# REP0RT 

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# ECONOMIC ENQUIRY C0MMITTTEE 

Vols. 1-III
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## REP0RT

OF THE

## EC0N0MIC ENQUIRY COMMITTEE

## Vol. 1

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## REPORT OF THE ECONOMIC ENQUIRY COMMITTEE.

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## REPORT OF THE ECONOMIC ENQUIRY COMMITTEE.

## Saction 1.-Oriens of the Committbe.

1. Our Committee was appointed in pursuance of the resolution of the Legislative Council, dated 28th November 1928, which ran as follows:-
"That this Council recommends to the Government that
(a) for the purpose of making an open public enquiry into the economic condition of the tracts, as preliminary to the resettlement, of the districts of Godavari East, Godavari West and Kistna, Government be pleased to constitute a committee, not less than half the members of which being elected by this Council and
(b) pending necessary inquiry, the resettlement scheme report of Kistna, West Godavari and tast Godavari districts be held in abeyance."

In pursuance of this resolution the Hon'ble the Revenue Member at a meeting of the Legislative Council held on the 30th January 1928 moved for election of the Committee to make the desired enquiry. This motion ran as follows:-
" that with reference to the resolution passed by the Council at the meeting held on the 28th November 1928 regarding the appointment of a committee to enquire into the economic condition of the districts of Kistna, Godavari East and Godavari West the Council do proceed to elect in accordance with the regulations made by the Hon'ble the President under Standing Order No. 77 for the holding of election, by means of the single transferable vote, a committee of seven of its members to make the enquiry and to report to Government by the 1st of October 1929." In accordance, however, with the motion made and passed by the Legislative Council on the 8th August 1929 the Committee was directed to send its report by the end of December 1929. G.O. No. 385, dated 23rd February 1929, constituting the Committee was communicated to us on the 25th February and the Committee met immediately afterwards and sent up proposals for the requisite establishment and the grants required to meet the expenses, and in G.O. Mis. No. 642, dated 26th March 1929, Government sanctioned an allotment of Rs. 25,000 for the work of the Committee, which was subsequently increased to Rs. 37,500 out of which a sum of about Rs. 37,100 has been spent.

## Szction 2.-Tours and Outdoor Work.

2. Immediately on receipt of the orders of Government allotting grants, we held a Conference in Madras with some of the leading ryots of the three districts and some economic experts. As a result of this Conference, we decided on our general programme of outdoor work. Necessary establishment for investigation was appointed and the first batch of our investigators joined duty in the last week of April.
3. In our first tour we covered a part of the East Godavari district and examined four villages and held conferences with the ryots of East Godavari. In this and in all our subsequent preliminary tours our main object was firstly to decide the most suitable villages for our economic inquiry and get ourselves acquainted generally with agricultural, irrigation and general economic conditions. In these preliminary tours we made it a point to examine the houses, the grain stores, the utensils, the clothing, jewels, cattle-sheds and cattle, etc., of both rich and poor ryots and in particular, the conditions of the working classes and we are grateful that the people everywhere gave us free access to their houses and showed us everything that we wanted. In our second preliminary tour, we inspected eleven villages in the Kistna district. In our third tour we inspected 35 villages- 12 villages in the Kistna district including Divi and 23 villages in the East Godavari district. In our fourth tour we inspected 26 villages, i.e., 24 in West Godavari and 2 in the Fast Godavari Agency. In all these preliminary tours we held conferences with the leading ryots and others from surrounding villages and took notes of their statements.
4. In our final enquiry in connexion with which we made four tours, our main object was to rerify the details contained in the final investigation reports of our own investigators and the details contained in the reports of the Government investigators. In these tours also we held conferences at several places with the leading ryots and

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with others and took notes of their statements. In our fifth tour of our final enquiry we examined the investigation reports and inspected 22 villages. In our sixth tour we similarly examined 13 villages in the West Godavari district. In our seventh tour we examined some villages in the East Godavari Agency and four villages in the West Godavari district. In our eighth and final tour wa examinel two villages in the East Godavari Agency and 23 villages in the Esast Godavari district. We would acknowledge here with gratitude the willing help rendered to us everywhere by the leading ryots and ryots' associations.

## [Vide Appendix No. 1.]

## Sbction 3.-Our Fstablishygent and Exppenditure.

5. Establishment.-In our work we employed all the outdoor and clerical establishments. We appointed, as Secretary to our Committee, Professor N. G. Ranga, B. LITr. (Oxon), Professor of History and Economics in the Pachaiyappa's College, Madras. He hal under him a staff of investigators, most of them University Graduates in Economics. These men carried out the detailed economio inquiry in 65 villages, and prepared their investigation reports.

We took up, besides, the following special enquiries :-
(1) Inquiry into agricultural indebtedness in 87 villages.
(2) Inquiry into leases in 16 villages.
(3) Inquiry into cattle mortality in Ellore and Tadepalligudem taluks.

For the purpose of these special inquiries we employed men (for a short time) who had previous local experience in rural reconstruction. All the work was done under the supervision of our Secretary and was checked by him from time to time. The investigation reports of all the villages were checked by the Committee during its visits to the several villages.
6. We would like here to place on record the good work done by our Secretary. On him devolved all the organizing work in connexion with various inquiries we took up and all the detailed supervision and correspondence. He worked cheerfully, unsparingly and efficiently, and was ever ready to place his !experience and every minute of his time at the disposal of the Committee.
7. Expenditure.-The total expenditure on all work connected with the Committee amounts to about Rs. 37,100 .

## Sbction 4.-Principles of Settibment.

8. In order that we may secure a proper presentation of our case with reference to the resettlement in the three districts with which we are concerned, we think it will be helpful if we begin with an enumeration of the various details that have to be attended to in the conducting of settlement operations.
9. As the assessment is based on the net produce of the various kinds of soils, the Settlement Officer has first to divide the soil into main classes according to mechanical composition and chemical properties of the land dealt with. Each class of soil is then subdivided into sorts with reference to their fertility as ascertained by the examination of the constituents of the surface soil and sub-soil. In the case of irrigated lands, they are further placed under various classes of sources of irrigation with due reference to the efficiency of the irrigation sources and facilities or otherwise for the disposal of -drainage.
10. The next process is to ascertain the grain outturns of the lands, irrigated and unirrigated, according to the classification referred to above. For this purpose certain prevailing crops are taken in the case of dry linnds and paddy in the case of wet

Ascertaining the grain ontturns. lands as standards, and the average outturns of these crops for every variety of soil are expected to be ascertained by actual experiments conducted for a series of years. From the outturns thus ascertained a deduction of from 15 to 25 per cent is made on account of the vicissitudes of the seasons and uncultivable patches unavoidably measured with fields.
11. The next process is to find the money value of the grain outturns. For this purpose it is expected that the average selling prioe of standard grains in the ryots' selling months for a period of years, generally 20 , should be ascertained after

> Money value of grain outturns. per cent for cartage and merchants' profits. The remaindor is taken as the ryots' selling price and adopted as the commutation rate and the grain outturns are then converted into money at this rate.
12. The next process is to ascertain the actual expenses of cultivation for each kind of soil. The difference between the money value of grain and cultivation expenses is then taken as net value grain and cultivation expenses is then taken as net value
for each kind of soil of which a moiety represents the land

## Asoertaining the expenses

 of oultivation. tax, and a table of rates is accordingly framed. "To correct inequalities arising from the adoption of a single commutation rate for an entire district or other large tract of country comprising a number of taluks, while the prices of grain often differ from village to village according to the facilities of communication and proximity to markets and from the adoption of the same grain values over similar soils whose fertility may be affected by local circumstances such as vicinity to the sea, rivers or hills, the villages are grouped together into separate groups and the money rates applicable to the lands classified in each group are raised or lowered according to circumstances."*13. As remarked, however, by Mr. Srinivasa Raghava Ayyangar, "the Madras Settlement operations, though conducted under elaborate rules, resolve themselves in the final result into the simple method adopted in Bombay, firstly, because the minute and extended enquiries which they involve are in most cases of the results of exch calculations. impossible to carry out and have frequently been dispensed with; secondly, because none of the data on which reliance has to be placed, such as prices of foodgrains in former years, are perfectly trustworthy and in some cases information regarding the quotations of prices in the ryots' selling months for the old years are - entirely wanting, and thirdly, because the determination of the rates of assessment with reference to a large number of factors, slight errors in regard to which might seriously vitiate the total result, is apt to make the assessments excessive."
14. Although the above is the theory of the Madras Settlement; it has, as

Dangerous to adhere to this theory. remarked by Mr. Peddar, been found impossible or dangerous to adhere to it strictly. "In the first place, the difficulty of determining with accuracy the average yield -of land is great; next, the only way of finding the average cost of cultivation is to ascertain what it would cost to cultivate a given holding by hired labour, and, as this labour would be needed only for a certain number of weeks or months, it is obvious that nothing would be allowed as wage for the subsistence of the oultivator and his family during the rest of the year. Hence, the first step in the Madras Settlement practically is determined on general considerations, whether the tract coming under Settlement requires a decrease or will bear an enhancement of land revenue and to what extent. The total amount of assessment to be imposed having thus been decided upon, the results of the processes above described are adjusted so as to yield it." $\dagger$ As remarked by Mr. Srinivasa Raghava Ayyangar, the rates imposed by the Settlement Department must depend greatly upon the discretion and judgment of the individual officers and little upon demonstrable calculated results. In this connexion, the following points arise for our examination in connexion with our enquiry:-
(1) Correctness of the standard crop outturn,
(2). the allowance for the vicissitudes of the seasons and uncultivable areas,
(3) adequacy of the allowance for cartage and merchants' profits in arriving at the commutation rate,
(4) the correctness of the commutation rate with reference to variations from village to village and from taluk to taluk, and
(5) the expenses of cultivation.

[^0]15. It will be necessary for us in the course of our report to supply one very Babaistence of the farmer. vital omissiou in the matter of arriving at the assessment. The eettlement calculations make no allowance for the subsistence of the farmer. With reference to this question, the Government of India in Resolution No. 1, dated 16th January 1902, wrote as follows:-
"It cannot but be their desire that assessments should be equitable in character and moderate in incidence, and that there should be left to the proprietor or to the cultivator of the soil, as the case may be, that margin of profit that will enable him to save in ordinary seasons and to meet the strain of exceptional misfortune."

It appears from this resolution that it was the intention of the Government of India that, in fixing the assessment of land, due provision should be made for the maintenance of the family of the cultivator. It would appear, however, that the policy of the Madras Government as enunciated by the Hon'ble the Revenue Member in his speech in Council on the 28th November 1928 is very different from the above. He spoke as follows:-
"The basis on which land revenue assessment in this Presidency is made is the proposition that the State is entitled to a share of the crop from the land. It is not based on any consideration of the circumstances of the holders of lands. We do not make any difference whether a land is held by a rich man or a poor man. The assessment is made with reference to the capacity of the land and not with reference to the circumstances of anybody who holds the land. It will not therefore be relevant to the question of assessment to consider the share of produce that will remain to eech individual after meeting his ordinary expenditure. It has never been the principle of the Madras Settlement that we should base our rates with reference to the net iucome, if I may say so, of individuals."

## Section 5.-Principles of Resbttlembet.

Principles for the revision of settlement-G.O. No. 263, Revenue, dated 11th May
16. The principles upon which revision of settlements should be conducted have been laid down in G.O. No. 263, Revenue, dated 11th May 1925. They are as follows:1925.
"These principles cannot bedecisively affirmed beforehand. In 1893 the Madras Criterion of rise in prices. Government on a reference from the Government of India intimated that it was prepared to assent to the principle that in districts in which the revenue had been adequately assessed the rates of assessment should be revised entirely with reference to prices and that no reclassification of soils or calculation of fresh grain outturn should be attempted; but, in view of the impossibility of foreseeing economic changes, the Secretary of State in his despatch of 8th January 1885, treating as an enclosure G.O. No. 3, dated 8th January 1894, declared against the policy of laying down hard and fast rules directing the Government of the future to a particular line of action in dealing with revisions of assessment. The question of the resettlement of each district must be left to be dealt with as it arises. At the same time, the Government recognizes that revision with reference to prices must continue to be the main factor of every ryotwari resettlement where the true initial rates have been ascertained and are on record for consideration. In Board's Standing Order it is stated that on expiry of the period of settlement, the Government reserves to itself the right to revise the assessment in such a manner as may seem just and proper either with reference solely to a rise or fall in prices or with reference also to other considerations such as would require reclassification of soils or a recalculation of the grain outturn."
17. Among the several points to be borne in mind by the Settlement Officer in conducting resettlements he must bear in mind that there

Allowance for increased cost of living, improvements made on land, etc. should be a substantial change in prices in order to warrant any alteration of the rates of assessment, and that the rates cannot be raised to the full measure of the rise in prices, because the allowance made for increased cost of living as well as for permitting a higher standard of comfort should be liberal. The conclusions thus arrived at must be checked by an examination of the economic position of the holders of agricultural land in the tract. In dealing with this it must be remembered that the Government bave undertaken to refrain from enhancing the assessment in reference to additional
gain which might have been imparted to the land by improvements effected by the ryots even though they have been carried out by means of money borrowed from Government.
18. We shall make our remarks later on about these points and how far they have been kept in view in the Scheme Report.

In summarizing the factors that have led him to propose an enhancement of assessments by about $18 \frac{1}{2}$ per cent in resettlement, the Special Settlement Officer sums. up the data on which he has based his conclusions as follows (in paragraph 44 of the Bcheme Report):-
" It is proved by statistics that during the current resettlement, population has

Summary of the conolusions of the present Scheme Report. increased by 15 to 22 per cent in Godavari East and old Kistna respectively, that the trade and commerce of the districts have considerably developed, that communications have improved and that there is considerably more money spent on luxuries than at the beginning of the period. Meanwhile holdings have increased by 19 and 9 per cent and the cultivation has extended by 326,221 acres. There has been no marked variation in the character of the seasons, and remissions and coercive processes have affected only a small fraction of the total revenue. There is no evidence to suggest that the problems of rural indebtedness such as they are, are more acute while there are not wanting indications that in certain respects the economic condition of the agricultural public is sounder than before. Lastly, the value of land has gone up 2 to 5 times, rentals 2 to 3 times and the condition of prices of the various standard grains have risen by 100 to 119 per cent. Meanwhile the assessment has remained stationary and the time has come to decide what share of this unearned increment the State may reasonably demand."
19. We shall have to say a great deal on each of these factors referred to by the Settlement Officer, to prove how superficial has been his examination of these factors. Meanwhile we shall only point out one or two very notable omissions.
20. He has passed over without any remarks or without giving any details; the

Many factors ignored by Speoial Settlement Offioer. important question of the rise in wages and of the rise in the cost of cattle, of implements and of commodities which have to be purchased. His examination of the question of cultivation expenses is exceedingly cursory. We hope to be able to prove fully that his failure to consider these factors and his very superficial examination of other factors have led him to the wrong conclusion that an increase in the assessments of $18 t$ per cent would be amply justified. He has used the term ' Unearned increment' in his summary of the factors which, he considers, proves the largely increased gains in cultivation. This term ' Unearned increment' has been nowhere defined authoritatively. If the price factor is the only element to be considered, even here it would have been necessary for the Settlement Officer to examine the positions of the purchaser and of the consumer and how much is required for consumption and how much is available for sale. The figures given under 'Trade and Commerce' would be of no use in this respect, since, as we shall show, they are entirely unreliable for the purpose that we have indicated. We shall now proceed to consider in detail the various factors referred to by the Special Settlement Officer as justifying the proposed increase in resettlement.

## Sbotion 6.-Ratapall and Skasons.

## 21. Rainfall figures given by the Special Settlement Officer are the averages for

 a number of years of the monthly figures for the taluk stations. For purposes of considering whether the rainfall in any particular area or taluk was in defect, leading to> Uselessness of average rainfall figures. loss of crop partial or entire, or whether similarly the rainfall was in great excess leading to submersion and damage, it could not at all be determined by a perusal of these figures. On the contrary, an examination of these figures would lead to the absurd and startling conclusion that rainfall was satisfactory at every one of these stations in every month of the crop season and that there ought to have been no room for loss of any kind or for remissions for any hind of loss. The tables given by the Special Settlement Officer in Appendix I (a), (b) and (c) are, therefore, not merely worthless but are thoroughly misleading. For purposes relevant to an economic inquiry it is absolutely necessary that we should consider the distribution of the rainfall
at each station, month by month for each year, separately. At least division into fortnightly periods would certainly be much more useful; but we find it rather difficult to get figures for these periods. It is well-known that while on clayey soils crops may get on fur a month at a stretch without rain, they may suffer serious damage if there was a dry period, on poor soils, of a fortnight. For the raising of a successful crop in fracts where peremnial irrigation does not exist, it is not sufficient that the total annual fainfall should be up to the average, but it is absolutely necessary that it should be so distributed that crops could get on from month to month without serious damage. It is a well-known fact that a small average fall, if evenly distributed from month to month, would enable ryots to raise crops successfully while there may be serious losses by even a higher average rainfall which was unevenly distributed. In cansidering the guestion of rainfall it is not merely necessary to examine rain failures and general inadequacy during the season"; but it is equally important to examine rather the cases of years when rainfall was largely in excess of what was needed and thus led to seriou's damage to both dry and wet crops. It is well-known that several of the dry crops sare completely damaged by continuous and heavy rainfall and it is equally a wellknown fact that with a heary rainfall, lands in the deltas of the Kistna and Godavari are often seriously damaged. Into the latter question we shall go more fully later on. Within the delta area the chief crops grown are paddy-in the irrigation parts-and cholam, dry paddy (Budama) and pulses in unirrigated parts. It is a well-known fact that enormous areas of, upland country drain through the delta ; and in years of heary rainfall the floods coming down the Yerrakalva, the Tammileru, the Buddamera, etc., swell local rains and cause very heavy damage to crops. It is necessary therefore that we should consider both aspects of rainfall, that is, when it is in excess and when it is in defect, since both lead to loss of crops. The Settlement Officer himself, realizing this point, remarks as follows :-
"It is impossible to" draw any definite conclusion from these figures as the effect of local rain depends more on its distribution than on its total quantity and a year of heavy downpour may be as disastrous as one of comparative drought."

> Opinion of the Irrigation Commission.
22. In considering the effects of rainfall as affecting the loss of crops the Irrigation Commission remarked :-
"The quality of the soil, the classes of crops cultivated and the character and resources of the people are also factors which greatly modify the effects of a deficiency of the rainfall. But as a general rule, tracts in which the rainfall is most liable to be in considerable defect from the average are those in which famines are most frequentiand the injuries from drought in the aggregate greatest. . The degree of least defect from the average which would, as a rule, cause injury to the crops is not easy to determine even for a given locality and it is still more difficult to fix any general rule; but, for comparative purposes at least it will be suffioiently correct to say that a deficiency of 25 per cent would be likely to cause some injury and that'a deficiency of 40 per cent would generally cause serious injury. The former we may call a dry year and the latter a year of severe drought."
23. As remarked by the Irrigation Commission the rains of the south-west

Importance of timely rainfall. monsoon regulate the bulk of the sowings on the lighter classes of dry land and are thus of the utmost importance to the Presidency as a whole. If they are late, the sowings on these soils will be untimely and the ordinary crops will suffer in consequence or others of a less valuable character will have to be substituted for them. Such a delay, that is, if the rains are expected towards the end of the period, is not of puch consequence on the heavier soils, for, from their nature, they are more of retentive moisture and are not usually sown till the latter end of this period or early. in October. In these districts where the bulk of the rain comes in during the south-west monsoon, it is on this that the bulk of the cultivation of both dry and wet crops depend. The north-east monsoon, as is well-known, is not dependable and as it is often concomitant with severe cyclones, it leads often to great losses by floods and submersion, both in the uplands and in the deltas, and ordinarily to considerable loss of crops, because the heaviest period of this monsoon, when it comes, is at the time when the paddy crop is nearing the period of harvest. Aided by these standards, we shall disciuss briefly the rainfall conditions of a few typical stations in the three districts under reference.
"24. We'agree with the Special settlement Uficer that the conditions of ranfall in these districts remain essentially unchanged and that there is no data in support of the assertion that one sometimes hears that the quantity of rainfall is diminishing and that its distribution now is worse than in former years. For the purpose of our review we have selected the ten-year period from 1890-1899, since an our opinion, any ten-year period selected may be considered to be typical of the general rainfall conditions. "We have not, besides, been able to obtain the details of rainfall for the later periods and that is another reason why we have chosen the above period. In each of the threédistricts in question we have taken the rainfall in two stations for detailed study.. In the case of the Kistna district we have chosen Gudivada and Nandigama as representing the delta and the uplands respectively. Similarly, for the West Godavari district we have selected Bhimavaram and Ellore and for the East Godavari, Ramachandrapuram and Peddapuram.
25. Taking first the rainfall statement for Gudivada, we find that the ten-year Gudivada. ' period under review includes three bad years, namely, 1891, 1896 and 1899 in which the rainfall was very considerably in defect. There is no doubt that in these years dry crops in the delta would have suffered considerably. In the year 1896-97. (as remarked by Mr. Datta on, page 232, Volume I, of his enquiry into the rise of prices). ' the north-east monsoon failed over large areas in the Circars and the Deccan districts. . Floods also. damaged the orops in Godavari, Kistna, Tanjore and Trichinopoly. The crop outturn was very poor--paddy yielded about half tae normal produce and the other food crops did worse. The season was bad throughout the country and this led to. widespread famine.' The year 1899 was again one of considerable failure of rains and as remarked by Mr. Datta, it was on the whole unfavourable to agriculture and the outturn of paddy was half the normal and of other crops less. This is followed by the serious famine of 1900 which caused acute distress throughout India. In the year 1892 there was 18 inches of rain in the month of October and in 1893 there was 9 inches of rain in the month of November. In these areas the paddy that was ready for harvest must have been damaged considerably.
26. Taking next the rainfall statement for Nandigama in 1892 we find that

## Nandigama:

 although it was favourable to paddy cultivation, dry crops were again damaged considerably. In the year. 1895 the rainfall was excessive and both wet and dry crops must have been damaged. In 1896 and 1899 rainfall was very considerably in defect so that dry crops must have suffered considerably and also paddy under tanks, since most of the tanks could not have received a better supply:27. 'It
 column of totals for the years in which there would have been damage to crops. [Vide Appendix No. 2:]

## Sbction 7.-Allowances por the Vicissitudis of the Seasons, Unprobitable Arbes, sto.

28. The allowanos made now for vicissitudes of the seasons, etc., are 10 per

Fuctors considered in cent for the deltas and 20 per cent for non-delta äreas. Fixing these allowanoses. in The factors to be considered in this connexion are the following:-
(1) Failures and insuffioiency of the rainfali leading to complete or partial failure of crops, and excessive rain leading to submersion and damage by floods besides untinely rain coming in about the time of haryest or before the crop, after being harvested, is removed from the fields.
(2) Delay in transplantation and sowing, owing either to late arrival of freshes in tho delta systems or insufficient supply in canals and tanks for purposes of transplantation.
(3) Areas normally left uncultivated and treated as current tallows and other areas included in pattas but remaining uncultivated as field bunds, channels, etc.
(4) Losses due to insect pests, rats, birds, etc.
29. We have already discussed fully the first of these causes and are of opinior that for this cause alone the allowances made at present would be insufficient. Underlosses due to the second cause we have already made remarks in connexion with irrigation in the Godavari delta, and our remarks would be equally applicable to other irrigation systems and tanks. We would now invite attention to the subjoined statements relating to the East Godavari, Kistna and West Godavari districts showing the areas sown in each taluk in these districts during the several months of the year (extracted from Benson's Statistical Atlas).* Omitting June sowings or transplantations which are inconsiderable and confining our attention only to wet crops these statements show that in Ramachandrapuram taluk the transplantation goes on intoSeptember and that while two-thirds of the area is transplanted in July, about one third is transplanted in August and September. In Amalapuram taluk half the area is transplanted in July and the other half in the months of August and September. The proportions in Cocanada and Razole taluks are about the same, as at Amalapuram. Taking the totals for the whole district under wet we find that while 152,000 acres are transplanted in July, the figure for August and September is 117,000 aeres, the figure for September alone being about 24,000 acres, that is about one-twelfth of the whole area. In the case of the Kistna and West Godavari districts we find that in Divi two-thirds of the area is transplanted in August and one-third in September. In Bandar taluk about one-third is transplanted in July, a little more than one-third in September and a little less than one-third in the months of September and October. In Gudivada the main transplantation is done in the months of July and August and a small area in the month of September. The proportions in the Kaikalur taluk are about the same as those in Gudivada. In Ellore taluk the areas transplanted in July, August and September are 36 per cent, 41 per cent, and 23 per cent, respectively. In Narasapur, Bhimavaram and Tanuku the main transplantation, say, about threefourth is in July, and about one-fourth in August while small areas are transplanted in September. Taking the total wet transplantation we find the following figures:-

$$
\begin{array}{llllr|cccc} 
& & & \text { Acs. } \\
\text { June } & \ldots & \ldots & \ldots & 22,900 & \text { September } & \ldots & \ldots & 50,300 \\
\text { July } & \ldots & \cdots & \cdots & 266,800 & \text { Ootober } & \cdots & \cdots & 11,200 \\
\text { August } & \cdots & \cdots & 169,500 & & & & \\
\text { [*Vide Appendix No. 3.] }
\end{array}
$$

30. Assuming the yields for transplantation for the months of June to September at $12,10,8$ and 6 bags per acre, respectively, we find that

Influence of late transplantation upon the yields. the yields per acre in the East Godavari district will be $9 \cdot 13$ bags, while in the Kistna and West Godavari it will be 9 bags per acre. If, however, we assume that the yields in the transplantation months are $14,12,10$ and 8 bags respectively we get as the average yield for the East Godavari district 11.13 bags and for the Kistna and West Godavari districts, 11 . bags. If a normal crop yield is taken at 12 bags , or a 12 -anna crop, the losses due to late transplantation alone amount to a diminution of $8 \frac{1}{3}$ per cent.
31. We have already noted that in the case of dry crop areas the delay in the

Current fallows. crops. We have noted elsewhere that large areas of dry land are left waste every year, but continue to pay the dry assessment although uncultivated. From Benson's Statistical Atlas we find that in East Godavari excluding the Agency taluks the area of occupied cultivated land is 758,633 acres, while the corresponding extent of current fallows is 301,460 acres. In the Kistoa and West Godavari districts the correspond-ing figures are $1,043,740$ and 331,006 acres, respectively. This means that in the East Godavari district, the area left fallow is a little less than half the area actually cultivated in every year while in the Kistna and West Godavari districts the proportion is about one-third.
32. Assuming these current fallows to be charged only at dry rates and taking the average rate of Re. 1 fer acre it means that a sum of 6.3 lakhs of rupees is being. collected for current fallows alone. In consideration of the very large proportion that current fallows in the three districts bear to the total actually cultivated area it seems obvious that the 20 per cent allowance referred to above must be considered to be
totally inadequate. Concerning this matter Mr. Srinivasarnghava Ayjangar writes as follows in paragraph 72 of his memorandum:-


#### Abstract

"As regards the 'excessive allowances' it seems to me that the allowances so far from being excessive are hardly sufficient. The deduction of from 15 to 25 per cent from the average outturn for vicissitudes of seasons and unprofitable areas meascred with holdings is in many cases less than the percentage of dry lands ander coceupation which, though not cultivated, is charged with assessment annually. This percentage for the Godavari district is 48.5 , for Tinnerelly 315 , for Nellore 27.3 , for Chinglepat 26.6 and for the whole Presidency 16-9. In some of the districts, the lands are left ancropped for pasture, but this is only in a small number of cases."


33. In connexion with this subject, we would invite attention to the remarks of the Governor-General in Councl in paragraphs 28 and

Land revenue and famineresisting power of the people. 29 of Resolution No. 1 of 16th Janaary 1902:-In discussing the question of the conmexion between land revenue assessments and the famine resisting resources of the people it is stated as follows :-
"It has been estimated that in Central Provinces, the agricultural classes have loet 40 crores of rapees or more than 26 million sterling during the past 7 years, an amount equivalent to the total land revenue of 50 years; while 7 years' land revenue would be required to reconp the loss over its famine expenditure in these Provinces. since the year 1896. Similar calculations could be made with regard to other faminestricken provinces. It is clear that no reductions of the land revenue demand short of its total abolition and not even its abolition itself, would enable any community to hold up its head against a calamity so rast and appaling. It is rot, of course, disputed that if the Government were largely to abate its demand and if the amounts of such abatement are fairly distributed among the cultivating classes and were sared by them instead of being thoughtlessly spent or absorbed by an increase of population or appropriated by a particular section, a reserve would be created which might enable those classes to withstand the losses cansed by failure of the raims. But, unfortumately, neither in the past nor in the present circumstances of the country can any warrant be fuund for the belief that the revenue so relinquished by Government would constitute a famine relief fund, in the hands of the people."
34. While we agree that to make op the losses incurred by ryots in a famine

Anowaners ehoald be sufficiently high, if the people are to recorer from the effects of a finine. when all crops have failed, not even a total remission of land revenue would meet these losses, we, nevertheless, hold what cannot be disputed for a moment, that these cases of widespread calamity and distress point to the necessity of making all necessary allowances for losses due to the vicissitudes of the seasons and to fix such a fairly low level of rates as would make it absolutely certain that the ryot population in must normal years will be left with sufficient sarings to enable them to tide over all periods of scarcity and distress and prevent them from being absolutely ruined and becoming indebted to money-lenders.
35. Every fact that we have stated above points only to one conclusion that as remarked by Mr. Srinivasaraghara Ayrangar, the allowances now made are totally inadequate.

## Sictios 8.-Rimsshors.

Remisuion rules
36. The remission rules are somewhat as follows:-
(1) No dry rate remissions are granted at all for lands classed as dry.
(2) For lands clased as dry but cultivated with wet crops, remission of the water-rate is granted, if the land is left entirely uncaltivated for reasons beyond the contrul of the ryut, or if the crop outturn on the land is an one-anna crop or less, subject, howerer, to the condition noted below:-
(3) No remission is granted for fields constituting less than a recognized subdivivion that is, if there was some crop on a part of a subdivision and mo crop at all in the rest, no remission is granted.
37. We have already referred to the inadequacy of the allowances made for the

Intention of the Government of India. sources of loss and diminution of outturns to the ryot which make it impossible for any Government to arrive at such a series of fixed money rates as would meet all ciroumstances and all conditions. The system of settlement based on a set of money rates, fixed in amount from year to year must therefore be supplemented by a liberal set of remission rules if certain tracts and certain classes of ryots are not to be ruined in the process. In their resolution on Land Revenue Policy the Government of India have recognized this, and in paragraphs 35 and 36 they write as follows :-
"It is manifest, however, that in tracts where the chances of bad harvest are high it must be exceedingly difficult to make allowances for crop failure in framing assessment rates. And it is also clear that the agricultural classes have not as a rule yet learnt to regard a good harvest not as an occasion for larger expenditure but as a means of insurance against failure of crops. In truth, to a poor family the short harvest must be a severe calamity. The assessment may absorb but a small share of the gross produce of its land. But its circumstances depend on the net produce on which the assessment is in higher proportion, and it is obvious that on inferior land a substantial deficiency in the outturn may leave no net produce whatever, 80 that (in the absence of saving) the assessment can only be paid by borrowing or by stinting the necessaries of life. When such a deficiency is reached the demand of land revenue must add very materially to the hardships endured by a poor and uneducated people. And then again where the produce of the land is liable to great and frequent fluctuations owing to failure of irrigation of vicissitudes of season, there is reason to apprehend that the fixed assessment may ruin people before it teaches them. Experience gained on a large scale during the past years of distress indicates that when a crop failure affects an entire village or other separately assessed area the difficulty of dealing with holdings individually may possibly be met by working from aggregate to detail by accepting the village or other such area as the unit for calculating the amount of reduction to be given and leaving it to subordinate officials of approved character merely to distribute this amount according to the degree of the loss sustained by individuals. The Government of India are not satisfied that in certain well-known tracts of insecure land where crops are liable to violent fluctuation in produce some such plan is not required in the interest of the people, and the question of its introduction will receive fresh consideration." We are not a ware that any action has been taken by the local Government in accordance with the above expressed intentions of the Government of India, excepting the introductions of the rules to provide for suspensions and remissions in the case of wide-spread calamities and famines, and we find that the remission rules in ordinary practice have remained unaltered all these years.
38. Settlement Officers and Revenue Officers have frequently referred to the Mr . Clerk's view. rigidity and the illiberality in the working of these rules. For instance Mr. Clerk in paragraph 52 of G.O. No. 43日, Revenue, dated 7th July 1899, explaining his objection to register certain lands in the delta then classed as dry as wet, says:- "It may be urged that remission will be granted whenever it is proved that the land is not left waste on account of the ryot's negligence. But it is also impossible to prove this and the Revenue Department is not in the habit of putting a liberal interpretation on the remission rules. Moreover as a matter of necessity some lands have to be kept waste for pasture for want of grazing grounds and forest reserves in the delta taluks."
39. In accordance with the wishes expressed by the Government of India in the concluding portion of paragraph 36 of Resolution No. 1,
Remission rules during times of widespread calamities. dated 16th January 1902, a Commission presided over by Sir Anthony Mcdonell was appointed and in accordance with its recommendations, the remission rules of the Madras Government also underwent some changes; and in their present form provision is made for suspensions and remissions of revenue in cases of widespread and local calamities. In seasons of exceptional drought or famine when there has been general failure of crop, Revenue Officers are authorized to grant, besides the remissions of revenue already referred to, suspension of revenue or remission is to be ordered subject to the following conditions.
40. (1) In case of remissions for wet lands coming under these rules the remission is granted with reference to the average lose in the whole tract and not with reference to individual losses.
(2) Remission may also be granted for wet waste lands.
(3) Where it is impossible to determine the uniform rate for any given tract, as in cases where the loss though considerable is confined to limited areas such as the a yacut of a small tank, district collectors are authorized to recommend for sanction, in view of an all-round percentage, remission on those portions of recognized fields on which the crop has been totally lost, provided that each such portion is not less than one acre in extent, and that arrangements can be made so that the jamabandi officer will be in a position to be satisfied in each case that the fields in respect of which remission is applied for, have been properly inspected and the losses thereon duly verified.
(4) For loss of crop on dry lands remission may be granted by Government in accordance with the scale noted below at uniforim rates calculated not with reference to individual losses but with reference to the average loss in the whole tract for which relief is granted:-

(5) Suspensions and remissions of land revenue do not carry with them suspensions and remissions of cesses.
(6) Before the collection of suspended revenue is carried out some time is allowed to ryots to recover from the effects of the bad season which has necessitated the suspension.
(7) Suspended revenue remaining unrecovered for three years is to be treated as irrecoverable.
41. Similar rules apply to cases of local calamities; but in this case, such relief as is ordered to be given is determined with reference to the actual damage suffered by each individual; and even in granting this relief, the entire holding and property of the ryot is taken into consideration instead of merely the field affected. We need hardly state that these rules do not cover sufficiently the various difficulties we have referred to above as these refer only to cases of widespread calamities or famines or local calamities. [Vide Appendix No. 4.]

Sketion 9.-Insbct Prsts, btc.
42. During the course of our investigation, ryots everywhere complained that

Estimate for the damage caused by insects, pests, rata, eto., to the paddy crops. they were incurring considerable losses on account of the various pests to which the paddy crop was subjected including losses due to rats when the paddy was ripening or after it was harvested. It was not possible for us to make experiments and to ascertain actually what the exact extent of these losses were; but the cultivators put it as varying from 10 to 25 per cent, i.e., that every year losses would amount to about 10 per cent and that when the pest was bad, the loss may amount to 25 per cent. In Mr. Wood's hand-book of agriculture ("Facts and Figures"), we find the following note under 'Insect pests for paddy':-
"The stem-borer moth is a serious pest in all rice-growing areas destroying probably an eighth of the total crop in normal years and one-quarter or more in bad years. The caterpillar feeds in the stem and the remedial measures consist chiefly in ploughing the stubble and burning or burying it as soon as the crop has been harvested."
43. It will be seen that Mr. Wood's estimate agrees with our own inquiries. Besides the stem-borer, we find also that 'mealy bug' and 'rice hispa' were also prevalent. In many villages ryots complained also of considerable damage caused by rats and they stated that every year they were incorring appreciable expenditure in digging out rat holes and killing rats.

Extraota from the annual reports on the paddybreeding station, Maruteru.
"Stem-borer.-In parts where second cropping is frequently practised it is difficult to escape infection by this pest. However, it was observed that plots that flowered before the end of October escaped lightly whereas those going on into November were badly infested."
45. "A systematic rat-eatching campaign was carried out from the beginning of the season and in spite of the presence of isolated patches of flowering plante from August to the middle of December the station remained free from damage; 626 rats were caught and killed between July and February at a cost of $6 \frac{1}{8}$ annas per acre."
46. In the annual report of the same station for the year 1927-28, we find the following remarks:-
"The stem-borer observations mentioned last year were continued and permanent light traps were continued and were set up, and daily collections of moth recorded. The early varieties of Basangi which flowered before the first week of October are fairly free from attack. From the second week onwards with the increased emergence and appearance of dead-hearts, signs of infection became increasingly high. The highest emergence is from the last four days of October to the middle of November. The emergence in January infested the second-crop nurseries and early planted seed crop. Collection and destruction of egg-masses was done in the second-crop nursery till the middle of February when the tiny parasitic fly was noticed to be hatching out from the eggs of moths instead of the caterpillar.
"Silver-shoot and hispa gave a set back to the lately planted crop of Co. 2 and Co. 3 and Garikisannavari in the seed-bed area. The spread of silver-shoot was checked by timely setting up of light traps and by forcing the crop with an application of Ammonium Sulphate. Mealy bug was not noticed last year. A keen watch was kept on the spot and the plants were pulled and burnt as soon as they were noticed. The rat-catching campaign was carried out from the beginning of the year at more frequent intervals than last year. It may be pointed ont that it is important to see that the young ones are killed in the nest as well as the adults. One thousand and sixty seven rats were caught from April 1927 to March 1928 at a cost of As. $10 \cdot 75$. per acre. A disease worked its way into the Kistnakatukulu which was also reported to occur in isolated patches in the district. The effect of the attack on the plants was yellowing and a gradual rotting which attracted flies in swarms. A bad odour is also emitted. The attack was attributed to a soil fungus. Fortunately, the infection was confined to patches and the plots were cut away and the straw and stubble burnt in situ."
47. We need hardly state that no allowance is made by the Settlement Department for losses due to pests either under vicissitudes of the seasons, etc., or under cultivation expenses.

## Sebtion 10.-Agriculitural Improvbmehts.

48. It will be useful to note here the fact that in any attempt to bring"new lands under irrigation the ryot has to invest a considerableamount of capital. In paragraph 20 of the resolution of the Governor-General No. I, dated 16th January 1902, the following remarks occur:-

Principle of exempting capital improvements effected apon land.
44. We find the following note in paragraph 23 of the. annual report on the paddy breeding station, Maruteru for 1926-27:-
"Stem-borer.-In
to escape infectio
before the end of
badly infested." from " gio of moth

3 and Garikisannavari in the seed-bed area. The spread of silver-shoot was
$\qquad$
ztrmindari provinces, where the revenua is temporarily asesesed on. entatas as a whole and not on each farticular plat of land composing: them, the state has not similarly surrendered ite rights to a share in improvemente in which the capacity of the soil plays. a fart with the industry or outlay of the cultivator. But the principle followed has been that additional assesements should not ke imposed on these lande until the private. labour or capital expended upon them bas had time to repay a remunerative return. In the Punjab and Pengal the term of exemption has teen fixed with reference to the term of settlement at 20 years for masonry wells, five years for canal distributaries and. ten years for other irrigation works. In the North-Western Provinces and the Central Provinces, irrigation works, not constructed by Govennment, are freed for the term of settlement next following their construction, the average period of extmption being 45 years in the former and 30 years in the latter Provinces. The rules of all Provinces provide for the grant of longer terms of exemption in special cases. This summary of existing procedure reveals a variety in practice which it is not possible to reduce to complete uniformity. It is the intention, however, of the Government of India, in consultation with the Local Governments, to take the whole matter into consideration with a view to the framing of rules that may stimulate the expenditure of private capital upon the improvement of land and secure to those who profit by such opportunities the legitimate reward of their enterprise."
49. The point that we wish to emphasise is that there are large areas of land where,

Places where such apecial expenditure has become necessary. when an irrigation source is provided, the ryot must incur often large expenditure before he can irrigate his lands. In upland areas like those commanded by the Muniyeru Project, the Divi-pumping Project, and under non-delta tanks, the ryot has often not merely to excavate a bodi channel to his lands but has to incur consderable expenditure in levelling and lowering his fields to make them fit for wet cultivation. Again, even in the case of delta lands, where such land is not easily commandable from the irrigation source, the ryot incurs large capital expenditure in lowering his fields. Then again, in the case of low-lying 'Parra' lands such as those that have been brought under cultivation within recent years in all the deltas lying 'at the tailend of the irrigation channels and bordering on the salt creeks and on the Collair and in parts of the Divi Island, he has generally to constiuct bunds to prevent submersion by flood or tide water with necessary pipes or sluices for purposes of drainage. The expenditure on works of this class is often very high. From our exquiries on the Muniyeru area, for instance, we found that many ryots have invested sums varying from Rs. 200 to Rs. 350 per acre for making the lands fit for wet cultivation. In fixing the assessment of lands brought newly under irrigation either under old sources or under new irrigation projects, the fact of capital expenditure having been incurred by the ryot to make these lands fit for irrigation is never taken into account. This procedure is against the humane official pronouncement of Government, and loads a ryot with debts which he is unable to repay from the produce of the land. We would recommend, therefore, that this question should be carefully considered and that the above class of improvements should be exempted from at least part of the normal assessments so as to make up for the expenditure of capital incurred by the ryots.

## Seotion 11.-Irrigation.

50. It has been stated already that the extension of first-crop irrigation in the
Supplies. Godavari delta system during the period covered by the scheme report is about 89,000 acres, while a similar extension of about 84,500 acres has taken place under the Kistna delta system in the Kistna district. The extension of second crop irrigation during the same period is about 56,500 acres. It is therefore necessary to examine the adequacy of the canal supplies in both systems for first as well as for second crop irrigation.
> 51. To examine the adequacy of the irrigation supplies in the first and second

> Adequacy of supplies. crop seasons we have prepared statements of the average monthly discharges for every month in the years 1919 to 1929 for (1) Godavari Eastern including Central, (2) Godavari Western, (3) Kistna Fastern, (4) the Divi Project and (5) the Muniyeru Project.* In these statements we have also worked out the average discharges in each month for all the eleven years taken together and the resulting duties.

[*Vide Appendix No. 5.]
I-4
52. Taking first the Godavari Fastern and Central system, we find that the June duty is 126 while the duties in July and August work out to 59 and 58 respectively. Although the July and August duties may be considered to be fair, yet they

Godavari Eastern and Central system. transplantation not merely in July but also in the month of are such as to necessitate transplantation not merely in July but also in the month of
August: in other words, it would take at least two months with these duties to complete transplantation. In the second crop season the duties similarly are fairly satisfactory and only the April supplies in some years are rather inadequate. We may on the whole take this system to be the best supplied of all
53. Taking the Godavari Western delta, the duties worked out prove that the

Godavari Western delta. condition of supplies on the whole is very unsatisfactory. The duty for June works out to 192 while the duties for July, August and September are 90,82 and 85 respectively. In this system, therefore, it will generally be impossible to complete transplantation even in the month of August and there must always be a balance left which could only be transplanted so late as September. In the second crop season, again, supplies are equally unsatisfactory, the duties for March and April which are the critical months being 77 and 100 respectively. We have no doubt therefore that the second crop must suffer badly under this system.
54. In the case of the Kistna Eastern delta, we find that the conditions are a

Kistna Eastern. little better than in the Godavari Western delta. The average duties in June, July and August work out at 165, 74 and 73 respectively. From the discharge figures worked out for the years 19251928 it would appear as if the fitting up of the six feet shutters over the Kistna anicut has not done much good so far as this part of the delta is concerned. Obviously, while the higher shutters have made it possible to utilize a larger portion of the river discharge than before, it would appear that this latter advantage would not accrue until the carrying capacities of the head sluice and the main canals are improved considerably. Apparently, this has yet to be done. It follows, therefore, that it would not be possible to complete transplantation either in July or in August and that a part of the area must necessarily be transplanted also in the month of September.
55. In the case of this system, the statements of duties and discharges worked Divi $\ddagger$ ytem. out prove that the conditions of water-supply are unsatisfactory. There are many years in which there is no supply available in June at all. The duty in July works out to 110 and the duty for August at 78. These are very unsatisfactory for purposes of transplantation and it is obvious that transplantation must go on from July into August and also into September. We find, however, that there is a marked improvement in supplies in the year 1928. This may be possibly due to the fact that a ninth and powerful engine has been fitted which is enabling larger supplies than before, to be pumped out for the system. We have not got the discharges for the year 1929 so as to enable us to see, if in the latter years the improvement noticeable in 1928 continues, but we hope that this is the case.
56. Muniyeru Project.-In the case of the Muniyeru Project we consider the

> Muniyeru Project. discharges and duties worked out by us show that on the whole the conditions of supply under this system are satisfactory.

## I.-Second Crop in the Godavaris.

57. In our review of the canal discharges we have already indicated the serions

Grievance of ryots as regards the delta crop. shortages of supply that take place in most years in the the tail-end villages and in other villages situated higher up where the lands are not easily commandable many ryots definitely told us that they did not want second crop cultivation under the present circumstances and their complaint was not only that they were put to losses on account of the inadequacy of the irrigation supply, but that blocks of land which were left uncultivated and which were contiguous to cultivated blocks were rendered saline and unproductive. We were told that these lands even though they were treated with heavy doses of atraw manure would yield very little during the next sarava crop. In connection with the
location of the ayacut for the second crop which has lately been under the consideration of Government, we found cases of people who were anxious to raise a second crop but whose lands have been excluded and there were also numerous cases of people who were not at all anxious to raise a second crop cultivation but who on the other hand desire to have their lands excluded from the second crop zones. We would only. request that before these zones are finally fixed, the ryots of all the villages should be given an opportunity of expressing their desires with reference to either exclusion or inclusion.

Stalement showing the arrival of first freshes in the Kistna River.

| Year. |  |  |
| :---: | :---: | :---: |
| 1919 | $\ldots$ | .. |
| 1920 | $\ldots$ | $\ldots$ |
| 1921 | $\ldots$ | $\ldots$ |
| 1922 | $\ldots$ | $\ldots$ |
| 1923 | $\ldots$ | $\ldots$ |
|  |  |  |
| 6th January | 1929. |  |


| Year. |  |  | Date. |
| :--- | :--- | :---: | ---: |
| 1924 | $\ldots$ | $\ldots$ | 21st June 1924. |
| 1925 | $\ldots$ | $\ldots$ | 6th July 1925. |
| 1926 | $\ldots$ | $\ldots$ | 3rd July 1926. |
| 1927 | $\ldots$ | $\ldots$ | 23rd June 1927. |
| 1928 | $\ldots$ | $\ldots$ | 16th June 1928. |

E. H. Chave,

Executive Engineer, Kistna Central Division.

## II.-Improvements.

58. Among the works enumerated by the Special Settlement Officer we might
(a) In Godavari delta. first refer to the piping system. It is needless to say that a satisfactory piping system guaranteeing a proportionate sapply throughout the length of any given channel from head to end would lead to great satisfaction and do a great deal of good : but it cannot be said that the channels that have so far been piped are working at all satisfactorily. During the course of our tours we came across many channels where pipes have been removed, either entirely or in part, and the numerous instances of open cuts. It would appear from our inquiries that the system of making open cuts close to places where pipes have been put in, is very general in the Godavari delta. Most of the ryots that we examined in many villages stated that the channel banks are cut open at night time during the period of transplantation. It is almost the unanimous testimony of the ryots of these deltas that the outturn of their crops depends very much on when the transplantation is completed. They believe that the highest crop outturns are obtained by transplantation in June; that the produce is less if the crop is transplanted in July-the difference between June and July transplantation amounting in their opinion to two bags per acre-that in the case of transplantation in August it is universally believed that lands yield about two bags less per acre than lands transplanted in July; while the lands transplanted in September are expected to yield a very poor crop. The general inadequacy of the supply for rapid transplantation coupled with the anxiety of the ryots to transplant their fields as early as possible, is responsible for the universal interference with the piping system and the general practice of taking supplies surreptitiously by means of open cuts. The same remarks also apply to the piping system in the Kistna Eastern delta, with the difference that in the latter case the system appears to have given satisfaction in many places.
59. In view, however, of the high net profits Government obtains from the

Inadequate supplies during the transplantation season. Godavari delta system and the high duties at which the system is working leading to great delay in completion of the process of transplantation, we are unable to consider the present state of things satisfactory. We feel that during the period under report the ryots, particularly those in the Godavari Western delta have been suffering from inadequate supplies during the first as well as in the second crop seasons, and we consider that it is a matter of urgency that the necessary improvements to end this state of things should be carried out as early as possible Later on, we refer in detail to the improvements that we consider necessary to improve the present conditions.
60. In the case of the Kistna delta system the more chronic insufficiency of (b) The $K$ istna delta. supplies from which the system was suffering almost throughout the period under report, has been in a very large measure set right by the fitting up of six feet shutters over the Kistna anicut. This work as well as the regulators at the heads of Masulipatam and Ellore canals is sure to result in great good to the Kistna Eastern delta.

## III.-Drainage.

61. We consider that the drainage sy stems of the Godarari and Kistna deltas require complete re-examination in the light of the most recent engineering and agricultural knowledge. The principles originally laid down in P.M.G. Nos. 3572, dated 19th December 1874, and G.O. No. 3528, dated 22nd December 1876, were of a tentative kind with reference to the state of knowledge at the time and the drains that were designed originally under these principles have continued up to this day without material alterations. These orders were passed at a time when the areas irrigated onder the two delta systems were about one-half the present figures. Large areas all over the deltas and particularly areas adjoining most of the drainages were then unoccupied and the submersion of these latter areas was therefore a matter of no consequence at the time. The designs of drains were based on the following principles:-
(1) Assuming the total rainfall in 24 hours to be 12 inches, the calculated full section of the drain was such as to carry off a discharge equivalent to two inches of rainfall from the catchment area in a day.

Theory of drainage clear-
(2) Of the full section as thus calculated a width of ance. from one-third to one-half only was to be cut.
(3) It was assumed that paddy crop was not liable to injury from an excess of water for several days, or from submersion for a short period.
62. A large part of the areas of both these deltas being subject to cyclonic rainfall during the north-east monsoon, the rainfall figures assuming a maximum of 12 inches in 24 hous would often be found to be very much below actuals, and when the drains are cut on the principles above laid down, water is not drained off as fast as it is desirable, with the result that considerable areas throughout these deltas are subject to submersion in varying degrees. The difficulty is now very much aggravated by the fact that irrigation has been extending and that practically every inch of land so to say in these deltas is now cultivated, including all the low lying lands near the drains and the ' parra' lands near the sea cuast.
63. The whole difficulty of disposing of inter-delta drainage is enormously

$$
\begin{aligned}
& \text { Cpland drainage salls } \\
& \text { upon the detia areas. }
\end{aligned}
$$ aggravated by the fact that very large volumes of upland drainage enter the delta with the result that the inadequate section of the existing drains is called upon to deal with enormous volumes of water brought in by these. The large upland streams that enter the delta are the Rallamadugu, the Yerakalava, the Ramileru, the Tamileru and the Budameru.

64. The last three of the above streams enter the Kollair and their floods erentually reach the sea through the Cppateru. We do not know exactly what the policy of the Government is with reference to the question of the dirpoial of upland drainage and of saving of the delta irrigation from recurring damage caused by floods brought down into the delta by these upland streams. In P.M.G. No. 3572, dated 19th December 1874, the following passage occurs:-
"The drainage of the delta lands so far as this may be connected with the disposal of surplus irrigation water rendered necessary to admit of the extension of irrigation, or may be required for the benefit of lands already irrigated, is fairly chargeable to the general scheme of delta irrigation. Perond this it would seem that the Irrigation works are in no way liable to kear the charge, and if any further works be debited to the capital account of the delta scheme it should only be on the ground that if there be a likelihood of a return from irrigation considerably execeding the interest on the mones inrested, some part of the capital represented by the difference may be inrested in the general improvement of the condition and bealthfulness of the country from which such revenue is derived. If so,'it is of course surplus revenue only, that should be applied to such a purpose."
65. In the course of our inquiries we futud that not only was there general complaint of submersion and damage in the country adjoining the chief major and minor drains but also evidences of damages in local areas, in many villages situated in the upper parts of the delta. As remarked by Mr. Clerk in paragraph 64 of the Resettlement Report published in G.O. No. 436. Revenue, dated 7th July 1*99, "in comparing the Godavari and Cauveri deltas one disadrantage in this district (Godavari)
is the fact that the anicut at Dowlaishwerami is only 38 feet above mean sea-level and the fall of less than one foot a mile makes it impossible for the flood water to drain off sufficiently rapidly. It is true that a number of drains have been constructed for this purpose, but they benefit only some villages, and not many villages. There is an area of land, large or small as the case may be, which is submerged for some days. every year."
66. While the present inadequate system of major and minor drains is receiving

Village drainages. some attention-insufficient in our opinion, from Publio Works Department-there is at present no agency for looking after the minor village drainages. There is obviously in these small local areas no question of maintenance of village drains by kudimaramat and it is therefore necessary that some system should be devised that would result in attention being paid to these minor village drains. Since we came across many cases of such village drains affecting more than one village, the excavation and maintenance of these drains therefore is impossible by local village agency. The problem of upland drainage which has been frequently examined in the years past is still awaiting solution and in view of the urgency of the question we would refer later on to the main improvements that we consider necessary; but in view of the fact that the Godavari and Kistna delta systems give net returns of 20.34 per cent and 16.08 per cent respectively on capital outlay including interest, or returns of 17.21 per cent and 12.82 per cent respectively, excluding interest charges, there ought to be no valid objection to charging to the capital account of these delta systems, the large outlay that will undoubtedly be necessary for dealing with the question of the disposal of upland drainages. These improvements are all the more necessary in view of the fact that 'the Revenue Department is not in the habit of putting a liberal interpretation on the remission rules'. We shall deal more fully with the question of remissions and remission rules later on.*
[ Vide Appendix No. 6.]
Sxction 12.—Extension of Cultivation.
67. The Settlement Officer notes that during the period

Nature of extension of oultivation. subsequent to the last resettlement, delta irrigation hasexteuded by the following figures:-

| (1) Godavari delta_ |  |  |  |  |  |  | scs. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| First orop $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\bullet 89,000$ |
| Second orop $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | 166,500 |
| (2) Kistna detta system | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | 169,000 |

With reference to the increase of second crop as noted by the Settlement. Officer, it may be remarked that second-crop irrigation had already developed to the figure of 166,630 acres in the year 1897-98 or during the last resettlement period itself, so that the actual extension as second-crop irrigation during the period subsequent. to the last resettlement is only 56,370 acres.
68. Concerning the extension of first crop in the Kistna delta, we have not got

## Extension under paddy.

 exact figures for the distribution of the extension of first crop in the Kistna delta in the Kistna and Guntur districts; but, for our purposes it may be sufficiently accurate to take the extension in the Kistna district as about half the entire extent of extension in the delta or at 84,500 acres. The total area, therefore, of extension of first and second crops in the delta portions of the three districts in question would therefore come to 230,000 acres. To the above figure must be added an extent of about 30,000 acres of Divi and Muniyeru projects, so that the total area of extension under all these project systems will come to 260,000 acres. From the figures of paddy cultivation given by the Settlement Officer in paragraph 28 of his Scheme Report, it would appear that the extensions of paddy cultivation since the last resettlement are as follows :-

Taking the above figure from the area of 260,000 acres arrived at an noted abov it will be seen that there is difference to be accounted in the three districts of 25,300 peres under paddy. This is probably explained by the conversion of paddy land into coconut and other gardens, under which there has been an increase of 26,400 acres in East Godavari. There is probably also a small diminution of wet aree in the uplands.
69. Turning again to the crop statistics given in paragraph 28 of the Scheme Report already referred to, it will be noted that the resultsare as follows in the case of other crops than paddy, which are mostly dry crops excepting the insignificant extents under plantains and sugarcane-
(1) The area previous to resettlement period was 447,193 acres, whereas in

Dry crops-Kistna and West Godavari. the period covered by the Scheme Report (fasli 1329-33) the area was 446,016 acres ; so that, as a matter of fact, there has been a shrinkage of 1,177 acres since the last resettlement.
(2) In the case of the East Godavari district, similarly the dry crop figure for the early period was 260,159 acres, whereas the figure $\begin{array}{ll}\text { for the recent period of (fasli } 1329-33 \text { ) was } & 353,852 \\ \text { been an increase here of about } & 93,693 \text { acres. Taking }\end{array}$ East Godavari. acres, so that there h s been an increase here of about 93,693 acres. Taking
therefore the three districts together, the total increase in cultivation, excluding paddy, amounts to 92,516 acres. It will also be seen from the tables given by the Settlement Officer that in the case of the Kistna and West Godavari districts there has been a diminution in the areas under cholam and cumbu and a considerable diminution in such valuable industrial crops like oil-seeds and cotton. Similarly, in the case of the East Godavari district there has been some increase under cholam and horsegram and under coconuts (where there has been an increase of 26,400 acres) ; while in the case of valuable industrial crops, such as, gingelly and tobacco, there has been an appreciable diminution in the area cultivated. It will, therefore, be right to conclude that while in the case of the deltas and the Divi and Muniyeru projects, there has been an extension of paddy cultivation, in the case of the uplands there has been a diminution in the areas under such valuable crops as oil-seeds, cotton, gingelly and tobacco ; while the total expansion of 92,516 acres is mostly under the ordinary non-valuable dry crops.

## Section 13.-Population.

70. The population of Kistna and West Godavari increased by 14, 15 and 7 per

Review of population statistics. cent during the three decades from 1891 to 1921 respectively, similar figures for East Godavari being 10, 13 and 2 per cent respectively. From the Census Report for 1921, Part II, page 338, it is seen that the average increase in Godavari district during the decade $1901-11$ is 14.5 per cent, while in Kistna it was 13.9 per cent. The Settlement Officer in trying to explain the check in population during the decade 1911-21 says that this result was in the main due to the influenza epidemic of 1918. From the following facts, however, it seems obvious, that there must be other causes operating to account for the very large check in increase of population in the decade 1911-21. From the figures given in paragraph 25, page 14, Volume I, of the Census Report for 1921, it is seen that the increase in death-rate due to the influenza epidemic of 1918 was 13.1 per thousand or 1.31 per cent of the population. Besides the increase in the death-rate, there is a fall in the birth-rate, at about 5 per thousand or 0.5 -per cent, so that the total loss of population due to the influenza epidemic may be taken as 11.8 or, say, 2 per cent. The differencэ in the percentage increases during the decades 1901-11 and 1911-21 for the two districts of Godavari and Kistna are 7.7 and 7.3 per cent respectively so that on an average the influenza epidemic cannot be an explanation for the diminution of (7.7-2) $5 \cdot 7$ and (7.3-2) per cent of the population respectively of the two districts. We must therefore look for other causes. From the table on page 30, Volume I, of the Census Report, giving figures for immigrants and emigrants, in the case of the Godavari district, 5.3 , it is learnt that the excess of immigrants over emigrants has dwindled to 28,000 in 1921. In the case of the Kistna district while the excess of the immigrants over emigrants in 1911 was 120,000 , in the year 1921 there was actually an excess of 23,000 emigrants over immigrants.
dependent on agriculture and the harvest is so completely destroyed by a single monsoon failure, that the labourer is thrown out of work for a whole year. It he has no savings, he and his family must starve or be kept alive by relief work even though food may be obtainable from neighbouring districts. It is clear therefore that an increase in population which absorbs the whole surplus of a normal harvest may transform the effect of a monsoon failure from unemployment into famine. It is only suggested that the growth of population may account for the fact that famines still occur in India in spite of the measures which have been taken to avert them."
75. In this country a lowering of the economic condition of the people does not necessarily result in a diminution of the growth of population. Adam Smith (Wealth of Nations) remarks :-
"Poverty, though it no doubt discourages, does not always prevent marriage. It seems even favourable to generation. A highland woman frequently bears more than twenty children while a pampered fine lady is incapable of bearing any, and is generally exhausted by two or three . . Extremely poor people are notoriously careless as to their future. If they get a short burst of high wages for instance, they are apt to spend recklessly and relapse into their former condition as soon as the burst is over."

It is unnecessary for us to make further remarks to establish the obvious proposition that an increase in population under present conditions is rather a menace than otherwise, to the economic condition of the country. We would also refer to the wellknown fact that under present political conditions, emigration from India and settlement outside it, are practically prohibited in many countries of the world where there are enormous vacant areas of land awaiting development. People from India can only emigrate to a limited extent as coolies.

## Sgction 14.-Ceanges in the Agricultural and Pastoral Population.

76. We have been able to verify the figures given by the Special Settlement Officer from the census of 1921, but we have been unable to

Occupation statistics do not indicate progress in ryots' conditions.
verify the figures for the year 1911, owing to the many changes made in the territorial divisions of these districts in the intervening period. While we accept the general correctness of his figures, we are unable to accept his conclusions which he states as follows:-" The figures not only indicate that the land of these districts is held chiefly by landowners and that their numbers are increasing apparently by accession from the ranks of cultivating tenants and labourers but they also dispel any suspicion that the agricultural classes as a whole are losing their hold through poverty and indebtedness." We have found from our inquiries that fragmentation of holdings has been going on to a considerable extent during the period under report and that during recent years two new tendencies have become notable. In the first place owner-cultivators are finding that cultivation is every day becoming less and less profitable on account of the falling prices of paddy and the increasing cost of labour and cattle maintenance. As a result of this many agriculturists who really belong to the labouring classes are taking up lands on leases, although many of them do not own cattle of their own. The latter classes employ the cattle of other ryots and pay for it either in straw or in the shape of their personal labour contributed for cultivation of the lands of others. In the second place the number of labourers who emigrate to Burma and the Straits Settlements return to their native districts and purchase little fragments of land with the result that they jump at once from the class of labourers into that of cultivating landowners.
77. We fail however to see any connexion between these figures and the question of poverty or agricultural indebtedness. Lands sold by ryots who become so deeply involved in debt as to be unable to continue cultivation are purchased either by outsiders (it may be, vakils, officials, etc.) or by the sowcars (either professional money-lenders or ryots who lend money) or rarely by other local ryots. While we claim that the economic condition of the districts under report is certainly far from satisfactory, it is not our contention that the stage has yet been reached that will lead to land going largely out of cultivation. The figures that we have given in section 13 show that firstly, the population has expanded and that secondly the area under cultivation has also expanded, though not in proportion. Apart therefure from
the natural fragmentation of the original boldings that is taking plaee [ride Appent dix No. 7] the expansion of population along with the simultaneors expansiom of cultivation must necessarily lead to ani increase under the first four headings in tid table, namely, non-cultivating land-owners, non-cultivating tenants, cutivating landowners and cultivating tenants. It is impossible therefore to argue from these figures that there has been either an improvement or a deterioration of the economio condition of the three districts under report.
78. There is, however, one point to which we would like to refer as it has an

> Prasure of uurplus babour upon land. important bearing on the economic condition of the districtsunder report, namely, the question of the pressare of the labouring population on land. The Royal Commission on Agriculture remark as follows on this subject, in paragraphs 506 and 507 of their report:-
"We propose to conclude this chapter with a review of the labour situation as it affects cultivation in India. The facts are simple. The evidence which we have received and our own observations indicate that in India in a belt stretching from the Madras Presideacy, east and north through Bengal, Bihar and the United Provinces, the problem is definitely one of superfluity of agricultural labour. This is the case even after allowance is made for the character of the Indian seasons which favours a short period of intense activity at seed time and again at harvest, causing at these times a demand for agricultural labourers, for whom during the remainder of the year there is little or no occupation on the land. The Famine Commission of 1880 observed that the numbers who have no other occupation than agriculture are greatly in excess of what is really required for the thorough cultivation of the land. Since that day the population has increased considerably, especially in Madras and Bengal and to an appreciative extent also in Bihar and Orissa. Although since the census of 1891 the first in which urban and rural population were distinguished, the urban population has shown a higher proportionate rate of increase, by far the greater number has been added to the rural population. It seems clear that the increase in the population and its distribution makes the observations of the Famine Commission even more pertinent to-day than when they were in 1880 . The labour problem, therefore, from the agricultural point of view, is simple one-to lessen the pressure on land, more especially the extreme pressure which at present exists in Bihar and in the deltaic areas of Bengal and Madras and in certain parts of the Madras and in certain parts of the United Provinces. Our examination of the present facts and of the probable future relations between industry and agriculture has not led us to accept that large-scale industry will develop in these areas to an extent likely to relieve materially the pressure on the land by offering to agriculturists the alternative of permanent industrial employment. Some development of industries connected with the primary processing of agricultural products may be expected, but, for the most part this will be seasonal in character and will therefore afford part-time occupations for a small number of agriculturists. The essential condition for relieving pressure on the land is, therefore, in our opinion, mobility and the question arises how far the free movement of the population is impeded by Government regulations, defective communications, or its own inertia. We propose to give a brief account of these factors before considering what measures can be suggested for relieving pressure on land. "They go on to remark that among the chief factors that impede the movement of labour, one of the most important is the widespread possession of, or interest in, a piece of land. "The plot of land may only be an acre or two in extent or the interest in its produce only a share of a few coconut trees or plantains, or it may be, though of considerable extent, situated in a precarious tract. In many cases the hirer of land is subject to conditions which make the status approach much more closely to that of a labourer than an independent cultivator. Very frequently also the holding is so small that the cultivator must supplement his income by working as a labourer. Nevertheless with all these drawhacks the average man will not give up a certain livelihood for the risks of pioneering in Assam, or even of transferring his family from the Deccan to unoceupied tracts in Kanara or Khandesh, in the same Presidency. Secondly there is the factor of indebtedness. Most cultivators are tied to their village by their relations with the village money-lender or trader who for obvious reasons puts every obstacle he can in the way of their emigrating. Lastly there is the important fact of ill-hoalth.

A population which suffers extensively from such enfeebling disesses as olirowio malaria and hookworm cannot be expected to display that energy which would accept and triumph over the risks incidental to the pioneer."

## Saction 15.-Conmunications, eto.

## 79. The Settlement Officer claims that there has been a 30 per oent increase

between the years 1906 and 1924 in the Kistua and West Godavari districts and a 52 per cent increase in the East Godavari district in the total mileage of metalled and unmetalled roads. The roads in these districts are being now developed at the coat of the ryots. constructed and maintained mostly from the additional road-cess that is being levied on the ryots at the rate of one anna in the rupee of the land revenue. In the original settlement in many districts of the Presidency it was the practice to meet the charge for roads from the Government's half share of the net produce, so that the ryots' halfshare was left intact. Mr. Srinivasaraghava Ayyangar writes on this point as follows :-(Page 209, Memorandum on the Progress of the Madras Presidency)" In this connexion it must be remembered that when the principle regulating the share of the net produce which was to represent the land tax was settled in 1856 it was intended that the charges for the maintenance of roads and of village establishments should be met out of Government assessment. And accordingly it was declared that the assessment included a percentage set apart for this purpose. The original principle has since been departed from by the development of the system of local taxation, that as regards the local land-cess at all events, the charges which it was intended should be met from the Government share of the produce are now practically met out of the ryots' share." The present practice therefore is an encroachment on the ryots' half-share of the produce. The alteration in the procedure therefore for finding money for meeting the charges for communications means that the ryots of these districts themselves pay for all costs for making and maintaining roads. It would be legitimate therefore to claim that all road improvements are not liable to be taken as elements in arriving at assessments or increase in assessments due to the so-called unearned income.
80. Besides, it is a well-known fact that in the matter of the village roads the district and taluk boards do actually collect a contribution varying from 30 to 50 per cent of the total cost from the interested ryots. It seems therefore that it is unjust Additional contributions are collected from the ryots. to consider any benefits derived from improyed facilities in the matter of metalled or unmetalled roads which are paid for almost entirely from the ryots' half-share of the net produce, as arguments for increase of taxation in resettiements. Apart from the above considerations it must be noted that the effects of all extensions of existing and the creation of new roads are purely local and there appears to be absolutely no justification for a percentage enhancement of the assessment over a whole district, on the mere basis of the construction of a little bit of road here and there in a district. Most of the unmetalled roads have not been provided with culverts over channels and drains with the result that many of them are not passable for loaded carts till practically the channels and drains dry up. It is besides a well-known fact that the rapid extension of motor-bus traffic has led to considerable deterioration of roads.
81. Since the last resettlement the Bezwada-Masulipatam branch, NidadavoleBhimavaram and Bhimavaram-Gudivada lines, and the Effects of the opening of Coconada-Kotapalli lines have been practically completed new railways. and opened. As remarked however under roads, the effect of these railway extensions is largely local, and it cannot by any means be argued that the whole district benefits by extensions which merely affect particular localities. It might also be added that as soon as the canals in these districts are closed for navigation the railways at once increase their freight charges for produce, etc., while as soon as the canals are open for navigation the freight charges are lowered. There are, therefore, some months in the year when produce has to be transported by railways at pretty high freight charges.
82. The Settlement Officer quotes figures to show the number of markets and shandies as they stand at present. There are no figures

Effects of markets are purely local.
ment. It will however be noticed from the figures given in Appendix IV of the Scheme Report that there are no markets in Nandigama and

Gannavaram taluks and in the Tirurur division. While by the existence of a market close by, the ryot who has a bandy and bulls might save some of the cartage charges, it might be noted that the bulk of the produce under the conditions at present obtaining in most parts is often cold in the village itself; so that it will be right to conclude that the effects of such markets as exist are purely local. The Settlement Officer also gives details of the rice mills in the districts in question, and argues that the rice mills in the area afford proof not only of the facilities at hand to the ryot to dispose of his surplus but also that he has a considerable surplus to sell. It is hardly necessary for us to remark that the produce brought to the mills for milling is not all surplus, for it is a well-known fact that the ryot must raise money soon after his harvest by selling a portion of his paddy to pay the Government kist and to liquidate debts incurred for cultivation expenses, etc. Most ryots are therefore compelled to sell a large portion of their paddy soon after harvest although they have to purchase later on the produce required for their consumption, etc. We have also noticed during our inquiries that in localities where too many mills have been started they are not prospering and it is likely that some of these might collapse in the years to come. We might also add that while these mills man some increased profit to ryots who have got actual surplus to sell they are adding to the unemployment of the labouring classes during those months of the year when agricultural employment is not ordinarily available, who in the absence of these mills would have been employed in the by-industry of pounding paddy and converting it into rice.

## Trade and Traffic.

83. The conclusions of the Special Settlement Officer under this heading, that the

| Review of rail-borne |
| :--- |
| traffic. | statistics indicate economic recovery and commercial devetraffio. lopment in an unmistakable manner are hardly warranted. One might admit that there has been a considerable increase in the number of traders, middlemen and agents who go about into the villages and into the markets, purchase produce and despatch these to various destinations either inside or outside the province. It is difficult to see how the ryots including those who have no surplus at all, but are obliged to sell on account of the pressure of moneylender, Government kist, or urgent domestic expenses benefit by this development. The grain that is transported by rail might be considered under various classes. Firstly, local produce that is sent from one place to another, either to places within these districts or to stations outside. Secondly, produce coming from outside the limits of these districts which merely passes through, to stations beyond the districts. In the cases coming under the first class there may be considerable double counting as in the case of produce despatched from stations within or without districts to stations within these districts and despatched again from the latter stations. It would have been very much to the point, if for purposes of comparison the Settlement Officer had given details of the amount of paddy and rice that are received into these districts from Burma, Tanjore, Nellore, etc. For, strange as it may seem, it is a fact that owing to the development of traders and trading agencies considerable quantities of rice and paddy are received for local consumption from outside these districts, while at certain seasons of the year large quantities of produce are sold for consumption in outside areas. The existence of extended markets beyond the districts may prevent violent fluctuations in prices, but to what extent the ryots benefit by the present level of prices is a matter that depends upon other considerations. The traffic figures do not give any idea of the actual quantities of produce sold; nor has any information been furnished as to the quantities imported later on and purchased for local consumption. The pricer also at which the produce is sold to begin with and those at which it is imported and purchased are important considerations.

Increase in the mileage of navigable canals is insignifioant.
84. Increase in the mileage of navigable canals during the period under report is as follows:-

|  |  |  |  |  |  | milbs. |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Godavari Delta Kystem | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\mathbf{1 4}$ |
| Kistna Delta System | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | 63 |

The additions are not material and their effects are local. The construction of the now aqueduct over the Vriddhagoutami for Polavaram Island will have the effect of
obstrueting the mavigation of that river. Altogether we may say that the changounder this head has not been material.
85. There is no doubt that the traffic on the Kistna and Godavari camals is steadily expanding; but, as remarked by the Special
Canal-borne trafio is very Settlement Officer, building materials and miscellaneous articles have produced the bulk of the total increase. animportant. In the year 1926-27 the total tonnage of the up and down traffic of the Godavari canals amounted to 793,217 tons, of which boilding materials alone acoounted for 423,777 tons, while in the case of the Kistna canals out of the total tonnage of 384,513 tons of the up and down traffic the tonnage of building materials was 225,547 tons. The increase under building materials is obviously due to the fact that Government is using stone largely for river conservancy work and for its building operations and that the local boards are using the canals largely for their increased requirements in stone and road materials.

## Sretion 16.-Agricultural Statigtics.

86. The abstract statement given by the Special Settlement Officer in paragraph Cattle and ploughs. 32 of the scheme report is obviously incorrect. With reference to the figares in columns 5,6 and 7 under ploughs, cattle and sheep and goats, they have obviously been taken from the accounts maintained by village karnams. We found during our investigations that these figures are generally unreliable for the reason that so far as ploughs are concerned the karnams instead of actually counting the number of ploughs in each village, put in theoretic figures in the accounts at the rate of one plough for every pair of cattle bullocks or he-buffaloes. In the case of cattle the account is taken usually in the months of October and November after most of the animals had been sent away from the delta taluks into the pasture grounds of the Agency and Hyderabad. It was impossible in the time at our disposal to attempt at anything like a total census of ploughs and cattle in the districts under report; but we obtained actual accounts in many of the villages that we took up for investigation and found that, as noted above, the karnams' figures in these respects were entirely wrong. For the purpose of comparison and of discussion we note below a table of figures prepared from the Statistical Atlas. of the Madras Presidency (Benson). A comparison of these two tables shows that the Settlement Officer's figures in columns 2, 3 and 4, that is, the area, assessment and pattas are correct [vide Appendix No. 8].
87. From the total figures for pattas shown by the Special Settlement Offier
it will be noticed as remarked by him, that there has been an increase in the number of pattas and shrinkage in the average area of patta, chiefly as a result of fragmentation of holdings by partition; that is because the increase in
Pattas: Congeation of population upon the cultivated land. population during the period under report has outstripped the expansion of cultivation.
88. From the statistical statement that we have prepared it will be seen that the greatest congestion exists in the taluks of Ramachandrapuram, Razole, Tanuku, Narasapur and Divi. In Ramachandrapuram and Divi, the average holding per patta is only 3 acres. In Razole, Tanuku and Narasapar, the corresponding figure is 4 acres. In Bandar, Gudivada, Kaikalur and Rezwada, it is 6 acres and in Cucanada it is 7 acres. It is seen, therefore, that the actual figuree for the several taluks are much more unfavourable than the figures given in column 8 by the Special Settlement Officer. From the statement of pattadars and holdings that we have prepared for certain selected villages in the Kistna, East Godavari and West Godavari districts we find that the areas owned by the following classes of pattadars to the total cultivated area is as follows:-


That is, 3 per cent of the cultivated area is ownel by pattadars owning one acre -and less, 17.7 per cent by pattadars owning between one and five acres and 15.8 par cent by pattadars owning between five and ten acres or that 36.5 per cent of the total area is owned by pattadars with areas less than 10 acres [* vide Appondices Nos. 7 .and 35].
89. Ploughs.-The total number of ploughs in the East Godavari is 113,003 as against 73,009 given by the Special Settlement Officer.
Heview of agricultural -statistics provided in the Soheme Report. kept for cultivation purposes. Dry ploughing is now coming more and more into vogue with the result that many ryots are now keeping ploughs both for dry ploughing and for wet ploughing.
90. We find the figures for cattle given in column 6 in the statement in paragraph 32 of the scheme report, to be correct in the case of the Kistna and West Godavari districts; but the figures given for the East Godavari are seriously underestimated. We have prepared a tabular statement of the details given in Benson's . Statistical Atlas of the Madras Presidency and we find that the total number of cattle for fasli 1330 in the East Godavari district comes to 721,840 instead of 431,946.

## duced

91. It will be useful now to consider the amount of fodder produced by the areas at present under cultivation and compare these with the requirments of the number of cattle maintained in these districts. Taking first the Kistna and West Godathe statement for fasli 1333 given in paragraph 28 of the vari districts we find from the statement for fasli 1333 given in paragraph 28 of the
scheme report that the area under cereals and pulses comes to 957,833 acres or 960,000 in round numbers. Assuming as a safe figure that an acre produces $1,500 \mathrm{lb}$. of straw or other fodder, we find that the total cultivated area will yield 1,440 millior lb . of straw or other fodder. The total number of cattle in these districts is 721,528 . The number of young stock of all kinds is about 215,000 . We would not therefore be far wrong if we assumed the number of units of full-grown cattle to be maintained to be about 600,000 . At the rate of $15,000 \mathrm{lb}$. of straw or other fodder per annum for each unit of cattle, the total annual requirements for feeding the cattle in the Kistna and West Godavari districts comes to $9,000,000,000 \mathrm{lb}$. It will be seen therefore that the produce of straw and fodder from cultivation is less than one-sixth of the total requirements of the cattle in the districts. In the case of the East Godavari district also making a similar allowance for young stock, we take the number of units of full-grown cattle to bs maintained to be 600,000 ; and making the same annual allowance per head as before, the total annual requirements of the cattle amount in this case also to $9,000,000,000 \mathrm{lb}$. The area cultivated under paddy and other cereals and under all kinds of pulses comes to 445,631 acres; and assuming as before that an acre gives $1,500 \mathrm{lb}$. of straw or other fodder, the total fodder yield from 450,000 acres amounts to $675,000,000 \mathrm{lb}$. which is a little over one-fifteenth of the entire annual supply required. It will be useful here to draw special attention to the fact how inadequate is the supply of paddy straw for the requirements of the cattle. It will be useful to remember this, since in the statement of cultivation expenses prepared by Settlement Officer no allowance is made for the maintenance of cattle for the reason that it has been set off against the value of the straw obtained.
92. The figures given above for the total number of cattle maintained in these

Maintenanoe of eattle is a serious drain upon the resourves of ryots. districts must bring forcibly to light the fact that the maintenance of cattle is a very serious drain on the resources of the agricultural population. Before proceeding further it will be useful here to quote the opinion of the Royal Commission on Agriculture on this question. At page 182 of their report they write as follows :-
"The number of bullocks required in agriculture is also affected by the character of the soil, by the cropping adopted, by the length or shortness of the seasons available for ploughing and sowing and by the size of the cattle and by the extent to which irrigation especially from wells is practised. Having regard to all these factors it is to be expected that the number of plough bullocks should
wary widely in different prowinces. If it is assumed that all the bullocks found in India are necessary the question erises what number of cows should suffice to rear the requined number. On the assumption that the 20 bullooks per 100 acres of net sown area, which the census figures show to exist, begin to work bet ween three and four years of age, having an average working life of ten years it follows that there should be seven young male cattle under $3!$ years of age to replace wastage. The census figures show sixteen 'other' cattle of which the proportion of bulls would be between two and three. When allowance is made for the fact that approximately half the cows born will be heifers and that casualties must occur, it will be seen that the number of young male cattle available for replacing wastage is likely to be between five and six. In view of the very poor quality of many of the calres the census figures lend support to the complaint frequently made by witnesses that the price of bullocks was rising because the supply was not equal to the increasing demand. In any case if it be assumed that all the bullocks now kept by cultivators are necessary no reduction in the number of young male cattle would seem to be desirable. But when the number of cattle of about three rears of age and under is compared with the number of cows, a very unsatisfactory feature in cattle management emerges. Indian cows if properly fed and managed might be expected to calve about once a year, as do the cattle in Europe. But it is well-known that in the conditions usual in India calving is very irregular. We were informed that cows in this country may be expected to calve at intervals of about 18 months. The census figures suggest that the a verage interval may be nearer three years than two. But when the census figures are used with the caution that is required they would clearly point to the conclusion which was borne out by the evidence which we heard all over India that the cow when dry is the most neglected animal among the cattle. In discussing the management of the cattle we shall return to this subject. In the meantime it may be stated that the census figures support the view that it is the demand for good bullocks and the poor average quality of cattle which lead breeders to keep many more cows than should be necessary to provide the number of bullocks required for draught."

And then again at page 190, paragraph 168 , they write as follows :-
"As a result of our examination of the subject we may state that we agree with those witnesses who expressed the opinion that India is attempting to maintain an excess number of cattle. Sut it should be observed that this view is not inconsistent with the other, namely, that good cultivation in many parts of the country may now be hindered because of the deficiency of bullock power. We are of opinion that the figures suggest the existence of a vicious circle. The number of cattle within a district depends upon and is regulated by the demand for bullocks. The worse the conaitions for rearing efficient cattle are, the greater the numbers kept tend to be. Cows become less fertile and calres under-sized and do not satisfy cultuators, who in the attempt to secure useful bullocks breed more and more cattle. As numbers increase, or as the increase of tillage encroaches on the better grazing land the deficiency of the arailable supply of food leads to still further poverty in the cows, and a stage is reached when oxen from other provinces or male buffaloes are brought in to assist in cultivation. The general inadequacy of fodder ceads to cattle degeneration and poor stock. And poor stock in its turn means that a large number of cattle has to be maintained. As cattle become smaller the amount of food needed in proportion to their size increases and large numbers of diminutive cattle are therefore a serious drain on those districts in which the fodder supply is so scarce."
93. It will be useful here to consider the significance of the large areas under current fallows in these districts. In the Kistna and West

Significance of current fallows. Godavari districts the area under current fallows is 331,006 acres. (It need hardly be noted that these reprecent dry lands which are kept waste to allow them to recuperate and regain fertility, while in the meantime they are used partly for the purpise of grazing cattle.) In the East Godarari district which includes the Ageney divisions of Yellararam, Polararam and Chodavaram the area under current fallous is $\mathbf{3 5 0 , 9 4 1}$. The neossity fur keeping such large areas as waste, although ther are under occopation and are paring Government kist, is due to the fact that the ryot is pressed to keep lands a railable for crazing purfoses, since in the deltas every arailable acre is taken up for paddy cultiration and as already shown above the total supply of straw and other fodder is cotirely inadequate for the maintenance of cattle.
94. Assuming that one acre of fallow land would provide for grazing for one

Fovest and arable waste. unit of eattle for three months, the areas of current fallows noted above would provide for grazing for 82,500 and $: 87,500$ cattle units respectively. The areas under forests and arable waste (unoccupied) are as follows:-

| ) |  |  |  | Foresta. Acs. | Arable wnete. $\Delta c$. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Kistna and West Godavari |  |  |  | 170,362 | 600,000 |
| East Godavari ... |  | ... | ... | 205,559 | 165,424 |

The areas under forests and arable waste, if taken to be as good grazing ground as current fallows (which certainly is not the case since most of the waste land is rocky, gravelly, barren or marshy), we find, would provide for 192,500 cattle units in the Kistna and West Godavari districts, and 97,700 cattle units in the East Godavari district. It will be noticed that in spite of these extravagant assumptions, there still remains great shortage of fodder for cattle, and that it is particularly acute in the East Godavari district.
95. The figures for the number of sheep and goats show that there is a gradual diminution in their numbers side by side with
Diminution in the number of geats and sheep. the progressive increase in areas under cultivation. This is only to be expected since particularly in the case of sheep and goats diminution of grazing grounds with the increase of cultivation would necessarily lead to diminution in numbers.

## Srotion 17.-Holdings and Revenue.

96. The figures given in paragragh 29 of the Scheme Report by the Settlement Officer confirm the remarks we have made already under
Extension of irrigation is only in parra lands. ' Population ' and 'Crops,' that the expansion of holdings has not kept pace with the expansion of population. It will be seen by a reference to the figures in Appendix (3), page 92, of the Scheme Report, that the expansion of population between 1901 and 1921 in Kistna and West Godavari and East Godavari districts was 22 per cent and 15 per cent, respectively while the total expansion of holdings in these two years was 9 and 19 per cent respectively. It must be noticed, however, that while the expansions under wet were 4 and 9 per cent respectively in the two areas, the expansions under dry were 12 and 25 per cent respectively. We are in a position to state from our inquiries that much of the expansion of wet irrigation has been in the inferior ' Parra' lands while the expansion under dry irrigation has been similarly in the case of the most inferior lands in the upland areas. For this reason we are of opinion that much of this expansion which is due to the pressure of population on land would rather depress than improve economic conditions.

## Darkhasts and Relinquishments.

97. We would draw attention to the large areas of relinquishments in the Divi, Bandar and Kaikalur taluks in the Kistna district, Ellore Exoessive pressure of and Bhimavaram taluks of West Godavari and Amalapuram population upon land. and Razole taluks of East Godavari district, to emphasize the point we have referred to already, namely, that owing to pressure of population inferior and worthless lands are being attempted to be brought under cultivation by the ryots, and this attempt often results in failure and loss. As remarked by the Special Settlement Officer, the proportion of theiarea of darkhasts to relinquishments is as 2:1.

Sbction 18.-Salr for Arrears of Land Revenue.
98. We accept the tables given by the Settlement Officer in paragraph 33 of his Scheme Report although we do not agree entirely with all his inferences. These tables prove the accuracy of the statements we have made elsewhere, vir.: (1) The demand Reasons
numerous. for land everywhere is so great on account of the increase in population and the absence of other employment that the ryot would generally manage somehow or other to pay up his dues. Even when there is no crop or when be has no money of his

- own from the produce of his lands, he generally borrows to pay up the Government dues. We have already referred in this connexion to the statistics of loans issued for this purpose by co-operative credit societies. Money is similarly borrowed from many other sources for the same purpose. (2) The lands that are sold for arrears of land revenue belong to ryots who have been so badly ruined in their cultivation as to be unable to command any credit from any sources. (3) The lands sold are obviously, as a rule, most inferior lands and in the attempts to reclaim them and to get a produce from them the ryot has failed.

The low values realized in the sales proved this.
99. The term "financial misfortune of the pattadar" used by the Settlement Officer is synonymous with loss of crops, unprofitable cultivation, loss of cattle by epidemics, etc., and other
Is the ryot extravagant? items which we shall refer to. The"personal extravagance" referred to by the Settlement Officer is, in our opinion, often a myth. We found in our inquiries that the allegation that is commonly made that the ryot is wasteful in his expenditure on marriages and ceremonies is not generally supported by facts. While it is true that the rich ryots are incurring expenditure in keeping with their status in connexion with marriages, etc., the scale of expenditure is very limited indeed in the case of smaller ryots and those whose income from land is very precarious. We are, however, very much impressed by the fact that where the margin of subsistence is very low indeed as we hope to be able to prove in connexion with our examination of cultivation expenses and net incomes, such obligatory expenses as those that have to be incurred in connexion with marriages and ceremonies are often a fruitful cause for debts incurred, which the ryot is often unable to discharge except by selling part of his land.

## Section 19.-Land Valubs.

100. For the purposes of demonstrating the increase in land values during the Rise in land values. period under report the Special Settlement Officer has selected the periods 1901-05 and 1921-25. It would at once be noted that the latter period is one of very high and unusual prices of grain with the result that land values which keep pace generally with grain prices stood at a very high and unusual level. He has made no attempt to trace the progress of the rise and fall, since 1925. In our remarks on prices we furnish details to show that since 1925 the prices of food-grains have shown a distinct tendency to fall considerably and in the course of our investigations we have collected details of land sales during the period subsequent to 1925 which prove that corresponding to the fall in prices of food-grains, land values in several places have either dropped or are remaining stationary (it may be as explained to us by many ryots), because at the present moment there is considerable difficulty in securing purchasers for land that is available for sale. There are so many facts that influence land sales, and the amounts realized by sale, that we are not prepared to accept the Settlement Officer's presentation of his case or the adequacy of his scrutiny. He remarks no doubt that he has eliminated all documents representing apparently bogus or unusual transaction and all values which were likely to be inflated by the demand for building sites or the imminence of some new project. But the question of sale values is complicated by so many considerations that no mere examination in an office would reveal all the relevant facts connected with each sale or afford any indication of the presence of unusual factors. As remarked by Messrs. Broomfield and Maxwell in paragraph 79 of the report of their special inquiry in Bardoli and Chorasi taluks:-
"There will be the same necessity (as in the case of leases) for scrutiny of the raw material as many sales as leases are for one reason or another not truly indicative of the agricultural value. It is just as essential in the one case as in the other that the scrutiny should be made in the presence of the parties. The same difficultios occur and an almost equal expenditure of time is required in the collection of reliable data. Our own inquiries satisfied us at a very early stage that sales are decidedly inferior to leases as evidences of the profits of agriculture owing to wide fluctuations in prices per acre and the difficulties of explaining them intelligibly. In none of the cases that we have investigated were any special circumstances apparent which could account for a marked variation from the normal. They were not, that is to say, cases obviously standing out from the normal range of prices such as the rents which we
frequently found standing out from the normal range of rents. Had they been sor they might have been disregarded; or in a calculation of the mean of all prices, the extremes might be expected to cancel one another. But in ecarcely any village in which we investigated sales was it possible to say within any reasonable limits that such and such appeared to be the normal selling price of land. No average price per acre or multiple could possibly be regarded as representative. It is sufficient to say. that the conditions being what they are, they have no practical value."
101. Before proceeding to a detailed analysis of some of the statements of land values prepared by the Special Settlement Officer and noted

General factors affecting land values. in paragraph 35 of his Scheme Report, we would like to note here the general factors that are influencing land values at the present time.
102. (1) We have already referred to the fact that the population in the districts Pressare of population. under report has increased faster than expansion or cultivation. The increasing pressure of population on land necessarily means an increasing amount of competition for lands available for sale, with the result that prices are paid which under ordinary circumstances may beconsidered exhorbitant.
103. (2) Investment of money in banks is unpopular to all classes of the population who have got spare money. The well known
Laok of banking facilities and land hunger. leads to the investment of money in land irrespective of losses.
104. (3) During the boom in the prices of foodgrains in the years of the war and in the years following (that is, generally from 1918 to 1925) wet cultivation, particularly in the deltas, paid good incomes with the result that during these years the prices Boom period in grain values. of lands followed the rise in prices of grains and reached high figures. It will be noticed that the Special Settlement Officer has taken exactly this period, that is, the years 1920-21 to 1924-25, as years typical of the high prices in the latter period. It is natural therefore to expect that in the particular years chosen by the Special Settlement Officer the prices of land should be high. One of the observations that came to our particular notice in our inquiries is that since the year 1925 there has been a marked tendency for land values to go down. We have in our inquiries noted a number of cases where lands which were formerly sold for high prices have since the year 1925 been sold for comparatively lower prices. We also came across numerous cases where we found that, although there were lands available for sale and ryots. willing to sell, there were no purchasers forthcoming for the prices previously prevailing. And there is no doubt that in these cases, when the lands actually come for sale, prices much lower than those that were obtained during the years of the boom in prices would come to be realized. Many of such cases, which were noticed by us and our investigators are detailed in the reports for the respective villages.
105. Another important factor that became obvious during every stage of our inquiries was the fact that for the bulk of the people there were no avocations readily available excepting agriculture. We shall have occasion later on to refer to the necessity for Lack of subsidiary and non-agricultural avocations. providing subsidiary employment for the spare time of the agricultural population. But at present we merely wish to emphasise the fact that industrial ventures could not readily be started, nor are there at present sufficient rural industries in existence for investing the money of those who have spare money available. The Royal Commission on Agricultureat page 70 of their report remark as follows :-
"With regard to rural industries in general, it may be said that the ohief needs to the stimulus of new ideas are the provision of adequate instruction and advice on the oommercial side. The opportunities which they present for improving the condition of the rural population are extremely limited. And as a general principle it may be laid down that the chief solution of the problem of the cultivator lies in promoting the intensity and diversity of his agriculture." It is no surprise, therefore, to find that there is a general scramble for land and that on this account priees neeessarity reach a high level.
106. Among the special factors that characterize land sales, and which could

Epócial airouństanoes intuencing prices of land. only be brought out clearly by a detailed inquiry in each village in the presence of the ryots concerned, may be mentioned the following considerations.
107. (1) Sales to money lenders or other agricullurists in satigfaction of debte.In this class of cases it is of course usual for the purchaser to enter in the document practically the amount that is due to him with interest charges, etc., and this figure is usually much higher than the proper value of the lands. The value as indicating prices is therefore really fictitious, although in cases where the debtor has no other resources except the land in question, the total amount of the debt with interest is necessarily entered as the amount paid in virtue of the sale.
(2) Family arrangements and Charitable sales.-In this class of sales the purchase-money is not regulated by ordinary commercial considerations, and the figures therefore are higher than normal.
(3) Special lands.-These generally form a numerous class in sales. The following classes may be considered under this.

## A: Doubied-crop land.

Land having special facilities for irrigation for first and second crops naturally fetch special prices.
Many ryots do not possess plots suitable for raising early seed-beds. Such lands
B. Seed-bed land. must possess special facilities for getting early water, if canal-fed. If not canal-fed, they must have facilities for getting water either from a well or a tank or a spring pond.

It very often happens that a land adjoining a ryot's holding becomes available fur C. Lands which have a special value for partionlar ryote. sale. There are numerous cases where the purchase of a particular bit of land would enable the ryot to make a compact block of his fields. Where fragmentation is so general as in these districts, the ryots are naturally anxious to purchase such lands belonging to other ryots as would enable them to save cultivation expenses and to consolidate their holdings.
D. The Isale might include land which contains a house or a cattle-shed or a well or fruit trees, etc. In these cases naturally the values are higher than normal.

Land on which the ryot has spent money for rendering it more fertile or for E. Improved land. improving irrigational facilities, by lowering it or by naturally fetches higher prices than ordinary.
108. With the Special Settlement Officer's contention that the best land rarely

Best land often comes first to the market. comes for sale and that the rise in the value of land is one of the strongest indications of increased profits we entirely disagree. We found in many cases that the beet land is often sold either by small ryots who are heavily involved in debt or by those who wish to migrate from the village to some new area In our inquiries we came across numerous cases of ryots who had sold valuable lands and have gone to settle down in Divi Island or have taken up inferior lands at low prices in the coastal tracts. These ryots hope that, by taking up these inferior lands at low prices and improving them for some years, they could eventually sell them for fairly high profits. In this case by selling a small area of the best land they are able to purchase a large area of inferior land for improvement. Concerning the Settlement Officer's reference to increased profits due to rise in prices of food-grains, we need only remark that there are so many factors entering into the element of net profits that we hope to be able to show that in many cases the theory of increased profits is a myth.

## Sbotior 20.-Lrasp Valurs.

109. In paragraph 76 of the Scheme Report the Settlement Officer deals with the question of lease values. It would appear almost as if he considers lease values to be equivalent to the profits of agriculture. In the concluding sentence of this section he states:
The discassion in the Scheme Report upon lease values is very crude.
"It is clear, therefore, that so far from the increased monetary return from agriculture having been swallowed up by the increased costs of cultivation, profits have risen faster than expenses."
110. We must, however, remark that the Settlement Officer's presentation of the case for leases is so crude and bald that we are not surprised at the conclusions he has reached. Lease or rental value is not the same thing as rents and does not emerge from a mere enumeration of the rents actually paid or agreed upon. As remarked by Mr. Anderson (page 79: 'Facts and Fallcies') "Rental value is a sublimation or abstraction from actual rents of all sorts"; and as remarked by Messrs. Broomsfield and Maxwell, "There is therefore, bound to be considerable difficulty in ascertaining rents correctly." Where leasing is the exception rather than the rule as is admitted by the Special Settlement Officer, one must be very cautious in applying any rental values deduced from the actual rents found to the much larger area which is never leased at all. The lease values noted above by the Special Settlement Officer are not true rental values at all. In fact, the matter is so complicated that we are surprised that the Scheme Report is content with a mere enumeration of rents with reference to the various assessments. An enumeration of leases obtained from SubRegistrars' offices, in our opinion, proves nothing at all. The total number of leases dealt with by the Special Settlement Offieer is only 885 for the later period. They cover altogether an insignificant extent of $4,144.81$ acres as against a total cultivated area of $1,811,517$ acres of wet and dry land. The question is how many valid leases will remain and how many true rental values will be left if we eliminate extreme cases and those in which special and unusual factors came into operation. As we shall presently explain, the matter is so complex that to arrive at any data of value at all it is necessary that each individual lease should be examined thoroughly in the presence of the parties concerned and of the people acquainted with all the facts of the case. We have no reason at all to believe that anything like this has been -attempted.

Faotors causing a rise in lease valuea.
111. To illustrate the complexity of the whole case we shall enumerate a few factors which lead to high lease values-
(1) Leases of sowcars or agriculturists to tenants who have borrowed from them : In this case, the lease amounts would be high as they would include interest charges as well and may often include payment of a part of the capital.
(2) Leases of temple lands and charitable leases: In these cases, the lessees might pay high rents without regard to other considerations.
(3) Competitive rents: In villages where the pressure of population is great there is generally a great deal of competition from small landholders to take up land on lease and in the course of our enquiries we have come across many cases where on account of the competition lease value has gone up.
(4) Lands on a portion of which there may be a house or a shed or fruit trees, etc., which enhance the lease amounts.
(5) (a) Lands commanding special irrigation facilities such as lands on which -a second crop may be raised or lands which have been lowered in level so as to secure easy command of irrigation supplies at all times.
(b) Lands suitable for seed-beds.

All ryots do not possess land suitable for seed-beds. The land must be suitable in level and must be easily commanded by and lie close to the irrigation source. In the Godavaries ryots in a very large number of cases raise seed-beds in May with water from wells, spring-ponds, tanks, etc., and lands possessing these facilities naturally fetch high lease values.
(6) Improved land: Land in a village on which the ryot has invested a lot of money either in the way of lowering it or of increasing its fertility by supplying it with a great deal of patimannu for a number of years or for which he had provided protective bunds when otherwise it would be subject to submersion-all command higher rental values than other lands.
(7) Lands possessing advantages of location and contiguity: On account of -the fragmentation of holdings a ryot is often anxious to take on lease bits of lands which intervene between his own holdings, since such leases enable him to cultivate this own lands economically and prevent cattle trespass, ete., or the land may be
inituated very near the village site and so provides facilities for carting manure to theflelds and for carting produce from the fields, etc. Lands possessing euch advantages of location generally command high lease values.
(8) Ficticious lease: There is quite a large class of leases in which the amounts entered are not really payable. In the course of our inquiries we came across many cases where the amounts entered in the leases are not really payable by the present lossees but merely represent amounts which were entered in former leases and they are now being continued at the same figures. Where the lessee is landless he is generally at the mercy of the lessor. In this case the lessor enters a high figure in the lease deed so that in case the present lessee has to be turned out he might get another man to take up the land for the amount entered in the deed. Although we found that this trick generally fails, the practice of entering ficticious amounts in lease deeds is not uncommon.
(9) Lands suitable for second crop irrigation for plantains, sugarcane, turmeric and such other valuable crops generally command a high lease value.
112. Besides the above, there are many other factors that affect lease values very

Crop sharing system is becoming more popular. sharing system seems to be very widely prevalent. Throughout the upland area and in many parts of the delta systems where the irrigation or the rain supply is precarious, the erop sharing system appears to be replacing the regular leases. The reason for the large extension of the crop sharing system in the deltas is apparently because, with the extension of irrigation that has been taking place, the irrigation supplies in many villages have been getting scantier than before.
113. In considering what share of the lease values represents true rental values,

The contribution made by the landlord abould be deduoted from the face value of the lease. Losses sustained. we have to bear in mind, besides the points that we have already noted above, many other questions of a very vital nature. For instance, it is the universal practice for the landlord to provide all the manure at his own cost besides carrying out necessary repairs, etc., to the fields before leasing them out. The value of patimannu supplied is an important item in regulating the amounts of the leases. Lands bearing a high assessment would not fetch decent lease amounts, unless the landlord provided for complete manuring before leasing. But apart from the above consideration, one of the points that was brought constantly to our notice during our investigations was the fact that most lessees were in arrears and that a very large number who have been leasing lands for a number of years have had to sell their lands to pay up arrears and have consequently become ruined. In determining the value of a lease, therefore, we have to consider not merely the value of the manure supplied but also the amount of accumulated arrears in each case.
114. We give below in an appendix a statement of lessees who have incurred losses and have lost their lands in the villages that we took up for investigation. The practice of landlords giving remissions to their lessees is very general. When, as under

Losses in leases, and remissions granted. tank irrigation, the tank receives no supply at all, the entire amount of the lease is
generally remitted and when owing to partial and unsatisfactory supplies, the yield is very low, corresponding remissions are granted. The practice of landlords granting remissions obtains also in the deltas for reasons similar to those noted above for the uplands. Where owing to extraordinary floods causing submersion and loss; very poor supplies resulting in diminished yields or where owing to pests the crop outturn is badly affected, remissions are, as a rule, granted.
115. Another important point that is rather masked by the manner of presenta-

Most of the leases are in grain. tion of the statement of leases by the Settlement Officer is the fact that these leases are nearly always in grain and not in cash.* To convert grain payments into cash values the Settlement Officer states that he had adopted prices of grain prevailing in the district during the year of the transaction. When we come to deal with the question
of prices, we shall have occasion to prove how unreliable are the statements of prices in Government records based upon information furnished by Collectors to the Board of Revenue. Apart, therefore, from the question of unreliability of price figures and consequently of the money values of grain leases we would note that it is unfortunate that the Settlement Officer has adopted the period 1920-21 to 1924-25 as representing lease values at the present time. The years 1918 and onwards and almost up tothe year 1927 were years of abnormal grain prices and naturally money values of grain leases based upon the ruling prices in these years show extraordinarily high values for leases. If, therefore, a comparison of the grain leases in the earlier period and the later period showed that there was very little difference in these, it means that the difference in the money values of leases in two periods is merely due to the increase in the price of grains. While the money values of leases depending, as they do, on the prices of grain at the time are high in years when prices ruled high, it follows that there would be a drop in lease values when the prices of grain fall.

115-A. In our enquiries we came across numerous cases which prove the tendency
Post-war period of high prices of grain naturally shows high lease values. of leases to go down after the year 1925. Apart from thefall in prices, the other causes that are tending to bring down these values are the following :-
(1) Cultivation in many cases is now resulting in a loss, as wages and cultivation expenses have gone up.
(2) Competition in many cases is not now so keen as before as several lessees. have incurred losses.
(3) The sharing system is now coming into vogue largely in many villages, which means that lease values are dropping.
116. We attach comparative statements showing the grain leases obtained in Review of grain leases. some typical taluks (where grain leases are the rule for two periods taken by the Special Settlement Officer for comparison namely 1901-05 and 1920-25). These statements are self-explanatory and show that, as a rule, grain leases are not altered in the two periods under reference.

We also attach as appendices, tabular statements of leases in these districts, wherethe lessees have undergone losses and in many cases lost all or part of their properties. (Vide Appendix No. 10.)
117. An enquiry was made under our direction into the results of the leases. registered by the ryots of 16 villages.* (*Vide Appendix No. 10.)

The consolidated results of this enquiry are given below :-
Table No. 1.
Consolidated village enquiries into leases-Kistna district (Dry).

| Area owned. | Number of leases. | Average holding owned, | Area rented. | Average holding rented. | Total rent. | Rent per are. | Lrosees inourred in the last four years. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No land | 6 |  | 16.52 | 810 | $90 \cdot 0$ | 6.0 | $\begin{array}{cc} \text { Aca. CRARTM. } \\ 200 & 0 \end{array}$ |
| One acre and less | 7 | 0.28 | 11.41 | 168 | 1480 | 128 |  |
| Five aores and lese bat over one aore. | 11 | 142 | 18.06 | $1 \cdot 64$ | 273*0 | 160 | $\cdots$ |
| Ton eores and losa but over flye andes. | 18 | 260 | 15.00 | 1.25 | 368.0 | 24.8 | 4000 |
| Orer ten acres ${ }^{\text {Orer }}$ | 51 | 16.00 | 895.91 | 776 | 4,480.0 | 11.31 | 8,800 0 |

118. This table indicates that landless people and small holders are not very much in the run for lands to be rented and that only the ryots each of whom has 10 acres and more rented most of the land. I his is because in these dry villages only such ryots who bave atleast a pair of bullocks each and who therefore would like to rent land in order to get more service out of their cattle are able to take others' lands for rent. In these villages landless people cannot command credit to purchase bullocks and carts and landlords who would like to lease out their lands do not have much trust in them. Most of the land is rented at Rs. 11 per acre and exceptionally high I-9
rents like Rs. 15 and 24 are paid for only small extents of land a nd under apeeial circumstances. The losses incurred in the last four years by the renters having more than 10 acres each amounted to twice as much as the total rent payable in a year, i.e.; 2 years' rent.
[Vide pages 35-36.]
Table No. 2.
Consolidated table for village enquery into leases-Kistna district (Della wot).

| Ares owned. | Number of rentiert. | Average holding owned. | Total ares rented. | A verage holding sented. | Total rent. | Eent per e05 | Lows in the last four pers |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No land | 23 | 0.80 | 69.01 | $2 \cdot 66$ | 8.831 .0 | 67.0 | 8,800 |
| One acre and less ... | 8 | 046 | 81.78 | 8.97 | 2,368-0 | 760 | 1,260 |
| Five nores and less but over one aore. | 47 | 200 | 91.20 | 194 | 6,1240 | 660 | 1,270 |
| Ten ames and less but | 17 | $8 \cdot 35$ | 67.61 | 281 | 3,0900 | 650 | 1,760 |
| Over ton aeres. | 14 | 11.71 | 4808 | 800 | 8,422.0 | 81.0 | 8,100 |
| Total | 109 | -• | 271.68 | -• | 17,8350 | $\cdots$ | 11,180 |

119. The land rented by the landless people and the ryots having only an acre and less each is very considerable, although the ryots having five acres and less each rented the largest area. It is generally admitted that by renting others' lands, landless people become more creditworthy and are able to raise more credit. Many of these small cultivators are East Kapus who have migrated into these parts from Ganjam and Vizagapatam districts, and who rent others' lands in preference to working for wages. These people are very hardworking and thrifty and are always trying to make land yield its utmost. They often agree to work as customary employees for some ryots who possess cattle, in return for the services of cattle at usual rates or free of charge and they thus get on without any bullocks. Some of them manage to induce some ryots to cart their paddy and straw home, in the way of mamul for the help rendered to them. Thus most of these people are not obliged to spend much either upon agricultural implements or upon the service of cattle and they have neither stables nor permanent labour to be maintained. In spite of all these favourable circumstances, they have had to lose in the past four years considerable sums, landless people losing 75 per cent of one year's rent and those having 5 acres each, about 25 per cent of one year's rent.
120. The land rented by all the ryots who have more than five acres each is less than that rented by others. The number of such bigger

Thuse having more than five acres of land each have rented less land than the others. ryots is also less than others. Eividently renting others' land is not so popular among bigger ryots. It is interesting to observe that the rent per acre paid by the largest class of rentiers, i.e., those who have five acres and less each pay higher rents than the latter possibly because they are more anxious to rent some land at any cost, and they do not mind their rents being in arrears.

Table No. 3.
Consolidated village enquiry into leases-West Godavari (Delta wet).

121. This table shows that in the three villages selected for this enquiry three big ryots rented as much land as 11 ryots who have very little or no land and that they are willing to pay a very much higher rent than the latter. All these ryots have lost heavily in this venture.

Table No. 4.
Consolidated table for the village enquiry into leases for East Godavari district (Upland wet).

| Ares owned. | Namber of rentiors. | Average holding owned. | Total area rentad. | Average holding rented. | Total rent paid. | Rent par acre. | Loss in laet four years. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Woland | 28 |  | $28 \cdot 42$ | 1. 5 | 713 |  | 875 |
| One aore and leas . . | 2 | 044 | 7.62 | 881 | 70 | 914 | 50 |
| Hive acrom and lombut | 9 | 1.65 | 14.20 | 268 | 886 | 278 | 25 |
| Ten acres and lean but | 16 | 180 | 19.45 | $1 \cdot 22$ | 415 | 214 | 40 |
| Opertan anes | 18 | 3125 | 137.25 | 8.58 | 1,784 | 180 | 1,370 |
| Total | 69 | - | 207-10 | . | 8,368 | $\cdots$ | 2,360 |

122. The details given in the above table relate to the conditions prevailing in Gummalladoddi and Burugupudi of Rajahmundry taluk. Most of the wet land of these places belongs to outsiders who are glad to lease out their lands to the resident ryots. Most of the rented land is taken up by the bigger ryots having more than ten acres each, who pay very much lower rent than is demanded from the others. This is largely due to their greater bargaining capacity and stronger economic conditions. The landholders are often willing to lease out their lands at a cheaper rate to the rich ryots as they can feel sure about the proper and prompt payment of the rents due. The ryots who have five acres and less each and the bigger ryots have also lost rather considerable sums in spite of the low rents they have to pay. Even in these villages where ryots work hard and extract more work from their cattle and where there is plenty of work in both dry and wet lands, it is not paying to rent others' lands.

Table No. 5.
Consolidated village enquiry into leases-East Godavari district (Dry).

| Area owned. | Number of rentiare. | Average bolding. | Total area rented. | Average holding rented. | Total rent. | Rent per sare. | Loen. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No land | 8 | . | 88.65 | 4.83 | 841 | $9 \cdot 6$ | 265 |
| One aore and lese | $\ddot{\square}$ |  | $1 \ddot{9}$ | 10*0 | ios | $\because$ |  |
| Bive aeres and less but more than one acre. | 2 | 40 | 18.0 | 19-0 | 109 | 6.0 | 160 |
| Ten maree and lean .. Over ten aorce | 10 | 376 898 | 14.8 86.61 | $\begin{aligned} & 3.60 \\ & 3.66 \end{aligned}$ | 200 234 | 14.4 6.8 | 200 280 |
| Total . | 24 | - | 107.65 | . | 884 | $\cdots$ | 845 |

123. The landless tenants have rented more dry land in the same two villages than wet land; but the bigger ryots, having more than 10 acres each have taken only 36 acres of dry land, showing thus that they are more anxious to have wet land to insure themselves against the too frequent failures of dry crops. Except in the case of four ryots who pay on the average a rent of Rs. 14-4-0 but who have lost Rs. 200 the rent paid in these villages for dry land ranges from Rs. 6 to 8 per acre. All the people who have rented lands have been found to have lost hearily.
124. Detailed enquiry was made into the results of leases in the following villages:-

Weat Godadari District.

Mogallu.
Vadlur.
Khandavilli.

Vegeswarapuram (upland wet).
Devarapalli (dry).

## East Godaveri District.

Burgupadi (upland wet).
1 Gummaladoddi (upland wet).

## Kistna District.

Patamata (dry).
Idupugallu.
Elaprole (upland wet).
Poranki.
Kanohikacheria (dry).

## Section 21.-Commutation Pricrs.

125. In considering the question of prices to be adopted for purposes of

Method of fixing commutation prices. commutation, we shall begin with a review of the orders of Government on this subject in the past. Mr. Srinivasa Raghava Ayyangar in paragraph 69 of his memorandum writes as follows:-
" It is further ruled that the grain assessment should be commuted into money value with reference to the average prices at which grain had been sold by the ryots for a sufficiently long period of years, in view, to taking account, of the fluctuations in prices which usually occur."

We would particularly invite attention to the words ": sold by the ryots", since there is a great deal of difference between the prices of grain as sold by the ryots and the prices at which grain is sold in the markets. Then again in paragraph 70 he-writes:-
"The third process is to find the money value of the grain outturn. For this purpose, the average of the market prices of standard crops in the months in which the ryots sell their produce for a number of years, generally twenty, is ascertained, and deducting from it 8 to 20 per cent for cartage and merchants' profits, the remainder is taken to represent the ryots' prices and adopted as the commutation rate; the grain outturn is converted into money at this rate."
126. It would appear from this extract that it is assumed that if a deduction of 8 to 20 per cent is made on the market prices, the result is the ryots selling prices. We shall show later on that this is not correct. Again, in paragraph 72 he writes as follows:-
"In fixing the commutation rate, from 8 to 20 per cent is deducted from the average prices for cartage and merchants' profits. The average prices are prices for the entire district, while the price in one taluk station often differs from that in another by as much as 30 per cent. To the ryots who have lands in the vicinity of the taluk stations where prices rule high, the rate is favourable, but to the ryots in out of the way parts, the commutation rates are unfavourable and relief has to be given by reducing the rates under the system of grouping already alluded to. Moreover, the settlement calculations do not ostensibly, at all events, make allowances for the liability of the ryot to pay a fixed cash assessment in all seasons whether the crop he reaps is abundant or so scanty as to be hardly sufficient for his subsistence. It is well known that poor ryots who borrow grain from sowcars or the richer ryots in the cultivation season have to pay at the harvest, that is, in 6 or 8 months, the quantity borrowed together with an additional amount varying from 25 to 50 per cent. When the crop fails and payment has to be postponed to the next harvest, the additional quantity is of course proportionately increased."

Again, as remarked by Sir Thomas Munroe:-
"It is in the nature of assessment procceding from single fields to whole districts and taking each field at its supposed average produce to make the correct sum greater than what can be easily realized and in view of this he used to lower the estimates of the assessors from 5 to 15 per cent."
127. In paragraph 79, Mr. Srinivasa Raghava Ayyangar writes as follows :-
"I beg to suggest that the rules (regarding revision of assessment) should be embodied in a legislative enactment or, if this is considered undesirable, then they should be notified in the official gazettes. Before this is done, certain preliminary questions will have to be settled. The first is, the initial schedule of prices which is
to be taken as the standard and with reference to which future revisions of assesment are to be regulated. The commutation prices adopted for the existing settlements oannot be taken as the standards for reasons which would be apparent from the acoount already given in regard to the manner in which the calculations as to the land valuations made for purposes of settlement are adjusted, with a view to that the enhancements of revenue resulting from the same do not exceed what the trects settled may be expected fram their general condition to be called upon to pay with ease. Moreover, the principle adapted in fixing the commutation rates has not been uniform in all districts. In the earlier settlements, the commutation rates were hased on the average prices of as many years as there were accounts for. In connexion with the Salem Settlement, this rule was altered and it was laid down that the commutation rates should be based on the average price of twenty years ending 1864. Then again in comnexion with the settlement of Madura district, the latter rule was modified and it was enjoined that the commutation rates should be the average price for the twenty years preceding the year of revision of settlement minus a percentage allowance for cartage and merchants profits, subject to the condition that where the rate thus reduced was higher than the lowest price which had obtained during the period of tudenty years, the latter should be taken as the commutation rate. This latter condition alas, since 1887, been dispensed with. In the earlier settlements, the prices taken were the prices of ryots selling months and in the recent settlement, the average prices of whole years are taken subject to the deductions above referred to."
128. In paragraph 35 of the memorandum printed on page 184 of Resolution No. 1 of the Governor-General in Council, dated January, we find the following:-
"The normal gross produce, that is, the gross produce struck on a comparison of good and bad years is valued at a pary favourable commutation rate, usually considerably below the average of the previous twenty years from which, moreover, all years
cess are excluded; from this sum, frem 10 to 27 per cent is

Nature of the twenty nonfamine years. of scarcity and high prices are excluded ; from this sum, from 10 to 27 per cent is deducted for merchants' profits and distance from markets."

From this extract, it will be seen that it was the intention of Government at the time to exclude, in considering the priees, all years of searcity and high prices.
129. A persual of the tables given in Appendix 15 to the Scheme Report will show that the Special Settlement Officer has, for purposes of arriving at the commutation rate, selected twenty years which give the highest rates possible for the thirty years period. The tables show that the pricer went up suddenly in the year 1918-19 reaching the highest in 1919-20 and then commenced falling slightly. We shall show later on that the tendency since 1922-23 has been on the whole towards a fall, the price levels reached in 1929 being the lowest since 1919-20. The tables also show that contrary to the orders quoted above, the year 1918-19, which was a famine year in the Kistna district, has also been taken into account in the twenty-year period for calculation. The Settlement Officer remarks-
"The soarcity of 1918-19, which led to the establishment of test works in the outlying parts of Nandigama taluk of Kistna, did not develop into a regular famine and such as it was, affeeted only the small zamindari enclaves of Lingala and Munagala lying in the Nizam's territory. It cannot therefore justify the exclusion of this year."
130. We cannut admuit the validity of this quibbling which seeks to make a difference between scarcity and regular famine. The price levels reached in that year show that the after-effect of the causes that led to the establishment of the test works referred to was reflected at once in a sudden jump in the prioes of food-grains in the district and as such it should have been excluded.
131. Then again high price levels from 1919-20 onwards were due to artificial and abnormal conditions created by the after-effects of the

High priers iu the period 1919-24 were dur to exeeptiounl cansre. War, whioh resulted in an abnormal increase in the prices which reached levels that cannot possibly be maintained in the years following. It would onty have been right if, in eccordance with the orders quoted above, these years of very high prices had also been excluded. There is besides a very important difference between the ryots' selling price of grain and the price at which grain is sold as aoted in the price schedules. published by the Buard of Revenue.
132. In connexion with the question of commutation prices we are concerned not with the prices at which grain is being pold. but with the price at which the ryot or the producer is selling grain. In other words, we have to bear in mind the difference between the price of grain at which the ryot sells his produce and the price at which, it may be, he purchases it

Producer's selling prices should be distinguished from the consumers' purchase prices. at various periods. To illustrate this point it will be useful to remember the difference between, for instance, the delta taluks of Kistna where paddy is sold largely and the non-deltaic taluk of Nandigama where paddy is bought largely for consumption at all times of the year. In a centre, therefore, like Nandigama where paddy has to be bought largely after being transported from distant markets the price is naturally high, since it represents not the producer's price but rather the consumer's price of paddy. It is besides misleading to call certain months of the gear the ryot's selling months without reference to the above point, whether in the transactions at the time the ryot is a seller or a buyer. The failure in all the schedules of prices to reaugnize this important difference makes these schedules largely fictitious, and the general unreliability of these statements is enhanced by the manner of, and the ageney for, their preparation.
133. We learn that the task of ascertaining local prices is generally entrusted to some junior clerk in the taluk offices. These clerks are expected to go to the market and to find out the selling prices; but it is difficult to know the exact manner in which these clerks find out the prices ; and ubviously there is no superior agency whose duty it is to verify the accu-

The present Government method of ascertaining the pripes of paddy, etc., is very defective. racy of the figures entered by the clerks. It would appear therefore that these unverified statements are transmitted to the Collectors' offices, consolidated there and then transmitted to the Board of Revenue. Mr. Datta at page 199, Volume I of inquiry into the rise of prices writes:-
" Many Collectors in Madras, for example, never scrutinize the statistics of prices furnished to the Board of Revenue because of the heavy work which they have to do. The prices statistics in Madras are got from patels and furnished to the Chief Accountant of the Taluk Headquarters. The Tahsildar checks these figures when ecarcity threatens. The Tahsildar sends the returns to the Collector or the District Magistrate, who in turn sends them to the Board of Revenue." The agency employed and the absence of check to the same, therefore, would make these figures highly unreliable.

We shall next proceed to examine briefly the history of the variations in prices during the period under report at various stations.

## Prices.

Causes peculiar to India.
134. The causes peculiar to India which have led to a rise in prices are summarized by Mr. Datta as follows:-
(1) A shortage in the supply of agricultural products and raw materials;
(2) An increase in the demand for these commodities;
(3) An increase in the cost of production;
(4) The development of railways and other communications in India and the lowering of the direct and indirect costs of transport in India itself and between Indian ports and foreign countries;
(5) An improvement in the general monetary and banking facilities; and
(6) An increase in the volume of the circulating medium. Among world causes, he notes the following:-
(i) A shortage in the supply of, and an increase in the demand for, the staple commodities in the world's markets ;
(ii) The increased gold supply from the world miner;
(iii) The development of credit; and
(iv) The destructive wars and increase of the standing army and navy in most of the prosperous countries diverting capital and labour to unproductive purposes and causing an increased demand for many clases of commodities.
135. Taking first the item of shortage in the supply and the many causes peculiar to India, he refers to the following as the main reasons that have contributed to this:-
(1) Growth of cultivation not keeping pace with the growth of population,
(2) Unseasonable rainfall,
(3) Substitution of non-fooderops for fooderops,
(4) Inferiority of new lands taken up for cultivation,
(5) Insufficient tillage on account of dearness and scarcity of plough-cattle and labour, and
(6) Decreased productive power of the soil.
-136. In considering the latter set of causes that contribute to a shortage in the supply of raw materials such as food-grains and other products it would at once be recognized that there is no certainty that these factors will continue always to be effective. A series of good seasons resulting in good harvests would at once be reflected by a fall in prices. There is no certainty besides that Indian and world causes may not lead to a drop in the cultivation of non-foodcrops and an increase in the production of food-crops. The development of agricultural science and its application to practical crop production has even now the tendency of increasing outturns, as for instance, in the increasing application of artificial manures. Similarly, the development of every large irrigation scheme in India and particularly in this Presidency has a similar effect in bringing about a fall in prices. The completion, for instance, of the Sukkur Barrage Scheme and the Sarda Canal Project and others outside the Presidency, the execution similarly of the Tungabhadra and Kistna Projects which would bring under irrigation probably a couple of million acres, would have the same tendency. The problem of insufficiency of plough-cattle and insufficient tillage are occupying also the attention of our agricultural and other experts and it would be unreasonable to consider that the present inefficient condition of agriculture which retards the crop production will continue indefinitely. The problem of increasing the productiveness of the soil being certainly one of the most vital for a country predominantly agricultural must certainly receive a solution before many years are past.

- 137. Among local or Indian causes that affect prices may be mentioned, the decision of the Government of India to place the exchange value of the rupee at le. $6 \boldsymbol{d}$ It is estimated that this has had the effect of reducing the profits of producers of agricultural commodities by about $12 \frac{1}{2}$ per cent.
.138. Among world factors that might result in a fall of prices in India may be World factors. mentioned, the not very unlikely extension of crop production outside India, the opening up and development of cultivation of new lands in Africa, in Canada and in Australia, Russia and other Asiatic countries-a process that appears even now to be engaging the attention of their respective Governments. These would surely result, by increasing crop production, in a fall in the prices of Indian crop products.
-139. Concerning the influence of an increased supply of gold from the world mines on prices, Prof. Seligman writes as follows:-
"The standard of the civilized world is now, and has been for some time gold gold, in other words, is being turned out in such enormous quantities that it is falling in value. But a fall in the value of gold, other things being equal, is tantamount to a rise in general prices."

140. How long the present rate of production of gold will continue, nobody can predict and a lower rate of production or exhaustion for the world's resources must necessarily result in a fall in prices. Then again, the expansion of the activities of the League of Nations and general trend of world forces against war as the arbiter of the destinies of nations seems already to indicate a reduction in armaments and in the strength of armies and navies. Even, therefone, if wars like the last Great European War are not abolished entirely, it seems certain that the effect of world forces would be towards the utilization of the world's man-power more and more for productive purposes instead of the unproductive and destructive purposes of war.
141. Mr. Datta in concluding his review of the rise in prices states that "the present price level, i.e., 1912, will be maintained, if not raised."

Sinoe the year 1918 pricea bave risen, but already furces seem to be at work which peema to udicate that the tendency for a fall has already etarted and maty anotinue. It is, however, impossible for any one to state that for the next 30 veers prices will either continue to rise or to fall, dependent as this fact is not merely on causes within India, but on the world causes.

> Which class of people is benefited from a rise in prices.
142. Again, in cummarising the effecta of the rise in prioes on different eections of the community, Mr. Datta writes as follows:-
"The classes that are benefited from the rise of prices are cultivaturs and purnchasers of commodities which have risen in price faster than the cont of production. It cannot be gainsaid that the land-owning clasees excluding thoee Zamindars of Bengal, Oudh and other parts of India who can eahance their teoants' rents only at considerable intervals and including the proprietary brotherboods of Northern India and the petty proprielors holding their lands disectly from the Slate in the Ryoteari Pro vinces of Madras, Bombay, Berar, Assom and Burma have bentited, for their profits from agriculture are greater than thes were."
143. In the eection on cultivation expenses, it will be our duty to inquire how far the rise in prices has benefited various clases of cultivators, i.e., not merely tho owners of large areas of lands but also, thoee Mr. Ihatta calls 'petty proprietors's who in the districts under report form a rery considerable clase. Indeed, the main queetion that we have set ourselves to solve is, how far an average increase in the present level of assessments is justifiable not nerely with refareace to those whe may be considered to be deriving profits from cultivation and benefiting by the increase in the prices of their produce, but also those very cansiderable clases of landed proprietors who have either no surplus produce to sell at all or whoee surplus produce is so small that any increase in prices obtained is more than swallowed up by the increase in the aut of production.

Femarks made by Mesers. Broomfield and Maxweh.
14. On the fluctuation of prices in Berdoli and Chorasi taluks Mesers. Brombield and Maxwell in peragraphs 25.26 and 27 of the report on the Special Inquirs write as follows:-
"Cltimately when Mr. Jarakar got to the stage of fixing the rates for his new groups he appears to have had regard to one consideration almost exclusirely, namely, increase in the cash value of the nain erops due to the rise in prices hetween 18951924. By a rough calculation of areas under different crops and vield per acre be estimated that the assessment if left in Find would have increased in vaive br 109 per cent in Bardoliand 93 per cent in Chorasi. Prima facie, therefure be suggested the maximum increase of 33 per cent could easily be justified. But be remognived of course that there are two other factors which cannot certainly be igmored, that is to say; the contemporaneous increase in the onst of production and the uncertaintry in prices. Admitting that some allowance might be made for these factors and finding, as is only to be expected, that on such lines be had no means of calculating even approximately what the allowance should be be propeeed to reduce the 33 per cent to 25 per cent. He might as well have suggested 20 or 15 or 10 , the whote thing teing guess work, and as the Settlement Commissioner expresse it in his forwarding report he left 'the main door of the fort wide open'. One of the main gmunds of attack against the prexent seftlement has beea that the rears 1914 to 1924 were abnornal years, and as we have had the adrantage of obeerving the course of prices for a further period of four years since then, we propose to make a few remarks mn that aspect of the subject.
145. "In the first place we think it necessory to ear that our imquiry has saggeeted some doubt as to the practical ralue oi the official efatisties of prices. The figums are furaished to the Settement Officer to the Drrector of Agricultare, who obtains bis information presumably from the monthly returne sulmitted from each taluk headquarters. These returas again are based on local inquiry which m practice means on the inforsation supplied by me or more hocal merctiants. The rates quoted for foed-efuffis are, we understand, the prevailing retail rates whrch moy not be the rates affecting the general body of agricultunits. Anotber diffechty aries from the fact that the statistics are compiled on the basis of the Bengal mand consisting of 40 seers of 80 tolas. As the boel maumd comests of 40 seers af
$37 \frac{1}{9}$ tolas it is obvious that neither the figures of seers per rupee nor the figuresper maund correspond to any figures with which the people are familiar. No doubt the standsrd maund is adopted for the purpose of comparison with other parts of India; but it is certainly inconvenient for the settlement inquiry to have to deal with figuresthe real meaning of which can only be extracted by a rather troublesome calculation. However, Mr. Jayakar's price graphs having been prepared on the standard forms we thought it sufficient to complete them up to the year 1928. The curves will be approximately accurate, at any rate for retail figures, even though the figures are inappropriate.
146. "The point that strikes one first on examining these graphs is what might almost be called the normality of fluctuation. In the whole period of forty years from 1888 the only approach to real stability is shown by the prices of cotton (in Chorasi). from 1891-92 to 1899 and from 1904 to 1908; and by the prices of jowari from 1924 to 1927. There is only one instance, jowari from 1903 to 1908, in which prices have either risen or fallen for more than three years successively. Then turning particularly to the period 1914-1924 we see that the first effect of the War was to cause cotton prices to drop. From 1915 to 1918 they rose steadily and rapidly to the maximum or thereabouts, and these high rates were maintained up to and including 1924, with a temporary set back in 1920-21. In 1925 and 1926 (and in Bardoli in 1927 also) prices fell, though still remaining above the pre-war level; and from 1927 (or 1928 in the case of Bardoli) an upward tendency again shows. itself. The prices of jowari and rice which had nearly as rapid a rise as cotton in the earlier years of the War, maintained the maximum limit for a much shorter time. Jowari fell heavily after 1921 and finally declined in 1928 to about the figure of 1922. The rice curve shows more marked variations. Prices rose again after 1923, fell in 1927 and in 1928 rose once more on the upward grade. It is interesting to note that the graphs show the price of jowari is much the same in 1897, 1900, 1908, 1912 and 1914. The ultimate price reached in 1928 apparently showing a tendency to return to something like the same level. The price now reached by riee in Bardoli is exactly what it was in 1914. So far as the available figures can be relied upon, therefore, they appear to show not only that the high prices prevailing in the decade 1914-1924 were abnormal but further that in case of food-grains at any rate a permanent increase over pre-war prices need not be expected to be very marked. At our preliminary conference with the leaders of the people it was suggested by Mr. Shivdasani, Member, Legislative Council, that an increase of 25 per cent over the prices of 1914 might probably be regarded as permanent. On the present figures we should be very unwilling to hazard any such prediction so far as jowari and rice are concerned. Cotton is a different matter, seeing that the lowest price recorded since 1923 is 33 per cent higher than the 1014 price, and as we have said the fall appears to have been arrested."

Mr. Anderson's view.
147. Mr. Anderson in "Facts and Fallacies," sections 107-109 writes as follows:-
"The rates for food-grains from 1818 to 1836 fell to only half what they had been in 1800-1818 (a great factor was the rapid increase in cultivation). And hence the ryot suffered when on a fixed cash assessment prices fell. He was caught by the back of the two-edged sword. Soon after the American Civil War 1862-63 the same phenomenon was repeated. High rates were justly fixed on high prices and rents; but it was forgotten they might fall. We are witnessing the same phenomenon after the Great War of 1914-1918. Prices and rents soared high and are now falling. The rates fixed from 1918 to 1928 have all been just and right on the prices and rents at that time. But they will soon be too high (or higher than intended) because prices seem to be falling ; a few more good seasons might ruin the landholders."

## Review of Prices.

148. To compare the prices noted by the Special Settlement Officer for the ryot's

Price statistios from Khats accounts. selling months in the various years with those obtaining in various localities in the three districts we have obtained the figures of selling price of paddy from the followingryots and Associations who have been maintaining regular accounts :-
(1) Mr. Adusumalli Gopalakrishnayya, Gudivada;
(2) Mr. Parvataneni Bhusayya, Nujella;
(3) Mr. G. Venkatachalam of Venkataporam;
(t) Mr. R. V. Ramarya of Jujhararam;
(5) Mr. V. Venkataraju of Lankalakodera;
(6) Mr. M. Apperya of Dendulur;

- Godarari Chamber of Commerce, Cocanada; and
( - ' The Rajahmundry Merchants' Asseciation.
In the case of the two last-mentioned budies the prices noted are for the ryots' selling months Deember to Fetruary. Mr. Gopelatrishnayris figures are aloo for the same months Mass. P. Ehuarya of Nujelih and R. V: Ramarra of Jojhararam alwars store their peddy and sell it lite in the senson when proes are farourable. The other three sell their produce half in the early months and half hater when pricea have risen.

149. Comparing now the Setthement Offcer's figures with those for instance obtained from Mr. Gnyolatristmarra's accounts, we alwars find that the former is rery considerably in excess of the hatter fyures is we have elsewbere explained, this is due to the fact that the Settlement Oifier's figures represent the averages fur the entire districts and also the seling pries of merchants in the ryots selling monthe, and do not represent rrots actual seling prives
lind. The table also ibows that since 1920 the prices on the whole hare shown a distint tendencr towards a gradual fall. Taking for instaoce the figunes for 19:11029 maintained by the Godarari Chamber of Cemmerce, we find that the prices have dropped from Re: :-1-11 per tag in $19: 2$ to Rs. $0-5-8$ in 19:29. As we have elsewhere pointed cut, the prives from $1020-1929$ are due to the special conditions created by the War and its aftereffects so that in accordance with the intentumes of Government and the promoumoments of the Bierd of Revenue, it is not right to imelude thee gears of excequiceally ligh prices in wroking out the arerage commutation rateride Appedix No. 11.

## Sbctiox io-The hefret of hise is peices ox Rtral Prospibity.

151. In connerion with the subject of prices, we might here quote the opinion of Dr. H. Marn, in Clapter VIII of his bent, "Land and Labuer in a Decren rillage."

He writes as fullows:-

- The effect of a rise in prices on the condition of the roral popaistion in India has been a matter of rery serrous difference of opinion. Some authorities have beld that, sering that the produce of land is a source of procperity to the landholders and vilage people gemeraily. the effect of their being abie to obyain a hisber price for it obricusir led to their general economic adrantage. Ochers equaliy weil informed, have said that, whatever wrold happen in theort, in practice Lowerer a rise in prices has meant more difficulty and more poverty in the rural areas. The matter is really of great importable berause of the impartant reason, that in a country of periodic land settlements as those that oceur in India, changes in prices hare aiwars been corsidered a ralid factor in determining changes in hand asensorents."

His general conclosions, ownerning the euferts on the inhabitants of a village when there is a rise in prices with a cirreponding rise in the wages, are as follows:-

1; Peyien wio depend on hand adone, which they wort with their own habour whe have sufferent land to raintain themselree in a sound poeition before the rise in Frices, are ketter cif.
(- There there is cambined dependemie on hacd, and on hawar. and where


3' The non-cultinating propitor ie not afferted except in so far as he has large debts.
4. The gemeral ffert en tie riage fopuiation os to lower their eenomic ondition and to increase the annual defict.
5. The guif tefween the sairent and insirent ciasest tends to widen, bat the ras majority of the ferpie whe are sivent. eferinid if they are sivent from had,
 insolreat.
152. The conclusions of Mr. Darling in his book, Mr. Darling's opinion. 'Punjab Peasant in Prosperity and Debt,' confirm the above views of Dr. Mann Mr. Darling writes as follows:-
"It is commonly assumed that high prices are good for the cultirator, and the assumption is correct as long as he has more to sell than to buy; but if it is the other way round, he benefits no more than any other class of consumer. Nor is it that a man with 20 or 30 acres will generally hare more to sell than buy, but whether the man is lucky if he has half-a-dozen acres to cultivate-they are as likely as not an evil; for it is only in good years that he has much to sell, while in bad years he may have to buy the very grain he eats. "What do we know of prices?' he asks, 'it is all we can do to fill our bellies."

Our cultivation Schedules, it will be noticed, go to support the abore conclusions, since they show that in a large number of cases the effect of a rise in prices combined with a much larger rise in total cost of cultivation, is to make cultivation unprofitable in a very large number of cases. It will be noticed that while prices (comparing commutation prices adopted by Mr. Clerk and now proposed by Mr. Holdsworth in the Scheme Report) have risen 2.2 times the cost of cultiration as between now and 30 years ago has trebled.

Section 23.-Standard Outturfs.
153. To find out the standard outturn for various kinds of soils and for various

Metbod adopted by the Boand of Rerenue to ascertain the 'normal gross produce.' the results recorded in the previous settlement and proceeds the gross outturn.
154. In paragraph 35 of the Board's Resolution printed at page 184 of 'the Land Revenue Policy of the Indian Government', the Board remarks as follows:-
"The Board would first point out that the net produce is not ascertained by taking from the gross produce the estimated cost of cultivation. The normal gross produce, i.e., the gross produce struck on a comparison of good and bad years is ralued at a very favourable commutation rate . . ."
155. We are unable to understand how it is possible by any process of experiment to find out ' the gross produce struck on a comparison of good and bad gears' for a number of varieties of soils subject to varying conditions of irrigation, drainage and rainfall. To our mind, the task is one impossible of achierement with any degree of accuracy. We cannot explain the difficulties connected with this matter better than as put by the Saharanpur Settlement Officer quoted by Sir Aokland Colrin in his Memorandum on the revision of land settlements in the North-Western Provinoes written in $18 \% 2$.
156. "Too small an area can be appraised by an European officer. When so Methed adopted by small a plot as 110 of an acre is taken as the measure of Saharanpur \&ettlement the whole, an enormous number of fields must be appraised Offieer to find out the in order that, by the rule of arerages, the little arrears in standard outturns. errors in another part. But it takes about three hours to cut and weigh the crop of a field on the spot. On an average, this operation can only go on simultaneously in two fields at a time. For the Khareef there are less than two and for the Rabee there are less than one month a avilable for the purpose, that is, some 76 working dars; that is, not more than 152 different fields can be appraised by the European officer even if he occupies 23 of the time arailable for inspecting his rillages; and cou must recollect what pressure was put on me to finish this work speedily. Bearing in mind that it is necessary to find out the average produce of some half-a-dozen different kinds of crops of 8 different classes of soil, irrigated and unirrigated, it is easy to see What small basis of calculation can be obtained for each soil Add to this the fact that appraiement has to be made in 41 groups of villages by 2 officers within the limit of one year and that till the inspection was orer, it could not be ascertained how these groups can be divided, and the impossibility of procuring a broed enough data for calculation is apparent. The native officials to whom part of the task entrusted with the wish of avoiding the imputation of lowering the apparent aseets of a village
fell into the opposite extreme and in spite of orders to choose in each village at least one good, one average, and one inferior field, rejected all the really bad fields. The native officials taking the soils as given in the settlement papers in many cases put down as 'measum' that which had not been manured for many years.
"No allowance can be made for the numerous fields where seed is annually sown on the mere chance of a favourable fall of rain.
"No allowance can with any certainty be made for little unproductive places at the corners and edges of fields; nor do I see really how to make allowance for the charges of weighing and carrying, which fell on the Zamindar, and the latter of which varies with the distance from the bazaar. Nor can it be ascertained what amount the Zamindar is forced by all his necessities to sell at the low harvest price and what portion he can reserve till the price rises.
"The appraisement of the inferior crops is particularly difficult. The produce has to be exposed for days to the wind and sun before the grain can be separated. Who is to watch during this time? It was the peasant proprietors' interest, of course, to lower the apparent outturn and I could feel no confidence in the result of operations which I did not witness throughout with my own eyes; yet, this was in most cases incompatible with the task of inspecting fresh villages every morning. The consequence was that the appraisement was far too much limited to the better classes of crops. To make such an operation-a true measure of the actual operation-several crops must be cut in the same proportion in which they are grown.
"I found that there was a decided difference in the weight of a crop, according as it was cut at the commencement or at the end of the harvest. The grain was drier and lighter at the end than at the begiming; consequently, the outturn of crops cut at the commencement of the season was unduly overstated. What allowance to make on this account, I know not; yet a difference of a couple of seers in the produce of $1 / 10$ of an acre comes to a serious amount on the whole."
157. We have no information as to the number of experiments that were made on the various kinds of soils and crops, irrigated and unirrigated, delta and non-delta, with a view to ascertain the grain outturns and we do not know, whether, as laid down by the Board, the gross produce was struck on a comparison of good and bad years.
158. In paragraph 36 of Mr. Clerk's report printed in G.O. No. 436, Revenue, dated 7th July 1899, he writes as follows:-" The season of 1894-95 was not favourable, the very heavy rains in the latter part of October having damaged the crops just when the ears were ripening. In the outturn reports submitted

Mr. Clerk's method of ascertaining the standard outturns. by the Tahsildars to the Board for fasli 1304 the yields in the several taluks were estimated as shown in the margin. On the whole district the outturn was reported to have been a 14 anna crop or 2 anna less than the average crop. The Tahsildars reported to me that the harvest would commence as usual in December, but owing to the heavy rains in October and subsequent hot weather the harvesit commenced in November, and consequently, before my subordinates were ready in each taluk to make experiments almost all the best crops in each village had been harvested. Mr. Master fully explains the impossibility of obtaining a large number of reliable experiments, and this has been the experience of every settlement officer throughout the country. He very truly remarks that the trustworthiness of the experiments diminishes in proportion with the rank of the individual employed. My own experiments and those of my covenanted Assistants and Supervisors were satisfactory. Each of us was attended by four classifiers and many peons and the experiments made are therefore reliable. The Tabsildar of Bhimavaram, my uncovenanted Assistants and my Additional Supervisor reported that they had detected the ryots fraudulently removing some of the bundles of grain while on its way from the field to the threshing floor. Such being the experience of officers of superior grade, it may be taken for granted that subordinates were deceived by the ryots in almost every experiment they made To show how extremely unreliable the experiments are, I give the following example. In the village of Dorasaparru in Tanuku taluk, the Revenue Inspector obtained an outturn of 328 Madras measures per acre. A day or two later I went to this village and from the adjoining and precisely similar field belonging to the same ryot obtained
an yield of 865 Madras measures. Needless to state that I rejected the Inspector's experiment, and I have had to do the same with a number of other experiments that were equally untrustworthy."
159. With reference to the above remarks of Mr. Clerk, which we take as a

Our oriticism of Mr. sample of reports concerning crop experiments, it looks. Clerk's method. almost as if the officers conducting these crop experiments, when they go to any particular village, expect to get certain results in keeping with the previously tabulated results, so that there seems tobe a tendency on their part for some reason or other to rejeet all results which are not in keeping with their preconceived ideas. Apart from questions of fraud, we do not see any reason why the Revenue Inspector's experiment should have been rejected, nor why two adjoining fields belonging to the same ryot should not have given different outturns of paddy. We do not also understand the statement that all the best crops in a village had been harvested to begin with. Harvesting is always started with the fields which are most ripe and not necessarily with the best fields in every village. Other things being equal, it is the crops on the poorer fields that are ready for harvest earlier. Apart from the question of crop experiments, we feel inclined to surmise that the standard outturns fixed for various soils and tarams must be the result of manipulations being worked up from the scale of assessments and the arbitrarily fixed weale of cultivation expenses. Taking one year with another, we feel that it is not impossible for fields bearing various assessments and belonging even to different soils and tarams to produce the same outturns. The advantages or disadvantages of irrigation and drainage, the incidence of pests, etc., are not always uniform in their operation and might often work in such a manner as to obliterate the differences in outturns which are indicated by the theoretic scale of assessments. The process of acceptance or rejection of crop experiments should not be based on preconceived. notions of theoretic outturns, but detailed examination may prove that these theoreticdifferences in outturn with reference to the differences in assessment are often in practice non-existent.

Mr. Datta's account.
160. Mr. Datta, paragraph 12, page 226 of his. inquiry into the rise in prices observes as follows :-
"It is prescribed that the fields on which the experiments are to be made should be carefully selected as typical of the area under examination and on which the crop is of average quality. The work is expected to be done under the direct supervision of a responsible officer though accurately on a small scale. The method by which these results are utilized to create standards is briefly as follows. All statistics which are prima facie untrustworthy are rejected; the remainder are then examined in detail, if the crops were taken in the normal course of agriculture, if the fields on which the crop is grown are typical and if the local conditions are not abnormal. The figures for every quinquennium are examined and compared with the standards obtaining in previous years; and, before a change is made in the standards of any crop, the results in the experimented district are carefully scrutinized. The general trend of the changes is in an upward direction."
161. Now we fail to see how it is humanly possible for any one to select a field or fields typical of the area under examination, or on which the crop may be considered to be of average quality, although we have no doubt that the crop experiments themselves are made with every possible care. We cannot, however, taking all the circumstances into consideration, resist the conclusion that, while the results of actual experiment may be applicable to particular fields, their application for purposes of assessment to other fields must largely be a matter of the nearest guess work. In dealing with the question of cultivation profits, however, we propose, for purposes of argument, to assume the general accuracy of the standard outturns assumed by the Settlement Officer.
162. The extracts taken from the memorandum submitted by the late Diwan

[^1]coarly as 1890. Since then there has been a steady increase in wages. The keen and intensive demand for labour during very short periods of time on two or three occasions accentuates difficulties owing to the exigencies of the nature of water-supply, weather and local custom in regard to these periods. At the time of the last settlement, most of the present-day deltaic villages were not so much dependent upon paddy cultivation as they are to-day and there was then greater and better equalization of demand for labour. This extraordinarily intensive demand for labour was then met without much difficulty with the aid of local labour. Besides, most of the ryots used to have a large retinue of customary workers who were assured of certain mamuls in return for their willingness to work for the ryots at the customary wages. Since dry crop cultivation was as important as wet, and since the former did not create such an intensive demand for labour for a very short period, the employers were in a stronger bargaining position and were therefore able to resist any abnormal rise in wages; but as more and more land was slowly brought under irrigation and as the numerous patches of dry land came to be eliminated by conversion into wet, the demand for labour created by paddy cultivation has come to influence adversely the rural economy of a big tract of country, all the villages of which get into periods of busy work at almost the same time, their demand for labour far surpassing the limits of local supply and leading to high wages. Although there has been a steady fall in grain prices and the general level of other prices since 1924, wages have not gone down. They are still rising in the deltaic taluks of these districts, while they have remained :stead $y$ in such villages as Elaprole, Kanchikacherla, Gummalladoddi, Burugupudi and Nallacherla where upland wet cultivation is carried on to some extent. In purely dry villages, such as Deverapalli in Kovvur taluk, Puligadda in Divi taluk and Konakanchi in Nandigama taluk, the wages have certainly risen in the last 30 years but the rise is not so ruinous as it is in the deltas.
163. A glance at the Appendix No. 12 (1) indicating the wages paid to men and

Wages of labour indicated by the khatas. women in different years by different ryots will show how great was the increase in wages. Mr. Gudipati Venkatachalam's khata shows that between 1911 and 1928, i.e., a period of 18 years in which the war and post-war boom periods are included, the wages of women have risen by $132 \cdot 2$ to 200 per cent and those of men by 77.7 per cent to 133.3 per cent. Considering that equal numbers of men and women are engaged for cultivation, we get an average increase of 105.5 to 166.6 per cent in the wages paid to agricultural labour. Similarly, Mr. Gudipati Krishnayya's khata shows that between 1911 to 1921--a period of 11 years-the wages of women have risen by 77.7 per cent to 103.22 per cent on the average. The khata account of Mr. Yelamart Ramanna of Bhimadole shows that there has been a rise of 100 per cent in the wages paid to men and women in the period 1911 to 1928-29, or 18 years.
164. It is therefore quite safe to assume that there has been an increase of at Increase in the labour budget per acre. least 100 per cent since 1911 in the wages paid to labour. Taking into consideration the fact that wages have certainly risen to a considerable degree in the period of 1900 to 1910, the estimate of 150 per cent rise in the wages paid for labour in this period of 30 years is quite reasonable.

Expenses per acre wpon Labour.
Cesoal labour.
Re. A. $\mathbf{P}$.

165. It is evident from the above table that even the very moderate average figure for the costs of casual labour employed per acre, indicated by the four khatas collected, exceeds the estimate made in 1900 by the then Special Settlement Party by
at least 178.84 per cent. But no account was taker by the Special Settlement Party of important and costly operations of work which can be performed only by hired labour as seed-bed repairs, baling ont water for seed-bed, cleaning the seed-bed, pulling the seedlings and conveying them, carting manure to the fields and spreading it, levelling and squaring the fields with the aid of hired labour, and preparing the hay-stack, and looking after cattle. Evidently all this work was expected to be done either by the ryot himself or his paleru; but no provision was made for the remuneration of a paleru.

## - Wages of Labour.

166. The wages paid for casual labour depend upon the intensity of demand for

General conditions of demand for labour. labour in any year and in any season and also upon the total supply of labour in the year and in the special seasons. There is no such thing as a wage market specially organized for the purpose in any of these villages. The ryots have not so far tried to regulate wages by co-operative, or concerted action. The wages paid for any kind of labour in any season depend entirely on any special demand for labour that may arise. Especially is it so in the deltaic villages, where the two great seasons of excessive and imperative demand for labour for transplanting and reaping and heaping in the paddy fields, come all at once and run for very short periods and come to a close just as precipitately. Individual ryots have but little choice for themselves. They have to begin the work of the season as early as possible and finish it as soon as possible, as otherwise they will have to lose heavily in more than one direction. The demand for labour becomes excessive and the local supplies of labour are found very inadequate. There is an immediate necessity for immigrant labour and hence the huge streams of such labour from the uplands to these parts in every season of transplantation or reaping. At these times, wages go on rising from the day on which the season is begun until there seems to be a prospect of an early close of the season and then they begin to slide down but very slowly. Owing to the limited season for agricultural operation, every ryot is anxious to get an adequate supply of labour to finish the work on the field chosen for that day's work. Owing to the very keen competition, wages will go on rising irrespective of the question of profitableness or unprofitableness of cultivation. To take transplantation, women are paid annas 6 to 12 each per day and men annas 8 to 14 .
167. Apart from the general conditions of demand, which have been described Special conditions. above, there are certain special conditions in which the wages tend to go lower or higher. For instance, if the canal water-supply comes unexpectedly aided also by a sudden and copious rainfall as was the case during 1929-30 in Gudivada and Kaikalur taluks, ryots have no time to assure themselves of the supply of even a few immigrant workers. They are therefore obliged to pay rather high wages over a considerable part of the season. If, however, canal water comes in slowly and there is no immediate prospect of all the people wanting labour at once, wages remain comparatively low. There are many differences between the villages. Some in which there is a large local supply of labour have to meet a very much lower total wage budget for transplantation or reaping than their neighbours whose local supplies of labour are not enough and who are obliged to draw upon the former's supply. If transplantation is possible under one canal at one time and under another canal at another time in the same village or in neighbouring villages it may be possible for the local ryots to manage with the local supply of labour without calling in immigrant labour. In such circumstances, the wage rate is not so excessive. The ryot whose fields are ready for transplantation just when the demand for la bour is excessively high, has to meet a greater wage bill than another who has to transplant his fields a little earlier or later. Only a few can escape paying the top rate for some of the labour engaged and none is able to pay either too low or too high wages for all the la bour employed.
168. The same kind of influences affect in general the rate of wages prevailing in the reaping season also. Then also there is a great necessity for immigrant labour. The total demand of the ryots for labour in this season can be spread over a longer period than is possible in the transplantation season but except for a few cases in a few villages, no attempts have been made to effect this much-desired change. If different
kinds of paddy which mature at different periods can be raised in a village, the local supplies of labour may be found adequate and the present too high and ruinous wages of labour may be avoided. In fact this is what is taking place, although with partial success, in an increasing number of villages in these districts. But there are clear limits beyond which this process cannot go on, decided as it is by climate, seasons of canal water-supply and the local practices of cultivation.
169. Heaping is a process of work in which, both men and women are employed as is the case in reaping. Mamuls in the form of bundles of cut paddy are given to workers in addition to or instead of the usual payment in kind or cash wages. Owing to the impossibility of guessing how many paddy bundles will yield a sufficiently high and remunerative wage for the workers and the consequent ill-humoured discussions between employers and employees, this practice of offering mamuls is being discontinued in many of the villages, in favour of an increased but fixed payment in cash or kind. The general level of wages prevailing for this work has always been a little higher than in reaping since it demands more arduous work. Even this work costs sometimes more than at other times especially when the clouds above threaten to spoil the crop and all the crop has to be heaped up within a very short period.

## [Vide Appendix No. 12 (ii).] <br> Sbction 25.-Agricultural Implemberts.

## 170. Except for a fey Panchama cultivators who take lands for rent, all other

 ryots possess almost the full complement of agriculturalEvery ryot needs certain agricultural implements. implements. Several ryots manage to get on without one or two of such special implements as gorru, kattava, and big knife, by borrowing them from their neighbours, relatives or friends. Even those ryots who do not happen to possess a cart have the accessories of a cart such as ropes so that when a cart is hired or borrowed, these accessories may come in handy. The following are the implements needed by every ryot having more than an acre but less than 5 acres:-

1. (a) Plough-dampa or metta or both.
(b) Its acoessories.
2. Spade.
3. Crowbar.
4. Axe.
5. Sickles
6. Gunny bags.
7. Kattava.
8. In the deltaic villages of Kistna district, metta (or dry) ploughing is the

Plough. usual practice and as such, most of the ryots possess metta ploughs; but in a few places where dampa (or wet) ploughing becomes necessary at frequent intervals, most ryots find it necessary to have the dampa plough also and many do manage to possess them. In both West and East Godavaris, dampa ploughing is the usual practice and dry or metta ploughing the exception ; and so, ryots are obliged to keep dampa ploughs only. Even in these two districts some ryots are obliged to maintain both the ploughs for the same holding since the local soil and climatic conditions make it necessary for them to be ready to give either kind of ploughing. The cost, therefore, of a plough per acre per annum differs from place to place and almost from ryot to ryot owing to these special circumstances. Furthermore, the metta plough is a more costly implement but lasts longer than the dampa plough and it serves a larger extent on the whole than the latter. Hence the variations shown in the tables for costs of agricultural implements. Everr plough needs certain accessories such as medi, yedi, kadi, ropes (fibre and leather), and oil (also leather, etc.). The spade work is more prominent in some places where metta ploughing is given than in other places. Everywhere squaring and levelling are done only with the help of the spade and the crowbar. The depreciation charges of these implements varies in direct proportion to the use made of them.
172. Axes and kattavas are needed for every holding but they last for fairly long periods and are used only on two or three important occasions in a year. A few ryots manage to get on without them but some day or other, every one is anxious to

Axe, kattava, sickles, bage, etc. possess them since loaning of the implements is not very popular in these districts. Sickles are needed to reap the paddy crop, sunnhemp, fodder crop and black-gram raised on the field bunds. It is not an unusual experience for a ryot to lose one or two of his sickles once in every two or three years. Gunny bags are another important
item. No ryot can afford to manage without two or three gunny bags at least and most ryots have more than five bags each. These are needed when the paddy has to be carted from the fields to the ryots' houses, to be stored.
173. Lastly, we come to carts. Ryots having bullocks or he-buffaloes for

Cart. carting keep carts. A study of village economic conditions shows that every ryot needs the services of a cart and noholding can get its cultivation finished without the use of a cart. Squaring and levelling can be done effectively only with the aid of a cart. Manure must be carted to the fields, the paddy, straw and sunn-hemp fodder produced on the fields have to becarted into the village. These processes of work must be finished by every ryot in the same short periods and no one can generally afford to lend his cart to someone else and neglect his work on his own farm. If anyone is desirous of biring a cart, he is often obliged to pay very high prices. The ryots who do not own carts borrow them. A few manage to own only carts while others have bullocks and they both co-operate and manage to economize their expenditure ; but most people who do not have carts work freely for those who have carts or compensate the owners of carts in some way or the other and secure the services of a cart. The estimates of the settlement party's investigators make no provision for the maintenance of carts.

## Siction 26.-Sbrdlings and Sbrd-brds.

174. The cost of seedlings varies considerably from place to place. In some places like Koderu of Divi, Vinjaram of Kaikalur, Kautaram

Nature of the work and variations of cost. of Gudivada, Edupugallu of Bezwada taluk, Chataparru of Ellore, Vadlur of Tanuku, Achanta and Velagaleru of Narsapur, Jagannadhagiri of Cocanada, Someswaram of Ramachandrapur, Gollavalli and Nallamilli of Amalapur taluks, either there is an early supply of canal water or there are seed-bed tanks and therefore the cost of raising seedlings needed per acre is considerably lower than in less favourably situated places. But in places like Machavaram of Divi, Pallivada and Amaravati of Kaikalur, Elaprole of Bezwada, Mogallu of Bhimavaram, Lankalakoderu of Narsapur, Devaguptam of Amalapur, where ryots are obliged either to grow seedlings in other places by renting seed-beds or to wait until the canal water comes, the cost per acre of seedlings rises very high. Thirdly, there are occasions in every village and in almost every year on which ryots have no other choice but to purchase seedlings from some of their neighbours or from distant places, either because their own seed-beds have proved a failure or because owing to too early supply of canal water for transplantation they cannot afford to wait until their own seedlings become ready for transplantation. A ryot is always obsessed with the fear that one day's delay in transplanting the seedlings may prove fatal, either injuriously affecting its resistance against the later submersion or drought or in its capacity to yield well or to resist the locally prevalent pest or the attacks of rats.
175. Most of the ryots do keep a portion of the previous year's yield for seed Seeds purchased. purposes. But if such seed gets damaged or if a ryot changes his mind as to the kind of paddy he should grow, he has to incur additional expenditure upon seed-beds. In some places, even though there are seed-bed tanks and wells, the supply of water is so insufficient that the ryots are obliged to bale out water into their seed-beds by the laborious means of karem or Gudavatu, at much cost.
176. As for the seed-beds, manure is needed to a greater extent in some places

## Treatment.

(Cocanada and Divi taluks) than in other places (Narsapur and Bhimavaram) and the seed-beds need cleaning of the surface soil (for removal of roots and stalks) to a larger extent in some places (Cocanada and Gudivada) as against other places (Kaikalur and Tadepalligudem taluks).
177. In the pulling out of seedlings different methods of engaging labour have Pulling out and carriage. varying influences upon the total cost of seedlings needed per acre. In some places this work is done by batches of workers who agree to do it on contract while in other places the ryots themselves have to engage a certain number of workers to pull out the seedlings out of the seed-bed. Again the conveyance charges for seedlings vary with the number of working members a ryot has in his family, with the numter of palerus he has engaged and chiefly also with the distance over which they must be carried.
178. Therefore the cost of seedlings per acre varies with the agrisultinal establishments of different ryots, the different seasons, the time of the caunal water-fupply, the availability of local sourees of water-supply for seed-beds and the local agricultural practices. In our estimates we have taken a fair minimum, neglecting the numerous variations which mean morecost. We have allowed no epecial baling, no extra cartage and we have ignored those cases where, owing to loss of early seed-beds, seeds have to be sown again. The Government investigalors (settlement parties) have made no provision for preparing seed-beds and watering them, and they have also (except in a few cases) generally ignored costs of pulling and conveying seedlingathe comparative statements in Appendix No. 13. Our schedules provide for average conditions. The settlement party's provisions under 'Seeds' is however fair on the whole.

## Segtion 27.-Transplantation, sto.

179. Women mainly are employed in transplanting seedlings on the paddy fields.

Nature of the wotk and the demand for labour. Only a few men are engaged to supply the women with bundles of seedlings, to clean the field here and there and to add the final touches to the boundaries of the fields. The number of women needed to transplant an acre of land varies from 8 to 15. In places like Singavaram and Dirusumarru in West Godavari, Pallivada, Vinjaram, Poranki, and Kanur of Kistna, Vendra and Addampalli of East Godavari where there is the ever present danger of submersion, seedlings are transplanted more densely than in other places and naturally more workers are needed. Again in places like Eleswaram, Vegeswarapuram, Burugupudi, Gummalladoddi of East Godavari, Machavaram and Koduru, Malleswaram and Amaravati of Kistna where the local workers are not so efficient in this kind of work, the number of workers needed per acre increases considerably. Thirdly, the number of workers needed also depends upon the number of hours per day put in by each worker. For instance, in places, like Chataparru, Mudunuru, Nallajerla, Tadikalapudi, Rachur, Chilukur of West Godavari, Pallivada of Kistna where there is a plentiful supply of local labour, the number of working hours per day per worker is higher than elsewhere. But in places like Pasumarru, Komaravolu and Edupugallu of Kistna, Pedabrahmadevam and Jagannadhagiri, Someswaram and Pasarlapudi of East Godavari where the local supply bas to be reinforced by immigrant labour, the hours of work put in by any worker in any day tend to be less and naturally more workers per acre are needed. Fourthly, the time at which the supply of water comes has an influential bearing upon the ability of ryots to extract more or less hours of work. If the water-supply comes all of a sudden, helped as it is by heavy rainfall, to all the villages in any particular neighbourhood, clamour for labour is universal and the local supply of labour is far short of the demand ; and there is scarcely time enough to bring in contingents of immigrant labour from uplands. The wages soar high and the kargaining power of the labour also goes up to a considerable extent. This was what happened in 1929-30 in most of the deltaic villages of Kistna district. If on the other hand any particular village gets too early or too late a supply of water, then either of the two following things may result. The workers may be willing to work for longer hours at the customary * or ever lower wages, thus reducing the number of workers needed per acre. They may also agree to work in larger numbers per acre but on sufficiently low wages. Lastly it must be remembered that the workers employed to transplant an acre of land with paddy seedlings, vary in their numbers not only between villages but also within the same village. The estimate of the number of workers needed per acre for transplanting paddy seedlings given in the tables below represents the normal demand for an acre of land for labour, and it must be varied to suit the conditions of different villages and different seasons in the same villages in order to make it applicable to local conditions. [*Vide Appendix No. 12 (ii).]
180. In most cases it is necessary to transplant seedlings here and there when they die due to submersion in patches. One worker per acre is needed to do this work. A more serious problem of retransplantation arises in places like Singavaram, Nallajerla, Mudunuru, Dirusumarru, Vemavaram, Likhitapudi of the West Godavari, Elaprole, Vinjaram, Pallivada, Koduru, Machavaram of Kistna, Gangavaram, Addampalli, Vendra, Burugupudi, Gummalldoddi of East Godavari where early submersion damages crops. In such places, a large portion of the land has to be
retransplanted and therefore the total number of workers needed par mere of damaged land for transplanting it with seedlings goes up to 25.

A reference to the comparative schedules in appendix will show that on the whole the Settlement Party's investigators have made fair provision onder "Transplantation."

## Weeding.

181. For weeding also, women are mostly employed as thoy are found to be Nature of the work. cheaper than men. The number of such workers needed per acre is also subject to very wide variations. It is largest in a village where there is tankfed irrigation and where the lands are not properly cleaned by deep ploughing and thorough puddling and improved by squaring and levelling. Some soils become less liable to the growth of weeds if manure is supplied and some grow worse. Again late transplantation gives an impetus to the growth of weeds and if the land is damaged by submersion and a crop is not raised for a year, weeding becomes a costly affair. It is largely true to say that certain villages are obliged to spend more upon weeding than other villages. Therafore it is reasonable to assume that 6 to 10 workers are needed per acre for weeding purposes.

A reference to the comparative schedules in Appendix No. 13 will show that the Settlement Party's investigators have made suitable provision for weeding.

## Reaping and Heaping.

182. There is also as great a variety of conditions in reaping and heaping as in transplantation and weeding.

To take reaping first, we find that the time at which this work is commenced bas

Nature of the work and the bargaining power of the ryot. a great influence not only upon the workers needed per acre but also upon the wages paid and the eventual profit or loss falling to the lot of the ryots. If a heary rainfall is threatened, the ryots of a village are obliged to start the reaping suddenly and finish it in a very short period in order to save their arop from being damaged.
183. Reaping and heaping go together, heaping, following upon the heels of reaping. Therefore all the influences that affect reaping influence heaping also to an equal degree. These two processes of work once begun, must be finished within a very short period, not exceeding a fortnight, especially since at the time of the northeast monsoon there is always the fear of damaging the ripe paddy. The local supplies of labour are foynd to be extremely insufficient in all but a few villages and large number of immigrant workers are annually imported from the uplands. At such times, the ryots can scarcely be said to be their own masters and labour assumes a commanding position, demanding successfully higher wages and offering fewer hours of work.
184. One other influence that affects the total demand for labour, coming from ryots in this season is the character of the crop realized. If the crop is damaged by submersion or if it is of very poor quality or if the weather is clear and favourable, the ryots may not be in a great hurry about their work and the wages of labour may not rise so high and the hours of labour may rise in their favour, reducing the number of workers needed.
185. Again if two or more kinds of paddy are raised, which come to be reaped in different non-competitive seasons, then the total demand may be kept within manageable dimensions and the local supply of labour may suffice, in which case the number of workers needed per acre also goes down. The number of workers needed for reaping and heaping the crop in an acre of land increases if there is still water in the fields and if the crop has to be conveyed to a few elevated places in the fields. It also shows a similar tendency if the fields are very small in area or if a heap can be constructed only in the neighbouring fields and not in the fields in which these processes of work are carried on.

But no where is it found that less than eight workers per acre are needed to finish reaping and heaping.

A reference to the comparative schedules in Appendix No. 13, will show that the provision made by the Settlement Party's investigators is fair.

## Section 28.—Wet (Dakpa) amd Dey (Metta) Plodehimg.

186. The cost of the services of cattle depends upon the extent of land cultivated, the number of working days, the crops raised, the amount of fodder and other feeding, raised as the bye-products of the crope produced, the nature and quantity of concentrated additional feeding supplied, the prices of such additional feeding and also the breed and strength and prices of the animals used.
187. The area cultivated by a pair of tilling cattle has been diminishing in the last 30 years. The constant subdivision of holdings and

## Acreage served by a pair of bullocks is decreasing.

 the increase in the number of non-agricultural people who have taken to cultivation during the last ten years, the possibility of purchasing lands from the indebted ryots and the increasing velocity with which lands are changing hands, have all contributed towards this unfavourable result. It is usually thought that a pair of cattle can plough at least ten acres of wet land and fifteen acres of dry land and in fact, a ryot can manage to cultivate at least ten acres of either dry or wet land with a good pair of bullocks provided other things are favourable. But the number of ryots having ten acres and more each is very small in any village and is never more than 20 per cent of the total number of landholders. The carts and bullocks owned by them are few when compared to those owned by the smaller ryots. Evidently most of the ryots, having each less than ten acres of land, are obliged to own each a pair of animals, a bullock-cart and a plough. Whatever may be possible in theory, when all things are ideally arranged, we shall have to take note of this unpleasant fact that most of the ryots are not able to use their draught animals for as much land as they are good for. In fact many of the ryots who have only five acres each manage to own a pair of draught animals and a cart, hoping to make up the waste thus incurred by carting at times for hire. The introduction of Dammu into the practices of cultivation has also brought down the maximum acreage that can be ploughed by a pair of bullocks and the paddy cultivation as a whole needs greater services of cattle on two or three occasions than the usual cultivation of dry crops.188. The practice of co-operation between the ryots of any village in the utilization of the services of cattle has been very little developed. Except for a few stray cases, we have not
The practice of co-operation in cultivation is not come across ryots, who own bullocks jointly or who work for others as customary labourers in return for the services popular. o cultivate their lands by hiring the rervices of cattle, in of cattle or who manage to cultivate their lands by hiring the services of cattle, in addition to or without their own cattle.
189. If it is possible for many ryots to hire out the cattle and carts or ploughs just when they need their services, the extent of land cultivable by a pair of draught animals, can be, other

Most rrots have to keep their own reserves of draught cattle. things being equal, increased; but the demand for their services comes all at a time during two or three important but short periods, when almost all the ryots need their services and no one can afford to miss the suitable time either for metta ploughing or for dampa ploughing, harvesting or carting paddy and straw home, doing the earthwork on the fields or carting manure to the fields. At such times, every ryot is obliged to have his own reserve of cattle to finish his work. For instance, metta ploughing must be finished -while the earth is still dry; dampa ploughing before the canal water-supply gues down, and thrashing before the north-east monsoon rains. Hence the very large reserve of draught animals maintained in all the paddy-growing villages and the low acreage commandable by a pair of draught animals.
190. To take the dry villages, the acreage commandable by a pair of draught Dry villages. $\quad$ animals tends to increase in such villages where the crops cattle and where the climatic conditions do not oblige ryots to finish the work needed with the aid of their cattle in such short periods as is the case in the deltaic parts. The introduction of the cultivation of groundnut and tobacco is complicating the lucal arrangements in many a village and the services of cattle are to-day in greater demand than in the past when only cholam, cumbu, ragi or varagu and gingelly and castor or horsegram were the main creps.
191. The ryot who wishes to effect "Dammu" on his land must have more cattle than the other who has to plough his land before it is watered. In fact buffaloes are almost a necessity for Dammu and one finds ryots maintaining many more cattle than otherwise necessary for them in all those villages in which the practice of Dammu is popular. Those who can afford to maintain the necessary number of cattle resort to Dammu, as far as Gudivada, Bezwada, Divi taluks are concerned,

Dammu is supposed to be good for paddy. while all the rest are satisfied with ploughing their lands sufficiently before they are watered. It is believed by ryots that Dammu facilitates the absorption of all the manurial qualities latent in the cow-dung manure, sheep and goat manure, patimannu and straw supplied to land and that the field is made better ready to nourish the seedlings. Therefore more and more ryots of Kistna district are trying to carry out Dammu on their lands, if it is possible at all.
192. On the other hand, Dammu has many evils attendant upon it. As it necessitates the retaining of a large number of cattle, the
Difficulties attendant upon the practice of Dammu ploughing. incidence of cattle epidemics when it visits the village, is increased. Dammu is such an arduous work that many of the cattle become unable to recover from the strain and are only fit, after the transplantation is over, to be sold at cheap rates in the local shandis. The longevity of such cattle is adversely affected in addition to their efficiency being undermined. Moreover, where dry ploughing is the rule, better and bigger bullocks are in use and they cost in the long run very much. less than the puny, ill-fed, inefficient but more numerous cattle that one finds in villages. Yet the ryots of West and East Godavaris have scarcely a chance of avoiding the losses incident upon Dammu, as they are all obliged to effect Dammu on their land. It is however true to say that in years when rains come too early and spoil the land, dry ploughing becomes inevitable for many ryots in these parts also. It must be admitted that the nominal cost of Dammu is very much less than its real cost for its bad effects upon the cattle and the consequent rise in the cost of the services of cattle are not included in its nominal cost.
193. The cost of Dammu varies from ryot to ryot and from year to year. If foot-and-mouth disease breaks out, many of the cattle in a village are temporarily disabled from working and the ryots are obliged to hire the cattle of other places. If the cattle of any ryot suffer from weak hoofs, the cost of Dammu rises. If again a ryot's holding is too small or too great for his cattle and if the exigencies of the water-supply and the transplantation season oblige him to finish the work in too short a period, he has to go in for hired cattle and thus spend more money upon Dammu than otherwise. If again Dammu is made unsuitable to the land by untimely rains, all the capital sunk upon the maintenance of cattle specially kept for Dammu goes for waste for that year, while an additional sum is. spent upon effecting dry ploughing upon his land.

A reference to the comparative schedules attached to appendix No. 13 will show that curiously enough the Settlement Party's investigators have made no provision, in their estimates for ploughing.

## Sbotion 29.-Prrmanknt Iuproviments to Land.

194. Permanent improvements will have to be made on \{every field before it is actually brought under irrigation. In fact the ryots of these parts have had to sink large sums of money in effecting the necessary improvements before their lands had been brought under irrigation. This process is still
Costly improvements are needed to bring lands under irrigation. going on in very many places, where land has been brought under wet cultivation in the last thirty years. For instance, ryots are spending R. 200 to 400 per acre in Amaravati of Kaikalur taluk, Rs. 150 to 300 in Lingala of Nandigama taluk, Rs. 200 to 300 in Machavaram, Kodur and Nagayalanka of Divi taluk, Rs. 200 to 400 in Poranki of Bezwada taluk, and Rs. 200 to. 300 in Dirusumarru of Bhimavaram taluk. The enhanced prices paid for land are not a little due to such costly improvements effected upon land.
195. The natere of such improvements depends apon the particular locality and special conditions of the soil of the fields. In places like Malleswaram, Mudunuru, Dirusumarru and Addampelli, the level of the land has to be raised in order to aroid

Locality and conditions of soil infuence the cost of improvements. submersion. In places like Singavaram, Burugupudi, Mogalla, the level of the land has to be lowered in order to make it command proper supply of water. In some places like Mulikipalli of Razole taluk, Gollavilli of Amalapur taluk, large sums of money have to be spent upon removing the top saline soil and in making the lands immune from salinity.
196. The cast of these improvements varies from village to village and from ryot to ryot. The differences in the nature of water-sapply, the level of the land and the constitution of the soil create the differences between different villages. The relative abilities of different ryots and the relative levels of their lands condition the amount of money spent upon these improvements. While admitting that vast sums of money have been spent upon these improvements, we have to state our opinion that there are still rery many ryots in most of the rillages who are unable to carry out the absolute minimum of improvements and who therefore are obliged to go with lower sields per acre.
197. The improvements to be carried out apon the lands of any village are not something that can be done once for all. Wither the raising of the level of land or the lowering of it is ever going on in every village and the fertility or otherwise of

The se improvements are not effected all at a time. any field depends upon the level (high or low) of its neighbouring fields. Therefore it is not an exaggeration to say that once in every twenty years, very costly improvements are needed in order to make any field either sufficiently low or adequately high. It is not easy for one to grasp this fact, simple though it is to a ryot, until one realizes what actually happens when a particular field is either too low or too high as compared to its surrounding fields. If it is too low, the crop is damaged by too much water, flowing into it from the other fields and if it is too high, it is transplanted too late in the season and the water in it trickles down into the fields around it, leaving the plants dry and without sufficient moisture. Its bearing upon the capital inrested by ryots and the rise in the prices of land cannot be exaggerated. It must however not be confused with temporary annual biennial or triennial improvements effected by every ryot upon his lands.

## Section 30.-Cattle Diseasthand Catrle Mortality.

198. It is impossible to judge from the published official statistics the incidence of cattle disease and of cattle mortality. On this subject, the Royal Agricultural Commission remarked as followi Effect of cattle diseases. (page 279 of their report): -
" Not only is it probable that the deaths from epidemic diseases are several times greater than those actually reported, but the loes by death is only a small part of the loss the cultivator suffers from this cause. Hæmorrhagic Septicæmia is a very fatal disease. The percentage of deaths from rinderpest is also very high. When it attacks hill cattle or those produced by crossing with European breeds, rinderpest is not so deadly as when it attacks the ordinary cattle of the plains. But, though the arerage mortality which fluctuates widely may not be more than 30 per cent of those affected, the remaining 70 per cent are enfeebled by disease. Similarly, in the case of foot-and-mouth disease for every one animal that dies, 99 may be temporarily incapacitated. If the crude figures given above are weighed by the considerations we hare indicated, it will be evident that epidemic diseases cause great direct injury to the cultivator through the death of his cattle and also entail extensive indirect losses through the illness of his working or milching stock. There must also often be indirect losses from the imperfect cultivation of crops when working animals are stricken by disease. Some indication of the direct and indirect losses due to cattlo disease may be obtained if the subject is approached from another point of view. An examination of the reasons which lead cultivators to borrow from co-operative credit societies,-shows that there is extensive borrowing for the purchase of cattle:"
199. In Madras, out of a total sum of 11.91 lakhs of loans granted by 00 -operative eredit societies in 1926-27 7.5 per cent was for the purchase of cattlo-the corresponding figures for $1925-26$ being 11.85 lakhs and 7 per cent.
"The need of loans is, of course, not necessarily due to disease. A cultivator
may want to buy additional cattle or to replace bullocks
Loans necessitated by losses due to cattle mortality. that, borrowing for cattle purchase is mainly due to losses
-operative. societies provide a relative small amount of the finance required by cultivators. The more usual source of credit is still the moneylender and there can be little doubt that cattle disease often compels resort to him. What the outbreak of an epidemic among their cattle means to cultivators who were struggling to get free from heavy debts will be realized by a reference to our discussion on indebtedness. The loss of a pair of bullocks at a critical stage of cultivation and the partial failure of a single crop in consequence keeps a cultivator wholly in the power of the money-lender and ultimately involves him in ruin."
200. The commission recommends the enforcement of the Cattle Diseases Act passed in 1866 and further suggests that as animal diseases

## Enforcement of Cattle

 Diseases Aot. which are worn out. But the experience of credit societies in one province in which the subject has been examined is that, borrowing for cattle purchase is mainly due to losses$\qquad$ is a central subject under the Devolution Rules it is advisable if a consolidated Contagious Diseases of Animals Act




 should be passed by the Imperial Legislature applicable to the whole of British India, Local Governments being empowered to apply it by administrative order to any tract such of these provisions as may be applicable in the circumstances of the case.
201. In reviewing the present establishment of the Veterinary departments they write as follows :-
"Veterinary aid is thus, except to an advisable extent, provided by officers employed either directly under Government or by local boards and a comparison of the number of these to the total cattle population reveals that there is only one of them for every hundred thousand cattle. But even this single practitioner cannot be regarded as a whole-time officer for cattle as there are a number of other domestic animals requiring his aid. Moreover, of the officers employed only one in 15 can claim to be a qualified Veterinary Surgeon. The others have been trained only as Veterinary Assistant Surgeons."
202. They proceed to recommend that considering all circumstances they were of opinion that there should be on an average at least one
Veterinary Department should be strengthened. Veterinary Assistant Surgeon for every twenty-five thousand cattle and one qualified Veterinary Surgeon for each district who would have, on an average, about six hundred thousand cattle in addition to other live-stock in the area under his charge. It is no wonder, therefore, that the present establishment of the Veterinary Department in Madras is totally inadequate to cope with the serious problem of cattle mortality.
203. In the establishment of the Veterinary Department, an immediate increase is necessary, not merely for the treatment and control of epidemic cattle diseases which are at present responsible for enormous loss to the cultivating population, but also for tackling the problem of cattle improvement. We have referred elsewhere to the fact that owing to the general inefficiency of plough-cattle, the farmer is now forced to maintain an excessive number of these and of other cattle with the result that their maintenance is at present a serious drain on his resources. The problem of improvement of the breeds of cattle with a view to improving their efficiency is a large one and requires full attention on the part of the Veterinary Department. This is an additional reason for strengthening the department so as to make it an efficient means of helping the agricultural population.
204. The usual impression of the ryots of these districts is that bullocks, as a

Nature of the inoidence of cattle mortality. rule, are capable of working for five to six years, after they come of age, i.e., after four years; but the period of work, contributed by a pair depends very largely upon the breed, and the stature of the animals, the climate of the villages and the economic condition of the ryots maintaining them. The bullocks of Ongole breed live longer and work better than those coming from the Ganjam district, or the Agency. The smaller animals, which are usually maintained by the ryots of East Godavari and by many
of the villagers in West Godavari live for a shorter period, work less efficiently, and cost more to maintain, than the bigger and better animals maintained in many of the villages in West Godavari and in most parts of Kistna. Yet more and more ryots are obliged to go in for these small animala, as they are cbeaper and can be disposed of more easily, whenever necessary and as they find it impossible to obtain the necessary capital for the purchase and maintenance of bigger animals. It may be true, as the Royal Commission on Agriculture maintains, that a hundred bigger animals cost per acre less in the long run not only to purchase but also to maintain than a larger number of smaller animala which can be purchased for the same amount of money. The cost of the services of cattle can be minimised by maintaining better and bigger animals, but in the absence of co-operative methods of cultivating lands most of the small holders go in for smaller animals.
205. The climate of the places in which cattle are maintained has also much influence upon the life of these animals. For instance, the dampness of the general atmosphere and the marshy condition obtaining in the deltaic villages has long been recognized to have a very bad effect upon the health of cattle. * In villages like Nandivada in Gudivada taluk, Gollavilli of Amalapur taluk, Tadikalapudi of Ellore taluk, the local conditions are very detrimental to the health and life of cattle. The climate of the places in which the bullocks and he-buffaloes of ryots are kept for a temporary period will also have to be taken into account, in this connexion. For instance, the ryots of most of the villages in Gudivada, Narasapur, Bhinavaram, Ramachandrapur, Razole, Amalapuram and Cocanada taluks are obliged to drive most of their draught and other animals to distant forests either in the Agencies or in Ellore, Yernagudem, Chintalapudi, and Nandigama taluks and even further into Nizam's territory and to keep them there for about four months in the year. Either excess of rains and the consequent attack of insects and flies or lack of sufficient rain and the consequent dearth of suitable fodder and drinking water cause damage to the health of the animals. Moreover, the change of climate, and nature of the feeding obtained in these forests affect the health and strength of cattle. The animals which are accustomed to the consumption of dried straw and sun-hemp fodder find it hard to adjust themselves to green fodder and grass, to the exclusion of straw, etc., the change in the diet often causing dysentery. They are penned in open enclosures during nights, and are therefore exposed to both rain and sun, while in the deltaic villages they are always kept in well-kept and protected stables.
206. Poorer ryots are, as a rule, incapable of feeding their cattle satisfactorily. Epidemic diseases among cattle have long been known to be a more serious matter in the deltas than in other parts but they have become very frequent and disastrous in their effect in the last ten years. The increase in the communications, the greater facilities obtaining for the free movement of cattle and the increasing dependency of most of the villages upon the local shandis for the supply of their cattle have all contributed their share in making cattle epidemics a very serious factor. The practice of driving cattle to the forests and uplands when they have to travel long distances and pass through many villages increase liability to infection, and as we have stated elsewhere a large percentage of cattle that go to the uplands never return to the villages.

Proper medical aid is generally not forthcoming either in the villages proper or in the forests once epidemics break out ; but ryots often incur appreciable expenditure on medicines.
207. During this year, in particular (1929-30), there was a severe outbreak of rinderpest in many places, and foot-and-mouth disease and anthrax in other places. The mortality of cattle due to these diseases and the losses consequent were very heavy, several villages losing 50 per cent of the cattle population. Cattle died in such numbers and in such quick succession that in many places neither ryots nor Madigas could cope with the work of buying the animals or even removing the hide.
208. The Taluk Board of Ellore has, at our suggestion, kindly got an investigation

Results of the cattle mortality enquiry. made into 53 villages under our direction into the mortality of cattle and our own investigators have conducted a similar enquiry into ten villages in both Kistna and West Godavari districts. The Tadepalligudem Taluk Board which has conducted a similar

[^2]enquiry, almost on similar lines, into twenty villages, on its own initiative, has kindly placed its findings at our disposal. The tabular statements prepared as a result of these investigations will be found in Appendix No. 14.

## Losees sustained in 1928-29.


209. Necessary particulars are available for losses for twenty-five villages in Ellore taluk so that we can get an idea of the incidence per acre of the burden of cattle mortality. It will be found from the Appendix No. 15 that in eleven villages, more than 10 per cent of the tilling cattle died, and that on the whole, 16.8 per cent of the tilling oattle owned by the ryots of these villages died of epidemics during this year alone. Moreover, the losses per acre sustained by the ryots on cattle of all classes amount to Rs. 4 and more in ten villages, while there are only five villages in which these losses amount to less than Re. 1 per acre:
210. During 1927-28 the loss per acre on the average was Rs. 1-6-6, which is nearly twice as much as the provision made by us for cattle mortality in our reports. Our own estimates (found on our village enquiries) give us the figure of Rs. 1-5-11 per acre for Chinnakondepudi and Rs. 1-6-6 for Choppella in East Godavari.
211. The results of the enquiry conducted by our own investigators into the cattle mortality of ten villages in these three districts are given in Appendix No. 14 (ii). It is evident from that table that the incidence of cattle mortality varied in 1929-30, from Re. 0-7-0 to Rs. 9-12-0 per acre in the twelve villages selected in Kistna district, from Re. 0-5-0 to Rs. 1-14-0 in the four villages of West Godavari and from Rs. 1-10-0 to Rs. 8 in the three villages of East Godavari.

## Saotion 31.-Cattle Mantrinance.

## Fodder and Cattle Foods.

212 In the deltaic villages, the only important by-product useful for cattle feeding is the paddy straw. The supply of this per acre varies from village to village and from year to year and Supply of paddy straw. within the same village and in the same year, from field to field. If there is submersion, the straw is damaged and what little is produced becomes useless as cattle feeding. If there is drought and consequent arrest in the growth of the plants, there is very little production per acre. If there are untimely rains just when the crop is heavy with ears or before it is finally reaped, the plants are levelled to the ground and the straw gets considerably damaged. If the soil is saline, the height to which the plant can grow is affected and the strength and growth of the plants are diminished, with the result that the total yield of straw per acre goes down. If the field is well manured and has an assured and equalized supply of water and is reaped at the right time and is not subject to any of the difficulties enumerated above, then the production per acre of straw is certainly enhanced. The taste of paddy straw differs according to the variety of paddy raised. For instance, the straw of the variety of Molokolukulu or Akkullu is very much disliked by bullocks, while that of China Kusuma or Peda Kusuma is relished very well. Where straw that is less liked by bullocks is raised, more additional feeding will have to be supplied by the ryots costing more money than in other places where more tasty straw is produced. Apart from the above facts, many ryots whose holdings are not big enough to assure them of a moderate supply of straw for their cattle, are obliged either to purchase it in the village or to increase their own production of it by taking others' lands for rent.

I-15
zㄷ: 81s: We would again invito. attention to our remariss elsewhere, which go to

Host of the holdings are too small to provide an adequate supply of straw. prove conclusively that the a anilable supply of paddy straw is totally inadequate for the rattle maintained, that therer fore the ryot must necessarily provide extra food of other kind. Sunhemp fodder is supposed to supply all the nutritive ingredients to cattle and make paddy straw palatable. This fodder was produced on a very large scale twenty years ago in most of the deltaic villages of Kistua and West Godavari, and in parts of East Godavari. The sunhemp seed was then comparatively cheap, the crop was not then so much subject to the attacks of pests and therefore the production of this form of fodder was much cheaper than at present.
214. A bag of sunhemp seed has risen in price from Rs. 10 to Rs. 15 , to Rs. 40 to

Sunhemp fodder has become most costly. Rs. 50 in the last twenty years and at least one-fourth bag is needed per acre, even when the seed is sown very thinly; and a ryot needs three to four acres of sunhemp to supply him with sufficient fodder for his cattle and one or two dairy animals. It has become impossible for him now to think of securing sufficient fodder for his bullocks and one or two dairy animals. In spite of all these unfavourable conditions many of the ryots, nch and poor, are still trying their best to raise as much of this fodder as possible, incurring thereby heavy expenditure and taking a big risk Despite many disappointments, they carry on its production in the hope of being able to get a good crop. The loses and the expenses incurred in this venture also must be put down to the cost of maintenance of cattle. In some places, one or two varieties of greengram, and in some other places, blackgram are sown along the field boundaries after the paddy cmp is weeded and also in the fields after the paddy crop is harrested, in order to obta in some yield of these crops and mostly to get a supply of green fodder.
215. In those deltaic villages in which there is some dry land, cholam fodder is specially raised to supply to cattle during August and September and again during November and December. The scale on which these fodders are raised is so small that the total production does not materially affect the question of the cost of maintaining cattle.
216. Paddy husk used to be produced in every home, thirty years ago, in emall quantities, but with the advent of rice factories, the growing unpopularity of home pounding and husking of paddy and the increasing demand for paddy husk, the price of this has risen to an extraordinary level, i.e., from As. 4 to 6 to As. 28 to 32 per bag in the period under consideration. People have come to be entirely dependent upon rice mills for their supply and local production has gone down considerably.
217. Bran which is a finer rariety of paddy husk was always produced by ryots themselves in the past in very small quantities but after the coming of the rice mills, its production has increased by leaps and bounds. The supply, however, has not kept pace with the demand. The price charged for a bag of bran has increased from Re. 1 about the year 1910 to Rs. 3 by 1928. In spite of this, it is found to be the cheapest and most suitable form of cattle food. Its main use is as a roughing to be mixed with other more nutritious foods.
218. The most important form of additional feeding supplied by ryots to their
 cattle during times of hard work such as dammu, harvesting and carting straw and paddy home and manure to the fields, are horsegram, gingelly cake, cotton seed and groundnut cake (in the order of their importance). This additional feeding is given everywhere for at least two months in the year and in places like Koduru in Divi taluk, Rachur Kanchumarru, Chataparru and Khandavili in West Godavari, where fairly big seized bullocks are maintained, this is supplied for at least four months in the year. There are many places, which have garden culture ntore or less well developed, where additional feeding is given for even eight months in the year.
219. The feeding is given again in different ways. In some places, paddy or

Manner of giving additional feeding to cattle. be supplied, these different kinds of additional feeding are provided to the cattle
with a view to enabling them to stand the etrain of sevefe work: If such feeding is not supplied, not:only will their efficiency be impaired, but the average life of these will be shertened.
220. Cotton seed is supplied mostly in the upland villages where it is usually produced. The area under cotton in these districts has always been very small and it has shown distinct signs of diminishing permanently. Even in villages like Kanchikacherla, Konakanchi of Nandigama, Poranki and Kanur of Bezwada taluk, Nallacherla and Tadekalapudi of West Godavari, Gorinta and Burugupudi of East Godavari, many ryots are obliged to purchase this seed. The demand for this is large and the supply inadequate and in consequence, the price has gone up from Rs. 3 to 4 to Rs. 10 to 12 per candy.
221. A reference to the comparative statements in Appendix 13 will show that the Settlement Party's investigators have seriously underestimated the costs of cattle-maintenance, if at all they attempted to make such an estimate. It follows therefore, that

## Und restimated by Settlement Party.

 their estimate for depreciation will also be below the actuals. They have besides made no provision for losses due to epidemic diseases when cattle mortality becomes often appalling.222. From the above remarks it will be seen (1) that the available supply of straw is quite inadequate, and (2) that the ryot in consequence must provide other fodder, besides special feeding for working cattle. The general inadequacy of fodder forces the delta ryots to send a large portion of the cattle to the uplands and into Nizam's territory, when either

Review of the Bpecial Settlement Party's general estimate for cattle depreciation, etc. grazing fees are paid at an agreed rate per bead or pasture land is hired sufficient for grazing purposes.

In spite, therefore, of the heavy cost of maintenance of cattle, the Settlement Party's investigators have made no provision for this important item in estimating the costs of cultivation. The Special Settlement Officer in paragraph $40(f)$ of the Scheme Report states that he considers Rs. 35 as a reasonable allowance on settlement lines for the best lands per acre. The cultivation expenses per acre of paddy at the Samalkot Farm are Rs. 62 and not 'Rs. 50 to $60^{\prime}$ 'as estimated by the Special Settlement Officer. He estimates that Rs. 15 would be the cost of maintaining the bullocks "which according to the settlement rules is to be set off against the value of straw". But, as we have shown above, the supply of straw is totally inadequate, and extra feeding of various kinds has actually to be given, and the cost of this must neeessarily be included under costs of cultivation. We invite reference to the schedules in Appendix No. 28.

We would invite attention to the figures for cost of maintenance of a pair of bullocks given in the table on page 697 of the Report of the Royal Agricultural Commission. The figures for Madras vary from Rs. 68 to 260. Our own estimates vary from Rs. 30 to 80 , and we consider them reasonable and very moderate.

## Skotion 32.-Manuring and Mantris.

223. It may be possible for a ryot to raise the same amount of paddy per acre continuously for a period of five to ten years, after the

Manure is needed to maintain the fertility of land. land has been brought under irrigation, without supplying any manure. But the crops raised will sooner or later exhaust the fertility of the land and there will come a time, when unless additional manure is supplied, the same yields per acre cannot be realized. There is everywhere the complaint that land is demanding more and more manure, that manure is costing more and more, that the local supplies of manure are either inadequate or non-existent. We have had abundant proof of the fact that most of the ryots are trying to supply but the barest minimum quantity of manure. There are many causee for this unfavourable development.

[^3]there are pati mannu, goat and sheep manures, cattle dung manure and stable refues, castor cake and groundnut cake, bonemeal and sulphate of ammonia and other artifcial manures. Of all these, pati mannu is much the most ancient and popular manure. This has always been used quite liberally for manurial purposes by both upland and deltaic ryots. The latter have supplied large quantities of it to their wet lands ir the first forty or fifty years of wet cultivation and now almost all the local supplies of it are exhausted. Except dilapidated forts like Mogalturru, house-sites in a few villages and the village-sites of a few places which are however very far from the active deltaic villages, there are no more great stores of pati mannu. With the decrease in local supplies and the ever increasing distance over which it has to be transported ryots think it worth-while, although mistakenly, to dig deeper and deeper in the hope of extracting a little more pati mannu; but while costs go up the quality produced is inferior. These ryots have been used to this form of manure for so many generations that it is not easy for them to chake themselves from the idea that pati manna alone can enrich their lands. They are therefore found in many villages trying to import pati mannu at very heavy cost, from distant places in boats over canals and in carts over roads. Even this source is not possible for many villages, the number of which is fast increasing and therefore there is an anxious search now being made everywhere by ryots themselves for other forms of manure which can give equally good results.
225. After pati mannu comes the sheep and goat manure, in point of antiquity

Sheep and goat manure. and popularity, although not in importance. The supply of this manure forms a bye-product of sheep and goats, which must be bred for the purpose, i.e., for the supply of wool and mutton. But these animals have lost their old importance as suppliers of wool, and the demand for such wool, once springing from such local manufacturing centres as Masulipatam, Ellore, has gone down considerably. It is therefore no more profitable for either the professional shepherds or for others to breed large flocks of these animals. The wholesale conversion of grazing and unoccupied land into cultivated land, the growth of large expanses of delta irrigation and the destruction of babool trees, all militate The very harsh forest rules. against the maintenance of a sufficiently large number of these animals in all but a few villages. The few people who have flocks of sheep charge high rates, for their manure. As it is, goat and sheep manure is at least as costly as pati mannu and it is not available, even at very high prices, in many villages.
226. Pig manure comes next in point of antiquity, if not in importance; but

## Pig manure.

 its use is being slowly discontinued, as its application is supposed to have a bad effect upon the nutritive qualities of paddy produced, and as it is rather nasty to handle The ryots are as much prejudiced against it as they are in favour of pati mannu, although people are not lacking in many villages who even take the trouble of importing it from such distant places at Singareni. The supply of this manure is always very limited and in the deltaic parts, it is very scarce as pigs cannot be bred locally.227. Oil-cakes have come to play an important part among manures only in the last twenty years, i.e., ever since the supplies of pati mannu began to fall off rapidly. Experiments made here and there by a few ryots with castor cake having proved successful, many have taken to its use and it has by now become an important and popular form of manure. Many of the ryots who have got used to castor cake are also taking kindly to groundnut cake. The area under groundnut is fast increasing and although a large quantity of the groundnut produced in this presidency is being exported there are still many parts of the country still untried and therefore the supply of groundnut cake bids fair to keep pace with the increasing demand for it. The cost of groundnut cake cannot be brought down to economic limits unless and until almost all the groundnut crop is utilized in this country, and cake becomes a vailable in larger quantities.
228. Coming now to artificial manures the experience of ryots with sulphate of

## Artificial manures.

ammonia and other artificial manures is not unanimous.
In some places, these manures are reported to have had beneficial results and in some other parts, the results are supposed to be not very favourable. We have come across cases where an injudicious application of them (either too much
or too little) has either not done any good or caused positive harm to the crop. These are however making very great headway in these districts on account of wide canvassing by the company's agents but the great impediment in the way of their making greater progress, is the belief of the ryots that these manures act only as stimulants for a year.

Eatimate of the total quantity of cattle manure
229. We have referred already to the number of cattle available.
units in the three districts under report as follows :-

| 1. Kistna and West Godavari | ... | ... | $\ldots$ | $\ldots$ | ... | $\ldots$ | Units. 600,000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2. East Godavari | ... | ... | ... | ... | ... | ... | 600,000 |

the total for the two districts being $1,200,000$ cattle units. Assuming that one cattle unit produces altogether $2,000 \mathrm{th}$. of dung we may take one half of this which would be the quantity that will be voided during the night time as being available for the ryot. Assuming that half the number of cattle units are sent away to the uplands and into Hyderabad territory for six months in the year three-fourths of the total number of cattle units available for manure purposes, would be nine handred thousand cattle units. Assuming further, that for want of firewood for cooking and other purposes, half the amount of available cattle dung is burnt for cooking purposes we find that nine hundred thousand cattle units will produce manure at the rate of 500 fb . per unit; so that the total amount of available cattle manure will be 450 million fb .
230. The cultivated area of first and second crop in the Kistna and Godavari West is $1,127,696$ acres or say $1,130,000$ acres. Deducting from this figure 230,000 acres as the probable amount of double crop land the net area per annum may be taken as nine hundred thousand acres. In the East Godavari district the total cultivation of first and second crofs is 683,821 acres and deducting from this figure 83,821 acres as the probable area of double crop land, we are left with six hundred thousand acres; therefore the total cultivated area in the two districts that requires manure may be taken as $1,500,000$ acres. The full dose of cattle manure per acre would be $8,000 \mathrm{tb}$. But assuming that only a half dose is given, the total requirements for the $1 \frac{1}{2}$ million acres is six thousand million fb . It will be scen, therefore, that the available cattle manure would be sufficient only to provide 1 i2th of the total area of cultivation with a half dose of cattle manure. This explains the necessity for the ryots' anxiety to go in largely for fati mannu and other forms of manure for his lands and this also explains the necessity for our providing in the agricultural budgets under cultivation expences for extia manuring for the reacen that the supply of cattle manure is totally insufficient for purposes of cultivation.
231. To come to the cost of manure per acre, it must first of all be stated that

## Cost of manure.

in any one year in any one village only a third of the total irrigated land is manured sufficiently. Even if all the local supply of different kinds of manure is taken into consideration, in any year there is not more than what is needed by half the extent of such land. Cnless the total quantity of manure is increased by the introduction of better kinds of sheep and goats, by the breeding of pigs on a larger scale, by a great production of oil-cakes and by diverting all the cow-dung available towards the production of manure, there cannot be a sufficient supply of manure. On the other hand, the demand, as it is eren at present, is far in excess of the supply and bence the rising prices of manure. If all the ryots were to manure all their lands as protably they would like to, very high -prices would have to be paid. As it is only a few ryots are able to manure their lands properly, and all the rest are obliged to be content with an insufficient supply. The ryots of Kautaram, Pasumarru, Gudlavalleru of Gudivada taluk, Edufugallu of Bezwada taluk spend as much as Rs. 10 to 15 per acre per annum opon manures alone and those of Someswaram of Ramachandràpuram taluk, Chataparru of Ellore taluk, Velagalerv and Achanta of Narssapur taluk spend Rs. 8 to 10 fer acre per annum; but the ryots of Malleswaram of Bandar taluk spend less, not exceeding Rs. 8 per acre of wet land per annum. On the other hand the ryots of Mogallu Dirusumarra of Bhimararam taluk, Likhitapudi and Kodur of Narasayur taluk Nallamilli and Ventrukona of Amalapur taluk, Mulikifalli of Razole taluk are scarcely able to fay for any additional manure and yet they do purchase now and then large quantities of pati earth and other manures, even with borrowed capital, for fear that
the productivity of their lands may go still further down. It is not uareasenable therefore, to assume that the minimum expenditure upon manure per acre of land per enaum is Rs. 6. It is, however, likely that the cost of manures may go up in the inmediate future as the supply is quite unequal to the demand.

## Skction 33.-Palert.

## 232. We have found abundant testimony to the fact that every ryot who has a holding of 5 acres and over and who does not havean adult male dependent to help him, engages a paleru (a juvenile worker) in order to assist him in carrying on his cultiva- <br> Palerus are needed.

 or temporary or permanent worker) in order to assist him in carrying on his cultiva-tion. There are only rare exceptions to this and they occur in the case of ryots belonging to Panchama and other depressed classes in addition to a few extremely poor ryots of the higher castes. It was at first rather surprising to us to find that even in such admittedily poor villages as Konakanchi in Nandigamz taluk, Puligadda of Divi taluk, Nallazerla of Tadepalligudem taluk, Tadikalapudi of Eillore taluk and Gummalladoddi of Rajahmundry taluk, there should be so many ryots who said they engagel palerus; but on detailed enquiry into the natúra of the work of the supervisor, needed especially by paddy cultivation and the work contributed by the palerus, we have come to realize that in most cases one or more palerus are needed and are engaged by ryots and that the inclusion of their salary in the costs of cultivation is a legitimate item.
233. A ryot must be in all those places in which more than three workers are

Nature of the work of a eupervisor. engaged in finishing any of the different processes of work demanded by paddy cultivation. If seedlings are being uprooted, the ryot must be there not only to see that the labourers do their work thoroughly and quickly but also to prevent theft. Similarly he must be on the field to which the bundles of seedlings are conveyed to be transplanted and on which transplantation is to be finished. Similarly in the reaping season, his attention is needed in more than one place.
234. To aid the ryot to discharge efficiently his functions of a supervisor, an adult male dependent or a paleru is needed. Without
Nature of the work of paleru. such an additional hand, the labour engaged works ineffciently and grain and other nesources are robbed.
A paleru does very much more work than supplementing the supervisor's funotions. He looks after the cattle, keeps the cattle shed in proper order, guards the haystack and agricultural implements, brings fodder (sunhemp, cholam, grass, etc.) for the cattle and stays on the fields with the cattle during summer.
235. They have become more mobile than in the past and with the introduction

History of paleru. of Christianity and the new awakening caused by the antiuntouchability movement, they have became quite canscious of their own economic strength.

The Panchamas who were once satisfied with being engaged as palerus are to-day extremely unwilling to work as such. For instance, they prefer to go for forest work in Nallazerla, Tadikalapudi of West Godavari and Chinakondepudi of Last Godavari. They are more anxious to become cultivators of others' lands in Mudunuru and Kanchumarru of West Godavari, Kautaram and Gokavaram of Kistna district. They prefer to be casual workers in almost every deltaic place. Thus there has been a steady and even very marked decrease in the last twenty years in the number of people who are willing to work as palerus. This has naturally forced up the salaries demanded and paid.
236. Payments are still made mostly in grain. Small advances of money are

Salaries paid to palerus. made free of interest to the palerus to enable them to clear off old debts or to get married or to construct a hiouse on the understanding that such advance shall be returned to ryots when they quit their service. Most of the palerus return these advances before they leave their employers; but a few manage to run away to Rangoon from West and East Godavaris without repaying such advances. Shoes, a pair of upper cloths and a dhuppati are given as mamools, in addition to sweets and food at all festive occasions to some or all the members of the family of the palera. During the harvesting season,
each paleru is given one or twe bundles of out paddy par field. The paddy that is seraped out of the threshing floor alse goes to the wife of the palerc. In addition to these perquisites, some palerus are fed by the ryots either thrice or only once a day. Such workers are supposed to work better and more efficiently and regularly; but the ryots have to spend more in thus feeding them than if they only pay the usual grain allowance. In some places the palerus are more anxious to be fed by the ryots than in other places.
237. Over and above all these allowances, each paleru is paid either in kind or in cash or in both. Of course those who are fed get less of this payment than others.

One and a half to three candies of paddy worth Rs. 100 to 180 is given per annum. The exact payments made vary from village to village ; but it is largely true to say that the salaries paid have risen in the last 30 years by at least 50 per cent.
238. The cost per acre of the services of a paleru depends very largely upon the extent of land served and the nature of the agreement made with him. It costs less for a ryot who has 10 acres of wet land to have a paleru than for one who has only 6

Cost per acre of the sorvices of paleru. acres. It pays better for the latter ryot to engage a cattle boy rather than a perma-
nent paleru. It again is cheaper to engage temporary palerus rather than permanent workers, whenever a ryot is obliged to have more than one paleru in the busy seasons. Hence the variations indicated in the tables given below.

The estimates of the Investigators of the Settlement Party make no provision for the cost of keeping palerus.

## Sbction 34.-Social Customs affrcting Agriotliurb.

239. It is necessary for us at this stage to refer to the social customs of the main agricultural classes in these districts, as they have an important bearing on the costs of cultivation. The classes

Women of the most important agricultural classes do not work in the fields.
owning lands in these districts belong mainly to the Kamma, Kapu, Telaga, Razu and Kshatriya castes, and a large number of Brahmans also own lands.
240. The following table shows the total number of males and females of the above castes in these three districts:-

| Catte. |  |  |  |  |  | Male. | Temale |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Brahman | $\ldots$ | $\ldots$ | ... | $\ldots$ | ... | 88,993 | 86,337 |
| Kapu | $\ldots$ | $\ldots$ | ... | ... | $\ldots$ | 242,412 | 268,880 |
| Telaga | $\ldots$ | ... | ... | ... | ... | 108,511 | 111,426 |
| Kabatriya | ... | ... | ... | $\ldots$ | ... | 45,105 | 47,944 |
| Rasu |  | $\ldots$ | ... |  | $\ldots$ | 9,032 | ${ }^{9,673}$ |
| Kamma | $\ldots$ | ... | ... | ... | ... | 147,495 | 125,499 |
|  |  |  |  | Total | ... | 639,548 | 640,759 |

Compared with the total number of land-owners and cultivating ryots in these three districts (omitting field-labourers and farm-servants) the above castes form about 84 per cent of the totals. Of these castes all excepting the Brahman observe the gosha aystem for their females, and in all cases including the Brahmans the women do not do any kind of field work. This is a serious factor in the cost of cultivation, because the cultivating ryots, instead of being able to depend upon their women for field-work, have to provide instead for paid labour. Among these classes we find in many families that there is only one male worker or sometimes $t w o$; and in a few cases we may find three members of the family working. It will be well, therefore, to emphasize this factor before we proceed to give details of costs of cultivation in these districts as affecting the bulk of the cultivating population.

## Section 35.-Khata Accounts.

241. During the course of our enquiries we made every effort to secure from the ryots their account books for their cultivation accounts. We found, however, that it was very rarely indeed that ryots maintained regular and complete accounts of their inaccounts. comes and expenditure from year to year, for a series of years. In many cases we were
supplied with accounts of costs of cultivation, obviously written up for the occasion, and we had invariably to reject theee. We however found, six ryots who had maintained regular account books from year to year, for a number of years. It was a work of great labour to analyse these accounts, and separate items referring to cultivation from those concerning the maintenance of the family, etc. Owing to want of time we had toselect in each case the accounts for the last four or five years from 1928 upwards. We attach great value to these accounts, incomplete, as they are, inasmuch as they were maintained in the usual course and not put up for the occasion to be given to us. These khatas afford us the most reliable and accurate information regarding the methods and costs of cultivation. They afford indeed incontrovertible evidence of the accuracy of our schedules for costs of cultivation. It will be found that they give interesting confirmation of the details and figures that we have ourselves worked out as the result of our enquiries in the villages that we took up for detailed investigation.
242. The evidence of these khatas enables us to say that most of the ryots who have volunteered to us information regarding costs of cultivation tried their best with much success to give us accurate and reliable information and also that our investigators were able to gather reliable information regarding the costs of cultivation.

Apart from other facts it will be seen that interesting information is afforded by these khatas concerning the following factors:-
243. Points emerging from khatas.-The accounts show

1. Maintenance of palerus.
2. Agricultural implements.
3. Squaring and levelling fields.
4. Public Works

Department mamools.
5. Purchase of seeds and seedlings.
that palerus are invariably maintained and generally on a scale much larger than we have allowed for in our schedules of costs of cultivation.

The accounts show costs incurred for repairs, but generally they do not make any provision for depreciation. In some cases costs of the purchase of new implements, carts, etc., are entered.

The accounts show that this is a common item of expenditure.

The khata of Jujhavaram shows regular payments for these mamools.

Several of the accounts show that the ryot has often been forced to purchase seeds and seedlings for various reasons.

Most of the accounts show costs of extra manuring. In some cases where the 6. Manuring. ryot possesses his own stock of pati mannu no entry is made; but in arriving at costs the value of the ryot's own pati
mannu has to be included.
8. Outturn.

Khatas give information about outturns of lands.
All these khatas indicate that the cost of cultivating an acre of land is not the same over a number of years and that it varies very greatly in sympathy with the varying conditions, such as, season, labour supply.
9. Agricultural expenses vary from year to year.

The following is a summary of the main points brought out by these accounts:-
244. Summary of points.-I. Khata of Mr. Veeresalingam of Edupugallu, (Kistna district).
[Vide Appendix No. 16 (i).]
(a) He maintains a large number of palerus.
(b) He makes grain payments to his palerus which he has not entered in his accounts.
(c) He incurs large expenditure on manures.
(d) He hires cattle for cultivation.
(e) He incurs expenditure on squaring and levelling of his fields.
( $f$ ) His actual expenses of cultivation per acre exclusive of depreciation charges. on cattle and implements are Rs. 69.
245. II. Rhata account of R. V. Ramayya of Jujhavaram (Kistna district).
[Vide Appendix No. 16 (ii).]
(a) This gentleman is an enterprising ryot as well as a skilled cattle-breeder and makes an appreciable income by the sale of cattle bred in his yard. He knows English and is anxious to make agriculture and cattle breeding pay.
(b) He works on his fields and carries on joint cultivation with his brother-in-law, his brother and his nephew.
(c) He pays for special martures and has not included the cost of the large quantity of pati mannu he uses from his own stock.
(d) He employs palerus in his fields.
(e) He pays Public Works Departmént mamuls.
(f) The cost of cultivation per acre, in his case, comes to Rs. 47-1-4, exclusive of the cost of pati mannu and depreciation of agricultural implements or Rs. 58-1-4, inclusive of these.
(g) The outturn varies from 13 to 17 bags per acre.
( $h$ ) He is an exceptional ryot and in the whole of Jujhavaram and Pasumarru, he is considered to be the most successful ryot.

## 246. III. Khata account of Ramayya of Bhimadole. <br> [Vide Appendix No. 16 (iii).]

His account shows that-
(a) He employs a large number of palerus.
(b) He makes part of his payment for labour in bundles of paddy.
(c) The cost of cultivation per acre for labour (temporary and permanent) alone, i.e., excluding manure, cattle maintenance, cattle depreciation, agricultural implements, etc., comes to Rs. 42-10-7.
247. IV. Khata account of K. S. Ramayya of Kothapeta (Kistna district).
[Vide Appendix No. 16 (iv).]
His account shows-
(a) That the costs of labour alone employed per acre come to Rs. 24.
(b) That his outturn per acre is 9 bags.
248. V. Khata account of K. Venkata Raju, Lankala Koderu (West Godavari district).
[Vide Appendix No. 16 (v).]
His account shows-
(a) He employs a large number of palerus.
(b) He maintains his own cattle and hires others if necessary.
(c) He cultivates also a second crop on his lands.
(d) He makes a net annual income of Rs. 147 from an area varying between 11-2 acres and 14 acres calculated over a period of ten years.

248-a. VI. Khata account of K. Somayya of Tadikalapudi (West Godavari district).
[Vide Appendix No. 16 (vi).]
His account shows-
(a) He employs temporary palerus.
(b) He purchases seeds.
(c) He incurs rather low expenditure on manuring.
(d) His charges for maintenance of cattle are very low, since being a merchant he uses the waste products from his grain-stores for his cattle.
(e) There are besides great facilities for him for grazing his cattle on poramboke and other lands.
( $f$ ) For the four years 1925-1928, he makes a net income of Rs. 32 per annum on the cultivation of 10 acres of wet and 41 acres of dry land.
[Vide Appendir No. 16.]
I-17

## Sechor 36.-Rivinw of the Ophichal Reports upor the mconomio conditiors or 24 tiluates.

## Cost of cultisation.

249. There is a separate section upon the "Economics of caltivation" in evary one of these 24 reports. In it are found details regarding the agricultural implements needed, the cattle maintained and the labour hired by an ordinary cultivator. The

> Agricaltural implementa Official Investigators have made many obvious omissions and underestimates which are too glaring to be missed even by a general reader. For instance, under agricultural implements, no provision is made for knires, sickles, gunny bags, carts and the annual repairs to the various implements used in farming by the ryots. Every ryot has either to pay for the services of a cart or to parchase a cart, since a cart is needed both for squaring and levelling work, for carting manure to the fields and for carting grain and straw from the fields into the village. Moreover, all these implements not only depreciate and become completely useless in a certain number of years but also need occasional and often annual repairs in order to keep them in good working condition and these repairing charges alone amount to appreciable sums in the case of every ryot; but the Government Investigators completely ignored this important factor (of maintenance charges).
250. Coming to cattle, fairly accurate information was collected by them regarding the price and the life of draught animals used in these 24 villages; but they have very often confused cart bullocks with plough bullocks; and so their estimates for the depreciation of cattle are inaccurate. Moreover, the price of animals provided for was in many cases underestimated, while the period for which they were said to work was often overestimated.
251. Must ryots try to purchase a pair of bullocks that will be good enough both

Depreciation of cattle.
for carting and ploughing. It is therefore only reasonable to assume for the purpose of calculating depreciation chargee that the price of the animals maintained will be about the mean between the prices paid for these two kinds. Moreorer, those ryots, who have more than ten acres but less than twenty acres, own a pair of bullocks and another pair of he-buffaloes in order to economise their expenditure upon cattle; but those who have more than 20 acres go in for three pairs of animals-one pair of cart bullocks, another pair of plough ballocks and a third pair of he-buffaloes. Very often these facts were lost sight of by the Government Investigators and the result is, what can be expected, an nonderestimste of the depreciation charges.
252. But the most important omission is the maintenance charges of cattle. The Special Settlement Officer states that "according to settlement rules" the maintenance of bullocks is to be set off against the value of the straw. It is impossible to agree

Maintenance of cattle. with the above because whatever might have been the cost of the additional feeding needed by cattle at the time when these rules were framed, there is no gain-saying the fact that at present the additional feeding needed by a pair of draught animals is very considerable. The Government Inrestigators simply satisfy themselves with making mention of a few or all the different kinds of additional feeding provided for draught and other cattle maintained without trying to estimate the cost of maintaining a pair.
253. The next item is seed. It must be admitted that the Government Investiseed. gators have made in many cases, adequate provision for seed; but in the case of a few villages their estimate is too low and needs to be raised to represent the actual conditions of things.
254. Labour expenes come as the last item in these estimates. Here also, the work is very cride and unscientific. Several items of work are completely omitted, although it is admitted in the section upon" The Rontine of cultivation" given in all the reports that such processes of work are performed by the ryots. For instance, no provision is made for the wages paid for all the processes of work performed upon paddy fields up to the time of transplantation.
255. Items of expenditwre omitted by Official Investigators-

1. Cleaning, repairing and ploughing the seed-bed.
2. Carting and spreadang manure to seed-bed.
3. Watering the seed-bed.
4. Squaring and levelling.
5. Bodi repairs and removing silt from irrigation channels.
6. Ploughing or Dammu (in some cases, it was provided for) Clerks report contains this.
7. Carting and spreading, manure on the fields.
8. Uprooting and conveying the seedlings. (Provided in some reports.)

- 9. Clleda and topping.

10. Watching and watering the crops. (Clerk's report contains this.)
11. Preparing the threshing floor.
12. Mamuls to artizans, ete. (Clerk's report accounts for a part of this.)
13. Preparing haystack.
 frome curtain putahes of a fight.
14. Even the most hardworking and thrifty ryot has to engage at least one coolie to assist him during some or all the days on which he has to work in the fields. Moreover, the reports are completely silent about what happens to the grain and straw, left on the fields, after the crop is thrashed. The ryots in these districts are not in the habit of leaving the heaps of straw on the very fields on which the straw is raised. They, in fact, cart most of it to their stables and stock it there. In performing this worli, hired coolies are needed to assist the ryots. The crop must be watched; water let in and let out at the right time and cattle kept off the fields and rats killed; and this work known as watching and watering is often done by the ryot himself or his paleru and if neither is arailable payment has to be made to some one who is engaged for this purpose. Although Mr. Clerk thought fit to provide for this item of expenditure, the official investigators have neglected it completely.

No wonder with all these omissions, the estimate of the Government Investigators, for the cost of hired labour is very low and for that reason, completely different from the actual conditions of things.
257. Lastly no provision is made in any of the official reports for the payments Paleru. Inde to a permanent or temporary or juvenile paleru. In actual practice, every ryot who has 5 acres of wet land engages a paleru and incurs an expenditure of Rs. 8 per acre. The omission of such an important item of expenditure has naturally led to a serious underestimate of costs of cultivation.
258. The Scheme Report does not contain any details of the cost of cultivation nor does it furnish a consolidated statement of the estimates made for 24 villages by official investigators. The consolidated tables (information abstracted from official reports) given in Appendix No. 17 clearly show that such details as were gathered by the investigators are not of much use.

A consolidated statement for the cost of cultivation per acre derived from various sources is given in Appendix No. 17. It will be ssen from it that the official estimates made for various items are gross underestimates. From this statement, it will also be observed that our estimates for the cost of cultivation per acre for each of the $\mathbf{6 0}$ villages selected, are quite reasonable and accurate and especially is it so, since the two important khata aceounts from Jughuvaram and Edupugallu in Kistna district streagthen our estimates.

## Section 37.-Retibw of the History of the Fortunbs of the Diglot Pattadars, as it is presentrd in the Oppiolal Reports:

259. The Government investigators have collected information regarding the fortunes of each and every one of the diglot pattadars of

This mate of enquiry is quite a useful one. the 24 villages selected for economic enquiry. If conducted on scientific lines and in a thorough manner, this mode of enquiry can certainly enable one to get a correct idea of the history of economic conditions of all classes of ryots. It is however in the manner of conducting this enquiry that these investigators have made themselves very much liable to critisism. They do not seem to have got their information in very many cases from the 1 rots concerned. They appear to have, on the other hand, depended to a great
extent upon the incorrect and casual information provided to them by the village karnams. This is a grave defect which detracta from the importance of their findings. They have for instance failed to understand the significance of such phrasee, as productive debt and unproductive debt, family expenditure and cultivation expenses; so that when losses of holdings or sales of lands were due to family maintenance, they have tried to draw the conclusion that such losees could not have been incurred if the ryots had been thrifty and careful and attended to their cultivation with assiduity. They have taken very much trouble to minimise the importance of the losees due to borrowings for cultivation expenses by assuming that such losses could not have been of much importance and could not have entered into the fortunes of so many ryots. Thirdly their findings would have been very much more valuable, if only they had taken care to see that the various causes for the losses of lands and the relative importance of such losses had been carefully noted. As it is, it becomes impossible to assess the causes they advance for such losses at their true value. For instance, they give such causes as "family maintenance, marriages and ceremonies" in one case, "purchase of lands, exchange of lands, lands being distant and poor of soil and family maintenance" in another case, "cultivation expenses, family maintenance" in yet other cases, for the losses incurred by ryots. By thus mixing up two or more causes to explain the loss of fortune in any one case, they have made their findings of doubtful value.
260. Many of these investigators were at pains to increase the confusion inherent Investigator's findings confusing. in their findings. They say that some sales of lands were due to the fact that the ryots in question had left the village; but they do not say whether those ryots had gone elsewhere to purchase lands with sale money of their properties or whether they had lost everything they had in disposing off their properties. The investigators themselves seem to have been anxious to infer that such people cannot be included in the list of those who lost their properties on account of economic pressure.
> 261. These investigators set aside some cases of sale of lands as due to "family Indefinite findings. purposes and family benefit" but they do not indicate exactly what is meant by these phrases. It cannot mean that the rrots in question bequeathed those lands to their relatives as there is separate provision for cases of gift, nor can it mean that they sold them to purchase lands elsewhere at cheaper rates or to exchange for better lands in the same or other village or to realize money by the sale of lands of poor soil in order to get greater income, as there is separate provision made for all such cases.
262. The number of cases of family expenditure, purchase of lands elsewhere, exchange for better lands, marriages, extra vagance, litiga-

Minimising the trae significance of the results of their enquiry. tion, losses in trade are multiplied tor such an extent and are introduced in so many cases of losses that one cannot but feel that these investigators have taken pains to minimise the importance of the results of their own enquiry. These investigators seem to have been under the impression that debts incurred for marriages are entirely unproductive debts. They bave not realized that up to a limit, the marriage expenses ought to be met out of the accumulated savings of a family and not out of its capital assets. Old debts also are a liability upon the annual income as well as the assets of ryots since such debts are at the present day the equivalent of the capital borroned a few years previous to the time of the enquiry for meeting family and cultivation expenses. Therefore it is only reasonable to assume that a large portion of the capital borrowed for marriages and most of the old debts form an annual charge upon the economic resources of the ryots; and that the losses of lands incurred ty ryots in order to clear off such debts are to be put down as due to economic pressure.
263. They have tried to conclude that most of the sales of lands and lowses, complete or partial of properties were very few and un-
Their conclusions were important ; but a careful study of their reports reveals the
not warranted. fact that much of the most important cases of sales of lauds and losses of property and the great majority of cases of loss were due to economic pressure. These investigators have tried but ansuccessfully to throw doubt upon the importance of economic pressure.

In the Appendix (No. 18) are presented extracts taken from the official reports with our comments. These extracts make it abondantly clear how unwilling were these investigators to see the real significance of their own findings and how ambiguous were the explanations given by them for the losses of lands, etc.
264. Over these 24 villages having 2,288 pattas at the time of the last settlement, only 591 pattas or about 26 per cent have remained in the hands of the original pattadars or their heirs without any material change and 202 pattas, or about 9 per cent have increased in size, while all the rest, i.e., at least 65 per cent of the pattas, have undergone partial or complete change of hands. Whatever might have been the causes for this, it eloquently proves that nearly two-thirds of the pattadars have become unable to retain their holdings in this period of 30 years. If we, however, look into the causes, we find that about 42 per cent of the total number of pattas, or more than 63 per cent of the pattas that have undergone changes, were due to economic pressure. It is preposteruss on the part of the official investigators to say that their survers indicated progress in all these villages in the face of the incontrovertible evidence of decay provided in their own reports [vide Appendix No. 19]

## Saction 38.-Probley of ndibtedness of the Ryots.

265. The Special Settlement Party made an attempt to get an idea of the magni-

Review of the method of the Goremment enquiry into the indebredness of ryots the two periods of 1900 to 1904 and 1920 to $1924-25$ :-

|  |  | Barlier per | Later perio |
| :---: | :---: | :---: | :---: |
| Number of documents examined |  | 3,638 | 3,035 |
| Anount borrowed |  | Rs. 9,37,261 | Rs. 16,24,250 |
| Number of agriculturists borrowing |  | 1,424 | 1,714 |

Information regarding the extent of land mortgaged and the total assets of the ryots who got their lands mortgaged was not gathered by the Settlement Party and therefore they can draw no conclusions as to whether more or less money is advanced against an acre of dry or wet land in the two periods under consideration. Moreover, unless it is known what proportion of the real assets of the borrowers is involved in debt, it is not possible for any one to say whether the real burden of the mortgage debt is bearier now than in the earlier period.

The Special Settlement Officer seems to be surprised at the fact that fewer documents were registered in the later period than in the earlier period, because he has mised the fact that in this period mortgage debt has become thoroughly unpopular among the debtor ryots. He has also failed to understand the real significance of the fact that " whereas this increase (in the money borrowed on mortgage) is 60 to 70 per cent only, the price of land has during the same period risen by 200 to 400 per cent " for, instead of inferring as is legitimate that the money-lenders may possibly have very much less faith in the artificial and too high prices paid for lands and that much the most important portion of the indebtedness of the ryots has come to be secured otherwise than by mortgage in this period of thirty years, he simply tries to suggest that the real burden of indebtedness upon ryots has gone down to a comsiderable degree.
266. In addition to this enquiry, he got another made into the indebtedness of some of the ryots in these three districts.

|  | Government anquiry. | Commitue's enquiry *. |
| :---: | :---: | :---: |
| Number of rillages selected | - 79 | 87 |
| Number of rrots examined | 1,930 | 6,826 |
| Tocal estimated ralue of property. | Rs. 88,79,961 ${ }^{\text {a }}$ | Rs. 3,68,05,3*4 |
| Total debts | 16,63,4i0 | " $74,07,100$ |
| Percentage of debts to total pro- | 23 per eent. ${ }^{\text {a }}$ | 20.12 per cent. | perty.

[^4][- Vide Appendir Na. 20.]

It must first of all be remarked that no rational systom was adopted by the Settlement Party in selecting the villages for this enquiry. For the whole of the Kistna district, eight villages in Bandar taluk were selected, for Last Godavari eleven villages in Ramachandrapur taluk, and for West Godavari 11 villages in Narsapur taluk, 15 villages in Bhimavaram taluk and 11 villages in Tanuku and Tadepalligudem taluks. In fact, this enquiry was thought of at the eleventh hour and so no attempt was made to see that there was a fair distribution of villages even within a taluk, not to speak of a district. In conducting this enquiry, care was not taken to see that, at least for a few villages, complete information was obtained for all the resident ryots. Indeed, many of the Special Revenue Inspoctors who were asked to do this work satisfied themselves with consulting the village karnams for gathering this information, without trying to obtain the information from the ryots themselves. No wonder the Special Settlement Officer himself writes on page 52 of his report that "no great accuracy can be expected from these figures which depend on unverified and probably casual estimates made by the individuals concerned."
267. We undertook a fairly comprehensive inquiry into agricultural indebtedness in the three districts and for this purpose we selected 10 villages in addition to the 78 villages * taken up by the Special Settlement Party.
[ ${ }^{-}$Vide Appendix No. 24.]
The following is a list of villages taken up:-

Kistnà District.
Divi taluk-

1. Puligadda.
2. Kodur.
3. Chavalipadu.

Nandigama taluk-
4. Konakanchi.
5. Lingala.

Bezwada taluk-
6. Idupugallu.
7. Patamata.
8. Elaprole.
9. Poranki.

Bandar taluk-
10. Chinapandraka.
11. Nanん̈igams.
12. Serivartallapalli.
13. Buddalapalem.
14. Amudalapalli.
15. Pedapothepalli.
16. Arisipalli.
17. Chilapantivaripalem.
18. Tallapalem.
19. Chittipalem.
20. Bairagipalem.
21. Pillarisettivaripalem.
22. Chinapothepalli.
23. Pothireddipalem.

Gudivada taluk-
24. Kantaram.
25. Pallivada.
26. Komaravole.

West Godevari District.
Sarsapur taluk-

1. Pedamallam.
2. Lakshmaneswaram.
3. Kaja.
4. Achanta.
5. Пapakurru.

## West Godavari Distriot-cont.

Narsapur taluk-cont.
6. Gummuluru.
7. Kummarapurugupalem,
8. Penumadam.

Ellore taluk-
9. Dendulur.
10. Kovrali.
11. Surappagudem.

Tadepalligudem taluk-
12. Racherls.
13. Navabpalern.
14. Badampudi.
15. Kristnayapalem.
16. Nallacherla.
17. Bommidi.
18. West Vipparra.
19. Chebrole.

Chintalapudi division20. Tadikalapudi.

Tanuku taluk-
21. Neggipudi.
22. Malleswaram.
23. Devarapalli.

Bhimavaram taluk-
24. Korakolln.
25. Pedapulleru.
26. Chilukuru.
27. Vendra.
28. Garagaparra.
29. Gollalakoderu.
30. Tundurru.
31. Yendagandi.
32. Chinaamiram.
33. Pedaamiram.
34. Kumudsvalli.
35. Mabadevapatnam.
36. Palapoderu.
37. Kopella.
38. Chinapullera.
39. Andalura.

## East Godavari Distriot.

Rajahmundry talak-

1. Bolleddupalem.
2. Jambupatnam.
3. Vemagiri.
4. Yerrampalem.

Amalapuram taluk-
5. Vemavaram.
6. Irusumanda.
7. Madupalli.

Razole taluk-
8. Palagummi.
9. Pasarlapudi.
10. Mulikipalli.

## East Godueary District-oont.

Ramachandrapur taluk-
11. Artamuru.
12. Ramavaram.
13. Konkudura.
14. Tapeswaram,
15. Someswaram.
16. Velagatodu.
17. Polamuru.
18. Koppavaram.
19. Ippanapadu.
20. Vadlamura.
21. Lolla.
22. Tossipudi.
23. Dwarapudi.
268. Our enquiry was from the very beginning conducted as carefully and systematically as was possible under the circumstances. How our enquiry was $\begin{aligned} & \text { systematically as was possible under the circumstances. } \\ & \text { Our Indebtedness Investigators, who were specially trained }\end{aligned}$ made. and deputed to do this work alone, have worked in close co-operation with the villagers and obtained the information regarding every ryot from himself or his relative. We have ourselves gone into this question in all the villages visited and have assured ourselves that the results were quite trustworthy.
269. It will be seen from the table below that the very poor ryots whase

Results of our enguiry. assets are worth not more than Rs. 100 each are most heavily indebted, in proportion to their property. The proportion of the property that must be set aside for the clearance of the debts contracted by the ryots decreases as the total value of the assets of different classes of ryots increases.


These figures make it clear that the smaller ryots are more heavily. involved in debt than the richer ryots, aince their debts absorb a much greater portion of their assets than those of the latter. The ryots of Kistna district are less heavily involved in debt than those of the other two districts and the burden of debts bears less heavily upon the West Godavari ryots than upon the East Godavari ryots. The following. comparison between the average indebtedness of the cultivators of these districts. (either actual landholders or tenants) and those of other parts of India reveals the following points.
["Vide Appendix No. 20.]
270. Comparative figures for the indebtednese of agriculturisto-

| Partioulare aboat the indebted parson. |  |  | Average debt par indebtedfamily. |  |
| :---: | :---: | :---: | :---: | :---: |
| 1. Indebted proprietor of Darling's enquiry (1924) |  | $\cdots$ | .. | R8. 463 |
| 2. Mr. Thorburn's enquiry (1896) ... ... | $\ldots$ | ... | ... | 562 |
| 8. Mr. Jnok for Faridpur distriet (1907) | ... | ... | ... | 121 |
| 4. Mysore (1919) ... ... ... | .. | .. |  | 273 |
| 5. The present enquiry in Kistna (per family)-- <br> (a) 1929-30 (1,334 debtora) |  |  |  | 1,070 |
| (b) West Godavari villages ( 2,886 ryots) | $\ldots$ | $\ldots$ |  | 1,236 |
| (c) East Godavari villages (2,606 ryota) | ... | ... | ... | 925 |

The above figures strongly suggest that the indebted ryots of Kistna distriot are nearly twice as heavily indebted as those in Mr. Thorburn's enquiry which revealed the heaviest indebtedness so far as previous enquiries were concerned. The Fast Godavari ryot is as heavily indebted as the ryot of Darling's enquiry and the West Godavari ryot is the most heavily involved, among all these ryots. In fact if we examine the figures given by Mr. Darling on page 13 of his book, we find that excepting the average larger proprietor of Hoshiapur district the average ryot of Kistna district comes out as the most heavily indebted ryot. It is really significant of the condition of the ryots of these districts that the average debt of indebted ryots should be greater than that of even the larger proprietors of the Punjab (the proprietors of Hoshiapur being an exception).
271. If we examine the statistics given in the consoli-

The poorest ryots are heavily indebted.
dated table, we find that 68.06 per cent of the ryots enquired into have each property worth only $\mathrm{Rs}_{\mathrm{s}} \mathrm{5}, 000$ and less.

[*Vide Appendix No. 20.]
272. The first three classes of ryots of these three districts own only 5 acres and less each and yet they have to clear off a debt of Rs. 250 to Rs. 330 per head.
273. These tables also indicate that the land owned by the ryots of different classes increases in extent as the total assets of the ryots increase and also that most of their assets are in the form of lands only.


## [ ${ }^{-}$Vide Appendix No. 20.]

The above details show that not only the aggregate debt per head increases as the value of total assets of ryots increases but also the burden of the debt upon each of the ryots in these different classes varies from district to district. The average Kistna.
ryot seems to be very much less involved in relation to his assets than that of East. Godavari, while the ryot of West Godavari whose aseets are less than Rs. 10,000 is more heavily involved than the corresponding ryot of East Godavari.

Those who are free from debts *-

274. The above table indicates that there are fewer people in the uplands who are

Those who are free from debts are few. free from debt than in the deltaic villages and that on the whole there are only a few people forming a negligible percentage, who are free from debts in all these villages.
On the whole there are only 512 people out of a total number of 6,819 or 7.6 per cent; but the Special Settlement Party's enquiry indicated that 37 per cent of the deltaic ryots and 40 per cent of the upland ryots were free from debt.
275. As is stated in our section upon credit, it must not be forgotten that co-operative credit is availed of by only some ryots of those-
Co-operative oredit plays an important part. few villages in which there are co-operative credit societies. Of the members of such societies, there are usually many who are quite rich. Indeed, it is not unusual for a co-operative credit society to be managed entirely by rich people. If, therefore, a proper and accurate idea of the percentage of assets of the members of such societies which were involved in debt, is to be got, we must first of all know all about the different classes of ryots who are members of such societies. Otherwise, the average "the percentage of debts to the value of the landed property held by the debtors" is liable to give us a very untrue and unreliable idea about the real burden of debts. The analysis of the burden of indebtedness upon different classes of ryots given earlier in this section, is enough to show how incorrect is the Special Settlement Officer's attempt to show that such percentage of debts to the value of landed property held by debtors is only seven. There is therefore no point in his remark that it is "a difficult fact for the pessimists. on rural indebtedness to explain away."
276. Causes for Debts.t-As for the purposes for which money is borrowed the

The income from land is not enough for maintenance. Special Settlement Officer argues with some plausibility that "it would be fallacious to argue from the borrowings for cultivation expenses that agriculture was unprofitable"; but he does not pause to say anything about the ten and nine per cent of thedebt due to family expenses in the delta and uplands respectively, one per cent in each of these tracts for the payment of kist, three per cent in each for miscellaneous purposes and eight and six per cent for house building. Surely people need not borrow for maintaining their families, and for constructing houses to live in, and for the payment of kist and miscellaneous purposes, if agriculture was profitable and if they were able to get big enough net incomes. If in fact anything is indicated it is that the income from land is not enough to enable ryots to maintain themselves. It is not uureasonable to claim

[^5]that ryote whowe cultivation is not unprofitable most usually be able to look forwand to saving enough to enable them to eupbrate the neceseary marriages and funerala, whenever such ceremonies come to be colebrated, tith the minumam of pomp, festivity and expenditure. Such expenditure, neemearily forms a part of the ryots' family bodget.
277. There is then the big item of debts contracted for the parment of old dethe. Bignifinase of old debte. It is necessary to get a clear idea about what is meant by this phrase, old debts. It means all those debts which aro contrac'ed by a ryot or someone else prior to the regisuration or the writing of a document and therefore two or more old debts may differ from each other rery. Widely in their meaning. It would be untemable, for this reason, for any one to ciaim that oid debts should not be considered to have been incurred by ryots who were not able to make both ends meet with their agricultural incomes. We would consider it quite reasonable to claim that at least 75 per cent of the old debts were incurred for family and cultivation expenses and should therefore be considered as a legitimate burden upoa land.

If, from this point of view, we look at the following classification of the debts incurred by the ryots whose affairs were enquired into by the Settlement Party, we cannot but come to the conclusion that at least 45 per cent of the total debts of the deltaic ryots (cultiration 10 , old debts 8 , marriage 7 , family 10 , house building 8 , miscellaneous 3 and kist 1) and at least 55 per cent of the debts of the upland ryots (cultivation 10, old debts 24, marriage 7, family 9, house 6, kist 1 and muscellaneous 3) vere imcurred because of their imbility to save enough to proride for all these necessary and legitimate expenseas.
278. Rater of Interest.*-The usual rate in the deltaic parts rangee from 12 to 18 per cant, while in many cases 18 to 36 per cent is also extracted. "Namula" and "Jatti" $t$ are two more methods of borrowing capital, open to the ryots. Many ryots resort to them and are therefore obliged to pay 50 to 150 per cent per annum. In fact, the rate of interest has a tendency to rise to an almost incredibie extent in the case of very poor ryots, and the ryots of thoee rillages which are subject to the trouble of submersion of crops and also the so-called rich but improvident ryots who are suspected of improvident babits. Industrious and careful ryots who are known to be thrifty are able to obtain credit though in insufficient quantities at 12 to 18 per cent. [ ${ }^{*}$ Vide Appendix No. 21.]

Three tables are provided as appendix to this section to show the sums borrowed at different rates of interest-

| Partioplas aboat mater of interent. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Eastana | Went Goluran | E-t Gedemari. |
| Lesethen An 124 | -- | 03 | 001 | - 6 |
|  | $\ldots$ | 548 | 76\% | 01 |
| Mose thea Re 1-u-a but lestitura Re. 1-4-0 | .. | 362 | 173 | c* |
| More than fis 1-1-6) but lemthra Lis. 1-9-0 | .- | 77 | 6 | 28 |
| More than Ea l-y-0. . . . .. .. | .. | $0 \cdot 0$ | 0-11 | -2 |

2\%9. We learn from the above table that the rates of interest are higher in Kiston than in the Godavaris and that, in spite of the operations of the co-operative crodit societies fur the last 15 years, there are still many rruts who are obliged to borrow money at more than 15 per cent interest per annum. It is noteworthy that as much as 34 per cent of the total amount of dett of the ryots enquired into in Kistma district is paying more than 15 per cent interest. Even in the ofluer two districts this percentage is nearly as high as in Kistna. This great disparity in the rates of interest prevalent in these two districts is partiy expiained by the fact that whilo a few poor rillages in Bandar taluk were meiuded in our enquiry only rich and big

[^6]villages were selected in the other two districts. If some of the worst villages in the Godavaris had also been selected, it would have been possible to show that there is not on the whole any great difference in the incidence of rates of interest upon the ryots of these three districts. But, however, even these facts are enough to prove that the Special Settlement Officer's statement regarding the rates of interest (i.e., that it does not ordinarily exceed 12 per cent) is not supported by actual facts. The real importance of the burden of these high rates of interest can be guessed, if it is realized that they fall only upon those who are least able to bear it. Those poor ryots whose property is worth little and whose assets are not very much and who are very badly in need of money, are often obliged to pay very high and even abnormal rates of interest for whatever accommodation they are able to get from the money-lenders.
280. If the village figures are examined, instead of these district averages,

A study of village figures is more instructive than the district averages. a more correct idea of the incidence of these high rates of interest upon the ryots can be gathered. For instance, in Tallapalam of Bandar taluk, out of a total sum of Rs. 6,365 borrowed by 22 ryots as much as Rs. 5,735 was obtained at Rs. 1-4-0 to Rs. 1-9-0 per cent per month. Sixteen ryots of Bairagipalam of the same taluk have borrowed Rs. 4,345 at Rs. 1-4-0 to Rs. 1-9-0 per cent per mensem out of a total sum of Rs. 11,385. The 171 ryots of Chinapandraka are paying the same rate of interest upon Rs. 31,638 out of their total debt of Rs. $1,29,975$. Even in Koduru of Divi taluk which is likely to be looked upon as a prosperous village, 138 ryots pay this rate of interest on Rs. 28,180 out of a total debt of Rs. 1,02,050. There are many similar cases in West Godavari and East Godavari districts also. Therefore it is much more important in this case than in any other problem connected with the indebtedness of ryots, that each village should be taken by itself in order to arrive at a proper idea of the burden of the rates of interest.

The rates of interest vary according to the kind of money-lender also. If he is a ryot, the rate is never more than 18 per cent but if he is a merchant, who is interested in "Namulu" and "Jatti," it is often not less than 50 per cent. If he is, however, a Marwari, the rate amounts up to at least 36 per cent compound interest.

In the case of the upland ryots, the rate is always above 12 per cent and is often 50 to 100 per cent compound interest. Many of them are obliged to get advances of credit only on "Namulu" or "Jatti" or both systems.
281. As for the period for which credit is advanced, the Vaisyas give fairly long-

The term of the loan varies from part to part and from individual to individual. term credit, the time being never less than an year, except when " Namulu " and "Jatti" are offered for which a term of only three or six months is allowed. The rich ryots who deal in money-lending are found to offer credit for a period of at least three years on simple interest, although a few of them try to collect the money more often and derive thus an additional advantage. The itinerating cloth merchants and money-lenders, the ryots and Vaisyas who deal in "Jatti" or "Namulu" offer credit for only 3 to 9 months. The Imperial Bank of India offers short term credit, not exceeding an year. The co-operative credit societies offer only twelve months' credit except in a few cases, in which credit is offered for a longer period on the security of lands, mortgaged or not.
282. Nature of the Security.-In these districts mortgaging the property except in the case of co-operative credit is not at all popular, although in a few very poor villages in Bandar, Ellore, Nandigama, Rajămundry and Peddapur taluks, most of the ryots are obliged to mortgage their lands. As for "Namulu" and "Jatti," the very idea underlying these methods of advancing credit is that the crops are taken as the necessary security. Thus the poorer ryots of Bandar, Kaikalur, Nandigama, Ellore, Peddapur, Rajahmundry, Tadepalligudam and Tanuku taluks are obliged to offer their crops as their only security for the credit they obtain from the merchants. However, most of the deltaic ryots are not obliged to mortgage their lands or to offer their crops as the only security since the values of their lands are high.
283. It will be evident from Appendix No. 22 that most of the ryots having property worth Rs. 5,000 and less each, had to devote nearly 75 per cent of their borrowed capital for family and agricultural expenses and for clearing old debts.


- Vide Appendiz No. 22

284. It is significant that these two enquiries almost agree in their findings as far as purchase of new lands is concerned. It is safe to conclude that at least 25 per cent of the total indebtedness of the ryots of these three districts is due to their inability

Purposes for which debts are made. to finance their cultivation with their own capital.

Although it is true, as the Special Settlement Officer puts it that many ryots borrow money for purchasing lands, it must be admitted by everyone who looks at the above results that a large number of ryots purchase lands with only borrowed capital and that accounts for one-fourth of the total indebtedness in the districts, the amounts bearing interest ianging from Re. 1 to Rs. 1-4-0 per cent per month. Ryots who have paid high prices for purchasing land are being ruined, since with the present prices of land and the present costs of cultivation the returns do not even cover interest charges. The borrowing made for the maintenance of family is very considerable. The debts due to losses incurred in business amount to a considerablesum in Kistna and East Godavari. This incidentally indicates that many of the ventures of agriculturists in business have not been successful. [Vide Appendix No. 22.]
285. Group 1 (those whose property is worth Rs. 500 and less).-These people own very little land. Most of them rent others' lands and many also work as coolies. Very few of them try to purchase lands with borrowed capital, although there 15 the strongest inducement for them to increase the size of their too small holdings. Hence the low percentage of their debts devoted for this purpose except in East Godavari. It is not surprising that agricultural and family expenses account for the major part of the total indebted nessof these ryots. In spite of the fact that most of them do try to increase their earnings by every possible means, they are obliged to borrow from time to time fairly large sums in order to balance their family budgets The fact that the old debts are so unimportant in their case shows that the moner-lenders do not like to allow these people to fall into arrears in paying up these debts.
286. Group 2 (those whose property is worth Rs. 1,000 and less).-A gricultural and family expenses account for nearly 70 per cent of the debts contracted by these people. Their holdings are too small and they are unable to balance their family budgets with their agricultural incomes. They can finance their agriculture only with borrowed capital. Although most of them are anxious to purchase lands, they are unable to obtain much credit for the purchase of lands, and so only the amall percentage of their debts for this purpose indicates that creditors do not have much faith in the ultimate solvency of these people.
287. Groups 3 and 4 (those having a property worth Rs. 10,000 and lest).-It is these people who form the bulk of the ryots of these districts. They are all smallholders but they try to maintain themselves on their own holdings, without having to seek coolie labour and such other subsidiary work. Many of them own draught cattle and carts. Most of them often go in for buying an additional acre or two of land and hence the high percentage of debts for this purpose. The high percentage of debts for agricultural and family expenses is explained by the fact that theee people
are obliged to purchase agricultural stock and also to borrow for family maintenance, in anticipation of the coming crop production. Old debts assume a new importance in the case of these ryots as their creditors are prepared to advance fresh credit in addition to old debts on the security of the lands owned.
288. Groups 5 and 6 (those with a property worth more than Rs. 10,000).-It is noteworthy that these ryots should have to devote only a very small portion of their debts to family expenses. It is also interesting to note that they devote quite a large portion of the debts for the purchase of lands, i.e., capital expenditure. It is however significant of the inherent weakness of their economic conditions that a large portion of their debts should be needed for agricultural expenses and old debts.

Attention is also invited to the figures given in the statement below which is based on information supplied to us by the ryots themselves in reply to our questionnaire.
289. Indebtedness details extracted from the replies to the ryots' questionnaire.

| - Consolidated statement for the three districts. [ Vide Appendix No. 23.]Debt per acre. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Distriut. |  | $\begin{gathered} \text { Number } \\ \text { of } \\ \text { ryots. } \end{gathered}$ | Extent of land owned. | Total debte | Debt per | a ares. |
| Kistna |  | 77 | $\begin{gathered} \text { Acs. } \\ 1,624 \cdot 19 \end{gathered}$ | $\stackrel{\text { R8. }}{2,18,320}$ | $\begin{gathered} \text { R8. } \\ 134 \end{gathered}$ | $\begin{gathered} \text { A. } \\ 6 \\ 11 \end{gathered}$ |
| West Godavami |  | 305 | 5,182.65 | 6,67,881 | 12813 | 9 |
| East Godavari | $\cdots$ | 181 | 2,662.91 | 2,28,290 | 8511 | 8 |
| Total | $\ldots$ | 563 | 9,469.75 | 11,14,491 | 117. 11 | 10 |

It will be seen from the above table that the debt per acre of the 563 ryots who sent their replies to our questionnaire comes on the average to Rs. 117-11-0. If an average interest rate of 12 per cent is assumed, the interest charge upon an acre comes to Re. 14-2-0 per annum. Eren if no provision is made in the farm budget for the repayment of the debt of any ryot within a particular period, provision must be made for the payment of at least the interest charges upon his debt. Therefore, it is only reasonable to claim that this sum of Rs. 14-2-0 should be added to the other costs in the farm budgets of these ryots. On the basis of these figures the average annual interest charge, due to rural indebtedness upon the farm budget per acre comes to at least Rs. 10.

## Section 39.-Co-opirative Crbdit Socirtibs.

290. It is a matter for congratulation that co-operative credit societies are

Review of the working of co-operative credit societies in these districts. steadily increasing although they have not expanded to such an extent as to meet the requirements of the agricultural population. Since the year 1923-24 for which figures are given by the Settlement Officer the number of societies has expanded as follows:-

| Year, |  | $\ldots$ | $\cdots$ |  |  | Total namber in the Preaideney. | Number of sooieties. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | Kistna. | Godavari. |
| 1926-27 |  |  |  | $\ldots$ | $\ldots$ | 11,436 | 415 | 888 |
| 1927-28 |  | $\ldots$ | $\ldots$ | $\cdots$ | ... | 12,471 | 450 | 953 |
|  |  |  |  | Workin | pital. |  |  | Reserve fond. |
|  |  |  |  |  |  |  |  | RE. |
| Kistna | ... | $\ldots$ | $\ldots$ | 24,2 |  | Kistna | $\ldots$ | 1,21,166 |
| Godavari | $\cdots$ | $\cdots$ | ... | 70,2 |  | Godavari | $\ldots$ | 2,83,461 |

The figures given above for the Godavari district include Godavari East, Godavari West and Godavari Agency, whereas it is obvious that the figures quoted by the Settlement Officer in the case of the Godavari district refer only to the East Godavari district. The table below gives details of the loans issued during the years 1926-27 and 1927-28 by agricultural and non-agricultural societies, other than central bauks, fur various purposes.
291. Taking the figures for 1927-28 it is obvious that excepting 8.92 per cent borrowed fur trade and industries and 1.73 per cent borrowed for non-productive purposes 89.35 per cent of the tutal loans have been issued for agricultural purposes. The figure of 39.07 per eent for paying off debta is remarkable and we have referred to.
such old debts already. It may also be nuted that 17.68 per cent is borrowed for cultivation expenses and 5.79 per cent for payment of kists. As remarked by the Special Settlement Officer these societies do not provide generally for more than comparatively small short-term loans and to meet the real needs of the ryot it is necessary to have a number of land mortgage banks. One of the unsatisfactory features that is made apparent by an examination of the working of these societies is the fact that generally there are large overdues; and even in cases where the loan amounts are ostensibly repaid, they are renewed again from year to year for several years. In concluding this part of the subject we will make the following recommendations :-
(1) That amounts set apart for takkavi loans in areas where a co-operative society is operating should be banked with these societies at cheap rates of interest,
(2) that trust funds should be similarly banked, and
(3) that as many land mortgage banks as may be found suitable may be started with a view to affording long-term credits. [Vide Appendix No. 25.]

## Sbction 40.-Cultivation Schrdules.

292. A very large part of our time was devoted to making a careful inquiry of the various processes connected with agriculture both in the deltas and in the uplands and making as correct an estimate as circumstances permitted of the actual costs of cultivation per acre. For our investigations in this matter we selected altogether 60 villages at the rate of 20 in each district. The preliminary work of investigation was carried out by the investigators we employed-most of them men who were trained and men who had experience in this line and all of them University Graduates in Eronomics. The details collected by our investigators were personally verified by us and our Secretary during our visits to these villages, when we examined numerous ryots in every village. We rejected in every village the evidence of ryots whom we found either exaggerating expenditure or through ignorance under-estimating them, and it is only after the most careful enquiry possible, that we arrive at the figures which are now to be found in the investigation reports of these villages which are submitted as Appendix No. 17. Circumstances vary so much from village to village and almost from ryot to ryot, that we feel that no one set of conditions will apply universally, and that therefore, the costs of cultivation must vary according to the many varying circumstances connected with peculiarities of irrigation, of the idiosyncrasies of ryots, and the kinds of soils, etc. We feel, however, that the estimates that we submit are as near the mark as it is possible for any human agency to make. One fact that came out plainly at a very early stage of our investigations was the fact that the assumption usually made by Settlement Officers, that the cost of cultivation diminishes with the class of land and the assessment, was in fact, incorrect. In many cases, we found that the ryots who owned inferior lands were trying to make as much as possible by devoting to their cultivation the largest amount of care and trouble possible, by proper manuring, proper ploughing, timely transplantation, etc., and where yields were low it was often due to circumstances beyond the control of the ryot and not due to avoidable carelessness on his part. We, however, recognize the fact that the style of cultivation and the labour employed, ete., do vary and for the purpose of making an near an estimate to actuals as was possible we have divided the maniner of cultivation, etc., into three classes-

Class I-representing the maximum of costs asincurred by ryots who take the greatest care and trouble in their cultivation ; and we estimate that this class represents about 25 per cent of the total cultivators.

Class II-what we call medium represents a slightly lower style of cultivation, which we estimate is adopted by about 30 per cent of cultivators, and

Class III-what we call the minimum which represents a lower style still of cultivation which we estimate is adopted, we estimate, by about 45 per cent of the cultivators.

In each of these classes again, we recognize three sub-classes, the first sub-class representing cases where the owner himself does not do any actual work in field, the second sub-class representing cases where the owner himself works in the fields and the third sub-class representing the eases where the owner and one dependent work in the fields.
293. Each set of schedules, therefore, represents nime classes. It will be seen, therefore, from the cultivation schedules attached, that we have made estimates for three different sets of nine cases, each in addition to a separate set indicating the costs of cultivation in 1900. In the first set,* we have calculated the value of the produce at the commutation rate for paddy, worked out by the Special Settlement Officer in his Scheme Report. The outturns that we have assumed for each class of land (bearing assessments from. Rs. 10 to Rs. 4-8-0) are the standard outturns given by Mr. Clerk, in the Resettlement Report of 1899. [*Vide Appendix No. 30.]

In the secund set,* we have worked out net values of these, similarly by assuming the price of a bag of paddy at Rs. 6-8-0, which is the current price. [* Vide Appendix No. 31.]

In the third set,* we have similarly tried to work out the effects of a rise in price and for this purpose we have assumed the price of paddy at Rs. 10 , per bag, -the price that was reached for sometime in the years following the war. [ * Vide Appendix No. 32.]

We have indicated on each schedule the boundary line, between cases in which the total net return after deducting cultivation expenses amounts to about twice the present assessments and those in which it is less than this figure, by a stepped red ink lines.* [*Vide Appendices No. 31 -and 32.]
294. From the schedules we can draw the following conclusions:-
(1) That the cultivation entirely with hired labour, as a rule, does not pay excepting in the case of the best lands.
(2) That the profits of cultivation in the case of the best land increases if the owner works in the fields and better still when the owner and his dependent also work.
(3) That profits could only be made on inferior lands by ryots who work on their fields with their dependents.
(4) That the cultivation of the poorest lands does not pay even cultivation expenses under the present conditions of wages, etc. In the Kistna, such lands paying an amount of Rs. 6 and below form about 28 per cent of the totals, while in the Godavaris, the percentage is 57 .

Under incomes from agriculture, we have taken no credit for sums realized by ryots by the sale of ghee, curds or butter-milk, for the reason, that, as we have already shown above, the straw realized by cultivation is insufficient even for a fraction of the working cattle maintained.

The schedules and statements enclosed are self-explanatory and need no further remarks.
295. It will be noticed that in preparing the schedules, we have not taken into Items ignored. account the following items which ought, legitimately to be taken into consideration.
(1) Interest on debts.-* The average debt per acre is not less than Rs. 100, and the minimum interest charge per acre, will therefore be Rs, 9 , per annum at 9 per cent. [* Vide Appendix No. 23.]
(2) Loss incurred by ryots owing to the damage caused by insect pests, rats,
eta.
(3) Loss due to heary, though occasional, damage caused by serious floods and oyclones.
(4) Interest charges of money advanced to palerus and customary labourers.
(5) Loss due to occasional outbreaks of fire, when a whole village or a part of it or only paddy, or straw heaps are burned.
296. We have already referred to the valuable evidence afforded by the khata

Other evidencee of the ecourasy of our figures. accounts to the general accuracy of the details entered in our schedules of cultivation. Besides this, we have gathered details of the expenditure incurred for various items coming under the heading of 'Cost of cultivation' by 573 ryots in the three distriots. As a representative example, we give details in Appendix No. 26 for six
cases only. It will be seen from these cases, that the average total expensee per acre comes to Rs. 58-13-0, a figure which is very near our own estimate of Rs. 52-2-0 per acre in our medium schedule.
[Vide Appendices Nos. 28, 29 and 30 also.]
Section 41.-Standard of Litivg.
297. The following details, taken from the " memorandum on the progress of the

Cost of living of a peasant's family in 1890 A.D. Madras Presidency" by Mr. Srinivasaraghava Ayyangar, 1888-90 ie agriculturists and the cost of their standard of living in 1888-90, i.e., the period, just preceding the present resettlement period.

The cost of food of Brahman and other high castes per male adult may be taken to be Rs. 3-12-0 per mensem or 2 annas per diem, and among the labourers Rs. 1-12-6 or anna one per head per diem in Coimbatore district.

298. But these estimates do not make any provision for clothing needed ly these two classes of cultivators. We get the following information regarding the cost of the cloths supplied to farm servants on pages 140 and 141.


In the light of these facts, it is reasonable, to assume that the clothing needed by Brahman and labourers was worth Rs. 4 and Rs. 2 respectively per head per annum. Then the cost of the standard of living of these two classes of people of Coimbatore district can be estimated to have been Rs. 48-10-0 and Rs. $23-0-0$ per adult and Rs. 194-8-0 and Rs. $92-0-0$ per family respectively.
299. Coming to the districts of our enquiry, it is interesting to notice that the

Cost of maintenance of a family in these three districts. Collector of Godavari, Mr. Foster, wrote in regard to the condition of the working classes in 1872 :-"1 he cultivating labourers were usually kept as private servants by the pattadars and were giyen food, etc., all the year round and about two puttis of grain at the harvest which if paddy would be worth about Rs. 40." Mr. S. R. Ayyangar accepts Rs. 20 as "the general average money value of the feeding charges of an adult labourer and Mr. A. J. Stuart, Sub-Collector, Rajahmundry, assumed that 2 puttis of paddy would be enough to maintain wife and children of a paleru. Therefore, the cost of the standard of living of a paleru and his children making up at the most three adults, came to at least Rs. 70 per aunum or Rs. 23-5-4 per adult. Dr. Macleane in his "Manual of Administration on the economic condition of the labouring classes" estimated that "the total monthly expenditure of a prosperous shopkeeper family consisting of 5 persons, would be about Rs. 8 . According to this estimate, the cost of living of an adult in the family of an "ordinary peasant" would be (taking that the 5 persons are equivalent to 4 adults for food consumption, etc.) Rs. 24 per annum per head. This and the above extımate agree
with each other and so we are justified in taking this Rs 24 to represent the cost of standard of living of an adult in an ordinary peasant's family in 1890.

The figure is also supported by the estimate made for the agricaltural coolie of Coimbatore district. Therefore the cost of maintenance in 1900 A.D. of a peasant's family of four adults can be estimated at Rs. 96 per annom.
300. The general standard of comfort has advanced and the cost of standard of living has risen considerably in the last thirty years. A very moterate estimate will indicate a rise of 150 per cent in the cost of the maintenance of an ordinary family of four adults.
301. The following two schedules for the cost of standard of living of a ryot's family in the delta and the uplands indicates that the minimum cost of maintenance of a family of four adults comes to Rs. 261 $1-0$ in the delta and Rs. 236-12-0 in the uplands. These estimates are not very much different from the usual estimate made by ryots that a candy of paddy ( 10 bags of 166 lb .) is needed-to maintain an adult, i.e., Rs. 60 at Rs. 6 per bag.

It will be noticed that in our schedules we have made no provision for the expenditure on intoxicating liquors and drugs. The present excise revenue of the three districts is Rs. $75 \cdot 37$ lakhs. The actual amount paid by the people may be taken to be twice the above figure or Rs. 150.7 lakhs. The amount paid by the agricultural population may be taken as 70 per cent of this or Rs. $105-5$ lakhs. The incidence per head taking the agricultural population to be 27.7 lakhs is Rs. 4 or per family Rs. 16 ; but if we take only the drinking population, the incidence per family may amount to Rs. 90 (ride eection 51).

302. According to these two budgets, the following scale of cereal allowance per adult becomes possible :-

in The following facts indicate that the people who are obliged to maintain themselves on this allowance of staple fuod mast certainly be under-nourished.

## Quality of cereaie granted.

1. Female convict, sentenced for aimple imprisonment (Madras Jail Code)
$\begin{array}{cccc}\cdots & \ldots & 1,800.00 & \mathrm{oz} .\end{array}$
2. A weaver on the margin of subsistence ${ }^{*}$... .. ... ... 16.86 "
3. Convict fur light labour, Bombay Jails $\dagger$.... ... ... ... 22.02 "
4. Non-working dependents, Bombay Famine Code... ... ... 138
5. M. Brinivasa Raghava Ayyangar's eatimate $\ddagger$... ... ... 24

24 -
Ryots having more than 10 acres but less than 20 Lower middle-olass ryots. acres of wet land or 25 to 35 acres of dry land maintain a slightly higher standard of living.
Family budget of a ryot with a family of five adults :-

|  |  |  |  |  |  | Delta | Upland |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cereals 25 bags | ... |  | $\ldots$ |  | $\ldots$ | $\begin{array}{r} \mathrm{Rg} . \\ 150 \end{array}$ | $\begin{aligned} & \text { Rs. } \\ & 162 \end{aligned}$ |
| Other kinds of food | ... | ... | $\ldots$ | ... | $\ldots$ | 75 | 60 |
| Fuel and lighting | ... | ... | ... | ... | $\ldots$ | 10 | 10 |
| Clothing ... ... | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\cdots$ | 55 | 45 |
| Miscellaneous expenditure | $\cdots$ | $\ldots$ | $\cdots$ | $\ldots$ | $\ldots$ | 50 | 40 |
|  |  |  |  | Total | $\ldots$ | 840 | 817 |

303. Ryots having more than 25 acres of wet land or 40 acres of dry land, Upper middle-class ryots. maintain themselves on a very much higher standard of living, costing Rs. 400 per annum per family of four adults. Their budget differs from that of the ryots having less than 20 acres of wet land in that they spend more upon other kinds of food, including sweets, spices, pickles and vegetables, mutton and ghee and upon clothing and also upon miscellaneous items including marriages, soaps and soapnuts, offerings to deity, etc., house decoration and house repairs.

Our enquiry is concerned mostly with these three classes of people in the deltas and the corresponding classes in the uplands.
304. The results of the enquiry made into the distribution of land in several villages show that more than 90 per cent of the landholders belong to the first two classes of ryots, leaving a possible 8 per cent of the people each of whom has more than 20 acres of wet land.

Resuits.

|  | Cost of mainteuannee of a family of fone adults. <br> Delte. | Peroentage. |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Kistras. | Fat Godavari. | West Godevari. |
| Those having 5 acres of wet land and less or 10 agrea of dry land and less |  | 68.2 | 865 |  |
| Those having 15 acres of wet land or 20 acres of dry land .. | 34000 | 290 | 8.3 | 194 |
| Those having 25 aores of wet Jand or 40 acres of dry land .. | 4000 | 7.8 | 6.2 | 6.9 |

Cost of maintenance of a peasant's family of five persone-

305. The statement in Appendix 33 compares the estimates for family expenditure given in the schedule above, with similar figures obtained in our inquiries. The items marked I, V are those given in the schedules. Items II, II are derived from the family budgets prepared by our investigators by inquiry from the ryots concerned. Items III, III are based on the complete inventories of all incomes and expenditure of all families in some selected villages. Items IV, IV are based on information furnished to us direct by ryots as a reply to. the questionnaire we sent out to them to answer. [Vide Appendix No. 33.]

[^7]306. From Appendix No. 33, it can be seen that our estimates for the eost of maintenance of a ryot's family of five persons or four adults in the deltas and in the oplands are very much lower than the actual cost of the standard of living maintained by the ryots of differing fortunes in these three districts.

That the results of the answers sent by ryots themselves, and those of the budgets gathered by our investigators should agree to such a degree is strong testimony, to the general accuracy of these facts.

The results of the statistical censuses* taken by our investigatoris show lower figures for the cost maintenance of an adult of the delta and upland since many labourers' budgets which show lower figures also were included in them.

## Saction 42.-Vilhage Budgets.

307. Profit and loss statements for eleven villages have been prepared in order to find out whether, on the whole, the villagers are able to balance their agricultural and family budgets.
308. The method adopted in preparing these statements is as follows:-
(1) (a) Mr. Clerk's estimates of standard yields in Madras measures are adopt-

Income from land. ed, in order to arrive at the yields for different kinds of ryotwari lands. For this purpose, the diglot register for division of land is availed of.

Madras measure converted into bags per paddy.
(b) These yields in Madras measures are converted into bags of 166 lb . each at 72 Madras measures to a bag of paddy.
309. (2) No such estimate was made by Mr. Clerk for the standard yields from Inam land. inam lands (wet or dry). So all that is possible is to accept the average yield per acre of wet or dry land (ryotwari) and to calculate the total yield from wet or dry inam land on that basis.
310. (3) Non-residents of a village may own some land in it and the only way in which the total yield from it can be found is by basing our calculations upon the average yield per acre of ryotLand owned by absentees. wari land (wet or dry) arrived at with the aid of Mr. Clerk's standard outturns.
311. (4) Lands which are under dry cultivation in 1900 A.D. are at present Cases of conversion. under wet cultivation. We have no information regarding the consolidated tarams for such lands. We have tried to deduct the average yield per acre of ryotwari dry land from the corresponding yield from wet land, in order to get an estimate of the additional yield of paddy due to the conversion of dry land into wet land.
312. (5) Here also, an estimate, is first of all made, of the gross yield from the Garden land. respective garden crops raised. From this is deducted the average yield per acre of dry land and the net result is taken to be the additional yield per acre due to garden crops. This procedure is justified by the fact that the standard yield from the dry land which has come under garden cultivation is already included in the estimate made, according to Mr. Clerk's standard outturns, for all the ryotwari dry land in the village and also for the inam dry land.
313. (6) The yields got from ryotwari and inam land and garden crops, and Total income from land. from the land of other villages owned by the residents of the selected village are all added up.
314. (7) All that income which comes from outside into the village, is included
-Subsidiary income. in this head, i.e., subsidiary income. Teachers, village officers and their meaials certainly get their salaries from outside. Goldsmiths, blacksmiths, carpenters and such others get only a portion of their earnings from outsiders. Ryot and others who cart for hire for outsiders, ryots and agricultural workers who go to other villages (neighbouring or distant) to work there for wages are also considered to have brought their earnings into the village. In calculating their wages, an attempt is made to estimate the total wages earned and not

[^8]the savings, since separate provision is made for their maintenance. Similarly, the earnings of emigrants to Burma are also taken into consideration. The earnings from the sale of ghee are liberally provided for in our budgets.
(b) Work of every kind which is contributed in the village for the sake

Work done for the villagera. maintenance The labour who are expected to serve one another in return for their by the local workers and paid out by the resident ryots. The former live on such payments and the latter live on what remains after the costs of cultivation are deducted from the standard yields from their lands and on any income derived from outside by rendering services to non-residents.
315. (8) The total of the gross income from lands in the village and the lands-- Inconse from all sources. owned by the residents outside the village and also that from subsidiary sources is all that can be had by theresidents for their maintenance and for the payment of kist and interest on debts. In most of the villages, a considerable portion of the gross income from land is taken away by outsiders, and this is provided for.
316. (9) A word or two is needed to explain the nature of the items included ind Expenditure of all kinds. the expenditure of the villagers. Food and other family expenses are provided for the maintenance of all the residents irrespective of the fact that some of them may be absent for temporary periods. while trying to earn their living outside. That portion of the kist which is paid by the residents is also included. The interest on debts is calculated at the very low and moderate rate of 9 per cent and is included in the expenditure of the village sincethe villagers are bound to pay off at least the interest accumulating on their debts if they are to retain at least the use of their lands. Lastly, the income derived by the absentee landlords from the land owned by them in this village is also included in theexpenditure of the village since it is taken away from the village, but a quarter of such income is estimated to remain in the village as remuneration given to labour, ete.
317. (10) Food.-To arrive at the needs of the villagers for food, the population

Family expenditure-
(a) Food. of the village is converted into families at five persons per family. Then each family is estimated to need at least: twenty bags of paddy-vide section on 'Standard of living '.

All such expenditure, as other kinds of food, clothing, fuel and lighting and
(b) Other expenditure. miscellaneous items of expenditure is estimated to cost at least as much as the cereals provided for food. Thereforer in our estimates the number of families is multiplied by twenty to get the number of bags of paddy needed for food and an additional twenty for other family expenditu/e.
318. (11) Wherever figures are available, the water-rates on the inam lands are-

Kist. also taken into consideration. But in all cases the total assessment paid by the village is entered. From it is deducted the kist paid by absentee landlords. The kist amount is expressed in terms. of bage at Rs. 6 per bag.
319. (12) Interest at 9 per cent upon the debt amount is calculated and is. Interest on debts. then expressed in bags at Rs. 6 per bag.
320. (13) It will be seen from the following table that not even one village showe:

Net result. a surplus balance. Deficit seems to be the general feature: of these villages.
321. (14) (a) For the local labour that goes out to work for outsiders, more thanample provision is made by us for such wages. This is treated as income for the village. Similarly, payments for imported labour shoold be treated as expenditure, but we : included and accounted for. have ignored this as being an error on the safe side.
(b) Most of our villages and certainly all the villages selected for this enquiry are dependent upon outside supplies of cattle and agricultural implements, but noprovision is made for them in our budgets.
(c) Grains such as horsegram, sunhemp seed, cattle feeding like gingelly cake are imported but no provision is made for them.
(d) Payments made to outsiders for looking after cattle when they are driven to uplands are also similarly omitted.
322. Therefore, if there is anything wrong at all in the following estimates, it is that the incomes of the villagers are exaggerated while their expenditure is minimized. In spite of all this, there are big deficits in every village.
15. Our results of this inquiry are expressed in terms of bags of paddy. Wherever grain in Madras measures comes in, it is converted into bags at 72 Madras measures per bag and similarly rupees are expressed in terms of bags at Rs. 6 per bag.
[Vido Appendix No. 84.]

## Sbction 43.-Resbttlisibet of 1899.

323. The financial results of the resettlement of 1899 were as follows :-

## 1. Godavari Della.

Under the vicissitudes of the seasons and unprofitable areas, an allowance of 10 per cent was made for wet and 20 per cent for dry and for cartage and merchants' profits an allowance of 15 per cent was made on the average grain prices in the Godavari Delta.

The commutation rates taken were Rs. 118 per garce of wet paddy and Rs. 96 per garee of black paddy.

The cultivation expenses taken were as follows:-
Per adre.

$$
\begin{array}{lcccccccc}
\text { Wet } & \ldots & \ldots & \ldots & \ldots & \ldots & \ldots & \text { Rs. } 14 \text { to Re. } 6-8-0 \\
\text { Dry } & \ldots & \cdots & \cdots & \ldots & \ldots & \cdots & \text { Rs. } 8 \text { to Re. } 2-10-0
\end{array}
$$

The financial result of the resettlement of the Godavari Delta, wet and dry, was an enhancement of 23 per cent.

## 2. Kistna Delta.

324. The commatation rates adopted in Kistna district were as follows:-

> Per garce.

|  |  |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | ---: |
|  |  |  |  |  |  |  |  |  |  |
| Wer garro. |  |  |  |  |  |  |  |  |  |

The financial result of the resettlement in the case of the Kistna Delta and Divi was an enhancement of 25 per cent.
3. (a) Uplands-Godavari.
325. The commutation rates taken for the uplands in Godavari were practically the same as noted above and were as follows :-

|  |  |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | ---: |
|  |  |  |  |  |  |  |  |  | Per garoe. |

The financial effect of the resettlement in this case was an enhancement of 29 per cent.

## 3. (b) Kistna-Uplands and Divi.

326. The commutation rates taken for the uplands of Kistna and Divi were as follows :-

|  |  |  |  |  |  |  |  |  | Per grome |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| White paddy | ... | ... | $\ldots$ | $\cdots$ | $\ldots$ | ... | ... | $\ldots$ | $\begin{aligned} & \text { Ra. } \\ & 118 \end{aligned}$ |
| Rlaok paddy | ... | ... | ... | ... | ... | $\ldots$ | $\ldots$ | ... | 96 |
| Cbolam | ... | ... | $\ldots$ | ... | $\ldots$ | ... | ... | ... | 170 |

The cultivation expenses assumed were as follows :mr

$$
\begin{aligned}
& \text { Par mara } \\
& \text { Wet ... ... ... ... ... ... Ra. } 13-0-0 \text { to Ra. 7-8-0 }
\end{aligned}
$$

The financial effect of the resettlement was an enhancement of 33 per cent.

## 4. Muniyeru Project.

327. In the case of the Muniyeru Project, the old classification continued with enhanced dry assessment. The wet irrigation was placed in the second class and was therefore charged the uniform wet rate of Rs. 4 per acre.

## 5. Masulipatam Portion.

The result of the resettlement so far as the Masulipatam portion of the Kistna district was concerned was a percentage enhancement of 36 per cent on the old revenue.

## 6. Rented Villages.

328. In the case of the rented villages in the Godavari area, the resettlement meant an enhancement of 68 per cent on the previous revenue.

## 7. The Cammiade Settlement.

329. In the case of 42 Koya villages in the Polavaram division of the Godavari district, the proposals of Mr. Cammiade were accepted and a flat aereage rate subject to a maximum of Re. 1 in the case of wet land and 8 annas in the case of dry land was imposed in such a way that the total assessment of the village approximated to the average rentals of the preceding ten years. It was, however, ordered that the wet rates should be increased by 25 per cent.

## Sbection 44.-Proposals if the present Sohbme Report.

330. The Scheme Report proposes the following enhancements :-

## 1. Kistna and Godavari Deltas.

(a) Wet lands.

An enhancement of $18 \frac{1}{4}$ per cent on the present rates is proposed.
(b) Delta-Dry.

In the case of the first eight tarams of the scale, the enhancement proposed is 18, per cent, while in the case of the lower tarams it is $12 \frac{1}{2}$ per cent.

## 2. Uplands.

(a) Wet lands-Godavari.
331. In the case of the Godavari Upland-Wet-the enhancement proposed is $18 \frac{3}{3}$ per cent, while in the case of lands already paying the special Yeleru rate the enhancement is to be limited to $12 \frac{1}{3}$ per cent.

> (b) Kistna-Wet.

In the case of the Kistna Opland-Wet-the enhancement proposed is $18 \frac{1}{4}$ per cent.
3. Upland-Dry.

In the case of the upland dry in the Kistna and the Godavari districts the enhancement proposed is $12 \frac{1}{3}$ per cent.

## 4. Divi Island.

332. (a) Wet.-The Special Settlement Officer recognizes that the irrigation under the Divi Project is suffering from many disadvantages. He states that-
"The season of fresh water in the Divi loop channel is comparatively short and the internal communications of Divi are relatively undevelopad and external communications seem difficult, that one of the results of its rapid advance since 1908 is a shortage of labour, a difficulty aggravated by the brackishness of the drinking water in many places and finally that the ayacut is still in course of development."

He recommends, therefore, a special water-rate of Rs. 6 per acre and carionaly pnough a percentage enhancement of 18.55 per cent on the old reyenue, a figure almost as high as those adopted for the deltas.
(b) For the area beyond the infiuence of the Divi Project, the Settlement Officer proposes an enhancement of 12.85 per cent.

## 5. Muniyerw Project.

333. The Special Settlement Officer's recommendations for the Muniyera Project would result in an enhancement of $\mathbf{2 3} .01$ per cent on the old revenue.

The net result of the Special Settlement Officer's proposals for the three districts excluding the Agency would be an enhancement of $17 \cdot 5$ per cent on the old revenue.

## Agency Fillages.

334. The above proposals do not, of course, include the Agency divisions. For the Polavaram division, the Settlement Officer's proposals refer to 17 of the rented villages and 42 of the villages which come under the Cammiade Settlement. In the case of the former the Settlement Officer expects that the proposals will result in an enhancement of 28 per cent. In the case of the Cammiade villages he expects that in the case of the wet lands, the enhancement will be $164 \cdot 38$ per cent and in the case of dry lands 102.98 per cent.

In the case of the 124 rented villages of the Yellavaram division, the Special Settlement Officer expects a reduction of revenue by 33 per cent as a result of resurvey and settlement. He, however, expects that it is likely that the sarvey will reveal large extra areas of cultivation which are not at present taken into account.

## Sectiox 45.-Lanici akd Padugai Lakds.

335. In the previous re-settlement these lands were put in special classes and charged special rates. Comparing only the top-rates, we find that in the previous re-settlement, the top-rates for delta dry were Rs. 5 and Rs. 7 per acre in the second and first groups, respectively, while the top-rate for padugai was nine and for lanka Rs. 11 an acre. The scales adopted in the last re-settlement are given in paragraph 11 (h) of the Scheme Report. In all the villages we visited where there were lanka and padugai lands the complaint everywhere has been that manv of these have deteriorated and some have become absolutely barren. The reasons given for this state of things were that many of these lands do not now get silt deposits on account of inundation and flooding and that many of them have in course of years accreted and risen in levels. Further, the former highly profitable indigo crop grown on these lands has since gone out altogether. These remarks apply also to lanka lands, but in the latter case, as fresh formation of lanka takes place at a fairly low level, these new accretions form fertile lands, while lands at higher levels have a tendency to become less and less fertile. Ryots everywhere have complained that the rates levied now in many cases were unduly high and that they should be lowered. In the scheme report, however, it is proposed that an enhancement of the old ro-settlement rates at $18:$ per cent should be made. In view of the facts that we have stated above, we are of opinion that the enbancement would not be justified in a large number of cases and that on the contrary, they call for reductions.
336. We found during our inquiries that in many villages lands-of varying extents-have been eroded by the rivers and completely washed away; and yet no remissions are granted for these cases. The fact that ryots are unwilling to relinquish their living as they do in the hope that the eroded portion may reform at some future date-should not prevent the granting of remissions.

## SBCTION 46.-WATER-RATES.

337. The proposals of the Special Settlement Officer concerning water-rates are contained in his letter to the Board R. Dis, No. 6 R 26, dated 6th September 1926. We find it rather difficult, however, to follow the principles on which the increase of water-rates proposed are based. Speaking generally the cases dealt with by the Special Settlement Officer fall under two classes, namely, (1) cases where it is possible to lery consolidated water-rates and (2) cases where it is necessary to levy a separate
water-rate in addition to the enhanced dry rate. In support of the propoeed enhancements the Special Settlement Officer in paragraph 3 of his letter quoted above gives reasons which are almost identical with those on which he proposes a general increasein assessment in re-settlement. Before proceeding, however, to deal with the various cases referred to by him where he propoees a separate levy of water-rate, we should like to state our opinions concerning the principles on. which enhancements of waterrates should be based.
338. The preamble of the Madras Irrigation Cess Act of 1865 states "that as a large expenditure out of Government funds has been and is still being incurred in the construction and improvement of works of irrigation and drainage, and whereas it is right and proper that a fit return should in all cases alike be made to Government on account of the increased profits derivable from lands irrigated by such works, it shall be lawful for the Government to levy at pleasure on the land so irrigated a separate cess for water". The Kistna and Godavari Delta systems and the Divi Project are already remunerative and the two former, in particular, are giving handsome returns. The works are therefore giving 'fit returns' and no enhancements on this account would be justified. Such enhancements could only be justified on account of proved enhancements in the profits of cultivation due to increased prices of food grains, etc. Our remarks therefore, on the general enhancements of assessments in re-settlement would apply in these cases also. Our general arguments would apply also to the case of Muniyeru project which is an unremunerative work. On principle no enhancement of a water-rate once fixed would be justified merely for the purpose of making an unproductive project productive.
339. We may say at once that we agree that the levy of the water-tax should be regulated by the consideration that the State is entitled to a share of the enhanced produce due to irrigation and that where higher rates are proposed to be levied they would be justified only by consideration, "that the cultivator is willing to pay for it ". The other consideration referred to in the Government of India's orders on the subject is that the rates levied should be consistent with the "maintenance of the demand for water ". We take it that this means that the enhanced rates proposed, if any should be consistent with the general increase in re-settlement, since the ryot has no option for refusing to take water in the case of these lands; and the terms "price of water as a commercial transaction" must mean the fixing of such a water-rate as would make a project pay, if possible, subject always to this condition that the water-rate so fixed represents a reasonable share of the enhanced profits due to irrigation.
340. We are therefore of opinion that the State is entitled to such an increase in wet assessment as to justify enhancement of the consoldiated wet rate in re-settlement, and that if it is decided to levy an enhanced dry rate plus an enhanced water-rate, the sum of the two should not exceed the enhanced consolidated wet rate. We fail to therefore, any justification in the levy of an enhanced water-rate in addition to an enhanced dry rate, where the sum of the two exceeds the enhanced consolidated waterrate in re-settlement. It would appear, however, that the main reason why the Settlement Officer proposes to charge separate enhanced dry rates and enhanced water-rates in most of the cases dealt with by him is merely the consideration that by this proposal a larger revenue would accrue to the State than by the adoption of the consolidated wet rate system.

## (1) Della Ayan Land.

341. In G.O. No. 2712, Revenue, dated 18th July 1918, Government fixed three scales of water-rates, namely, Rs. 6-4-0, Rs. 4-3-0 and Rs. 3-2-0 according to the quality of and duration of irrigation. The Special Settlement Officer proposes to levy in the case of delta lands the rate of Rs. 6-4-0 for the first and second clazs sources and a rate of Rs. 5 for third and fourth class sources. We are unable to agree with his opinion that the difference between first and second class delta sources is not sufficient to require different rates, nor can we agree to his proposal to levy the uniform rate of Rs. 5 for third and fourth class sources. The difference between the several classes of delta sources are in our opinion distinctly marked and we consider that such water-rates as are levied should be adjusted with reference to the class of the irrigation source. We note, however, that the bulk of delta ayan land will now be classified as wet and will therefore bear consolidated wet rates; and therefore the areas to which the proposals of the Special Settlement Officer apply will be comparatively small.

## (2) Colair- Dpputarw. $^{\text {Pren }}$

342. These lands are at present treated as belonging to the second group and are charged at the rate of Rs. 3 per acre. The Settlement Officers' proposal will, however, mean charging these lands at the rate of Rs. 4 per acre, in which case the enhancement proposed in resettlement will be at the rate of $33 \frac{1}{3}$ per cent. We note, however, that the enhancement on delta wet lands proposed in re-settlement is 18! per cent for lower tarams. The Settlement Officer himself refers in great detail to the great difficulties under which jrrigation in Kaikalur taluk and in similar areas in EHlore, Bhimavaram, Narasapur and Amalapuram taluks suffers. He, therefore, has. made special recommendations for Kaikalur taluk in paragraph 40 of the scheme report. It was a surprise to us to note that in spite of these admitted drawbacks and difficulties, the Settlement Officer should propose a enhancement of the consolidated wet rates for Kaikalur taluk, by 18.06 per cent; but we are even more surprised that the enhancement of the water-rate proposed for the area in question should amount to no less than $33 \frac{1}{\frac{1}{2}}$ per cent.

## (3) Upland Tanks.

343. In the case of theee upland tanks, it is proposed to enhance the present rates of Rs. 4 and Rs. 3 per acre for first and second group irrigation to Rs. 5 and Rs. 4 which would mean enhancement of 25 and $33 \frac{1}{5}$ per cent, respectively. Irrigation under these tanks is notoriously insecure, and remissions are frequently granted for large areas. In view, therefore, of all that we have stated above, we consider the proposed enhancement excessive, and unjustifiable.

## (4) Muniyeru Project.

344. The irrigation under this is dealt with as second class and a water-rate of Rs. 4 an acre is being charged at present. The Special Settlement Officer however proposes to levy a enhanced rate of Rs. 6-4-0 an acre, which means an enhancement of 50 per cent. The project is at present unremunerative and is giving a net return of about 4 per cent on capital outlay; but we need hardly remark that the enhancement of water-rate would not be justified by such a reason, apart from the usual considerations that regulate enhancements of assessments in re-settiement.

We fail also to see why in these cases, dry rates plus a water-rate should be levied instead of levying a consolidated wet assessment. We have elsewhere pointed out that the ryots under this project have gone to considerable expenses to make their dry land fit for wet cultivation; and there seems, therefore, to be every reason why they should be dealt with fairly by the levy of consolidated wet rates.

## (5) Inain and zamindari lands in the delta.

345. Our remarks above with reference to the delta ayan land apply also to this case.

## (6) Upland and padugai lands irrigated from the Delta system.

The above remarks apply to this case also.

## (7) Divi Project.

346. We have elsewhere referred to the many disadvantages under which wet cultivation in Divi is suffering as compared with ordinary delta lands. We should have expected therefore that in dealing with the Divi project these considerations would have weighed with the Special Settlement Officer.

The only concession that he feels justified in recommending, is that the waterrate charged in these cases should be Rs. 6 instead of Rs. 6-4-0 the proposed standard rate.

We consider, however, that there is, in this case no justification for not levying conoolidated wet rates and for accepting the proposals of the Special Settlement Officer for a resettlement enhancement of the dry rates plus a water-rate of Rs. 6 .

The project is regarded as self-supporting and therefore the reason alleged by theSettlement Officer that it may be necessary at some future date to have to replace the engines at great cost is hardly relevant.
I-23

## (8). Second-erop Water-rate.

347. As pointed out by the Special Settlement Officer the orders of the Governiment in G.O. No. 2712, Revenue, dated 18th July 1918, are "that the water-rate for a second wet crop will as hitherto be half the rate charged for a frrst wet crop, and the charge for a dry crop whether first or second will be the same". The present practica, however, in these districts is to charge a full water-rate for the irrigation of a second wet crop on zamindari and minor Inam lands and on lanka, padugai and upland lands irrigated from the anicut systems. It would appear, therefore that the present practice is not in accordance with the specific orders of Government in the Government Order quoted above. We do not agree with the interpretation of the term "as hitherto" in the above Government Order that is given to this phrase by the Special Settlement Officer.

## Srotion 47.-Irrigation and Draimage Improvemente.

348. In our remarks on irrigation we have referred to the general inadequacy of -
I. Irrigation. the supplies in the first and second crop seasons in the Godavari and the Kistna and Divi pumping systems.
349. We have given details to prove that in the case of the Godavari eactern
A. Godavari delta. and central deltas while the supply is better than in other parts of the system the great delay in transplantation indicates the nocessity for running larger supplies than at present to accelerate the progress of transplantation, which to the ryots is a very vital matter as we have shown. In the case of the Godavari Western delta we have shown also that the supply is entirely inadequate and calls for immediate improvement. It is not within our competence to specify definitely the nature of the works necessary to enable the canals to carry a larger supply than at present, a fact which we shall repeat. We do not know what exactly the experts of Government may decide upon doing. The alternatives open however seem to be only three, namely, (1) to raise solidly the masonry crest-level of the anicut, or (2) to put up higher shutters than at present, or (3) to increase the vent-way of the head sluices, since we believe that the canals themselves are capable of carrying the larger supplies we deem necessary.
350. The difficulty of supplies in the case of the second crop season and the very

Storage on the Sabari. large losses that the ryots are put to in consequence of this could only be remedied by providing storage somewhere on the Godavari itself or on one of its tributaries. We believe however that storage sites are a vailable on the Sabari, where it may be possible to form a reservoir capable of storing 10,000 to 15,000 million cubic feet, a quantits that may be adequate to meet the deficiency of supplies during the second crop season. With such a reservoir it may be possible also to have some first crop irrigation in the Agency itself or in the delta. We feel however that the matter is one that can only be decided by. investigation by the experts of Government.
351. We have already explained that we consider the present discharges in the B. Kistna Eastern delta. Kistna Eastern delta as shown by the recorded discharge figures are inadequate for transplantation purposes even after the fitting up of six feet shutters over the Kistna anicut. It would appear that the head sluices and the main canal are incapable of taking full advantage of the increased height of water that the six feet shutters make it possible to utilize. We recommend that the matter should be examined by the experts of Government and necessary improvements effected.
352. In the case of this system there has been considerable improvement of the
C. Divi Pumping Project. supply after the fitting up of the ninth engine. We feel, however, that as a consequence of the fitting up of higher shatters at the Kistna anicut and the consequent increases of ayacut under this system that have become possible and are now contemplated, the supply to the Divi Pumping system is likely to be seriously affected in the years to come. We hope that Government would take timely measures to prevent this system from suffering on account of the possible diminution of supply in the river at Divi and the shortening of the pumping period.
353. In our opening remarks we have already explained that the principles

## II. Drainage.

 adopted for the design of drainages in the deltas has led to the excavation of drains with altogether inadequate carrying capacity. We would suggest therefore that the whole question may be carefully examined and that a gradual widening of the sections of drains may be undertaken wherever it is found necessary. During the course of our inquiries we have everywhere received complaints that the present system of maintenance of the drainages is unsatisfactory, and that many drains remain unrepaired and untouched for many years. At a result of this, there are many complaints of submersion and damage in numerous localities. We consider that it is necessary that more systematic maintenance of drains should be ondertaken and that larger sums than at present should be devoted for this purpose on the same lines on which money is expended for the maintenance of the irrigation canals and distributaries.354. But the main problems connected with drainage in both the deltas are those

> Diverting the Yerra kalva and Rallamadugu into the Godavari. due to the disposal of the floods received into the delta from upland drainages. In the Godavari Western delta the main cause of serious damage is due to upland floods brought down by the Yerra kalva and the Kallamaduga. It seems impossible to design any kind of drains through the delta that can at all dispose of with satisfaction the large volumes of upland floods brought down by these streams, and the only solution that we would suggest for examination is that the possibility of diverting both these streams inte the Godavari below Dowlaishwaram anicut -may be examined. We are aware that this will be a costly work, and our only reason for recommending it is that it seems impossible that any similar expenditure of money within the delta will produce results of equal value.
355. The problem of the Collair and the Uppateru have remained unsolved for Collair and Upputeru. many years. Numerous investigations have been made, some with the idea of increasing the waterway of the Upputeru, of flood-banking it, etc., but all have been dropped on account of their great cost. Similarly proposals for diverting the Budameru into the Kistna and for constructing flood moderating reservior on the Tummileru have been investigated but have shared the same fate. We would however urge that in spite of its cost the proposal to divert the floods of the Budameru into the Kistna below the anicut may be investigated, and we would similarly urge that the question of flood moderating reservoirs on the Tummileru may be re-examined, but without looking to any direct irrigation and revenue from such a reservoir. If, however, there is water left in such a reservoir after the flood season there would be no objection to utilizing it for parposes of second crop irrigation. The problem of the Collair and the flood submersion due to it call for urgent solution and we hope that our proposals may receive careful examination by the experts of Goverament.
356. The losses that are being sustained by the ryots under both delta systems either on account of the insufficiency of supplies during the first crop season leading to delayed transplantation and reduction of crop outturn or to loss of crop in the second crop season due to inadequacy of supplies or again due to

These delta systems need all the additional expenditure proposed. flood submersion on account of the insufficient carrying capacity of the drains which are not only incapable of carrying away at a sufficiently rapid rate the local drainage but are totally incapable of dealing with upland drainage, can only be obviated and their prosperity increased by the remed ying of the serious defects that we have referred to above. The Godavari delta system with a capital expenditure of 168 lakhs is giving a return of $17 \cdot 21$ per cent; while the Kistna delta system with a capital expenditure of 183 lakhs gives a revenue of 23 lakhs and a net return of 12.82 per cent. It will be seen that even if the capital expenditure on these systems were doubled they would still yield a handsome return on capital outlay and continue to satisfy the requirements of productive public works.

## Sbetion 48.-Agriculural Dbpartiknt.

357. One of the main avenues by which the prosperity of the ryot population could be enhanced is through the activities of the Department of Agriculture. While we -onsider that with reference to the existing staff and its limitations, work of value bas
been done in some directions, our enquiries only eanfirm our belief, that with referenceto the large number of problems still remaining to be solved, the past activities of the Agriculture Department have barely touched the fringe of the matter.
358. Taking first research work we find that the operations of the Reseerch Research work. Section of the Department so far as the three districts wodeal with are concerned are limited mainly to paddy, sugarcane and plantains. The farm at Marataru is concerned solely with work in connexion with paddy; at the Agricultural Farm at Smalkote the main work again is in connexion with paddy, while a considerable amount of work has also been done in connexion with sugarcane and plantains. With reference, however, to many of the other crops in the district, particularly dry crops and garden cultivation, we find that absolutely nothing was done. It is notorious that the condition of the ryots in the uplands in the Godavari and Kistna is extremely unsatisfactory. The main crops in these dry areas are cholam, cumbu, ragi, maize, pulses, oil-seeds, gingelly and cotton.
359. We have already stated that we find from statistics that the areas under cotton, oil-seeds, gingelly and cholam are diminishing. Taking oil-seeds, for, instance ${ }_{r}$ we find from the records that this formed in former years an important part of the total cultivated area. The crop is, however, one that is liable largely to be attached by pests and we surmise that the reduction in area is largely due to the fact that on account of this factor the cultivation of this crop has proved unremunerative. We would, therefore, recommend that an experimental farm should be started in the upland area at some suitable locality so that research work in connexion with dry crops may be carried out.
360. In the Razole and Amalapur taluks in the East Godavari district, cultivation of cocoanuts has increased largely and has assumed considerable importance. During our inspections, we however found several gardens in these taluks attacked by

$$
\begin{gathered}
\text { Pests } \\
\text { gardens. }
\end{gathered}
$$ disease and the trees were withering. We understood from our enquiries that the ryots of these parts approached the department with the request that an agriculturak station may be opened somewhere in the above locality, with a view to studying cocoanut cultivation. We understood besides that the ryots were willing to pay an appreciable contribution for this purpose; but the request has not materialised and the matter seems to have been dropped. We consider that in view of the large area here that is under cultivation of cocoanut, research work in connexion with this is necessary.

361. During the course of our tours we examined several orange gardens in many localities and we found that in several areas where the cultivation of batavianoranges was going on for some years, the gardens are now dried up, on account of disease and this is particularly the case in the Palakole and Narsapur areas. Sweet lime, ordinary lime and several hardy citrous varieties are taking the place of the old batavians everywhere. We understood from enquiries that the Agriculture Department is unable to help the owners of these gardens with advice for the simple reason that they have no experts capable of dealing with this matter.
362. Similarly with reference to mango cultivation, we found that although there

Mango gardens. are very large areas everywhere the yield is extremely irregular. We found many topes which yield nothing from year to year in succession. Apart from the question of dealing with insect and fungoid pests, we feel that research alone can show whether it is not possible to increase the yields of fruit-gardens and make them produce more regularly than at present. The experimental farm that we have advocated for the uplands could alsodeal with work in connexion with fruit cultivation.
363. During the course of our enquiries ryots everywhere stated that there has. been progressive decline in the fertility of their lands.
Loss of fertility of land and green manures. While we believe that that statement may be true only toa limited extent (inasmuch as it is likely that there has been diminution of yield in the case of the best class of lands which probably yielded more when they were originally brought under cultivation) and while we equally believe that it is likely that there has been some improvement in the fertility of the land in the case of inferior lands brought under cultivation some years ago, we may agree generally with the opinions of the Royal Agricultural Commission that possibly now a balance has been established and no further deterioration,
is likely to take place under existing conditions of cultivation. But the important point is, not whether lands are likely to deteriorate further, but whether it is not imperative that in consideration of the present economic conditions of the ryot population it is not possible to devise means of improving outturnsand increasing agricultural prosperity. This can only be solved by tackling the problem of manures. In our remarks elsewhere, we have shown that the quantity of catle manure available is entirely inadequate, that the supply of patimannu is runing out and that therefore the ryots are now often puzzled as to what to do. Green manure has not taken on largely because sun-hemp and other green-manure crops are required mainly for fodder purposes. Bone meal is not available in appreciable quantities or at reasonable cost since bones are being exported largely out of the country. Oil-seed cake is similarly not available in appreciable quantities or at reasonable cost since we find that not only is it exported, but the cultivation of oilseeds as we have shown elsewhere, has been contracting seriously. In the three districts in question the use of sulphate of ammonia and superphosphate is being pushed by special agents employed by the large manufacturing firms. Our inquiries go to show that the ryots have not, however, obtained satisfactory results; and as the future of the problem of increasing crop outturns depends largely on the use of artificial fertilizers we consider that this problem should be taken up and investigated by the Agriculture Department.
364. In the matter of seed distribution, the department have been, we find,

## Seed diatribution.

 successful. Although so far their operations have been on a small scale, in view of the great importance of the supply of seed, we would urge an expansion of its activities in this branch. Besides, departmiental agency we consider that a larger number of ryots working under departmental control should be encouraged to take up this work. Seed thus grown under control may be purchased back by the department so that the supply of seed may go on expanding in larger and larger circles until the bulk of the areas under cultivation are provided with improved seed.365. Concerning demonstration plots and propaganda work generally we feel unable to take an equally optimistic view. The main difficulty seems to be the inadequacy of the superior supervising
We find that the superior staff is unable to check on the Demonstration plote, eto. staff of the department. We find that the superior staff is unable to check on the
field the actual results achieved on demonstration plots with the result that in many cases the reported outturns are unreliable. We hope, however, things will improve in this very important work with the increase in the personnel of the Agricultural Department. We found that a very large part of the time of the superior officers and experts is taken up by routine work (clerical and accounts work). This state of things. we cousider ought to be remedied as early as possible.

## Sberion 49.-Forests.

366. We would invite the attention to the recommendations of the Royal Agrioultural Commission with reference to Forests in Chapter 8 of their Report. We draw attention, however, to three main points.

We have referred elsewhere to the general practice obtaining particularly in

1. Fuel supply. Delta areas of burning cattle-dung for cooking and other purposes leading thereby to a great wastage in the possible manure supplies. The reason for this practice is that in these areas there is generally, little or no firewood available for domestic purposes. We believe there are old orders of Government asking the Public Works Department to utilize the large areas of poramboke lands in its charge for the growth of babool trees; but this is not generally attended to mainly, for the reason that it could not be done by the department with its present establishment. The matter, however, is one that is worth further careful examination with a view to helping the agricultural population. The scheme might even be found to be remunerative and bring in an appreciable revenue to the Government. We would, however, draw special attention to the necessity for examination of the question as to how far it will be possible for the Forest Department to bring adequate supplies of fuel down the rivers and canals so as to make it available for villages in the delta. Water transport could not be very expensive and it would appear that the enterprise suggested above would not only come as a great relief to the cultivating population, enhancing thereby the supplies of manure, but is also likely to turn out a remunerative enterprise.
2. Our remarks above with reference to the supply of fuel from foreste would apply also to the supply of timber required for agricultural purposes. The supply of babool wood in delta

## 2. Timber supply.

 areas for agricultural purposes is exceedingly limited and usually the supply of it bas to come a long distance from outside areas in the uplands and elsewhere.368. We invite the attention of Government to the recommendations of the hoyal Agricultural Commission concerning the importance of fodder supplies from forests.

## Skction 50.-Sanitation and Public Health.

369. Any inquiry into the general conditions of agriculture and the position of Condition of the villages. the cultivator must take into account the public health aspect of his life. The close relationship between agriculture and public health need hardly be emphasized. The economic wastage due to disease cannot be overexaggerated. The sanitary conditions of the numerous villages that we have visited must be considered to be bad. In many villages, the difficulty - f getting drinking-water even for the people is great. In the deltas, particularly, there are no vacant sites available for latrines and people have often to wade through mud and water to go to the field bunds or to the channel bunds for answering the calls of nature. The pollution of surface soils leads to the pollution of the water supplies and the incidence of the hook-worm disease is very large. Malaria takes its toll by the thousand. The wells and tanks that exist are generally unprotected and the village streets are unswept. The resolution of the All-India Conference of Medical Research Workers held in 1924 and 1926 would apply to the general conditions in these districts as to other parts of India.

## 370. The resolution runs as follows :-

"This conference believes that the average number of deaths resulting every

## Resolution of the Medical

 Research workers.year from preventible disease is about 5 to 6 millions, that the average number of days of loss of labour by each person in India from preventible disease is not less than a fortnight to three weeks in the year, that the percentage loss of efficiency of the average person in India from preventible malnutrition and disease is not less than 20 per cent and that the percentage of infants born in India who reach a wage-carning age is about 50 , while it is quite possible to raise this percentage to 80 or 90.
"This conference believes that these estimates are understatements rather than exaggerations, but allowing for the greatest possible margin of error it is absolutely certain that the wastage of life and efficiency which result from preventible diseaso costs India several hundreds of crores of rupees each year. Added to this is the great suffering which affects many millions of people every year.
"This conference believes that it is possible to prevent a great proportion of this waste at a cost which is small in comparison with the expenditure.
"The recent census shows that the position in India is one of grave emergency.
"This conference recognizes that the problem is very complicated and involves not merely Medical research but also questions of Public Health, Medical relief, Medical Education, propaganda and social and economic considerations.
"This conference believes that the greatest cause of poverty and financial stringency in India is loss of efficiency resulting from preventible disease and therefore considers that lack of funds far from being a reason for postponing the inquiry, is a strong reason for immediate investigation of the question."

The conditions of water-supply and Public Health and Medical relief being such as they are, it is no wonder that the mortality here from epidemics such as cholera is high.
371. 他 the case of the East Godavari omitting the Agencies where the mortality from fevers is about 50 per cent of the total annual mortality we find the same percentage of 50 per cent obtains also in the taluks of Rajahmundry, Peddapuram and Cocanada. In the case of the Kistna and East Godavari districts, the incidence of cholera is the same as noted above, while the incidence of mortality from fevers is about 50 per cent of the total annual mortality in the taluks of Tanuku, Bezwada, Nandigama, Nuzwid,

Tiravor, Fllore, Yernagudem and Divi. In analysing the Public Health statistics for the whole of India for 1923 the Public Health Commissioner to the Government of India notes that the total number of deaths recorded is three and three-fourths millions for the year and he proceeds to remark as follows :-
"The ( great As we have a million dealiss from malaria, he morbidity of which is very dispensaries and hospitals, we can surmise how apalling is the maiming due to it. Further, its relation to agriculture js very close through methods of cultivation and canal irrigation which may lead to final depopulation. It is of primary importance in opening up jungle tracte to tea, coffee and rubber while its connexion with rice cultivation is a very complex one which occupied the attention of the recent International Malaria Conference at Rome. Christophers in estimating the morbidity says that for one million deaths in adult males between fifteen and fifty years of age there should be at least two millions constantly sick and the equivalent of fifty millions of admissions to hospitals." The seriousness of these figures need hardly be emphasized.
372. In the uplands and Divi, the difficulty for drinking-water is very much Scarcity of drinking-water greater than in parts of the deltas and there are many localities in the upland areas where guinea-worm is prevalent in addition to other diseases. With water-supplies; inadequate or bad, without any arrangements for the disposal of drainage, without any arrangements for latrines and with inadequate medical relief, it is no wonder that the incidence of epidemic diseases and of malaria is so high and that there is in the rural parts such a serious waste of human life and energy.
373. These districts are noted for their very high infant mortality. It is Infant mortality. a well-known fact that the disease resisting power of a people varies in inverse proportion to the rise or fall in the infant mortality obtaining for those people. Practically no systematic effort has been made by Government to bring down the very high infant mortality figure of these districts. While we are conscious that there has been an improvement in Public Health conditions in municipal areas and in unions, the unsatisfactory conditions in rural parts remain practically as before.

## Skotion 51.-Excigr Revprus.

374. In considering the question of the improvement or otherwise of the eco-

An estimate of the drain of raral eoonomio resoures coused by excise revenue.
nomic condition of the people of the districts under report it will be a very material point to trace the growth of the excise revenue. In the year 1906-07 the total excise revenue of the province was 204.8 lakhs, while the revenue for 1928-29 was 552 lakhs. Of the latter sum, the three districts of East Godavari, West Godavari and Kistna contributed 75.37 lakhs or 13.6 per cent of the entire excise revenue of the province. We have not got the exact revenue that was contributed by these districts in 1906-07, but assuming that the proportion then was the same the excise revenue in 1906-07 must have been 27.9 or, say, 28 lakhs; $s 0$ that during the period of the current settlement the excise revenue of these districts has increased by 36.5 lakhs. When it is remembered that the agricultural population forms about 70 per cent of the total of these districts it will be realized that a large portion of this increase in excise revenue referred to above is being contributed by the agricultural population consisting of the poorer agriculturists and the labouring classes. To a large extent therefore the excise revenue is an indirect taxation on the agriculturists of the districts, and we would particularly ask this point to be remembered in considering the question of enhancement of the land revenue in resettlement. Even assuming that the agricultural population is benefited by the increase in prices owing to which it is now proposed to increase the assessment in reettlement, - it will be noticed that while owing to increased prices in resettlement the Scheme Report proposes to take an extra sum of 9.53 lakhs of rupees from the three districts in question, the Government are already levging an impost on the agricultural population of these districts which amounts to an increase of 36.5 lakhs over the callections in 1906-07.
375. Of the latter increase, the levy from the agricultural population will be $36.5 \times 70 / 100$ or 25.5 lakhs of rupees. If this is added the increase proposed in resettlement of Rs. 9.5 lakhs, the total of Rs. 35 lakhs will amount to a pericentage increase of 64.5 on the existing land revenue.

The above figures take no account of the revenue that goes to the Government of India, the profits made by the distillers of liquor and the renters of shops for the sale of intoxicants, and the money that is made by illicit distillers, tappers, etc. The effects of taking the above items into consideration will probably be to double the above figures.

## Sbotion 52.-Dificts or the presint Sxstam of Land Revenue.

376. The land revenue system of the Presidency is merely a modification and development of the system obtaining in the country underprevious Governments. In the past, it was reported that the system was often excessively oppressive in incidence and as a result, land, very often, went out of cultivation.
The present asstem
presees hard upon the
resources of ryots. But the old system of grain rents and the slackness in collection and other factors provided many loop-holes. The people besides enjoyed many advantages in the utilization of common lands, forest lands, fisheries and other rights, etc., which provided a considerable measure of relief, while at present the rigidity of the system of fixed money assessments places irksome burdens on the cultivators. It is possible under the present system for the land tax to become excessively oppressive without affecting the revenue. Cultivation being the main occupation of the bulk of the people, the effect of heavy and oppressive assessments often reaches a stage merely of impoverishing the ryot population without leading necessarily to the throwing out of land from cultivation or a diminution of the land revenue. In the words of Sir Norman Marjoribanks in his speech in the Legislative Council on the 20th November 1928-
"The basis on which land revenue assessment in this Presidency is made is the proposition that the State is entitled to a share of the crop from the land. It is not based on any consideration of the circumstances of the holders of lands. We do not make any difference whether a land is held by a rich man or a poor man. The assersment is made with reference to the capacity of the land and not with reference to thecircumstances of any body who holds the land."

If this statement correctly describes the present land revenue system we must .state that it is not possible to imagine a system more barbarious and unstatesmanlike than the present one. A system like the present will hardly be tolerated in any civilized country in the world at the present time. As we shall presently show, old land revenue systems like those still obtaining in this country have disappeared else-. where. Any humane Government must consider the circumstances of the people from which it raises its taxes, and cannot afford to heap burdens on those who are least able to bear it. In any system of taxation, the ability of the person taxed to pay is one of the elementary principles for consideration, and except in the case of emergency taxation where the very existence of Government is threatened, it is impossible for any Government to ignore this elementary canon of taxation.
377. The system of assessment is not only not progressive, but actually tends in the other direction. Its burden presses more and more on the less prosperous cultivators. It is based too much on averages, on a verage rainfalls, on a verage irrigation supplies,

The system of assessment is regressive in its effeots. on average outturns, on average prices, etc., and its inelasticity drives large numbers of people to the money-lender particularly in bad seasons. Among others, it is one of the chief causes of low production and of haavy indebtedness. The recurring surveys and settlements preceded by prolonged and harassing inquiries accompanied by numerous complaints and appeals are a serious disturbing factor in agricultural economy and always lead to great discontent.
378. The surveys and settlements themselves extending over a series of years in each case entail enormous and disproportionate costs.

Survey and settlement operations are too costly. budget figures under charges of Administration, Survey and Settlement, Land Records and Inam Commissioner amount to 29.75 lakhs. The-
revised estimate for 1927-28 for the same items was 35.57 lakhs. We notice that a sum of about 11 lakhs which apparently were the charges for Tahsildars and Deputy Tahsildars, Revenue Inspectors and feons employed in connexion with this work is now being charged to District Administration from 1st of April 1928 instead of appearing under the legitimate head of Survey and Settlement. Including the latter item therefore (taluk establishments) the annual expenditure on survey and settlement would be about 36 lakhs, an amount equivalent to what would be realized in four years if the increments in revenue rates proposed by the Special Settlement Officer in the three districts under report are given effect to. Then costs to the people of provision and renewal of survey stones owhich are always paid for by the ryots will have to ke added to the above figures of expenditure. But we have no information on this point.
379. Apart from the above considerations, it is a well-known fact that incomes

Incomes from and property in land are more beavily taxed than other forms of income and property.
which the assessment of land tax is based is not the net income after meeting the requirements of the landholder and his family and in consequence, even low incomes and no incomes are not exempt from taxation. In addition to all the above disadvantages, the land tax is not subject to any Statutory Rules or Acts of the Legislature and is entirely subject to the executive orders of Government. In spite of the pronouncement of the Joint Committee of the Lords and Commons to the effect that they were of opinion that the time has come to embody in the law the main principles by which the land revenue is determined, the methods of valuation, the pitch of assessment, the period of revision, the graduation of enhancements and the other chief processes which touch the well-being of the revenue payers, no legislation has yet been undertaken on the subject.

## Sxction 53.-Land Rrvande Policy.

380. Before we proceed to make our recommendations concerning the land revenue policy and resettlement we would like to put briefly the trend of policy in this matter in some of the other countries of the world.

## I. France.

381. The land tax of France is 10 per cent on annual value, that is, the gross produce less the cost of production and earnings of the management. Incomes derived from land are also liable to the general income-tax.

## 1I. Italy.

382. Land is subject in Italy firstly to two schedular taxes-(1) a tax at a flat rate of 10 per cent of the assessed economic rent (which is subject to periodic revision) paid by the proprietor if the land is let, otherwise, by the cultivator, (2) a tax of 8 per cent of the income of the cultivating farmer-incomes below $£ 4$ being exempt from this tax.

In addition to these, both landlord and tenant are liable to the State income-tax, which varies from 1 per cent to 10 per cent and which is levied on landlords and tenants for incomes over $£ 8,750$. In addition to the above, local surcharges for local purposes a mounting to about 15 per cent of the economic rent may be levied both on the schedular taxes and on the income-tax.

## III. Sweden.

383. In Sweden there is no land tax but a progressive income-tax at rates varying from 5 per cent to 25 per cent is levied on all incomes including agricultural incomes.

## IV. Australia.

384. In the Australian States the assessment is levied on the unimproved value of the land, that is, on that fart of the annual or capital value of real property which is not due to the efforts or investments of owners or occupiers. The tax is levied only on the excess over the specified minimum.
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## F. New Zoaland.

385. In New Zealand, amall farmers whose holdings are worth lese than $\mathbf{8 5 0 0}$ ara exempted. But therd is a graduated tax on the largar eatates varying from onosixtesnth of a panny to three pence in the pound according to the value of the estate. Both in Australia and New Zealand the income-tax is levied in addition to the land tax.

## VI. Japan.

386. In Japan the land tax is on-fourth per cent on the capital value of the land. All incomes from land, however, are liable to the general income-tax.

## VII. Lower Burma.

387. In Lower Burma the land revenue is assessed at one-fourth of the net profits.

## Sbetion 54.-Stimmary.

388. We shall now summarise the chief points we have referred to in the preceding pages:-
(1) While rainfall has generally remained unchanged in averages and in general characteristics, a study of the monthly falls for several years at different stations reveals the fact that in every ten-year period, losses would be sustained in five years either due to insufficiency or excess.
(2) While the population has increased, extension of oultivation has not kept pace with it.
(3) There is no improvement in the conditions of unemployment of agricul tural labour.
(4) Fragmentation of holdings has increased and the average area of holding has gone down, while 36 per cent of the total land cultivated is held by pattadars owning 10 acres and less.
(5) While land values have increased owing to causes not altogether permanent in their action, they are falling since 1925.
(6) Grain leases have on the whole remained stationary, and an account of the high level of leases, many lessees have been ruined.
(7) Ryots have to maintain an excessive number of cattle of all kinds and the cost of maintenance is therefore unnecessarily large.
(8) The supply of straw does not suffice for more than one-ninth of the cattle maintained and therefore ryots have to incur large expenditure on cattle fodder and foods, which are not taken into account in the official eettlement calculations.
(9) The indebtedness of the agricultural population is heavy, hampers cultivation and reduces incomes.
(10) The irrigation supplies in the deltas daring the first-crop season are not such as to avoid loss to ryots owing to late transplantation. The supplies are, in particular, inadequate in the Godavari Western and Kistna Eastern deltas. The sapplies during the second-crop season in the Godavari are insufficient and uareliable, particularly in the later months of the crop period ; and this leads, therefore, to considerable loss to the ryots.
(11) Owing to failure to tackle the problems connected with the disposal of upland drainage, drainage conditions over large tracts in the deltas are unsatisfactory. The general question of the design of drains requires examination.
(12) The allowances made to the vicissitudes of the seasons and for unprofitable areas included in the pattas are inadequate. Large areas lying fallow in the three districts pay at present the full assessments.
(13) Remission rules require to be worked in a more liberal spirit than at present.
(14) Loss due to insect pests, rats, etc., are ignored in settlement calculations.
(15). Capital expenditure incurred by ryots on reclamation of land and on permanent improvements is not allowed for in settling assessments.
(16) While prices of grains have risen, they are now falling and there is no knowing, by how much they will still fall further.
(17) Years of famine, war years and years in which there was grain control when prices were excessive have been included in calculating commutation rates.
(18) While we have adopted for our calculations the standard tables of outturn in the settlement reports, we feel that in actual practice some lands do yield more and a very much larger area yields less than is indicated by the standard tables.
(19) Wages of labour have increased by 150 per cent in the last thirty years.
(20) Losses due to cattle diseases and cattle mortality are serious, but have been ignored in settlement calculations. Cattle diseases besides sap the energies of cattle and shorten their life.
(21) Similarly many other important items such as the maintenance of permanent farm-servants, agricultural implements, etc., havelbeen ignored or underestimated.
(22) Public health conditions in the rural parts are unsatisfactory and preventible diseases and mal-nutrition diminish the efficiency of the agriculturists by about 20 per cent.
(23) Increase in the excise revenue during the last thirty years amounts to 44 per cent of the existing land revenue.
(24) The system of settlement and resettlement involves the maintenance of costly establishments (amounting to about 35 lakhs of rupees per annum) which is hardly justifiable.
(25) The cost of cultivation has increased by 300 per cent in the last thirty years.
(26) The cost of maintenance of an average family according to the low standards, has increased by 159 per cent during the last thirty years.
(27) The margins available for maintenance of the cultivator's family after paying the assessments are either inadequate or nil.
(28) Land is changing hands rapidly owing to many causes, and ryots are unable to repay their debts except by sale of their lands.
(29) The system of land revenue is based too much on averages (average rainfalls, average supply of water, average outturns, average prices, etc.). The inelasticity of the system leads to low production and indebtedness. It is much heavier in its incidence than other taxes. It is antiquated, and is not in keeping with the trend of land revenue policy in civilized countries.
(30) In most rural parts the value of the agricultural produce is insufficient, after meeting the demands of Government revenue, for the maintenance of the agriculturists; so that, while a few rich people get richer, and a small number remain on the margin of subsistence, the majority are running into debt and losing their hold on land which is frequently changing lands.
(31) In the resettlement of 1899, assessments were enhanced by about 30 per cent, while in the present scheme report these are proposed to be further enhanced by 184 per cent.
(32) Padugai and (patta) lanka lands have greatly lost in fertility and their former special advantages and require reduction of assessment.

## Sbotion 55.-Rbcommbndations.

389. In view of the facts we have stated above we now make the following recommendations:-
(1) The basis of assessments in future should be 25 per cent of the net produce instead of 50 per cent of the net produce as at present.
(2) The proposals for enhancements of the assessments contained in the scheme report should not be given effect to.
(3) There should be no resettlements till the value of the net produce exceeds four times the present assessments-further resettlements taking place when the excess over four tinies the assessment becomes sufficiently appreciable. Every resettlement should be preceded by a careful survey of economic conditions.
(4) There is no need at present to consider extra sources of income and taxation.
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(5) Lacal bodies may be given the power to raise cemea on the land revenue for meeting local needs. The maximum of sach should not exceed 25 per cens on the land revenue with exemptions in the case of small holdings of five acres and less.
[- Nde.-Our recommendation (1), (3) and (5) are almost identieal with those of the Indian Tazation Euquiry Commitute.]
(6) The strength of Surrey and Settlement Parties should be reduced at once.
(7) The fixing of future land revenue assessments should be subject to the contmol of the legi-lature, since we have no doubt whatever, that the legislature will act with a due sense of reponsibility in this matter.

8 , Inder Irrigation, we recommend that the following should be considered :-
(a) The crest level of the Godavari Anicut or the full surply level should be raised, and the canals, particularly the Godavari Weetern Delta Main Canal, shuuld be made capable of carrying larger supplies so as to a acid the present delays (and the ansequent loss of produce) in transplantation.
(b) The discharges of the Kistna Eastern Delta Main Canal require improvement.
${ }^{\prime} c$ ' To a roid loses of crop in the second crop season in the Godavari Deltas, storage should be provided either on the Sabari or at any other suitable place. Such a storage work will prove remunerative, since it could also provide for extension of second and also of first crop irrigation.
9. Suitable arrangements should be made for the disposal of upland drainage, so as to prevent large lonses due to submersion in the deltas. The design of drains in the deltas requires examination.
(10) The Agricultural Department should be strengthened so as to expand work in the following directions:-
a To expand the work of seed distribution,
$l_{\text {. }}$ to extecd demonstration work under proper supervision,
c) to undertake the study of dry crops ouconuts, fruit-cultivation, oil-seds, etc., in suitable experimental farms situated within the districts, and
(d) to study the suitability of artificial manares and to push the use of those manures that are found to be suitable.
(11) The Veterinary Department should be strengthened
(a) to enable it to deal with cattle epidemic diseases sati-factorily so as to avoid very large loses to which ryots are now put on account of cattle mortality, and
b) to push vigorously improvements to the breeds of cattle.
(12) To reisere unemployment, cottage industries and industries connected with agriculture (conrersion of raw materials into finished products) should be started under Government auspices or private enterprises encouraged with liberal 8tate aid.
13. Medical help and public health work require expansion to minimise lces of life and energy due to preventible diseases, and to reduce infant mortality.
14. Expansion of the co-operative eredit movement is necessary, and particularly the starting of land mortgage banks in as many centres as puesible.

## Sectios 56.-Coscursion.

390. In concluding our report, we would like to expres our thanks to Government for giving our Committee the opportanity of examining and reprrting on the coonomic conditions of the Godararis and Kistra districts and for the be!p that we have received through Government for carrying out our investigations. We feel conscious howerer, that our report is in some respects not as complete as ye would wish to have made it, had time permitted. We have actually taken about nine monthe for completing our investigations-including the periods taken up by the sittings of the lagislative Council during this time. The Settlement Parties which had to cover the name ground (although their wort was of a somewhat different lind) took wome years to complete their woik, assisted though they were by the entire establishments of

Government in these three districts. In spite of shortcomings, however, we feel that we have done our best and we feel we have spared no pains to make our report as full as the time at our disposal, and the many obvious limitations, under which we worked, permitted. We feel confident that our conclusions will, in the main be found unassailable; and we submit our report with the hope that our data and conclusions will be received with an open mind. These, we are aware, will be found very different from the usual roseate and optimistio descriptions and conclusions that form a feature of Settlement and Resettlement reports. Truth is often unpleasant, but we have felt that we owe it, not only to ourselves, and to the ryot-population of these districts, but also to Government as well, that we should try to set forth, as faithfully as we could, conditions as we actually found them as the result of careful studies. These latter have revealed the fact that the economic conditions of the bulk of the agricultural olasses is unmistakably unsatisfactory, and that while there are some ryots in these districts who could without hardship bear an enhancement of the assessment, in a great majority of cases such a measure would be an intolerable burden. The system of arriving at land revenue assessments and their enhancement, and the formal inquiries that precede them depend so much os averages, that they fail to take adequate note of the conditions of the individuals who have to pay. We hope that Government is in no way committed to the dictum, that it is the land that pays the assessment, and that it is not concerned with the well-being of the ryots paying the assessment. We believe that Government is and must be actuated by the most humane considerations, and that it cannot fail to attach due weight to the conditions of poverty, indebtedness and misery which affect such a large part of the agricultural population and determine their ability to bear the burden of present and future enhanced taxation. It cannot fail to take note of the many serious disadvantages and difficulties under which the agricultural population labours-difficulties that lead to serious losses and to consequent poverty, nor can it afford to wait much longer in applying the necessary remedies. It has been in this belief that we have drawn pointed attention to their difficulties, so that with the removal of these, the contentment and prosperity of the agriculturists may be secured. While we feel that it is the duty of the Government to safeguard the revenues of the State, we believe that it is equally its duty, to take note of the distressing condition of the people and the consequent discontent and, by applying measures of relief and carrying out improvements such as those we have suggested, to secure their happiness and contentment and enhance the prosperity and tax-paying capacity of the ryot population. In securing the happiness of the people by such measures must Government look for its highest reward, and in removing discontent, its highest statesmanship.
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(5) Local bodies may be given the power to raise ceenes on the land revenue for meeting local needs. The maximum of such cesses should not exceed 25 per cent on the land revenue with exemptions in the case of small holdings of five acres and less.*
[ ${ }^{\bullet}$ Note--Our recommendationa (1), (3) and (5) are almort identical with those of the Indian Taxation Enquiry Committee.]
(6) The strength of Survey and Settlement Parties should be reduced at once.
(7) The fixing of future land revenue assessments should be subject to the control of the legislature, since we have no doubt whatever, that the legislature will act with a due sense of responsibility in this matter.
(8) Under Irrigation, we recommend that the following should be con-sidered:-
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(14) Expansion of the co-operative credit movement is necessary, and particularly the starting of land mortgage banks in as many centres as possible.

## Sbotion 56.-Conalusion.

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(2) Schedale for net income effeoted upon each holding. Maximum, minimum and medium.
(3) Schedules showing Madras measures to be added to the yield to make up the deficit.
c. (1) Schedule for net income per acre (labour of the owner and his dependant is taken into account). Maximum, minimum and medium.
(2) Bchedule for net inoome effected on each holding. Maximum, minimum and medium.
(3) Schedule showing the Madras measures to be added to the yield to make up the deficit. Minimum, medium and maximum.
81. According to the present day price at Rs. 6-8-0 per bag.
(1) Schedule for net income per acre (the labour of the owner is not taken into account). Maximum, medium and minimum.
(2) Schedule for the net income per acre (the labour of the owner is taken into account). Maximum, medium and minimum.
(3) Labour of the owner and the dependant is taken into account. Maximum, medium and minimum.
82. Schedule for the net income per acre assuming that the prise for garce is Rs. 444-4-0 or Re. 10 per bag.
(1) The Iabour of the owner is not taken into account. Maximum, medium and minimum.
(2) The labour of the owner is taken into account. Maximum, medium and minimum.
(3) Labour of the owner and the dependant is taken into account. Maximum, minimum and medium.
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b. (1) Family expenditure statement, Kistna distriot.

| (2) | Do. | West Godavari district. |
| :--- | :--- | :--- |
| (3) | Do. | East Godavari district. |

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(2) Minimum expenditure upon a family from the Detailed reports, West Godavari district.
(3) Minimum expenditure upon a family from the Detailed reports, East Godavari district.
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(2) Pasarlapudi ... ... ... ... ... Razole taluk.
(3) Mulikipalli $. . . \quad . . \quad$... ... ... Do.

(5) Kanchumarru ... ... ... ... ... Tanuku taluk.
(6) Likhitapudi ... ... ... ... ... Narsapur taluk.
(7) Kanchikacherla ... ... ... ... Nandigama taluk.
(8) Konakanchi ... ... ... ... ... Do.
(®) Lingala ... ... ... ... ... Do.
(10) Elaprole ... ... ... ... ... Bezwada taluk.
35. Consolidated register of division of holdings.

## REP0RT

OF THE

# ECONOMIC ENQUIRY COMMITTEE 

VoI. II-Appendices

## REPORT OF THE ECONOMIC ENQUIRY COMMITTEE-VoL II.

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APPENDIX No. 1 (i).
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Pinal Enguiry.

$\triangle P P E N D I X$ No. 1 (ii).
 Emoutey Comitrizas.

## Kirtna District.

Gudivada taluk-

1. Kontaram.
2. Pasumarra
3. Komaravole (G).
4. Nandivada (G).

Bexwada taluk-
5. Kanar.
6. Fdupagalln.
7. Elaprole (G).
8. Poranki.
9. Fatamata.

Bandar taluk-
10. Gokavaram (G).
11. Malleswaram (G).

Nandigama talnk-
12. Lingala (G).
13. Torraguntapalam (G).
14. Konakanchi.
15. Kanohikacheria.

Kaikalor taluk-
16. Pallivada (G).
17. Vinjaram (G).
18. Amaravathi (G).
19. Korakolla.

Divi talnk.
20. Puligadda (G).
21. Machavaram (G),
22. Kodur.
 Enquiry Cometrise.

Kistina District.

Divi talak-

1. Nagayalania.

Beawada taluk-
2. Kondapalli.

Kaikalur taluk-
3. Venkatapuram.
4. Divi Ialand.
 Eisoungy Commitrise.
West Godaedari District.

Fillore taluk-

1. Bingavaram (G).
2. Chataparra.'

Chintalapudi division-
3. Settivarigadem (G).
4. Taaikalapudi.

Tanaku taluk-
6. Kanchamarra (G).
6. Kandavilli.
7. Vadlar.

Tadepalligudem taluk
8. Mudunar.
9. Nallazerla.
10. Rachar (G).

Kovvar talak-
11. Devarapalli.
12. Vegeswaraparam.

Narsapur talak-
13. Lankalakodera.
14. Likhitapudi (G).
15. Velagalera (G).
16. Kodera (G).

Bhimararam taluk-
17. Chilakur (G).
18. Vemavaram (G).
19. Dirnsumarru.
20. Mogallu.

Rast Godavari District.

Agenor-

1. Mangapati Divipeta
2. Buasazapalli.
3. Yellavaram.

Rajahmandry taluk-
4. Chinakondepadi.
5. Barugapudi.
6. Gummalladoddi.

Peddapar talut-
7. Dontamar.
8. Gorinta

Cocanada taluk.
9. Pedabrahmadevam.
10. Vendra.
11. Jagannadhagiri.

II-8

Amalapar talak-
12. Madupalli.
13. Gollavilli.
14. Yentrukona.
15. Nallamilli (u).

Rajole talak-
16. Pasarlspudi.
17. Ravalapalem.
18. Malikipalli (G).
19. Palagummi.

Ramachandrapor taiuk-
20. Addampalli.
21. Someswaram.
22. Choppella.
23. Gangavaram.
APPENDIX No. 6 (i).
Llat of mads mprofrmberta cazrizd out me Godafari Delta from 1405-06 to 1926-27.
A.-Irrigation.
Eltimate
Re.

1. Constracting new underslaices to the Dowlaishweram Aniout. The work was commenced in 1903-04 and mostly completed in 1906-07 ..... 8,32,800
2. Constructing a training bund in front of the new nader- slnices at Dowlaishweram. The work was commenced in ..... 8,540
1906-07 and completed in $1910-11$
mprovements to Vemavaram. Projeet in the Godavari Central delta. The work was commenced in 1905-06 for extension of irrigation of about 1,185 acres of dry land in Vemavaram, Magam and Bhatnavalli villages Work completed in the year 1906-07
3. Improvements to Vemavaram Projeet in the Godavari Central ..... 13,858
4. Improvements to Madiki ohannel for extension of irrigation,about 1,616 acres. The work was commenced in 1906-07and mostly completed in the aame year .. .. ..10,900
5. Constructing the upper and lower wharves at Nidadavole.
The work was commenced and practically completed in 5. Constructing the upper and lower wharves at Nidadavole.
The work was commenced and practically completed in 1910-11 ..... 9,5006. Constructing 13 telephone shedis in Godavari Eastern delta..Work commenced and practically completed in 1914-15. at Tadepalligudem. Constructing in 1911-12
6. Constracting a wharf and sheds for Wharf Buperintendentat Tadepalligudem. Constructing in 1911-126,070
7. Constructing a wall from Chettipetta weir down to No. $\ddot{3}$ lime kiln at Chettipetta on the Right Bank of Ellore canal. Constracted in 1911-12
8. Driving piles in front of the river wall at Dowlaishweram. Work commenced in 1912-13

$$
16,000
$$

10. Constructing a wharf wall in the left bank of the Eastern Delta Main canal. Work commenced in 1912-13 and
20,400

completed in 1913-14
11. Constructing 12 sheds for mile coolies on the Bank oanal central delta. Work commenced in 1912-13 and com- pleted in 1913-14 ..... 7,080
12. Constructing eight telephone sheds in the Godavari central delta. Work commenced and completed in 1913-14 ..... 4,820
13. Constructing whurves at Palakole look in Narasapur canal. Work commenced in 1913-14 and completed in 1914-15. . ..... 7,870
14. Constructivg a wharf traffic shed and establishment quarters at Gannavaram. Constructed in 1913-14. ..... 11,300
15. Constructing an impervious apron in front of Dowlaishweram headquarters. Work commenced in 1914-15 and practi- cally completed in 1916-17 ..... 6,050
16. Improvements to Kazole channel. Work oommenced in 1914-15 and completed in 1916-17 ..... 3,500
17. Excavating a new approach channel to Bobberlanka lock. Work commenced in 1915-16 and completed in 1918-19. ..... 61,200
18. Restoring the Kovvur Manjair Junction canal. Work com-menced in 1915-16: the ontlay to end of 1926-27 isRs. 1,13,789$1,37,000$
19. Protecting with steel sheet piles the lower margin of the impervions apron below Dowlaishweram headsluices and constructing a retaining wall below the headsluices on the right side of the main canal eastern delta. Work com- menced in 1915-16 and completed 1919-19 ..... 28,148
20. Remodelling Chinchinada channel. Work commenced in 1915-16 and completed in 1919-20 ..... 51,830
21. Constracting an outfall sluice at 45-2-615ं of Vagista left bank at Pedatippa. Work commenced in 1916-17 and completed 1919-20 .. ..... 18,900
22. Raising the groyne at the left bank of Bobberlanka undersluices. Work commenced on 1916-17 and completed 1817-18
Botimato.
RS.
23. Remodelling the Tessipadi north side channel. Work oom- menced in 1917-18 and outlay to end of 1926-27 isRs. 50,315
57,702
24. Constructing lock and regulator in Kakaraparra canal. Work commenced in 1917-18 and completed in 1919-20. ..... 47,000
25. Hemodelling the Mandapetts channel. Work commensed in 1919-20 and completed in 1924-25 ..... 18,340
23. Extending the right chamber wall of the Kakarapurra look. Work started in $1920^{\circ}-21$ and completed in $1922-23$ ..... 4,000
27. Constructing an undertunnel aeross the Bhatanavalli channel. Work commenced and completed in 1922-23 ..... 10,300
28. Remodelling the Tapeswaram south vide ehannel. Workcommenced in 1924-25 bat further progress kept inabeyance for change of proposals70,000
29. Improvements to the bridges over the Mukknmala lock and weir. Work commenoed in 1926-27 and almost completed the aame year ..... 19,872
30. Remodelling the Duggudurru channel. Work commenoed in 1926-27 and completed the same year ..... 11,200
81. Remodelling the Anathavaram channel. Work commenced in 1926-27 and expenditure to end of $1926-27$ is Rs. 3,325 . ..... 11,40332. Polavaram Island Project for extension of irrigation in Pola-varam Island. Work under execution. Eixpenditure toend of March 1929, Hs. 10,67,910

$$
14,05,140
$$

B.-Drainoge and Pretective Works.
33. Widening the straight cut of the Yanamaduru drain to the Naidupalem revu. Work commenced in 1904-05 and completed in 1906-07

$$
1,43,049
$$

34. Excavating a straight out of the $\dot{Y}$ enamaduru $\dot{d}$ rain at its tailend to tail into Naidupalam. Work commenced in 1904-05 and mostly completed in 1906-07
88,000
35. Constructing a surplus weir at 38 M .32 chains of Narasapur canal. Work commenoed in 1906-07

$$
10,700
$$

86. Improvements to the Yenamaduru drain from the Gostandadi infall to short cut. Work commenced in 1810-11 and completed in 1919-20
3,73,500
87. Improvements to the mouth of the Talyabhaga drain. Work commenced in 1915-16 and completed in 1918-19.
31,709
4,800
13,450
88. Excavating the Nedunur drain. Work commenced in 191718 and completed in 1918-19
89. Improvements to the Neelakodu and Bondada drain. Work commenced in 1917-18 and completed in 1921-22.
$1,54,409$ 1918-19 and completed in 1925-26
90. Providing a flood bank along the right side of the Teki drain from below the atraight cut to the Tallarevu look. Work commenced in 1918-19 and completed in 1919-20
8,470
91. Improvements to the upper portion of the Yenamaduru drain. Work commenced in 1920-21 and the outlay to end of March 1929 is Rs. 7,36,828. The work is in progress
92. Construoting an inlet of Sahapuram drain and raising the bank of the Tylyabaga drain. Work commenced in 1924-25 and completed in 1926-27
93. Gravelling the roadway on the Akhanda Godavari right flood bank from Vizeswaram to Polavaram $24 \frac{1}{4}$ miles. Work oommenced in 1909-10 and oompleted in 1912-13
26,190
94. Raising the Vaiata Godavari left flood bank from 14 miles to $45 \frac{1}{\text { e }}$ miles of the Gannavaram canal. Work oommenced in 1909-10 and completed in 1910-11
1,04,381
95. Raising the right bank of the Vainateyam Godavari from $3 \frac{1}{3}$ miles to $12 \frac{\text { g miles. }}{}$ mork commenoed in 1909-10 and completed in 1911-12
$\mathbf{9 , 7 4 , 0 0 0}$
96. Laterite pitohing along Godavari river margin from Judges:
bungalow to Red Rocke at Rajahmandry. Work was
97. Laterite pitohing along Godavari river margin from Judges
bungalow to Red Rocks at Rajahmundry. Work was commenced in 1911-12 and is in progress
40,445
16,000


Offg. Superintending Engineer, Dowlauahmeram Oirols.
18th October 1929.

## APPENDIX No. 6 (ii).

 FROM 1899 To 1928.
A. Irrigation.

| Gerial numbor. | Neme of worls. | Botimate mmoant. | Ioar of |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Btarting. | Completion. |
| 1 | Ertending the rear arohes of Faptern Delta hend sloiees . . . . | Not treoe- | 1899 | 1903 |
| 8 | Widening the Masulipatam asnal cooond remoh .. .. .. .. | -bla. | Do. | Do. |
| 3 | Exeaveting the Urutar and Mallavole main channels | * | Do. | Do. |
| 4 | Congtrnoting a ocmbined hend eluice for the Nambigunta and highleval bothi chennels. | . | Do. | Do. |
| 5 | Construoting a surplas weir at Mallove main canal .. ... .. | - | Do. | Do. |
| 6 | Construeting a surplus weir et 22/0 of the Masolipatem canal | . | Do. | Do. |
| 7 | Constructing an nnder tunnel at 0/5 of the Gudapede ahannel .. | . | Do. | Do. |
| - | Converting the old Kessrapalle look into an escape | . | Do. | Do. |
| $\bigcirc$ | Constracting an ontlet and molet from $8 / 2$ plos 330 to $8 / 3$ and fram 11/1 plus 330 to $11 / 2$ of the Elore cenal. | - | Do. | Do. |
| 10 | Eroevoting the (ogonta channel .. .-. .. .. ... .. | - | Do. | Do. |
| 11. | Alterations to the inlet at 14 m . of the Ryvee oanal and construoting out-horsee and stables at Komatiganta reet-honse. | . - | Da, | Do. |
| 18 | Strengthening the banks of the Mammils oodn .. ... .. .. | ** | Da. | Do. |
| 18 | Constracting a head slaiee to Penjendra main channel and excerating Pedana branch. | . | Do. | Do. |
| 14 | Constructing whart establishment shods at Madinepalle and siding basin on the Polaraza canal below Madinepalli bridga. | ** | Do. | Do. |
| 15 | Constructing a head sluice to Tumma codu right side ohmanel .. | - | Do. | Do. |
| 16 | Extending the wet Tammilera egoape from the Ellore onnal ... - | - . | Do. | Do. |
| 17 | Constructing a bridge across the Dosepadiu channel at Manizcands .. | .. | 1902 | 1908 |
| 18 | Beoonstructing Madinepalli Bridge soross the Masalipatam anal .a | $\cdots$ | 1808 | 1004 |
| 10 | Constructing a girder bridge acroes the Masalipatam anal .. .. | - | 10. 1904 | Do. 1905 |
| 20 | Comstruoting a bridge over Pallern at Pamarra .. .. -* .. | - | 1904 1906 | 1906 |
| 21 | Construoting an Inspeotion bangalow with oat-honees at $63 / 8$ of the Polaras canal. | - | 1904 | $\begin{aligned} & 1906 \text { ह } 1900 \end{aligned}$ |
| 22 | Constracting a look at Komatignnta . . .. .. .. .. | - | $\begin{aligned} & 1946 \\ & 1907 \end{aligned}$ | $\begin{aligned} & 1807 \\ & 1908 \end{aligned}$ |
| 28 | Extending the Drggumilli abamel ... ... .. | * |  |  |
| 24 | Construction of an Inspection bungalow at Malleswaram | . |  |  |
| 25 | Constructing \& etraight ont from the under tannel of the Mallevale channel. | 5,540 |  |  |
| 23 | Constructing an Inspeetion bangalow et Penumatas .. | $\begin{aligned} & 6,540 \\ & 6,000 \end{aligned}$ | $\frac{191}{1914-15}$ | $1916-16$ |
| 27 | Improvements to the Komatigunta canal Polutonds .. .. .. | 6,000 6,650 | $\begin{array}{r} 1914-15 \\ 191 \end{array}$ | $15^{1916-16}$ |
| 28 |  | 6,650 60,080 | $\begin{array}{r} 191 \\ 1920-21 \end{array}$ | $1928$ |
| 29 | Construoting a combined jook and regrlator at $27 / 2$ of Pullers amal. |  | 1920-21 | 1928 |
| 80 | Ezosvating the Pamarru channel diversion .. ${ }^{\text {a }}$ - . | 14,200 | 1921-22 | 1924-26 |
| 81 | Constrneting an arohed bridge tarose the Fillore ganal at Atulur .. | 80,200 | 1926-26 | Contribution ork |
| 32 | Improvenents to the Egnipad aquejoet at 20 m . 15 ohat of the Kywos canal. | 32,000 | 1926-27 | - |

8. D. 8hropp,

Executipe Engineer, Kistna Eastern Division.
 rRoM 1902-1903 to 1923-1929.
A.-Irrigation.

| $\begin{aligned} & \text { Berinal } \\ & \text { name } \end{aligned}$ | Xame of works. | Botimato macent. | Year of |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Starting. | Complotion |
|  |  |  |  |  |
| $\begin{aligned} & 1 \\ & \mathbf{2} \end{aligned}$ | Improvemente to the Bank canal of the Eistna western Defte Constroeting tro drainage pipte and foar brifges on the Varaba- | -. | 1899 | 1900 Do. |
|  | patnan obinnel. <br> Eroavating Kollur right side channal and Ipar and Anentoverua |  |  |  |
| 2 | Esoavating Kollar right side chanpal and Ipur and Anantoveras brancbes and masonry worlis along the amme. | .. | Do. | Do. |
| 4 | Constructing a masonry injet wall at i/2 of the Commamar canal - | -. | Do. | Do. |
| 6 | Constracting a bead sjaice, four pipe elaioes, floree bridges and a tril evonpe in the Bapelle tank emse side ohannel. | -. | Do | Do. |
| 6 | Constructing a head aluico. aiz pipe elaiees, three bridges and a tal escenpe in the Bapatis tank veet Eide obeanel. | -• | Do. | Do. |
| 7 | Construoting Tenali rood eulvert and ander-tannal at $1 ; 5$ and a drop and bridge at $5 / 0$ of the Tangababdre side channel. | $\cdots$ | Do. | Da. |
| - | Constraeting athroagh squedvot over the drainage obenmel in Biapatle tank to ourry Mahapalem branoh. | -• | Do. | Do. |
| 9 10 | Ereavating the Tungabhadre obannol and oonstraeting a beed aicice aqeedaef at $3 \%$, an under-tennel at 0 erand a drop ot $2 / 1$ of the sume. | - | $\begin{aligned} & \text { Do. } \\ & \text { 1903-04 } \end{aligned}$ | $\begin{aligned} & \text { Do. } \\ & \mathrm{D}_{\mathrm{o}} \end{aligned}$ |
| 10 |  | $\because$ |  | Do. |
| 12 | Constrceting a mhard at Vellatar ... .. . . . .. .. | .. |  | $\mathrm{D}_{0}$ |
| 13 | Improvemeats to the anst side of the channel and it bramehes .- | . | $\begin{gathered} 1909-04 t^{*} \\ 190405 \end{gathered}$ | Ba. |
| 14 | Improvements to the enat tide channel and branehes | - |  | 1904-05 |
| 15 | Rronvation of Vellatar chanmal and its branches of Baniz enanal | - |  | Do |
| 15 | Constroeting a look at the 11th mile and constructing a tidal tail loxt at the end of Benk enael. | .. | . | 1903-04 |
| 17 | Rreavation if Tengabledra chanall and its brenches Commanir earial. | - | - | 1905-06 |
| 18 | Constresting an Inspeotion bangalow at Eollimerla lock ... .. | - | 1907-08 | 1907-08 |
| 19 | Construeting Appaparnm drainage eobenae enneoted with improvemente to the centil. | . |  |  |
| 20 | Improving and ridening the bridgen on the Fismapotam eanal tost and west sidg channela. | . | 1907 | 1907-04 |
| 21 |  |  | 1910-11 | 1912-13 |
| 28 | Constroeting a nev houd sloice to east side channed .. ... .. | 10,810 | 1910-11 | 1911-18 |
| 23 | In the Kistan river oat of the 123 miles of niver zuargin only 9 miies require cootly protective vorks, sach at groynes, edging and browalond weeds. Twe remaining portiong of the mangima are protected by a good strip of manal grach. The works oriried out in 1910-11 were al minor ones, of thich the more important were - | $\cdots$ | 120-11 | 1911-16 |
|  | (i) Raving the right (tuod mank of the Kistane river below the anient to I above M.F.I. | 74,000 | 1909-10 | 1911-12 |
|  | (ii) Baining ond otrengthening the left good benk of the Kivena river above aniont from Ibricuspatan to Reswads. | 6,400 | 1910-11 | 1911-12 |
|  | (iii) Divertion of right lood bank along the lise of Yellatar village ring bard | 12,370 | 1909-10 | 1911-12 |
| 24 | Improvements to the Kollar side chanad and errearatiag the Krapu chanpel. | 6,200 | 1911-18 | 1913-16 |
| 25 | Dirertion of the Kiston rifht loed bealk aleng Pedapalivarre ring band. The cotlay during 1917-18 is Ra. 1.645 againgt the estimate. The bank mis miced in fall length and beight eneept so0 feed in leogth Ehere wrom has to be dono with trans trocka | \%,800 | 1912-13 | 1912-14 |
| 28 | Imptovements to Ecllipare channel .. .- .. .. .. | 73,000 | 1914-15 | 1917-18- |
| 97 | Constrocting e seppicmental aqzodoot and under-tannel to carry the V-lintar ehennel over Bhitiprole drain | 7,400 | 1916-16 | 1917-18 |
| 28 | Erearating the Ponnapalli chanoal and Nadimpali dxain | 13,000 | 1916-17 | 1918-10 |
| 23 | Reracdelling the llomependi blook | 23,200 | 1919-80 |  |
| 30 | Kaising and strengthaing the rigit and left food bank of the Kirtna river. The outiay to the and of 1917-18 is the 60,206 ngaint the eatirnated emount. | 79,200 | 19\%-80 | .. |
| $\begin{aligned} & 31 \\ & 32 \end{aligned}$ |  | 16,600 | 1919-20 | 1921-29 |
| 32 | Improvemento to brach ehannela and distribetarive of the Eolipre ehanal. | 18,900 | 1919-0 | 192-20 |
| 38 | Constrating on mrebed bridge over the Commenar eanal it Daggind | 20,150 | 1920-21 | 1935-98 |
| 3 | Constrecting a mour dicie to Bentimenal. Cwentreoting a moer olaice to onst mide channal |  | 1930-29 | $\begin{aligned} & \text { Almont enins } \\ & \text { pletad. } \end{aligned}$ |

P. Vegicataramaina Rand,

APPLNDIX No. 6 (iii).
 Kigtan Cemphal Divinoz.

## A. Irrigation.

## Kistna Delta Byotem.



Divi Pumping Sydem-1905-06.
The project was cammenced daring the year, $\quad$ The amount expended on the project in this and the succeeding yeara consista of excavation of loop channel, constraction of engine honse, aupplying engines, and eto., construction of quarter for establishment, excaration of channels and drains.

In addition to the above, the following are some of the main improvements carried out:-

> 4.-Irrigation.

E. H. Chate,

Anecutive Enginew, Kiofuc Central Dioision.
 Drainage and Protectioe Works.

|  | Neme of worl. | Frimate | Year of |  |
| :---: | :---: | :---: | :---: | :---: |
| 发 |  |  | 8tarting. | Completion. |
|  |  | ns. |  |  |
|  |  |  | 1899 | 1900 |
| , | Constrocting a drop at head of Pedapad esoppo drain $\quad$. | $\because$ | 1199 | 1900 |
| 3 | Examating Pedaped escope drain .. .. .. .. .. | . | 189 | 1900 |
| 6 | Do. Kudnavalli drain .. $\quad .$. | $\because$ | 1898 | 1900 |
| 6 | Do. Mimidar afflaent $\quad \because \quad$.. |  | 1899 | 1400 |
| 7 |  | . | 1903-04. | 1904-05 |
| $\stackrel{8}{8}$ | keoonstruoting a bridge nver the Chondraya drain at Yarimapad. .. | . | ${ }_{1907}^{1904}$ | 1905 1900 |
| 10 | Construetirg a bridge orer the Podatammidi drain .. | $\because$ | 1997 1907 | 1908 1908 |
| 11 | Eroavaing the Utakar drain $\quad . \quad . \quad . \quad .0$ |  | 1915 | 1916 |
| 12 |  | 8,000 | 1916 | 1917 |
| 19 | Do. sobeidiary drains to the Motar left eide drain $\quad \because \quad .$. | 20,700 | 1824 | 1925 |
| B. D. Beromp, <br> Executive Engineer, Kistna Eastern Division. |  |  |  |  |

Drainage Works in Kistna.
Western Delta.

| 景 | Name of mork | Frtimate amonnt. | Year of |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Gtarting. | Completion. |
|  |  | 80. |  |  |
|  | Eracavating the Bapata Fsest and Weat side drains ... .. .. |  | 1899 | 1900 |
| 2 | Porali drain-Exoavating the-below the Railway bridge .. .. | .. | 1899 | 1900 |
| 2 | Rxoavating the straight ent of the Repalli main drain .. .. | $\ldots$ | 1899 | 1900 |
| 5 | Exouvnting the Tungabhadra main drain Exogration of the Pondis drain | . | 1899 | 1900 |
| 5. | Exoavation of the Pandla drain <br> Exespation improvementa to the Repalii drains $\quad \because \quad$. | :. | 1902-03 | 1904-05 |
| 7 | Excovation improvementa to the Repali drain ${ }^{\text {a }}$ (mprovement to the Chendraya drain and reconstruoting bridge over |  | 1908-04 | 1908-04 |
|  | Chendraye drain at Xerikaped .. .. .. .. .. |  | 1904-05 | 1904-05 |
| 8 | Draining the Bapatla east ewrmp $\quad \therefore \quad \because \quad \because$ | 17,207 | 1909-10 | 1918-14: |
| 10 | Drainage of the Bapatla tast swamp. Ontlay is Re. 7,975 | 16,260 |  |  |
| 10 | Exourating a straight out to Bhatiprole drun | 11,360 | -. |  |
| 11 | Improvemants to Bhattiprole drain from 12 miles to 16 miles, 6 forlonge ts foot |  | 1917-18 | -. |
|  | Improvmente to the drainage of Murkondepad blook" $\quad \because \quad$. ${ }^{\text {M }}$ | 34,000 $\mathbf{1 9 , 2 0 0}$ | $\begin{aligned} & 1917-18 \\ & 1917-18 \end{aligned}$ | 1921-22 |
| 18 | Eroarating the Jupudi affuent and improring Gollimudipada drain | 13,200 9,700 |  | 1921-22 |
| 14 |  | $\begin{array}{r} 9,700 \\ \mathbf{s o , 0 0 0} \end{array}$ | 1917-18 | 1920-21 |
| 16 | Raising und strengthening the right and left food benks of Kistns river | 58,400 | 1918-17 | 10 |
| 16 | Forming the new diversion of the Kistne left flood bank trom 97-0 |  | 1916-17 | 1918-19 |
| 17 | to t0-0 and raising and titrengthening the existing banks | 36,000 | 1918-19 | 1919-20 |
| 17 | Divertion of Nallamada drain | 10,18,000 | 1923-24 | Septenber |

P. Venieatarangaka rajo, Executive Engineer, Kisina $W$ eatern $D_{\text {ivisio. }}$.

## APPENDIX No. 9.

Kietra, Wegt and Eagr Godavazis.
Leape saluce expreted in terme of grain.
Taken from lease value enquiry of the eettlement party.

| Eurly period, 1001-1905. |  |  | Letur prieh, 1090-1004. |  |
| :---: | :---: | :---: | :---: | :---: |
| Bate of amment. | Name of village. |  | Xume of village. | Orain ralue pur cesin. |

Delfa Wex.
Gudipecta Talut.


11

| E-dy maing, mat-306. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Bate | Eame of viluge | Comin | Itme ${ }^{\text {f }}$ village | Chain matue |

Delita Wixp-cout.
Guliond Trant-eont


| Parly period, 1001-1906. |  |  | Later period, 1000-1v3t. |  |
| :---: | :---: | :---: | :---: | :---: |
| Dete of amermixent. | Name of villago. | Gruin Values per more. | Taus of village. | Grain vilate per cores. |

Delta Wet-cont.
Bexwade T. luk.


(L.ease values in kind.)

| Rarly period. |  |  | Later period. |  |
| :---: | :---: | :---: | :---: | :---: |
| Rate of nceess ment. | Name of villnge. | Leuse values in lind per nore. | Name of village. | Leage values in kind per aore. |

Kaikalur Taluk.




## APPENDIX No. 16 (i),

## Krata Account of K. Vrbresalimgam Gard of Edoppgallo.

Mr. K. Veeresalingam has been keeping khata acoounts ever since 1916 but he has aupplied
Beview of the method aiopted in heopicg this khata.
us his socounts for the years of 19:4, 1925,
1926, 1927 and 1928 A.D. He has in addition supplied to us whatever information was available concerning the payments he made to his palerns. He has, in these khatas, entered daily acoounta concerning his family, agricultural activities and his personal movements and interests in one continuous acoount. For instance, we oan get information regarding the kind of agricultural work done on any day, the payment made in cash to the daily and permanent labour, the travelling expenses, the presents made to his relatives, the journey made by him or his palerus, the seed purahased, the grain sold, the money borrowed, the dismissal of a paleru, the improvements effected upon a partioular field. There fore it has become necessary to disentangle the various entries in order to be able to disoriminato agricultaral operations from other activities. He has been trying to make some profit by developing a betel leaf garden upon his two aores of dry land and the income from and the expenditure upon this garden has also to be differentiated from those due to paddy cultivation. It has not been quite so easy an affair to do this work and what is produced below can only be a olowo approximation to the actual experience of thia cultivator and we cannot claim absolate mocuraoy in every detail for these facts.

To mention only a few difficulties in the way, the khata acconnta indioate a very much amaller expenditure apon palerna in every year than what actually was apent by him.


He did not enter the cash equivalents for the payments made in kind in his khata accounts and so, if his khatas alone are relied upon, we get an entirely unreal and incomplete picture in this regard.

There is another difficulty in trying to distingaish the expenses upon labour ueeded for the betel leaf garden from those demanded by paddy caltivation. We have had to use our local knowledge, and the usual discretion, subject as it however has been by many hints thrown out by the khata as to the most important work done on the farm in any day or in any week. It is atill doubtful whether some more items of expenditure upon labour conld not have been added to or subtracted from those which are taken into consideration for our present purposes-expenses upon paddy oultivation.

A few items of expenditure, in the case of whioh payments are made mostly in grain, do not unfortunately find any place in these khata accounts and therefore, the expenditure indicated upon the head of improvements of land and manure is bound to be partial and unrepresentative of the actual condition of things.

Lastly this caltivator, being a Brahman and the karnam of the village, is not able to work actually in the fields, although he is found to be very enthasisstis and particalar about his agrioulture. He has kept in this period of 5 years, three to ioar palerus per annum, in addition to one or two temporary palerus, one or two watchers and one or two customary workers. Considering the fact that he has cultivated 10 to 13 acres of land in any year, such a large number of palerus strikes one as being too large and abnormal. But betel leaf garden demauds close and careful attention of at least one paleru throughout the year and some attention of at leat a juvenile palera. We can therefore subtract Kis. 144 from the total expenditure apon palerus, in arriving at the figure for the expenditure upon palerus, for paddy oultivation. This calculation, though fair, cannot be applied in such years such as 1928 in which this ryot had to get on with insufficient hands because of the unexpected withdrawal of a palera. If we keep in mind all these qualifications and difficulties in assessing the proper value to be attached to the following figures, we oan rightly understand the question of coots of cultivation npon paddy.

## Costa or cultivation.

Table No. 1.

|  | Yexp. | Mandre. | Agrionltaral inpiements. | Maintenance of cettic. | Tabour. | Palers, | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 18. 1 P. | \#8. 4 . | 3at A. R. | HR A. P. | 18. 4.5 | 動 4. P。 |
| 1924 | - | 8200 | 16 8 6 | 8580 | 280 | 1780 | 621128 |
| 1926 | - | 24130 | $24 \leqslant 0$ | 4136 | 18013 | 27950 | 67009 |
| 1928 | - | 3600 | $20-9$ | 151 6 3 | 187136 | 33250 | 42726 |
| 1927 | . | 16910 | 2506 | 13211 t | 18510 | 32000 | 9211810 |
| 1928 |  | 162130 | 16130 | 20399 | 21620 | 188127 | 77124 |

## Extrat of hand coltivated hy him.

Table No. 2.


As regards Table 1, the expenditure upon labmor, palern and manare ia for paddy cultivation only, while that npon agrioultural implements and maintenance of cattle is incurred on account of both dry and wet lando. Mr. Veereealingam purchased an acre of dry land in 1928 for Hs. 800 , hence the increase in his holding.

To take manure to etart with, Mr. Veeresalingam has applied mostly castor cake, in addition to the waste atraw and cattle-dung manore from his own stable. He has purchased on occasions come cattle shed sweepings and a small quantity of patimanno.

Most of this manare was applied to the land in the months of August and September, i.e.s Manure. after the seedlings have been in the field for 4 to 6 weeks. The ups and downs shown by this expenditure indicate one or two very interesting things. The first year, i.e., 1924 shows quite an appreciable expenditure per acre but the expenditure in the two following years goes down considerably, probably because the ryot expected his fields to yield well on the strength of the large supply of manure provided in the previons years. But the fact that he has spent equally big sums of money in the two last years sopports the general plea put forth by the ryots (inoluding himself) of his village that good manuring is essential.

## Implements.

The expenditure upon agricaltural implements does not represent all the expenses incurred by this ryot on this head in these years becanse it does not include the depreciation charges of the implements owned and maintained, not to speak of the iuterest upon the capital locked up in them. It only represents his expenditure upon the maintenance and repairs of these implements. The amonnt spent on this head in any year depends upon the importance of the repairs, replacements of oertain parts and accessories effected, hence the variations in the total expenditures indi-- oated in different years.

## Cattle maintenancr.

The expenditure opon cattle maintenance is for all the cattle maintained by Mr. K. Veeresalingam. He had only one she-buffaloe and a cow barring his plough cattle, and he spent very little-Ha. 24-on their maintenance. This iten also includes the cart-hire paid whenerer the services of the cattle were hired, the cost of labour engaged in reaping sun-hemp fodder, the cost of sun-hemp seed, in addition to the cost of additional fodder provided for his one pair of bullocks. In fact his one pair of bullocks was ingufficient to cultivate his holding but finding that it was cheaper to hire the services of cattle now and then rather than maintian another pair, he preferred to pay fairly large sums of money for such services. This expanditure should therefore be taken to represent mors the cost of the services of cattle (own or otherwise) for his holding than that of the maintenavce of a pair of bullocks. The gradual increase in the cost is dae to the increasing cust of sun-hemp seeds, the rising rates for the serrioes of cattle, the higher prices for paddy bran, horse-gram and the increasing quantities of additional food provided to his esttlo, in order to compensate for the hard vork demanded of them on the wet lande and on the garden.

The expenditure upon labour is typical of the changes that have come upon the general economic conditiona of the ryots. Up till now, the ryots of these parts were still hopeful of a brighter fature and the prices of peddy though on the deoline, were not 00 very diecouraging. Therefore ryots had an incentive to effect inprovemente apon their landa on an extensive and bold scale and were even willing to employ more labour than what is necessary to finish a particular piece of work. That Mr. K. Veeresalingam is no exception is abown by his expenditure upon labour, indioated by 'lable 1. In 1924 he apent Rs. 50 upon squaring and levelling his fields, hence the very high figure for that year. The following four years have been very nnfavourable to ryota and Mr. K. Veeresalingam, like others, astisfied himself by spending only as much as is absolutely neoessary to get the ngual agrioultural operations finished, but he has not been able to lower his expenses to any considerable extent and it has in fact been rising again in sympathy with the increasing wages demanded by labour.

When we come to his expenditure upon palerus there is some uncertainty. The year 1928 cannot be taken into consideration as the ryot had somehow to get on with insuffivient hands. It is rather difficult to say what is indicated by the very low expenditure in 1924 as in that year the ryot engaged four palerus for only temporary periods and only two full-time pllerus, one an adult and the other a juvenile. He engaged in addition one female oustomary worker who was kept to watch the fields and guard the crops. The details given by him olearly indic te that the salary paid to a palera has increased in this quiaquennial period from 18 bags to 22 bage per annum and the figures in the above tables bear oat the general information recoived from the villagers.

Expenditure upon paddy cultivation per acre.


Therefore the normal average expenditure comes to Ka. 70-13-11. If we include the following items also it will rise up to $\mathrm{Fs} .71-0-5$ per aore per annum :-


He gets a yield of 13 to 17 bags per aore, averaging about 15 baga worth Rs. 90 . 80 the net inoome per acre he can expect is not very mach. Whan the priaes were higher, Mr. Veeresanlingam could get for the same produce as muoh as Rs. 120 and his net income per acre oould be at least Rs. 35 per acre. As it is, he is able to get a net return of Rs. 14 per acre per annum on the average over a period of five years.

## APPENDIX No. 16 (ii).

## Khata Account of Ravilia Vexacta Ramayy of Jogruvaray.

Mr. R. V. Ramayya is a Kamma ryot of Jughnvaram, situated on the trunk road ranning from Bozwada to Masalipatam via Pamarra. He has had high-sohool ednoation and his brothor ia also an educated youngman. They both are in all the agricultural operations. They are assisted at home in managing their honsehold aftairs by their experienoed and capable mother. They have realized that it ia undeairable for ryota like them to indulge in loxuries and wasteful habits and they have therefore managed not only to economise expenditure upon housing and elothing bat also in aroiding litigation and speculation in business. They are really exceptional ryots among the Kammas of this and the neighbouring villages, in that they are enterprising, akilful, hard-working and bosinesslike and it is no
wonder that they have been able to actually improve their condition, despite the fall in paddy prioes and the inorease in labour costa. Mr. Ramayya should be considered both as am agrioultarist and cattle-breeder

Lands possessed by them.

| Year. |  |  | Lands possessed by them. |  |  |  |  | Wot. | ${ }^{-} \text {Dry. }$Acs. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |
| 1921 | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | - | - |  | 83 |  |
| 1922 | . | . | $\ldots$ | -. | . | . | $\because$ | 34.60 | 3.64 |
| 1923 | . | . | . | ., | . | . | . | $34 \cdot 60$ | 3.64 |
| 1924 | $\cdots$ | $\cdots$ | . | $\cdots$ | . | . | . | $38 \cdot 20$ | $8 \cdot 64$ |
| 1925 | $\cdots$ | $\cdots$ | . | $\cdots$ | . | . | . | $38 \cdot 20$ | $3 \cdot 64$ |
| 1926 | . | - | . | . | . | . | . | 38.20 | $3 \cdot 64$ |
| 1927 | . | - | - | . | . | . |  | 40.00 | $3 \cdot 64$ |
| 1928 | - | $\bullet$ | . | $\cdots$ |  |  |  | 40.00 | $3 \cdot 64$ |
|  |  |  |  |  |  | Tot | -• | 296.80 | $25 \cdot 48$ |

Mr. R. V. Ramayya kept khata accounts since 1921, i.e., ever since he has begun to oultivate his lands himself, with the aid of his brother. His method of keeping this khata is very much more advanoed than that of Mr. K. Veeresalingam of Edupagallu, in that he has tried from the commencement of the khate account, more or less sucoessfully not only to differentiate the family account from the agricultural account but also to differentiate between the expenditarea opon different main items of expenditure in agriculture. Thus, although he got confused at times about the proper places for the entry of oertain items, it has been more easy to examine and verify his kbata. Our anslysis of his khata is, therefore, less dependent upon our disoretionary oalculations than in the oase of the other khata.

Even in this khata, however, separste ledger aoconnts are not maintained for dairy eattleand draught animals nor were the home produce anoh as paddy husk and bran, and own farm produce suah as horsegram valued. Therefore the expenditure indicated by this khata apon the maintenance of his oattle is incomplete and suoh, onreliable.

Costs of curtivation over his holding.

*These flgures do not inolude the orsh equivalents to the grain payments made ly this ryot. It is oustomary in these parta to pay a worker 2 to 8 M.M. of paddy in addition to a oush payment of 5 to 7 annas. Only oash paymenta.
are acoounted for in this khata.

Mr. R. V. Ramayya owned a site out of which large quantities of patimannu ( 2,000 cart-loads worth Rs. 3,000 ) has been dug and supplied to his lands. He also sold out Rs. 35 worth of patimannu. Hence the very small expenditare upon manare, indicated by bis khata.

He bought a cart in 1921 A.D. for Rs. 132 and he had to spend large sums of money on two ocossions in purchasing two pairs of wheels. He has in all three carts, and three ploughs, the depreciation charges for which, are not acounnted for in his khata. Therefore, the expenditure indioated by the oolumn for agrioultural implements in the above table relates only to the repairing and maintenance of such implements.

We are in possession of greater details about the cattle possessed by this ryot.
Cattle possessed by him.


Apart from the natural inoresee or deareace due to the birth of new once or the deeth of did Cattla. oattle, the variations is tha number of cattle maintained by this ryot from year to year are explained in the following table, the partioulars for which are gathered from his own khata.


Net gain on account of cattle . . . . . . . . . 30. 300-12-0
He lost Rs. 250 worth of cattle in 1925, owing to the outbreak of diseases in the uplanda to whioh they were driven. Therefore, he got a total net inoome of Rs. 50-12-0 from his - cattle account.

The above table clearly indicates that he has very cleverly managed to part with the most valuatle of his bulls and ballocks while he was purchasing (exoept on one occasion), quite ordinary bullooks, but he paid very high prices for a high class cow and a heifer.

As can be seen from the results of our enquiry into cattle mortality, there can be no doabt that he has been most fortunate in not losing even one important animal in this period (except one in 1925). One or two of his cattle fell ill every year and he has saved them by timely medical aid (as is evidenced by the frequent entries made in his khata for medicine and other charges). He has lost, nevertheless, 8 cows driven to the forest in 1925, owing to eattle - - 1 idemios.

The following details culled from the additional statement applied by him indicate how carefully and intelligently this ryot has managed his affairs in this regard:-
(1) "Sold out in 1921 an old ball for Rs. 150 and bought an useful and efficient bullook."
(2) "Retained the cow and the ball bought this year and sold out two bolls bred in his stable and an old bullock."
(3) " 1925. Sold out two out of the three balls owned and bought one big ball at a high price."
(4) "1926. As one of the bulls bred in his stable came to be useful for ploughing, one of his bullocks was sold out for Rs. 185."

Another very important and surprising fact that springs out of these details is that whereas even in his own village, most of the ryots who have less than ten acres of land each, feel obliged to own a pair of bollocks. Mr. K. V. Ramayys has tried to manage with only $2 \frac{1}{8}$ pairs of bullocks from 1021 till 1924, by engaging for hire others' cattle and carts whenever his own cattle and carts were not enough to cope with the work in hand and also by co-operating with his brother-in-law in the cultivation of lands. Mach of the expenditare indicated in the column for cattle in table 1 is in fact due to the payments made by him for cart hire. He has maintained only four pairs of bullocks for this very large holding of 55 acres (five of his, and three belonging to his brother-in-law). It has certainly paid him to do so, as otherwise he would have had to sink at least Ks. 400 capital upon the purchase of another pair of bullocks and spend Ks .70 per annum upon their maintenance. By 1925, he was able to get another bullock from his own stock and thos he came to have three pairs since then, besides those of his brother-in-law.. He spends at the most Rs. 70 apon his cattle other than bollocks but considering the fact that he gets their
manure for hia fields it in not anreamonable to include this expenditure also in the cost of cultivation. The expenditure npon eattle manatenanee and depreaiation is teo low becanes of the exceptional circamstances of this ryot and as such, cannot be said to be typical.


During 1928, one big paleru has given ap his service as he fell ill and so the expenditure Palera. upon this item has come down considerably. These figures indicate that the salary demanded by cattle boys is on the increase and that - ryot has the option of paying his palern either in kind or food and ossh.

The expenditure on palerus would ordinarly be larger than in this case, since four members of his family (Kamayya, his brother, his brother-in-law, and his nephew) work in the fields regularly.

The importanoe of maintenance of bodi ohannels is brought out rather clearly by these khata average on the repairs of the channels, bodi channels and the bonndaries of the field is indicated by his khata; bat even this expenditure is liable to variation because the Government cenals are repaired by ryots only when the local Pablic Works Department officers fail to carry out necessary repairs. Field boundaries cost more in one year to be repaired than in another depending on the damages caused by floods, broaohes, etc.

The cost of transplantation has shown a distinct tendency to rise within this period. His khata certainly lenda support to the popular statement that the wages demanded by workers are

Tranalantation, etc. not the same every year and the oost of any particular process of work is not the same either within two or three years or within the eame year but different for ryots of different holdings. The cost of weeding aloo has been subject to very great variations beaanse of the greater or less amount of weeding necessary in different years and also the ohanges in the wages paid and the number of workers employed per acre. Reaping shows similar variations. It has become, as a general rule, more costly in 1929 than in 1920; bat there was a sudden jump in 1926 and the rise in the cost of reaping has more than maintained itself in 1927 .

The amounts for 1920 and 1928 are inoomplete while those for the other seven years, 1921 to 1927, are fairly complete, but for the faot that there was no entry for seeds in 1922 and 1925 and for weeding in 1927.

The variations in equaring, ote., is dne to the greator or less interest taken by the ryot in temporary improvements neoessary to his fields. Althoogh ryots like him usually preserve seed out of the previous year's produce, thes are sometimes obliged to parchase either seed of different variety of paddy from what they have preserved if on aceount of the rain they decide to put in a short crop variety or they purchase seedlings if their own seedlings are not ready. Moreover the price of seed as well as seedlings is subject to very great changes. Hence the variations indicated in his khata. The figures for 1922 to 1925 amply bear out the general remarks made in the seotion under transplantation, i.e., apart from the rate of wages, the number of workers needed per acre varies from year to year, depending upon the nature of the season and the total supply of local and immigrant labour in comparison with the total demand made for latour on any cay by any partioular ryot and also by all the ryots in a village on the same day. The expenditure apon heaping, harvesting and oarting paddy and straw home is also increasing though not as fast as the cost of reaping. The real oost of heaping is not indicated by the figures given in the khata ainoe the mamuls given to servants, to all the caszal lebourers, to
all the customary workers and to all the pelerus in the form of peddy and paddy stram are not acoounted for. Moreover, the cost of carting aleo bas varied from year to year depeudine upon the nature of the seasona.

Costs of cultioction of paddy per acre.


Nork.-In the above table, manure costa have not been inoluded as thie ryot has his own atock of patimanna. He has applied abont 2,000 carta, worth about $\mathrm{Hs} .2,000$ to his lands, whioh worken oat at Bs .10 per nore.

To the above calcolation of cost of oultivation per aore ahould be added the following :-


Depreciations of carts Re. $\frac{332}{\text { Ten years } \times 40 \text { acres. }}$
$=$ Re. 0-13-3 per acre per annum.
All other implements-A bout Re. 0-2-9.
Total Re. 1 per acre per annum.
Manure per acre per annum Rs. 10.
Total cost of cultivation Rs. 11.
Therefore the average expense per acre apon paddy oultivation comes to Re. 58-2-2 per annom. The cost woald have been more bat for the fact that in this case four members of the family do actual field work.

## Income.

Mr. V. Ramayya has been able to increase the number of souroes of income to a surprising extent. He has realized in one year Rs. 40 by selling away an old bullock cart and paid Rs. 132 rather a high price for a very good cart. He sold in 1924 and 1925 the babul trees got from his dry land and realized Ks. 61. He had his own stock of patimannu and sold Re. 35 worth of it. He got on the whole net income from cattle and he managed to derive a total gross income of Rs. 442-15-7 over these seven years from his dry land or Rs. 18-1-4 par acre per annam. When he had some surplus of horsegram, and sanhemp seed, he disposed of them, and got ready cash. On the other hand, when he found horsegram selling at a very obeap rate in 1922, and again in 1926, he purchased large quantities of it, to suffice for those and the following jears. Thus he has been always on the alert to take advantage of every favourable change in the market and he has succeeded not only in realizing the best prices for his produce but also in avoiding losses by disposing of his grain, cattle or implements just at about the right time.

Total expenditure upon paddy cultivation in these eight years comes to Ra. 17,255-5-2. The total income in these years comes to $\mathrm{K}_{\mathrm{s}}$ 31,879-13-4 or $\mathrm{R}_{\mathrm{s}}$. 107-6-7 per aore respectively. The net aggregate income comes to Rs. 14,624-8-2 or Rs. 49-4-7 per acre. But he had to pay Rs. 2,419-2-4 towards land revenue and so he was left with Re. 12,205-5-10. The paddy that he kept for his family consamption, i.e., about four candies per annum may be said to be the equivalent of the value of the services rendered by his brother-in-law and his nephew. Supposing this ryot had not been able to realize any income from cattle and had been obliged, like most of the other ryots, to purchase all the bullocks needed, he would have had to incur an expenditure of Rs. 16,000 over eight years or Ras. ©-2-0 per acre, leaving a net income of Rs. 35-12-9 per annum. The maintenance charges of his family consioting of himself, his brother, his mother, his wife and sister-in-law and two children, come to not less than Hs. 1,200 per head. He has purchased seven acres of wet land and 3.64 acres of dry land for Rs. $1,27,000$, most of which was borrowed at 12 percent interest. Therefore the total expenditure for eight years npon family and interest upon debts comes to His. 11,896 (Rs. 9,600 for family maintenance, Rs. 2,286 for interest) in these eight years ur Rs. 40 per aore.

This leaves a deficit of Rs. 4-3-3 per acre or Re. 1,192-1:-3 for the holding over these eight years. Mr. Ramayya and his brother received in the form of dowries from their wives Rs. 10,000. He has at present a debt of Rs. 7,100. This leads us to the conolusion that agriculture certainly enables such a big holder, who is enterprising, intelligent and capable, not only to maintain himself on fairly high standard of living but also to save a little every year.

The following information conoerving the prices of paddy obtained by him are gathered Priose of paddy seoured by him. from these acconnts. According to his account, Rs. 6-12-0 per bag to Rs. 8-13-4 and Rs. 9-14-1) and they have remained high even in 1921. The next year, i e., 1922 , marked a fall but $192: 3$ has shown that though the price of paddy has begun to fall, the possibility for paddy prices to rise has not disappeared and the same is indicated by the evente of 1924 and 1925. But the prices secured by him in 1927 und 1928 clearly show that the prices have definitely come down, without any hope of rising in a stendy manner.

The most important feature of this account is that there are so few sales effected before the months of June in any of these eleven years. Only very small amounts of grain were gold before June and for seven yeare, paddy was sold only on three ocoasions in a year. In fact Mr. R. V. Ramayya actually borrows small sums of money daring the first four montha in any calendar year, in order to be able to pay the kist, workers and to meet other expenses, withont having to sell away his paddy. September and November seem to be the most important selling months for this ryot and he tries to avoid as far as possible both June and August. He admits that there are only two or three more ryots in his village who are aible to store their paddy like him.

He sells his paddy both by measure and weight and also in his village as well as in sroh distant markets ns Masulipatam and Bezwada. He says that the merchants of Masulipatam alwaye manage to deceive ryots in measuring paddy and yet it is found more profitable for a ryot to market his atragadda paddy in Masulipatam than in Bezwada. Mr. R. V. Ramayya tries to sell most of his kusuma paddy in Bezwada, where paddy is purchased only by weight. Only emall quantities of paddy are sold in his own village to merchants who go there for paddy.

Both in Bezwada and Masulipatam, he had to meet several expenses such as charity contribution, toll-gates, carting, oommission to the dealers. But ouly his net receipts are taken into account for the purpose of our calculations.

What is meant by Government when they talk about paddy of first and second sorts is not known to us. But if it is meant that ohina kusuma paddy is of second sort and atragadda paddy is of first sort, it will mean that very few ryots are able to raise the paddy of first sort and even then only in very amall quantities. For instance, in the whole of Jughavaram Mr. R. V. Ramayya has the largeat extent of land under atrayadda paddy and yet he was able to derive comparatively very little benefit, as ia evident from the following figures, since only small quantities of it can be raised.

Mr. R. V. Ramayja's khata aocount shows that he sold most of his paddy on two or three important occasions in every year. In the period of 1921 to 1028, he effected the biggest sales when the prices were rather higher than at other times.

| Month. |  |  |  |  | $\begin{gathered} \text { Number } \\ \text { exoee } \end{gathered}$ | yeare with big salea ing his. 500 on eaoh ooession. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jannary | - | - * | - - | -• |  | 2 |
| April | * | - | * | - | - | 1 |
| May | * | - | ** | * | $\cdots$ | 1 |
| July | -* | - | * | - | * | 2 |
| Aagust . . | ... | - | - | . . | -• | 1 |
| Sept ${ }^{\text {amber }}$ | . - | - - | - | - |  | 4 |
| October . . | $\cdots$ | - | - - | - |  | 1 |
| November | - | - - | -• |  |  | 4 |
| December | . | - | - | - |  | 4 |

He was fortunate enough to catch the highest price on every occasion. But it was not possible for him, nor is it possible for any one to sell almost all his paddy only when the price is highest in the year.

An for the variationa in prices, only a few ryots like Mr. R. V. Ramayya can store up their paddy till the new crop comes and thus take advantage of the higher prices. But even he was not able to store much of such old paddy and the ordinary ryots are usually much less capable of storing thus their paddy.

The fluctuations in the market for paddy are beooming a serious factor in the income of the ryota aince they have to depend for their economio well-being upon the oultivation of paddy orop alone. For instance in one month alone (November 1929) there were two prices paid for - bog of paddy, renging from Ra. 8-13-4 up to Re. 9-14-0. The market prioes for paddy have come to be influenoed more and more by the imports from Burma and other placea and the internal movements of poddy and rice vary with different places within our country. For instance, this year 1929, owing the thoods in Burma the shipments of rice to Madras wers delayed by a few weeks and the local prices went up from Re. 6 to Re. 6-12-0 and Re. 7-4-1) fer bag and the Burma rioe began to pour in again. By the time the price rose to Ris. 6-12-0 most of the paddy in the villages pasaed out of the hands of the ryote and the highest prices thit ruled in the market were taken advantage of only by a few rioh ryota and merchanta.

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Table ahowing the sums of money received by Mr. R. V. Ramayys for the grain oold in the respective monthe in the year of 1921 to 1928.


Prices of Kusuma paddy Jrom 1918-1928.


Prices of Atragadda paddy.


APPENDIX No. 16 (iii).

## Khata accounts of Y. Ramayya, Bhimadole.

Mr. Y. Ramayya of(Bhimadole in Ellore talut has been keeping accounts for the last eight Method adopted in his khata. years. He fornished us with full details concerning the khatas for the years of 1926, 1927 and 1928. When asked why he kept these accounts, he said that he wished to see how much it cost him to finish the cultivation operations apon his land and to economise, if possible, in the use of permanent as well as temporary labour, in view of the fact that wages are rising higher and higher. He wanted to show the necessary details about the work turned out on every day in every part of his holding. As far as his expenditure upon labour is concerned, his thata afforda us as complete information as can be got under the present circumstances. We have abstraoted but aifew details for the purpose of this enquiry.

## 25

In explanation of the statistics given below, it may be stated at the outset that this ryot has tried to consider the value of work contributed by his palerus on any day in terms of money. He has considered this contribution as a source of income, while what he was paying out in the form of salaries waf considered expenditure. For our purposes, we have preferred to oonsider the value of the contribation made by palerns as so much additional expenditure upon labour.

Total expendilure espon casual labour.

|  | Years. |  |  | Removing the seedlings. | Transplantation. | Weeding. | Resping. | Heaping. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 1928-27 \\ & 1927-28 \\ & 1928-29 \end{aligned}$ |  | $\cdots$ | $\because$ | $\begin{array}{ccc}\text { R8. } & \text { A } & \text { P. } \\ 81 & 9 & 6 \\ 60 & 7 & 0 \\ 86 & 9 & 0 \\ 86 & \end{array}$ | $\begin{array}{rrr}\text { 88. } & \text { A. } & \text { P. } \\ 69 & 5 & 0 \\ 111 & 10 & 0 \\ 81 & 14 & 0\end{array}$ | $\begin{array}{lcr}\text { nis. } & \text { A. } & \text { P. } \\ 164 & 2 & 0 \\ 197 \\ 184 & 12 & 0 \\ 134 & 14 & 0\end{array}$ | $\begin{array}{rrr}\text { R8. } & \text { A. } & \text { P. } \\ 117 & 7 & 0 \\ 178 & 9 & 0 \\ 128 & 12 & 0\end{array}$ |  |

The total in these three periods-

| 1926-27 |  |  |  |  |  | 428 | 6 | 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 182\%-28 |  | .. | . | . | - | 562 | 8 | 1 |
| 1928-29 | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ |  | 453 | 1 | 6 |

He makes his payment for heaping only in kind, i.e., bundles of out paddy, seven of them yielding one bag of paddy. He actually considers as his proper produce what is left after paying thus the workers engaged for heaping and it is therefore thought better to omit it out of acoount.

The expenditure per acre upon temporary labour.

|  | Year. | Removing seedlings. | Trenaplantation. | Weoding. | Reaping. | Heaping harvest. | Total par sare. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 1336 \\ & 1397 \\ & .1898 \end{aligned}$ |  | mas. A. P. | mg. A. ${ }^{\text {P. }}$ | Es. A. P. | n. ${ }^{\text {a }}$. P. | na. A. P. | 18. 4. Pi |
|  |  | $\begin{array}{lll}1 & 2 & 3 \\ 1 & 8 & \end{array}$ | $\begin{array}{lll}2 & 8 \\ 2 & 3\end{array}$ | $5{ }^{5} 97$ | $44 *$ | $2{ }_{2} 1$ | 16911 |
|  | .. .. | 100 | 2157 | 8109 | 4100 | 226 | 1507 |
|  | ., .. | 180 | 2118 | $\leqslant 106$ | 448 | 265 | 1548 |
|  | Total | 2150 | 836 | 131410 | 1380 | 6105 | 4514 |
|  | Average | 150 | 21110 | 4108 | 464 | 236 | $15 \leqslant 11$ |

$A_{s}$ for his paleras, he has employed a fairly large number of them in these three years, and more in 1838 fasli than in 1336. The following table indioates the importanoe of the expenditure inourred on this head :--

Expenditure upon permanent labour.



Therefore over these three yeara, the expenditare apon labour alone formed 59.44 por cent of the total income from peddy caltivation. The cost of remoral of aedlinge has rien to an oxtraordinary extent in 1927-28 as the ryot had to oonvoy the woedlings over longer dintancoe and as the rates of wages demanded were higher then usual. Tranaplantation is beooming a costlier process of work yenr after year but weeling seems to be subjeot to ite own ohangee uninfluenced to any great extent by any ohanges in the general level of wages. Heaping meeme to be the , ' 5 process of work over which the ryot had to upend a nniform amount of money. Heaping, though paid for in kind, is less costly in one year than in anotherowing to the exigencies of the labour market.

This ryot manages to keep a large number of customary worters in reserve by offering them priority of employment whenever there is work on his holding and by giving them eertain customary mamula at the time of the harvest. By carefully watching the amount of labour engaged for any field to perform a particular prooess of work and the output of work got out of such labour and by so adjusting his demand for labour, in the light of hio experience in other fields for similar work as not to engage mach more than what can usefully he employed, he has tried with mach success in the last six years, to minimise the waste of labour, engaged at an increasing rate of wages. That, in spite of all this scientific care taken by this ryot, be had to spend on the average Rs. 15-5-0 per aore per annam upon casoal labour alone for the performance of the most important processes of work, is strong enough proof for the statement made in the oral evidence given by ryots in most of the villages, that the cost of labour needed per acre is a little more or less than Rs. 20 per annam. If the expenditure apon squaring and levelling the land, repairing the bodi channels and field bunds and cleaning and watering the seed beds are taken into account, the labour badget of even this ryot will come up to Kis. 17-5-0 per acre per annum. It must also be observed that it oosts per acre mach less for this ryot to engage labour than for the usual smsll holders having too numerous fields in different places of the village ayacut.

The experience of this ryot as regards paleras is most instructive. He has bren able to His experience of paleras. realise $1 / 7$ to $1 / 10$ of the total expenditure inourred apon palerus though the work contributed by them, when the full days of intensive fieldwork was alone taten into acoount. During the rest of the year, these workers were fonnd to be doing come useful work or other which was considered to be valuable and serviceable for the farm, as otherwise, this oareful ryot woull not have engaged them. That he should have thought it wise to inarease the number of pilerus in 1338 fasli shows that, despite this unfavourable fact indicated by his khats, this ryot mast have found the services of his palerns indispensable not only on the days of intensive work but also in the slack seasons. It is therefore evident that it clearly pays a ryot under certain eiroumstances to keep a certain strength of permanent labour upon his farm. This account also demonstrates the fact that a permanent paleru is found to be absolutely necessary evea by the most effioient and cereful ryots, although in a few places like Tadikalapadi, some ryots may try to get on without them. This account further proves that actual saving in the way of daily labour that can be made by a ryot and a helper (eithor his wife or relative) by actually working in the fields side by side with the casual labour, can be only very lithe, being at the moat Rs. 20 per person.

## APPENDIX No. 16 (iv).

## 

Mr. M. Sundara Ramayya has 5.50 acrea of wet land in two fields of 13.50 and 2 acres in the village of Aswaraopalam of Divi island. He has kept a khata account for the expenses incurred by him upon laboor. He nsually makes payment in kind but he has entered the cash equivalents of sach payments in his shata account.!

The following table gives us an idea of the namber of workers needed to finish the different processes of work:-

Field of 3.50 acres.

| Number. | Kind of work. |  |  |  |  |  | Men. | Women. | Total. | Avorage per acra. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Seedlings .. | $\cdots$ |  |  |  |  | 11 |  | 11 | 2 |
| 2 | Treneplantation |  |  |  |  |  | $\ldots$ | 21 | 24 | 7 |
| 3 | Heaping .. |  | -. | .. | . | . | 16 | 10 | 26 | 8 |
| 4 | Beaping .. | - | .. | - | . | .. | 23 | 9 | 82 | 9 |

The field of 2 acres.


These tables exemplify the fact that the number of workers needed varies between different processen of work and also between different fields. More workers per acre had to be engage $i$ to onltivate a field of two acrea of land than in the cultivation of a bigger field of 3.50 acres and thisis due partly to the fact that the number of workers needed per acre to finish any process of work. tends to diminish op to a limit as the sizo of the field increases.

The cost of lahour employed for this holding.

|  | $\cdots-$ |  |  |  | Toual. |  |  | Cost por core. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 8. | $\square^{\circ}$ |  | R8. | 4. |  |
| Uprooting the seedlings |  |  | . | . | 13 | 8 | 0 | 2 | 7 | 3 |
| Transplantation | . |  | $\cdots$ | . | 181 | 2 | 0 | 3 | 6 | 6 |
| Weading .. | $\cdots$ |  | $\cdots$ | . | 231 | 4 | 0 | 4 | 5 |  |
| Reaping | . |  | . | . . | 30 | 2 | 0 | 5 | 7 | 8 |
| Heaping .. .. | . |  | . | . | 23 | 2 | 0 | 4 | 5 | 1 |
| Harvesting .. | - |  | . | . | 22 | 3 | 0 | 4 | 0 | 0 |
|  |  |  | Total | - | 132 | 3 | 0 |  | 15 | 10 |

The total produce from this holding was only 56 bags or Rs. 364 at Rs. 6-8-0 per bag and the labour costs alone absorbed 36.2 per cent of it.

This khata acconnt affords the strongest evidence of the veracity of the oral statements madeby villagers in many villages, as to the labour oosts on their farms. It also proves that the smaller the holding and the more numerons are the fiells in the holding, tha greater is the namber of workers needed and the higher the total cost of labour employed per acre.

## APPENDIX No 16 (v).

## Khata account Mr. Vbgrsina Vrnigatrazu of Lakicalakodrbu.

Mr. V. Venkatrasu has kept khata acconnts since 1911 A.D. He had a holding of 11.20 acres in 1911 , including the Lankapolam of 2.78 acres which he bought early that year and which was eventually sold in 1919. Hs himself oultivated this land fully or partially yantil 1921, in which year be leased it ont, as he fell ill and as he found ont that his own caltivation was not as profitable as leasing it out to others. He is a very hardworking and thrifty ryot, and has tried to minimise his needs for palerus, by himself working in his. fields.

His khata is kept in a very curious manner. All inoomes got and expenses paid for in cash. are entered in it, while no other partioulars are provided. The palerus who were paid mostly in

How his thata is rept kind are not accounted for, exoept for the very small payments made in cash for the parchase of cloths ; and the mamuls given in kind to workers and others are not entered at all in his khata. He has attempted to keep the cattle account separated from the general account, but the acoount needed for the years under conwideration is not sent to us. It is, nevertheless, clear that be has not sucoeeded in separating the cattle acoounta from the main khata acconnts, beoanse many items ooncerning the maintenance of cattle are entered in the latter also. Many other payments made in cash were entered in the misoellaneons accounts khata which is not available
for ns.

Delva accounts are mixed up with those for the Sarava crop. For some yeara, he seems to have caltivated only one field (2.78 acres) while in another year he went into partnership with another ryot in cultivating his lands.

The capital expenditare incurred upon the purchase of agricultural implements and aatrle and initial improvements effected by him upon his lands is not acounted for by his khata.

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He has not attempted to keep his agriealtural scoounts exparated from his family socount -bat all the peyments mode in grain to dbobie, barber, potter, madiga and othert are not ontered, while the paddy kept by him for his family consumptiou also does not find a place in the thate Therefore, the total expenditore indioated by the khata represents only a part of the aotual expenses incurred by him in tinanoing his agrionltare and in msintaining hin family, while the income indicated is also a part of the total income got by him, as the various grain paymente are left out of account. The results indieated by his khata can only be taken as those that reanlt after all other items of expenditure and income are partially or fally accounted for and as indicating how much of profita he eventually got in any one year, after paring the kiat, meeting the agricultural and family expenses but exoluding the expenses acoounted for in the misocllancona socounts khata. If we look at the following statistice, bearing in mind all these defeota inherent in this th ita account, we may be able to asvess them at their proper value.

Lands cultivated by him.


Mr. Venkatrazu always engaged two palerna, one a big one and another a boy, and paid both of them not more than 20 bags of 166 lb . each per annum. He himself worked more efficiently than an ordinary palera; and therefore two adult permanent workers and one juvenile permanent worker were needed in his case to cultivate a holding of 11.20 acres of wet land or $4 \frac{1}{3}$ sores per one permanent worker.

He maintained throughout this period two pairs of bullooks and he hired for temporary Catilo. periods a pair of he-buffaloes and kept in addition two or three cows and she-buffaloes. If we consider that on the whole he had $2 \frac{1}{2}$ pairs of draught animals throughout this period, we get 4 $\frac{1}{2}$ acres of land per pair.

What his total actual expenditare opon the maintenance of these oattle was, could only be guessed since his khata accounts show only an expenditure of Ba. 57-3-3 and since the iteme entered into his miscellaneous accounts khata could not be obtained.

But his capital expenditure upon and the income from the alle of onpital are entered in detail in the khsta and the following facts are abstracted therefrom :-

Purchases.
Date.
Partionlare about animal.
Prion paid.

17th July 1911
19th October 1912
Jannary 1914
April 1915
November 1916
Do.

Date.
Partionlase about aniral.
R8. 4. P.
Buffalo .. .. .. .. $4312 \quad 0$
$\mathrm{Cow}_{\text {Ow }}$.. $\quad . . \quad . . \quad . . \quad . . \quad 150$
Buffaloes .. ... .. .. $82 \quad 9 \quad 0$
Do. .. .. .. .. $19 \quad 0 \quad 0$
$\begin{array}{lllllll}\text { Do. } & \cdots & \cdots & \cdots & \cdots & 35 & 0 \\ 0\end{array}$
$\begin{array}{rrrrrrrr}\text { Bullock } & \cdots & \cdots & \cdots & \cdots & 43 & 0 & 0 \\ & & \text { Total } & \cdots & 238 & 5 & 0\end{array}$
Sales.

1913 AD


There was thus a net expenditure of Rs. 102-9-0 upon the capital acconnt of cattle in these seven yenrs or Re. 14-10-5 per annum. As he had by fune 1917 as in 1911 only two pairs of bullucks and one cow and a she-buffalo, he has had to incur this additional expenditure in the oonrse of these seven years in trying to parchase strong and useful bnffaloes and to sell useless and wornout buffaloes and a bullock. Therefore we shall have to add this to the usual item of depreciation of cattlo in order to get a truer idea of the weight of depreciation of eattle upon ryots.

Expenses upon labour for the whole holding.
Total.


Thus there was an expenditure of R8. 8-15-9 per acre upon these four processes of work for which also casual labour is engaged.

If we allow at least 20 oents of land for seed-bed and field bunds over this holding of 11.20 acrey, we shall be left with 11 aores of land. There was thas an expenditure of Rs. 7-5-8 in 1911, Rs. $8-10-4$ in 1912, Ra. 8-1-9 in 1914 and Rs. $7-13-0$ in 1915. These figures oannot be taken as entirely reliable beoanse many payments made in kind were not entered into khata at all. If at all these figures indicate anything, it is that the expenditura apon labour cannot be less than what is indicated by this khata, even in cases in which the owner and his dependent actaslly work hard in the fields, for this ryot is one of the most hardworking, economical and effigient ryots of his village. Moreover, his real expenditure upon the labour needed to perform all the prosesses of work that need to be performed on his farm is inoluded, to some extent, in his - expenditure apon palerus or permanent workers.

Total expenditure upon permanent and casual labour.


[^9]The expenditure upon a part of the onaual labjar and paleras per aore par a nun n comes to Ra. 17-5-6. Sinoe the ryotis khata is very imperfeot and rince many items of exponditare uponlabour are omitted in this eotimate, his aotual expenditure muat be more.

Coming now to bie profita from agricultare, after the family and agrioultaral oxpeases (excluding of conrse the items entered in his miscellaneous aosounts khata) aro met, wo have information for ten years, although detaile for coltivation scononts are available for only six yeara.

Profit and Lors Statement.

|  |  | Yoar. |  |  | . |  | Moner ineome. | Moet of tho money expor diture | Barplam or dakait. | Dethit. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | 2. 2.8 | 24. 4. P. | m 4 P. |  |
| 1911-12 | . | - | $\cdots$ | $\cdots$ | - | $\cdots$ | 368 9 6 | 26268 | 1064 | .. |
| 1912-13 | . | -. | - | .. | . | .. | 462120 | 2878 | 1951 | . |
| 1912-14 | * | - | - | $\cdots$ | $\because$ | $\cdots$ | 368 \% ${ }^{18}$ | $\begin{array}{lll}168 \\ 235 & 6 & 6 \\ & 11\end{array}$ | 20318 |  |
| 1914-15 | .. | . | - | $\cdots$ | $\cdots$ | $\cdots$ | $\begin{array}{lll}318 \\ 685 & 18 & 0\end{array}$ | $\begin{array}{llll}235 & 11 \\ 250 & 11\end{array}$ | $327{ }^{\circ} \mathrm{B}$ | 16 \% 11 |
| 1916-16 | $\cdots$ | $\cdots$ | $\because$ | $\cdots$ | $\cdots$ | $\cdots$ | ${ }^{285} 1810$ | $25011{ }^{11} 9$ | $\begin{array}{rrrr}227 & 1 & 6 \\ 80 & 12 & \end{array}$ | ** |
| $1916-17$ $1917-18$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\ldots$ | $\cdots$ | 202 416 | $\begin{array}{lll}711 & 6 & 9 \\ 180 & 6 & 0\end{array}$ | 2812 <br> 284 <br> 15 | $\cdots$ |
| $1917-18$ $1918-19$ | .. | $\cdots$ | $\cdots$ | -. | $\cdots$ | $\cdots$ | 41688 | $\begin{array}{lll}130 \\ 306 & 6 & 0 \\ & 777 & \end{array}$ | $\begin{array}{lll}28415 \\ 162 & 10\end{array}$ | $\cdots$ |
| 1919-20 | $\cdots$ | . | - | .. | . | $\ldots$ | 673143 | 6778 | 968 | . |
| 1920-21 | - | .. | .. | . | . | . | 6688 | 6266 | 13723 | . |
|  |  |  |  |  | Total | . | 4,60710 | 2,188 16 6 | 1,484 11 | 16711 |

Net income Ra, 1,458-2-0 for ten years.
Net income for one year Rs, 146-13-0.
During the yeara 1917 to 1921, Mr. Venkatrasa has got rather very high money inoomes. Both his income and expenditure show an abnormal inorease aince 1918-19. His expenditure rose to such an extent that it swallowed the major portion of his money inoome, leaving him in every one of these three years, much leas surplus per annum thau what he got in the previous period. This extraondioary thing can be explained by only one factor, i.e., the aboormal rise iu the general level of prices and the consequent rise in the cost of standard of living and in the costs of cultivation.

Yet another important and interesting fact emerges from these figar 3s. In 1917-18, when he was otill cultivating his lands, he got a total money incoms of Rs. 415-5-3 only, while in the succeeding years, it had steadily increased until it was nearly 50 per cent higher. This was becanse the price of paddy rose from Re. 4-8-0 in 1917 up to about Rs, 8-8-0 on the averago. One would have expected that his money income also should have risen to 90 per oent, i.e., the rise marked by grain prices, in direct sympathy with the rise in grain prices but otber inflaences such as lower yield and failore to take fall advantage of bigher prices have lowered the rise in the money incomes got.

All that this ryot was able to save, after paying a total kist of Re. 55 per annom was Re. 13 per acre after having raised two crops almost in every year and after having caltivated his landa most carefully. But even this saving is only nomiual since the expenditare entered in his miscellaneous acconnts khata has not been deducted. Indred he found that his mosey income from his lands was barely sufficient only to maintain himself and his family of (fuar for sometime) three and he had to borrow Rs. 1,760 in order to neet emergent expenses.


He soll away 2.75 acres of wet land for Rs. 1,500 in 1919 to liqaidate a prtion of his debts and be has at present a debt of Rs. 1,100 taken from the local co-operative oredit asoiety.

It is therefore clear that a ryot like him who can be taken to be an ideally effirient and hardworking one is not able to save enough from his agricultural ineome from a holding of $1!$ acres.

## APPENDIX No. 16 (vi).

## Keata Account of Mre Korukonda Somayya of Tadikylapudi.

Mr. K. Somayya has kept khata accounts since 1925-26 and he has tried to differentiate the expenditure upon agriculture from that upon his family maintenanoe; but he has not been able to carry this analysis further in order to give ua a clear idea of expenditure upon wet cultivation ae against that apon dry cultivation' nor has he entered in his khata details regarding the extent of wet land transplanted and reaped, and.the extents of dry land, which are to be devoted for the raising of different dry crops. He has moreover failed to enter all the details concerning all his dealings in cultivation. For instance, he mentions in his accounts for 1925 and 1927 that he spent Rs. 2-8-0 and Rs. 8-12-0, respectively, upon the incidental expenses apon oarting straw from some distant place, to his place but he does not say from whom he got that atraw and how he got it. His khata aocount indicates rather too low an expenditure upon manures, the maintenance of cattle and palerus while there was no entry for agricultural implements. Mr. K. Somayyahas 10 aores of wet land and 41 acres of dry land and he oultivated this land all by himself in these four years. He bad a pair of bullocks and a cart but he did not employ even one permanent paleru, and managed to get on by employing on the whole foar temporary paleruswhenever he needed their assistanoe.

The great variations indicated by the sbove table in the expenditures apon every item between different jears are due, to a very great extent, to the fact that not the same orops were raised in any two years nor was the same orop raised on the same extent in different years. Morcover some crops were not barvested at all in some years and even if harvested, the labour expenses were too low as the orop was a failure and the income therefrom correspondingly diminished.

Seeds.-He parchased small quantities of different seel, whenever his own sapplies, preserved from the previons year's yields were either insuffioient or uasaitable and the followingstatistios, entered in his khata acoounts show that a ryot has to parahase seed.

| Partionlars. | 1925. | 1926. | 1927. | 1988. |
| :---: | :---: | :---: | :---: | :---: |
| Paddy .. | 18. $4 . \mathrm{P}$. | 78. ${ }_{8}$ A. P. | R8. A. <br> 15 P | H月. 4.80 |
| Cholam .. | 280 | 100 | 12146 |  |
| Horsegram | 700 |  | 9120 | 300 |
| Castor .. | 496 | 280 | $\therefore$ |  |
| Gingel'y | .. | - | 280 | 180 |
| Greengram |  | 080 | 200 |  |
| Blackgram |  | 100 | 140 | 700 |
| Total | 1416 | 1300 | 4896 | 2580 |

- Sale of paddy soedlings fetohed bin Rs. 4-8-0.

Greengram and blackgram were not raised in 1925 and so, Mr. Somayya had to purohaseseed in 1926. He had to purohase horsegram seed in 1927 as he did not grow it in 1926 and as. the 1925 seed would be useless. Gingelly seed had to be purohased in 1927 but in smaller quantities in 1928 since a orop was raised in 1927.

Manure.-The water-supply to the local tank is entirely dependent upon the local rainfall and the eatohment area of the tank is not very great. There is no assurance that a good paddy crop ean be raised consecutively for two years and therefore, there is no incentive for ryots to manure and improve their lands well. Hence the very low and inadequate expenditure apon manures, incarred by this ryot.

Cattle.-This ryct is a Vaisya by caste and is more apt to look to the money aspect of every problem, while an ordinary ryot is mare influenced by sentiment, prestige and onstom. Therefore it costs certainly less for the Vaisya to maintain a pair of bullocks than for an ordinary ryot. Moreover, Mr. K. Somayya, being a merohant, is able to supply the waste produce of different products to his cattle and so he needs spend less than others. Apart from all these, he lives in a village whioh is olose to the forests, and in whioh there is plenty of poramboke land for cattle to wander about and he gets now and then, large supplies of straw from elsewhere to replenish his supplies of fodder for his cattle. Therefore the expenses inourred by him apon the maintenance of cattle are only nominal.

Palerus.-There is plenty of forest work for the Panchamas of this village and so only a few of them are willing to be engaged as palerus and even they are not willing to serve as paleras for more than one or two years, as the remunerative wages possible in the forest work palways act as an alternative attraotion. The salaries demanded are higher, the demeanour of the workers
over-bearing and the work got out of them lese. Therefore, Mr. K. Bomayya hae preferred to emplor only for temporary periods one or two or more palerus and get his most urgent work finished with their aid.

## Palerns.



Thus out of the eight palerus whorn he engaged at some time or other, five gave up his servioe after a few months, in the first year of their service. A ryot can get bat indifferent work from palerns who are new to the work.

Lıbour.-Coming now to the most important item of expenditure, i.e., labjar, we have to observe that it is sabject to the same influenoes which have been noticed in the case of seed. If a crop fails in one rear. the reaping of that crop is avoided and if there is nnother crop, whioh needs heavy labour in reaping or harvesting, the reaping chargea go up high. If a crop like blackgram or cas' or or greengram is substituted for horsegram, or cholam, more labour per acro will be needed. If the previous years crops were a great auccess, the ryot becomes optimistio and tries to plough all his land and grow different cropa. Whetber in the end he is able to realize any enhanced or proportionate income or not his laboar budget swells and the cost of labour per acre increases. All the uncertainties which attend dry cultivation influenoe the cost of labour per acre also.

This khata indicate, more than anything else, that the expenses apon paddy, and oholam do not rary from year to year to any great extent while the income from those crops is subjeat to very great variations. Whether the crop is a failore or a sucoess, a ryot has to plough the same extent of land, improve, and fence it and supply what little manare he can scrape up for it. It is found on a more detailed enquiry into the kbata accounts that considerable sums of money were spent even in such a poor village as this ryot in 1926 npon oarrying out earthwork removing the wild growth, and squaring the fields and fencing them properls.

Income.-The total agriculturel income, this ryot got from his lands in these four years was Rs. 1,468-2-6 and the expenditure he incurred was Ro. 1,156-3-9 leaving a sarplus of Rs. 311-14-9. He had to pay a kist of Rs. 182-5-0 or a little more than 58 per cent of hia agricultural income. He had therefore a net agricultural incoms of Rs. 129-9-9 or Rs. 32-6-5 per annum. Thus Mr. K. Somayya has not been able to earn at least half as muoh as is usually paid to a paleru, although he used all his basiness experience in addition to paying his best attention to his lands. He has not only tried to improve his lands, a rare thing in these poverty-ridden places but also attempted to derive some income from even such comparatively onimportant source as the soapnot trees. He has maintained only one pair of hullocks for his large holding while many others would have thought of maintaining two or three paire and he has economised his expenditure upon palerus bs avoiding the engagement of permanent palorus. In spite of all these exceptionally intelligent adjustments, he was able to derive an insufficient income from bis holding. He has thought it more profitable to lease out a large portion of his lands.

## APPENDIX No. 18

## DETAILED REVIEW OF CEAXGES OF DIGLOT PATYA8 DY THE LAST 30 YEAR8.

## Lukbitaptid (Nargapur Talde).

This report for this village was written by Mr. Holdsworth himself and this evidently formed the model for the other investigators. Our remarks upon the other features of his report are to be foond in our report apon the detailed economic conditions of this village. We therefore confine our attention to his discusaion of the history of the landholders in the laot $\mathbf{3 0}$ years.


#### Abstract

Acoording to Mr. Holdsworth, ont of the 104 pattas at the time of the last resattlement only in 4 eases, the original families have increased their holdings and 46 pattas "are held by the original pattadars or their heirs" while "in 20 cases the area owned has deoreased" and "the land in the remaining 34 pattas has entirely changed hands." So this is the story for the last 30 years, that only 40 out of 104 pattas are held without any change.




Mr. Holdaworth is at pains to explain away the otherwise sinister significance of the first 21 casses and says that "the pattadar sold his land simply because he was leaving them to settle elsewhere. The sale proceeds were used to purchase lands or build a house in his new home". However ingenious this explanation may be, it oertainly is a far fetched one. No Indian ryot Inkes to leave his village, so long as his holding fetohes him sufficient income and he has no other enoumbrances. Indeed, a ryot and his family consider it a calamity if they are obliged to leave their native place. To say in a complacent manner that ao many ryots have quietly left this village to settle elsewhere is rather surprising. We oan safely infer that out of these 34 cases, 32 were due mostly to economic pressure and bis conolusion that "only 23 pattadars appear to have been in economic diffioulties" is a misrepresentation of facts.

Partial sale-

|  |  |  |  |  |  | мо. | Acs. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Marriage expenses | . |  | - | - | . | 3 | 16.27 |
| Litigation expenses | . | . | . | - | - | 1 | 0.64 |
| Medical expenses and family expenses |  |  | . | - | - | 4 | $13 \cdot 99$ |
| Payment of debt | . | . | - | . | . | 4 | 23.79 |
| Relinquighment of poorland | - | . | - | . | . | 2 | $5 \cdot 85$ |
|  |  |  |  |  |  | 14 | 60.54 |

These oases are "related chiefly to land in the submerged area and were due to special expenses in medical, legal in 8 out of the 14 cases." There are clearly 13 oases in the above list whioh oan be seid to be due to economic pressure.

Mr. Holdsworth says that "the oonolnsion suggested is that where a holding comprises reasonsbly good land and is of sufficient size to be economically worked, the profits of agriculture are enough to meet normal requirements of a normal family or if the family too large, debt is, in the long run, probable and certain if to the above be added spooial expenditure in marriage, litigation or dootors." This is exastly what is found by us to be the trath. But Mr. Holdsworth forgets these facts by the time he comes to the end of the report and concludes in a hopefal manner.

Sourees of agrioulture-

| 1. Profits of agrioulture | $\because$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | . | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Sale of land elsewhere | .. | $\because$ | . | . | . |  | 1 |
| 3. Trade .. | . |  |  | $\cdots$ | .. |  | 5 |
| 4. Emigration .. |  | $\ldots$ |  |  | $\ldots$ |  | 3 |
| 5. Coolie work | . |  |  |  | $\cdots$ |  | 4 |
| 6. Ocoupational profits- |  |  |  |  |  |  |  |
| Pleader .. .. .. | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ |  | 1 |  |
| Parohit . . . | . | $\ldots$ | $\ldots$ | $\ldots$ |  | 4 |  |
| Washerman | $\cdots$ | . |  | . | . | 2 |  |
| Teacher .. | . | . | $\ldots$ | .. | $\ldots$ | 1 |  |
| Merchants olork .. | $\cdots$ | $\cdots$ |  | $\cdots$ | . | 1 |  |
| Weavers .. | .. | . | $\cdots$ | .. |  | 2 |  |
| 7. Gift, assigament and suit | . | - | $\cdots$ |  |  |  | 5 |
|  |  |  |  |  | Totar | . | 89 |

These details certainly do not indicate that agrivaltare in this village has evabled many rrote to conquer new realms. If they indicate anything at all, it is that more and more of the fand of the resident s.nd actual ryots is passing into the hands of the non-resident people, a sure aiga of decay in agricultural industry. Fet, he writes "agrioulture is apparently holding its own and no wonder, guided as they are by such corions thinking and facile argament, the other inventigatore even ecared into the region of inagination to explain awsy the real significance of actaal facta.

Cansen for the sale of lands in 1920 to 1924-


Thus here again there were 9 cases in which economic pressare played a prominent part. But Mr. Holdsworth explains the facts of sales for marriage expenses as "the realization of assets to meet emergencies". He seems to bave forgotten the fundamental fact that land is not like a deposit in the bank but a means of living and that expenses apon marriages should normally be met out of the accumulared savings made out of agricultare. No wonder he sets the seal in a self-eatisfied manner to this enquiry he made by eaying that "it cannot be said that the economio history of Likhitspudi is gloomy reading." Even the historical facts he himself furnishes to us make a gloomy reading. He also admits that "the ryots have to meet serious natural difficulties", and in another place "there are people in the village who cannot make both ends meet and have eventaally to sell their property to cover accomulated debt" and yet comes to the extraordinary conclusion that "most of the ryots are solvent and maintaining their position."

## Machataray (Divi Taluiz).

## (Kistna Distriet.)

The official report eays "At the beginning of the resettlement period there were 205 pattas. Of these 41 pattas are still held by the original pattadars or their heirs. In 80 oases, the area owned has decreased." In 38 cases there was no economio significance and 42 casea of losses of land were due acconding to the Government Investigator to economio pressure.

Ont of the 22 holdings which have increased, only eight are "due to "Damasha' and profita from agricultare."

The decrease of land in the following 42 cases has economic significance :-
(a) Sale of a portion of holding for marriages and other family expenses, repayment of debts, etc. .. .. .. .. 19
(b) Sale of a portion for arreara of assessment $\quad \cdots \quad \cdots \quad . \quad . \quad . \quad 1$
(c) Relinquiahment .. . . . . . . . . . 1

(e) On account of family expeuditure .. .. .. .. 20

42
Sixty pattas have disappeared completely out of which 41 "have economic significance"
The following are the cases:-
(a) Land sold by Government for arrears of revenue . . .. 2
(b) Helinquiabed by the pattadars being uobable to pay the asessment. 13
(c) Disappeared on account of debts . . .. .. .. 26

Only 145 out of a total namber of $5: 4$ pattas are held by the original pattadars or their heirs. Yet the Investigator goes on to say that "the economio outlouk of the village may be prononnced to be quite satisfactory". He conclales "it is obvious that the ryots generally have succeeded in impruving their financial pasition and caltivation of land does not by any meane appear to be such a wholly unprofitable business proposition as some of them were anxiona to make out to me".

## Ayaravatif (Kaikalur Taluz).

There were 36 pattas at the time of the last settlement and only foor of them are now in the hands of original pattadars or their heirs.

The 22 onees of alienation of land are explained in the following manner by the Government Inveatigator:-

| Parpose, |  |  |  |  |  |  | Number of cases. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| To clear off debts made for family maintenance |  |  |  |  |  | . | 13 |
| Poor land . . |  | - . |  |  |  | - | 2 |
| Revenue sales |  | $\cdots$ |  |  |  | . | 2 |
| Marriages |  | -• |  |  |  | . | 3 |
| Free gift . | - |  |  |  |  | . | 1 |
| Non-resident |  | -• |  |  |  | $\bullet \cdot$ | 1 |
|  |  |  |  |  |  |  | 22 |

There remain 20 cases in whioh the sale was due to economic pressure, such as, family expenses, poor land, revenue default and marriage expenses. Owing to natural difficalties of tail-end irrigation, saline soil and want of patimanna, the lands do not generally yield well ; of the 20 oases, four relate to an extent over 10 acres.

In sir cases, the holdings were reduced in size -

| Parpone of sale. |  |  |  |  |  | Number of oases. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Repayment of debta made for family maintenance |  |  |  |  | - | - | 3 |
| Wrong registry | . | . | - | - | - | - 0 | 2 |
| Free gift . . | . | $\cdots$ | - | - | - | - | 1 |
| Losses in trade | - | - | - | . | - | . . | 1 |
|  |  |  |  |  |  |  | 7 |

The Investigntor makes the following remarks regarding four of the above oases. "The partial asles were due to economio pressitre, three out of these four are traceable to poor yield on land and high expenses of maintaining a family."

In ooveluding bis section apon diglot pattadars, the Investigator writes "out of 36 old pattas, the owners of 20 have sold the whole and three a part of their land; in other words, the owners of 23 pattas appear to he in economic diffioulties. Yet of the 20 holdings sold, only four could be considered sufficiently large to be profitably worked. The conolasion suggested is. that where a holding comprises reasonably good land and is of suffioient size to be economically worked, the profits of agriculture are enough to meet the normal reqnirements of a normal family." But on his own showing out of $3 \dot{j}$ pattadars, 23 were found to be in economio diffoulty in a village in whioh the ryors being Upparas are proverbially hard working and have a very important subsidiary source of income.

Even if we examine the eanses for whioh 39 sales were effected in the period of 1920 to 1923, we can bat find the amme influenoe at work-

Purpone. . | Number of |
| :---: |
| casees. |

1. Nominal sales .. .. .. .. .. .. .. .. 3
2. To meet unusual expenditure, i, e., marriage and funeral expenses. 6
3. To meet debts incurred for family maintenance .. .. .. 1s
4. To meet losses in trade .. .. .. .. .. .. 5
5. Land being distantly situated .. .. .. .. .. 4

6 Being non-resident .. .. .. .. .. .. .. 3 39

The Investigator also admits that "there are pattadars of the village who cannot make hoth ends mest. These represent 18 out of $89 . "$ But he tries to minimise the importance of No. 2 by saying that "it means only a realization of assets to meet emergencies" in spite of the faot that the expenditure upon marriages and fanerals abould form a part of the normal family budget of ryots. Despite all these unfavourable and gloomy facts, this Investigator draws the II- 10
comfortable conclasion that "it oannot be said that the eoonomio history of Amaravati makes gloomy rending". After making the above statement, it is strange to find him giving away his whole case by writing as follows: "The ryots have to meet serious natural difficulties, such as, saline soil, tail-end irrigation and want of patimanna." If the hardy race of Upparas aro in this plight of economio depression, it must certainly be more diffioult for the less industrious and leas thrifty but socially more advanced, Kapas of Pallivada and Vinjaram to make both efids meet.

## Vinjarai (Kaikalor Talue)。

Vinjaram is a small village in Kaikalur taluk, which is distinctly in a deoadent condition. The Kapa ryots of this village have only small holdings and are slowly losing their hold upon the land. Out of the total extent of 110.4 acres of wet land, 50 acres of wet is subject to submersion and the large portion of the dry land is damaged by percolation of water in the two channela, one an irrigation channel and the other, a drainage channel.

The Government Investigator sayg that "Kapus have sold much of their land to discharge debts, incurred for family maintenance as they are lazy and extravagant in their expenditure, while the other castes have increased their holdings by their savings from professional avooations". But, in fact, none of the resident ryots has been able to improve his condition and only a few Mangalagiri weavers have purohased lands in this village. The above remarks about the Kapus were made by the Investigator to explain away the otherwise inconvenient faot of many sales of land, which are detailed below :-


Out of the people who have lost lands owing to family maintenance, etc., $25 \cdot 46$ acres were lost on account of family expenses and 29.27 aores for marriage expenses. Thus, out of a total namber of 58 pattas, only 13 are held still by "old pattadars and their heirs without any material alteration in size", while all the other pattas have nudergone material changes of ownership. It is indeed sorprising to find this Investigator writing in the face of these incontrovertible facts that "there is no economic stringency even though it is one of the poorest villages in the taluk".

Sule deede.-Fifty-six sales were made in the period of 1920 to 1923.


The Investigator is willing to concede that there are only five cascs where "there are people who cannot make both ends meet" argoing all the time that all the cases included in No. 6 are due to extravagant living on the part of the Kapas.

Out of the 15 people who have purchased lands, only three are supposed to have paid for the lands out of the profits from agriculture while all the others have drawn upnn the money got by the sale of lands and from their subsidiary ocoupations.

## Pallivade (Katralur Talue).

At the time of the last settlement there were 196 pattas, of whioh only 46 are still held by the original pattadars or their heirs all the rest having passed into the bands of othere.

$$
\begin{array}{llllllll}
\text { Entire change of hands } \\
\text { Pattas decreased in area } & . . & . . & . & .- & . . & . & . . \\
69
\end{array}
$$

$$
\text { Pattas decreased in area .. . . . . .. .. .. .. } \frac{73}{142}
$$

## Causes of sale

|  | Loss in agricultural operatio and poor yield | 2 |
| :---: | :---: | :---: |
|  | Family maintenance and liqui- |  |
|  | dation of old debts | 49 |
|  | Partitions | 7 |
|  | Soid being submersible lands | 7 |
|  | Bold for arrears of kist | 2 |
|  | Subdivigion of Local Fund road |  |
|  | Marriage expenses | 5 |
|  | Exchange | 1. |
|  | Transfer of land to other pattas belonging to the same parties. | 6 |
|  | Transfer due to long enjoyment. | 2 |
|  | Sold to meet the loss in trade | 6 |
|  | Sold by court in satisfaction of dnes .. |  |
|  | Change due to errata approved. | 1 |


| 14. Nominal tranafers |  |
| :---: | :---: |
| 15. As a result of improper management |  |
| 16. Relinquiebed to Government for want of income |  |
| 17. Sold on account of change of residence | 12 |
| 18. Sold being tail-end and unprofitable lands |  |
| 19. On leaving the village for good. | 11 |
| 20. For purchasing lands eleowhere |  |
| 21. Conversion of lands from wet | 9 |
|  | 142 |

At least 100 acres of losses of land were due to economio pressare. As against these, there were only 24 cases of acquisition of land owing to profits from agriculture. These facts cortainly indicate that the economic condition of the ryots is weakening and that more and more of their lands are passing into the hands of others.

## Sources of acquisition.

| 1. Profita from agricultare | 24 | 10. Trade earnings |  | - |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Fale of lands in other villages. | 7 | 11. Employment |  | $\cdots$ |  |
| 3. Sale of jewellery | 8 | 12. Professional income |  |  |  |
| 4. Co-operative debt not yet fally |  | 13. Toddy-ihop renting |  |  |  |
| liquidated | 1 | 14. Cattle watching |  |  |  |
| 5. Debts fully liquidated | 5 | 15. Gift |  |  |  |
| 6. Sheep rearing and sale | 3 | 16. Nominal sale |  |  |  |
| 7. Exchange of lands | 3 |  |  |  |  |
| 8. Darkhast grants | 6 |  |  |  | 76 |
| 9. Money-lending business | 7 |  |  |  |  |

Nandivada (Godivada Taluk).
At the last resettlement there were 208 pattas in this village. Of these, 72 pattas are still held by the original pattadars or their heirs without any material alteration in size. In 22 cases the original families inoreased their holdings, while in 41 cases the area owned has deoreased. The land in the remaining 73 cases has entirely changed hands. As many as 72 pattadara have not been able to improve their condition in these 30 years and 73 pattadars have actually lost their lands, while 41 pattadars had to sell away a portion of their lands, leaving only 22 pattadars or 11 per cent of the total number of Pattadars, who can be said to have improved their position.
(a) Pattas decreased-41.

Canse of ceale.

1. Donation, partition and for purchase of lands elsewhere .. .. 2
2. Marriage expenses .. .. .. .. .. .. .. 3
3. To purohase lands elsewhere .. $\quad . . \quad . \quad . \quad . \quad . \quad . \quad . \quad . \quad 8$
4. Partition .. .. .. .. .. . .. .. 3

5 Sold as the lands are not fertile $\quad . . \quad$.. .. $\quad . . \quad . \quad . \quad 2$
6. Liquidation of old debts and debts incurred for family expenses .. 12
7. To purchase cattle .. .. .. .. .. .. .. 1
8. Leaving the village for good . . . . . . . . .. $\frac{1}{2}$
9. For litigation and for building hnuses .. .. . . .. 2
10. To liquidate old debte and partly to purchase lauds .. .. 1
11. Being non-re. ident .. .. .. .. .. .. .. 1
12. As a result of bad character $\quad . . \quad . \quad . \quad \ddot{ } \quad . \quad . \quad . \quad . \quad . \quad 1$
18. Nominal and trivial transaction or sales .. .. .. .. 4
(b) Pattas entiraly changod hands.
Canses of sale.

| Number of |
| :---: |
| protten. |



Most of the cases of decrease ocourred in the oase of ryots having 5 acres and lesa, showing that such amall holdings are incapable of maintaining ryots unaided by any other ocoupation and that most of them are obliged to sell away portions or all of their lands in order to clear off their debts. The Government lnvestigator, being unwilling to admit this faot, tried to draw some help from the fact that such losses were inourred "in many oases a few years after the last resettlement and that there have been very few changes after that time ". But the present-day landholdera of even this village are heavily burdened with debts.

Out of the 41 cases in which there was a decrease in the holdings, 24 aases are olearly due to economio pressure in one form or the other ; bat the Government Investigator tries to nuderestimate the importance of this fact by using ambiguons phrases.

## Pattas which have enlirely changed hands (due to economio pressure).

1. To liquidate the debts contracted for family maintenance and for liquidation of old debts .. .. .. .. .. .. 11
2. Lands not being fertile and within easy reach of oultivation .. 6
3. Litigation . . . . .. .. .. .. .. 1
4. Construction of houses . . .. .. .. .. .. .. 1
5. Leaving the village for good .. .. .. .. .. .. 8
6. Marriage expenses .. .. .. .. .. .. .. 2
7. To meet agricult oral expenses .. .. .. .. .. .. 1
8. Partly to liqnidate debts and partly as gift .. .. .. .. 1
9. For drinking and for family expenses .. .. .. .. 1
10. To meet losses in trade . . .. .. .. .. .. .. 1
11. Inability to cultivate lands .. .. .. .. .. .. 1
12. Leper and asyyasin .. .. .. .. .. .. .. 2

Thus, out of 68 cases in which pattas have entirely ohanged hands, at least 36 were due to eoonomic pressure; yet the Government Investigator writes, "the causes of alienation or sales in many oases were due to ciroumstances not pertaining to economic pressure. Only 18 cases can be said to bave taken place on account of eoonomic difficulty."

The following remark is interesting :-"These ryots who had no property suffioient to meet all their family expenses and who have large families, bad to sell their lands to meet their expenses and debts."

The sale-deeds registered in the period of 1901 to 1905 and 1920 to 1924 are analysed is the following manner by the Government Investigator:-

## First period.



In all these 98 cases, he could find economio pressure only in Nos. 4 and 8, i.e., 46 cases, leaving Nos, 3, 5, 6 |and 7 making up another 10 cases.

Later period.


Here also, he detects economic pressure only in Nos. 4 and 8, making up in all only 60 cases, leaving 11 oases, which are evidently due to economic pressure, out of account.

> Komaravole (Gudivada Talox).

At the time of the last settlement there were 108 pattas of which only 29 are still held by the original pattadars ; in 6 cases the original holding was inoreased, in 38 it was decreased and in 35, the holding has completely ohanged hands.

Those changed hands entirely.
Causes of alienation-

1. Leaving the village :. . . . .. .. 16
2. Sold to buy fresh lands and exchange property .. .. 15
3. For the maintenance of a big family .. .. .. 3
4. Sold for the pattadar's 3 marriages . . .. .. .. 1

35
Twenty of these cases were due to economic pressure. Sixteen people were reduced to sach plight that they had to leave the village for good.

The holdinge have been reduced in the following cases.


Nine oases were due to economio pressure in oultivation.
Sources of acquisition-

1. Assignment $\quad: \quad \therefore \quad . \therefore \quad . \quad . \quad . \quad . \quad . \quad 2$
2. Purchasing land with profits of agriculture and partition among 28 joint families.

II-11

No dednotion ean lo drawn from theso figuree sinco partition and profite frona egrieultare are mixed up.

Canses of aales from 1919-22-
(c) Purchase of lands in Tativarru, Addads and in other viliages .. 80
(b) Reparing old debts .. .. .. .. .. .. .. 33
(c) Faraily maintenance and marriages ... .. .. .. 11
(d) Building a house .. .. .. .. .. .. .. 2

126
Forty-four cases of sales of lands were due to economio pressura. The official invertigator conoludes however that "it can be sxid that the economio history of Komravole is fair reading."

## Malrswaray (Bakdar Taldx).

This in one of the poorest villsges in the deltaio portion of Kistna district. Most of the local ryots are Gollas, who are very hardworking and thrifty. These psople try their boet to earn as much as possible by dairy farming and shepherding also. In apite of all this, ont of 68 pattas at the time of the last settlement, there were only 22 which were held in 1924 A D." by the same persons or their heirs without material change in area" and "in one case of the sams tenure the holding has increased while in 10 it has decreased and in other 29 cases the land has changed hands."

Pattas deereased-10.


What exactly is meant by Nos. 1, 5, 6 and 7 is not known. Nothing is said as to what was done by the sale-proceeds of these lands. Old debts acconnted for two cases.

Pattas entirely changed hande.


No. 1, i e., partition, indicates that a man sold his lands but it does not say what was done with the money realized. Nos. 3,7 and 11 are also equally silont about the fate of the sale money. But Nos. 2 and 4 are clearly due to economic pressure. If we add No. 10 also, we get 20 clear cases which were due to economic pressure alone. Yet the Government investigator eays "economically the village appears to be prosperous."

## Neso pattas.



## 41



Ont of 72 eases of acquisition, only four involving 14-22 aores are pat down definitely as due to agricultural earnings.

The darkhast grants alone absorbed 283 asres of land and almost all the rest of the land which was newly acquired was paid fot with money got out of the various non-agricultaral and quasi-agrioultaral (ehepherding) employments. These figares do not indicate any progress in the economic conditions of the original resident pattadars. But the investigator sings the usual song that " on the whole I should oall the village prosperous and see no reason why it should not remain so."

## Elaprole.

There were 111 pattas at the time of the last settlement and 25 of them are in the hands of the original pattadara.

## Causes for the change of personnel.

Out of the 111 pattas (diglot)-
(a) 20 are retained by heirs.
(b) In 6 cases, there are no changea, but a shuffling.
(c) In 13 cases, holdings have increased.
(d) In 43 cases, the area has decreased.
(f) In 29 cases, the land has changed hands completely.
N.B. - Nearly one-fourth of the pattas have ohanged hands and in the case of nesrly half the pattas, there has beean - dearesse in the area hold.
(s) Ont of the 29 oeaes, that have completely ohanged lands, 14 eases are due to evonomio presaure.
(d) Ont of these 14, 12 pattas have ohanged hands for family and marriage erpensea.
(o) In the oase of the 43 reduoed pattae, 41 cases were due to economio preesure (inoluding 86 oases due to marniage and family axpenditare).

## Examination of the pattas.

(a) In the examination of the pattas the canses for the selling of land are given as due mostly to family and marriage expenses.
(b) In patta No. 28, the resident pattaiar is said to have sold his land of acres 68.64 to meet his family expenses. But in fact muah of the loss wis due to unprofitable cultivation, interest apon old debts and expensive living and the maintenanoe of family.
(c) Pattadars of $69,88,111,26,33$ and 43 pattas have sold lands of aores 4.22, 10.00, $8 \cdot 82,14 \cdot 46,2 \cdot 84$, and $5 \cdot 96$, respeetively to meet family and marriage expenses.
(d) The ryot of patta No. 33 sold his holding of acres $14 \cdot 46$ to meet family expenses.
(e) In no case, agrioulture is cited as a cause for any of these holdings.

$$
\begin{aligned}
& \text { Present pattas-182- } \\
& \begin{array}{llllllllr}
\text { Single } & . . & . . & .- & . . & . . & . . & . . & 55 \\
\text { Joint } & . & . . & . & . & . . & . . & . . & 127
\end{array}
\end{aligned}
$$

(a) Out of the 55 single pattas, 29 are diglot pattas.
(b) The rest 26 are cocupied by atrangers.
(c) Profits from lands have been attributed for the buying of these lands.

Sales.
From 1920-25-
(a) There were. 56 casen of sale ont of which 42 were dae to marriagea and family expenditare.

## Lingala (Nandjgama Talde).

Out of the 42 single pattas, only seven are held by the original pattadars or their heirs. Again out of the 46 pattas at the time of the last .settlement, 37 were aingle pattas, out of which only 13 are held by the original pattadars, All the rest have passed into the hande of outaidereand new landholders.

Those that have changed hande entively
(Canses of alienation).
(a) Debts caused for the maintenance of families ... .. .. 18
(b) Family maintenance and marriages expenses . . .. .. 2
(c) Marriage or for debts incurred for marriage .. .. .. 2
(d) Free gift to Gods . . . . . . . . . . . . 1
(a) Investing the money for trade or interest .. .. .. .. 2
(f) For purchasing lands elsewhere .. .. .. .. .. 4

24
As many as 21 cases of losses of land were due to economio pressare.
The holdings have increased in the following cases:-
(a) Surplas earnings on the lands-b.

This investigator thus accounts for only five cases of increase. All the other pattadars were either able to retain what they had or were obliged to lose a portion or all they had.

## Causes of decrease.



Thus 80 out of 96 acres of land were lost owing to economio pressure.
Sources of acquisition.


Out of these 33 cases of new acquisition of land, only 15 are supposed to be due to profits from agriculture. These facts do not indicate mach progress.

## Torfaguntapalem (Namdigama Talue).

This is a depopulated village in the extremely poor taluk of Nandigama. Most of the lands belonging to the ayacut of this village is owned by the Vaisyas and others of Jaggayyapetta and is cultivated hy the ryots of Tirumalagiri and the neighbouring villages. The ryots of these villages are not at all in a position to maintain themselves on their present very low standard of living with their agricultural earnings. There were in this village 24 pattas at the last settlement, out of which 14 were single. The ohanges in the single pattas are detailed below. Three of them are in the hands of the original pattadars.

## Those changed hands entirely.

Family maintenance on account of inaproper yield in their lands as the

Thoee eleven cases only represent several suoh asses ocourring in almost every village in thise taluk. The rainfall is sosnty and anoertain, the soil is not at all fertile and the vegetation is not laxarions. The money-leuders have very little faith in the solvenoy of the ryots and therefore charge rainously high rates of interast. No wonder more and more of the pasture land of these parts is passing into the hands of the deltaio ryots while the arable land is bought by money-lendars.

## Sources of acquisition.



These details also show that in these parts as in other places, not many oases of aoquisition ean be diseovered, which are due to thi profits from agrionlture. The Government inveatigatorpersists in saying that " the eoonomic oondition of Torraguntapalem cannot be said to be altogether ansatisfactory, though it is depopulated one."

## Goravaram (Bandar Talus)

This is one of the poorest villages; ont of the 90 pattas at the time of the last settlements only 30 are still held by original pattadars or their heirs. In 10 there has been some increase and in 11 they passed into the hands of ontaiders and "the area owned in the remaining 39 cases has decreased."

An abstract of alienation and their causes-

|  |  |  |  | Acs, |
| :---: | :---: | :---: | :---: | :---: |
| (a) Gifts |  |  | 3 | $8 \cdot 42$ |
| (b) Debts clearing . . |  | .- $\quad$ - | 19 | 122.81 |
| (c) Nominal sales |  | - $\quad$. | 4 | 58.46 |
| (d) Partition .. .. . . . | $\cdots$ | $\cdot$ | 4 | 31.05 |
| (e) Bale on account of non-residence conoern. | and as | unprofitable | 2 | 13.43 |
| (f) Relinquishment of land | $\cdots$ | .. - | 1 | 9.79 |
| (g) Revenue sale | $\cdots$ | -• - | 1 | 4.24 |
| (h) Family dispates .. ... .. | . | . . . | 1 | 14.01 |
| (i) Sale in nsual course for no difficulty | . | - $\cdot$ | 3 | $4 \cdot 94$ |
| (j) Salt cottaur transaction .. .. | . | . . . | 1 | 14.64 |
|  |  |  | 39 | 28179 |

At least 27 oases have economic significance. Economio pressure seems to have been regponsible for such losses. The Government investigator himself says that "the sales made in many casea were on account of the non-profitable nature of the lands and that there would have been no such sale had the quality of the land been good and had the same been a source of inoomg to the ryots sufficient for the maintenance for their familie.

The means of acquisition and the souroe of purchase -


Ont of all these 37 oases of aoquisition of land the Government investigator oould disoover only nine cases which were due to profits from agricultare. He comes however to the surprising conclasion that "many of them are solvent in spite of other natural difficulties." The actual cultivators are not able to make even their agricultural budget balance, and the only people who are able to maintain then position are the Komattis who earn on money-lending and ealt cotaur businees.

II-12

## Pumanda (Dive Theotis).

Thare were 230 pattae at the time of the eetilement of which 30 pattae are atill hold by original pattadars or their heirs; in only 11 ases was there eome improvement and in 74 anem themo was deorease while in the remaining 115 pattas have ontirely ohanged hands. Thus meandy three-fourths of the ryot population has been adversely affected in the laat therty jeam.

## Patcus which have changed hands-

(a) Leaving the village to settle elsewhere .. .. .. .. 81
(b) Nominal alienation . . . . . . . . . . . 5
(c) To evade the creditore .. .. .. .. .. .. 2
(d) Due to the mistake in the diglott regiater .. .. .. .. 1
(e) Transferred by a nominal pattadar to a real pattadar .. .. 1
(f) Land acquired by the Government .. .. .. .. 28
(g) Transfer of lands to other pattas .. .. .. .. .. 7
(h) Change from a joint to a single .. .. .. $\quad \because \quad . . \quad 1$
(i) Partly acquired by the Government, partly transfering the remainder to other pattai $\quad . . \quad . . \quad . \quad . . \quad . . \quad 4$
( $j$ ) A portinn of the land acquired by Government and the remaining portion is sold away $\quad . \quad . . \quad$.. . . . . . . . $\quad$.
(k) Sold away for a very low price as they were in danger of being eroded .. .. .. .. .. .. .. .. 1
The following cases are due to economic pressure:-
(l) To meet the debts due to loas in trade .. .. .. .. 2
(m) To build a brick house .. .. .. .. .. .. 1
(n) On account of debts accumulated for oultivation expenses .. 4
(o) To meet the loss in trade .. .. .. .. .. .. 3
( $p$ ) Major portion to meet the marriage expenses and the next being
eroded or acquired
(q) To liquidate the debt contracted for bare subisistenee $\quad .$.

108

More than 50 cases of losses were due to economic stress and 37 cases were due to the Government acquisition of lands. Since Government did not provide these people with wet land in other villages in exchange for the lands asquired by it in this village for the canals, eto., many of the ryots had to become landless, although they became free from debts by giving away the sale proceeds.

Which have decreased in extent -


The following cases have some significance :-
(g) Marriage expenses and loss in contract .. .. .. 1
(h) Fear of erosion . . . . . .. .. .. 1
(i) Marriage expensea . . . . . . . . . 2
(j) Partly acquired and partly sold for livelihood .. .. 3
(k) Livelihood .. .. .. .. .. .. 6
(l) Partly relinquished or acquired and the rest sold for cultivation 2 expenses.
(m) Lross in contract . . . . . . . . . . 1
( $n$ ) Litigation and marriage .. .. .. .. .. 1
(o) Sold, being anfit for onltivation .. .. .. .. 1
(p) Arrears of land revenue .. .. .. .. .. 2

## 45

Theme twenty cases were due to cheer econamic premare.
Pattas which have increased-
$\begin{array}{llllll}\text { (a) Lending money for interest } & \because & . . & . . & . . & \mathbf{1} \\ \text { (b) Contraoting debt } & \because & \because & . . & . . & \because \\ \mathbf{2}\end{array}$
$\begin{array}{lllllll}\text { (b) Contraoting debt } & \because & \because & . & . . & \because & 2 \\ \text { (e) Gift } & . . & . . & . & 1\end{array}$
(d) Subdivision from other joint pattas .. .. .. .. 2
(e) Profits from profession.

| 1. Purohit . . | - | - | - | - | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Washerman | . | . | . | . | 1 |
| 3. Toddy drawing | .. | - | $\cdots$ | . | 2 |

Not even one original agrioulturist was able to improve his position with profits from lands. Two people have even borrowed money for. purchasing lands bat they would soan have to sell those lands to clear off the debt.

## Sourcos of acquisition:



Non-agrioultural people who had more remunerative employments than oultivation to depend upon, have been able to acquire lands. Only two of our 19 are said to have bonght lands with profita from agricultare.

| Purpose of sale. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| (a) To pay land revenue <br> (b)' Meet unusual expenditure and funeral expenditare |  | sind those of |  | 5 |
|  |  |  |
| marriage .- .. | $\cdots$ |  |  | .. | $\cdots$ | 2 |
| (c) To purohase lands elsewhere | $\cdots$ |  | $\cdots$ | 3. |
| (d) To liquidate debts oontracted in the village | . | . |  | 24 |
|  |  |  |  | 34 |

Thirty-one cases tell a sorry tale about the poverty and helplessness of the ryots of this village. In the faoe of all these too olear indications of decay and poverty, the official inveatigator oould but conclude that "the economio history of Puligadda since the last settlement cannot be said to be partioularly bright."

## Kanchumarbi (West Godavart Tapmpalilatdira Talum).

The Government investigator was able to write, that "it cannot but be said that the economio history of the village is not without some eneouraging features. The condition of affairs is better than at the opening of the resettlement period. The advent of the new line of the railway and any further endeavours towards the improvement of drainage in the delta will remove the submeraion under which a portion of the village labours and increase the general prosperity of the agrioulturist." The only result of the advent of the railway and the buses has ao far been to induce most ryots to waste their money apon these new luxaries, As for other factors, we aball try to show in his own words and by hi; own facts how unwarranted his optimistic conolusions are-.

1. "Out of the 110 oases of sale of land in 1920 to 1924 A.D., 54 were due to old debts, pir for old debta, etc., two for maintenance expenditure and only 25 for purchase of lands." These figures do not indicate any rosy conditiona.
2. After examining the present rent roll, as it existed in 1924, he found that there were only 19 now pattadars.

Sources of acquisition.


These facts do not indicate that it has beoome possible for ryote to aohieve muoh sucoess.
In the past 30 years, there were 17 cases of deorease in holding. Of these, ten were due to family expenditure, sickness, marriages, and partition and one due to loas in trade, and another to immoral living and only four due to the parchase of lands elsewhere. These figares speak of the fact that land is passing into the bands of money-lenders, workers and othere who have made their savings in non-agricultural purauits.

The fact that several non-agriculturists have invested thair money in land is taken"advantage of, by the Government investigator, to prove that "Agricolture is apparently holding its own with other occupstions." But he forgets that the Kapus and others who made their eavings in Rangoon look upon agriculture as a deity and are anxious to turn to it at the earliest opportonity and also the fact that money-lenders purchase lands in order to raise their social status and that others go in for land as it is thought to be a more afe avenue for permanent investments.

## Rachur (Taderalligudim Talue).

Rachur is a tail-end village. Ont of a total extent of 2,618 acres of wet land, as mach as 817 acres of land is occasionally subject to submersion. Out of the 171 pattas given at the last settlement, 108 are still in the hands of the original pattadars or their heirs without any material change, i.e., " 41 are held by the original owners, 20 have substantially inoreased their holdings while in 47 pattas the area owned has decreased and the land in the remaining 63 pattas has entirely cbanged lands."

Of these 63 pattas, 39 are of over 5 acres-

| 1. To liquidate family debts .. <br> 2. Non-residents sold the lands got on darkhast, |  |  |  |  |  | 24 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | 28 |
| 3. Eeonomic pressare | - | - | - | $\cdots$ |  | 11 |

Thirts-five ryots out of a total number of 171 have been obliged to part with their landa owing to economio pressure. All the cases of decrease (47) are in one way or the other due to economic pressure.

1920-21.

## Sales of land.

| (a) To purchase lands elsewhere | - | - | $\cdots$ | - | 22 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (b) To construct honses |  | - | . |  | 2 |
| (c) To meet marriage expenses |  | - |  |  | 1 |
| (d) To meet family expenditure | . | . |  |  | 16 |
| (e) To meet the loss in trade . . | . | . | . |  | 2 |
| $(f)$. Inability to cultivate lands | . | - | . |  | 4 |
| (g) To meet cultivation expenditure | - | . | . |  | 3 |
| (h) To dig an irrigation bodi . . | . | . | . | . | 1 |
| (i) For the benefit of the family | -• | - | - | - | 4 |
| ( $j$ ) Purpose not stated | $\cdots$ | . | - | - | 33 |
| (k) To clear off old debts and previous | debts | - | - | - | 85 |

"Naarly half of the oasea malate to the, liquidation of old, debts presumably, not the ones inourred by the pattadar." The real significanpe of the sales due to old debte is thatr the ryots have not been able to olear off their debts over a number of years, may be over one or two generations with the profits from the agrionlture and have, therefore; been obliged to sell away their lands to clear them away.

Sources of acquisition of land.

1. Purchase by outsiders out of their savings from their lands, etc. . . 47
2. Profits from trade ... ... .. .. .. 4 :

3: Gift. . . . .. .. .. .. .. 10

5. Coolie labour .. .. .. . .. .. .. 13
6. Profite from medicine .. .. .. .. .. 1 :
7. Profits from carpentry .. .. .. .. .. 1
8. Purchase from the savings in fish-trade .. .. .. 1.
9. Savings from pali tenare .. .. .. .. .. $\quad . \quad$ 2
10. Sale-proceeds of land in other village .. .. .. 2

There were no resident ryots who have been ahle to parchase lands with their profits. from agricolture. Only two cultivators who have rented othera' lands have been able to purchase emall extents of land. Non-agricultural people, and the absentee or immigrant landholders and people who have a subsidiary industry to augment their earnings found it possible to porchase lands which were sold by the ryots of this village. These facts speak of the inherent economio weakness of the cultivating ryots of this village. But the investigator conoludes in the usual manner by eaying that "the economic condition has appreaiably bettered during the last decade and is now virtually on a par with the rest of the wet villages of the taluks.

## Singayaram (Ellobr Taluk).

"At the time of the last settlement, there were 52 pattas. Of these 32 were single pattas", of which 18 only are in the hands of the diglot pattadars, in 6 , the holding has decreased, in 7, the lands changed hands, leaving only 5 which have increased in their extent,

## Increase of pattar.

(a) Surplus on other lands and money-lending business .. .. ..
(b) Purohase out of surplus on other lands .. .. .. .. 2

Only two cases of increase were entirely due, according to the offioial investigator, to profits from oultivation.

## Partial alienation.

(a) Idleness of the pattadar .. .. .. ... .. .. 1
(b) Family expenses .. .. .. .. .. .. .. 3
(c) Family expeness and purchase of other lands $\quad . . \quad \because \quad . \quad . \quad . \quad 1$
(a) Free gift ....... .. .. .. .. .. 1
(e) Marriage and other family expenses .. .. .. .. .. 1

Six of these cases were due to economio pressare.

## Complete alienation.



II--13
 14 pldis 7 or 21. Extolading the pattas in which the deoresee of entire olingge of minds is due to illives, froe gift, improper yield, oultivation expensex, parchase of builditg frith eiter and ofril litigation, wo have 13 omes, the ale in whieh appeart to be due to economic dificuftien.

Sources of acquicition.
(Single pattas.)
1 Out of the surplus earnings and other lands . . . . .. .. 8
2. Surplus of earnings on other lands and money-lending businesa .. 8
3. Money-lending business . . . . . . .. .. .. 1
4. Partly by debt not repaid and partly ont of earnings on other lands.. 1
5. By debt not repaid .. .. .. .. .. .. .. .
6. Free gift . . .. .. .. .. .. .. .. .. 2
7. Settlement deed .. .. .. .. .. .. .. .. 1
8. New assignments from poramboke lands .. .. .. .. 22

39
Only 12 cases of acquisition of land are sapposed to be due to profits from cultivation.

## Sources of arquisition.

(Joint pattas.)


These atati.tics gathered by the official investigator himself do not warrast his conolunion that " the economic condition of the village is satisfactory."

## Koderuti (䦎arabapur Talue).

"Against 36 single and 27 joint pattas: (old) there are torday 39 aingle and 87 joint pattae. Of the former 8 pattas covering an area of 5.34 actes aro othit held by the old pertadars or their heirs with no ohange in holding, 17 pattas covering an ares of 32.55 acres have entirely ohanged hands, 10 pattas have deoreased in holding from 58.50 to 22.71 acres." Except for one, all these ten cases of deorease in holdings are said to have been due to family and marriage expenses and debts. Ryots borrow money for their family purposes which inolude of course agrioultaral purposes also. Of the 17 pattas whioh have entirely changed haods, 12 were due to economio pressure.

Even out of the 23 new pattes only 8 pattas, covering not more than 10 acres, are entirely due, according to the official investigator, to the income from own land. It is, however, feared that he was not able to distinguish the Rangoon earnings suffioiently from the income from own land.

Vhlagalery (Narasapur Talde).
There were 96 pattas at the last settlement of which 68 were single. Of these 32 are still in the hands of the original pattadars or their heirs.

Cases in which lande have entirely changed hands.

| 1. Sold to migrate elsewhere | - | - | - | - | - | - | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Nominal alienations |  |  | $\cdots$ | - |  |  | 3 |
| 3. Economic pressure . . | - | - | - | - | - | - | 11 |
| 4. Marriage expenses | - | - | -. | -. | - | - | 4 |
| 5. Medical expenses | - | . | . | - | . | - | 1 |
| 6. Litigation | . |  | - | - | - | * | 1 |
| 7. Pattadars intemperate habits |  | - | - | - | - ' |  | 1 |

Reviewing these figures, the inveatigator states that " 42 per cent of the changes aro not due to eoonomic pressure at sill and is a high peroentage in suppert of the contention that assesment does not bear heavily on the land". But he does not state why ter people have sold away their lande in migrating to other places. If they have purchased lands elsewhere that fact would have been mentioned. So the only legitimate inference that can be drawn about these cases is that they must have been obliged to leave the village in order to aeek shelter in other places. The groupa Nos. 4,5 and 6 also represent mostly cases of asle due to economio pressare.

In concluding this section, the investigator makes the extraordinary statement that "the cases of sale due to economic pressure or 32 per oent are in my judgment a very promising indication for the future". It is hard to imagine what exactly is mesnt by this statement. In trying to explain the final withdrawal of these very small holders from the ranks of small holders, he says that "there is a limit in wet and dry holdings beyond which subdivision should not go. When that limit is passed and discord among families maltiplies small holdings, the unesoapable reminder of economic facts steps in and small holdings and their owners part company. The assessment in this case, even if remitted could not save these holdings whioh have transgressed the margin of utility." Therefore he comes to rather strange conclnsion that the assessment should be raised upon holdings which are distinctly unprofitable.

Sale.


Except for Nos. 3, 5, 8 and 9 all the other obses of sale were due to in some way or the - other (not to speak of losses dae to marriages, house construction, etc.) to economic pressare.

Sources of acquisition.

| $\begin{gathered} \text { Namber } \\ \text { of } \\ \text { oosea. } \end{gathered}$ | Firtant. | Gouroas |
| :---: | :---: | :---: |
|  | Acs. |  |
| 20 | 13.77 | Income from lands. |
| 22 | 1624 | Labour earnings in Rangoon. |
| 1 | 0.85 | Trade and labour earnings in Rangoon. |
| 4 | 10.71 | Income from land and daily wages. |
| 8 | 1.82 | Sale-prooeds of other lands. |
| 8 | 13.73 | Income from land and by raising loans. |
| 2 | $1 \cdot 40$ | Income from land and weaving. |
| 2 | 226 | Income from trade. |
| 1 | 3.01 | Nominal alienation. |
| 1 | 0.65 | Exchange of land in and other villages. |
| 1 | $1 \cdot 15$ | Income from land and gits. |
| 1 | $0 \cdot 14$ | Coolie earninge. |
| 6 | 3.28 | Income from lands. |
| 3 | $4 \cdot 16$ | Labour earnings in Rangoon. |
| 72 | 73.73 |  |

This inveatigator is olever enough to introduce profits from land in several items so that no -lear inference can be drawn from the above abstract of facts. But it is evident from the above table that muoh the largest area was bought with inoome derived from non-agrioultural occupations, inaluding emigration to Burma. The number of cases in which ryots are obliged to sell their lands in order to olear off their debta is less in this village than in other villages beoause many of the ryots are able to send one or two of the male dependents from their families to Rangoon to earn enough to pay off their debta made in this country.

## Vemataray (Betmatarai Talui).

At the time of the last re-settlement there were 57 pattae of which 48 were siogle. Of thees single pattas, 36 are still in the hands of the original pattadars or their heire and only two holdings have increased. The investigator admits that "the total number of aingle pattas which completely changed hands or decreased is 24 ". He says "that the sale of land was only due to epecial expenditure bat not due to any real economic pressure in 7 pattas." He admits, however, " that the remaining 17 single pattas seem to have economically suffered."


| Decrease in original pattas. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| (a) Heavy family expenses |  | . . | . | 6 |
| (b) Marriage and family expenses | - | $\cdots$ | . | .. 5 |
| (c) Medical expenses (leprosy) | . | $\cdots$ | . | 1 |

All these cases of decrease were due to economic pressure.
Decrease in holdings.


These figures do not indiaate that the local ryots are prospering.
Sources of acquisition.


Only eight cases of acquisition were due parely to profita from agricultare. Again out of these 24 people who have aoquired lands, 12 are outsiders and so the lands sold by the villagers could not be purchased by the other residents.

## Chiloror.

Chilukur, in Bhimavaram talnk, suffers from both water scaroity and. submersion. There were 127 pattas at the time of the last settlement, out of which only 29 are in the bands of the original pattadars or their heirs.

Clauses for the change of holdings.


It is thus olear that out of 87 pattas, that have partially or fally ohanged hanis, Nos. 1, 2, 3, 4 socounting for 71 cases were due mostly to economio pressure.

The following details regarding the 50 pattas that oompletely ohanged handa arer instructive:-

|  |  |  |  |  |  |  |  | $\begin{aligned} & \text { Number ol } \\ & \text { oasea. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pattas nnder - |  |  |  |  |  |  |  |  |
| 1 acre | - | - | - | $\cdots$ | - | * | - | 5 |
| 2 acres | . . | - | . | . | $\therefore$ | - | - | 8 |
| 3 " | . . | - | . | $\bullet \cdot$ | - | - | - | 10 |
| 5 .. | - | - | - | - | - | - | -• | 17 |
| Over 5 acres | - | $\cdots$ | . | -• | . | - | . . | 50 |

The following remarks of the investigator show the real position of this village. 'Out of 127 old pattas, 87 decreased or disappeared, 11 pattas inoreased in holding and 29 pattas remained nnchanged. The disappearance or deorease in 59 pattas was due to economic pressure,'

One of the most important ressits of these sales of land is that more and more land ia gradually passing into the hands of the non-resident ryots who numbered in 1924 A.D. 91 as against the 96 resident pattaiars. If the local land, which is sold, is not bought by residents but by non-residents and if most of the looal pattadars are not in a position to purohase lands that oome for sale, it only means that the villagers are as a whole, fast losing their hold upon their рояsessions.

It is also noteworthy that out of the 91 non-resident pattadara, 77 are oultivators belonging to the neighbouring villages of Mahadevapatnam, Caraguparru, Uppalur, Yendagandi and Valivarra.

## Sources of acquisition.



Thas there were 20 oases of asquisition of land out of a total of 51 , whioh were sappose 1 to be entirely due to surplus inoome from lands. Even if we acoept the doubtfal aadysis of this investigator, we have to remember that this account for only 25 per cent of the total number and that there are, to set off against these cases of acquisition, as many as 50 oases of complete ohsnge of lands and 37 of partial changes.

## Partial increase sources of acquisition.

1. Purohased from surplus içoome on lands .. .. .. .. 5
2. Purohased by loans raised .. .. .. .. .. .. 4
3. A.oquired on darkhast .. .. .. .. .. .. .. 1
4. Purchased from professional earnings . : .: .: .. .. 1

These details show that many ryots try to purchase small extents of land with borrowed eapital, in the hope of paying off these debts with the profits from lands and labour. But these debts beoome old debte in a short-while and acoount in their turn for many of the sales of land. Secondly, there are only 5 oases out of a total of 11 which are supposed to be due to income from land.

The Government investigator thought it proper to conclude that "the economio history of Ohilukur cannot be said to be disappointing." The only factor that he oan adranoe in support of this extraordinary conclusion is that "the village has attraoted as many as 164 pattadars, 87 residenta and 77 non-residents" but he does not pause to oonsider what mast have happened to the previous owners of the lands acquired by these people.

## Settivarigudem (Chintalapalle Taloi).

At the time of the last Settlement there were 54 pattas, of whioh only 16 are atill held by the -old pattadars or their heirs and in 4 other cases, the holding was increased. In 10, the holding was deoreased and in the remaining 24 pattas, the landa have completely ohanged hands.

## Partial aliemation.



Eight cases are evidently due to economio pressure. It is sad that the ryot has to sell a portion of his lands because of his inability to clear off debts made for improving his lands. The poverty of these villages is indicated by the fact that there are two more cases of complete loss of lands for the very same reason.

Complete alienation.

| 1. To olear off debts made for family expenses |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2. For want of possession or not being made owner |  |  |  |  |  |  |
| 3. On leaving village or being non-resident |  |  |  |  |  |  |
| 4. To clear off debta made for improv | g la |  |  |  |  |  |
| 5. By taking land in exchange of their selling for maintenance |  |  |  |  |  |  |
| 6. To meet debts made by fat living |  | . | . . |  |  | 2 |
| 7. Purchasing lands elsewhere |  |  | -. | . |  |  |
| 8. Gift .. |  | . | - |  |  |  |
| 9. Benami transaction |  |  |  |  |  |  |
| 10. Inability to manage owing to death |  |  |  |  |  |  |
| 11. Poor yield .. .. .. | - | - | - |  |  | 1 |

Fifteen of these cases are again due to economic pressure.
Increase of holdings.

| (a) Due to subsequent assignment |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| (b) Sukdivision of joint holding and tranofer to own patts | $\ldots$ | $\ldots$ | 8 |
|  |  |  | 1 |
|  |  | 4 | 4 |

No ryot has been able to increase his holdings by his savings.
Sources of acquisition.


Out of all these 48 cases, only 3 cases can be taken to be due to the profits made in agricultural and similar occupations. This is one of the poorest villages, and that fact is clearly evidenced by the above facts and yet the official repcrter eays that "the conditions obtaining in Settivarigudem cannot be said to look dark and unsatisfactory."

## Mulikipalli (Razols Taloi).

There were at the time of the last Settlement 64 pattas, out of which 16 are atill in the hands of the original pattadars, or their heirs.

Oasee in which holdings have entirely ohanged hands:-
Ont of the 27 cases of losses of holdings, in fifteen the extent of land lost was less than an acre in each case.


Out of these 15 cases there are 12 olear cases of eoonomic pressure (Nos. 2, 4, 5, 6). The - AOovernmeut Investigator dismisses these cases by saying that " these holdings are minor holdings, which by itself is not a sofficient property to maintain a family".


Seven of these are due to eoonomio pressure.
The ryots concerned in cases Nos. 10 and 11 said to the Government Investigator that they had lost their lands since they could not raise good enough orops and since their debta .multiplied, but the Investigator dismisses this explanation by saying that "it is not likely to be".

## Cases of decrease in the holdings.



Eleven of these are due to eoonomic pressare.
The Investigator unhesitatingly declares that "it will be seen that in none of the cases the -decrease was due to economic pressure". A veritable jugglery with faots and figares. In 5 other cases the extent involved is less than en area in each case and the cause of alienation is none .but eoonomic pressure.

## Sources of arquisition.

| 1. Earnings on land taken on lease . . . |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Savings on patta land in the | vill |  |  |  |  |  | 1 |
| 8. 8avinge in other villages .. .. .. .. . . 21 |  |  |  |  |  |  |  |
| 4. Sale of lands elsewhere |  |  |  |  |  |  |  |
| 6. Trade .. .. .. .. .. .. .. .. |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| 7. Coolie work in Rangoon .. .. .. .. .. .. . 27 |  |  |  |  |  |  |  |
| 8. Coolie work in the village |  |  |  | $\cdots$ | $\cdots$ |  | 3 |
| 9. Begging for alms .. .. .. .. .. .. .. 1 |  |  |  |  |  |  |  |
| 10. Ocoupational profits- |  |  |  |  |  |  |  |
| Washerman |  |  |  |  |  |  |  |
| Purobit .. |  |  |  |  |  | 2 |  |
| Kolngaram | -. | - |  | . |  | 1 |  |
| Medical practice | . |  |  | . |  | 1 |  |
| Goldsmith | .. |  |  |  |  | 1 |  |
| Shoemakers | . |  |  |  |  | 2 |  |
| 11. Stridhanam and gift | -* |  |  |  |  |  | 8 |

In all the above 109 cases of frebl eoquisition of hand in the lact 80 yeara, we can find only 80 enses in which lands posemeed by pattadare are supposed to have onabled their holdore to purchase additional land. All the other osees are due to earninge got out of non-agrioultaral occupations. It is also found on detailed examination of the facta supplied by the Investigator that aimost all the first 29 ceses of accuisition, given by him, represent only very amall extentes imostly for honse-sitea.

## Pabagugig (Razole Talde).

This is a tail-end village in Razole taluk. Most of the land in this village in owned by Brahmans and Kapus and Settigas, of whom Settigas are very poor peoplo and live by their coolie labour and by renting others' lands. There are only. three cases in which the once landless people have managed to secore amall extents of land with the money saved over a number of jears out of their earnings in coulie work in this village and in Rangoon.

There were at the last resettlement 34 pattas. Out of these 22 are atill held by the original pattadars. "In 10 cases of these, the holding has been increased while there ia decrease in 4 cases, the area in the remaining 8 cases being unchanged. In 9 out of the remaining 12 esces of old pattas, the land has entirely gone into the hands of new pattadars bat it is only partial alienstion in 2 cases". It is therefore clear that there has been partial lose or complete loss in the case of 13 pattadars or one-third of the total number of pattadars in the village.

## Causes for the lose of lande.

(a) A Brahman spent apon marriages and building a house .. .. 1
(b) Losses incarred in renting others' lands .. . . .. .. 5
(c) Marriages and litigation $\quad . \quad$.. $\quad . . \quad . \quad . \quad . \quad . \quad 2$
(d) Family expenses and ficklemindedness $\quad \because \quad$.. $\quad . . \quad . \quad . \quad 1$
(e) Debta made in Rangoon .. .. .. .. .. .. 1
(f) Oultivation expenses and losses inourred upon rented lands .. 1 11

In concluding, the Government Inveatigator says that "in none of the abovementioned cases alienation of land is not dne to failure of orops or improper yield ". Whatever this may mean, the above facts olearly indicate that in this village, as in most other villages, it is not profitable to rent others' lands, and also that many ryots are not able to save enough to pay for the occasional marriages and are therefore obliged to lose all or a part of their lands. At least ten of these 11 cases of losses of lands were due to economic pressure.

## Sources of acqussition.

(a) Earnings as a coconut merchant .. .. .. .. .. 1
(b) Professional trade (Abkari trade) .. .. .. .. ..
(c) Rangoon earninge $\quad . \cdot \quad . \cdot \quad . \cdot \quad . \quad . \quad 1$
(d) Rangoon earnings and profits from rented lands and coolis .. .. 1
(e) Money-lending business . . . . .. .. .. .. 1
( $f$ ) Earnings on cultivation of lands in three villages .. ... .. 2
(g) Profits from rented land, paddy trade and borrowing Ra. 1,400 on mortgage deed ... $\quad . \quad . \quad . . \quad . \quad . \quad . \quad . \quad . \quad 1$
(h) Partly from earnings in labour in Rangoon .. .. .. .. 1

In none of these cases of acquisition of land, could one find the profits from agriculture alone acconnting for the purchase of lands. The sonrees of income which are supposed to have enabled these ryots to parchase lands are so many that it is impossible to draw any inference definitely from these figures. If one is to infer anything at all, it is that savings made by coolie labour and business (of one kind or other) were more important than the profits from cultivation, in helping these people to obtain emall extents of land.

## Nalhamilli (Amalapur Taldi).

This village is only $1 \frac{1}{2}$ (one and half) miles from Amalapuram and is supposed to enjoy excellent irrigation facilities. But a portion of the land affers from sabmersion and is noti very suitable for the sarava crop. The yielit of the crop is low. Out of the 73 pattas at the time of she late settlement, 32 are held by original pattadars and the rest have nndergone changes owing to the anprofitable nature of cultivation.

## Pattas entirely changed hands.




These facts do not indicaté any cocnomio progress, oases $b, c, d, f, i$, accounting for 17 cases ont of a total of 23 are $m$ stly due to eoon mic pressure. The three cases of loss of land to olear off debts made for purchasing of lands supports the resalts of our general observation that it does not pay a ryot to purchase lands with borrowed capital.

## Partial decrease in extent.



Even here, one can digcover economic pressare in at least 8 cases.
Complete acquisition.


Barbers, ooachmen, toddy drawers and coolies always sink, as they did in this village, all their arvings in the purohase of house-sites and in building houses,

Exoept for the first five oases, whioh are due to incomes from land, all the other cases of sequisition of land art due to non-agricaltural or quasi-agrioultural canses. Thus while many ryots are losing their lands owing to the inability of the land to afford them a sufficient income to maintain themselves and perform the necesuary marriages, most of their lands are parohased by people who make their savings in non-agrioultural avocations.

Partial increase.


II-15

Most of the cases of acquisition which are due to earninga in Rangoon and inoome from labour relate to the parchase of house-sites and are therefore relatively uaimportant. Yet the Investigator sings the naual song that "it will be olearly seen that the people are quite eolvent as a whole, if not affigent and this is clearly an indioation of how easily the present nesesment is borne." He is quite enthusiastio aboat the people being "quite comfortably off" and grows imaginative and says that "with the growth of education and the farther development of the country Nallamilli should go on from strength to strength and be quite flourishing in the near foture."

APPENDIX No. 24 (i).
 8ettlemest Party in East Godavari Digtrict.

N.B.-Vadlapalu and Tapeswaram were originally erquired into and the total debts came to $\mathbf{H a}$. 77,350 and Rs. 25,100 , respectively, but these were not taken into consideration as an be seen from their absence in the consolidated statement and in place of these two, other villages presomally Kontiodurra and Lolla with 98 ases amounting to only Hs. 10,750 most have been taken up.

Abstract.

N.B.- Ont of 9,690 eases only 688 cases (resident cingle fattadars) have been enquired into, i.e., 16 per cent of the total bingle resident pattadars. This shows that the enquiry is very incomplete and it alco showe that suah eaces favourable to their rerort might have been taken ap.

Liet oy fullage for whick modebtbdngas minquiry has bekn made by Gettlameant Party nif Wrat Godavari Dibtrict.

| 勆 |  | Taluk. |  | 商 | Name of village. |  | Single pattadar into. | $\begin{gathered} \text { Single } \\ \text { reaident } \\ \text { patidedar } \\ \text { not } \\ \text { enquired } \\ \text { into. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Tanubu | - . | ** | [ ${ }^{1}{ }^{\circ}$ |  |  | 5 19 21 9 9 2 8 18 9 8 81 61 26 | $\begin{gathered} 61 \\ 228 \\ 220 \\ 95 \\ 168 \\ 198 \\ 198 \\ 163 \\ 186 \\ 88 \\ 117 \\ 176 \end{gathered}$ |
|  |  |  |  |  |  |  | 170 | 1,654 |
|  | Narasapur | $\cdots$. ${ }^{\text {a }}$ |  | 121814161617181920 | Aghanta . <br> Peddamaliam <br> Penamadam <br> Gummalnra <br> Ilapakarra <br> Kaya <br> Tundurra <br> K ummaraparagupalem" |  | 41 28 17 17 34 34 23 21 28 98 | 667 14 84 83 108 11 264 92 92 |
|  |  |  |  |  |  |  | 227 | 1,212 |
| 8 | Bhimavaram |  |  |  | Palakodera <br> Peda Amiram <br> Maipa <br> Vendram Kopaile <br> Kamadavalli <br> Gollalakodery <br> Garagapa <br> China Amiram <br> Chilnkara <br> Komarada <br> Pudapolleru <br> Mahidevapataam <br> Chinapa)lera <br> Madugupolavaram Andaluru <br> Andalara |  |  |  |
|  |  |  |  |  |  |  | $\begin{array}{r}16 \\ \hline 6\end{array}$ | Nil. 10 |
|  |  |  |  |  |  |  | ${ }^{15}$ | 7 |
|  |  |  |  |  |  |  | 34 18 | 138 84 |
|  |  |  |  |  |  |  | 48 | 188 |
|  |  |  |  |  |  |  | 42 | 80 |
|  |  |  |  |  |  |  | 17 | 103 |
|  |  |  |  |  |  |  |  | ${ }^{229}$ |
|  |  |  |  |  |  |  | 34 | Nil. |
|  |  |  |  |  |  |  | 88888 | -95 |
|  |  |  |  |  |  |  | ${ }^{6}$ | 47 |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | 685 | 1,783 |

Abstract.

|  |  |  |  |  | $\begin{aligned} & \text { mber } \\ & \text { lagea } \end{aligned}$ | Cases nquired into | $\begin{gathered} \text { Not } \\ \text { enquired } \\ \text { into. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Tanaku |  | . | - | .. | 11 | 170 | 1,654 |
| Narasapar | $\cdots$ | - | . | . | 9 | 227 | 1,212 |
| Bhimavaram | - | - | $\cdots$ | . | 18 | 565 | 1,783 |
|  |  |  |  |  | 38 | 962 | 4,649 |
| Total cases .. Cases enquired |  |  |  | $\cdots$ | - | $\begin{aligned} & \cdots \\ & \cdots \end{aligned}$ | $5,611$ <br> 17 per cent of the total cases. |
|  |  |  |  |  |  |  |  |

NB.-1. From a eoparate gtatement of Gollalakodara prepared by the Special Revenve Inepeotor, it appears that the total dobt of the village was Rs, 68,880 but another statement bas been prapared so as to bring down this fgare by one half, i.e., Re, 26,700 and this hea been shown in the oonsoliduted register.
2. From a espurate atatement of Chilnkar prepared by the Special Revence Inspector, it appears that the tofal dobt of the village FBe Kis. 98,800 but another fatement has been prepsred 80 as to make the figure ks. 11,250 and thia bas been shown in the consolidated register, the balance of the total debts originally arri ved at having been ignored.
8. Two atatamente prepared for the village of Yendagandi and Kondopadn bave not been taken into acoount. They are Re. 79,900 and Re. 63.100 . In the place of theee villages, it is quite possible that Chinapallera and Tillopadi must have been taken up with their indebtednese figure of Ein. $\mathbf{4 , 2 6 0}$ and Ra, 7,960 respeotively.
 Party ma Kistin Distact.

| Bingle ramident pettodars manired inte. | Siagle raident pethedare aot |
| :---: | :---: |

Bandar Tatut.

| 1. Tallapalem | - | -• | - |  | -• | 142 | 19 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Amudalapalle | - | $\cdots$ | - | $\cdots$ | - | 28 | Nil. |
| 3. Rerivartallapalli |  | . |  | . |  | 26 | Nil. |
| 4. Buddalapalem |  | - |  | - | - | 15 | Nil. |
| 5. Pottepalu - |  | .. | - | . | . | 16 | 2 |
| 6. Nandigama |  | . | . | . | . . | 40 | 20 |
| 7. Chimapandraks |  |  | . | . | . | 28 | 17 |
| 8. Arisepalle |  | -• | . | $\cdots$ | $\cdots$ | 28 | 5 |
|  |  |  |  |  |  | 323 | 63 |
|  |  |  |  | Total | $\cdots$ |  |  |

F.B.-The villages selested are vary petty villaget and moxt ingortant tulaky that are barienod vith inlebtedacm Dave not been enquired into.

Abstract (Villages).

| 1. East Godevari district | $\cdots$ | $\cdots$ | - | $\cdots$ |  |  | 32 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Weat Godavari district |  | .. | . | - | . |  | 38 |
| 3. Kistna distriot |  |  |  |  | - |  | 8 |
|  |  |  |  |  | Total | - | 78 |

## APPENDIX Na 24 (ii).


Fistina District.


## REP0RT

## OF TRE

# ECONOMIC EṄQUIRY COMMITTEE 

## Vol. III-Appendices

## LIST OF APPENDICES.

## CONTENT8.



III-A



## APPENDIX No． 2 （ii）．

Table showing rainfall in inches．

| Years． | 号 | 盛 | 䂞 | 感 | 安 | 吕 | 家 | 嵒 | 安 | 8 <br> \％ <br> 8 <br> 8 <br> 8 | 告 | ¢ 8 最 ¢ A | － |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

（i）Gudivada．

| 1840 | ． | ． | $\cdots$ | ． |  |  | 0.17 |  | 7.80 3.90 | 5.12 5.50 | 2.05 7.47 | 4.85 8.47 | 6.08 1.10 | 8.77 0.05 | 0.22 | \＄4．81 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $18 \mathrm{H1}$ | ．． | － | $\cdots$ |  |  |  | ． | 0.70 | 3.90 | 5.50 | $7 \cdot 47$ | $0 \cdot 47$ | $1 \cdot 10$ | 0.05 |  | 85－19 |
| 1892 |  |  |  |  |  |  |  | 0.22 | $2 \cdot 55$ | 4.81 | 6.88 | 6.82 | 18.01 | 0.24 | 0.01 | 39．54 |
| 1893 |  |  | $\cdots$ | 0.61 | 0.86 | 126 | $\cdots$ | 2.80 | 4.64 | $8 \cdot 48$ | 6.32 | 5.59 | 1.77 | $9 \cdot 14$ | ． | $40 \% 7$ |
| 1894 | ． | －． | ．． | O－69 |  |  | 2.26 |  | 2.48 | 1.64 | $4 \cdot 87$ | 5.53 | 11.51 | $4 \cdot 12$ | ．． | 82.00 |
| 1846 | $\cdots$ |  | $\ldots$ |  |  | 0.68 | $0 \cdot 68$ | $2 \cdot 14$ | 287 | 8.90 | $8 \cdot 08$ | 9.99 | $8 \cdot 65$ | 1.94 | ． | 48.76 |
| 1886 | ．． | ， | － | $\ldots$ |  | ． | ．． | 2.01 | 822 | 4.96 | 459 | 1.61 | 0.88 | 869 |  | 80.86 |
| 1897 | ． |  | ． |  | 0.28 | $2 \cdot 14$ | $\cdots$ | 2.48 | 1.31 | 323 | 10.82 | 6.94 | $5 \cdot 16$ | 0.11 |  | $81 \cdot 67$ |
| 1898 | ． | － | ＇， |  | 202 |  | － | 0.66 | $4 \cdot 15$ | 7.93 | $2 \cdot 24$ | 2.24 | 8.82 | 5.74 |  | 28.80 |
| 1898 | ． | $\cdots$ |  |  |  |  |  | 0.33 | 0.96 | 2.87 | 7.55 | 5.76 | 1.87 |  | $\ldots$ | 28.87 |
| Sattl age 189 | $\begin{gathered} 101 \\ 30 \\ 1928 \end{gathered}$ | $\begin{aligned} & \text { er's } \\ & \text { cars } \end{aligned}$ |  | 0.37 | 0.26 | 0.25 | 1.06 | 1.80 | $3 \cdot 67$ | 6.26 | 5.81 | 6.32 | 6.50 | 2.84 | 0.22 | $83 \cdot 36$ |

（ii）Nandigama．

（iii）Ramachendrapuram．

（iv）Peddapuram．


Table showing rainfall in inches-cont.

(v) Bhimavaram.

(vi) Ellore.


APPENDIX No. 8 (i).
Statement ahowing the average monthly oultivation in hundreds cf aores for each taluk, both for dry and wet landa in ordinary yeara.


## APPENDIX No. 3 (ii).

Cultivation Account-East Godavary.
Statement showing the average area sown in each taluk during each month of the year.


## APPENDIX No. 4.

Kigtas, Wrat and East Godavabis.
Remissions.


| (a) One handrad and fifty sores was left wusto due to | (f) Upland wet, remissions not asanl. |
| :--- | :--- |
| the fear of sabmersion. | (d) Upland wet. |
| (b) Remissions ard neasi. |  |

West Godavari District.

(a) This moouent in for the secoond arop sabmeraion.

IIT-2

## West Godavari District-oont.

Remisaion.

| Berial number and name of the village. | Period of remission. | Namber of years doring that period. | Extent remissioned. | Amonnt of remimaion. | Drainage diffioulty. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | When rewuis- When it was <br> sion wrus  <br> granted. not granted. |  |  |  |

Even previous to 1915 remissiona were common.


East Godavari District.

(a) Crop spoiled.

APPENDIX No. 6.
Dischargr Statrmbits.

| Monthb. |  | 1819. | 1820. | 1921. | 1922. | 1923. | 1924. | 1926. | 1926. | 1927. | 1928. | 1929. | Total. | A verago. | Aysort. | Daty. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (8) Godavari Eastern and Central Dellas. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Jane | .. | . | 2,335.0 | 8,21t-8 | 2,103.5 | 1,098. 5 | 1,0920 | 6,084.9 | 2,210.6 | 2,985.6 | 3,254.6 | 2,684.1 | 25,982. 6 | 2,598 |  |  |
| 2. July | .. |  | 8,818.0 | 7,2309 | 7,518 4 | 5,165.2 | 4,848.1 | 5,672.1 | 4,433.6 | 8,133.6 | 6,620.8 | 5,412.8 | 69,757.1 | 6,478 |  | 196.4 69.8 |
| 3. Anguat .. | . |  | 6,802.2 | 6,734-2 | 7,173.3 | 8,108. 5 | 7,386.8 | $4,704.3$ | 5,608.0 | 8,004.8 | 8,414.6 | 3,4472 | 61,481.9 | 6,148 |  | 67.7 |
| 4. Sepiember | . | .. | 6,767.7 | 7,001.7 | 7,440.1 | 6,203.6 | 6,238.2 | 6,568.2 | 5,049.5 | 6,969.0 | 6,217.6 | 6,690. 6 | 68,438.2 | 8,344 | 854,468 | 65.9 |
| 6. Ootober .- | $\cdots$ | . | $6,447.9$ $4,429.8$ | $8,104.4$ $6,529.3$ | 8,508-1 | $8,104.3$ 4,343 | $8,083 \cdot 8$ $8,683 \cdot 8$ | 4,803.1 | 5,914.2 | 8,447.8 | 5,840.7 |  | 62,760.3 | 6,862 |  | 60.6 |
| 7. November | $\ldots$ |  | 4,429.8 $2,655.8$ | 6,529.3 $4,576.7$ | $6,578 \cdot 2$ $6,114.0$ | $4,343.7$ $4,607.8$ | $8,688 \cdot 8$ 8,164 | $4,911.0$ $3,738.0$ | $4,799.7$ $4,337.1$ | $8,704 \cdot 4$ $8,842.8$ | 4,3552 $3,607.0$ |  | 41,914.4 | 4,690 |  | 77.8 |
| 8. January .. | $\ldots$ | $\cdots$ | 2,042.0 | 2,128.5 | 8,868.7 | $4,718.2$ | $4,219.9$ | 3,988.4 | 8,987.1 | 4,006.8 | $8,607.0$ $8,351.3$ | 8,432.5 | 38,624 $30,703 \cdot 4$ | 8,736 8,754 |  | 37.1 26.9 |
| 9. Febrasry.. |  |  | 4,107.6 | 1,896.6 | 8,848-3 | 2,834.8 | 2,846.8 | 2,673-1 | 4,198.0 | 8,087.5 | 3,068.8 | 3,695•8 | 31, 5547 | 3,155 |  | 26.9 32.0 |
| 10. March .. |  |  | 2,222.8 | 782.1 | 1,783.7 | 1,927. 6 | 1,299-3 | 1,625-4 | $8,289 \cdot 6$ | 1,940-1 | 2,385-1 | 2,852.6 | 20,062.5 | 2,006 | 101,093 | 60.4 |
| 11. April -. | .. | . | 1,424.0 | 835.5 | 1,835-7 | 1,734.5 | 1,348.8 | 1,385•6 | $8,018 \cdot 0$ | 1,546.8 | 1,639.0 | 2,009•7 | 16,282.5 | 1,626 |  | 62.8 |
| 12. May .. |  | .. | 2,580.3 | 1,002.0 |  | 1,865.0 | 1,140.0 | 1,600.0 | 1,446.0 | 1,857.0 | 1,462.0 | 1,112.0 | 13,074 3 | 2.208 |  | 458 |
| (ii) Godavari Western Delta. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Jung .. |  | 8,989.7 | 1,390-7 | 2,048.8 | 1,523.5 | 698.8 | 948.6 | 8,887.7 | 1,588.2 | 2,968.0 | 2,534.6 |  | 20,880-1 |  |  |  |
| 2. July .. | . | 5,612 6 | 5,376.0 | 4,588.4 | 6,036.5 | 8,335.1 | 3,930.0 | 4,608.7 | 4,081 3 | 3,657.8 | 4,762.9 |  | 44,863.3 | 4,486 |  | 89.8. |
| 3. August :- | $\cdots$ | 6,610-8 | 6,448.2 | 4,1760 | 6,731.6 | 5,8194 | 5,700.0 | 1,644.5 | 4,954.5 | 4,337-1 | 5,383.9 | .. | 48,888.6 | 4,869 |  | 82.4 |
| 4. Sep.ember | .. | 5,835.0 | 6,435.6 | 4,440.0 | 6,279.7 | 4,463.3 | 3,208. 7 | 4,388.7 | 4.880 .0 | $4,300 \cdot 7$ | 5,100.0 |  | 47,829.6 | 4,738 | 402,744 | 85.1 |
| 6. Ootober .- | . | 8,516.1 | 4,230.6 | 4,0702 | 4,968.1 | 4,7760 | 4, $916 \cdot 1$ | 3,372.4 | 5,117.7 | 4,887.1 | 2,686.8 | . | 41,940.6 | 4,184 |  | 96.0 |
| 6. November. | $\cdots$ | 4,1333 $4,000.0$ | $4,044 \cdot 0$ $2,463.9$ | $4,8,8680$ $8,450 \cdot 0$ | $8,686 \cdot 7$ $8,212 \cdot 8$ | $2,238.8$ $2,822.8$ | 2,7149 $2,527.4$ | $3,791 \cdot 0$ $2,775.8$ | $4,414 \cdot 8$ $3,509 \cdot 2$ | $2,816 \cdot 5$ $8,368 \cdot 1$ | $3,721 \cdot 8$ $3,077 \cdot 1$ |  | $35,860 \cdot 8$ $31,498 \cdot 4$ | 8,686 8,160 |  | 112.8 |
| 8. Junuary .. |  | 4,00 | 4,519.4 | 2,518.1 | 8,450.0 | 8,976.1 | 2,948.4 | 2,573.5 | 8,400.3 | 8,183.9 | 3,485.6 | 8,191.0 | 82,245.2 | 8,225 |  | 127.2 40.9 |
| 9. February.. | $\cdots$ | .. | 4,505.0 | 1,280.8 | 8,161.1 | 2,962.9 | 2,813.8 | 2,374.9 | 3,670.0 | 2,479.6 | 3,622-1 | 8,622.0 | 30,342.8 | 8,084 |  | 40.9 49.8 |
| 10. Mareh .. | $\cdots$ | $\ldots$ | 2,460.0 | 947.8 | 1,098.7 | 1,920.6 | 1,392.8 | 1,711.1 | 2,946.1 | 1,974.9 | 2,602 7 | 8,031.0 | 19,985.6 | 1,999 | 151,147 | 75.6 |
| 11. April .. |  | .. | 1,884-8 | 878.1 | ${ }^{1600} 3$ | 1,477.8 | 1,109.7 | 1,442.6 | 2,749.7 | 1,575-6 | 1,850.8 | 1,732-1 | 15,066.0 | 1,607 |  | 100.8 |
| 12. May .. |  | . | 1,260.0 | 996.0 | 883.3 |  | 860.6 | 1,641-3 |  | 1,639.3 |  | 2,464.0 | 9,628.4 | 1,878 |  | 109.8 |
| (iii) Besuada, Kisma Eastern Delta, |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. January .- | $: 1$ | 877 | 1,595 | 868 | 2,461 | 1,418 | 708 | 940 458 | 1,108 | 697 840 | 1,445 |  | 11,705 | 1,171 |  | $\cdots$ |
| 8. March if | $\because$ | 172 | 859 | 479 | 409 | 839 | 116 | 230 | 743 | 164 | , 690 |  | 4,501 | 604 460 |  | $\because$ |
| 4. April .. | .. | 208 | 238 | 825 | . | .. | .. |  | . | 264 |  | - | 1,696 | 384 | $\because$ | $\because$ |
| 6. May $\quad$ June | $\cdots$ | 8,186 | 2,038 | 2819 | 2.128 | 10218 | 2,392 | 1,825 | 1.778 | $2 \cdot 617$ | 618 4.355 | $\cdots$ | 1.518 24.809 | ${ }^{618}$ |  |  |
| 7. July $\quad$ - | $\because$ | 6,661 | 6,381 | 6,1+1 | 6,885 | 6,611 | 6,665 | 5,144 | 6,207 | 4,825 | 5,984 |  | 6E,304 | 6,585 |  | ${ }^{166.8}$ |
| 8. Auguat .. | . | 6,988 | 6,316 | 6,304 | 6,208 | 7,396 | 6,322 | 2,033 | 6,252 | 4,898 | 6,680 |  | 56,782 | 6,678 |  | 73.6 |
| 9. September | . | 6,093 | 4,872 | 4,061 | 6,118 | 4,289 | 8,042 | 4,848 | 4,889 | 4,390 | 4,371 | $\cdots$ | 45,768 | 4,675 | 410,111 | 89.6 |
| 10. Ootober .. | . | 3,880 | 4,328 | 8,648 | 4,138 | 8,619 | 3,208 | 8,801 | 6,6+6 | 4,762 | 2,691 | - | 39,641 | 8,964. |  | 1096 |
| 11. November | $\cdots$ | 8,568 2,347 | 3,138 $\mathbf{1 , 1 6 7}$ | 4,409 | 2,328 1,287 | 2,201 | 1,972 | 4,298 1,924 | 4,884 | 2,101 2,048 | 3,598 $\mathbf{1 , 9 8 8}$ | $\because$ | 81,989 $\mathbf{1 8 , 5 6 8}$ | 8,190 |  | $\frac{128.2}{28.0}$ |
| 12. Deoember | $\cdots$ | 2,347 | 1,167 | 2,652 | 1,287 | 1,342 | 1,608 | 1,824 | 1,698 | 2,048 | 1,988 | - | 18,668 | 1,866 |  | $222 \cdot 0$ |

Discharge Statements-cont.

| Monthe. | 1919 | 1920. | 1921. | 1422. | 1823. | 1824. | 1425. | 1926. | $1 ¢ 27$. | 1928. | 11.29. | Totnl. | Avernge | A yoout. | Daty. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

(iv) Divi Project.

| 1. Jone |  | 188 845 | 212 441 | 183 262 | 168 | 378 | 170 314 | 309 | 305 | 118 | ${ }_{683} 263$ | $\cdots$ | 1,203 8,331 | 172 870 |  | aca. | 2180 900 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8. August | .. | 543 | 631 | 448 | 418 | 679 | 467 | 366 | 677 | 418 | 628 | $\because$ | 4,901 | 440 |  |  | 778 |
| 4. Beptember | - | 889 | 8118 | 302 | 834 | 859 | 234 | 360 | 305 | 341 | 379 | $\cdots$ | 3,361 | 336 | > | 28,630 | 1098 |
| 6. Ootober |  | 369 | 880 | 280 | 317 | 283 | 833 | 462 | 351 | 386 | 285 | . | 9,406 | 341 |  |  | 1074 |
| 6. November | $\ldots$ | 262 | 340 | 880 | 334 | 187 | 287 | 282 | 282 | 125 | 300 |  | 2,76\% | 276 |  |  | 1327 |

(v) Water returns of Muriyeru Anicut from 1920-1929—Discharges through Head Sluice-Average per day.

| June .. | $\cdots$ | $\cdots$ | $\cdots$ | 148 229 | 116 289 | 83 265 | 230 | 89 | 141 279 | 287 | 273 | 315 | 148 | 482 2.892 | 121 239 |  |  | 667 287 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| August | $\ldots$ | $\cdots$ | $\cdots$ | 259 | 873 | 234 | 468 | 186 | 476 | 608 | 448 | 625 | 820 | 3,820 | 882 |  | \% | 179 |
| September | $\cdots$ | . | $\cdots$ | 316 | 290 | 484 | 637 | 426 | 619 | 488 | 419 | 480 | 628 | 4,446 | 446 |  | $\stackrel{-}{*}$ | 154 |
| Ootober | . | . | . | 203 | 884 | 434 | 474 | 398 | 392 | 814 | 609 | 483 | 628 | 4.278 | 428 |  | 8 | 160 |
| November | . | .. | $\cdots$ | 134 | 379 | 886 | 664 | 412 | 535 | 314 | 478 | 477 | 481 | 4,134 | 418 |  |  | 166 |
| Deoenber | $\bullet$ | .. | $\cdots$ | 61 | 164 | 78 | 348 | 209 | 144 | 181 | 477 | 126 | .. | 1,412 | 167 |  | 8 | 487 |


| M onthe. | 1919. | 1920. | 1021. | 1922. | 1923. | 1924. | 1926. | 1826. | 1927. | 1928 | 1929. | Total. | Average. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |


| 1. Jane |  |  |  | 1,965 0 | 1,807 8 | 1,978 5 | 6035 | 5780 | 2,764 9 | 1,241 6 | 1,485 6 | 1,805 6 | 1,2941 | 14,074 8 | 1,407 46 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2. July |  | .. |  | 3,7140 | 3.949 .9 | 4,148 4 | 2,848 2 | 2,c08 1 | 3,1701 | 2,5736 | 3,143 6 | 8,333 8 | 3,031 6 | 22,6111 | 8,25111 |
| 3. August |  | . |  | 3,705.2 | 2,628 2 | 3,338 3 | 4,295 5 | 4,1028 | 2,8583 | 8,1010 | 8,0608 | 3,503 6 | 1,087.2 | 81,9119 | 3,101 19 |
| 4. Septenber |  | . |  | $3,623 \cdot 7$ 2,79 | 3,532 7 | 3,881 1 | 3,174.6 | 2,7762 | 3,424.2 | $8,428.5$ | 3,2460 | 3,3436 6 | 2,4006 | 83,4402 | 3,344 02 |
| 8. Ootober |  | . |  | 2,7199 | 3,182.4 | 3,6381 | 3,873 3 | 8,177.8 | 2,610 1 | 8,3872 | 3,2478 | 2,728 7 | .. | 27.9163 | $3.100 \cdot 60$ |
|  |  | $\because$ |  | 2,317.3 | 2,747 3 | 2,999 2 | 1,816 7 | 1,7676 | 2,478.0 | 2,56: 7 | 1,683 4 | 2,053 2 | $\ldots$ | 20,246 | 2.24960 |
| 7. Deoember |  | $\cdots$ |  | 1,387.3 | 2,116.7 | $2,863.0$ | 2,082. 6 | 1,426 0 | 1,836.0 | 2,017 1 | 1,940 3 | 1,836 0 |  | 17,254 0 | 1,421 68 |
| 8. January |  | $\cdots$ |  |  | 1,2235 | 1,889 7 | 2,563.2 | 2,264.9 | 1,731 4 | 2,018.1 | 2,2878 | 1,6278 | 1.8415 | 17,4184 | 1,928-16 |
| 10. March |  | $\cdots$ |  | 2,180. | 1,154.6 | 1,867.3 | 1,6108 | 1,652 8 | 1,443. | 2,244.0 | 1,672 6 | 1,6488 | 2,1048 1.572 .6 | 17,466 7 | 1,74687 1,13116 |
| 11. April | $\cdots$ | -• | $\because$ | $1,886.8$ 8860 | 666.1 754.6 | 1,0817 717 | 1,1215 1,0085 | 808.8 7698 | 8784 7826 | 1,8205 | $1,085.1$ 8058 | 1,8401 9670 | $\begin{array}{r}1,672.6 \\ 7 \times 8 \\ \hline\end{array}$ | $11,811 \cdot 6$ 0.818 | 1,13116 92186 |
| 12. May | $\cdots$ | . | $\cdots$ | 8608 | .. | .. |  |  |  |  | .. |  |  | 8608 | 60. 50 |

Disoharge Statomentemoont．

| Months． |  | － 1019. | 1920. | 1081. | 1022. | 1928 | 1034. | 1026. | 1098. | 1427. | 1928 | 1898. | Total， | A varaga． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| （vii）Godavari－Central Della， |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1．Jane $\quad$－ | ． | Mot noted． | 080 | 1，008 | 726 | 408 | 614 | 2，820 | 969 | 1，460 | 1，449 | 1，400 | 11，608 |  |
| 3．Jaly $\cdot$ | ． | Do， | 8，114 | 8，240 | 8，936 | 2.817 | 2，240 | 2， 60108 | 1，809 | 2，900 | 8，187 | 3，881 | 97， 2168 | 8，740 |
|  | $\cdots$ | No． | 8,1147 8,186 | ${ }_{8}^{8,2146}$ | 8,336 8.659 | 8,871 8,020 | 8， 2,288 | 2,006 8,144 | 28.617 | 2，054 | 2，861 | 2，880 | 99，870 | 9，467． |
| 4．Heplamber | $\cdots$ | Do． | 8,186 2,728 | 8,469 8.472 | 8,669 2,470 | 8,021 8,781 | $\xrightarrow{2,462}$ | 8,144 8,168 | 2,681 2,647 | 8.194 8.220 | 9,854 8,618 | 8，6010 | 20，04\％ | 88,000 |
| c．Xoveruber ${ }^{\text {a }}$ ． | $\cdots$ | De． | 2,112 | 8，782 | 2,810 2,834 | 8,181 2,637 | 2，4006 | 2,168 3,493 | 2，647 | 8，280 | 8， 2，912 | Mil． | 34,888 21,01088 | 2,769 $2,8 t 1$ |
| 9．Deoember ．． | ． | Do． | 1，2018 | 2，480 | 2，461 | 2,645 | 1，730 | 1，403 | 2，3110 | 1，402 | 1，773 | $\because$ | 18，880 | 1，814 |
| S．Janaary ．． | ， | Do | 2，048 | 400 | 1，978 | 2,150 | 1，455 | 2，267 | 1，954 | 1，784 | 1.724 | 1，691 | 18，287 | 1，820 |
| 9．Pabruary ．． | ． | Do． | 1，487 | 14 | 1，479 | 1，144 | 1，148 | 1，184 | 1，454 | 1，885 | 1，820 | 1，601 | 16，040 | 1，410 |
| 10．Maroh－ | ． | Do， | ${ }^{092}$ | 917 | 702 | 8116 | 848 | 747 | 1，419 | 846 | 1，046 | 1.275 | 8,741 | 874 |
| 11．April ${ }_{\text {12 }}$（\％ | $\because$ | Do． | 868 1,740 | 81 1,000 | 618 | 781 1,886 | 674 1.140 | 8683 1,000 | 1，210 | 811 | ${ }_{1}^{482}$ | 1，211 | 6，949 | 896 |
| 2．， | ＇＇ | D； |  |  | －＇ | 2，000 | 1，180 | 1，000 | 1，446 | 1，ab7 | 1，668 | 1，118 | 19，224 | 1，868 |

APPENDIX No． 7 （i）．
Feagmentation of Holdinas．

|  |  |  |  |  | Kidina． |  |  |  | East Godavarl． |  |  |  | Weat Godavari． |  |  |  | Total for there three distriota． |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | $\begin{gathered} 6 \\ 6 \\ 8 \\ 8 \\ 8 \\ 8 \end{gathered}$ | $\begin{aligned} & \text { 菏 } \\ & \text { 品 } \end{aligned}$ |  |  |  | 䓓 | $\begin{aligned} & \text { \& } \\ & \text { 品 } \\ & \text { 品 } \end{aligned}$ | $\begin{aligned} & \text { \$ } \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ |  | 莫 |  |  |  | 严。 | \％ |
|  |  |  | $\because$ |  | 768 28．8 |  | Acs． 85498 | 14 | 2，274 | 480 | ${ }^{1,08197197}$ | 297 | 821 | 24.8 | ${ }^{468 .} 14721$ | 1.9 | 8，861 | 88.280.6 |  | 8017.9 |
|  |  |  | $\cdots$ | 1，311 | 809 | $8,612.28$ | 18.8 | 1，960 | 88.5 | 4，39741 | 818 |  | 89.1 | 1，267．80 | 11.4 | 8，7\％0 |  |  |  |
| $10{ }^{10}$ | ＂ | 6 |  | ． | ．． | 681 | 177 | 4，184．12 | 18.5 | 878 | 76 | 2，481．08 | 16.4 | 209 | 168 | 1，480 08 | 180 | 1，167 | 12.1 | B，098 08 | 16.8 |
| 16 ＂ | ＂ | 10 | ．， | ．， | 222 | 6.7 | 4，182．48 | 18.4 | 132 | 2.7 | 1，686． 68 | 100 | 03 | 71 | 1，128．04 | 10.8 | 447 | 47 | 6，468．18 | 18.5 |
| 20 ＂ | ＂ | 16 | ． | ． | 168 | 47 | 2，881 64 | 105 | 87 | 12 | 988．70 | 6.5 | 47 | 8.6 | 77607 | 71 | 257 | $2 \cdot 7$ | \＄，441．41 | 88 |
| 25 ＂ | ＂ | 20 | － | － | 80 | 2.4 | 1，78\％／46 | 70 | 96 | 07 | 781.79 | 60 | 87 | 2.8 | 79176 | 72 | 152 | 1.8 | 8，386 00 | 6.6 |
| 80 ＂ | ＂ | 26 | ． | ． | 42 | 1.8 | 1，180．98 | 47 | 88 | 14 | 838.76 | 42 | 20 | 1.6 | 678.77 | 5.2 | 180 | 1.4 | 2，983 81 | 46 |
| 80 | ＂ | 80 | ．． | ．． | 91 | 28 | 4，994．73 | 178 | 28 | 0.6 | 1，072 74 | 71 | 45 | 8.4 | 1，680．48 | 15.8 | 165 | 1.7 | 7,14790 | 18.8 |
| 60 | ＂ | 60 | － | $\because$ | 18 | 0.6 | 1，791．28 | 7.1 | 18 | 0.2 | 1，644．46 | 80 109 | ${ }^{27}$ | 20 | 1，677［68 | 14.4 | 67 | 0.8 | $8,883.88$ | 8.6 |
| Over 80 morce | － | － | ． | －• |  |  |  |  | 18 |  |  | 100 | 18 | $1 \cdot 0$ | 1，612．01 | 18.9 | 4 | 04 | 8，80680 | 97 |

－Information abotraoted from the replies aent by kamams．

## APPENDIX No. 7 (ii).

Fragmentation of Holdinge.
Abstraet for Kistma and West and East Godavanit.
[Information talien from the replies to the Ryote' Questionnaixe]


APPENDIX No. 8.
Agricultural Statistica-Fasli 1330.


II

Tabulated figures of lease values (Committe9's enquixy).



Tabulated figuren of lease values (Committee's enquiry)-cont.



Tabulated figuree of leace valuce

| Name of oultivator. | Innd owned by him. |  | Iand sonted by hime. |  |  |  |  | Speeinl feataree of the land. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dry. |  | Dry. |  | Wet. |  |  | $\begin{aligned} & \dot{8} \\ & \frac{1}{2} \\ & \frac{E}{6} \\ & \mathbf{B} \end{aligned}$ | 䓪 |  |
|  |  |  | $\frac{8}{8}$ | Rent paid. | $\begin{aligned} & \text { 宫 } \\ & \hline \end{aligned}$ | kent paid. |  |  |  |  |
|  |  |  |  | Cash. Kind. |  | Cast. | Kind. |  |  |  |



DIX Na 10 （ii）．
（Committee＇s enquiry）

|  | $\begin{aligned} & \text { Hes he been } \\ & \text { sble to pey } \\ & \text { the crente. } \\ & \text { rogularly? } \end{aligned}$ |  |  |  |  | 容 |  | Properisy loat． |  |  | $\mathbf{J}_{\mathbf{e}}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 成号号 |  |  |  |  |  | 嶅 | 宮 |

Godavaris．

－H．B．ax He－buffilo．
III－5

Tabulated figures of lemee values

| Msme of euftivator． | Iand orrad by him． |  | Iand monted by hime |  |  |  |  |  | Appedal matares of the hand． |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dry． | Wet． | Dry． |  |  | Wet． |  |  | $\begin{aligned} & \frac{8}{8} \\ & \frac{8}{6} \end{aligned}$ | 苞 | $\begin{aligned} & \text { 范 } \\ & \text { 部 } \end{aligned}$ |
|  |  |  |  | Kent | paid． |  |  | paid． |  |  |  |
|  |  |  | 滑 | Centh． | Kind． |  | Onak． | Kind． |  |  |  |



[^10](Committee's enquiry)-cont.

| For how many years hashe taken thyin. |  | $\left\|\begin{array}{c} \text { Has he been } \\ \text { sble to pey } \\ \text { the nente } \\ \text { regularly } \mathrm{p} \end{array}\right\|$ |  |  | How neany abla-bodiedworkers in the family? | 容 |  | Property loat. |  | Debta. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 8 |  |  |  |  |  | 8 |  |  |  | 寅 |

## Godasarie-oont.



Tabralated figarea of leace values



- And eome of this is wet.
(Committeo's enquiry)-conf.


APPENDIX No. 11 (i).
Prices of paddy per bag of $\mathbf{1 6 4} \mathrm{lb}$.


APPENDIX No. 11 (ii).
Prices of paddy per bag of 164 lb .
Kistna District.

|  |  |  |  |  |  |  | Stationwa | fignres. |  | Mr. Holdsw | rth's figures. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Tiravara | Jeggayyapeta. | Nandigama. | Mazvid. | Annual | Ryot's eelling months. |
|  |  |  |  |  |  |  | Upland W |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 1899 | $\cdots$ | * | - | - | $\cdots$ | , | $\cdots$ |  | - | - | $\cdots$ |
| 1900 | . | - | * | $\cdots$ | . | * 415 | $4 \cdot 11$ | 411 | 67 | . | * |
| 1901 | * | $\cdots$ | - | $\cdots$ | . | $4 \cdot 15$ | $4 \cdot 11$ $4 \cdot 8$ | 4.11 43 | 47 | - | - |
| 1902 | - | - | $\cdots$ | $\cdots$ | . | - | 18 3.18 | 43 3.11 | 46 3.14 | - | - |
| 1903 | $\cdots$ | - | $\cdots$ | $\cdots$ | -• | . | 318 | 311 312 | 410 |  | -87 |
| 1904 | . . | - | $\cdots$ | $\cdots$ | $\cdots$ | . | 33 38 | 312 4.1 | 40 40 | 36 311 | 87 48 |
| 1905 | . | - | $\cdots$ | $\cdots$ | - | . | 38 | $4 \cdot 1$ | 40 | 311 | 48 |
| 1906 | - | - | $\ldots$ | $\ldots$ | $\cdots$ | - | $4 \cdot 8$ | - | 4.0 | 46 | 47 |
| 1907 | - | $\cdots$ | - | - | - | - | 4.13 | * | 48 | $6 \cdot 2$ | 68 |
| 1908 | . . | - | - | - | . . |  | 53 | * | 60 | 67 | 64 |
| 1909 | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | 414 | 67 | ** | 6.9 | 610 | $6 \cdot 3$ |
| 1910 | . | . | . . | . . | . | 53 | $5 \cdot 4$ | . | 6.1 | 62 | 6.6 |
| 1911 | . | $\cdots$ | - | $\cdots$ | -• | 53 | $6 \cdot 6$ | $\cdots$ | 44 | 412 | 413 |
| 1912 | . | . | . . | . . | . . | 65 | $5 \cdot 6$ | . | 118 | 64 | 6.9 |
| 1913 | $\cdots$ | - | $\cdots$ | . | . | 6.12 | 515 | . | 61 | $5 \cdot 16$ | 67 |
| 1914 | . | . | . | . . | . | $5 \cdot 14$ | 514 | . | 6.9 | 514 | 6.18 |
| 1916 | - | . | . | - | . | $6 \cdot 1$ | $5-6$ | $\cdots$ | 61 | 66 | 68 |
| 1916 | . | . . | . | - | . | 49 | 6.6 | -. | 616 | 57 | 6-11 |
| 1917 | $\ldots$ | - | . | . | . | $5 \cdot 8$ | 6.6 | $\cdots$ | 59 | 613 | 614 |
| 1918 | . | . | . | . | . | $6 \cdot 6$ | 5.6 | $\cdots$ | 615 | 62 | 64 |
| 1919 | - | - | . | $\cdots$ | . | $7 \cdot 6$ | 82 | .! | $6 \cdot 13$ | 76 | 712 |
| 1920 | . | . . | . | . | . | $8 \cdot 12$ | 91 | $7 \cdot 7$ | 78 8.7 | 94 | 10.2 |
| 1921 | . | - | . | - | - | $8 \cdot 8$ | 96 | . | 8.7 | 98 | $8 \cdot 11$ |
| 1922 | - | * | . | - | - | 7.6 6.10 | - | *- | 78 | 85 | 714 |
| 1923 | $\cdots$ | $\cdots$ | -• | - | - | $6 \cdot 10$ | $\cdots$ | . | 710 | 78 | 70 |
| 1924 | $\cdots$ | . | * | $\bullet$ | - | 7.8 | $\cdots$ | $\because 12$ | 78 | * | -• |
| 1925 | . | - | - | - | -• | 7.7 | - | $12 \cdot 1$ | 79 | . | * |
| 1926 | $\cdots$ | - | . | - | - | 7.0 7.10 |  | - | 70 | - | - |
| 1927 | * | . | -• | - | - | 7.10 7.10 |  | * |  | * | - |
| 1928 | - | * | ** | - | $\cdots$ | 7.10 700 | 6-12. | $\cdots$ | 6.11 | - | * |
| 1929 | * | - | ** | $\bullet \cdot$ | * | 70 | 6.8 . |  | 5.8 | - | ** |


| Stationwar informatiopn expplied by Government for prices of paddy per bag（164 lb．without bag）． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Committee＇s information． |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Mr．Holdsworth＇s figures． |  | Weat Godavari． |  |  |  |  |  | East Godavari． |  |  |  |  |  |  |  |  |  |  |  |  |  | 80\％品 |  |
|  |  |  |  |  |  |  | $\begin{aligned} & \text { 总 } \\ & \text { 邑 } \\ & \text { H } \end{aligned}$ |  | $\begin{aligned} & \text { 品 } \\ & \text { 砸 } \end{aligned}$ | ¢ en 易 4 |  | $\begin{aligned} & \text { 感 } \\ & \text { ही } \end{aligned}$ |  | $\begin{aligned} & \text { 比 } \\ & \frac{E}{4} \\ & \hline \end{aligned}$ | $$ | $\begin{aligned} & \text { 曾 } \\ & \text { 蔦 } \\ & \text { 品 } \\ & 4 \end{aligned}$ | 䓂 |  | $\begin{aligned} & \text { 商 } \\ & \text { 总 } \\ & \text { 总 } \end{aligned}$ |  |  |  |  |  |  |  |
| 1899 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1900 | ．． | ． | $\ldots$ | $\ldots$ |  |  | $\because$ |  |  |  |  |  | $\cdots$ | $\cdots$ |  |  |  | $\cdots$ | $\cdots$ | $\cdots$ | $2 \cdot 12$ | $\cdots$ | 30 | ． | $\cdots$ | 1899 |
| 1901 | ． |  |  | ．． | 411 | 47 | 4.15 | 52 | 411 | 6.3 | 414 | 49 | $5 \cdot 1$ | 41 | $\stackrel{8}{8}$ | 50 | 411 | $\cdots$ | $\cdots$ | $\cdots$ | 8.6 8.14 | $\cdots$ |  | $\cdots$ |  | 18100 |
| 1902 | ．． | ．． | $\cdots$ | ． | 312 | 39 | 4.6 | 4.9 | 40 | 41 | 47 | 4.11 | 4.2 | ${ }_{3}^{4 .} 8$ | $4 \cdot 12$ | 6.7 4 | 42 | $\because$ |  |  | 8812 |  | 4.2 8.12 |  |  | 1901 1802 |
| 1903 1904 | $\because$ | $\because$ |  | 3.5 | 37 | 3.4 <br> 3.2 | 3.11 | －315 | 3.7 | 39 | $3 \cdot 12$ | 3.14 | 3．11 | 35 | 4.1 | $3 \cdot 11$ | 314 | $\because$ | $\cdots$ | $\cdots$ | 2.13 | $\cdots$ | ${ }_{3} 9$ | $\because$ |  | 1902 1903 |
| 1905 | $\ldots$ | ． |  | 314 | 43 | 3.8 | 4.2 | 3.12 3.12 | 3.4 | 3.6 | ${ }^{3} 12$ | 32 | 36 | $2 \cdot 14$ | 4.0 | 38 | ${ }^{8} 13$ | $\cdots$ | $\cdots$ |  | 82 |  | 88 |  |  | 1804 |
| 1806 | ．． | ． |  | 412 | 4.7 | 4.6 | $5 \cdot 0$ | 45 | ${ }_{4} 1.15$ | ． | 3.12 | 8.12 | 3.10 | 3.4 | 4.4 | $4 \cdot 2$ | 4.0 | ． | $\cdots$ | $\cdots$ | 87 | ． | $5 \cdot 4$ |  |  | 1805 |
| 1907 | ．． | $\ldots$ |  | 5.9 | 5.5 | 5.6 | 5.15 | 4.5 | 5.0 | $\because$ | 4.15 5.9 | 6.0 6.2 | 4.6 5.4 | $3 \cdot 15$ $4 \cdot 14$ | 4.15 5.15 | ${ }_{5}^{4.13}$ | 4.15 | $\cdots$ | $\cdots$ | $\cdots$ | 414 | 40 |  |  |  | 1906 |
| 1808 | ．． | ． |  | 5.16 | 6.10 | 5.9 | 63 | 5.6 | 6.6 |  | ${ }_{6}{ }^{6} 1$ |  | ${ }_{6} 5.4$ | 4.14 5.9 | 6.15 6.12 | 6.14 5.14 | ${ }^{5} 5.11$ | $\cdots$ | ： | $\cdots$ | 4.14 | 46 | 414 |  |  | 1907 |
| 1909 | ． | ， |  | 64 | 6.3 | 5.7 | 6.14 | 64 | 8.8 | $\because$ | 6.14 | 7.6 | 6.2 | 57 | ${ }^{7} 70$ | ${ }_{6}^{6 \cdot 11}$ | 6.15 6.15 | $\cdots$ |  | $\because$ | 610 5.10 | 4.12 $4 \cdot 14$ d | 513 |  |  | 1808 |
| 1910 | $\cdots$ | ．． |  | $4 \cdot 11$ | 4.9 | $4 \cdot 1$ | 4.14 | 415 | $5 \cdot 3$ |  | 4.15 | 5.5 | $4 \cdot 10$ | 4.11 | 5.11 | 5.6 | 6.0 |  | $\cdots$ | $\because$ | 3.15 | 4.14 5.0 | 48 9.1 |  |  | 1909 |
| 1911 | ． | $\cdots$ |  | 48 | 4.5 | 4.3 | $4 \cdot 11$ | 415 | 5.3 | $\cdots$ | $4 \cdot 13$ | 57 | 46 | 49 | 6－11 | $5 \cdot 1$ | $6 \cdot 1$ | 4.13 | 41 |  | 40 | 48 |  |  | $\cdots$ | 1910 |
| 1912 |  | ． |  | ${ }_{5} 512$ | 5.5 | 5.2 | 5.11 | 55 | 5.14 |  | 5.12 | 6.14 | 5.5 | 4.12 | $6 \cdot 15$ | 5.15 | 515 | 62 | $5 \cdot 11$ | $\because$ | 4.7 | 48 | 6.15 56 | 5.1 |  | 1911 |
| 1913 | ． | $\cdots$ |  | 66 65 | 6.3 6.12 | ${ }^{6} 610$ | ${ }_{6} 8.7$ | 6.14 | 6.13 | ． | 6.6 | 6.3 | 5.11 | 4.11 | 7.7 | 6.10 | 8.11 | $5 \cdot 15$ | $5 \cdot 14$ | $\because$ | 5.0 | 8.2 | 6.6 .7 | ${ }_{6}^{6.6}$ |  | 1812 1918 |
| 1914 | $\cdots$ | $\cdots$ |  | 65 5.14 | ${ }_{6.6}^{6.12}$ | 5.11 5.2 | 68 6.8 | $5 \cdot 10$ | 6.7 | ． | 6.11 | 7.0 | 6.3 | 5.7 | 7.14 | 6.12 | 6.11 | 6．8 | 7.2 | $\because$ | 6.1 | 45 | 9 | 5.2 |  | 1914 |
| 1916 | $\because$ | $\cdots$ |  | 68 | 6.4 | 56 | ${ }_{6} 6.13$ | 4 | 7.1 | $\cdots$ | 6.3 7.8 | 78 | 5.15 | 5.11 | ${ }_{7}^{6 \cdot 14}$ | ${ }^{6.6}$ | ${ }^{6.0}$ | 6.6 | 7.7 | $\cdots$ | 4.15 | $5 \cdot 12$ | 1 | 4.9 |  | 1915 |
| 1917 | $\because$ | $\because$ |  | 8.3 | 5.6 | ＊12 | $5 \cdot 15$ | 4.14 | 64 |  | 78 | 7.7 | 6.3 5.10 | 6.2 6.5 | 76 80 | ${ }_{6.1}^{8.10}$ | 7.2 6.10 | 75 6.4 | 76 7.6 | ．． | 4.5 | 78 | 1 | $4 \cdot 16$ |  | 1916 |
| 1918 | ． | .. |  | 6.5 | 5.7 | 50 | 5.12 | $4 \cdot 16$ | 6.4 |  | 7.5 | 7.11 | ${ }_{6}{ }_{8} 10$ | 6.5 63 | 78 | ${ }_{6}^{6.1}$ | 6.10 6.12 | 6.4 7.6 | 7.6 7.0 | $\because$ | 4.7 4.7 | 6．1 ${ }_{6} \cdot 12$ | $\because$ | 4.7 |  | 1917 |
| 1919 | ． | ．． |  | 715 | 6.4 | 6.12 | 6.9 | 6.6 | 71 |  | $9 \cdot 13$ | 9.9 | 8.12 | 8.7 | $9 \cdot 4$ | 8.1 | 8.1 | 85 | 7．13 | $\cdots$ | ${ }_{6}^{4.7}$ | ${ }_{8}^{6.12}$ | $\cdots$ | ${ }_{6}{ }_{6} 10$. | $\cdots$ | 1918 |
| 1920 |  |  |  | 101 | 71 | 8.9 | 7.12 | 83 | 714 |  | 12.4 | $10 \cdot 10$ | $10 \cdot 13$ | 9．16 | $10 \cdot 1$ | $12 \cdot 4$ | 1015 | $10 \cdot 10$ | 13.5 |  | 8.4 |  | $\because$ | ${ }^{6} 715$ | $\cdots$ | 1919 1920 |
| 1921 |  | ． |  | 10.8 | 8.6 | 9.7 | $8 \cdot 13$ | 10.6 | 8.8 | $\ldots$ | 11.8 | $12 \cdot 12$ | 11.4 | 10.6 | 123 | 10.12 | 11.9 | 12.10 | $13 \cdot 12$ |  | 6.15 |  | 8.6 | 8.15 |  |  |
| 1922 | － | ．． |  | ${ }_{7}^{9.5}$ | 8.1 | 7.7 | 8.8 | 8.12 | 88 |  | 10.11 | 9 | $9 \cdot 15$ | 98 | 12.10 | 10.8 | 106 | 10.6 | 13.12 |  | 7.5 |  | 7.6 | ${ }_{76} 7$ |  | 1822 |
| 1923 |  |  |  | 712 | 7.3 7.9 | ${ }_{6}^{6.13}$ | 7.4 | 7.11 | $7 \cdot 11$ | $\because$ | 9．9 | 913 | 8.13 | 8.1 | 98 | 8 | 93 | 88 | 8．8 | $\cdots$ | ${ }_{6} 3$ |  | 68 | 8.7 |  | ${ }_{1923}$ |
| 1824 |  |  |  | $\cdots$ | 7.9 | 6．14 | 7.9 | 88 | 7.13 | ．． | 11.1 | 9.14 | 98 | 9.0 | 8.8 | 8.5 | 93 | 9.5 | 9.5 |  | 6.6 |  | 7.8 | 7.6 |  | 1924 |
| 1925 1826 |  | $\cdots$ |  | $\because$ | 7.11 7.0 | 8.8 7.7 | 7.9 | 8.14 | 73 |  | $9 \cdot 14$ | 10.2 | 98 | 9.0 | 8.8 | 8.11 | ${ }^{9} 12$ | 7.3 | 10.6 |  | $8 \cdot 10$ |  | 72 | $7 \cdot 4$ |  | 1926 |
| 1927 |  | $\cdots$ | $\cdots$ | $\cdots$ | 70 80 | 7.7 7.8 | 7.3 8.2 | 8.11 | 8.14 | ＊ | 711 | $7 \cdot 12$ | 7.0 | 6.14 | 8.2 | 6.7 | 77 | 6．14 | $8 \cdot 1$ |  | 6.5 |  | $8 \cdot 10$ | 6．14 |  | 1928 |
| 1928 |  |  |  |  | 76 | 78 | 8.8 | 8.6 7.13 | 9.8 9.6 | ．． | 8.2 8.6 | 7.9 7.9 | 7.8 7.12 | 73 7.3 | 7.9 7.8 | ${ }_{7}^{7.11}$ | 8.0 78 | 7.13 | 79 |  | 7.5 |  | 714 | 7.3. |  | 1927 |
| 1929 |  |  | － | ． | 8.8 | 7.8 | 7.8 | 7.7 | 8.14 | $\cdots$ | 88 | 79 | ${ }_{6.8}$ | 7.8 6.8 | 78 6.8 | 7.11 6.8 | 78 7.7 | 7.5 7.8 | ${ }_{7}^{7.7}$ |  | $6 \cdot 12$ |  | 7.1 6.7 | 6.14 | $\cdots$ | 1 |

24. 

## APPENDIX No. 11 (iv).

Prices of paddy per bag of 164 lb . in loose IV.
West and East Godavari.

|  | Weat Codavari, |  | East Godavari. |  |  |  |  | Mr. Holdsworth's figares. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Tallapadi. | Chintalapadi. | Toni. | Pithapuram. | Prattipadn. | Peddapar. | Rajahmandry | Annual. | Ryote' solling monthe. |

Upland Wet.


## APPENDIX No. 12.

Details of wages taken from Khatas.

| Tear. | $\begin{gathered} \text { Polling } \\ \text { the } \\ \text { seedlings. } \end{gathered}$ | Traneplentation. |  | Weeding. |  | Reaping. |  | Heaping. |  | Harresting. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Man, | Woraan. | Man, | Woman | Man. | Woman. | Man. | Woman. | Man. | Woman. |

(8) Wages of labcur from the accounts of Gudipati Venkatachalapathi Garw.

(ii) Wages of labour from the accounts of Mr. Gudipati Venkata Krishnayya.

(iii) Wages of labour from Yandagandi accounts.

(iv) Wages from the accounts of Yelamarti Ramanna Garu of Bhimadole.


APPENDIX No. 12-cont.
(v) Statement showing the working hours by agricultural coolies.
[From Committece's detwilod roports]

| Sorial <br> num- <br> ber. | Name of village. | 4000. | 1028. |
| :--- | :--- | :--- | :--- |

(a) East Godavari District.


(b) West Godavari District.

|  | Chilukur (Bhimavaram taluk) |  | 8 a.m. to 5 p.m., recese $\frac{1}{3}$ an hour $=81$ hours. | 10 a.m. to 6 p.m., reoess $45^{\prime}-81$ hours. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2. | Dirugamarra ( , , ) | .. | $6-30 \mathrm{a} . \mathrm{m}$. to 12 noon and 2 p.m. to 6-30 p.m. $=9$ hours. | $\begin{aligned} & 9-90 \mathrm{e} . \mathrm{m} . t t^{1} \\ & \text { p.m. and } 2 \\ & \text { hours. } \end{aligned}$ |  |
| 8 | Vemararam ( ${ }_{\text {a }}$ ( $\quad$ ) | '. | $8 \mathrm{a} . \mathrm{m}$. to $5 \mathrm{p} . \mathrm{m}$., recese $\frac{2}{3}$ an hour $=7$ hours. | 9-30 a.m. to 4 p.m., recese t an hour 56 hours. |  |
| 4 | Mogalla ( ${ }^{\prime}$ ( ${ }^{\text {a }}$ ) | .. | 7 am . to 12 noon and 2 p.m. to 8 p.m. $=9$ hours. | 10 a.m. to 1 p.m. and 2 p.m. to 6 p.m. $=7$ honss. |  |
| 6. | Kanohumarra (Tanuku talak) | .. | $7 \mathrm{a} . \mathrm{m}$. to 1 ll s.m. and 2 p.m. to 6 p.m. $=8$ hours. | 9 a.m. to 12 noon and 2-80 p.m. to ${ }^{6-30}$ p.m. $=6$ hours. |  |
| 6 | Bachur (, ).. | . | 7-30 a.m. to 12 noon and 2 p.m. to 6 p.m. $=8 \frac{1}{2}$ bours. | 9 n .m. to 12 noon and 2-30 <br>  |  |
| $\begin{aligned} & 7 \\ & 8 \end{aligned}$ | Mudurar (Tadipalligndem taluk) Nallacherla ( $\quad$ ) | $\cdots$ | $5 \mathrm{a} . \mathrm{m}$. to $10 \mathrm{a} . \mathrm{m}$. and 10 a.m. to $5 \mathrm{p} . \mathrm{m}$. | $\begin{aligned} & 8 \mathrm{a} . \mathrm{m} . \text { to } 4 \mathrm{p} . \mathrm{m} . \\ & 5 \mathrm{a} . \mathrm{m} . \text { to } 6 \mathrm{p} . \mathrm{m} . \end{aligned}$ | No etrange. |
| 9 | Serigavaram (Ellore) .. .. |  | 8 a.m. to 6 p.m., recabs 1 hour. | 10 a.m. to 5 p.m., reoess 1 hour. |  |
| 10 | Chataparra ( ${ }^{\text {a }}$ ) .. .. |  | 7 a.m. to 6 p.m., reaess 1 bour. | 9 a.m. to 4-30 p.m., $1 \frac{1}{2}$ hours recese. |  |
| 11 | Velagalera (Narasapur taluk) | .. | $\begin{aligned} & 7 \mathrm{am} \mathrm{~m} . \text { to } 12 \text { noon and } 1-30 \\ & \text { p.m. to } 8 \mathrm{p} . \mathrm{m} \text {. } \end{aligned}$ | 10 a.m. to $11 \mathrm{e} . \mathrm{m}$, and 2 p.m. to $6-30$ p.m. |  |
| 12 | Koderu ( $\quad$ ( ) | . | 8 a.in. to 6 p.m., reoess 2 hoars. | 10 a.m. to 2 p.m. and 8 p.m. to 5 p. n. |  |
| 18 | Lankalakodera ( ${ }^{\text {( }}$ ( | $\cdots$ | 7-30 a.m. to 1 p.m. and 2 <br> p.m. to B p.m. | 9 s.m. to 1 pm. and 2 p.m. to 8 p.m. |  |
| 14 | Likhitapudi ( $\quad$ ( ) | .. | 6-30 a.m. to 12 noon end 2 p.m. to 6 p.m., recess 2 hours. | 8-30 a.m: to 11 a.m. and 2-30 p.m. to 5-30 p.m., recess at hours. |  |

APPENDIX IVò. 12-cort.
(v) Statement showing the working hours byragricuiltural coolies-cont.
[Prom Committoof B Uftailed reporta.]

| ferial <br> num- <br> iber. | Name of village. | 1900. | $\prime$ | 1928. | Hemarks. |
| :--- | :--- | :--- | :--- | :--- | :--- |

West Gedavari District-cont.

|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Vadlar (Tanaka) .. | .. | 6 s.m. to 6 p :m., interval 1 hour. | 11 a.m. to $4-80$ p.m., inter-: val it hours. |
| 16 | Khandavilli ( |  | 7 a.m to B p.m., interval 2 |  |
| 17: | $\mathrm{Tadil}^{\text {a }}$ alapudi (Chintalapadi) | .. $\cdot$. | 7 a.m. to 12 noon and 1 p.m. to 6-80 p.m. | $7 \mathrm{am} . \mathrm{m}$ to.2.p.m. |
| $\begin{aligned} & 18 \\ & 19 \end{aligned}$ | Devarapalli Vegebwaraparam |  |  |  |

APPENDIX No. 13 (a) (i).
Cost of oultivation table (Committee and Government).
[From the Detailed Eoonomio Reports by the Investigators.]
Kistna :District.


Notra- Bigures in italies refor to the.ooloulations made in the offioial reporta,



- All the flgures in italios represent the pffioial estimates.


No, 13 (a) (iv).
Labour (Committee).

ropresent offioinl extimateg.
$\mathrm{W}=$ Wonen.

APPENDIX No. 13 (b) (i)--Cost of oultivation (Committee).
West Godavari.


[^11]APPENDIX No. 13 (b) (ii).

APPENDIX
Agricultural implements
Weat


- All the agares in itation

No. 18 (b) (ii).
(1928 Committee).
Godatrari.

| Repnire. <br> (10) | Crowbur. <br> (11) | Ase. <br> (12) | Katterve. <br> (18) | Siakles. <br> (14) | Ganny bags. <br> (15) | Large Inife <br> (18) | Carpponter's mamools. <br> (17) | MinoelIrneons <br> (18) | Total. <br> (19) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

wet.

wet.

ropresent the officinl estimates.

APPENDIX No, 13 (b) (iii),
Depreciation and maintenance of cattle (Committee).


Upland wet.


APPENDIX No. 13 (b) (iv).
APPENDIX
Daily Labour
Weot

| Villego． | Toluk． | Squaring，bodi repairs，sto． |  | Seed bed，water－ ing seod，oto． |  | Polling and conveying seedlings． |  | Dummo and upude work． |  | Transplantation． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 麇 | 䊙 | 号 | 菦 | 安 | 发 | E | 踼 | 5 | 婁 |



Piguree in italion represent the offloinl entimates．

No． 13 （b）（iv）．
（Committee）．
Godatari．

|  | Wee |  | Reaping． |  |  | Heaping |  |  | Thr <br> Car | and <br> ddy | Hay stack． |  |  | Miscellaneona． |  | Watohing and watering． | Total． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 军 |  |  | 咭 | 号 | － | $\begin{aligned} & \text { H } \\ & \text { dig } \end{aligned}$ | $\begin{aligned} & \text { 巳. } \\ & \text { 句 } \\ & 0 \end{aligned}$ | $\begin{aligned} & \text { ej } \\ & \text { E } \end{aligned}$ |  |  | rix | $\begin{aligned} & \text {. } \\ & \text { 品 } \\ & \text { 品 } \\ & \end{aligned}$ | 等 | $\begin{aligned} & \text { Bu } \\ & \text { B } \end{aligned}$ | 宮 |
| vet． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8 |  | 30 | 8 |  | 60 | 3 |  | 114 |  | 30 | 2 |  | 14 |  |  | 24 | 268 |
| 10 |  | 812 | 7 |  | 46 | 8 |  | 18 | 7 | 214 |  |  | ． |  |  | ＇ 24 | 2814 |
|  | ． 5 | 28 | 8 | 8 | 88 | 3 |  | 114 | 3 | 40 | 2 |  | 10 |  | 1 | ， 24 | 2513 |
|  | 7 | 310 | 10 |  | 50 |  |  |  | 4 | 30 |  | $\cdots$ | $\cdots$ |  | $\therefore$ |  | 1510 |
| 4 |  | 18 |  | 3 | 82 |  | 2 | 20 | 6 | 20 | 2 | ． | 10 |  | － | 24 | 286 |
| 10 |  | 818 | 8 |  | 40 |  | ． |  | 4 | 30 |  |  | $\cdots$ |  | － |  | 1518 |
| 4 | 4 | 212 | 8 |  | 80 | 8 | ． | 114 | 4 | 28 |  | ．． | 10 |  | 0 | 24 | 2211 |
|  | 4 | 14 | 6 |  | 30 | 8 |  | 18 | 2 | 18 | 2 | ． | 10 |  | ． | 24 | 218 |
|  | 2 | 012 | 8 | 2 | 2 5 | 4 |  | 24 | 6 | 36 | $\cdots$ | ． | $\cdots$ |  | ． | 20. | $\begin{array}{ll}21 & 8 \\ 15\end{array}$ |
| 7 |  | 810 | 10 | io | 50 |  |  | ． | 4 | 30 | $\cdots$ | ． | $\cdots 12$ |  | $\cdots$ | － | 1510 |
| 10 | ， | 82 |  | 10 | 312 | ＊ | ． | ， | 5 | 114 | 2 |  | 012 |  | 0 | 24 | 28 6 |
| 6 |  | $\rangle 18$ | 10 |  | 70 | $\cdots$ | ． | $\because$ | 6 | 54 | $\cdots$ | ．． | ii |  |  | － | 88 |
|  | 5 | 28 |  | 8 | 40 | 4 |  | 20 | 2 | 38 | 1 | ．． | 114 |  | 0 | 24 | 216 |
| 6 | 3 | 50 | 10 | 8 | 60 |  |  | ， | 5 | 3 \％ |  |  | $\cdots$ |  | $\cdots$ | ． | 3012 |
|  | 6 | 21 | 6 | 4 |  | $\cdots$ | ． | $\because$ | 8 | 30 | 2 |  | 10 |  | 0 | 24 | 24 0 |
| 6 |  | 19 | 6 | ， | 30 | 4 | ＊ | 20 | 5 | 312 | 2 | ． | 10 |  | 1 | 20 | 241 |
| 0 |  | $s 0$ | 7 | 8 | 48 | $\cdots$ | ． |  | 5 | 34 | $\dot{\square}$ | ． | $\cdots$ |  | $\cdots$ |  | 1618 |
| 4 | 3 | 28 | 8 | 8 | 210 | 8 | ． | 18 | 4 | 20 | 2 | ． | 10 |  | 2 | $\dot{2} 0$ | 349 |
| 6 |  | 114 | 5 | 4 | 40 |  |  | －• | 4 | 28 | 2 |  | 012 |  | ． | 20 | 21 |
| $\theta$ |  | 0 | 9 |  |  |  |  | $\because$ |  | 18 |  |  |  |  |  | － | 178 |
| － | 7 |  |  | ．$\cdot$ | 30 |  | ． |  |  | 48 | 1 | ． |  |  |  | 24 | 348 |

wet．



Figares in italioe represent the official estimates．

APPENDIX No. 13 (o) (i).
Cobt of coltivation (Commities).
(From the d-tailed econowio reports by the Investigatora.)


## Opland weet.


Dry.


These figuret in italies represent the emlenhtions unde in the efficial reporta.

APPENDIX No. 13 (c) (ii).
East Godavari-Agricaltural implements, 1928 (Cormmittee).


Deita Wet.


## Upland Wet.

 Dry.


APPENDIX No． 13 （c）（iii）．
East Godavari－Depreciation and maintenance of cattle， 1928 （Committee）．

| Viliage． | Taluk． | Depreciation． |  |  |  |  |  | Maintenance． |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 品 | 里寅 |  |  |  |  | － |  |  |  | $\stackrel{\square}{\square}$ |  |  |  | \＆ |
|  |  |  |  |  |  |  |  |  | 砢 |  |  |  | $\square$ | \％ |  |  | 8 |
|  |  |  |  |  |  |  |  | 8 | $\stackrel{\square}{3}$ |  |  | 完 | 竒 | $\stackrel{\text { f }}{\text { ¢ }}$ |  | － | 8 |
|  |  |  |  |  |  |  |  | 旡 | 这总 | 免 | 管 | 告 |  | 名 | 鄓 | \％ | 㫧家 |

## Delta wet．




## APPENDIX No 13 (c) (iv)

Daily Labour-Committee.

APPENDIX
Daily Labour－

| תistriot and village． | Taluk． | Bquariag bodi repaire，oto． |  | Beed bed，wafor－ ing reed，ote． |  | Pulling and conveying moed－ ling． |  | Dnmmo and epade work． |  | Tramplantaticn． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | （4） |  | （d） | $\begin{aligned} & \dot{E} \\ & \frac{4}{6} \\ & \stackrel{1}{6} \\ & (7) \end{aligned}$ | 立 <br> （8） | $\begin{aligned} & 8 \\ & 8 \\ & 8 \\ & 0 \\ & 0 \end{aligned}$ | 息 (10) | $\begin{aligned} & \text { 最 } \\ & \text { (1i) } \\ & \text { (19) } \end{aligned}$ | है <br> （18） |
|  |  | ， | 3． 4 | ． 17 | A．$\%$ ． | $\pm$. | A．P． | ． 1 \％ | 2n． 4 | m． | A |

 Upland



No． 13 （c）（iv）．
Cormittee．

| Weoding． |  | Rmping |  | Heaping． |  | Thurabing ond earting paddy bome． |  | Hay atmolt |  | Miveellaneous． |  | Watab <br> ing and ing． | Total． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { E } \\ \frac{H_{6}^{\prime}}{3} \\ 0 \\ \text { (18) } \\ \hline \end{gathered}$ | $\begin{gathered} \text { ju } \\ \text { (1) } \end{gathered}$ | E． E． （10） （10） | $\begin{aligned} & \text { 訔 } \\ & \text { (19) } \end{aligned}$ |  | $\begin{aligned} & \frac{8}{8} \\ & (18) \\ & (18) \end{aligned}$ | $\begin{aligned} & \text { E. } \\ & \text { 䔍 } \\ & \vdots \\ & \text { (199) } \end{aligned}$ | $\begin{aligned} & \text { fín } \\ & \text { (20) } \end{aligned}$ |  |  |  | $\begin{aligned} & \text { 号 } \\ & \text { (24) } \end{aligned}$ | $\begin{aligned} & \text { 兑 } \\ & \mathbf{1 2 5 )} \end{aligned}$ | $\underset{(905}{0}$ |
| 1. |  |  |  |  |  |  |  |  |  |  |  |  |  |

Det．


Det．




Appradix No. 14 (i).
Resulta of the cattle mortality enquiry-Ellore Taluk.


Results of the cattle mortality enquiry-Ellore Talnk-cont.

$\triangle$ PPENDIX No. 14 (ii).
Oattle mortality in Kistna, West Godavari and East Godavari.


West Godarari.
Vegiamaraparam .. Devarapalit
Vadlur



| 2 | ${ }^{6}$ | 4 24 86 | 190 288 1,269 |
| :---: | :---: | :---: | :---: |
| 4 | 7 | 84 | 1,786 |


| 168 | $\begin{array}{r} 490 \cdot 91 \\ 6,094 \cdot 64 \\ 654 \cdot 16 \end{array}$ | $\begin{array}{r} 69 \\ \quad 188 \\ \quad 64 \\ \hline 68 \end{array}$ | $\begin{array}{r} 887 \cdot 09 \\ \mathbf{9 , 5 7 8 \cdot 4 1} \\ 168000 \end{array}$ | $\begin{array}{lll}0 & 6 & 0 \\ 0 & 1 & 0 \\ 1 & 14 & 0\end{array}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 308 |  |  |  |  |  |
| 156 |  |  |  |  |  |
| 625 | 6,240 01 | 851 | 2,101-68 | - | + |

Eant Godavari.


APPENDIX No. 14 (iii).
Results of the cattle mortality enquiry-Tadepalligadem.


## APPENDIX No. 15.

Loss due to oattle epidemics (caloolatad per aore).
Ellore Taluk.


APPENDIX No. 17 (i).
Cost of oultivation (Settlement Party).


| Machavaram, wet | - | * | - | - | . |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Amaravati, wet | .. | . | .. | ., | - | Kaikalar ${ }^{\text {P }}$ |  |
| Vinjaram, wet .. | . | . | - | . | , |  |  |
| Palliveda, wet .. | - | $\cdots$ | - | $\because$ | - | Do |  |
| Fandivade, wot | - | $\cdots$ | ** | -0 | $\cdots$ | Gudi |  |
| Komaravoln, wet | .. | - | ., | - | . | Do. |  |
| Elaprola apland, wet | ** | - | - | - | - | Band |  |
| Lengalis upland, wot |  | - | . | - | . | Nezwe |  |
| Torragantapalam, dry |  | $\ldots$ | ". | $\because$ | $\cdots$ | Nandi |  |
| Gotararam, dey | -* |  |  |  | .. | B |  |
| Paligadde, dry | -• | $\bullet$ | $\because$ | - |  | Divi |  |


|  | $\begin{array}{ll} 1 & 8 \\ 1 \end{array}$ | $0$ | $\begin{array}{rrr}8 & 8 \\ 1 & 0 \\ 2 & 0\end{array}$ |
| :---: | :---: | :---: | :---: |
|  | 10 | 0 | ${ }_{2} 180$ |
|  | 14 | 0 | 20 |
| . | 111 | 0 | 200 |
| . | 20 | 0 | 500 |
|  | 114 | 0 | 100 |
|  | 02 | 8 | $211-4$ |
|  |  | 0 | 200 |
|  | 08 | 0 | 180 |
|  |  |  | (Ploughing) |
|  | 06 | 0 | 212 |


| $\because$ | 5 | 0 | 0 | 1 | 4 | 0 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| $\because$ | 7 | 0 | 0 | 3 | 8 | 0 |
| $\because$ | 10 | 0 | 0 | 1 | 0 | 0 |
| $\because$ | 6 | 0 | 0 | 1 | 0 | 0 |
| $\because$ | 16 | 0 | 0 | 8 | 0 | 0 |
| $\because$ | 10 | 0 | 0 | 1 | 0 | 0 |
| $\because$ | 5 | 0 | 0 | 2 | 0 | 0 |
| $\because$ | 6 | 0 | 0 | 2 | 8 | 0 |
| $\because$ | 5 | 0 | 0 | 4 | 0 | 0 |
| $\because$ | 5 | 0 | 0 | 1 | 0 | 0 |
|  |  |  |  | 10 | 0 | 0 |
|  | 1 | 0 | 0 | 1 | 0 | 0 |

$\left|\begin{array}{ccc}9 & 13 & 0 \\ 14 & 0 & 0 \\ 18 & 4 & 0 \\ 11 & 2 & 0 \\ 9 & 6 & 0 \\ 10 & 0 & 0 \\ 20 & 0 & 0 \\ 9 & 11 & 0 \\ 12 & 0 & 0 \\ 4 & 0 & 0 \\ 9 & 8 & 0 \\ 4 & 10 & 0\end{array}\right|$
$\because$
$\because$
$\because$
$\because$
$\because$
$\because$
$\because$
$\because$
$\left|\begin{array}{ccc}20 & 1 & 0 \\ 27 & 8 & 0 \\ 27 & 7 & 0 \\ 21 & 6 & 0 \\ 91 & 1 & 0 \\ 84 & 8 & 0 \\ 29 & 14 & 0 \\ 21 & 1 & 0 \\ 28 & 4 & 0 \\ 12 & 0 & 0 \\ 28 & 8 & 0\end{array}\right|$
$\begin{array}{ccc}57 & 8 & 2 \\ 48 & 8 & 0 \\ 46 & 0 & 10 \\ 82 & 13 & 9 \\ 48 & 18 & 11 \\ 61 & 0 & 6 \\ 44 & 9 & 1 \\ 24 & 4 & 7 \\ 46 & 4 & 6 \\ 16 & 10 & 6 \\ 38 & 1 & 0\end{array}$

West Godavari District.


East Godavari District.


APPENDIX No. 17 (i).
Agricaltaral implementa (Settlement Party).


APPENDIX No. 17 (iii):
Depreciation of cattle (Settiement Party).



4 Pranle

No. 17 (iv).
(Seftlement Party).


APPENDIX No. 19.-
Changes of Pattas.
[From the reportso of the Bettlument Party.]

| District. | Tulat. | Villago. | $\begin{gathered} \text { Number of } \\ \text { pattanat the } \\ \text { lant mettlemant. } \end{gathered}$ | Namber ofsttae in 1925. pattae in 1925. | - Nuxiber of paltas whioh are in the hands of the original pattadars. | Namber of patteo which have ohanged hands. |  |  |  |  | Bomarka. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Partiol obange. |  | Complete omange. |  |  |  |
|  |  |  |  |  |  | Total namber. | Nutaber due to eennomio pressure. | Total namber. | Number due so econemia promeare. |  |  |
| Kirtas | Divi .. .. | Mrohavaram .. .. | 205 | 624 | 41 | 80 | 42 | 62 | 41 | 28 |  |
|  | Rnikalur $\quad \because$ | Amararati $\quad \because \quad \because$ | ${ }^{38}$ | ${ }^{92}$ | 18 | 18 | ${ }_{16}^{4}$ | $\stackrel{98}{98}$ | - 80 |  |  |
|  | Do. $\quad$ Do. | Vinjarnm Pallivads O. | 68 196 | -978 | 18 48 | 78 | - 61 | $\begin{array}{r}98 \\ \hline 68\end{array}$ | [ 18. | 8 |  |
|  | Gadivada. $\quad$ O. |  | ${ }_{709}^{198}$ | 807 | 72 | 41 | 2 | ${ }^{73}$ | 88 | 8 |  |
|  | Do. $\quad$. | Komaravola .. | 108 | 168 | 29 | 88 |  | 85 | 20 | 6 |  |
|  | Bandar Bosmada Rex | $\xrightarrow{\text { Maileswarimm }}$ Elaprola | ${ }^{62}$ | 188 188 | 39 38 | 43 | 41 | 99 29 | ${ }_{14}^{90}$ | 18 |  |
|  | Nandigama $\because$ | Lingale | ${ }_{37}$ | ${ }^{84}$ | ${ }_{8}$ |  | $\ldots$.-...- 1 - | 2 | - |  |  |
|  | Do. $\quad \because$ | Torragontapalem \#. | 14 90 | $\begin{array}{r}26 \\ 183 \\ \hline 185\end{array}$ | 3 80 | if | $\because$ | 12 84 | ${ }_{16}^{11}$ |  |  |
|  | Randar  <br> Divi .4 <br>  . | Qokavaram Paligedda O. | 930 230 | ${ }_{233}^{183}$ | 80 | 74 | 20 | 115 | 50 | 11 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  | Tamaku ${ }_{\text {Do }}$ | $\begin{array}{lll}\text { Kanohamarra } \\ \text { Raohur } & \because & \because \\ \text { R }\end{array}$ | 1719 | 110 <br> 274 | ${ }_{41}^{14}$ | - 47 |  |  |  | 19 |  |
|  | Narmpux $\quad \because$ | Likhithapudi $\quad \ddot{\square}$ | 104 | 136 | 48 | $\begin{array}{r}20 \\ \hline \quad 20 \\ \hline\end{array}$ | $\begin{array}{r} 13 \\ 8 \end{array}$ | $\begin{aligned} & 34 \\ & 17 \end{aligned}$ | $\begin{aligned} & 88 \\ & 19 \end{aligned}$ | 1 |  |
|  | Do. ${ }_{\text {Dor }}^{\text {Do. }}$ |  | 88 98 | 76 136 | ${ }^{88}$ | - 10. | ${ }^{8}$ | ${ }_{31}^{17}$ | 18 | 18 |  |
|  | Bhimavarem: | Vemararmm $\quad \because \quad \because$ | 488 | ${ }^{197}$ | $\begin{array}{r}82 \\ 29 \\ \hline 29\end{array}$ | 18 37 | 12 | 18 60 | 5 | 2 | ${ }^{57}$ (Pingle+joint.) |
|  |  |  | 129 |  |  |  |  |  | 4 |  |  |
|  |  | Singavaram Bettivarigadom Sta | 38 <br> 54 | 79 98 | ${ }_{18}^{6}$ | 10 | $\begin{aligned} & 6 \\ & 8 \end{aligned}$ | ${ }_{24}^{14}$ | 15 | $6$ | 62 (8inglotjoint.) |
|  |  |  |  |  |  |  |  |  | 19 |  |  |
| $\underset{\text { Godevari. }}{\text { Bart }}$ |  |  | $\begin{aligned} & 64 \\ & 34 \\ & 78 \end{aligned}$ | $\begin{gathered} -179 . \\ \hline 98 \\ \hline 8 . \end{gathered}$ |  | $\begin{aligned} & 18 \\ & 12 \end{aligned}$ | $\stackrel{18}{8}$ | $\begin{array}{r} 17 \\ 12 \\ 92 \end{array}$ |  | $3_{6}^{0}$ |  |
|  |  |  | 9288 |  | 691 | 818 | 892 | 877 | 645 | 202 |  |

Aseats and Debts.


Asoets and Dobbe-oont:

|  | Helow Ra, 600. |  |  |  |  | Ba. 600 to 1,000 |  |  |  |  | Hin. 1,000 to 6,000. |  |  |  |  | He. 6,000 to 10,000, |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Vilinge (1) |  | $\begin{gathered} E \\ (8) \\ \hline \end{gathered}$ | $\begin{aligned} & \pm \\ & \text { to } \\ & \text { (0) } \end{aligned}$ |  |  |  | $\begin{gathered} \dot{5} \\ (n) \\ \hline \end{gathered}$ | $\begin{aligned} & 8 \\ & (p) \\ & \hline \end{aligned}$ |  |  |  | $\underset{(18)}{\dot{8}}$ | $\begin{aligned} & 8 \\ & \text { (14) } \\ & \hline \end{aligned}$ |  |  |  | $\underset{(1 \mathrm{~A})}{\dot{\text { ju}}}$ | $\begin{gathered} i \\ y_{8}^{\prime} \\ \text { (19) } \end{gathered}$ |  |  |
| Kimma liarajor-oont. |  | A08. | ${ }^{\text {atal. }}$ | us. | as, |  | 40. | 406, | $\underline{.}$ | 3. |  | A00. | 406. | 1. | nt. |  | ${ }^{0} \mathrm{Os}$. | $\Delta 0$. | n. | м. |
| 6. Bancar taluk-oont. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10. Ohittipalem .. |  |  |  |  |  |  | 0.81 | 1.64 | 1,460 | 40 | 18 | 8.00 | 48.08 | 82,208 | 9,980 | 4 | 0.40 | $80 \cdot 00$ | 88,700 | 8,060 |
| 11. Bnimaplphiome $\because \quad .0$ | 8 | 4.85 | $0 \cdot 80$ | 1,0no | 660 | ? | 9.47 | 1.00 | 1,886 | 900 | 1 | 88.69 | 8808 | 98,406 | 0,0,085 | $\cdots$ | $\cdots$ | .. |  | . |
|  |  | 20.87 | $\because$ | 1,940 | ${ }_{826} 810$ | $\stackrel{1}{2}$ | 93 71 | $\because$ | 2,860 | 880 | 1 | 96.69 | .. | 1,818 | 100 | $\because$ |  | $\because$ |  |  |
| 1i. Pothoroddtphom $\because$ | 9 | 14.68 | $\because$ | ${ }^{6} 690$ | 200 | i | 18:34 | $\cdots$ | 000 | 800 | 'i | 4780 | $\because$ | $\because 020$ | 1,700 | g | 180.80 | $\because$ | 18,088 | 8,900 |
| Total .. | 180 | 80978 | 36.60 | 60,478 | 29,976 | 78 | 880.85 | 60.06 | 81,083 | 91,270 | 391 | 974.70 | $060 \cdot 14$ | 4,71,188 | 1,4x,066 | 60 | 209.31 | $408 \cdot 16$ | 3,88,460 | 02,060 |
| 6. Owdivach relunh. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Kenterama |  |  |  |  |  |  |  |  |  |  |  |  | 36.80 | 65.816 |  |  | 901 |  | 1,74,910 | 21,006 |
| 9. Pollivande $\quad \because \quad \because$ | ': | $\because$ | $9 \cdot 18$ | 910 | 000 | 9, | 9.86 | ${ }^{14.08}$ | 00.080 | 1,980 | 14 | 20.90 14.18 | 80.68 80.88 60, | 83,770 31300 | ${ }_{0} 0.8180$ | ${ }_{8}^{8}$ | 48.70 80.18 | 6.1 .7 168.30 | 8, 87,080 | 9,8,80 36,400 |
| 8. Komaravola -. .- |  | . | . | - | $\cdots$ | 8 |  | $1 \cdot 28$ | 1,700 |  |  |  | $6 \cdot 68$ | 61,300 | 8,408 |  |  | 168.so | P.10,180 | 6,610 |
| Total. | 8 | . | 9.18 | 900 | 600 | 19 | 200 | 16.82 | 7,780 | 2,010 | 61 | $84 \times 18$ | 189.06 | 1,08,606 | 26,700 | S6 | 68.25 | 21.88 | 4,16,040 | 89,918 |
| Grend botal | 231 | $867 \cdot 17$ | 19.88 | 80,871 | 31.860 | 187 | 819.00 | 66.01 | 98,747 | 86,000 | 041 | 1,697.00 | $1,104 \cdot 74$ | 18,01,889 | 3,28,680 | Iv: | 1,046-08 | 1,173.01 | 18,08,970 | 9,66,406 |

Aseets and Debto-cont.


Augets and Debtn-cont.


APPENDIX No. 20 (ii).
Aseets and debte of different groups of ryote.


Assete and debts of different groupe of ryots－cont．

| Villagen， | Re．10，000 to 20，000． |  |  |  |  | More than Re．20，000． |  |  |  |  | ＇l＇otal． |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{gathered} \dot{\sim} \\ \text { (29) } \\ \hline \end{gathered}$ | $\stackrel{\stackrel{0}{0}}{(24)}$ |  | 旁 䔍 <br> 宽 <br> （28） | 훙 <br> 量首 <br> 127） | $\begin{gathered} \dot{\oplus} \\ (28) \\ \hline \end{gathered}$ | $\begin{gathered} \stackrel{5}{6} \\ \text { (29) } \\ \hline \end{gathered}$ |  <br> （ ${ }^{n}$ ） | 茄 莒 ． <br> 훙 <br> （31） |  | $\dot{f}$ (89) | $\begin{gathered} \dot{8} \\ 8 \\ (84) \end{gathered}$ |  |  |  |
| Wemr Godavary Difretor －aont． <br> 1．ZJaratapur taluk． |  | 408. | acs． | $\underline{5}$. | 8. |  | ACB． | $\Delta \mathrm{ca}$ ． | 8. | Re． |  | 408. | 408. | 2． | 18. |  |
| 1．Pedamallam ．．．． | 8 | 24.00 | 4000 | 48，800 | 18，000 |  |  |  |  |  | 22 | 45.90 |  |  |  | 89 |
|  | 1 | 2.00 | 20.00 | 10，260 | 1800 |  | $\because$ | － | $\because$ | $\cdots$ | 80 | 46.90 9116 | $102 \cdot 36$ 186 | 1，20，010 | 81，976 | 88 |
| 8 Rujt ．．．．．． | 2 | 10.00 | 102．00 | 78，010 | 18，000 | 1 | $\because$ | \＄6． 00 | 21，000 | 10，000 | 67 | 2436 | 346.38 | 2，01，850 | 97，260 | 88 |
| 4．Aotanta ．．．0－． | ${ }^{8}$ | 42.60 |  | 37，000 | 8.000 | 8 | 170.00 |  | 1，6， 0000 | 18，000 | 63 | $365 \cdot 18$ | 16.60 | 8，43，680 | 82，640 | 92 |
|  | 22 28 | 81.50 10.06 | 216.60 816.00 | 8，00，100 | 1，10，400 | ${ }^{6}$ | 6n．00 | 100.00 | 1，85 900 | 25，000 | 168 | 180.08 | 536.35 | 7，08．040 | 2，39，475 | 84 |
|  | 18 | ．． 10.06 | 816.00 $\mathbf{2 2 4 . 6 0}$ | 2，49，100 $\mathbf{2 , 5 6 , 7 0 0}$ | 78,060 44,000 | 18 | 86.00 | 48500 268.00 | $6,41,400$ $y, 97,000$ | 68,200 63,000 | 186 | 48.65 | 1，829．08 | 18，60，120 | 2，35，265 | 17 |
| 8．Rummarapuragapalem ．．． | io | $\because$ |  | 2，06，700 |  | ， |  |  |  |  | 106 80 | 2994200 | 708.96 8.60 | $\begin{array}{r}\text { 7，49，200 } \\ \hline 68826\end{array}$ | $1,61,280$ 83,866 | 74 |
| 9．Penamadam ．．．． | 10 | 8.80 | 108．00 | 1，34，800 | 24，900 | 7 | 12.00 | 219.00 | 2，81，500 | 17，000 | 74 | 21.80 | 678．68 | 6，91，200 | 87，000 | 16 |
| Total＊＊ | 87 | 176－86 | 1，087．00 | 18，06，260 | 2，86，860 | 41 | 267.00 | 1，076．00 | 18，98，800 | 1，88，800 | 776 | 1，087－＾7 | 8，640．88 | 48，24，810 | 9，59，000 | 22 |
| sllowe taluk． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2．Dendular ．． | 1 | 7.00 | 11.00 | 11，700 | 5，200 |  |  |  |  |  |  |  |  |  |  |  |
| 8．Eavvali 8．$_{\text {Barappagadem }} \quad \because \quad \because \quad \because$ | 1 | 7.00 | 84.26 18.00 | 14,000 14,160 | 8,900 8,600 |  | 26.00 | －15．00 | $\ddot{87}, 750$ | $i, 050$ | 1 | 82.00 | 3425 68.00 | 14,000 81,900 | 8,800 8,660 | 28 7 |
| Total ． | 8 | 14.00 | 58.25 | 39，850 | 11，700 | 2 | $65 \cdot 00$ | 85.00 | 60，750 | 15，050 | 8 | 75.00 | 14325 | 1，09，600 | 28，760 | 26 |
| 8．Tadopalligudom taluk． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1．Reaharla ．0．$\quad$. | 17 | 8.00 | 172.59 |  |  |  |  |  |  | 11，200 | 70 | $9 \cdot 18$ | $885 \cdot 14$ | 4，21，020 | 75，469 | 13 |
| 8．Navarpalem＊＊ | 7 | 88．00 | $\begin{array}{r}69.80 \\ \hline 110.09\end{array}$ | 91，000 | 18，100 | 6 | 117.00 | 111.00 | 2，84，500 | 20，000 | 98 | 295.80 | 291.76 | 8，80，486 | c0，088 | 11 |
| 8．Badumpudi ．${ }^{\text {a }}$ ． | 14 | 189.88 | 116.09 | 1，71，700 | 80，600 | 5 | 11：87 | $18 \cdot 80$ | 20.000 |  | 89 | 304.41 | $253 \cdot 28$ | $8,00,070$ | 74，416 | 20 |
| 4．Erinhnayapalem ：．${ }^{\text {a }}$ ． | 88 | $\because 07 \cdot 00$ | 181.18 94.97 | 8，07，720 | 27，800 | 5 | $\cdots$ | 76.71 | 1，84，000 | 9，700 | $\begin{array}{r}129 \\ \hline 90\end{array}$ | 0.20 2.88 .56 | 46949 | 8，09，650 | 76， 603 | 0 |
| 6．Bommidi ．．$\quad$. | 6 | 18.00 | 24.67 79.00 | ＋81，200 | 6，650 | $\cdots$ | － | 819.68 | 9，18，000 | 59，910 | 70 | $2,288 \cdot 86$ 12.00 | 118.67 68566 | 2，64，980 $8,87,400$ | 61，660 $1,26,065$ | 20 |
| 7．Weat Vipparra ．．．． | 12 | 1.40 | 291.50 | 1，01，800 | 81，800 | 6 | － | 949.60 | 9，07，650 | 48，600 | 68 | $4 \cdot 40$ | 722.85 | 8，08，541 | 1，01，000 | 20 |
| e．Chebrola ．．${ }^{\text {－}}$ | 9 | 151．00 | $170 \cdot 00$ | 1，37，260 | 24，800 | 4 | $110 \cdot 00$ | 160．00 | 1，28，000 | 21，000 | 68 | 380.83 | 676.85 | 8，62，210 | 75，604 | 91 |
| Total | 90 | 667.78 | 1，094．90 | 11，88，870 | 1，69，710 | 29 | 289.28 | 1，029－18 | 0，94，250 | 1，45，310 | 481 | 3，296－97 | 3，876－96 | 80，07，414 | 6，13，207 | 17 |
| 4．Chimialcamil talub． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1．Tuditalepadi ．．．． | 2 | 810．00 | 85.00 | 98，100 | 7，000 | － | － | －＊ | － | － | 30 | 718．06 | 118.60 | 1，07，000 | 28，718 | 81 |

Assets and debte of different groups of ryots－cont．

|  | Helow Be． 600. |  |  |  |  | Re． 500 to 1，000． |  |  |  |  | Ks．1，000 to 5，000． |  |  |  |  | Re． 8,000 to $10,000$. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Villeger． （1） |  | $\begin{aligned} & \dot{8} \\ & \text { (3) } \\ & \hline \end{aligned}$ | $\begin{aligned} & \stackrel{\leftrightarrow}{6} \\ & i+1 \end{aligned}$ |  <br> （5） | 富 <br> 寄害 <br> （6） |  | $\begin{aligned} & \dot{\Delta} \\ & \text { (8) } \\ & \hline \end{aligned}$ | $\begin{aligned} & \stackrel{ \pm}{0} \\ & \text { 3 } \\ & \text { (9) } \end{aligned}$ |  |  <br> 高宽 <br> （11） |  | 官 (13) | $\begin{aligned} & \stackrel{\rightharpoonup}{0} \\ & \stackrel{1}{2} \\ & (14) \end{aligned}$ |  |  <br> （10） |  | $\begin{aligned} & \dot{\boldsymbol{\theta}} \\ & (18) \end{aligned}$ | 8 <br> （19） |  <br> 3 <br> （20） |  <br> 寒宽 <br> （21） |
| Wher Gonavani Dieftict |  | acs． | 408. | ${ }^{2} 8$. | R． |  | 4cs． | ses． | Bs． | 2. |  | $\Delta$ ct． | 4 cas | 80. | 28． |  | 400. | $\Delta \mathrm{ct}$ ． | 4. | 28. |
| E．Tammk taluk． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1．Neggipodi <br> 2．Malleuwaram |  | 0.09 | $\because$ | 100 | 290 | 1 | 1．30 | 0.45 | 950 1.400 | 880 | 16 | 008 | $23 \cdot 10$ | 42，885 | 7，9n0 | 6 | 10.78 | 17.00 | 86，800 | 6，880 |
|  |  |  |  | ． | ．- |  | $1 \cdot 30$ |  |  |  |  | 0 | 12．70 | 38，205 | 14，976 |  | 10.76 |  |  |  |
| Otal | 1 | 0.09 | ． | 100 | 290 | 8 | 1.80 | 0.45 | 2，350 | 1，200 | 81 | $9 \cdot 76$ | 35.80 | 80，580 | 29，875 | 14 | 10.76 | 89.80 | 88，800 | 18，780 |
| 6．Eowour laluk． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1．Devarapalle ．． | 17 | 27.00 | － | 4，C05 | 6，800 | 21 | 120．74 | ． | 13，850 | 8，000 | 61 | 1，136•60 | ． | 1，42，700 | 64，250 | 5 | $290 \cdot 00$ | ． | 30，700 | 7，900 |
| 7．Bhimavaram．zaluk． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1．Korukolln ．．．． | 1 | 0.83 |  | 314 | 60 |  | 7.64 | $\cdots$ |  |  |  |  |  |  |  | 20 | 115.64 | 30.05 |  | 88，850 |
| 8．Pedapalleru 8．Cbyuraru a | $\cdots$ | $\cdots$ | 1．14 | 200 | $\because 00$ | 1 | 9.98 | $1 \cdot 27$ | 500 | 1， 100 | 9 <br> 9 <br> 9 | 4.68 | 30.69 150 | － 21.3000 | 2，950 89 | 5 | 0.18 | 40－29 | 184，800 | 8，200． |
| 4．Vendra ．． | 22 | $\ddot{2} 41$ | $2 \cdot 69$ | 6，980 | 2，126 | 20 | B． 98 | 1327 13 | 800 20,650 | 600 6.081 | 789 | $\stackrel{81}{89}$ | 154.05 119.91 | 84,660 $1,70,760$ | 88,700 88,520 | 17 | 81.84 | 193.21 57.68 | 1，18，028 $\mathbf{1 , 7 , 1 0 0}$ | 29,600 12,050 |
| 8．Garagaporta $\quad . \quad$ ．． |  |  |  |  | 2，125 | 8 | 8.40 | 13.68 1.50 | 20,660 2,450 | 6.0819 1,400 | 28 | 84.89 4.70 | $\begin{array}{r}119.91 \\ 97 \\ \hline 152\end{array}$ | $1,70,760$ 74,814 | 38,620 21,890 | 17 | 81.84 8.60 | 57.68 114.46 | $1,7,100$ $\mathbf{9 8 , 1 6 0}$ | 12,050 85,000 |
| 6．Gollulahodera ．．．． | 5 | $0 \cdot 11$ | $1 \cdot 18$ | 1，775 | ＇480 | 8 | 0－26 | $8 \cdot 66$ | 6，850 | 1，400 | 86 | 46.28 4 | 157.48 159 | 2，06，430 | 41，890 48,360 | 20 | 8.60 48.25 | 118.46 108.12 | 1，39，828 | 84，400 |
| 7．Tundurra ．．．． | 34 | $7 \cdot 64$ | 40．11 | 9，796 | 4，280 | 83 | 11.30 | ． 79.64 | 22，980 | 10，645 | 45 | 20.60 | 286.75 | －91，725 | 84，600 | 9 | 81.50 | 182.00 | ， 67,070 | 88，960 |
| 8．Yondagandi ．．$\quad$. | 14 | 2．50 | i10 |  |  | 6 |  | 7.84 | 4，300 | 750 | 45 |  | 205.92 | 1，49，920 | 38，200 | 18 |  | 168.00 | 1，28，80u | 32，469 |
| 9．Chinamiram－．${ }^{\text {a }}$ | 14 | 2.68 | $2 \cdot 16$ | 8，241 | 1，765 | 7 | 8－86 | $2 \cdot 99$ | 6，810 | 2，400 | 47 | $42 \cdot 10$ | 106.16 | 1，17312 | 25，160 | 18 | 42.01 | 98．58 | 1，${ }^{\text {k1，48x }}$ | 18，700 |
| 10．Pedamiram ．．－． | 5 | $\because 0.18$ | i11 |  |  | 2 | ．． | 0.81 | 1，172． | ${ }_{4} 460$ | 88 | 0.70 | $88 \cdot 18$ | －94，164 | 23，310 | 28 | 4.38 | 160．18 | 1，61，282 | 11，000 |
| 11．Komodnvulle ．． | 5 | $0 \cdot 16$ | $1 \cdot 11$ | 1，593 | 160 | 5 | ．． | 4.18 | 8，650 | 650 | 24 | 0.13 | 65.78 | 84，728 | 18，645 | 18 | 22．26 | 78.95 | 1，07，868 | ${ }^{21,850}$ |
| 18．Pulakodera ．．$\quad .$. | $\because$ | － | － | ． | － | 1 | － | $1 \cdot 19$ | 960 | 500 | 86 | 10.05 | $81 \cdot 40$ $7 \cdot k 3$ | 81,090 | 22,630 2 | 16 | 6．00 | 97.00 198.48 | 1.03700 | 17，980 |
| 14．Ropelle ．．．．．． | $\square$ | ，．． | $\because$ | $\because$ | $\cdots$ | 2 | ． | 1：56 | 1,800 | 1，800 | 14 | $18 \cdot 60$ | $7 \cdot 63$ 29 | 11,700 36,550 | 2,630 $\mathbf{1 1 , 3 0 0}$ | ${ }_{6} 8$ | $12 \cdot 72$ | 183.48 42.60 | $1,79,060$ 86,000 | －7，186 |
| 15．Chinapallora | － 1 | ．． | 0.88 | 300 | 200 | 6 | $2 \cdot 00$ | $8 \cdot 16$ | 8，500 | 1，726 | 8 | ＋2．60 | 44.05 | 28，660 | 11，250 | 12 |  | 92.48 | 86，200 | 20，800 |
| 16．Andalur ．． |  | － | $\cdots$ | ．． | ．． | ． | ．． | ．． | ， | $\cdots$ | 8 | 23.70 | ．． | 18，400 | 4，000 | ， | 52．70 | 0.00 | 88，100 | 12，300 |
| Total | 88 | 18.18 | 4817 | 24，170 | 9，450 | 118 | 84．31 | 128.40 | 79，701 | 29，735 | 680 | $298 \cdot 18$ | 1，477－88 | 18，78，381 | 8，66，585 | 288 | $395 \cdot 88$ | 1，016．97 | 16，42，060 | 9，87，685 |
| Grand Total | 275 | 274－14 | 68－25 | 67，888 | 46，098 | 281 | 32695 | 231.02 | 1，86，521 | 85，875 | 1，907 | 3，708．83 | 2，056．84 | 82，81，312 | 8，58，049 | 482 | 1，540．87 | 2，983－81 | 33，73，406 | 7，41，825 |

Acseta and debts of different groupp of ryote-pons.


Aascts and Debts.


Asuets and Dable-count.


APPENDIX No. 21 (i).
Statement showing the rates of interest.

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Talak \& Village. \& Nomber
of ryots
ex amined. \& \[
\left|\begin{array}{c}
\text { N amber } \\
\text { having } \\
\text { no debts. }
\end{array}\right|
\] \& Leses than
\[
0-12-6
\] \& \[
\begin{gathered}
0-12-6 \\
t 0 \\
1-0-6
\end{gathered}
\] \& \(1-0-6\)
to
\(1-4-0\) \& \(1-4-0\)
to
\(1-9-0\) \& Mone than
1-9-0 \& Total. \\
\hline \multicolumn{10}{|c|}{- Kirsta District.} \\
\hline \multirow[t]{2}{*}{1. Divi} \& \multirow[t]{2}{*}{\begin{tabular}{l}
1. Puligadda \\
2. Koduru
\end{tabular}} \& \[
\begin{array}{r}
70 \\
138
\end{array}
\] \& 7 \& \(n s\). © 10 \& \[
\begin{aligned}
\& \text { Rs. } \\
\& 2,750 \\
\& 51,070
\end{aligned}
\] \& \[
\begin{gathered}
\text { Rg. } \\
2,890 \\
22,890
\end{gathered}
\] \& n2,
13,096
28,180 \& \& \[
\begin{array}{r}
24 . \\
19,836 \\
1,02,060
\end{array}
\] \\
\hline \& \& 208 \& 11 \& 600 \& 53,820 \& 25,690 \& 41,275 \& . \& 1,21,385 \\
\hline 2. Kaikular . . \& 1 Chusulipada \& 2 \& . \& . \& 3,660 \& .. \& \& .. \& 3,600 \\
\hline \multirow[t]{2}{*}{8. Nandi\(\mathrm{gama}^{\mathrm{m}}\)} \& \multirow[t]{2}{*}{\begin{tabular}{l}
1 Konakanchi \\
2. Lingala ..
\end{tabular}} \& 81
21 \& \& \& 38,300
\(\mathbf{5 5 , 9 6 5}\) \& \(\cdots\) \& \(\mathbf{3 , 6 0 0 \%}\)
\(\mathbf{5 0}\) \& . \& \[
\begin{aligned}
\& 41,300 \\
\& \mathbf{5 6 , 0 1 5}
\end{aligned}
\] \\
\hline \& \& 82 \& . \& .. \& 94,265 \& . \& 3,050 \& . \& 97,315 \\
\hline \multirow[t]{2}{*}{4 Bozwuin.} \& \multirow[t]{2}{*}{\begin{tabular}{l}
1. Id ugugailu \\
2. Patamata \\
3. Paprolu \\
4. Poranki
\end{tabular}} \& \begin{tabular}{l}
83 \\
78 \\
54 \\
34 \\
\hline
\end{tabular} \& 1
1
7 \& \(\because\)
\(\because\)
\(\square\) \& \[
\begin{array}{r}
2,13.068 \\
65,440 \\
29,360 \\
57,700
\end{array}
\] \& \(\because\)
11,900
\(\cdots\) \& \(\because\)
\(\because, 000\) \& \(\because\)
\(\because\)
\(\square\) \& \[
\begin{array}{r}
\hline, 13,069 \\
65,790 \\
46,260 \\
67,700
\end{array}
\] \\
\hline \& \& 248 \& 9 \& . \& 3,65,619 \& 12,200 \& 5,000 \& \& 3,82,819 \\
\hline \multirow{7}{*}{b. Bandar . \(\{\)} \& \multirow[t]{7}{*}{} \& 171
198
60
48
38
3
3
30 \& 6
1
2
1
1
\(\cdots\)

1 \& 7,800
3,700
$\cdots$ \& 10,100
77,120
39,740
300
37,200
$\cdots$
$\cdots$ \& 88,945
8,800
1,420
2,290
3,000

900 \& | 31,630 |
| ---: |
| 260 |
| $\mathbf{4 , 1 3 0}$ |
| 3,700 |
| $\mathbf{3 0 0}$ |
| 3,110 | \& $\because$

$\because$
$\because$
$\square$

500 \& $$
\begin{array}{r}
1,29,975 \\
89,020 \\
64,915 \\
6,720 \\
48,900 \\
1,200 \\
3,810
\end{array}
$$ <br>

\hline \& \& 14 \& 1 \& $\cdots$ \& \& 19,650 \& 200 \& 100 \& 20,250 <br>
\hline \& \& 22 \& . \& . \& 200 \& \& 6,735 \& $\pm 30$ \& 6,360 <br>
\hline \& \& 21 \& - \& \& 3,610 \& 13,660 \& -, 388 \& .. \& 19,640 <br>
\hline \& \& 16 \& $\because$ \& $\cdots$ \& 4,850 \& -200 \& $\begin{array}{r}4,535 \\ \hline 380\end{array}$ \& \& 11,386 <br>
\hline \& \& 10
7 \& $\because$ \& \& \& +426 \& ${ }^{380}$ \& \& 1,790 <br>
\hline \& \& 7 \& . \& 2,000 \& . \& 4,700 \& 20 \& \& 11,900 <br>
\hline \multirow{4}{*}{R. Gndivad $\{$ \{} \& Total \& 560 \& 12 \& 13,560 \& 1,92,460 \& 1,46,705 \& 56,550 \& 1,330 \& 4,11,095 <br>
\hline \& $\begin{array}{lll}\text { 1. Knutaram } & \text {. } \\ \text { 2. Pallivada } \\ \text { 3. Konnravalu } & \cdots & \text {. } \\ \text { a }\end{array}$ \& 96
29
108 \& 5
4

18 \& $\because$ \& \[
$$
\begin{array}{r}
52,645 \\
3,800 \\
17,000
\end{array}
$$

\] \& \[

$$
\begin{array}{r}
1,4,925 \\
1,87,770 \\
1,89,270
\end{array}
$$
\] \& 1,010

2010

2,290 \& $\because$ \& $$
\begin{aligned}
& 1,98,470 \\
& 21,580 \\
& 2,01,490
\end{aligned}
$$ <br>

\hline \& Tolal \& 238 \& 22 \& . \& 73,345 \& 3,32,965 \& 5,235 \& . \& 4,11,545 <br>
\hline \& Graud Totul \& 1,334 \& 54 \& 14,150 \& 7,83,509 \& 5,17,560 \& 1,11,110 \& 1,330 \& 14,27,059 <br>
\hline
\end{tabular}

APPENDIX No. 21 (ii).
Btatement showing the rates of intereat.


APPENDIX No. 21 (iii).
Statement showing the rates of interest of Indebtedness.

| Taluk. | Village. | N umber of ryota examined. | Namber having no debt. | $\begin{gathered} \text { Below } \\ 0-12-0 . \end{gathered}$ | $\begin{gathered} 0-12-0 \\ 1-0-0 \end{gathered}$ | $\begin{aligned} & 1-0-8 \\ & 1-4-0 \end{aligned}$ | $\begin{aligned} & 1-4-0 \\ & 1-9-0 . \end{aligned}$ | More than $1-9-0$. | Tots |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Fast Godavari District.


APPENDIX No. 22 (i).
Table A.-Olassifoation Sums borrowed for differont purpores.
Sistna, West and Baet Goditaris.

| Purposes, | Hnving proparty worth lis. 800 and lews. Group 1. |  |  |  |  |  |  |  |  | $\text { He } \begin{aligned} & 8 \text { non- } 10,000 . \\ & \text { droup } 4 \text {. } \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Kiotna. | Wout Gord. vari, | That Goin= virit | Kietna. | Want Godaval. | Enat Ooiln. varl. | Kiatna | Went Godavarl | Nant Ooda. vari | Kintun. | Wout Oodavarl | Eatt Oode verf. |
| Purahneo of landa | ${ }_{7}{ }^{\text {an }}$ | ${ }_{\text {Ano }}$ |  | ${ }_{8,120}$ | $\operatorname{lin}_{8, \text { nen }}$ | ${ }^{\text {nn }}$ |  |  |  |  | 1,27, ${ }^{\text {Rana }}$ | 1,10,880 |
|  | 0,120 | 18,02010 | 93,863 | 10,720 | 8a, 974 | 66,179 | R1, 1019 | 8, 01,071 | 8,00, 1.18 | 74,100 | 9, AS, 817 | 1,00,718 |
| Fanily .. | 98,4AB | 9y, , AK $^{\text {a }}$ | 17,135 | 18, пn¢ | 37,\%บ® | 26:869 | 1,8y, ¢63 $^{\text {a }}$ | 3, 88,011 | i,nas, Mu | 1, 1', 'lano | 3,60, 1as | 77,118 |
| Liquidntion of old dobto .. .. | y(1) | 1,1060 | 8,810 | 480 | 1,4104 | 16,4no | [12, 100 | 41,979 | 1,14,238 | 10,301 | 46,128 | 71,860 |
| Litigntion ${ }^{\text {a }}$. ${ }^{\text {a }}$ | 160 | 8(1) | 2,8111 | Ni1 | give | ${ }^{8000}$ | 1,7680 | 7.440 | 1.610 | 8 8, (1) | 17,1040 | B,480 |
| Lont in bualnem .: .. .. | 780 | 1.860 | 828 | 8.760 | 6,9110 | 9,476 | 10,230 | 14.3100 | 41,410 | 2,850 | 16,160 | 10,110 |
| Misoellanous .. .. .. | 80 | Nil. | 401 | Nil | 776 | 810 | 2,8110 | 8,8610 | 11,303 | 040 | 10,460 | 6,908 |
| Total indobtodnose | 81,660 | 40,005 | 64,438 | 84,041 | 88,770 | 1,01, 9 Al | 8, 80,880 | 8,00,044 | 8,78,M13 | 2,04,006 | 7,41,846 | 1,00,987 |
| Total value of the proporty .. | 00,671 | 67,008 | 70,209 | v6,767 | 1,46,021 | 8,28,940 | 12,01,682 | 89,81,812 | $82,10, \mathrm{mma}$ | 13,80,970 | 38,78,406 | 21,98,860 |


| 'Purpome | Re. $10,000-80,000$. |  |  | $\begin{aligned} & \text { More than Rin } 80,000 \text {. } \\ & \text { Uroup o. } \end{aligned}$ |  |  | Totel. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Klatne. | Wout Godavari. | But Oodavart. | Reotue. | Weut Godnvari | Sunt Godnvar | Riatna. | Wert Oodavarl | Erel Codevart. |
|  |  |  | ${ }^{34}$ | ${ }^{20} 9$ |  |  |  |  |  |
|  | 87,470 70,950 | $1,74,240$ <br> $8,18,409$ <br> 18 | 1,08,4000 | 16.936 <br> 80.840 <br> 180 | $9.14,800$ $8,77,746$ | 88,200 $\mathbf{1 , 3 1 , 0 1 0 9}$ |  | ${ }^{12,790,488}$ | 8,90,978 |
|  | 1,11, ,236 | 8, 1 1, 140 | -7v, ano | 1,80, 2 AS | 9,47,185 | 2,ay, ato | $8,40,1027$ | 11,08, nat | ©.81.419 |
| Liquilation of old dobta .. .. | 19, | 49, ${ }^{\text {asa }}$ | 78,8019 | 12,846 | (n6,280) | ne, पик\% | 60,018 | J,un, 371 | 1,18,4\%0 |
|  | 8,410 | 11.010 | 8,920 |  | 89.800 | S,uno | 18,915 | H0.360 | 84.2no |
| Lomen tin buinioue .. .. .. .. | 90,1000 | 16,000 | 18,600 | 60,900 | 19,6010 | 1,01,101 | 77,2ma | ns,480 | 1,98,086 |
| Mimotllantoun .. .. .. | 8,360 | 8,400 | 6,100 | 1,800 | B,060 | 9,650 | 16,430 | 36,416 | 86,804 |
| Total indebtednem | 8,81,006 | 8,66,980 | 4,18,018 | 6,07,978 | $0,74,10$ | 0,06,642 | 16,87,669 | 36,07,901 | 86,11,769 |
| Total value of the proparty .. | 10,10,918 | 47,06,866 | 29,88,180 | 86,99,970 | 06,02,048 | 81,92,700 | 61,60,206 | 1,00,18,170 | 1,01,24,009 |

APPENDIX No． 22 （ii）．
Table B．—Classified distribution of debts expressed in percentages of the totals in Kistna，West and East Godavaris．

| Purposes． | Having property worth Rs． 600 and less． Groap No． 1. |  |  | Re．600－1，000． Group No． 2. |  |  | Rs． $1,000-6,000$ ． Group No． 3. |  |  | Re．5，000－10，000． Group No． 4. |  |  | Re． $10,000-20,000$ ． Group No． ． |  |  | More than Rs． $20,000$. Groap No． 6. |  |  | Total． |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 雷 | $\begin{aligned} & \text { r } \\ & 0 \\ & 0 \\ & \text { 若 } \\ & 0 \\ & \overrightarrow{0} \\ & 0 \end{aligned}$ |  | $\begin{gathered} \text { H } \\ \text { 最 } \end{gathered}$ |  |  |  |  |  | $\begin{aligned} & \text { 舄 } \\ & \text { 品 } \end{aligned}$ |  |  | $\begin{aligned} & \text { 免 } \\ & \text { 萿 } \end{aligned}$ |  | 它 | 䓣 | 宮 |  | 豆 | 咎 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Purohase of lande ．． | 2.60 | 1.05 | 8.68 | 11.27 | 6.63 | 12.83 | 21.01 | 11.67 | 18.65 | 22.88 | 17.21 |  | 27.21 | 20.38 | 26.92 | ． 31.79 | 21.89 | 18.27 | 25.46 | 17.45 | 20.29 |
| Cultivation expences． | 19.44 | 28.25 | 52.21 | 29.81 | 89.09 | 44.67 | 25.92 | 40.69 | $40^{\circ} 6$ | 27.49 | 85.82 | 40.32 | 23.87 | 37.23 | 3226 | 22.82 | 39.67 | 28.89 | 24.68 | 38.48 | 87.86 |
| Family $\because$ | 74.29 | 64.41 | 26.69 | 50.18 | 44.29 | 24.68 | 40.78 | 39.60 | 20.9 | 42.67 | 34.93 | 15.57 | 34.80 | 38.98 | 19.08 | 29.20 | 24.21 | 16.28 | 37.13 | 83.47 | 18.72 |
| Liquidstion of old | 0.69 | 2.29 | 6.96 | 1.72 | 1.87 | 14.48 | 5.58 | 4.81 | 18.08 | 8.88 | 8.15 | 15.01 | 4.06 | 4.97 | 17.68 | $2 \cdot 80$ | 6.77 | 13.82 | 8.86 | 6.67 | 14－24 |
| Litigation ．．．． | 0.49 | 0.64 | 8.57 |  | 0.80 | 0.35 | $1 \cdot 48$ | 0.98 | 0.89 | 1.86 | 2.4 | 1.40 | $1 \cdot 21$ | 1.34 | 0.52 | 0.69 | 5.86 | 108 | 1.07 | 2.54 | 1.01 |
| Loss in basiness ．． | 2.84 | 8.36 | 1.28 | 7.62 | 6.91 | $2 \cdot 64$ | 4.68 | 1.66 | 4.75 | 108 | 2.02 | 3.25 | 7.79 | 1.76 | 8.28 | $11 \cdot 95$ | 1.38 | 22.18 | 6.81 | 1.84 | 7.28 |
| Miboellanoons | 0.25 | ．． | 0.70 | ．． | 0.91 | 0.6 | 0.70 | 0.44 | 1.28 | $0 \cdot 18$ | $1 \cdot 47$ | 1.07 | 106 | 0.89 | $1 \cdot 46$ | $1 \cdot 85$ | 0.82 | 0.62 | 1.01 | 0.7 | 1．1 |

APPENDIX No. 22 (iii)
Clasaifikd disteibution op debts.
Ristna District.


Clessifi d distribation of debra-esnt.
hisatwe Diderict-cont.


Cimaified distribution of debta-cont.
Kisfina Divetrict-cont.


Classified distribntion of debts-cont.
Fistine Dintrid-cont.


Classified distribution of delte-cont.
Kietra District-mont.


Classified distribution of debta－comt．
Kistna District－cont．

|  | Over Re．20，000． |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | and． | 京 |  | Origin of dobts |  |  |  |  |  |  |
|  |  | $\underset{(108)}{\stackrel{i}{i}}$ | $\left.\right\|_{8}$ |  |  | 항 <br> 普震 <br> （67） |  <br> （88） | $\begin{gathered} \text { 窇 } \\ \text { 品 } \\ \text { (69) } \\ \hline \end{gathered}$ | 응 <br>  <br> （70） | （71） |  |  |
| 1 Divi Talue |  |  |  | m． | 28. | $\underline{4 .}$ | \％8． | 28． | R． | 88． | \％8． | 88. |
| 1．Puligadda <br> 3．Kodura | ${ }^{\circ} 6$ | $\cdots$ | $\because$ | 2，62，000 | 88，000 | 6，800 | 14，200 | 500 | $\cdots$ | 1，500 | 10，000 | $\cdots$ |
| Total | 6 |  | ．． | 2，62，000 | 88，000 | 6，800 | 14，200 | 600 | ． | 1，600 | 10，000 | ． |
| 2．Katealer Talue． <br> 1．Chavalipadn． | $\ldots$ | ．． | $\cdots$ | ． | ． | ． | ． | ． | ． | $\cdots$ | － | $\cdots$ |
| 3．Namdicaxa Talue． <br> 1．Konakanobi <br> 2．Lingala | 1 | $\cdots$ | $\because$ | 49，000 | $\stackrel{10,000}{ }$ | 8，000 | 3，600 | 8，400 | ．． | $\cdots$ | $\cdots$ | $\cdots$ |
| Total | 1 | ．． | ．． | 49，000 | 10，000 | 8，000 | 8，600 | 3，400 | ． | ． | ．． | ． |
| －Bezwada Talue． <br> 1．IIlapugalin <br> 2．Pitamata <br> 3．Elaprola <br> 4．Pomaki | 24 1 2 | $\square$ $\because$ $\because$ $\square$ | $\because$ $\because$ $\because$ | 8，74，870 38.000 42,800 | $\begin{array}{r} 1,17,649 \\ 6,000 \\ \dddot{6,100} \end{array}$ | $\begin{aligned} & 22,900 \\ & \because \\ & \because, 000 \end{aligned}$ | $\begin{aligned} & 26,276 \\ & \because \\ & \ddot{2,400} \end{aligned}$ | $\begin{gathered} 80,549 \\ \cdots \\ \ddot{2,700} \end{gathered}$ | 3,625 $\mathbf{6 , 0 0 0}$ $\cdots$ | 1,200 .. | 4，800 $\cdots$ | 8,300 $\cdots$ $\therefore$. |
| Total | 27 | ．． | ． | 0，58，170 | 1，28，660 | 88，400 | 88，675 | 33，240 | 8，526 | 1，200 | 4，800 | 8，300 |
| b．Bampar Talue． |  |  |  |  |  |  |  |  |  |  |  |  |
| 1．Chinnupundrikn ．． | 1 | $\cdots$ | ． | 22，000 | 26，000 | － | ． | $\cdots$ | ． | $\cdots$ | 25，000 | ． |
| 2 Nundigumu ．．． | 1 | $\cdots$ | $\cdots$ |  |  | $\cdots$ |  | 5,000 | $\cdots$ | $\cdots$ | ．． | $\cdots$ |
| 8．Bervartalapalli－ | 1 | $\cdots$ | $\cdots$ | 26，200 | 6，000 | ． | 1，000 | 6，000 | ． | ． | ． | ． |
| 4．Biddulapalemu | 1 | $\cdots$ | $\because$ | 20，400 | $\because 3,000$ | $\because$ | $\cdots$ | ．＇． | $\because$ | $\ldots$ | 3,000 | ． |
| 6．Chilakuntivaripaleun | ． | ． | $\cdots$ | ．． | ．． | $\cdots$ | ．． | ． | $\cdots$ | $\ldots$ | ．． | ． |
| 7．Peda Pothupalli－． | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | ． | $\cdots$ | $\cdots$ | $\because$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ |
| －Arisapalli ．．．－ | ． | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | － | ． | ． | $\because$ | ． |
|  | $\cdots$ | $\because$ | $\because$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\because$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ |
| 10．Chitrupapion ．${ }_{\text {11．}}$ | $\because$ | $\cdots$ | $\because$ | $\because$ | ． | $\ldots$ | $\cdots$ | $\cdots$ | $\cdots$ | ． | ．． | $\cdots$ |
| 19 Pillariceltivaripulema． | ． | ． | ． | ． | ．． | ． | ． | ． | $\ldots$ | ． | ． | ．． |
| 19 Chinna Pothapalli ．． |  | ．． | $\cdots$ | ． | ． | $\cdots$ | $\cdots$ | $\cdots$ | ． | ． | ． | ． |
| 14．Potheroddipuien ．． | ． | ．． | $\cdots$ | ． | ． | ． | ． | ． | ． | $\cdots$ |  | ．． |
| Total | 3 | ．． | ．． | 68，800 | 24，000 | ． | 1，000 | 6，000 | ． |  | 28，000 | ． |
| 6．Queivada Talue |  |  |  |  |  |  |  |  |  |  |  |  |
| 1．Tantarala <br> 2．Pallovidu <br> 3．Konnmirula | 88 20 |  | $\cdots$ | $14,22,100$ $7,24,600$ | $1,40,980$ $1,00,800$ | 60,726 37,800 | 14,965 <br> 27,450 | $\begin{aligned} & 60,940 \\ & 27,650 \end{aligned}$ | 4，000 $\cdots$ | 300 | $\because$ 8,000 | $\because$ |
| Total | 68 |  |  | 28，66，600 | 2，41，780 | 28，625 | 42，416 | 88，490 | 4，（not） | 300 | 8.000 | ．． |
| Grund Tolat＇－ | 45 |  |  | 26，79，870 | 4，47，870 | 1，42，226 | 99，890 | 1，30，639 | 12，626 | 3，000 | 50，800 | 8，300 |
| Percentuge ．． | － |  |  | ． | ． | 3179 | 22.32 | $29 \cdot 20$ | 280 | 069 | 1185 | 1.85 |

Clanifird dian riberion of debor-roet.
Fretur Diftrid-cont


APPENDIX No. 22 (iv).
Clabsifird distribution of debts.
West Godavari District.


Classificd distribution of debts.--cont.
West Godesari District-oont.


Clasified distribution of debts-cont.
West Godavari District-coms.


## Clnesified distribution of debte-cond.

West Godavari District-comt.


Tlamified diutribation of debtes-coht.
Weat Godsvari District-cont.


## 84

Clemified dirtribotion of debte-cont.
West Godsvari District-cont.


Classified distribution of debts－cont．
Weat Godavari District－cont．

| Villago． | Totol． |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  <br> （62） | 3 \％ <br>  （88） |  | Origis of debt． |  |  |  |  |  |  |
|  |  |  |  | 7害 A （85） |  | 曾 (67) | © <br> 产 <br> 豆 <br> （8R） |  | 容 <br> 5． <br> 응응 <br> （70） |  <br> （71） |
| 1．Naveaptit Tavol． |  | 28. | ${ }^{5}$ | ${ }^{2}$ | ${ }^{2} 8$. | $\underline{8 .}$ | 8. | 18. | 28. | 38. |
| 1．Pedamailamin ．． | 22 | 1，28．050 | 40，860 | 4，800 | 12，400 | 29，750 |  |  | － |  |
| 2．Lakshmeneswarain | 80 | 83，975 | 21，975 | 1，700 | 7，350 | 12．625 | 200 | 85 | $\because 0$ | 200 |
| 8．Kaja ．．${ }^{\text {2．}}$ | 67 | 2，61，850 | 97，260 | 4.120 | 36，655 | 48.785 | 5，000 | 850 | 1，400 | 460 |
| 4．Aolinnts ．． | 69 | 8，43，650 | 52，540 | 6，840 | 28，390 | 17，350 |  |  | $\therefore$ | ， |
| 8．Ilapakarra－． | 163 | 7，03，940 | 2，39，475 | 16，780 | 74，475 | 83，450 | 21，040 | 20，250 | 16，660 | 2，000 |
| 6．Aohente ．．．${ }^{\text {a }}$ ． | ${ }^{108}$ | $13,65,120$ $7,90,210$ | $2,35,265$ $1,61,280$ | 41,600 68,600 | 86,911 43,320 | －98，744 | 8,060 $\mathbf{2 , 2 0 0}$ | $\begin{array}{r}600 \\ \hline 200\end{array}$ | 3,850 $\mathbf{2 , 0 0 0}$ | 600 |
| 8．Gummarapuragapalem | 80 | 15，325 | 33，385 | 3，000 | 9，325 | 14，640 | 1，400 |  |  |  |
| 9．Penumedem ．． | 74 | 6，91，900 | 87，000 | 17，800 | 22，190 | 35，940 | 9，040 | 490 | 850 | 690 |
| Total | 776 | 48，24，810 | 9，59，000 | 1，60，720 | 3，26，216 | 3，79，144 | 41，930 | 22，390 | 24，660 | 3，940 |
| 2．Throne Talut． |  |  |  |  |  |  |  |  |  |  |
| 1．Dendolar－ | 2 | 48，700 | 19，200 | 2，000 | 8，200 | 5,100 | 3，900 | ． | $\cdots$ |  |
| 2．Kovpali ．］．－ | 1 | 14，000 | 3.4100 | 500 | 1，200 | 2，200 | ．． | ． | ． |  |
| 3．Surappagadom ．． | 2 | 51，000 | 3，650 | ． | 3，000 | 650 |  |  | ． |  |
| Total | 6 | 1，09，600 | 20，760 | 2，500 | 12，400 | 7，450 | 3，900 | ． | ． | ． |
| 3．Tadmpahmardie Tande |  |  |  |  |  |  |  |  |  |  |
| 1．Raoherla ．． | 70 | 4，31，020 | 75，459 | 35，140 | 17，192 | 16，881 | 3，426 | 1，000 | 100 | 1，720 |
| 2．Niwabpalerm ．－ | 98 | 5，80，486 | 60，885 | 18，300 | 21，240 | 23，145 |  | 1，600 | 1，000 | 700 |
| 2．Phdampudi－－ | 89 | 3，66，470 | 74，416 | 19，900 | 16，775 | 29，500 | 6，840 | 700 | 1，800 | 400 |
| 4．R ristayapaloma ．． | 129 | 8，09，650 | 76，508 | 12，650 | 81，470 | 29，683 | 3100 | 300 | 2，000 | 100 |
| 6．Nalleoherla ．． | 99 | 8，64，230 | 51，850 | 12，300 | 22，265 | 12，635 | 1，900 | 200 | 2，100 | $350{ }^{\prime}$ |
| 6．Bornmidi ．． | 70 | 6，33，400 | 1，28，965 | 7，680 | 30，650 | 44，280 | 22，270 | 19，400 | 2，100 | 625 |
| 7．Weat Vipparra ．． | 58 | 5，08，541 | 1，01．800 | 4，300 | 54，725 | 34，295 | 6，600 | 10， | 600 | 1，680 |
| 8．Chobrala．． | 68 | 3，68，218 | 75，800 | 16，700 | 37，470 | 14.230 | 2，100 |  | 100 |  |
| Total | 681 | 98，07，414 | 6，43，367 | 1，21，970 | 2，31，687 | 2，09，549 | 42，336 | 23，100 | 9，260 | 6，475 |
| ＊Chietazapuda Talug． |  |  |  |  |  |  |  |  |  |  |
| 1．Tadikclapudi | 80 | 1，07，600 | 33，716 | 11，665 | 12，265 | 9，185 | 800 | ．． | 200 | 100 |
|  |  |  |  |  |  |  |  |  |  |  |
| 1．Neggipudi | 30 | 1，72， 835 | 28，750 | 2.200 | 18，800 | 10，710 |  |  | 540 | $\cdots$ |
| 2．Muileswaram | 32 | 2，34，305 | 61，476 | 18，200 | 16，165 | 24，620 | 600 | 1，600 | － 400 |  |
| Total | 62 | 4，06，940 | 88，225 | 20，400 | 29，455 | 35，380 | 600 | 1，500 | 940 | ．． |
| 1．Devarapalle | 105 | 2，02，265 | 76，950 | 17，050 | 12，900 | 36，600 | 2，450 | 1，700 | 6，250 | ． |
| 7．Bemataram Talde． |  |  |  |  |  |  |  |  |  |  |
| 1．Korakolla ．$\quad$. | 91 | 8，00，703 | 89，645 | 11.900 | 44，700 | 27，495 | 4，200 | －． | 1，250 | ． |
| 2．Prilapajiara－ | 25 | 6，98，600 | 66，600 | 19，300 | 20，805 | 17，880 | 6，635 | － | 8，000 |  |
| 8．Chilakat ．．．． | 69 | 3，58，375 | 91，400 | 17，940 | 36，100 | 29，700 | 8，800 | 160 | 200 | 1，650 |
| 4．Vendre ．．．． | 162 | 8，69，680 | 1，276 | 8，200 | 38，020 | 40，805 | 5.150 | 700 | 400 |  |
| 6．Gnragaparta $\quad . \quad$ ．－ | 63 | 6，42，789 | 1，28，290 | 12，100 | 67，840 | 81，400 | 6，600 | 8，000 | $\cdots$ | 300 |
| 6．Golmalatoileri ．．．． | 135 | 6，80，913 | 1，25，440 | 22，400 | 60，146 | 37，010 | 4，950 | 500 | 200 | 235 |
| 7．Tondurra ．${ }^{\text {a }}$ | 127 | 8，78．600 | 1，01．625 | 18，030 | 40，870 | 37，845 | 4，630 |  | 150 | ．． |
| 6．Irndagandi－ | 90 | 7，97，230 | 1．48．800 | 10，660 | 89，926 | 81，414 | 25,960 | 1，000 |  |  |
| －Chinamimam－ | 91 | $4.68,102$ | 78， 105 | 16.900 | 34.745 | 23，026 | 2，085 | $\cdots$ | 200 | 150 |
| 10．Pedamiram ． | 79 | 6，02，822 | 1，67，060 | 17，000 | 64，250 | 47，710 | 14，500 | 6，800 | 10，660 | 6，250 |
| 11．Knmudavali ． | 72 | 7，39，738 | 1，14，285 | 43，950 | 29，736 | 32，275 | 6，925 | 2，000 | 400 | ， |
| 18．Muhadovapetmem | 70 | 6，12，440 | 78，690 | 10.700 | 23，480 | 36，810 |  | 1，000 | 6，200 | 400 |
| 18．Palato iera－＊ | 48 | 11，78，490 | 2，79，376 | 68，300 | 1，03，211 | 68，754 | 18，920 | 18，000 |  | 2，190 |
| 14．Kopelde ．．．－ | 48 | 8，72，850 | 1，17，700 | 8.300 | 71，500 | 38，600 | 300 | 8，600 | 2，500 |  |
| 16．Chiaupollera ．．．． | 89 | 1，37，650 | 97，475 | 8.800 | 10，650 | 9，400 | 1，300 | ．． | －． | 7，325 |
| 16；Andalar ．．．$\because$ ．．${ }^{\text {a }}$ | 24 | 2，08，700 | 38，400 | 1，500 | 19，400 | 17，500 | ．． | ． | ． | ．． |
| Total | 1，287 | 93，69 667 | 17，30，765 | 2，88，180 | 7，46，427 | 6，16，103 | 1，05，865 | 41，650 | 26，150 | 17，400 |
| Grand Total ． | 2，686 | 1，04，18，176 | 26，87，752 | 6，28，485 | 13，70，250 | 11，03，861 | 1，98，371 | 90，340 | 65，460 | 28，916 |
| Poresatage ．． | － | － | $\cdots$ | 17.45 | 38.48 | 38.47 | 6.67 | 2.54 | 184 | 0.70 |

III－22

APPENDIX"No. 22 (v).
Clastipied digtribution oy debta.
East Godavari District.


Classified distribution of debte－cont．
East Godavari Distriot－cont．

| Villege． | 20．1，wo0 to B，000． |  |  |  |  |  |  |  |  |  | 3e．0，000 to 10，000． |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | $\begin{aligned} & \text { 最 } \\ & \frac{6}{6} \\ & \text { (2A) } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { 菌 } \\ & \text { (27) } \\ & \hline \end{aligned}$ |  |  |  | $\begin{aligned} & \text { 数 } \\ & \frac{5}{7} \\ & \frac{1}{8} \\ & \text { (81) } \\ & \hline \end{aligned}$ |  |  | 寞 <br> － 7 <br> （34） | $\%$ <br>  <br> （86） |  | (97) | $\%$ <br>  <br> （38） |  |  | $\begin{gathered} \text { 最 } \\ \frac{8}{5} \\ \frac{1}{2} \\ \frac{1}{2} \\ \text { (63) } \\ \hline \end{gathered}$ |
| Bophmanify Tulak－ <br> 1．Bolloddapalem． <br> 2．Jambupatinam <br> a．Vamagirt <br> C．Yerminpalers | 26 10 86 86 |  |  | $\begin{gathered} 20 \\ 600 \\ 2,400 \\ 1,900 \end{gathered}$ | 988 0.480 8,1100 8,760 0,400 | 80 8,480 8,680 8,776 8,000 | $\begin{aligned} & \because . \\ & \ddot{i, 180} \\ & \mathbf{4 0 0} \end{aligned}$ | $\begin{aligned} & 14 \\ & . \\ & \ddot{20 n} \\ & 200 \end{aligned}$ | 14 $\because$ $\cdots 176$ $\cdots$ |  | 6 2 9 | 28. <br> 80,008 <br> 12,000 <br> 66,900 | $\begin{array}{r}80 \\ .11,000 \\ 2,000 \\ 10,000 \\ \hline .\end{array}$ | 80， 4,000 7,800 | 88 8,400 1,040 8,040 | 2n 2,200 1,000 8,470 | $\begin{aligned} & \mathrm{mb} \\ & \ddot{7} 90 \end{aligned}$ | 10 $\square$ 40 | $\begin{aligned} & \because 2 \\ & \because \\ & \because 000 \end{aligned}$ | 40 $\because$ $\because 80$ |
| Total | 94 | 2，11，448 | 62，760 | 6，800 | 29，700 | 16，776 | 1，650 | 400 | 178 | 860 | 17 | 1，07，700 | 23，600 | 6，800 | 9，340 | 6，670 | 760 | 810 | 900 | 840 |
| Amelapar Talul－ <br> 1． 1 Vemaviam <br> 1．Rrosumanda $\qquad$ <br> 2．Madipelll <br> －• | 81 88 88 8 | $\begin{array}{r}60,750 \\ 49,040 \\ 4,960 \\ \hline\end{array}$ | $\begin{array}{r}60,8080 \\ 10,208 \\ 2,870 \\ \hline\end{array}$ | 19，700 $\because$ $\square$ | 18,126 8,696 820 | 14,028 10,274 1,240 | 8，800 1,460 | 2，160 | $\begin{aligned} & 800 \\ & 810 \\ & 160 \end{aligned}$ | 800 428 140 | 12 | 88,980 48,240 | 48,800 14,000 | 29，800 .. | 12,428 8,404 | 8,475 6,080 | 2，000 1，800 | 000 | 1,000 . | 1，116 |
| Tous | 67 | 1，28，740 | 72，426 | 19，700 | 17，031 | 26，609 | 6，260 | 2，100 | 1，460 | 786 | 19 | 1，82，240 | 02，800 | 29，400 | 17，020 | 14，866 | 4，400 | 600 | 1，000 | 1，116 |
| Ravolu Taluk－ <br> 1．Pulognmm <br> 2．Pucmilapudl <br> $\bullet$ <br> －Mailhipalli <br> 14 | 10 27 16 | 80,400 87,210 82,270 | 12,800 14,640 18,860 | 1,600 8,810 1,000 | 4，966 1,800 6,806 | 6，748 7,460 8,065 | ${ }^{\prime \prime}{ }_{800}$ | ＂． | 880 800 | 1，800 | 1 9 | 9,800 64,660 88,400 | 1,600 14,800 8,660 | 800 8,600 | 800 700 8,880 | $\begin{array}{r} 800 \\ 8,770 \\ 8,720 \end{array}$ | 2,000 80 | ＂． | 1，900 | $\because$ |
| Totol | 62 | 1，19，880 | 40，600 | 0，800 | 12，760 | 17，240 | 800 | ． | 1，680 | 1，890 | 16 | 1，04，460 | 27，400 | 0，100 | 7，080 | 7，020 | 8，060 | $\cdots$ | 1，800 | ．． |
| Memuohnndrapur Tsluk－ | 222 | 8，00，880 | 1，80，102 | 88，800 | 8A，682 | 20，08B | 89，293 | 180 | 1，200 |  | 40 | 2，74，700 | 61.447 | 22,654 | 18.048 | 8.832 | 16， 770 | 660 | 100 |  |
| 9．Mnmavaraib | 282 | 8，44，840 | 72，782 | 10，400 | 82，060 | 7，832 | 1，000 | ．． | 400 | 1，100 | 80 | 1，80，060 | \％2，000 | 2，610 | 18，210 | －240 | 6，900 |  |  |  |
| 8．Konhadura | 122 | 2，011，700 | 88,050 | 10.100 | 82，010 | 16，460 |  |  | 4，860 | 1，700 | 42 | 2， 2 ，81， 810 | 47，146 | 8，200 | 2N，4is | 10，200 | 460 | 600 | 600 | 000 |
| 4．Tapeemaram | 108 | 2，47，960 | 76，480 | 16，310 | 28,147 | 6，510 | 16，488 | 8，200 | 10，200 | 1，000 | 94 | 2，40，840 | 42.066 | $16, \mathrm{ARO}$ | 12，834 | 8,948 | 8，404 | 700 | 100 | 8，860 |
| 6 Houicmamm | 98 | 2，02，880 | 90， 640 | 7，068 | 86，118 | 28，170 | 12，960 |  | 8，400 | 100 | 24 | 1，82，¢10 | 82，700 | 4，460 | 84.480 | 7.160 | 18，2111 |  |  | ．． |
| －Vnlognthodu | 98 | 1，88，4810 | 78，680 | 31,1128 | 28.958 | 10，1116 | 14，720 | 200 | 2，180 | 2，100 | 28 | 82，706 | 20,1980 | 7.060 | 18，8804 | 1，640 | 4，9010 | 8，000 | ${ }^{200}$ | $\because$ |
| 7 Polamur．． | 72 | $1,71,010$ $1,40,640$ | 86,200 68,400 | 2,600 2,100 | 21,180 80,180 | 10,780 12,170 | 18100 7.9100 | 860 | 8，200 | 850 | 17 | 1，08，740 On， 808 | 87,040 17,400 | 8,8040 | 18,800 8,850 | 6,800 $\mathbf{6 , 6 0 0}$ | 2，000 | 800 | $\begin{array}{r}10,000 \\ \hline 000\end{array}$ | $\because$ |
| －Jpppanvosada | 27 | 68，720 | 14，820 | 6，700 | 8，210 | ${ }^{660}$ | 2，910 |  | 1，000 | 20 | 10 | 69， 1100 | B，180 | 8，860 | 1，180 | 000 | 480 | ．． |  |  |
| 10．Vadlamiar | 68 | 1，24，960 | 24，918 | 9，068 | 8，140 | 8，720 | 8.410 | 900 |  | 800 | 4 | 84，860 | 0,160 | 8，160 | 1，970 | 80 | 1，000 | $\ldots$ |  | $\because$ |
| 11．Loolla al＇ | 4 | 1，10，880 | 27.1100 | gaid | 17.180 | 6，881） | 1，640 | ．． | 1，000 |  | 28 | 1，87，660 | 32，090 | 8，100 | 14，840 | 8，860 | 4，800 | ．． | 1，600 | ．． |
| 13．Toselpudi | 8 | 87， 8000 | 29，488 | 8，800 | 4，78a | 1，700 | 10，860 | $\ldots$ | 1,900 | 1，200 | 8 | 4，4，460 | 8,200 8,700 |  | 1,900 1,400 | $\begin{array}{r}200 \\ 1.100 \\ \hline\end{array}$ | 8,700 3,800 | 800 | $\ldots$ | ． |
| 10．Dwarapadi | 28 | 84，100 | 18，878 | 1，060 | 6，220 | 9，488 | 1，650 | $\cdots$ | 1，700 | 800 | 8 | 46，640 | 8，700 | 2，600 | 1，660 | 1，100 | 2，860 | 600 |  |  |
| Total | 1，104 | 27，06，420 | 7，10，488 | 1，31，248 | 2，86，922 | 1，24，706 | 1，06，028 | 6，980 | 88，480 | 8，470 | 286 | 18，40，010 | 0，81，807 | 77，880 | 1，06，260 | 47，868 | 67，160 | B，960 | 12，000 | 8，650 |
| Grand Total ：． <br> Poroonitage ．． | 1，897 | $82,10,880$ | $8,76,800$ | 2，62，608 <br> 18 <br> 865 | $8,86,919$ <br> 00.00 | $\begin{array}{r} 1,88,820 \\ 2040 \end{array}$ | $\begin{array}{r} 1,14,288 \\ 1808 \end{array}$ | $\underset{\substack{7,040 \\ 0.80}}{ }$ | $\begin{array}{r} 41,808 \\ 478 \end{array}$ | $\begin{array}{r} 11,888 \\ 1.28 \end{array}$ | 887 | $21,98,080$ | 4，08，267 | $1,18,839$ 28988 | $1,09,708$ 40.92 | 77.188 16.67 | 74,860 1601 | $\overline{0,460} \begin{aligned} & 1 \cdot 40 \end{aligned}$ | $\begin{array}{r} 10,100 \\ 8,26 \end{array}$ | 8,206 107 |


| Village． | His．10，000 to 20，000． |  |  |  |  |  |  |  |  |  | More than Re．20，000． |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} 5 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ \hline \end{gathered}$ |  | 安 <br> 高畐 品 <br> （44） |  |  | $\underset{(47)}{(4)}$ |  | $\begin{gathered} \text { 要 } \\ \text { 品 } \\ \text { 菏 } \\ \text { (49) } \\ \hline \end{gathered}$ |  |  |  |  |  <br> 3. 0 0 <br> （64） | 5 <br> 8 <br> （8B） |  | $\begin{gathered} \text { 最 } \\ (87) \\ \hline \end{gathered}$ |  |  |  | $\begin{aligned} & \text { 旡 } \\ & \frac{6}{6} \\ & \frac{2}{2} \\ & \frac{1}{3} \\ & \text { (81) } \end{aligned}$ |
| Rajahmindry Taluk－ <br> 1．Bolledupalam <br> 2．Jambupatnam <br> 8．Vemagiri <br> 4．Terrampalem | $\begin{array}{r}6 \\ \cdots \\ \hline 1\end{array}$ | 810， 89,000 11,000 $\cdots$ | 26.00 12,600 8,000 | 10 $\square$ $\square$ $\square$ | 90． 10，000 $\cdots 780$ | R4， 2,800 8,270 | 1. $\because$ $\because$ $\cdots$ | 18. . | ma． $\square$ $\because$. $\square$ | 80. 100 $\cdots$ $\cdots$ | 1 1 2 2 8 | $\begin{array}{r}88 . \\ 27,400 \\ 25,000 \\ 1,01,000 \\ 71,800 \\ \hline\end{array}$ | $\begin{array}{r}\text { R！} \\ 7,200 \\ 1,600 \\ 8,000 \\ 28,000 \\ \hline\end{array}$ | 20. $\cdots$ $\square 8000$ | 28． 4,400 98,000 18,400 | 81.0 <br> 1,800 <br> 1,600 <br> 8,000 <br> 6,100 | $1,0.0$ 1,000 | \％ | $\begin{aligned} & 14 \\ & \ddot{ } \\ & \ddot{i}, 000 \\ & \hline \end{aligned}$ | nen $\cdots$ $\because$ $\square$ |
| Total ${ }^{\text {a }}$ | 7 | 80，800 | 16，800 | ． | 10，730 | 4，770 | ． | ． | ． | 100 | 6 | 2，25，200 | 42，700 | 4，000 | 24，800 | 11，400 | 1，000 | ． | 1，600 | ． |
| Amalapur Talnk－ <br> 1．A．Vemararam <br> 2．Rrucumands <br> 8．Madipalli | 2 <br> 8 <br> 1 | 28,700 49,640 16,000 | 16,000 14.400 8,400 | 11,000 8,400 1,000 | 2,000 $\mathbf{6} 170$ $\mathbf{3 , 4 8 0}$ | 700 $\mathbf{2 , 2 8 0}$ 6,700 | 1,800 $\cdots$ | 100 | $\because$ | 2,600 870 | 1 | 48,000 47,000 | $\mathbf{5 , 0 0 0}$ $\mathbf{1 1 , 0 0 0}$ | 8,000 $\because$ | 7，600 | 2，200 | 400 | 800 | $\because$ | $\cdots$ |
| Total | 6 | 87，280 | 87，800 | 17，400 | 7，800 | 8，630 | 1，300 | 100 | ． | 2，770 | 8 | 92，000 | 16，000 | 8，000 | 7，600 | 2，200 | 400 | 800 |  | ． |
| Ragola talnk－ <br> 1．Palagumms <br> 2．Paserriapadi <br> 9．Malikipalli | 1 8 8 | 12,810 73,100 60,700 | 2,600 17,880 16,800 | 600 1,600 1,110 | 1,000 8,100 $\mathbf{3 , 3 2 0}$ | $\begin{array}{r}800 \\ 4,000 \\ \hline 6,650 \\ \hline 18\end{array}$ | 600 $\mathbf{6 , 9 8 0}$ 1,800 | 920 | $\dddot{1,000}$ | 1，000 | 1 8 1 | 20,000 $1,30,600$ 46,000 | 8,200 61,600 10,000 | 19,000 8,000 | 600 700 1,000 | $\begin{array}{r} 2,000 \\ 17,010 \\ 1,050 \end{array}$ | 6，600 | $\because{ }^{100}$ | 1，000 | 600 60 |
| Tota！ | 12 | 1，42，800 | 36，030 | 8，310 | 0，480 | 11，150 | 9，280 | 920 | 1，000 | 1，000 | 7 | 1，76，600 | 64，800 | 25，000 | 9，800 | 20，660 | 6，600 | 100 | 2，100 | 660 |
| Ramaohnndrapur Taluq－ <br> 1．Aptnusur | 17 | 2，24，000 | 84，800 | 18，200 | 8，950 | 2，900 | 6，800 |  | 650 | － 400 |  |  |  |  |  |  | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ |
| 1．Ramiavaram | 24 | 3，07，000 | 41，950 | 6，300 | 27：290 | 2，380 | 7，100 | $\cdots$ |  |  | 2 | 46，000 | 8,000 | 2，000 | 9，700 | 300 |  | ．． |  | － |
| 3．Konkudura | 20 | 2，76，2100 | 41，690 | 17，900 | 12，810 | 6，820 |  | $\ldots$ | 8，500 | 600 | 11 | 8，18，660 | 47，500 | 17，000 | 16,700 | 6，400 | 4，0400 |  | 8，00 | ． |
| 4．Tappervaram | 14 | 1，83，000 | 89，000 | 8，800 | 4，200 | 800 | 12，200 | $\cdots$ | 8，800 | 800 | 8 | 3，04，060 | 48，900 | 6，000 | 15，900 | 8，860 | 28，000 | 1，000 | 6，600 | $\because$ |
| 6．Rometwamm | 18 | 1，78，800 | 48，900 | 6 6，（1060 | 22，400 | 12.800 | 6，200 | 200 | 1，000 | 400 | 4 | 1，84，400 | 17，500 |  |  | 6,110 1.400 | 8,400 8,000 | 1，000 | － | $\because$ |
| 6．Velagathoda $\quad .$. | 10 | 14,600 $1,31,300$ | 21,210 16.400 | 8,860 2,700 | 4,080 8,600 | 7,000 8,300 | 200 1,560 | 200 | ．． | 30 100 | 8 | 80,600 $1,16,350$ | 29,000 86,000 | 10,000 8,000 | 14,000 11,000 | 13，000 | 8,000 $\cdots$ | $\cdots$ | $\because$ | 2，000 |
| 8．Koppavaram | 6 |  | 16，610 |  | 4，700 | 8，400 | 4，610 | 1，000 |  | 100 | 8 | 186，800 | 24，660 |  | 91，450 | 8，010 |  | ． |  | $\ldots$ |
| 9．Ippanapuda | 13 | 1，65，620 | 38,648 | 11，000 | 6，223 | 6，700 | 11，820 | ， | 1，000 | ． | 4 | 1，48，000 | 08，840 | 4，000 | 2，250 | 0 | 2，600 | $\because$ | 87，000 | － |
| 10．Vudlamur | 10 | $1.93,800$ $1,27,600$ | 5,600 13,660 | 7,400 1,400 | 900 0.000 | 6.10 8,700 | ${ }^{6} 00$ | $\because$ |  | $\cdots$ | 1 | $1,28,000$ $1,66,600$ | 78.600 | 1，600 | 8，500 | 600 | 2，000 | $\cdots$ | ． | －． |
| 12．Tomipodi ．． | 4 | －61，600 | 8，800 | 1，600 | 1，400 | H10 | 8，900 | $\cdots$ | 1,000 | $\because$ | 2 | 136，000 | 16，400 |  | 400 |  | 16，000 | ． |  | $\ldots$ |
| 13．Dwarapadi | 4 | 61，000 | 13，400 | 1，700 | 1，100 | 1，100 | 4,600 |  |  | $\cdots$ | 8 | 2，24，000 | 7，702 | 2，740 | 000 | 1，600 | 1，062 | ． | 1850 | ．． |
| Total | 140 | 19，17，720 | 8，29，082 | 07，760 | 1，07，263 | 66，080 | 68，080 | 1，200 | 12，650 | 2，230 | 4 | 16，09，050 | 3，32，092 | 49，240 | 80，000 | 25，090 | 64，982 | 4，000 | 97，200 | 2，000 |
| Grand Total ．． <br> Peronntage ．． | 170 | 29，98，180 | 4，18，618 | $1,08,460$ 9692 | $1,38,0013$ 3226 | 79,630 1908 | 78,850 1768 | 2,220 068 | $\begin{array}{r} 13,860 \\ \$ 28 \end{array}$ | $\left.\begin{array}{\|c\|} \hline, 110 \\ 166 \end{array} \right\rvert\,$ | 68 | 2，192，780 | 4，65，692 | 83,240 18.87 | $1,31,600$ 28.84 | 09,840 1629 | 62.942 1382 | $4,0 \% 0$ <br> 108 | $\begin{array}{r}1,01,100 \\ 28 \\ \hline\end{array}$ | $\left\lvert\, \begin{gathered} 2,650 \\ 068 \end{gathered}\right.$ |

Classified distribution of debts-cont.
East Godavari District-cont.


## APPENDIX Na 23 (i).

Indebcedmens detaine extracted from the roplios to the ryote' quactionmire.

## Kiofsa Distimet.



Kitima Drityict-ment.


APPENDIX NO. 23 (ii).
Indebrednese details extraesed from the replies to the ryots' questionnaire.


APPENDIX No. 23 (inij-



Hegr fogavan Datrict.



Eugr Gomaraki Dustricx-cont.

| Renater Taser. |  | 2al |  | 518.8 |
| :---: | :---: | :---: | :---: | :---: |
|  | 47 | 310 30 | 55,409 | 138 10 a |
| 14esampplin | 1 | 9560 | 8.000 | 11218 |
| Remvaram | 15 | 17.40 | 16, 910 | 9210 |
| Tenal | 72 | 54.45 | 8,210 | 160 |
|  |  |  |  |  |
| Bunagrapedi | 13 | 2950 | 12,565 | 412 |
| Eobiliniduypamin | 4 | 198603 | 5,760 | \% 0 |
| Eaparanare | \% | 运易 | 4.569 | 78 |
| Stricamgamtratal .. | - | 5450 | 6,900 | 756 |
| Raghmraphame -- | - | $443 \cdot 6$ | 87,709 | 8 6 |
| Emamapalete | 10 | 7690 | 3,300 | 71 |
| Vemagiri | 10 | 57.0 | 6,600 | 115128 |
| Trasil | 1 | 1,080~5 | 63,205 | 5210 |
| Priatamat Dithams. |  |  |  |  |
| Mangoputideraper | 5 | $281 \cdot 15$ | 2,909 | 13.2 |
| Elonsazajapalit | 5 | 14000 | \&,009 | 389 |
| Tedal | 10 | 20412 | 6090 | 17 t |
| Grend Total | 101 | 2,46292 | 2,25,480 | 8511 |

APPENDIX No． 28 （iv）．
Changes in the fortanes of the ryots who bave sent their replies to the committee＇s ryots＇questionnaire．

| Dintriotr |  |  | Lend nequired． |  |  | Larde lost． |  |  |  |  |  |  | Dabte inourred． |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 最 |  |  |  | 息 |  | 最㫛 |  |  |  |  |  |  | 家 | 最㫛 | 8 8 8 \％ \％ d |
| Kiatne <br> Enat Godavari <br> Weet Godapari | 74 281 848 | $1,487 \cdot 74$ 2,930 $0,068 \cdot 85$ | $\because$ | $165 \cdot 70$ 44.00 214.80 | 427.80 <br> 1789 <br> 117.10 |  | 11.00 7.40 950 | 220.66 61.60 388.60 | 8，920 $91 \cdot 20$ $\cdots$ | 61.10 2.00 8.00 | $1,498 \cdot 91$ 3,686 3,4868 6,4616 | $\because$ |  |  | （20.100 <br> 7.800 <br> $8,6.0$ | （17，786 | （ $\begin{array}{r}70,209 \\ \text { 12，966 } \\ \text { 2，91，440 }\end{array}$ |  |

$\infty$

## APPENDIX No． 25.

Loans in Agrioùltaral and Non－agrionltural Societies（other than Central Banks） in 1927－28 and 1926－27．

| Loang． | $\begin{gathered} \text { Agrioultaral, } \\ 1927-28, \end{gathered}$ |  | $\begin{gathered} \text { Agrioultaral, } \\ 1920-27 . \end{gathered}$ |  | Non－agrionltaral， 1987－28． |  | Non－agrioultaral， 1926－27． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 宮 |  | 曾 | 茄 | 异 | $\begin{aligned} & \text { 呂 } \\ & \text { 蒲 } \\ & \text { M } \end{aligned}$ |

A．Loans issued during the year classified according to purpose and value．

| （1）Pormons． |  |  | R8． |  | es． |  | ［8． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| For cultivation expenies | 45，28，848 | 17．68 | 89，50，419 | 16.70 | 6，99，238 | $8 \cdot 88$ | 11，12，794 | 6.88 |
| ，parohase of ositle ．． | 16，58，200 | 6.48 | 18，18，516 | 6.84 | 1，67，279 | 0.87 | 1，16，685 | $0 \cdot 70$ |
| ＂payment of ziete | 14，82，855 | 5.74 | 48，16，946 | 5.67 | 65，093 | 0.86 | 61，327 | 0.87 |
| ＂improvement of lands．． | 12，04，832 | $4 \cdot 70$ | 18，74，946 | $5 \cdot 81$ | 2，81，884 | 1.28 | 1，71，897 | 1.04 |
| ＂parohese of raw materisis for $\begin{gathered}\text { induatries } \\ \text { l．} \\ \text { ．．} \\ \text { ．．}\end{gathered}$ | 1，83，184 | 0.52 | 1，18，551 | 0.51 | 1，08，877 | 0.57 | 61，932 | 0.39 |
| For trade ．． | 21，54，814 | $8 \cdot 42$ | 20，28，515 | $8 \cdot 80$ | 26，09，136 | 14.48 | 24，44，827 | 14．67 |
| ，edacation | 52，120 | $0 \cdot 20$ | 70，888 | 0.82 | 1，99，098 | $1 \cdot 11$ | 1，60，498 | 0.98 |
| is bouse building | 9，2í， 787 | $8 \cdot 62$ | 9，78，347 | $4 \cdot 14$ | 16，06，762 | 8.98 | 18，64，693 | $8 \cdot 18$ |
| ＂manofature and purohase of country | 04，476 | $0 \cdot 37$ | 91，606 | $0 \cdot 39$ | 1，00，299 | $0 \cdot 56$ | 26，768 | $0 \cdot 16$ |
| For purchase of lande $\quad$ ：$\quad$ ．．$\quad .$. | 12，24，714 | $4 \cdot 78$ | 10，66，698 | 4.50 | 8，28，966 | $1 \cdot 82$ | 2，76，346 | 1.86 |
| ＂）food and necessaries of lite | 16，06，669 | 6.68 | 17，83，928 | 7.54 | 36，20，557 | 20.09 | 83，36，461 | 20.04 |
| Total，productive | 1，61，60，399 | $69 \cdot 20$ | 1，48，98，719 | 60.90 | 97，11，878 | 63.89 | 01，33，688 | 64．85 |
| For paying off prior debts | 1，00，04，136 | 89.07 | 89，38，032 | 87．78 | 58，43，434 | 82．48 | 46，98，521 | 27.62 |
|  | 2，91，080 |  |  |  |  | 6.22 1.34 |  |  |
| ＂1，other coremonies $\begin{aligned} & \text { litigation }\end{aligned}$ | 54，161 | $0 \cdot 21$ | 36,438 6,983 60,760 | 0.16 0.08 | 2，42，285 | 1.34 | $2,01,746$ 17,855 | 1.00 c 10 |
| ＂other now－rroduotive parposes | 88，715 | $0 \cdot 88$ | 56，765 | 0.23 | 11，02，421 | 818 | 12，04，343 | $7 \cdot 22$ |
| Total，non－produotive | 4，48，946 | 1.78 | 8，25，171 | 1.87 | 24，68，793 | 13.68 | 29，30，086 | 17.53 |
| Grand Total | 2，66，98，780 | 100．00 | 8，30，67，822 | 100.00 | 1，80，21，905 | $100 \cdot 00$ | 1，86，82，295 | $100 \cdot 00$ |
| （2）Vacoli． |  |  |  |  |  |  |  |  |
| Loans not | 34，09 | 18. | 83，67 | $14 \cdot 2$ | 81，50 | 11.94 | 19，74，328 |  |
| ＂）exneeding Re．60，but not Rs． 100. | 40，68，889 | 16.88 | 99，96，087 | 16.90 | 26，89，938 | 14.92 | 24，01，128 | 14.41 |
| ＂）oxoeeding Ra，100，brt not Ra， 260. | 88，01，678 | 29.01 | 85，78，670 | $23 \cdot 66$ | 42，78，708 | 28.74 | 40，08，152 | 24.46 |
| ＂exoeeding Rar 260 ．． | 1，22，48，688 | 4784 | 1，07，20，323 | 45.80 | 80，02，684 | 49－40 | 82，78， 892 | 49．68 |
| Total | 2，56，98，780 | 100．00 | 2，36，57，822 | ：00．00 | 1，80，21，905 | 100．00 | 1，66，62，295 | 100.00 |

APPENDIX No. 26.
Consolidated statement of cost of cultivation from different conroes-Investigator's reports.

| Districh | Agrioalturl inaplements. | Cattle servicen. | Mancre | Seada. | Laboar. | Palora. | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Della Wet.


Upland Wet.


## Dry.



Khata accomite.


## Ryots' Questionnaire (West Godavari).



- Figarea in italiea indicste official entimatee, i.e., by Eettlement Marty.

APPENDIX No. 26 (ii).
Cost of cultivation per acre caloulated from the ryot's questionnaire.
Hest Godabari.


## APPENDIX No. 27 (i).

" Per aore "-oost of cultivation, 1900 (Committe日).


## E

APPENDIX No. 27 (ii).
Agrioaltaral implementa schedale, 1900.


## APPENDIX No. 27 (iii).

' Per aore' eattle depreciation echedule, 1900.

| Holdinga. |  |  |  | 8 | \% | 䆝号 |  | \% |  | E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 serres and leen 10 agren and leen | -. | ". | Bullooks. Do. | 18. 60 80 | 8 | Recc. |  | $\begin{array}{ccc}\text { ne. } & \text { a } & 8 . \\ 8 & 0 & 0 \\ 10 & 8 & 0\end{array}$ | $\begin{array}{ccc}\text { ER. } & 4 & \\ 8 & 10 \\ 8 & 10 \\ 1 & 8 & 0\end{array}$ |  |
| 16 acres and hee | -. |  | Do. | 100 | 8 | 128 | 10 | 1388 | 180 | 10 |
| 20 acres and lem |  | . | Do. | 160 | 8 | 18180 | 10 | 19 19 0 | 127 | 127 |
| 36 mares and lem |  | f | Do. | 160 | 8 | 18120 | 100 | 1918 | 014 | 1) 811 |
|  |  | $11$ | Do. | 80 150 |  | $\begin{array}{lll}10 & 0 & 0 \\ 18 & 12 & 0\end{array}$ | $\begin{array}{ll}1 & 8 \\ 1 & 0\end{array}$ | 10  <br> 10 18 | $\begin{array}{llll}0 & 7 & 7 \\ 0 & 11 & 8\end{array}$ | $\left\{\begin{array}{l}1 \\ 1\end{array}\right.$ |
| so aeres and lem | -• | \{ | Do. | 100 |  | 1980 | 10. | 1888 | - 0 | 13 |

APPENDIX No. 27 (iv).
Cattle maintenance Committea cahedule, 1900.


Labour sahedole par sore of paddy（exolad

| Partioulars． | Standard wages and laboar． |  |  | 1 mare and lom． |  |  |  | 5 acren and lema． |  |  |  | 10 arom and lem |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 宽 | $\begin{aligned} & 8 \\ & \text { B } \\ & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 8 \\ & 80 \\ & 8 \end{aligned}$ | 傕 | $\begin{aligned} & \text { 最 } \\ & \text { 劵 } \end{aligned}$ | हi | $\begin{aligned} & 8 \\ & 8 \\ & 8 \end{aligned}$ | 害 | $\begin{aligned} & \text { 旡 } \\ & \text { 㽞 } \end{aligned}$ | i | $\begin{aligned} & 8 \\ & 8 \\ & i=8 \\ & i x \end{aligned}$ | 寓 | $\begin{aligned} & \text { 旡 } \\ & \text { 最 } \end{aligned}$ | \％ | E |
| Bquaring and levelling | 2 |  | ${ }_{0}^{40 .}$ |  |  |  | an．A．P． |  |  |  | 20．4．P． |  |  |  |  |
| Bodi repaire ．．．．．． | 1 |  | 080 | 1 | $\cdots$ | $\cdots$ | $\begin{array}{llll}0 & 6 & 0 \\ 0 & & 0\end{array}$ | 8 | ． | ． | 120 | 14 | ． | －． | 210 |
| Carting and spraading manara． | 2 | ． | 080 | 8 | $\cdots$ | $\cdots$ | 060 | 8 | $\because$ | $\cdots$ | 180 | 14 | $\because$ | $\cdots$ | 150 |
| Preparing tha seed bed and | 1 |  |  |  | $\cdots$ | $\cdots$ | 0 0 | ， | $\cdots$ | ． | 180 | 14 | $\cdots$ | $\cdots$ | 910 ＊ |
| Ploughing and damma＂$\quad$ ．－ | 5 |  | $\begin{array}{lll}0 & 8 & 0 \\ 0 & 0\end{array}$ | 5 | $\cdots$ | －． | $\begin{array}{lll}0 & 8 & 0 \\ 1 & & 0\end{array}$ | 8 | $\cdots$ | ．． | 090 | 7 | $\cdots$ | $\cdots$ | 018 |
| Uprooting the meedlinge $\quad .$. | 2 | $\cdots$ | $0 \leqslant 0$ | 5 | $\because$ | $\because$ | $\begin{array}{lll}1 & 1 & 0 \\ 0 & 8 & 0\end{array}$ | ${ }^{16}$ | $\cdots$ | $\cdots$ | 8120 | 86 | ． | $\cdots$ | 818. |
| Conveying and handing them |  |  | － | 8 | $\cdots$ | $\cdots$ | 080 | 6 | － | $\cdots$ | 180 | 14 | － | $\cdots$ | 8. |
| Valleda ．．．$\quad$ workers $\quad .$. | 1 | ＇i | $\begin{array}{lll}0 & 4 & 0 \\ 0 & 9 & 6\end{array}$ | 1 | －i | $\cdots$ | 0 ¢ 0 | 3 | 8 | $\bullet$ | 0180 | 7 | $\cdots$ |  | 1180 |
| Transplantation＂$\because$ | $\because$ | 10 | ${ }^{-} 86$ | $\cdots$ | 10 | $\cdots$ | $\begin{array}{lll}0 & 2 & \\ 1 & 14 & 6 \\ & 1\end{array}$ | ． | ${ }_{80}^{8}$ | $\because$ | $\begin{array}{llll}0 & 7 & 6 \\ 8 & 10 & 0\end{array}$ | $\cdots$ | 70 | $\because$ | 11 |
| Weoding ．．．． | 3 | 8 | $\left\{\begin{array}{lll}0 & 8 & 0 \\ 0 & 9 & 0\end{array}\right\}$ | 3 | 8 | ． | 0160 | － | 0 | $\cdots$ | 2180 | 21 | 70 91 | $\cdots$ | 18.0 |
| Watering and watobing | $\cdots$ |  | ． | ． | $\cdots$ | $\cdots$ |  |  |  |  |  |  |  |  |  |
| Heaping ．． | 3 | 8 | $\left\{\begin{array}{lll}0 & 4 & 0\end{array}\right\}$ |  | ， | － |  | $\cdots$ | ． | $\cdots$ | ＂ | $\cdots$ | $\ldots$ | － | ＊ |
| Heaping ．．$\quad$ ． |  |  | $\left[\begin{array}{lll}0 & 8 & 0\end{array}\right\}$ | 8 | 3 | － | 5 | 9 | 0 | ． | 8150 | 21 | 81 | － | － 2 |
| Heaping ．．．．．．． | 2 |  | $\left[\begin{array}{lll}0 & 1 & 0 \\ 0 & 8 & 0\end{array}\right\}$ | 2 | 2 | － | 0140 | 6 | 6 | $\cdots$ | 2100 | 14 | 14 | －• | 6 \％ |
| Prepering the thrmohing floor | 2 |  | 0 ： 0 |  | $\cdots$ | －＊ | 060 |  |  |  |  |  |  |  |  |
| Thrashing and carting peddy． | 4 | $\cdots$ | 050 | 4 | － | $\cdots$ | $1 \leqslant 0$ | 12 | ．． | $\because$ | 120 | $\ddot{28}$ | $\cdots$ | $\cdots$ | 8 is 0 |
| Carting and hay rtaoking ．． | 2 | －． | 0 ¢ 0 | 2 | $\because$ | $\cdots$ | 080 | 6 | ．． | ． | 18 | 14 | ．． | $\cdots$ | 380 |
| Mamala to labourers ．． | ． |  | ．． | － | ． | ． | 040 | ．． | $\bullet$ | ．． | 080 |  | ．． |  | 100 |
| Total | $\cdots$ | $\cdots$ | － | $\cdots$ | $\ldots$ | －$\cdot$ | － | ． | ．- | $\cdots$ | 30.0 |  | $\cdots$ |  | 70106 |
| Palesa |  |  | － | $\cdots$ | $\cdots$ |  | － | $\cdots$ | $\cdots$ | $\cdots$ | － |  |  |  |  |
| Grand Total | ． |  | ． |  |  | ． | －• | ． | ．． |  |  |  |  |  |  |
| Labour and palara per | － |  | － |  |  |  | ． | － |  |  | 1080 |  |  |  | 1026 |
| Laboar per ame． |  |  |  |  |  |  | － | － | $\cdots$ |  | 1080 | － | ． | ＊－ | 1016 |

DIX No． 27 （ v ）．
ing owner＇s labour）achedule 1900.

| 16 aecres and lene． |  |  |  | 20 arree and bees． |  |  |  | 26 arreo nas hees． |  |  |  | 20 mereanad beec |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| E | $\begin{aligned} & \text { E } \\ & \text { 坒 } \\ & \hline \end{aligned}$ | ¢ |  | 馬 |  | $\stackrel{\text { g }}{ }$ | 器 | 罟 |  | E | \％ | ${ }^{8}$ | $\begin{aligned} & \text { 言 } \\ & \stackrel{y}{8} \end{aligned}$ | $\stackrel{8}{5}$ | － |
| $\begin{aligned} & 24 \\ & \begin{array}{l} 12 \\ 24 \end{array} \end{aligned}$ | $\because$ | $\because$ | mell | 17 17 17 | $\because$ | 17 68 17 |  | 28 14 28 | $\because$ | 16 8 88 28 |  | $\begin{aligned} & 18 \\ & 18 \\ & 18 \\ & 18 \end{aligned}$ | $\because$ | 28 <br> 14 <br> 38 <br> 1 |  |
| $\underset{\substack{80 \\ 24}}{8}$ | $\because$ | $\because$ | 16 160 | $\begin{aligned} & 5 \\ & \substack{58 \\ \hline 89 \\ \hline} \end{aligned}$ | $\because$ | $\begin{aligned} & 5 \\ & 10 \\ & \hline \end{aligned}$ | －${ }^{0} 15$ \％ | $\mathbf{s}$ | ． | ${ }^{18}$ | ${ }^{24} 82:$ | $\begin{gathered} 106 \\ 108 \end{gathered}$ | $\because$ | 10 <br> 38 <br> 84 <br> 24 | cre |
| 12 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\because$ | 731 | $\because$ | ${ }^{3}{ }^{3} 14000$ | $\because$ | ${ }_{7} \mathrm{is}_{170}$ | i |  | $\stackrel{29}{\because}$ | is 220 | $\because$ |  | $9$ | $2{ }_{20}$ | 188 |  |
| 86 | ${ }^{30}$ | ．． | 1140 | 4 | 51 | 10 | 141. | ${ }_{5} 4$ | ${ }^{6}$ | 13 | 1860 | 49 | 81 | 32 | 1950 |
| 38 | $\stackrel{3}{8}$ | $\ddot{.}$ | 1612 。 | $\ddot{46}$ | $\ddot{61}$ | $\because$ | 88 | ． | ${ }_{66}$ | $\ddot{\theta}$ | 32. | $\ddot{87}$ | $\ddot{81}$ | $\ddot{4}$ |  |
| 24 | 24 | ． | 1080 | 29 | ${ }^{4}$ | 5 | 18 10 0 | 88 | 4 | 8 | 17120 | 20 | 5 | 24 | 17100 |
| i8 | $\because$ |  | $16 \%$ | ${ }^{58}$ | $\because$ | io |  |  | $\because$ | 12 | ${ }^{2}$ | ${ }_{78}$ | $\because$ | $\stackrel{30}{30}$ | $4{ }_{6}^{6}$ |
| $\stackrel{\square}{\text { ：}}$ | $\because$ |  | \％${ }^{6}$ |  | ． | 13 | $5{ }^{5} 540$ |  |  |  | $7 \%$ \％ |  | ．． | 32 | ${ }_{3}^{58}$ |
| $\cdots$ | ．． | ． | 12140 | ． | ． |  | 14628 |  |  |  | 1089 |  |  |  | 196106 |
| ． |  | $\cdots$ |  |  | ．． | ．． | 10 |  |  | ． | $\begin{cases}40 \\ 15 & 0 \\ 0 & 0 \\ 0\end{cases}$ | ） |  |  | $\left\{\begin{array}{lll}80 \\ 15 & 0 & 0\end{array}\right.$ |
|  | ．． |  |  | ． |  |  | 18898 |  |  |  | 259 |  |  |  | $9910{ }^{10}$ |
|  | $\cdots$ | ． | 101 |  |  |  | 10153 |  |  |  | 128 |  |  |  | 1019 |
|  | $\cdot$ | － | 101 | ． |  | ． | 897 | ． | ． | ． | 905 | ． |  |  | 74 |

## APPENDIX No. 28 (i).

Schidole for cost of culitiation, 1928.
( 0 wner't labour ozoladed.)
Haximum 25 per cent cost per aere.


Medium 35 per cent.


Minimum 45 per cont.


APPENDIX No. 28 (ii).
Nature of the labour contributed by the ryot.

| Particalam. | 5 acres and leso. |  |  | 10 acres and less. |  |  | 15 toren and lese. |  |  | 20 sares and loss. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Minimam. cahedule. | Medinm. | Maximum. | Minimam. | Medinm. | Maximum. | Minimam, | Mediam. | Maximum. | Minimam. | Mediam. | Maximum. |
| Seed bed and ite work | ${ }_{88} 812.80$ |  |  |  |  |  | ne. A.  <br> 3 P. |  |  | ${ }_{1}^{\text {Ra. A. A. }}$ P. |  |  |
| Equaring and levelling ... $\quad$. | 840 | 300 | 200 | 3120 | 50 | 400 | 800 | 200 | 400 | 1200 | 1900 | $\cdots$ |
| Bodi repair ... .. | 120 | 200 | 100 | 2100 | 300 | 1880 | 80 | 200 | 200 | 2100 | 700 |  |
| Ploaghing or parma .. | $\stackrel{0}{3} 0$ | 3120 | 3120 | 300 | 8180 | 3120 | 600 | 780 | 8120 | 600 | 780 |  |
| Carting manare, oto. .. $\quad$. | 100 | 180 | 100 | 280 | 480 | 888 | $5{ }^{5} 00$ | $\begin{array}{lcc}78 & 0 \\ 889\end{array}$ | $\begin{array}{lll}8 & 0 & 0 \\ 288 & 0\end{array}$ | $\begin{array}{lll}8 \\ 8 & 8 & 0 \\ 8 & 8 & \end{array}$ | 80 | $\cdots$ |
| Conveying and uprooting medling | 140 | 140 | 100 | 1140 | 280 | 3 2 0 <br> 8   | 280 | 8190 | $\begin{array}{lll}2 & 8 & 0 \\ 8 & 0\end{array}$ | 2 8 <br> 8 1 | 28  <br> 4 8 | $\because$ |
|  | $\begin{array}{lll}1 & 8 & 8 \\ 1 & 2 & 0\end{array}$ | $\begin{array}{llll}2 & 4 \\ 0 & 12 & 0 \\ \\ 1 & 0\end{array}$ | $\begin{array}{lll}1 & 8 & 0 \\ 188 & 0\end{array}$ | $\begin{array}{lll}3 & 8 & 0 \\ 2 & 4 & 0\end{array}$ | $\begin{array}{lll}2 & 4 & 0 \\ 4 & 0 & 0\end{array}$ | $\begin{array}{lll}8 & 4 & 0 \\ 4 & 4 & 0\end{array}$ | $\begin{array}{lll}3 & 0 & 0 \\ 2 & 4 & 0\end{array}$ | $\begin{array}{llll}3 & 0 & 0 \\ 4 & 8 & 0\end{array}$ | 8 4 4 8 0 | $\begin{array}{lll}8 & 18 & 0 \\ 2 & 10 & 0\end{array}$ | $\begin{array}{llll}4 & 8 & 0 \\ 6 & 6 & 0\end{array}$ | . |
| Reaping - .. .. $\quad$. | 100 | 100 | 180 | 180 | 180 | 180 | 200 | 200 | 200 | 200 | $\begin{array}{lll}6 & 6 & 0 \\ 2 & 0 & \\ 2\end{array}$ | $\because$ |
| Heaping .. .. .. | 100 | 100 | 100 | 180 | $y 0$ | 180 | 200 | 800 | 200 | 800 | 200 | $\cdots$ |
| Proparing the threshing foor .. | 080 | 080 | 100 | 180 | 180 | 180 |  |  |  |  |  | . |
| Thrashing and curting paddy, oto. | 280 | $3{ }^{3} 10$ | $3 \leqslant 0$ | 8120 | 540 | 5.0 | 640 | $6 \% 0$ | 800 | 780 | 90 | $\cdots$ |
| Watohing and watering paddy fields | 612 | 6120 | 6120 | 15120 | 16120 | 15120 | .. |  |  |  |  |  |
| Total | 28120 | 29 | 2740 | 4660 | 550 | 6160 | 8800 | 4880 | $40 \leqslant 0$ | 6010 | 61140 |  |
| Per agre | 8148 | 9120 | 1 | 6100 | 7189 | 56 | 8 | 88 | 418 | 2168 | 8108 |  |

Nature of the labour contributed by the dependent.
(Savinge made, it the dependent also worke.)

| Partioulara. |  | 5 aores and losa. |  |  | 10 aoree and less. |  |  | 15 aeres and less. |  |  | 20 sores and leas. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Minimum schedale. | Medinm. | Maximam. | Minimum. | Mediam. | Maximum. | Minimum. | Medium. | Maximum. | Minimum. | Medium. | Maximam. |
|  |  | 88. A. $\mathbf{P}$. | Rs. A. P. | Re. A. P. | R.t. A. P. | 88. 4. p. | 88. 4. P. | 日s. A. $\mathbf{P}$. | 8. A. P. | нs. A. ₹. | 2s. 4. P. | 88. 4. \%. | 14. A. P. |
| Soed bed and ita mork .: ${ }^{\text {a }}$ | -• | .. | 200 | ${ }_{2}^{2} 80$ | ${ }_{2}^{214} 0$ | $1{ }^{1} 000$ | ${ }^{8} 00$ | .. | .. | .. | .. | . | - A. |
| *quaring and lovelling .. -. | .. | . |  | 200 | $3{ }^{3} 40$ | 200 | 400 | ., | - | . | . | - | . |
| Bodi repains .. .. .- | - |  |  | 100 | 1100 | $\begin{array}{lll}2 & 0 & 0 \\ 5 & 0 & \end{array}$ | $\begin{array}{lll}1 & 8 \\ 0 & 0\end{array}$ | . | . | $\cdots$ | . | $\cdots$ | - |
| Ploogbing or pamanu .. $\quad$ - | $\because$ | 300 | 3180 | $\begin{array}{rrr}312 & 0 \\ 0 & 8 & 0\end{array}$ | $\begin{array}{lll}4 \\ 2 & 8 & 0\end{array}$ | $\begin{array}{lll}E & 0 & 0 \\ 2 & 0 & 0\end{array}$ | $\begin{array}{lll}5 & 0 & 0 \\ 3 & 8 & 0\end{array}$ | $\cdots$ | $\because$ | $\because$ | $\because$ | ". | $\because$ |
|  | $\cdots$ |  |  | $\begin{array}{lll}0 & 8 & 0 \\ 1 & 0 & 0\end{array}$ | $\begin{array}{ccc}2 & 8 & 0 \\ 1 & 14 & 0\end{array}$ | $\begin{array}{lll}2 & 0 & 0 \\ 2 & 0 & 0\end{array}$ | $\begin{array}{lll}3 & 8 & 0 \\ 8 & 2 & 0\end{array}$ | - | " | $\because$ | - | $\because$ | $\because$ |
| Conveying teedlings, eto. $\quad$ Weeding | -. | $\begin{array}{lll}010 & 0 \\ 210 & \end{array}$ | $\begin{array}{lll}010 & 0 \\ 2 & 4 & 0\end{array}$ | $\begin{array}{llll}1 & 0 & 0 \\ 2 & 4 & 0\end{array}$ | $\begin{array}{rrrr}1 & 14 & 0 \\ 3 & 8 & 0\end{array}$ | $\begin{array}{lll}2 & 0 & 0 \\ 3 & 0 & 0\end{array}$ | $\begin{array}{lll}3 & 2 & 0 \\ 3 & 6 & 0\end{array}$ | $\because$ | - | $\because$ | $\because$ | $\because$ | $\because$ |
| Valleds $\quad . . \quad .$. | . |  | $\cdots$. |  |  | 080 | 100 | .. | .. | .. | $\because$ | -. | -. |
| Reteping .. .. .. | - | 100 | 100 | 100 | 180 | 180 | 180 | . | .. | . | . | . | - |
| Heaping $\because \because \quad \because$ | - | 100 | 200 | 100 | 180 | 200 | $\begin{array}{lll}1 & 8 & 0 \\ 6 & 12\end{array}$ | -. | - | - | . | - | .. |
| $1{ }^{1}$ Wraahing and ourting paddy, etc. | - | 280 | 480 | 2120 | 600 | 600 | 6120 | $120 \sim 0$ | 12000 | 12000 |  |  | $190^{\circ} 0$ |
| $\begin{array}{ll}\text { Watching } \\ \text { Palera }\end{array} \quad .$. | $\because$ | . | - | . | 4200 | 4200 | $42 \ddot{0} 0$ | $120 \quad 0$ | $120 \quad 0 \quad 0$ | 1200 | $120 \quad 0$ | 12000 | 18000 |
| Total | .. | 10120 | 1520 | 17120 | 70140 | 69 0 | 7640 | - | $\cdots$ | $\cdots$ |  | $\cdots$ | - |
| Per aore | . | 394 | 608 | 5188 | 1020 | 9189 | 1014 d | 1000 | 1000 | 1000 | 7011 | 7011 | 7011 |

ATPINDIX No 24 （iii）．
Nohedulev for ngricultural implemonta．Dommon to all mohodulam．

| Naine of impla． mantu． | One nere muil lean． |  |  | A arram and lonus actana |  |  | 10 noren aud 19ym 7 moram． |  |  | 10 morem and lematil moram． |  |  | Q0 ancan mid lann 17 noren， |  |  | HS anran and lam 24 zorph． |  |  | 10 anras and lama 47 antman． |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 8 | $\frac{d}{3}$ |  |  | 罗 |  | 8 | 3 |  |  | $1$ |  | 音 | $\frac{8}{3}$ |  | $8$ |  |  |  | 3 |  |
|  | M，A $\cdots$ $\because$ | $a n, 1$ | Man．A．${ }^{\text {a }}$ |  | ran |  | $\begin{array}{ccc}126 . & A \\ 40 & 0 \\ 4 & 0 \\ 1 & 11 \\ 1 & 0\end{array}$ | 7n4 |  | 80. 100 10 0 | rnmi | $\begin{array}{cccc}8 . & A & 7 \\ 1 & 1: 1 \\ 0 & 1 & 1 \\ 0 & 1 & 1 \\ 0 & 1 & 1 \\ 0 & 1 & \end{array}$ |  | run $\begin{gathered}\text { run } \\ 10 \\ 1 \\ 10 \\ \\ 2\end{gathered}$ | $\begin{array}{cccc}\text { anc } & \text { A } & \\ 0 & 0 \\ 0 & 8 & 8 \\ 0 & 0 & 8 \\ 0 & 0 & 0 \\ 0 & 1 & \end{array}$ |  | Y 10 1 10 | $\begin{array}{ccc}\text { as．} & \text { A } & \\ 0 & \text { a } \\ 0 & 7 & 0 \\ 0 & 1 & 0 \\ 0 & \\ 0 & 1 & 10\end{array}$ |  | 10 1 10 9 | $\begin{array}{llll}\text { an．} & A \\ 0 & 11 & 0 \\ 0 & 1 & 11 \\ 0 & 0 & 11 \\ 0 & 1 & 1\end{array}$ |
| $\begin{array}{lll} \text { punire } & \because & \because \\ \text { Rpada } \end{array}$ | ig 0 | 0 | 0 \％ 0 | 1 1 <br> 0 1 |  | $\begin{array}{lll}0 & 1 & 4 \\ 0 & 1 & 0\end{array}$ | $\begin{array}{ll}1 & 0 \\ 1 & 0\end{array}$ |  | $\begin{array}{llll}0 & 1 & 7 \\ 0 & 0 & 7\end{array}$ | －（8） 8 （ 8 |  | $\begin{array}{lll}0 & 1 & 4 \\ 0 & 0 & \\ 0\end{array}$ | $\bigcirc$ |  | $\begin{array}{lll}0 & 1 & 3 \\ 0 & 1 & 1\end{array}$ | ${ }^{0}\left(\begin{array}{lll}(s) & 1 & 0 \\ 0 \\ (d) & 4 & 0\end{array}\right.$ |  | Occc |  |  | $\begin{array}{llll}0 & 1 & 1 \\ 0 & \square & 7\end{array}$ |
| Clumhar，${ }^{\text {a }}$ |  | 10 | 017 |  | 10 | $\begin{array}{llll}11 & 0 & 0\end{array}$ | $\because 0$ |  | $0 \begin{array}{lll}0 & 0 & 0\end{array}$ | （1） | 10 | 0 0） | －（y） 10 | 10 | ${ }_{11}^{0} 0$ | －（y） 0 | 10 | 0 0 | －（N） 11 | 11 | 0 |
| Raltana．： |  |  |  |  |  |  | 111 | 10 | 0010 | $y 8$ | 10 | $\begin{array}{lll}10 & u & y\end{array}$ | （a） 1 |  | 00 | －（y） 0 | 10 | 0 | －（8） 40 | 10 | 00 |
| Hagn | －（2） 10 | 4 | 040 | －（0） 2 A |  | 0 \％ | －10）If 0 | 10 | $0: 3$ | （11） 100 | 10 | 0 y 0 | －（16）yy |  | 0 \％ 1 | －（y0） al $^{1}$ |  | 0 y | －ancta y | 10 | $0: \%$ |
| Mioklean ．． | － $0^{0}$ | 0 | 0 1 4 | －（1） 1 月 | $\stackrel{ }{ }$ | 01 | －（d）$!~ A$ | 4 | 10010 | －（N）at 0 | 1 | 010 | －（10） 18 | 4 | 0011 | －（10） x 1 y | 4 | 0 0 $n$ | －（1a） 610 | ＋ | $0{ }^{1} 8$ |
| Axo $\quad$. |  | ． | ．． | 10 | 10 | 000 | 18 |  |  | 8 |  | 0 O 01 | 1 | 10 | 0 O 2 | （2） 4 | 10 | ${ }_{0}^{0} 0$ | （ ${ }^{(1)}$ ： 0 | 11 | $0 \%$ |
| Rnnam $\quad \because \quad \cdots$ |  | $\because$ |  | $\because$ |  |  | $\begin{array}{ll}5 & 0 \\ y & 0\end{array}$ |  | $\begin{array}{lll}0 & 5 & 1 \\ 0 & 0 & \\ 0 & 0 & \end{array}$ | \％ 0 |  | $\begin{array}{lll}0 & 1 & 8 \\ 0 & 0 & 8 \\ 0 & & \end{array}$ | 10 |  | $\begin{array}{llll}0 & 1 & 1 \\ 0 & 0 & 1\end{array}$ | －（4：10 ${ }^{10} 0$ |  | $\begin{array}{lll}0 & 1 & 4 \\ 0 & 0 & \\ 0 & \\ 0\end{array}$ | －（1） 10 |  | $\begin{array}{lll}0 & 1 & 0 \\ 0 & 0 & 4\end{array}$ |
| Mimanallanacius | 02 | 1 | 0 0 | 0. |  | 0 \％ 4 | $y 0$ |  | 0 － 7 | 40 | 1 | 0.4 |  | 1 | 0. | － 10 0 |  | 070 | （15 u | ， | 1111 |
| moola ．． | 01 | 1 | 020 |  |  | 18 | 0 |  | 0.10 |  | 1 | \％ | 40 |  | 0 － | 19 |  | 0 \％ | 180 |  | 111 |
| Por nom |  |  | 01811 |  |  | 128 |  |  | 410 |  |  | 328 |  |  | 210 |  |  |  |  |  | 316 |

APPKANDIX No. 28 (iv).
Manare-Common to all schedulea.


APPENDIX No. 28 ( v ).
Cattle Depreciation-Schedule.


APPENDIX No. 28 (vi).
Cattle Depreciation-Schedule.


APPENDIX No. 28 (vii).
Cattle Depreciation-Sohedule.


APPENDIX No. 28 (viii).
Maintenance of cattle-Sohedule.

| Partioulars. | One 20re and lem. | 6 soren and lees. |  | 10 mores and leso. |  | 16 sores and less. |  | 20 eores and leme |  | 26 aores and leas. |  | 80 aores and lems. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Quantity | Prioe. | Quantity. | Prioe. | Quantity | Prioe. | Quantity. | Prioe. | Quantity. | Prioe. | Quantity. | Prico. |
| Maxmon. |  |  | R. 4. P. |  | 89. 4. 8. |  | 패. 4. 2. |  | 2. A. A. |  | as. 4. P. |  | M. 4. 8. |
| Sunnhemp seede and laboar. | Na. |  | 640 | 2 baga. | 2118 0 |  | 2200 |  | 2480 |  | 28120 |  | 38120 |
| Oil oske | .. | 1 bag. | 800 | 2 " | 1600 | 8 baga. | 2400 | 8 bage. | 2400 | ${ }_{5} 8$ bags. | 480 | ${ }^{6}$ bagas. | 480 |
| Horeogram ... .. | . | Nii. | Nil. | 2 " | 2400 | 8 " | 8600 | 8 " | 880 | ${ }^{6}$ | 6000 | 8 | 600 |
| Bran .. ... .. | $\cdots$ | 2 baga. |  | 4 " |  |  |  |  | 1200 |  | 1800 |  |  |
| Paddy huok . .. .- | . | 4 ." | ${ }^{6} 000$ | .. | 6 18 18 00 | 4 " | $\begin{array}{r}68 \\ \hline 600\end{array}$ | 6 " | ${ }^{8} 800$ | 12 | $\begin{array}{lll}16 & 0 & 0 \\ 60 & 0 & \\ 10\end{array}$ | 12. | 1600 |
| Pasturage Cattio thed repairs | $\because$ | $\ldots$ | $\begin{array}{rrr}10 & 0 & 0 \\ 2 & 0 & 0\end{array}$ | $\cdots$ | 16 4 000 | $\cdots$ | $\begin{array}{rrr}26 & 0 & 0 \\ 6 & 0 & 0\end{array}$ | .. | $\begin{array}{rrr}36 & 0 & 0 \\ 8 & 0 & 0\end{array}$ | .. | $\begin{array}{lll}60 & 0 & 0 \\ 10 & 0 & 0\end{array}$ | $\ldots$ | $\begin{array}{lll}60 & 0 & 0 \\ 10 & 0 & 0\end{array}$ |
| Medical expentes ., ... | $\cdots$ | $\because$ | 100 |  | 100 |  | 200 | $\because$ | 800 |  | 480 |  | 10 |
| Total expenses ... | $\ldots$ | $\ldots$ | $\begin{array}{lll}89 & 4 & 0\end{array}$ |  | $\begin{array}{lll}98 & 12 & 0 \\ 188 & 8\end{array}$ |  | 18800 | $\cdots$ | 16180 |  | 238120 | . | 241120 |
| Per zore expentes .. | - | . | 1814 | . | 1868 | . | 111 | . | 8147 | . | 10100 | . | 81410 |

APPENDIX No. 28 (ix).
Maintenance of cattle-Sohedule.

| Partionars. | One acre and lome. | 5 acres and less. |  | 10 aures and lens. |  | 15 sores and less. |  | 20 aores and lese. |  | 25 aores and lese. |  | 80 aores and leve. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Quantity. | Prioe. | Qusntity. | Prico. | Quantity | Prioe. | Quantity. | Prioe. | Quantity. | Prioo. | Quankity. | Prioe. |
| Mididu. |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sannhemp seeds and labour. |  |  |  |  | $\begin{array}{cccc}\text { as. } & \text { A. } \\ 16 & 8 \\ 16 & 8 & 0\end{array}$ |  |  |  |  |  |  |  | \#8. ${ }^{\text {a }}$ A. P. |
| 8annhemp seeds and lebour. | NiL. | - ${ }_{\text {bagg }}$ | $4{ }^{6} 0$ | 2 bage. | $\begin{array}{lll}16 & 8 & 0 \\ 16 & 0 & 0\end{array}$ | 2 bags. | $\begin{array}{lll}22 & 0 & 0 \\ 16 & 0 & 0\end{array}$ | 2 bags. | $\begin{array}{lll}22 & 0 & 0 \\ 18 & 0 & 0\end{array}$ | 8 bage. | $\begin{array}{rrrr}28 & 12 & 0 \\ 24 & 0 & 0\end{array}$ | $4{ }^{\text {a baga }}$ | $\begin{array}{lll}28 & 12 & 0 \\ 86 & 0 & 0\end{array}$ |
| Hortegram .. .. .. |  | - bas. | Nil. | 2 " | 2400 | 8 ", | 860 | 8 " | 860 | 8 " | $60 \quad 00$ | \% ${ }^{\text {b }}$ | ${ }^{80} 00$ |
| Bran \#̈n .. .. ${ }^{\text {P }}$ |  | .. | 600 | - | 600 | - | 1200 |  | 1200 | - | 1800 | $\left\{\begin{array}{l}6 \\ 8\end{array}\right.$ | 180 |
| Paddy buak .. .. .. |  | - | $\stackrel{1}{6} 0$ | . | 00 | - | 1200 | - | 120 | . | 10 | [ 8 | 1000 |
|  | $\because$ | ". | $\begin{array}{lll}6 & 0 & 0 \\ 2 & 0 & 0\end{array}$ | $\bullet$ | 1000 | - | 2000 | - | $\begin{array}{cc}25 & 0 \\ 8 & 0\end{array}$ | - | 4000 | . | $\begin{array}{lll}50 & 0 & 0 \\ 10 & 0 & 0\end{array}$ |
| Medioal expenien ... .. | $\because$ | $\because$ | 100 | $\because$ | 100 | ". | 200 | $\because$ | 200 | $\because$ | 400 | $\because$ | $\begin{array}{rrrr}10 & 0 & 0 \\ 40 & 0\end{array}$ |
| Total expentes .. .. | . | $\because$ | 24.0 | $\because$ | $\begin{array}{llll}76 & 8 & 0\end{array}$ | . | 11200 | $\because$ | 11900 | $\because$ | 182120 | $\because$ | 216120 |
| Por sare expennes .. -. | -• | $\cdots$ | 814 | - | 101410 | $\cdots$ | 964 | .. | 700 | $\because$ | 8411 | $\cdots$ | 806 |

APPENDIX No. 28 ( x .
Maintenanee of onttle-Schedule.

| Partioulart. | One aore and lese |  | 6 aores and loss |  | 10 aoros and Jexs |  | 16 norea and leve. |  | 80 aores and leme |  | 25 norw and lext. |  | 80 soree and leve. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Quantity. | Prioe. | Quantity | Prioo | Quantity. | Price. | Quantity | Price. | Quantity | Prioo. | Quantity. | Prioe. | Qaantity. | Prios. |
| Mimiuv. |  |  |  | 2a. A. P | Bage | 20. A. P. | Buge. | 24. A. P. | Bagt. | 24. A. ${ }^{\text {a }}$ | Bage. | 4. 4. ${ }^{\text {P }}$ | Bage. | 2m.4.s. |
|  | Nil. |  | .. | 600 | 1 | $\begin{array}{ccc}18 & 8 & \\ 8 & 8 & 0 \\ 8 & 0\end{array}$ | 2 | $\begin{array}{ll}20 & 1 \\ 16 & 0 \\ 10\end{array}$ |  | $\begin{array}{llll}24 & 8 \\ 848 \\ 84 & 0 & 0 \\ 0\end{array}$ | 4 | $\begin{array}{lll}28 & 12 & \\ 92 \\ 92 & 0 & 0\end{array}$ |  | $\begin{array}{ccc}36 & 18 \\ 50 & 0 & 0 \\ 0 & 0\end{array}$ |
| Horsearam $\quad .$. | $\because$ | . | $\because$ | $\because 0$ | 1 | 1200 | 2 | 2400 | ${ }^{2}$ | $\begin{array}{ll}24 \\ 240 & 0 \\ 0\end{array}$ | \% | $\begin{array}{lll}96 & 0 & 0\end{array}$ | 4 | 4800 |
| Pnddy bran .. $\because \quad . \cdot$ | . | .. | .. | 600 | 2 | 600 | 2 | 60 | 8 | $\bigcirc 0$ | 4 | 1200 | 6 | 150 |
| Paddy hush .: $\quad \therefore \quad \therefore$ | . | $\because$ | $\because$ | ${ }^{\circ} 00$ | . | $\begin{array}{rlll}8 & 0 & \\ 10 & 0 & 0\end{array}$ | 4 | ${ }^{6} 800$ | 4 | ${ }^{6} 00$ | 6 | $8^{8} 0$ | 12 | $\begin{array}{ll}18 & 0 \\ 86 & 0\end{array}$ |
|  |  | $\because$ | $\because$ | $\begin{array}{lll}60 \\ 100 \\ 10 & 0\end{array}$ |  | $\begin{array}{lll}10 & 0 & 0 \\ 20 & 0 & 0\end{array}$ | $\because$ | $\begin{array}{ccc}16 & 0 & 0 \\ 8 & 0 & 0\end{array}$ |  | $\begin{array}{lll}20 & 0 & 0 \\ 8 & 0 & 0\end{array}$ | $\because$ | $\begin{array}{r}26 \\ \hline 80 \\ 4 \\ \hline\end{array}$ | $\because$ | $\begin{array}{lll}86 & 0 & 0 \\ 6 & 0 & 0\end{array}$ |
| Madionl oxpousee ... | $\cdots$ | $\because$ |  | 100 | $\because$ | 100 | $\because$ | $\begin{array}{lll}8 & 8 & 0 \\ 2 & 0 & 0\end{array}$ |  | $2{ }^{8} 00$ | $\because$ | ${ }^{1} 0000$ | .. | 400 |
| Total | . | . | . | 2200 | . | 678 | . | 424 | $\because$ | 112 - |  | 149120 | .. | 204120 |
| Pur aom | .. | . |  | 784 | .. | B | .. | 7110 |  | 6 0 11 | .. | 6180 | .. | 794 |

APPENDIX No. 28 (xi).
Daily Labour Schedule.

APPENDII
Daily Labous

|  | Standard for wagee and labour employed． |  |  | One nore and lem． |  |  |  | 5 aoree and lem（8 acreat 3 fielde）． |  |  |  | 10 morve and lean（ 7 comve a felita）． |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pastionlars． （1） | 晏 (2) | $\begin{aligned} & \text { 发 } \\ & \text { d } \\ & \text { B } \\ & \text { (3) } \end{aligned}$ |  | $\begin{aligned} & \text { 延 } \\ & \text { (5) } \\ & \text { ( } \end{aligned}$ | $\begin{aligned} & \text { a } \\ & \text { E } \\ & 0 \\ & \text { (B) } \\ & \hline \end{aligned}$ | 关 (7) |  | 品 (9) | $\begin{gathered} \text { E } \\ \text { E } \\ \text { B } \\ 10 \end{gathered}$ | E 11) |  | $\left(\begin{array}{c} \text { d } \\ \text { 空 } \\ 18 \end{array}\right.$ |  | $\begin{gathered} 5 \\ 0 \\ (16) \\ \hline \end{gathered}$ | 5 <br> （16） |
| Tacimeme． <br> Beed－bed ropaiss ．． | 1 | $\ldots$ |  | ． | ． | $\ldots$ | net   <br> 0 8 $\mathbf{p}$ | 2 | $\cdots$ | $\cdots$ |  | 4 | $\cdots$ |  | $2{ }_{2} 0$ |
| Carting and spreading manore to seed－bed | 1 | $\cdots$ | $080$ |  | ． |  | $080$ | 8 |  |  | 180 |  |  | ． | 10 |
| Watering the seed－bed ．． | 2 | ． | 100 | $\ldots$ | ．． | $\cdots$ | 100 | 4 | ． | ．． | 200 | ， | ．． | $\ldots$ | 800 |
| Squaring and levelling and eleaning | 3 | ． | $180$ | $\cdots$ | $\ldots$ | ．． |  | 8 |  | － |  | 16 | ． |  | － 0 |
| Bodi repairs $\quad \cdots \quad \cdots$ | 2 |  | 100 | $\ldots$ | ． | $\cdots$ | 100 | 4 | $\ldots$ | ．． | 200 | 6 | $\ldots$ | $\because$ | 000 |
| Ploughing or damma ．． | 5 | － | 320 | ．． | ． | ． | 320 | 15 | ． | $\cdots$ | － 0 | 85 | $\cdots$ | $\cdots$ | 21140 |
| $\underset{\operatorname{carting}}{\operatorname{man}}$ and spreading | 2 |  | 100 | $\cdots$ | $\cdots$ | ．． | 100 | 8 |  |  | 150 | 14 |  |  | 700 |
| Uprooting seedlings ．． | 2 | $\cdots$ | 140 | ．． | ．． | ． | 140 | 4 | ．． | $\cdots$ | 280 | 14 | ． | $\cdots$ | 6120 |
| Conveying and handing them to workera | 2 |  | 140 | $\cdots$ | $\cdots$ | $\cdots$ | 10 | 4 |  | ． | 28 | 10 |  | $\ldots$ | 0 |
| Transplantation ．．．． |  | 10 | 600 | $\cdots$ | $\ldots$ | $\cdots$ | 600 | $\cdots$ | 30 | $\ldots$ | 150 |  | 70 | $\ldots$ | 850 |
| Weeding ．．．．．． | 2 | 4 | 240 | ． | ． | ． | 240 | 6 | 12 | $\cdots$ | 6120 | 14 | 28 | $\cdots$ | 15120 |
| Falleda and topping | 2 | $\cdots$ |  | ． | ． | ． | 0120 | 2 | ${ }_{2}^{2}$ | ．． | 188 | $8$ | 8 | $\cdots$ | 640 |
| Reaping ．．．．．． | 2 | 6 | 400 | $\cdots$ | $\cdots$ | ．． | 40 | $6$ | 18 | ． | 1200 | $6$ | $40$ | $\cdots$ |  |
| Heaping $\quad . \quad$ ．．．． | 2 | 2 | 200 | ． | ．． | ．． | 200 | 6 | 6 | ．． | 600 | 14 | 14 | ． | 1400 |
| Preparing the thrashing fioor ．．．．．． | 1 | $\cdots$ | 080 | $\cdots$ | ． | ．． | 080 | 2 | ．． | ． | 100 | 3 | ；． | ． | 10 |
| Thrashing and carting paddy | 4 | － | 800 | $\ldots$ | ．． | $\cdots$ | 200 | 8 | － | ．． | 600 | 21 | ． | ．． | 15120 |
| Carting straw and pro－ paring baysteok | 2 | $\ldots$ | 100 |  | $\ldots$ |  |  | 6 |  |  |  | 14 |  |  | 90 |
| Mamool | －• | $\cdots$ | ． | ． | ． | ．$\cdot$ | $\cdots$ | ． | ． | ．$\cdot$ | 100 | －． | － |  | 20 |
| Total | － | $\cdots$ | ． | ． | ． | ．． | 2910 0 | ． | ． | $\ldots$ | 7810 － | $\cdots$ | ． | $\cdots$ | 18510 |
| Palera | － | －． | ． | ． | ． | － | Nil | －• | ．． | －． | 1800 | $\because$ | － |  | 420 |
| Grand Total | － | $\cdots$ | ． | ． | ．$\cdot$ |  | 29100 | ．． | $\cdots$ | ． | 96100 | ． |  | ． | 22710 |
| Per acre expensea | $\cdots$ | － | － |  |  | －• | 29100 | ． | ． | $\cdots$ | 328 | ． | $\cdots$ | ．． | 28 |

No． 28 （xi）．
Bchedule．

| 15 aores and less（12 soxes．） |  |  |  | 20 sores and lese（17 acres）． |  |  |  | 25 aores and less（22 sares）． |  |  |  | 30 aures and less（27 acres）． |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 品 <br> 吕 <br>  <br> （18） | $\frac{8}{0}$ <br> （10） | $\begin{aligned} & 803 \\ & 80 \\ & \text { (20) } \\ & \end{aligned}$ | $\underset{\text { 寻 }}{\text { g }}$ <br> （21） | $\begin{aligned} & \text { 总 } \\ & \text { 吕 } \\ & \text { B } \\ & \text { (22) } \end{aligned}$ | $\begin{gathered} \text { 号 } \\ \stackrel{8}{\circ} \\ (28) \\ \hline \end{gathered}$ |  | $\stackrel{\text { は }}{\substack{0 \\ \hline ⿻}}$ (25) | 总 <br> 宫 <br> （28） | $\begin{gathered} \dot{8} \\ \stackrel{8}{8} \\ (27) \end{gathered}$ |  | 怘 (29) | $\begin{aligned} & \text { 붕 } \\ & \text { B } \\ & \text { 莫 } \\ & \text { (30) } \end{aligned}$ | $\begin{aligned} & \dot{8} \\ & \mathbf{8} \\ & \hline \end{aligned}$ |  | 堅 |
| 6 |  | 6 | $\begin{array}{ccc}\text { 8．} & \text { A．} & \text { P．} \\ 8 & 0 & 0\end{array}$ | 9 | －• | 8 | 78， 4.80 | 8 | $\bullet$ | 10 | Ref． a P． | 10 | － | 10 | R8．${ }_{6}$ | A． 0 |
| 7 | $\because$ | 7 | 880 | 12 | － | 7 6 | $\begin{array}{lll}6 & 0 & 0 \\ 6 & 0 & 0\end{array}$ | 9 | $\because$ | 4 18 | $4 \times 80$ | 9 | － | 6 18 | 48 | 80 |
| 12 | ＊＊ | 24 | 600 | 20 | － | 81 | 1000 | 22 | － | 44 | 1100 | 41 | － | 40 | 208 | 80 |
| 4 | ．${ }^{\circ}$ | 6 | 2000 | 10 | $\cdots$ | 10 | 600 | 11 | －． | 22 | 58.0 | 24 | ．． | 80 | 120 | 0 |
| 50 | ＊ | 14 | $81 \leqslant 0$ | 84 | 69 | 16 | 4820 | 80 | ． | 80 | 60 0．0 | 105 | － | 80 | 6510 | 100 |
| 16 | 4 | 20 | 800 | 20 | $\therefore$ | 24 | 1000 | 15 | － | 40 | 788 | 19 | $\cdots$ | 48 | 98 | 80 |
| 24 | ．． | 20 | 1500 | 34 | － | ．． | $21 \leqslant 0$ | 44 | －． | －． | 2780 |  | $\cdots$ | － | 3812 | 120 |
| 20 |  | $\star$ | 1280 | 80 |  | 4 | 18120 | 34 |  | 10 | 2140 | 44 | $\cdots$ | 10 | 278 | 80 |
| 2 | 120 | ． | 6000 |  | 170 |  | 8500 | ．． | 220 |  | 11000 |  | 270 | － | 1350 | 0 |
| 6 | 8 | 8 | 600 | －． | ． 90 | 12 | 88120 | ． | 102 | 80 | 3840 | 32 | 100 | 30 | 66 | 00 |
|  | 12 | 12 | 480 | $\cdots$ | 16 | 18 | 600 | ． | 22 | 22 | 840 |  | 27 | 27 | 10 | 20 |
| 82 | 80 | 4 | 4600 | 80 | 12 | 4 | 6600 | 68 | 100 | 10 | 8300 | 80 | 126 | 10 | 103 | 00 |
| 20 | 24 | 4 | 2200 | 84 | 80 | 4 | 3200 | 48 | 80 | 10 | 3900 | 50 | 48 | 10 | 49 | 00 |
| ＊ | ＊ | 4 | － | $\cdots$ | ＊ | 4 | $\cdots$ | $\cdots$ | ＊ | 10 | － | 5 |  | 10 | 2 | 80 |
| 10 | － | 8 | 8000 | 56 | ＊＊ | 12 | 4200 | 62 | ＊＊ | 24 | 46.80 | 88 | － | 20 | 660 | 00 |
| 20 |  | 10 | 1000 | 26 | ＊＊ | 16 | 1800 | 26 | $\cdots$ | 18 | 1800 | 22 | ＊ | 26 | 110 | 00 |
|  | － | － | 400 | ． | － | $\bullet$ | 500 | － | － | － | 800 | ＊ | － | － | 120 | 00 |
| －． | － | － | 262120 | ＊ | － | ＊ | 40760 | － | －$\cdot$ | － | 484120 | － | － | －． | 6830 | 00 |
| ＊＊ | ＊＊ | $\cdots$ | 12000 | －＊ | － | $\cdots$ | 18200 | $\cdots$ | －＊ | － | 2820.0 | －• | －${ }^{\text {A }}$ | － | $282{ }^{\circ}$ | 00 |
|  | ＊ | －• | 882120 | ＊＊ | － |  | 6169 6． 0 | \％ | － | ．${ }^{\prime}$ | 76612.0 | ．$\cdot$ | ＊＊ | － | 8150 | 00 |
| ＊＊ | － | ＊ | 9114 | － | ＊＊ | $\cdots$ | 88711 | ＊＊ | －＊ | ＊ | 8418.8 | $\cdots$ | ＊ | ＂${ }^{\prime}$ | 303 | 30 |

APPEN
Daily Labour


DIX No. 28 (xii).
Schedulo.


| APPENDIX <br> Bahedule for |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Standard for wager and labour employed． |  |  | One sere and lesa |  |  |  | Pive acres and lem 8 morve： 3 shelde |  |  |  | Tan cores and lem 7 norse ： 8 bolde． |  |  |  |
| Partiealars （1） | $\begin{aligned} & 5 \\ & y_{n}^{\prime} \\ & (2) \\ & \hline \end{aligned}$ | $E$ 8 8 8 <br> （3） | $\begin{aligned} & 4 \\ & 8 \\ & 8 \\ & 8 \\ & \text { (4) } \end{aligned}$ | $\begin{aligned} & 5 \\ & \mathbf{D}_{8} \\ & (5) \end{aligned}$ | $\begin{gathered} 5 \\ \frac{5}{6} \\ \vdots \\ (6) \\ \hline \end{gathered}$ | $\begin{gathered} E \\ 0 \\ (7) \\ \hline \end{gathered}$ |  | 岳 (o) |  | $\begin{gathered} \text { a } \\ \vdots \\ 0 \\ k(11) \\ \hline \end{gathered}$ |  | $\left\|\begin{array}{c} 5 \\ \text { E } \\ (29) \end{array}\right\|$ |  | B (16) |  |
| Timimam． |  |  | ［．A． $\mathbf{P}$ ． |  | － |  | 18． 4. |  |  |  | 1n． 4 F |  |  |  | men． 4. |
| Geed bod repairt ． | 2 |  | 0 © | $\cdots$ ． | － | $\cdots$ | 0120 | $\because$ | $\cdots$ | $\because$ | $2 ¢ 0$ | $\cdots$ | $\because$ |  | 1120 |
| Carting and spresding manare to seeds． | ． | $\ldots$ |  | $\ldots$ | ． | ．． | ． | － | $\cdots$ |  | $\cdots$ | $\cdots$ | ． | $\cdots$ | ．${ }^{\text {a }}$ |
| Watering the seed bed ．． | 2 | $\cdots$ | 060 | $\cdots$ | － | $\cdots$ | 0120 | $\because$ | $\cdots$ | $\cdots$ | 10 | － | $\cdots$ | $\cdots$ | 280 |
| Squaring，oleaning and | 2 | $\ldots$ | 060 | ． | ． | ． | 0120 | －． | $\cdots$ | ． | $2 \leqslant 0$ | ． | － | ＊． | 510 |
| Eeveling． | 1 | ． | 060 | $\cdots$ | $\cdots$ | $\ldots$ | 060 | － | ＊＊ | $\bullet$ | 120 | $\bullet \bullet$ | － | $\cdots$ | 2100 |
| Ploughing and dammu ．． | 4 | $\cdots$ | 080 | $\cdots$ | $\cdots$ | $\because$ | 200 | － | $\cdots$ |  | 600 | ． | ， | ． | 1400 |
| Carting and spreading manure． | 2 | ． | 080 | ．． | ． | ．． | 100 | － | ＊＊ | － | 100 | $\cdots$ | － | －• | 600 |
| Oprooting seedlings $\quad \therefore$ | 1 | $\ldots$ | 0100 | ．． | ． | $\cdots$ | 0100 | ． | $\cdots$ | $\cdots$ | 1140 | $\cdots$ | $\cdots$ | － | 460 |
| Conveying and handing them to workers． | 1 |  | 0100 | ．． | ．． | ．． | 0100 | ． | － | －． | 1140 | －． | ＊ | ．． | 3120 |
| Transplantation ．．．． |  | 8 | 070 | $\cdots$ | $\cdots$ | $\cdots$ | \％ 80 | $\cdots$ | ＊ | $\because$ | 10 ： 0 | $\cdots$ | － | ． | 2480 |
| Weeding ．．．．．． | 2 | 2 | 060 | ． | ． | ． | 180 | $\cdots$ | ＊ | $\because$ | 40 | $\cdots$ | ：． | $\cdots$ | 10.0 |
| Valleda and topping ．． | $\because$ | 1 |  | $\ldots$ | $\cdots$ | ． | 060 | $\because$ | ＂ | $\because$ | 120 | $\cdots$ | $\cdots$ | $\cdots$ | 200 |
| Reaping ．．．．．． | 3 | 8 | $\begin{array}{llll}0 & 8 & 0 \\ 0 & 8 & 0\end{array}$ | $\ldots$ | ． | ． |  | $\cdots$ | $\cdots$ | $\because$ |  | $\because$ | $\cdots$ | $\because$ | 2100 |
| Heaping ï ：̈ ．． | 2 | 1 | $\begin{array}{lll}0 & 8 & 0 \\ 0 & 8 & 0\end{array}$ | $\cdots$ | $\cdots$ | $\cdots$ | $\begin{array}{lll}1 & 0 \\ 0 & 0\end{array}$ | ．． | ＂． | $\cdots$ | 40 | $\cdots$ | $\because$ | $\cdots$ | 10.0 |
| Preparing the thrashing floor． | 1 | ． | 080 | $\cdots$ | ．．＊ | ．． | 080 | － | ＊ | $\cdots$ | 0.0 | $\cdots$ | － | － | 10 |
| Thrashing，earting and | 4 | － | 0100 | $\cdots$ | ． | $\cdots$ | 20 | $\cdots$ | $\cdots$ | $\cdots$ | 78 | $\cdots$ | － | ． | 17 － 0 |
| Mamal ．．lc． | ．． |  |  |  |  |  | － 0 | $\cdots$ | $\cdots$ | $\cdots$ | 100 | $\cdots$ | $\cdots$ | － | 80 |
| Watching and watering ．． | ．． |  |  |  |  |  | 20 | $\cdots$ | － | － | 6120 | $\cdots$ | $\cdots$ | ． | 15120 |
| Total ．． Palera ．． | $\cdots$ | ．． | 710 | $\cdots$ | $\cdots$ |  | 220 | $\cdots$ | $\cdots$ | $\because$ | 68.00 | $\because$ | ＂． | $\cdots$ | $\begin{array}{lll}21 & 1 & 2 \\ 48 & 0 & 0\end{array}$ |
| Graed Total |  |  | ． |  | ． | ．$\cdot$ | － | ． | ＊ | $\cdots$ | $\cdots$ | $\bullet$ | － |  | 1898 |
| Per sere expenses | $\cdots$ | $\cdots$ | －＊ | $\cdots$ |  |  | 220 | $\cdots$ | $\cdots$ | － | 2100 | － | － | $\bullet$ | 2711 |

No. 28 (xiii).
daily labour.

| Fino 13 memen |  |  |  | ${ }^{20}$ mata and lime |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\underset{\text { gin }}{\substack{\text { an } \\ \hline}}$ | $\begin{gathered} 5 \\ \frac{5}{8} \\ \text { (18) } \\ 10 \end{gathered}$ | $\left.\begin{gathered} 6 \\ 5 \\ a n \\ a n \end{gathered} \right\rvert\,$ |  |  |  | $\left\|\begin{array}{c} E \\ E_{2} \\ e n \end{array}\right\|$ |  |  |  |  |  | $\begin{gathered} \text { gis } \\ \substack{(29)} \end{gathered}$ |  | $\begin{gathered} \text { cis } \\ \text { (a) } \\ \hline \end{gathered}$ |  |
|  |  |  |  |  |  | $\begin{gathered} \ddot{6} \\ 12 \\ 12 \\ 10 \\ 12 \\ 17 \\ \ddot{6} \\ \ddot{6} \\ \ddot{8} \\ 10 \\ 4 \\ 4 \\ 12 \\ \ddot{4} \end{gathered}$ |  |  |  |  |  |  |  |  |  |
| :. | : | $\because$ | 120 | :. | .: | $\because$ | 162: | $\because$ | : | $\because$ | ${ }^{283} 50$ | $\because$ | : | $\because$ | 2030 |
|  |  | $\cdots$ | 08 |  |  |  | 4 |  |  |  | $\mathrm{ccs}_{5} 120$ |  |  |  | 6132 |
| .. |  | . | 2611 | . | . | $\cdots$ | 232 |  | -• | . | 25 | . |  |  | 2211 |

## APPENDIX No． 29.

Price of atandard outturns at the present day commutation price（i．0．，Re． 258 per garec）． ［Grom income in eath per weris（common to all moholales）．］


APPENDIX No． 80 （a）（i）．
Schedule for net ineome effeeted upon one sare（owner＇s labour is not taken into acconnt）． （Corumatation prioe．）

| Partioalara |  |  | d d d | 7 $\vdots$ d i | \％ \％ ¢ － | a ¢ ¢ a | \＄ | $\begin{aligned} & \underset{\rightharpoonup}{2} \\ & \text { ® } \end{aligned}$ | ¢ d d |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Maxisios． |  | an 1. | m．． 2 | m． 4 | m． 4. | － | 4． 8. |  | 4．4． |
| 5 sores and less | ．． | 648 | 8010 |  |  | －18 $11{ }^{6}$ | －2016 7 | －2497 |  |
| $10{ }^{6}$ morres do． | $\cdots$ | ${ }^{63} 78$ | 918 | 188 | － 8.8 | － 121010 | 二191411 | -28811 -2381 | 二28 |
| 15 do． | ．． | ${ }_{60} 114$ | 11188 | 497 | ［ 3106 | － 9148 | －1729 | －20129 | －24 610 |
| 20 do． | $\because$ | $\begin{array}{llll}60 \\ 63 & 3 & 3 \\ 68 \\ 8 & 11\end{array}$ | $\begin{array}{rrrr}12 & 6 & 9 \\ 9 & 0 & 1\end{array}$ |  | － 225 | 二 ${ }^{9} 1212{ }^{6}$ | 16108 -2080 |  | －28148 |
| ${ }_{80}^{25}$ do | $\because$ |  | 16811 | ${ }_{9}^{1} 10$ | 20 | － 68.8 | 二12 78 | － 2816 | －1818 ${ }^{\text {－}}$ |
| Maproil |  |  |  |  |  |  |  |  |  |
| 5 arrea and los | $\cdots$ | 47010 | 2588 | $18 \div 1$ | 11.0 | 81110 | －${ }^{3} 888$ | － 72 | － 1012 |
|  | $\cdots$ | ${ }_{65}^{55} 5818$ | $\begin{array}{llll}17 & 8 \\ 18 & 11 \\ 11 \\ 5\end{array}$ | ${ }^{1} 91510$ | 2118 | 二4 8 5 <br>  8 5 | -11126 <br> 1068 | 16 -1816 | －19 |
| 20 do． | $\cdots$ | 61120 | 20130 | 13811 | 6410 | － 0154 | 二886 | 二1118 | －1698 |
| 25 da | $\because$ |  | 18159 | 11118 | 477 | －2127 | －10 08 | － 18188 | － 178 |
| $\geqslant 0$ da． | $\cdots$ | $61 \pm 4$ | $21 \leqslant 8$ | 1407 | 6126 | －078 | －7119 | －1169 | －161510 |
|  |  |  |  |  |  |  |  |  |  |
| 5 merces and heos | ．． | 411210 | 30122 |  | 16 | 81510 |  | － 1148 |  |
| 10 do． | $\ldots$ | 48119 | 231810 | 169 | 95 | 218 | － 627 | －812 | － 12 |
| 16 de． | ． | 481810 | 23112 | 16.1 | 920 | 11410 | －5 | －815 | －129 |
| 20 do． | $\bullet$ | 4798 | ${ }^{24} 164$ | 17118 | 10  <br> 11 7 <br> 11 8 <br> 18  | ${ }^{3} 3$ | 二 41 | － 7118 | － 118 |
| 250 do | － | $\begin{array}{llll}46 & 1 & 2 \\ 4 & 9 & 0\end{array}$ | $\begin{array}{llll}28 & 7 \\ 28 & 10 \\ 28 & 0 & 0\end{array}$ | ${ }_{20}^{19} 1{ }^{3} 11$ |  | ${ }_{6}^{41} 8$ | 二 $20 \%$ | 二 $\begin{array}{r}62 \\ \hline 810\end{array}$ | 二 $8^{12}$ |

## APPENDIX No. 30 (a) (iin.

Sohedule for net inoome effected upon eaeh holding.
( 0 wners habour is not taken Into confideration.)

| Partioalars. |  |  | ¢ d d ¢ ¢ |  |  |  | ¢ ¢ W ¢ ¢ | 5 7 7 \% ¢ | + |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mantion. |  | 28. A. P. | R8. A. P. | 25.4. P. | A 8 | 4.8 . | 28. A. 8. |  |  |
| ${ }^{6} \begin{aligned} & 6 \text { aress and lena } \\ & \text { da }\end{aligned}$ | $\because$ | 44 8  <br> 68 7 8 <br> 8   |  | 2 6 8 <br> 8 7 11 | .. | .. | $\because$ | $\because$ |  |
| 15 do. | $\because$ | ${ }^{68} 12.8$ | 14240 | 568 ${ }^{8} 80$ | $\because$ | $\because$ | $\because$ | $\because$ | $\because$ |
| 20 do. | $\because$ | ${ }^{60} 888$ | ${ }^{2108} 121091$ | 88 12 <br> 88 8 <br> 88 8 | .. | . | $\cdots$ | -. | .. |
| 80 do. | $\because$ | $\begin{array}{cc}68 & 0 \\ & 1\end{array}$ | 44709 | 261 268 | $55^{\circ} \leqslant 8$ | $\because$ | $\because$ | $\because$ | $\because$ |
| Medidi |  |  |  |  |  |  |  |  |  |
| $5^{5}$ mores and loses | $\cdots$ | 47010 | 7686 | $5812{ }^{5}$ |  | 1136 |  | - | . |
| ${ }_{15}^{10}$ do. | $\because$ | $\begin{array}{llll}56 & 5 & 1 \\ 58 & 18 \\ 5\end{array}$ | 120 <br> 204 <br> 218 | ${ }^{87} 12410$ | 19 2 8 <br> 60 7 8 <br> 1   |  | . | . | - |
| ${ }_{20}^{15}$ do. | $\because$ | 58 58 512 12 | 224 <br> 858 <br> 18 <br> 8 <br> 8 | $\begin{array}{llll}137 & 8 & 0 \\ 230 & 7 & 7\end{array}$ | $\begin{array}{r}60 \\ 107 \\ 108 \\ \hline 8\end{array}$ | . | $\because$ | $\because$ | $\because$ |
| 26 do. | $\because$ | ${ }_{63} 61.8$ | $417{ }^{317}$ | $\begin{array}{ll}258 & 0 \\ 258\end{array}$ | 98 <br> 8 <br> 88 <br> 10 | $\because$ | $\because$ | $\because$ | $\because$ |
|  | . | 644 | 574140 | 878169 | 18816 | $\cdots$ | - | -. | .. |
| Mintiox. |  |  |  |  |  |  |  |  |  |
| ${ }^{6}$ a arees and less | . | 411210 |  |  |  |  | 588 | - | . |
| $\begin{array}{ll} 10 & \text { do. } \\ 15 & \text { do. } \end{array}$ | $\because$ | 48 48 48 11 11 10 | 188 <br> 284 <br> 8 <br> 8 | $\begin{array}{llll}114 & 4 & 3 \\ 197 \\ 5 & 3\end{array}$ | 85 7 <br> 110  <br> 110  | 14 <br> 14 <br> 22 <br> 10 <br> 10 | ... | $\because$ | .. |
| 20 do. | $\because$ | 4798 | ${ }^{424}{ }^{4} 8{ }^{4} 8$ | 30015 | 17798 | 54  <br> 5 0 <br> 10  | $\because$ | $\because$ | $\because$ |
| ${ }_{80}^{25}$ do. | $\because$ | $\begin{array}{llll}46 & 1 \\ 44 & 1 & 2 \\ 4 & 9 & 0\end{array}$ |  | 428 <br> 580 <br> 8 | $\begin{array}{llll}263 & 8 & 8 \\ 864 & 8 & 8\end{array}$ |  <br> 103 <br> 163 <br> 183 <br> 18 | $\because$ | $\because$ | $\because$ |
| 80 do. | .. | 4480 | 7680 | 68018 | 864 8 | 163 3 0 | .. | $\cdot$ | - |

APPINDIX No. 80 (a) (iii).
Sohedule showing the Madras menaures to bo added to the yield to make up the defiot.


APPENDIX No. 30 (b) (i).
Schedule for net income per acre.


APPENDIX No. 30 (b) (ii).
Bchedule for net income effected upon each holding.



APPENDIX No. 30 (c) (i).
Schedule for net income per acre.


APPINDIX No. 80 (c) (ii).
Sohedule for net income effected on each holding.


APPENDIX No. 30 (c) (iii).
Schedule showing the Madras measures to be added to the yield to make up the defioit.
(Owner's and dependent's labour is taken into acoount.)


APPENDDIX No. 31 (i).
Prioe per beg Re. 6-8-0
Schedule for net aavings per acre.
(Ownar'l labour is not taken into acoounto)



## APPENDIX No. 31 (iii).

Price per bag Ra. 6-8-0.
Bchedule for net savings per acre.
Labour of the owner and the dependent is taken into acoount.


## $\triangle$ APPESDIX Xa. 32 (i)

Schedrle for met imomere per acre.




## APPENDIX Na. 32 (in)


Schend whe for nett stringes per acre (eurnett to the menrent anal).



## APPENDIX No. 32 (iii).

Labour of the owner and the dependant is taken into account.
Schedule for net savinge per aspe (correot to the nearest anna).
Re. 10 par bag (R.. 144-1-0 pea garce).


APPENDIX No. 33 (a).
Consolidated family sxpenditure statement (Kistna, East and West Godararis).


Upland Wed and Dry.

| I. Minimane elimale |  |  |  |
| :---: | :---: | :---: | :---: |
| 11. Invotigator's badget |  | 581 | ,753 2 |
| III. Inventory | 123 | 623 | 243 - |
| 17. Ryote' quentionnaire | 688 | 2,468 | 3,00,654 1 |
| Yinimura expenditare for <br>  dotailed report. |  |  |  |



APPENDIX No． 38 （b）．
Family expenditure atatement．

| Luformation than from |  |  |  |  |  |  |  |  |  | man |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | 立 | 咅它 |  |  | ¢ 产 最 | خ |

（i）Kistna Disthict
Delta Wet．


Dry and Upland Wret．

（ii）West Godafari Distruct．

| Wed． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1．Mininum estimate ．． |  |  | 1 |  | 5 |  | 120 | 01 | 56 | 8 | 6 | 0 | 48 |  | 81 | 0 | 26112 |
| 2．Investigator＇s budgets． | 87 |  |  |  |  | 181 | 30，247 | 0 | 8，12z | 6 | 720 | 0 | 7，764 | 8 | 0，886 | 8 | 45，218 6 |
| 3．Inventory $\quad . \cdot \cdots$ | 232 | 481 | 468 | 450 | 1，84t | 1，119 | ． |  | ． |  | － |  | ． |  | ． |  | 67,744 180 |
| 4．Ryots＇questionnaire ．． |  | $\cdots$ | $\cdots$ | $\cdots$ | ． | 1，848 | ． |  | ． |  | $\because$ |  | $\because$ |  |  |  | 1，69，168 18 |

IIry．

（iii）East Godavari District．

## Delta Wet．



－Dry and wet combined．
$\triangle$ PPENDIX No. 33 C (i).
Minimam expenditure apon a family from " Detailed reports"-Kistna District.


Per village Re. 280. Per adult Rs. 70.

| Dry. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Lingaju .. |  | Nandigame | . $\cdot$ | 120 | 0 | 710 |  |  | 25 | 0 | 25 |  | 250 | 0 |
| 2. Fhaprole .. | . | Bes wrads .. | . |  | 0 | 3412 |  | 4 | 31 | 0 |  |  | 238 | 0 |
| 8. Torraguntapalam | . | Nandigama | , |  |  | $\because$ |  |  |  |  |  |  |  |  |
| 4. Kanohikaoherls | . | Do. | . | 160 | 0 | 300 | 6 | 8 |  | 0 | 22 | 0 | 240 | 8 |
| 6. Konakanohi .. | . | no. | . | 150 | 0 | 220 | 8 | 0 |  | 0 | 20 | 0 | 210 |  |
| 6. Gukavaram .- | $\cdots$ | Bandar .. | . |  | 0 | 2212 | 6 | 5 | 41 | 0 | 40 | 0 | 248 | 2 |
| 7. Parligadda .. | $\cdots$ | Divi .- | . |  |  |  |  |  |  |  |  |  |  |  |
| 8. Poranki -. | . | Bexwada | $\cdots$ |  | 0 |  | 12 | 8 | 35 | 0 | 37 | 0 | 279 |  |
| 9. Kanur .. | - | Do, | . | 158 | 0 | 100 | 3 | $\stackrel{8}{8}$ |  | 0 | 32 | 0 | 281 | 8 |
| 10. Patamata | .. | no. |  |  | 0 | 40 0 | 10 | 0 | 30 | 0 | 32 | 0 | 266 | - |
|  |  | Total | . | 1,166 | 0 | 3010 |  |  |  |  |  |  | 1,978 | 1 |

Per village Re. 247. Per adult Re. 62.

APPENDIX No. 33 C (ii).
Minimum expenditure upon a family from " Detailed reports "-Weat Godarari Distriot.
Delta Wet.

| 1. Khanduvilli |  | Tanukn | * | 1440 | 72 | 8 | 40 | 37 |  | 43 | 0 | 300 | 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Vadlar | $\bullet$ | Do. |  | 1800 | 56 | 0 | 80 | 39 | 0 | 34 | 8 | 282 | 8 |
| 3. Kanobumarra | . | Do. | - | 1680 | 42 | 0 | 140 | 35 | 8 | 81 | 8 | 291 | 0 |
| 4. Haohur | $\cdots$ | Do. | $\bullet$ | 160 | 59 | 0 | 128 | 32 | 0 | 25 | 8 | 279 | 0 |
| 6. Chataparra | . | Ellore .. | . | 150 | 35 | 8 | 148 | 57 | 0 | 22 | 8 | 279 | 8 |
| 6. Lankalakoderv | .. | Narsapur .. | .. | 1200 | 30 | 0 | 38 | 60 | 0 | 37 | 0 | 240 | 8 |
| 7. Likhitapudi | . | Do. | $\ldots$ | 150 | 38 | 0 | 60 | 35 | 0 | 29 | 0 | 251 | 0 |
| 8. Roderu | $\ldots$ | Do. | . $\cdot$ | 1440 | 89 | 0 | 60 | 40 | 0 | 46 | 8 | 274 | 8 |
| y. Valagalern | . | Do. .. | . | 1880 | 30 | 0 | 188 | 33 | 0 | 39 | 0 | 248 | 8 |
| 0 Mogolla | $\cdots$ | Bhimsvaram | . | 1200 | 43 | 0 | 50 | 40 | 0 | 29 | 8 | 237 | 8 |
| 1. Vemeveram | * | Do. | ** | 1210 | 70 | 0 | 6 6 |  | 0 | 20 | 0 | 240 | 0 |
| 12. Dirueumarru | $\cdots$ | Do. | . | 1440 | 35 | 0 | 30 | 40 | 0 | 39 | 0 | 261 | 0 |
| 8. Chitugura | $\cdots$ | Do. |  | 1200 | 72 | 8 | 90 |  | 8 | 53 | 8 | 292 | 8 |
| 6. Mudanara |  | Tadopallegudum | . | 1600 | 35 | 0 | 70 | 38 | 0 | 37 | 8 | 265 | 8 |
|  |  | Total | * | 1,948 0 | 657 | 8 | 1050 | 587 | 0 | 487 | 0 | 8,729 | 8 |

Por village Rs. 266. Per adult Re. 67.
Upland Wet.

| 1. Singavarems .. <br> 2. Bettivarigudem |  | Whlore ${ }_{\text {Chintalupudi }}$ | $\cdots$ | $\begin{array}{ll}150 & 0 \\ 146 & 0\end{array}$ | 39 34 | 0 0 |  | 35 | 8 0 | 48 | 8 | $\begin{aligned} & 274 \\ & 257 \end{aligned}$ | 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dry |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. Veges matruparam | - | Kovver | * | 180 |  | 0 |  | 96 | 0 | 26 | 8 | 227 | 8 |
| 4. Devarapalii ${ }^{\text {a }}$ | ** | Do. .. | - | 120 |  | 0 |  |  | 0 | 24 | 8 | 228 | \% |
| 6. Tadikulapndi . | -. | Chintalapudi | . | 1080 | 35 | 0 |  | 88 | 0 | 38 | 0 | 219 | 0 |
| 6. Nallacherin .. | . | Tradepwllegadem | . | 1400 | 421 | 12 |  | 40 | 0 | 34 | 0 | 280 | 0 |
|  |  | Total |  | 8020 | 247 |  | 361 | 195 | 8 | 209 | 8 | 1,481 |  |

Per villege Rs. 247. Per adult Ks. 62.

APPENDIX No. $33 \mathbf{C}$ (iii).
Minimum expenditure apon a family from "Detailed reporta "-East Godavari Distriot.


- Total per village Rs. 268. Per sdult Rs. 67.
† Total per village Re. 218. Per adult Re. 68.


## APPENDIX No. 84 (a)

Consolidated statement for village budgets shown in bags of 72 Madras measures.

| Districh | Telak. | Village. | A. Inoome from |  |  |  |  |  |  |  | B. Expenditare |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Ryotwari wet land. | Ryotwari dry land. | Inam wet land. | Inam dry land. | Total inoome from all kinds of land. | Subsidiary income. | Garden orops. | Total income from all sources. | Pamily. | $\begin{aligned} & \text { A seess- } \\ & \text { ment } \\ & \text { (kist). } \end{aligned}$ | Interest on debts. | Inoome taken awny by the absentees. | Total expenditare. |  |
| $\underset{\text { Gostavari. }}{\text { Fed }}$ | Cooanada. | Pedabrahma. | 23,010 | 1,754.0 | 4,840 | 498 | 80,100 | 3,328.6 | . | 83,426-6 | 27,520 | 3,038-0 | 625 | 7,518.3 | 38,601-3 | $\begin{aligned} & \text { Defloita. } \\ & 8,501 \cdot 8 \end{aligned}$ |
|  | Razole .. Do. Bamahan- draporam. | $\begin{array}{ll}\text { Paevariappadi } & \\ \text { Malikipalli } \\ \text { Addampalli } & \because\end{array}$ | $\mathbf{6 , 2 5 2}$ 2,361 8,503 | 8,164 106 102 | 8,284 918 $1,037.52$ | 2,945 $298 \cdot 25$ 26.9 |  | 9,100 <br> $1,986 \cdot 6$ <br> $8,906 \cdot 6$ | $8,351 \cdot 2$ $1,193 \cdot 3$ $\cdots$ | $29,768 \cdot 2$ $6,834 \cdot 15$ 8,57602 | 28,120 8,520 9,080 | 1,404 79.5 658 | 1,592 $760 \cdot 0$ 1,000 |  | 34,476 $11,138 \cdot 51$ $\mathbf{8 8 6} \cdot 4$ | $\begin{aligned} & 4,709 \cdot 80 \\ & 4,299 \cdot 36 \\ & 4,64 \cdot 88 \end{aligned}$ |
| Woat ${ }_{\text {Godavari. }}$ | Tanakn .. | Kanchamarra .. | $\left[\begin{array}{c} \text { 6,600 + } \\ 4377 \text { for } \\ \text { lands } \\ \text { owned in } \\ \text { other } \end{array}\right.$ | 52 | 1,366.2 | 68.0 | 8,423.2 | 1,228.8 | $\cdots$ | 9,849-8 | 7,800 | 814 | 1,800 | 1,814 | 11,728 | 2,078•20 |
|  | Narasapar. | Likhitapudi .. | $\underset{\substack{\text { villages. } \\ \\ \hline \\ \hline}}{ }$ | 607.6 | 543.90 | 88.28 | 6,766.78 | 428.6 | - | 6,188.88 | 8,080 | 174 | 450 | 8,878.85 | 6,577-85 | 394.47 |
| $\underset{\text { Distriot }}{\text { Kistns }}$, | Nandi- | Kanohiksoberla. | 1,029 | 18,780 | - | 4,740.4 | 19,529.4 | 2,688 8 | - | 22,067.7 | 28,080 | 651 | 1,200 | 4,888-3 | 29,819•8 | 7,752-10 |
|  | gama, Do. <br> Do. | Konakanohi Lingala | 1,480 $2,822 \cdot 8$ | 10,708•7 | 25 <br> . | $902 \cdot 16$ 628.6 | $18,110.88$ <br> $5,597.8$ | $1,318 \cdot 8$ $1,328 \cdot 6$ | $\because$ | $1,442 \cdot 16$ 8.929 .9 | 16,040 7,480 | 608 200 | 900 760 | $2,658.6$ 1,00575 | $\underset{\substack{20,204 \cdot 8 \\ 9,436 \cdot 76}}{\text { c, }}$ |  |
|  | Bezwada.. |  | $\begin{aligned} & 2,822.8 \\ & 2,916 \cdot 0 \end{aligned}$ | 2,148 $\mathbf{2 , 1 3 8}$ | $1 \ddot{89} 6$ | 1,022.4 | 6,68788 $6,268 \cdot 0$ | $1,777 \cdot 0$ | $\cdots$ | $8,029.9$ 80,049 | 7,480 $\mathbf{7 , 1 8 0}$ | 200 395 | 960 $\mathbf{1 , 0 9 5}$ | 1,00575 791.1 | 9,435•76 9,441 | 2, $1,311 \cdot 88$ |
|  | - ${ }_{\text {Bezwada, }}^{\text {Gadivada. }}$ | $\begin{array}{ll} \text { Klaproil } \\ \text { Koutaram } & \because . \end{array}$ | $16,956$ | 1,098 | 7,402.6 | 1,600.5 | 28,957 0 | 8,760 | $\because$ | 35,717.0 | 82,320 | 2,911 | 6,000 | 2,043.5 | 43,274.6 | $1,988 \cdot 00$ $7,657.60$ |

APPENDIX Na. 84 (b).
Eabt Godavari Distactr.
Budget of villages.
(i) No. 1. Peddabrahmadevam-Cocanada Taluk.


No. 1. Peddabrahmadevam-Cocanads Taluk-cont.

B.-Eprenditure.
(1) Pamily-

- Bac

Total population of the village
.. .. .. .. . . . . . 44
Meale needed for consumption at 20 hag family...
Meale needed for consamption at 20 bage per family
Other family expenses .. .. .. ..

|  | 3,449 |
| :---: | ---: |
| $\cdots$ | 688 |
| $\cdots$ | 18,760 |
| $\cdots$ | 18,760 |
|  | 27,520 |

Tolal

(2) Aenesement-

Totrant aseesanar. A. P.

Borne by villagers . . . . . . . . . . . . $\quad 18,228 \quad 9 \quad 0 \quad 3,038 \cdot 0$
(3) Intereat on debte-


4) lnoomn derived by absentees upon 1,326 os aores of land, less one-foarth of it,
left in the village for laboure, eto.-
eft in the village for lebours, eto.-
The net incoue taken away from the village by absenteen
Aevming that ont of $1,326^{\circ} 08$ sores owned by them wet, ext ent is 994.5 aorea and that of dry 831.6 aces in the ratio of $8: 1$ on the basis of the division of the ryotwari land into wet and dry 2,117 and 775 aores, respeotively, the total yield for $1,326.03$ acres is $(994.5 \times 8.8+831.5 \times 3.8 \mathrm{t}) \times 4=7,618.3$ bags
(c) Total expenditure-
(1) Family $\quad . \quad . \quad . \quad . \quad . \quad . \quad 27,520 \cdot 0$
$\begin{array}{lllllll}\text { (2) Assemment } & . & . . & . . & . . & . . & . \\ \text { (3) Interest on debte } & . & . & . . & . . & . . & 5,038 \cdot 0\end{array}$
(4) Abeantes landlords ....$\quad$.. .. .. ..
$8,038 \cdot 0$
$525 \cdot 0$
$7,618 \cdot 8$
38,601•8
C.—Net Result.


> Dofeit

## EAST GODAVARI DISTRICT.

No. (ii) 2. Pasarlapudi-Rasole 'raluk.

| Rate. | Extent. | Standard yield <br> per sere. | Total yield in <br> Madras <br> measures. | Total yiald <br> in <br> bags. | A vorage yield <br> per corv. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Ace. | m.m. | m.m. | mas. | zacs. |

A.-Income.

Dry land-

|  | 7.0 | 307.67 |
| ---: | ---: | ---: | ---: |
|  | 5.0 | 37.29 |
|  | 4.0 | 14.87 |
|  | 3.0 | 34.90 |
| Total | $\ldots$ | 598.55 |



The above extents are taken from soil olasaifloation table aooording to diglot of 1900 A.D. But the ortent at present is different from those fgures.
According to the Revenue scoounts of fasli 1337.

## Ryotwary.

| Delta wet- <br> Aores 560 at 11.7 bags per ace | $\cdots$ |  |  |  |  | $\cdots$ |  | mas 6,862 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dry- | . | . |  |  |  |  |  |  |
| Aores 415 at 7.8 baga per acre | . $\cdot$ | - | -• | * | - | - | * | 3,154 |
| Inam wet- |  |  |  |  |  |  |  |  |
| Aores 279 at 11.7 bage per aore Dry- | - | - | $\cdots$ | $\cdots$ | . | . | - | 8,264 |
| Aores 307 at 7.6 bags per aore | - | - | . | - | . | . | - | 2,046 |

6. Total yield from all kinds of land-

| Ryotwari wet | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | . | ${ }_{8,562}^{8408 .}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Inam wet | - | $\cdots$ | $\cdots$ | $\cdots$ | - | 3,154 |
| Ryotwari dry | . | . | . | . | . | 8,264 |
| Inam dry | . | $\cdots$ | . | - | $\cdots$ | 8,845 |

6. Subsidiary inoomo-
(a) Teachers
(c) Ninety ryote coolie earning at Re. 60 each .. 4,600
(d) Thirty tapparas .. .. .. .. ... . 8,000
(s) Ten toddy-drawers .. .. .. .. 1,000
(f) Ten goldsmiths

600
g) Two hundred families go to the other aide of
the river during harvest season and earn at the rats of Ks. 120 per family in two menths
(h) Ten parohits
(i) Gheo Belling

7. Garden erops-


Deduat the yield at the rate of 7.6 bags per aore as the uanal yield from the land under theee gardena orops are already inoluded in dry land $\ldots$..
8. Total inoume from all sources-

| (5) | $\cdots$ | - | -. | - | $\cdots$ | - | - | - | $\begin{gathered} \text { mags. } \\ \mathbf{1 5 , 8 1 6} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (6) | $\ldots$ | .. | .. | $\cdots$ | .. | . | . | * | 6,100 |
| (7) | - | * | - | " | - | - | - | -* | 8,851-8 |

## Na 2 Paearlapodi-Resole Talok-cond


(iii) No. 8. Mulikapalle-Rasolo Talak.

| Rate per eore. | Extent. | Amount of ascossment. | Btandard gield in Madra meseares por acre encording to Mr. Clarke. | Total yield in Madras mewares. | Total yiold in bagt. | Avarage yiald per acre. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 408。 | Acm. | 8. A. P. | max. |  | 2пи6. |  |

> 4.-Income.
(1) Ryotwari-Wet land-

| 9.0 | 46.28 | $\begin{array}{rll}616 & 12 & 0 \\ 682 & 14 & 0 \\ 682 & 11 & 0 \\ 60 & 12 & 0\end{array}$ |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 8.0 | 82.77 |  |  |  |
| 7.0 | 80.36 |  |  |  |
| $6 \cdot 0$ | $8 \cdot 46$ |  |  |  |
| Total | 217-87 | 1,698 | 1 | 0 |


| $\begin{aligned} & 700 \\ & 600 \end{aligned}$ | $\begin{gathered} \qquad 1,875 \\ 68,288 \\ 86,270 \\ 6,075 \end{gathered}$ | ". | $\because$ |
| :---: | :---: | :---: | :---: |
|  | 160,808 | - | - |
| per b | . | 2,861 |  |

(2) Byotwari-Diy land-

| $\begin{aligned} & 8.0 \\ & 2.8 \end{aligned}$ | $8 \cdot 10$ | 7180 |  |  |
| :---: | :---: | :---: | :---: | :---: |
| $2 \cdot 0$ | $9 \cdot 43$ |  |  | 0 |
| 1.8 | $17 \cdot 48$ | 27 | 8 | 0 |
| Total | 8001 | 64 | 0 | 0 |

Thus thia 30 acres of dry land gives a yield of
(8)AInam-Wet land -
86.00 Gross yield from it
(4) Inam-Dry land-

85-50 Grose yield from it
(6) Toial inoome from all trinds of lando-

$$
\begin{aligned}
& \text { Ryotwari-Wet .. } \\
& \text { Inam-Wet } \\
& \text { Ryotwari-Dry } \\
& \text { Inam-Dry }
\end{aligned}
$$

(6) Subaidiary inoam3-

> Villsge officers' ealaries
> 20 emigrants to Rangoon
> Toddy drawers .
> 60 eoolies at Rs. 160 per coolie
(7) Garden orops-

There are coconat gardens in 40 aores of land.
The income from these gardens at Rs. 200 per aora Or at the rate of Rs, 6 a bag
Ercluding the usnal income from dry land-40 $\times 8.5$

(8) Total incometfrom all sources-

> Item (5)-Laud ... Item (6)-Subsidjary income Item (7)-Garden crops

| . | $8,674 \cdot 25$ | $\ldots$ |
| :---: | :---: | :---: |
| $*$ | $1,966 \cdot 60$ | $\ldots$ |
| $\cdots$ | $1,193 \cdot 30$ | $\ldots$ |
| $\cdots$ | $6,884 \cdot 16$ | $\ldots$ |

## No. 3. Mulikapalle-Razole Taluk-cont.

## B. - Expenditure.


C.-Net result.



$$
\text { Defioit .. } \quad 4,289 \cdot 36
$$

(iv) No. 4. Addampalli-Ramachand rapuram taluk.

| Rate per sore. | Extent. | Amount of assessment. | Standard outturn. | Yield in Madraa me2surea. | Total in bege. | Average income per aore in bage. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 408, | 2 cs. | 88. 4. 8. | M. $\mathbf{y}$, |  | 72 צ.м. <br> pIR bag. |  |

> A.-Income.
(1) Jirayati dolta, wot-

| 8.0 | $146.60$ | $\begin{array}{lll}1,911 & 6 & 0\end{array}$ | 980 | 131,131 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $207 \cdot 07$ |  |  | 262,291 | 9,603 |  |

No. 4. Addempelli--Rameohandrapurim Talnk-cont.

(2) Jirayati, dry-

B.-Expenditure.
(1) Family

Population
.. .. .. .. .. .. .. .. .. 1,184

| . | -. | . | .. 1, |  | , |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - | - | . |  | 27 |  |
| $\cdots$ | - | - | $\cdots$ | - | 4,540 |
| - | - | -• | . | " | 4,640 |
| Total, Frmily expense |  |  |  | . | 9,080 |

(2) Kist-
or at Re. 6 per bag ..
(3) Interest on debten

(4) Absenteo landlords hold-
65.04 20res
of hand paying
440.6 Field from it at 11-79 bags per core

1,000
IV.B.-One-fourth of this gield is eftimated tro be left in the village for puging labour, ato. ; therefore the produce that goes ont of the

480-4
(D) Expenditure of all family -
B.-Expenditare ..

A-Income ..

> Deficit \begin{tabular}{cc}

. \& | $11,119-4$ |
| :---: |
| $8,676-02$ | <br>

\hline $2,644 \cdot 88$
\end{tabular}



| 9,080 |
| ---: |
| 1,008 |
|  |
| $886-4$ |
| $11,110 \cdot 4$ |

## Wegt Godafari Distriot.

(v) No. 5, Kanohamarru-Tanoku Taluk.

(v) No. 5. सanchamarru-Tannku Talak-cont.
B.-Expendituro-oont.

(4) Abeentes landlords owning 18014 acrea of wet land of assessment at ks. 1,261 tandard yield being 700 Madras mewnares

$$
\begin{gathered}
\text { Total yiold } \\
\text { or } \ddot{7} 2 \mathrm{M} . \mathrm{M} . \text { per bage. } \\
\hline 126,100
\end{gathered}
$$

Three-fourths of it goes to them while one-fourth of it is left off at wages to the villagers.
(5) Total expenditare-

| (1) Pamiiy | - | .' | . | * | .. | . | 3100. <br> 7,800 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (2) Kist | $\ldots$ | .. | . | $\ldots$ | $\cdots$ | .. | 814 |
| (3) Interest | .. | - | . | $\bullet$ | $\ldots$ | $\ldots$ | 1,800 |
| (4) Absentees | . | . | . | . | .. | .. | 1,314 |

11,728
C. Net reaalt-

(vi) No. 6. Likbitapudi-Narasapur Taluk.

| Rate per acre. | Extent. | Amount of assessment. | Standard onttarn Madraa measures* | Total yield in Madras measnres | Total in buge. | Average yiald per sere. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A.-Income. |  |  |  |  |  |  |
| I(a). Jirayiti | Acs. <br> t- | R8. 4. P. |  |  |  |  |
|  |  | 4614 28713 | 700 800 | 4,690 28,768 |  |  |
| 6.0 | 105.87 | $629 \leqslant 0$ | 560 | 68,239 |  |  |
| $4 \cdot 8$ | 201-85 | 90870 | 500 | 100,925 |  |  |
|  | 101.61 | 40860 | 460 | 46,726 |  |  |
|  |  |  |  | 238,837 | 3,310 | 7.1 bagrs. |
| (b) Oonverted wat- |  |  |  |  |  |  |
| .. | 158.69 | 7938 | 650 | - 87,286 | 1,212 | $7 \cdot 6$ |
| Second crop- |  |  |  |  |  |  |
| $\mathbf{s 1 1 - 9 0}$ As it is siated that there is no prospeot of getting any yield from the first orop due to submertion ne apeoial provision is mado for the seeond arop. |  |  |  |  |  |  |
|  |  |  | .. -... | , Total .. | 4,522 |  |

(vi) No. 6. Likhitapudi-Naradapar Taluk-cont.


## Kigta Dithact.

(vii) No. 7. Kanchitacherla-Nandigama Taluk.
A. Incomé'


## No. 7. Kanchilracherla-Nandigama Taluk-conts

## B. Rxpendituro-eont.


(viii) No. 8. Konakanchi-Nandigama Taluk.
A. Incomes


## No. 8. Konakanchi-Nandigama Taluk-cont.

A.-Income-comt.


## B. Expenditure,

(1) Pamily -

Population 2,004. Number of families at five members for each 101 Grain reeded for consumption at 20 bage per family

8,020
Other expenditare being oonsidered to be equal to that on tood
$\begin{array}{llllllllll}\text { Total demand } & . . & . . & . . & . . & . . & . . & . & \mathbf{5 , 2 1 8} & 9 \\ \text { Kist paid by absentees } & . & 0 \\ 1,682 & 1 & 0\end{array}$

Absesment paid by villagers ." .. "or caloulating at Re. 8 par bag.
(8) Intereat on debte $\rightarrow$

Total debt of the villagers .. .. .. .. .. .. 60,000 o 0

(4) Iacome taken nway by absenteen-

Land owned by them, $\mathbf{1 , 2 6 6 . 2 2}$ seres of dry land. Inoome fromit at $2 \cdot 8$ bege per aore $=3,644 \cdot 8$ bags. Of this 26 per cent or $886 \cdot 2$ bage of grain ramains per the village in the form of wagee, eto., while the remainder is taken out of village by the sbsentees
(5) Total expenditare-


Total expenditure .. .. .. .. .. .. .. .. 20,204.60
Total income .. .. .. .. .. . .. .. 14,424.16
(ix) No. 9. Lingala-Nandigama Talak.


No. 9 Lingala-Nandigama Taluk-cond.

(X) No. 10 Elaprole-Bezwada Taluk.

A-Income.


No. 10. Klaprole-Bezwada taluk-aont.

(xi). No, 11. Kantharam-Gudivada Talnk.

| Iate per aors. | Extent. | Amonat of aesessenent. | 8tandard yield in Madris meneures per sare. | Total yiald in Madras measares. | Total yield in bage | Avarage gíbl d par aore. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |



III-38
(xi) No. 11. Kantharam-Gudivada Taluk-eint.

B.-Expenditure.
(1) Faroily-

Population of the village

Coreals needed for conenmption at 20 bage per farmily


APPENDIX No. 35.
Consolidated register of division of holdings.


From Inventories.


Consolidated register of division of holdingamoont．

| Taluk． | Village | 90 aores and less bat over 26. |  |  | 60 cores and lem but over 80. |  |  | 80 gores and lese bat opor 60. |  |  | Over 80 mores． |  |  | Total． |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\frac{\text { 苛 }}{\frac{1}{2}}$ |  |  <br> （24） | $\begin{gathered} \text { 曾 } \\ \text { (26) } \\ \text { (26) } \end{gathered}$ |  |  <br> （27） | $\frac{\text { 营 }}{\text { 呙 }}$ <br> （29） |  |  | $\begin{aligned} & \frac{B}{8} \\ & \frac{5}{n} \end{aligned}$ (81) |  |  <br> （88） | $\begin{gathered} \text { 宸 } \\ \text { 胃 } \\ (84) \end{gathered}$ |  |

From Inventories．


Consolidated register of division of holdings－cont．

| Talak， | Village． | One sore and lem． |  |  | 5．arese and lea bat over＇ 1. |  |  | 10 acres and lesa butover 6 ． |  |  | 16 aoren and less bat over 10. |  |  | 20 soree and less but ovar 16. |  |  | 26 arrom and lees bat over 20. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{aligned} & \text { 总 } \\ & \text { 会 } \\ & \text { (4) } \end{aligned}$ | （6） |  <br> （6） | 蒿 | （8） |  <br> （9） | 突 <br> （10） | （11） |  <br> （12） | 突 <br> （18） | （14） |  <br> （16） | $\begin{aligned} & \text { 通 } \\ & \text { 点 } \\ & \text { (16) } \end{aligned}$ | （17） |  <br> （18） | $\begin{aligned} & \text { 号 } \\ & \text { 荷 } \end{aligned}$ <br> （19） | （20） |


| From the Karnams＇list for the detailed villages－（Palakwar）． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Kimina Diarmict． |  |  |  |  |  | 1 cs. |  |  |  | acs． |  | 108. | 403. |  |  | $\triangle$ cs． |  | 40. | Act． |
| 1．Boswada ．． | ．．．． | 106 | 65.18 | 0.61 | 261 | 740.54 | $2 \cdot 84$ | 120 | 848.48 | 7.07 | 49 | 607.08 | 12－39 | 24 | 408．57 | 17.02 | 15 | 945．99 | 29.07 |
| 2．Gudivads ．．． | ．．．． | 102 | 47.99 | 0.47 | 407 | 1658.38 | $2 \cdot 70$ | 96 | $700 \cdot 90$ | $7 \cdot 30$ | 34 | 434．94 | 12.79 | 26 | 448.62 | $17 \cdot 28$ | 11 | $252 \cdot 44$ | 22．95 |
| 3．Nandigama ．． | ．．．． | 65 | 41.84 | 0.64 | 288 | 910．64 | 9.16 | 235 | 1，7＋2．82 | 741 | 98 | 1，212．72 | 12.38 | 86 | 1，638－81 | 17.88 | S0 | 1，096．04 | 21.90 |
| 6．Raikslar $\quad$ ．． | $\ldots$ | 92 401 | 41.09 168.35 | 0.45 0.40 | 117 | － $\begin{array}{r}288 \cdot 18 \\ 1,039 \cdot 64\end{array}$ | $2 \cdot 25$ $2 \cdot 85$ | 104 | 18076 711.86 | 6.96 6.84 | 13 | 168.73 889.07 | 12.21 12.60 | 18 | 68.75 288.49 | － $16 \cdot 94$ |  | 88.09 |  |
| 6．Divi ．． | ．．．． |  |  | 0.40 |  | 1，039－64 | 2．35 | 104 | 711.68 | 6.84 | 28 | 849．07 | 12．60 | 18 | 228.40 | 17．19 | 4 | 88.99 | 22.25 |
| Fatr Godavari | Total ．． | $\begin{array}{r} 76 \mathrm{E} \\ 23.3 \\ \text { iper cent. } \end{array}$ | （ $\begin{array}{r}\text { 854．96 } \\ 1 / 4 \\ \text { por cent．}\end{array}$ | 0.46 | $\begin{array}{r} 1,311 \\ \text { per cent. } \end{array}$ | $\left\lvert\, \begin{array}{r} 9,512 \cdot 28 \\ 13 \cdot 8 \\ \text { per } 00 n t . \end{array}\right.$ | $\stackrel{2}{ } \cdot 6$ | （ $\begin{gathered}\text { 5812 } \\ \text { 17／7 } \\ \text { per cent．}\end{gathered}$ | $\begin{gathered} 4,184 \cdot 12 \\ 16.5 \\ \text { per oent. } \end{gathered}$ | 7.20 . | $\begin{gathered} 222 \\ 8 \cdot 7 \\ \text { per cent. } \end{gathered}$ | $\begin{gathered} 4,162 \cdot 49 \\ 16 \cdot 4 \\ \text { per oent. } \end{gathered}$ | 18.75 .. | $\begin{gathered} 163 \\ 4.7 \\ \text { per oent. } \end{gathered}$ | $\begin{gathered} 2,681 \cdot 64 \\ 10.6 \\ \text { per cent. } \end{gathered}$ | ${ }^{17 \cdot 59}$ ． | $\begin{array}{r} 80 \\ 2 \cdot 4 \\ \text { per cent. } \end{array}$ | $\begin{gathered} 1,782 \cdot 16 \\ 7 \\ \text { per cent. } \end{gathered}$ | 22.28 <br> - |
| 1．Rasole ．． | ．．．． | 70 K | 288.87 | 0.41 | 482 | 1，008－68 | $2 \cdot 18$ | 77 | 645.81 | 7.84 | 25 | 862．04 | 14.48 | 14 | 242.96 | 17．36 |  | 157.06 |  |
| 2．Amalapar ．． | ．．．． | 233 | 83.63 | 036 | 124 | 1，269．98 | 209 | 26 | 177．64 | 8.88 | 6 | $72 \cdot 10$ | 12.03 | 5 | 8212 | $1 \mathrm{t} \cdot 42$ | 5 | 111.69 | 22．82 |
| 8．Peddapar ．． | ．．．． | 18 | $8 \cdot 89$ | 0.64 | 37 | $106 \cdot 77$ | $2 \cdot 86$ | 10 | 88.43 | 6.64 | 8 | $84 \cdot 14$ | 18.05 | 1 | 21.72 | 21.72 |  |  |  |
| 4．Polaveram ．： | ．．．． | 4 | $2 \cdot 29$ | 0.57 | 18 | 62.35 | $8 \cdot 28$ | 7 | 132．61 | $7 \cdot 79$ |  | $150 \cdot 46$ | 12.54 | $t$ | 88.68 | 17.17 | 8 | 67.72 | 22.67 |
| 6．Ooeanaila ．． |  | 626 | 267.40 | 0.49 | 681 | 1，36182 | 2－34 | 141 | 974.67 | 8.91 | 43 | 582．35 | 12．38 | 22 | 898．92 | $18 \cdot 18$ | 14 | 290.68 | 20.76 |
| fi，Bemachandra－ | ．．．． | 788 | 438．69 | 0.68 | 727 | 1，699•41 | 2－12 | 112 | 684．67 | $5 \cdot 22$ | 43 | 610．87 | 11.87 | 11 | 168．32 | 16．21 | 8 | 13479 | 22．80 |
|  | Total | （ $\begin{array}{r}2,274 \\ \text { 46．0 } \\ \text { per cent．}\end{array}$ | $\left\|\begin{array}{c\|} \hline 1,081 \cdot 87 \\ 7 \cdot 1 \\ \text { per cent. } \end{array}\right\|$ | 0.43 . | $\left\|\begin{array}{r} 1,860 \\ 99.5 \\ \text { per cent. } \end{array}\right\|$ | $\left\|\begin{array}{c} 4,837 \cdot 41 \\ 28 \cdot 7 \\ \text { per cont } \end{array}\right\|$ | 2－22 . | $\begin{gathered} 372 \\ 7 \cdot 6 \\ \text { per cent. } \end{gathered}$ | $\left\|\begin{array}{c} 2,481 \cdot 03 \\ 18.4 \\ \text { per } 0 e n t . \end{array}\right\|$ | 6．86 | $\begin{gathered} 182 \\ 2 \cdot 7 \\ \text { per oent } \end{gathered}$ | $\begin{array}{\|c} 1,666.55 \\ 10.9 \\ \text { per oent. } \end{array}$ | $12 \cdot 68$ . | $\left(\begin{array}{c} 67 \\ 1 \cdot 2 \\ \text { par cent. } \end{array}\right.$ | $\left\lvert\, \begin{gathered} 988 \cdot 70 \\ 65 \\ \text { per cent. } \end{gathered}\right.$ | 17．23 | $\left\lvert\, \begin{gathered} 36 \\ 0.7 \\ \text { per } \\ \text { cent } \end{gathered}\right.$ | $\begin{gathered} 761 \cdot 79 \\ 5 \\ \text { per oent. } \end{gathered}$ | 21.77 . |
| Wer Godatari Dingrict． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1．Kovrar |  | 26 | 16.68 | 0.64 | 218 | 548.81 | $2 \cdot 49$ | 189 | 992．37 | $7 \cdot 1$ | 71 | 856． 68 | 12.06 | 88 | 620.04 | 16.82 | 81 | 652.69 | 21.08 |
| 9．Tanuku |  | 117 | 66.70 | 0.49 | 149 | 888－61 | 246 | 88 | $286 \cdot 16$ | $7 \cdot 0$ | 18 | 163.99 | $12 \cdot 61$ | 8 | 138．85 | 17.29 | 6 | 118．79 | 28.80 |
| 8．Narmespur ．． |  | 178 | 73.98 | $0 \cdot 62$ | 151 | 947－28 | $2 \cdot 30$ | 26 | 173－40 | 6.68 | 9 | 108．54 | 12.06 | 1 | 17.68 | 17.68 | 1 | 2087 | 20.87 |
|  | Total | ｜r｜r｜r $\begin{array}{r}721 \\ \text { 24．3 } \\ \text { per cen }\end{array}$ | $\left\|\begin{array}{c} 147.21 \\ 1.8 \\ \text { per cent. } \end{array}\right\|$ | 048 $\cdots$ | $\left.\begin{array}{r} 518 \\ 39 \cdot 1 \\ \text { per cent. } \end{array} \right\rvert\,$ | $1,267.60$ <br> 11．4 <br> per cent． | $2 \cdot 48$ | $\begin{array}{r} 203 \\ 163 \\ \text { per cent. } \end{array}$ | $\left\|\begin{array}{c} 1,480 \cdot 93 \\ 18 \cdot 0 \\ \text { per cent. } \end{array}\right\|$ | 7.05 $\square$ | $\left\lvert\, \begin{gathered} 98 \\ \text { yor } \\ \text { poont. } \end{gathered}\right.$ | $\left\|\begin{array}{c} 1,12908 \\ 10.8 \\ \text { per oent. } \end{array}\right\|$ | $12 \cdot 14$ . | $\left\lvert\, \begin{array}{r} 47 \\ 8 \cdot 6 \\ \text { par oent. } \end{array}\right.$ | $\begin{gathered} 776 \cdot 07 \\ 7 \cdot 1 \\ \text { per cont. } \end{gathered}$ | 16.61 | $\begin{gathered} 97 \\ 2 \cdot 8 \\ \text { per cent }, \end{gathered}$ | $\begin{gathered} 791.76 \\ 7 \cdot 2 \\ \text { per cent. } \end{gathered}$ | $21 \cdot 40$ .- |
| ．－． | Grand Total ． |  | $1,683 \cdot 63$ <br> $8 \cdot 1$ <br> per 0 ent | 0.47 . | $\begin{array}{r} 8,779 \\ 34 \cdot 6 \\ \text { per cent. } \end{array}$ | $0,107 \cdot 29$ 17.7 per cent． | 2.41 $\square$. | $\begin{gathered} 1,167 \\ 121 \\ \text { per oent. } \end{gathered}$ | $8,098 \cdot 08$ 1,88 per cent． | 7.0 $\cdots$ | $\begin{array}{r} 447 \\ \text { per } \begin{array}{r} 4.7 \end{array}, \end{array}$ | $\begin{gathered} 0,968 \cdot 18 \\ 13.6 \\ \text { per oent. } \end{gathered}$ | 16.67 . | $\left\lvert\, \begin{gathered} 257 \\ 2 \cdot 7 \\ \text { per oent. } \end{gathered}\right.$ | $\left[\begin{array}{c} 5,461 \cdot 41 \\ 8 \cdot 6 \\ \text { per 0ent. } \end{array}\right.$ | 16：89 | （ $\left\lvert\, \begin{gathered}-152 \\ 1 \cdot 8 \\ \text { par cont，}\end{gathered}\right.$ | $\left\{\begin{array}{c} 9,9 a 6 \cdot 00 \\ 8 \cdot b \\ \text { per cont. } \end{array}\right.$ | $21 \cdot 96$ |

Consolidated register of division of holdings－cont．

| Taluk． | Village． | 30 acres and less but over 25： |  |  | 50 aares and lese but over 50. |  |  | 80 aores and lese but over 50. |  |  | Orer 80 acres． |  |  | Total． |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  <br> （21） | $\begin{gathered} \text { 芴 } \\ \text { H } \\ \text { (22) } \\ \hline \end{gathered}$ | （23） |  | 萝 第 <br> （26） |  | $(27)$ | $\begin{gathered} \text { 廷 } \\ \text { 匋 } \\ \text { (28) } \end{gathered}$ |  |  <br> （30） | 薄 落 <br> （31） |  |  <br> （33） | $\begin{aligned} & \stackrel{\rightharpoonup}{E} \\ & \stackrel{H}{1} \\ & \text { (3b) } \end{aligned}$ | （85） |



PAPERS CONNECTED WITH THE REPORT OF THE ECONOMIC ENQUIRY COMMITTEE APPOINTED TO REPORT TO THE GOVERNMENT OF MADRAS ON THE RESETTLEMENT OF THE DISTRICTS OF EAST GODAVARI, WEST GODAVARI AND KISTNA.
I. B.P. No. 2820, dated 29th September 1930, with annexure (Report of Mr. B. G. Holdsworth, I.C.S., dated 11th April 1930, and appendices thereto).
II. Remarks of the Chief Engineer for Irrigation, dated 9th June 1930 and 30th June 1930.
III. Remarks of the Director of Agriculture, dated 9th April 1930.

# Proceedings of the Board of Revenue (Land Revenue and Settlement), Mis. No. 2820, dated 29th September 1930. 

[Settlement-Resettlement-Economic Enquiry Committee-Report-RemarksSubmitted.]

H. A. B. Vernon, Esq., c.s.i., c.i.e., I.C.S.,<br>Commissioner of Land Revenue.

C. A. Souter, Esq., I.C.S.,<br>Cornmissioner of Land Revenue and Settlement.

G. T. H. Bracken, Esq., c.i.e., I.C.S.,<br>Commissioner of Excisen

The Board submits the following report on the findings of the Committee appointed to enquire into the economic condition of the East and West Godavari and Kistna districts.
2. The period of the last resettlement in those districts expired in fasli 1338 (1928-29) and the resettlement was due for introduction in fasli 1339 (1929-30). The proposals of the Special Settlement Officer (Mr. B. G. Holdsworth, I.C.S.) for the resettlement of the Government villages were published in the District Gazettes of the three districts in December 1927 and were alsoplaced on the Editors' Table. The Government allowed time up to 30th September 1928 for the submission of objections to the proposals other than those relating to rates, and the objections and representations received were carefully considered. At the meeting held on 28th November 1928 the Legislative Council adopted a resolution to the effect that a committee should be appointed to enquire into the economic condition of the three districts and that pending the enquiry the introduction of the resettlement should be kept in abeyance. With reference to this resolution, the Council at the meeting held on 30th January 1929 appointed a committee of seven of its members to make the enquiry and to report to Government by lst October 1929. The Committee was subsequently allowed to submit its report in January 1930. In G.O. No. 405, Revenue, dated 26th February 1929, which was placed on the Editors' Table, the Government passed orders on the proposals for the resettlement other than those relating to the new rates of assessment and they were given effect to in fasli 1339. The new rates proposed by the Special Settlement. Officer for introduction in fasli 1339 and recommended by the Board have not yet been sanctioned by Government.

On 18th March 1930, it was suggested in the Legislative Council that the Council should be given an opportunity of expressing its opinion on the findings of the Committee appointed on 30th January. 1929 before final orders. were passed by Government and the Government gave an undertaking that the suggestion would be borne in mind. The Committee's report was forwarded by Government to the Board in March 1930 for remarks, and at the Board's instance the Government in their Order No. R. 206, dated 26th March 1930, placed Mr. B. G. Holdsworth on special duty to prepare and submit a report on the Committee's report. Mr. Holdsworth submitted his report in April 1930. His report which is appended to these proceedings is so detailed and complete that it is unnecessary for the Board to examine in any further detail those portions of the Committee's report which have already been examined carefully by him.
3. Sections 4 and 5 of the Committee's Report-Principles of Settlement and Resetlement.-The Board has to observe at the outset that the Committee is in error in its statement of the principles of settlement. These are correctly stated by Mr. Holdsworth in paragraph 3 of his report. The Board desires to emphasise the fact that the assessment which the Government levy is an assessment on the produce of the land. It has been the immemorial practice in India for the State to claim a certain definite share of the produce. Originally this share
was actually paid in kind. Consequently the Government automatically benefited in the same proportion as the rise in prices. If this old sharing system had been still in force, there would have been no need for a periodical revision of the rates of assessment. It was only after the share of the produce was commuted into a money value that such periodic revisions of the rates became necessary. This commutation rate was fixed after making various liberal deductions for cultivation expenses incidental to the raising of a crop. The result was of great benefit to the ryot in that Government have never taken the full share of any increase in price which they would have taken if the old sharing system had been still in force. If the Committee had borne in mind this elementary statement of the case, its criticisms of the principles of settlement would have been quite unnecessary.

Normally, a resettlement is not a fresh settlement of the Government share of the produce of the land but is merely a revision of the commuted money value of such share with reference to the variations in prices which have taken place subsequent to the introduction of the previous settlement. It is an accepted principle that the agricultural value of land once ascertained with tolerable accuracy may be taken as a basis for future adjustment. In section 5 of its report the Committee tacitly accepts this canon and it is only with reference to the other moderating factors which should guide the Settlement Officer in deciding on the percentage of increase that there is a difference of opinion between the Committee and the Settlement Officer. These factors relate to the economic condition of the holders of agricultural land in the tract. There is a palpable fallacy in the reasoning of the Committee in paragraph 15 and in the concluding paragraph of its report where it advocates the need for considering each ryot's status in fixing the settlement demand. The Board agrees with Mr. Holdsworth (vide second sub-paragraph of paragraph 3 of his report) that it is not necessary and in fact not practicable to vary the assessment in accordance with the peculiar circumstances of each individual cultivator. It is one of the main principles of a ryotwari settlement that the assessment should be on the land and should not be determined by the wealth or poverty of the landholder. Under the present system the ryot, however much he may dislike resettlement and the enhancement in his dues which generally, though not invariably, accompanies resettlement, has at any rate this satisfaction, that he knows when the resettlement is concluded that during the period of its currency the rates fixed will not be changed. If assessments were to vary according to the circumstances of each holder, he would necessarily be exposed every year to the constant menace of à varying demand.
4. Section 6 of the Committee's Report-Rainfall.-In paragraph 4 (b) of his report, Mr. Holdsworth has given an effective reply to the Committee's observations on the subject. There is no point in its attack of his figures (which have been prepared on the lines laid down by Government) when it accepts the conclusion of the Settlement Officer that there has been no appreciable change in the character of the seasons. As pointed out by Mr. Holdsworth, the Committee is hardly justified in basing the sweeping generalization that five of every ten years were bad, on admittedly meagre statistics. In taking the total rainfall of the year for coming to this conclusion the Committee disregards its own principle, viz., that it is not the total that counts but the distribution.
5. Section 7 of the Committee's Report-Allowances for vicissitudes of season, etc.-In this section the Committee attempts to prove that the outturn per acre is less than the standard outturn fixed at settlement and that the allowance made for vicissitudes of season and unprofitable areas is not adequate. The accuracy of the calculations in paragraphs 29 and 30 is highly problematical. As regards unprofitable areas the Committee cannot expect, as it does, that deductions should be made on account of lands wantonly left waste by ryots. As rightly pointed out by Mr. Holdsworth in paragraph 4 (c) of his report the allowance is intended to cover only small paths, channels, etc., and other small uncultivable bits measured in with holdings. The statistics of 'current fallows' referred to by the Committee are irrelevant to the question, and the conclusions in paragraphs 31 and 32 of the Committee's report will lead to the absurd fallacy of supposing that no assessment should be levied when a ryot does not choose to cultivate his lands in any year-a theory opposed to established settlement principles.
6. Section 8 of the Committse's Report-Remissions.-The settlement rates are based on the normal outturns and it would be as unreasonable to pitch it unduly low in view of the years of low yield when no remission could be granted under the present remission rules as it would be to pitch it unduly. high considering the years of bumper crops.

Further it is not true to say that the remission rules are not worked liberally now, whatever truth there may have been in the statement when Mr. Clarke made it. As pointed out by Mr. Holdsworth in paragraph 4 (d) of his report, the districts in question are well protected from famine owing to the construction of big irrigation systems and the fact that during the 20 years ending. 1923-24 the average annual seasonal remission was Rs. 83,900 in Kistna and West Godavari and Rs. 37,650 in East Godavari sufficiently proves that the rules are not worked illiberally.
7. Section 9 of the Committee's Report-Insect pests, etc.-In paragraph 47 of its report the Committee says that no allowance is made by the Settlement department for losses due to insect pests either under vicissitudes of season, etc., or under cultivation expenses. The insect pest is as inconstant a factor as shavi and waste and damage due to it can be met only by the application of remission rules and it is impossible to gauge the average loss due to insect pests so as to provide for it in the rate of deduction allowed for vicissitudes of season.
8. It is true that Government have undertaken to refrain from enhancing the assessment in respect of any additional value which may have been imparted to the land by the ryots' improvements. It will be observed from the resolution of the Government of India quoted in paragraph 48 of the Committee's report that the term 'improvements' refers to the construction of wells, channels and tanks at the cost of the ryots which enhance the value and improve the productivity of their lands. It is clear that it was never intended that lands which are supplied with water at the cost of Government should be eligible for specially favourable rates of wet assessment or water-cess for the reason that the ryot has rendered them irrigable. If this were the intention, a great part of the wet land of the Presidency would be eligible for specially favourable treatment, since, as is well known, it is only through the exertions of its owners that a great part of the wet land has been rendered fit to receive irrigation. As a practical matter and in fairness to the general taxpayer, the charge for water, whether it is imposed in the form of a water-cess or is consolidated with the assessment, must be governed to a large extent by commercial considerations; that is to say, it must be fixed at a rate which will render the scheme of irrigation remunerative. If this policy were not generally followed, there would be an end to the development of irrigation. It should further be remembered that in one of the areas to which the Committee refers, namely, Divi, lands were sold or assigned subject to the payment of the rates of water-cess now imposed. It can hardly be maintained that rates which the ryots accepted but were free to reject are excessive or inequitable.
9. Sections 13 and 14 of the Committee's Report-Population.-When in paragraph 71 of its report the Committee says that the figures would indicate that the growth of population has outstripped the expansion of cultivation it proceeds on the untenable assumption that the question of the proper incidence of population for a tract should be decided with reference to the available arable area alone and that the entire population should necessarily be exclusively agriculturists. Further, as indicated by Mr. Holdsworth in paragraph 7 of his report, the increase of population is not a direct factor in calculating the increase of assessment at resettlement. He has clearly demonstrated the inaccuracy of the Committee's figures and the error of its conclusions.
10. Section 15 of the Committee's Report-Communications, etc.-As observed by Mr. Holdsworth in paragraph 8 of his report, statistics regarding communications, markets and trade indicate the economic prosperity of the ryot population though they do not play any direct part in the revision of assessment at resettlements. The view of the Committee that road-cess should properly be merged in the half net due to Government and not levied separately in
addition to the assessment is based, as obseryed by Mr. Holdsworth in paragraph 9 of his report, on a misapprehension on the part of Mr. Srinirasa Raghava Ayyangar regarding the policy of Government.
11. Section 16 of the Committee's Report-Agricultural statistics.-The Committee considers that the Special Settlement Officer's figures under cattle, sheep and ploughs are unreliable as they were obviously taken from the accounts maintained by the village karnams. These figures have been compiled from the statistical return A. 4 corresponding to village return No. 21. The instructions for the preparation of these returns require that the census should be taken accurately and not that it should be left to guess work. Further the statistics relating to ploughs and working cattle do not warrant the Committee's assumption that the number of ploughs has been calculated antomatically on the basis of a pair of working cattle for each plough. There is also no reason to suppose that the number of cattle and sheep was calculated in any arbitrary manner.

As regards cattle, the Committee states that as the census was taken in October and November when most of the cattle would be away in Hyderabad and the Agency the figures are under estimates. The Settlement Officer himself has admitted this in paragraph 32 of his scheme report so far as the figures for fasli 1329 are concerned. This year the statistics were taken in the third week of January when the cattle, if any, that had gone out of the districts should have returned. The figures for agricultural stock including sheep and goats taken at the census held in October 1924 and in January 1930 are given below :-

|  |  | Godmemi. | Ment Godievari. | Kintan. |
| :---: | :---: | :---: | :---: | :---: |
| October 1924 |  | 619,738 | 816.726 | 842,574 |
| January 1930 | - | 659,185 | 727,528 | 69\#,276 |

There was an increase of about $\mathbf{4 0 , 0 0 0}$ in the case of East Godavari and 50,000 in the case of Kistna, while in West Godavari there was a fall of nearly 90,000 .

In paragraphs 86 and 89 of its report the Committee also attacks the accuracy of the Special Settlement Officer's figures of cattle and ploughs so far as East Godavari district is concerned. Mr. Holdsworth has explained in paragraph 10 of his report that as figures for non-Government areas also were included by mistake in the statistical atlas he has obtained separate figures for Government areas alone. According to the correct statistics relating to the Government areas obtained from the Director of Agriculture in respect of fasli 1329, the total number of cattle (excluding sheep and goats) and ploughs in the district is as shown below :-

## Number of ploughs.

| Director of Agriculture's figure .. Special Settlement Officer's figure |  | $\cdots$ |  | $\because$ | $\begin{aligned} & 80.870 \\ & \mathbf{8 3}, 000 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Committee's figure |  |  |  |  | 113.003 |
| Numb |  |  |  |  |  |
| Director of Agriealtare's figure |  |  |  |  | 550,199 |
| Special Settlement Officer's figure | $\cdots$ |  |  |  | 431,966 |
|  |  |  |  |  | 721, |

The above statement shows that while the Committee's figures are exaggerated the Special Settlement Officer's figures are below the actuals.

In paragraphs 91 to 94 of its report the Committee discusses the question whether the output of fodder from the cultivated area will be enough to meet the requirements of the cattle of the tract. The Committee profeses to show that the output of fodder from this area will meet the requirements of only one-sixth of the available cattle in the Kistna and West Godavari and one-fifteenth in East Godavari. In arriving at this conclusion it makes certain assumptions with regard to the output of fodder from each cultivated acre and the requirements per head of cattle, which do not conform to the standards accepted by the Agricultural department. In paragraph 10 of his reply Mr. Holdsworth has
adopted the rates of the Agricultural department except in regard to the outturn of fodder. which he has estimated at a uniform rate of one ton for each cultivated acre while according to the Director of Agriculture the yield will be one ton for paddy, half a ton for other cereals and quarter ton for pulses. Recalculating the output of fodder on the correct area and on the data given by the Director of Agriculture the result in the case of Kistna and West Godavari will be-

|  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | ---: | ---: |
|  |  |  |  |  |  |  | Area. | \(\left.\begin{array}{c}Output of <br>

fodder <br>
in tons.\end{array}\right]\)

1,792 million lb . This is nearer the figure ( 1,440 million lb .) adopted by the Committee than that of Mr. Holdsworth ( 2,150 million 1 lb .). Taking the requirements of the cattle of the two districts at 3,360 million lb., the present output is about half the requirements of the total number of cattle and not one-sixth as stated by the Committee. Similarly in East Godavari the total output of fodder on the cultivated area will be-

| Paddy | . | $\cdots$ | . | $\cdots$ | . | $\begin{gathered} \text { ACS. } \\ 330,000 \end{gathered}$ | $\begin{aligned} & \text { TONs. } \\ & \mathbf{3 3 0 , 0 0 0} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cereals | . |  | . | . | . | 116,000 | 58,000 |
| Pulses | . | . | . | . | $\cdots$ | 72,000 | 18,000 |
|  |  |  |  |  |  |  | 406,000 |

909.4 million lb.

The total number of full-grown cattle is ab-ut 520,000 and their requirements (at $5,600 \mathrm{lb}$. per head) will be 2,912 million lb . The present output will thus be roughly one-third of the requirements of the total number of cattle and not one-fifteenth as represented by the Committee. If the area of fallows, arable waste and forest area referred to in paragraphs 93 and 94 of the report which would provide grazing for the cattle is also taken into consideration, then the quantity of available food supply would be much more than the proportion arrived at above.

As regards the shrinkage in the average area of a patta the Committee is of opinion (paragraphs 87 and 88 of its report) that it is due not only to fragmentation of holdings but also to the increase in population during the settlement period having outstripped the expansion of cultivation. The latter observation is correct so far as Kistna and West Godavari districts are concerned as the extent of holdings has increased by only 9 per cent while the population has increased by 22 per cent, but it is not so in the case of East Godavari where the extent of holdings has increased by 19 per cent while population has increased by only 15 per cent.
12. Sections 12 and 17 of the Committee's Report-Holdings and Revenue.-It has been shown in paragraph 7 of Mr. Holdsworth's report that the increase in the percentage of area cultivated is actually greater than the percentage in population that this increase has been mainly under wet crops and that the Committee's suggestion that the increase is due only to the opening up of lands on the margin of cultivation may be decisively rejected. As observed by Mr. Holdsworth in paragraph 11 of his report the Committee's observation that the expansion under wet in Kistna and West Godavari and East Godavari was only 4 and 9 per cent respectively does not take into account the explanation given by the Settlement Officer that most of the so-oalled Ury lands were under regular wet cultivation, but were shown as dry only in the accounts.

It may be true as observed by the Committee in paragraph 97 of its report that, owing to the increasing demand for land, worthless and inferior lands are taken up on darkhast and subsequently relinquished if they are not productive.

In the Kaikalur taluk of the Kistna district where the extent relinquished is nearly equal to the extent assigned, this is particularly true, but this is due as explained in paragraph 30 of the Scheme Report to certain special disadvantages and unfavourable conditions. In the rest of the resettlement tract the area of darkhast lands retained by the ryots is far greater than the area relinquished and this certainly does not denote economic depression.
13. Section 18 of the Committee's Report-Sale for arrears of land revenue.The Committee's theory that the ryots somehow manage to pay up the Government dues and that the statistics of sale for arrears of land revenue represent the case of ryots who have been 'ruined' by trying to bringing unsuitable land to cultivation is unsupported by evidence. Even if it were correct 18 such ruined ryots out of 75,000 in East Godavari and 163 out of 155,000 in Kistna and West Godavari (vide paragraph 33 of the Scheme Report) can hardly be considered sufficient to establish the theory that pressure of population on the land has affected the economic prosperity of the ry st to any great extent.
14. Section 19 of the Committee's Report-Land values.-In paragraph 12 of his report Mr. Holdsworth has given sufficient statistical data based on land acquisition records to disprove the Committee's allegations that the value of land has gone down after 1925.

In regard to the Committee's observation that the several considerations enumerated in paragraph 107 of its report go to vitiate the land values so that they could not be taken as representing the correct economic value of the land, it has to be pointed out that the Settlement Officer had already anticipated this criticism when he remarked in paragraph 35 of his Scheme Report that " whatever influences vitiate the returns for the latter period must have vitiated those for the early period and for purposes of comparison cancel out."

In paragraph 108 of its report the Committee emphatically denies that the rise in the value of the land is one of the strongest indications of increased profits. It is not clear what other conclusion the rise in the value of land can indicate unless it is to be seriously urged that all sales of land fall under one or other of the categories mentioned in paragraph 107 of the Committee's report.

In the opinion of the Board the fact that the value of land has increased enormously is proof that the assessment thereon has had very little effect on its value. The Committee itself seems to be unable to reconcile the large increase which has taken place in the selling price of land with its contention that the general condition of the ryot population is such that any increase in the rate of assessment is not justifiable. It is only reasonable to expect that few ryots will be willing to pay very high sums for the purchase of land, if thereby they know that they are going to lose money. After all the rise in the sale values is not a factor directly bearing on the question of increase of the assessment but is only an indication of the effect of the rise in prices on the value of lands.
15. Section 20 of the Committee's Report-Lease values.-In paragraph 13 of his report Mr. Holdsworth has given a complete answer to the Committee's criticism. In paragraph 111 of its report the Committee enumerates certain factors which lead to high lease values and implies that the Settlement Officer has simply ignored these factors. Statistics of sale and lease values for purposes of resettlement are generally collected with very great care and it is only simple and straightforward transactions that are taken into account-vide the elaborate instructions contained in paragraph 11 of section I of the Resettlement Manual.

The Committee has not proved that the system of leasing is unpopular or that the landlord is necessarily a loser by the transaction. The fact that a landholder is able to lease his lands to tenants at rates which are many times higher than the rates of assessment is clear proof that the rates of assessment are not too high. It must be remembered that the assessment is paid by the landholder and not by his tenant. The landholder therefore when he leases his land is assured of a very handsome profit. As shown by Mr. Holdsworth in paragraph 13, sub-paragraph (5) of his report, the rent on an acre of wet land assessed at Rs. 8 comes to Rs. 65.
16. Section 21 of the Committee's Report-Commulation prices.-The Committee's lengthy dissertation on prices is, as observed by Mr. Holdsworth in paragraph 14 of his report, not altogether relevant. Mr. Holdsworth has, in the opinion of the Board, shown conclusively that the commutation prices arrived at in the scheme report are by no means high. Even if the figures accepted by the Committee are taken, it is clear that during the present resettlement prices have risen by abont 100 per cent.
17. Section 22 of the Committee's Report-Effect of prices.-In paragraphs 151 and 152 of its report the Committee attempts to point out that the rise in prices is not always or universally a blessing to the ryot. The very anthority which the Committee quotes to prove the proposition admits that there is rery serious difference of opinion in the matter. Even assuming that the proposition is true, the Board cannot see its relevance, since the basic principle of settlement is that the assessment represents the Government share of the net profits from land and not of what is left of the profits after the satisfaction of all the needs of the ryot.
18. Sections 23 to 35 and 40 of the Committee's Report-Cultination expenses.In these sections and in the appendices relating thereto the Committee professes to show that the cultivation expenses have increased considerably and that the value of the net produce from his land is insufficient to maintain the ryot. The Board has little to add to the observations made by Mr. Holdsworth in paragraphs 15 and 16 of his report in which he has shown how inaccurate are the statistics compiled by the Committee. The appendices to the Committee's report are full of errors and it is impossible to place much reliance on them. The Committee's contention that the value of the net produce is insufficient to maintain the ryot would appear to be almost absurd to anyone who is in the least acquainted with the conditions of cultivation in the Kistna and Godavari deltas. This overstatement of its case br the Committee detracts very largely from the value of its report. If the facts were as stated, land values instead of increasing as they have done must ineritably hare dropped; cultivation mast have fallen in extent and the ryot population gone elsewhere in order to earn a liring. The facts that population has increased and shows no signs of migration, that cultiration has extended and that land and lease values have gone up enormonsly are in themselves a refutation of any such suggestion as the Committee puts forward.
19. Sections 36 and 37 of the Committee's Report-Economic enquiries in selected rillages-The economic enquiries conducted by the Settlement department, although intensire, are necessarily on a limited scale and corers only typical areas, as otherwise it would be impossible for any Settlement Officer to finish his enquiries within a reasonable period. In the case of the three districts in question clear and comprehensive instructions were issued by the Settlement Officer for the condact of economic enquiries and the Board has no hesitation in saying that the Committees allegation that the "Government investigators depended to a very great extent upon the incorrect and casual information provided to them by the rillage karnams ${ }^{*}$ is unwarranted. Even assuming that the Committee's enquiries were thorough and its conclusions correet, it is difficult, as obeerved by Mr. Holdsworth in paragraph 19 of his report, to argue therefrom that sales of lands were generally due to economic pressure. The Board is in entire agreement with the observations made by Mr. Holdsworth in the concluding sub-paragraph of paragraph 19 of his report.
20. Sections 33 and 41 of the Committec's Repart-Indeblednext of ryonds and standard of living.-Mr. Holdsworth's discassion on the agricaltural indebtedness of the ryots and the increase in the coot of liring in paragraphs 17 and 13 of his report is, in the opinion of the Board, a complete refutation of what the Committee has sought to prove. The Comnittee starts from a fallacious premise when in paragraph 2.6 of its report it says that the income from land should be enough to enable the ryots to maintain themselves. Indebtedness may be due to a rariety of causes and until it can be proved that the ryot has contracted debt mainly on account of agricaltural losses the case for a modification of the land revence demand handly arises. The debtor nay borrow
because he has some need to satisfy or because he has credit and cannot resist the numerous temptations to enjoy its use. It is not borrowing however that leads to debt but failure to repay and for this there may be reasons quite distinct from those which led to the borrowing. It is weil known that as a general rule the ryot does not hoard up money in liquid form. He has not so far taken to banking in the ordinary accepted method. When he has any surplus money he invests it in jewels or on land or lends it out, but very rarely keeps what may be called 'till money' with which to meet any emergency which may arise. When, therefore, such emergencies arise he has either to sell his jewels or his land or to call in his loans. If he cannot raise moner by any of those means, he has to borrow on the security of his lands or jewels. This in fact is and has been from time immemorial the ryot's peculiar method of banking. That he has to borrow is no proof at all that he is in a bad way. Indeed it is rather a proof that he is well off and that his credit stands high in the money market. To argue as the Committee has done that increased indebtedness denotes increased poverty is, the Board is convinced, the exact opposite of the truth.
21. Section 42 of the Committee's Report-Village budgets.-As observed by Mr. Holdsworth in paragraph 20 of his report, much reliance cannot be placed on the Committee's statistics.
22. Section 45 of the Committee's Report-Lankas and Padugais.-Government have issued orders directing that the classification might be lowered in all deserving cases-vide paragraph 8 of G.O. No. 405, Revenue, dated the 26th February 1929.
23. Section 46-Water-rates.-The Board entirely agrees with the observations of Mr. Holdsworth in paragraph 21 of his report and has nothing to add to them.
24. Sections 11 and 47-Irrigation and Drainage.-The Committee deals with irrigation under the three heads of (1) Adequacy of canal supplies, (2) Drainage and (3) Improvements. In paragraph 50 of its report the Committee proposes to examine the adequacy of supplies with reference to the extension of irrigation. It may be mentioned at the outset that if there has been extension of irrigation it is due to improvement of supply and better distribution brought about by the remodelling of channels and the introduction of pipes.

Supplies.-As regards canal supplies, the Committee is of opinion that conditions are not unsatisfactory in Godavari Eastern and Central deltas and in the Muniyeru project but they are far from satisfactory in Godavari Western and Kistna Eastern deltas and in the Divi island. It bases its opinion in this regard on the fact that transplantation of crops which should be completed by the end of July has to be carried on to August and September. There is a fallacy in this argument. Transplantation depends not merely on adequate canal supplies but also on the supply of seedlings, labour and cattle, and if these latter are either not available or available only in insufficient quantities the progress of transplantation must necessarily be retarded. Again, if the river receives freshes in time and if the rains are adequate and timely, transplantation progresses satisfactorily and is completed in six weeks time, which is considered the normal period required for the completion of transplantation. If, however, the river receives freshes late and if the rains are not timely and adequate, transplantation must necessarily be delayed.

The Committee is of opinion that the second crop suffers considerably in the Godavari Western delta owing to the inadequacy of canal supplies. It further states that many ryots in the villages situated higher op, where the lands are not easily commandable, admitted that they did not want second-crop cultivation and that while lands on which second crop could be easily raised hare been excluded from the second-crop zone, lands on which second crop cannot easily be raised have been included in it. It therefore recommends that the wishes of the ryots in this regard must be consulted before the zones are finally fixed. It is not true that the second crop suffers badly in the Godavari

Western delta, where the area grown is the largest, while in the Godavari Eastern and Central deltas in spite of favourable conditions, the area grown is very much smaller proportionately. The fixing of the second-crop zone in the Godavari Western delta has since solved many of the difficulties referred to in paragraph 57 of the report, and if only the ryots would take advantage of the rotation system of closure of channels for second crop and concentrate the area cultivated in that delta, the difficulties as regards soakage in contiguous lands would be greatly removed. Again, the statement that the ryots are anxious to give up second-crop cultivation is unsupported by facts. Anyone who attended a second-crop conference can readily recall to mind how great is the scramble for second-crop water. Of the 132 petitions received by the Board of Revenue objecting to the proposals of the Special Executive Engineer regarding the fixation of second-crop zone, only 8 were from partie; asking for the exclusion of their lands, while the remaining 124 which came from 1,800 ryots definitely asked for the supply of water in the second-crop season to about 15,000 acres of land. Even the ryots who desired the exclusion did so under the misapprehension that the supply for the second-crop would mean the loss of the supply they had till then enjoyed in the first-crop season. Not only ryots but also registered companies and private individuals owning property outside the limits of the area irrigated by direct flow petitioned for the inclusion at any cost of their lands in the second-crop zone. They were prepared to pay an inclusion fee of Rs. 25 per acre, to set aside lands for the benefit of the depressed classes and discharged sepoys, to construct at their own expense all the channels and engineering works necessary to take water for their lands, and to pay such rates of water-cess in additionsas Government might fix. If irrigation were really unsatisfactor and second-crop cultivation unprofitable as alleged by the Committee, such companies and individuals would hardly come forward and ask for the inclusion of their lands on terms which at first sight seem unfavourable. The Board therefore agrees with the conclusions of Mr. Holdsworth in paragraph 5 of his report.

Drainage.-As regards drainage, the Committee considers that the drains designed originally in accordance with the tentative principles laid down in P.M.G. No. 3572 dated the 19th December 1874 and G.O. No. 3528 dated the 22nd December 1876 can hardly meet the present requirements. It says that, in the first place, these principles themselves have become obsolete in view of the most recent developments in engineering and agricultural knowledge. Secondly, cultivation has extended considerably since the drains were designed and constructed, so that the extent of cultivation is now twice what it was before. For these reasons, the Committee considers that the drains should be improved so as to carry off water as quickly as possible. It also refers to the complete neglect of village drains and to the fact that very large volumes of upland drainage also enter the deltas and aggravate the drainage difficulties, as the existing drains cannot efficiently deal even with internal drainage.

The drains designed in accordance with the principles referred to in the report have been found to serve well so far, and recent observations made in the Gonteru drain of the Godavari Western delta have shown that no improvements are required. The flood-flow which occurs only occasionally during rains spills freely on both sides and is fairly rapidly discharged into the sea. It is only during times of low flow which occurs for a long period in the year that there is a chance of the silting up of drains and the tentative section adopted for clearance is intended to prevent such silting. Certain low-lying lands are no doubt affected here and there, but on the whole there is no submersion on a large scale for such periods as are likely to injure the paddy crop. Lands which are not easily drained have been included in the second-crop zone for cultivation and this solution is certainly more effective and economical than spending large sums on the improvement of drainage with doubtful results. The disposal of the full floods estimated from the upland drainage has been provided for as far as possible so as to convey the floods rapidly without damaging the delta works relating to the disposal of upland drainage have been constructed in the past and charged to the Capital account of the system. The improvements to
the Yenamaduru drain at a cost of 10 lakhs of rupees and the provision of flood-weirs at several places are instances in point. Such works will also be constructed in the future if the need is felt and the cost is justified. Village drainages are entirely local and have therefore been left in the hands of the ryots. In many places, drainage takes place by field-to-field flow. Drains serving a number of villages are generally looked after by the Public Works Department and if any instances of such drains which are not in chárge of Public Works Department are brought to noti e, they will be examined and taken over for maintenance.

Improvements.- Cnder improvements, the Committee suggests for the Godavari systems (1) the raising of the masonry crest level of the anicut, or (2) the putting up of higher shutters than at present, or (3) the increasing of the ventway of the head sluices. To ensure adequate supplies for the secondcrop season the Committee recommends the construction of a reservoir on the Godavari or on one of its tributaries and suggests the construction of one on the Sabari. The question of increasing the height of the falling shutters was considered when the question of extension of irrigation in the Godavari delta was investigated in detail and it was then decided that it would be sufficient to adjust the pivots of shutters so as to make them fall with a larger depth of flow on top of them and to provide machines for the rapid lifting up of the shutters when once they fall down. The former improvement has been and is being carried out, while the latter will be arranged for shortly. The suggestion for the construction of a reservoir to increase the supplies in the second-crop season will be separately considered.

As regards the Kistna Eastern delta, the Committee thinks that to take full advantage of the increased height of water made available by the $\mathbf{6} \mathbf{f t}$. shutters installed over the Kistna anicut, the head sluices and the main canal should be expanded and necessary improvements effected. The question of extension of irrigation in the Kistna Western delta is now being investigated by a special officer and he will be requested to examine the question of adequacy of supplies for transplantation, although it is held that the supplies are adequate.

As regards the Divi Pumping project, the Committee apprehends that the improvements to the Kistna system will seriously affect the Divi island system and accordingly recommends that timely measures should be taken for preventing such shortage. There is at present a proposal to extend the East Bank canal and carry water to Divi island by constructing an aqueduct across the Puligadda Arm of the Kistna river and when it matures adequate supplies will be assured for irrigation in the Divi island.

In paragraphs 353 to 356 of the report, the Committee refers to the need for improving the drainage with a view to preventing submersion and consequent loss to the ryots and recommends that more systematic maintenance of drains should be undertaken and that works calculated to carry off the upland drainage should be constructed. It finally states that expenditure should not be stinted on these improvements and works for the reason that the Godavari and Kistna systems yield very fair net returns and that, if the capital expenditure on them were doubled, they would still yield a handsome return and continue to satisfy the requirements of productive public works. As stated already, the drains are sufficiently satisfactory for present requirements and no widening is therefore necessary. As regards their maintenance the difficulty has been mostly in securing labour for doing the work within the closure period, more especially as the drains take a good deal of time to dry out to make excavation possible. However, every endeavour will be made to overcome the difficulty by enlisting the co-operation of village panchayats and interested ryots and to arrange for a more systematic maintenance of drains. The improvements to the Yenamaduru drain must make rapid discharge of the upland drainage possible. A regulator will have to be constructed for shatting out the floods from the Venkiah and Wuyyura canals and when this is done the Yerrakalva floods cannot cause damage to the delta. The flood-weir at
the Velpur canal disposes of most of the floods from the Rallamadugu which are carried to the sea without causing any damage to the delta. The proposal to divert them into the Godavari river below the anicut is open to serious objections. Besides being prohibitively costly, it will be impracticable and of doubtful utility for many reasons. Provision will have to be made to carry the floods across the canal by means of a syphon which, however, is likely to give trouble when discharges of varying quantities flow down it; and there is the added trouble due to the backing up of floods in the Godavari. The diversion of the Budameru into the Kistna below the anicut is equally impracticable and will be costlier than the above proposal, apart from the difficulty of negotiating the town of Bezwada which will come in its way.
25. Section 48 of the Committee's Report.-The remarks of the Committee in this section are mainly in the nature of suggestions to improve the present economic condition of the ryots in the three districts and are irrelevant to the question at issue, viz., whether any increase in the present rates of assessment is called for with reference to the rise in prices and the existing economic condition of the people.
26. Section 49 of the Committee's Report-Fuel supply.-In this section the Committee makes the suggestion that the Forest department may arrange to get adequate supplies of fuel down the rivers and canals so that the widespread practice of burning cowdung cakes may be put a stop to and the consequent great wastage in the possible manure supplies may be avoided. The remarks of the Chief Conservator of Forests extracted below give an answer to this part of the Committee's report. It may also be pointed out that apart from the question of cost the practice of burning cowdung cakes is partly the result of preference as it is a slow burning fuel and a fire once started can be left to take care of itself:-
"The misuse of cowdung is a particularly serious matter and is not confined to the deltas of the Kistna and the Godavari. But it is not only a question of whether an alternative fuel is available, or not. If wood or charooal is used, it must be paid for, however low the price may be, whereas nothing is paid in cash for cowdung and the fact that it has a value in connection with agriculture is ignored. This would be a principal difficulty if firewood or charcoal could be made available in greater quantities-it would not be bought until there was developed a very strong public opinion on the subject of burning cowdung. A case in point is Coimbatore town where plenty of firewood is available, but the price is not low and cowdung is brought in from the country side over a radius of 5 miles to be used as fuel in the town.
"In Godavari (East and West) and Kistna, and without taking account of the Guntur areas within economic distance of the delta tracts, 182 square miles of reserved forest have been handed over to panchayat management. Properly managed these areas should be capable of producing large quantities of fuel, but excessive grazing has gravely depreciated the value of these areas for any purpose.
"There is too little forest in the Madras Presidency and what there is is badly distributed. What is required is the formation of village forests to be managed for the production of wood in the deltas of the two rivers and in many other places agricultural land would have to be devoted to the purpose. What has happened is that every cent fit for the growing of field orop is devoted to cultivation, no provision being made for land required for other necessaries, such as firewood and pasture.
" An unnecessary number of cattle are kept. The result of this is that a large number of cattle migrate for a part of the year to the uplands of Guntur and even into Upper Godavari. As a consequence the forests of Guntur are ruined.
" The whole of the forests under departmental control within economic range of the deltas are being worked to their full capacity and very little development, if any, is possible. The sea board mangroves are fully worked, but would be more productive could illicit grazing be better checked. The casuarina plantations in Godavari are being extended.
"In 1926 an experiment to ascertain whether it would pay to extract fuel on the banks of the Godavari above the gorge was ordered to be made and information is now called for as to whether it was found possible to extend work in this direction. There is nothing to bring down the Kistna, except from Kondapalli, the yield from which is fully utilized in Bezwada."
27. Section 51 of the Committee's Report-Excise Revenue.-The fallacy of the Committee's argument that the land revenue demand should be reduced in view of the large income realized as excise revenue is sufficiently exposed by Mr. Holdsworth in paragraph 22 of his report.
28. Section 52 of the Committee's Report-Cost of Settlement Operations.-In the opinion of the Board the Committee has entirely misapprehended the functions of a settlement party. As Mr. Holdsworth points out in paragraph 2 of his report, the portion of a resettlement party engaged in the work of revising the rates of assessment bears a very small proportion of the cost of the entire party. That so large and expensive a party is necessary during a resettlement is due to the fact that during the currency of a sottlement the revenue records are not kept up to date. If the maintenance of such records could be kept up to date during the currency of a settlement, the work of a resettlement party would be confined practically to an examination of the statistics relating to prices during that period and to the development of cultivation, communications, trade and so on. The examination of those statistics could in most cases be carried on in an office with a small staff, the cost of which would be almost negligible. It is therefore unfair to saddle a resettlement party with the cost of a large part of the work done by it which has nothing to do with the work connected with the revision of rates.
29. Conclusion.-In Mr. Holdsworth's detailed examination of the Committee's report and in the Board's remarks in the previous paragraphs it has been shown how the Committee's conclusions on all vital points have little to commend them. They are often based on a misinterpretation of Government orders on the subject; on wrong or admittedly insufficient data and on wide generalisations not based upon any recorded facts. The Committee has started with the fundamentally erroneous idea that the assessment should be regulated with reference to the economic condition of each individual ryot and not the productivity of the land. Its suggestions and observations throughout its report have in consequence been largely vitiated and when it concludes its report with the expression of a hope that Government are in no way committed to the dictum that it is the land that pays assessment and that the well-being of the ryots is not their concern, it is clear that the Committee does not realize that even if the principle it supports is desirable it is not practicable.

As pointed out by Mr. Holdsworth in paragraph 23 of his report, the Committee, in spite of the arguments advanced regarding the inability of the ryot to stand any increase in assessment, contemplates with equanimity an increase of 25 per cent in the rate of cesses. This fact in itself seems to show that the Committee can have very little faith in its contention that the present rate of land assessment is too high. If the ryot can stand a large increase in the rate paid by him as cesses, he obviously can stand an equivalent increase in the rate of assessment. In the opinion of the Board the report of the Committee has not shown that the increase proposed in the Scheme Report on the present rate of assessment cannot be easily borne by the ryots in the three districts of East and West Godavaris and Kistna. Indeed on a consideration of the undoubted increase by 100 per cent in the selling price of rice during the currency of the present resetilement a much higher increase in the rate of assessment would be justifiable. It is the emphatic opinion of the Board that the proposals in the Scheme Report are based on sound grounds and that there is every justification for introducing the rates proposed therein without further delay.
(True extract)

S. G. Sengodatyan, Acting Secretary.

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## REPORT, DATED 11m APRIL 1930, BY MR. B. G. HOLDSWORTH, I.C.S.

1. The Committee's Report.-The report of the Committee is contained in threevolumes comprising 101 pages of text and 212 pages of appendices. The report and the uppendices have been examined as carefully and thoroughly as time permitted, but the task has not been facilitated by the numerous errors they contain. Arithmetical mistakes, many of them serions, occur in practically every appendix. The figures and arguments of the Settlement Officer have been attacked often unreasonably and on occasion misrepresented. Public statistics have been quoted without verification of their relevancy, and although the appendices bristle with an imposing array of columns, many of them are irrelevant and some of them soimpracticable that in the end the Committee's staff has not attempted to fill them in. The frequent errors of fact and calculation suggest that the report has.not been drafted with the care required by a subject of such complexity, and though many of the mistakes may be of detail they detract from the authority of the conclusions. Care has been taken to refer to the original manuscript of the Committee's report and to verify that none of the mistakes criticized below are merely misprints.
2. The Costs of Resettlement.-In concluding its report, the Committee has drawn attention to the fact that its investigation has taken only nine months while that of the Settlement Party took some years. It admits that the work of the Settlement Party was of a somewhat different kind. In view, however, of the misapprehensinns betrayed in paragraph 378 of the report on the subject of the cost of resettlement, it is essential to emphasize the difference between the operations of the Settlement Party as a whole and those on which the Committee was engaged. It is unly a very small fraction of a Settlement Party that is employed on work directly connected with proposals for a revision of rates. The large majority of the Party is engaged in operations which would be essential, whether any alteration of the rates of assessment was contemplated or not. Its activities are confined almost entirely to the task of bringing up to date the registry and description of holdings in the revenue records. It must also be clearly understood that a resurvey is in no sense an essential part of a resettlement. There would be no difficulty in raising or lowering the assessment without any resurvey. Resurvey is necessary not because a district is resettled but because the existing. survey, owing to changes in the holdings, has become so out-of-date that it can no longer be adapted to existing conditions. To argue that the cost of the Survey department should be considered as an essential part of the costs of a. resettlement, as the Committee has done in paragraph 378, is, therefore, unsound. There is even less justification for including the charges on account of the Inam Commissioner; and the further suggestion that the transfer of the cost of the district staff employed on the maintenance of revenue records from " 5 . Land Revenue" to "22. General Administration" is improper on the ground that this staff has some connection with resettlement has little to commend it. If the question is impartially considered, it will be seen that the only legitimate debit against the increased revenue levied at a resettlement is a small portion of the cost of the Settlement Party employed in the district resettled. The annual average expenditure for the last three years on the four Settlement Parties employed in various parts of the Presidency is 7.9 lakhs. About one half of this represents the cost incurred in Kistna and Godavari and it will be no exaggeration to say that less than one-tenth of this half was spent on staff directly connected with the operations involved in submitting proposals for a revision of rates. So slight is the cost of revising the rates that if resettlements were abandoned and a permanent settlement introduced, it would make little difference to the figures of expenditure quoted by the Committee in paragraph 378.
3. The Principles of Settlement and Resettlement.-The Committee has gone sumewhat outside its terms of reference and has opened its report with a criticism of the principles of settlement and resettlement and a suggestion that these prinoiples have been ignored by the Settlement Ufficer and by Government.

In paragraph 15 the Committee has misstated the settlement principles and misinterpreted the statement of the Hon'ble the Revenue Member made in Council
on 28th November 1928. It states that the settlement calculations make mo allowance for the subsistence of the farmer and that the Madras Government are not prepared to consider the requirements of the cultivator in assessing their revenue ratea.' Under the strict theory of Settlement the net profits from agricultare, ie, the gross outturn less the cultivation expenses, are divided equally between the ryot and Government; but owing to the number of deductions that are arde in favour of the ryot at each step in the calculation and owing to the fact that the net produce is valued at a commutation rate which is always considerably belur the market price prevailing at the time when the settlement is made, the theoretical half share is never taken in practice, and the aseessment is invariably very much lese than half the current value of the net produce. The balance is left to the cultivator and as a resalt of the fact that at resettlements Gorernment have mever enhanced rates up to the full percentage of the rise in prices, it has come alout that the ryot's share is constantly increasing while the Government's share is constantly decreasing as the value of the products rises. It is impoesible to follow the reasoning of the quotation from Mr. Srinivasa Haghara Ayyangar given in paragraph 13 of the report to the effect that slight errors in the calculation aro likely to result in excessive assesements. It is true that slight errors in dotail might vitiate the total but there is no more likelihood of such errors tending to make assessments excessive than of their making then leuient. It all depende on the nature of the error: and in view of the care taken to see that the calculatione are made in a way most favourable to the ryot the second alternative is really more probable than the first. The quotation from Sir Norman Marjoribanks doee not mean that the Government of Madras are not concerned with the maintenance of the family of the cultivator but that as adequate sllowance has been made for the maintenance of the cultivator in fixing original and resettlement rates, it is not necessary and, in fact, it is not practicable, to vary the assessment in accordance with the peculiar circumstances of each individual cultivator. This is a very different thing from stating, as the Committee suggests, that the Government of Madras were not prepared to muke due provision for the maintenance of the fanily of the cultivator. Asa matter of fact, the present rates of aseessment in these districts represent nothing like the value of half the net produce. Figures will be given later to show that the assessment is very much less than a half or even a quarter of the net produce.

These facts explain the treatment of the question of cultivation expenses in the Scheme Report. The Committee has accused the Settlement Officer of having dealt with this matter in a cursory fashion. The calculation of cultivation expenses is a matter of extreme difficulty and a recalculation of such expenses would involve a recalculation of the standard outturns. In recent resettlements in view of the fact that the enbancements proposed have been so much lower than the rise in prices, it has been considered unnecessary to embark upon such debatable points as the cost of cultivation. If it were proposed to enhance the assessment up to the full percentage of the rise in prices it would be essential to examine the relation of modern cultivation expensee to those of the preceding resettlement. The normal development would be for caltivation expenses to increase similarly with prices. There is no apparent reason why the coot of agricultural implements, cattle, manare, etc., should rise faster than the price of grain: and as labour is generally paid in grain the money equivalent will vary exactly as the price of produce, unless there has been an increase in the rate of grain wages. It is possible that there has been a slight increase in grain wages and by this amount the increase in the cost of cultivation may exceed the rise in prices. The excess is however so slight that it should be amply covered by the difference between the rise in the price of produce and the percentage enhancement of the assessment proposed. As, however, the Committoe has supplied an estimate of cultivation expenses which purports to show an increase of no less than 300 per cent over the figures of 1900 the question will be examined more elaborately in.: subsequent part of this report.
4. The Resetllement Factors-(a) The standerd outhurns.-The Cummittoe haes advanced a eeries of arguments to show that the allowance made auder the head ${ }^{4}$ vicissitudes of season and uncultivable areas' is inadequate, that the allownence
for cartage and merchante' profits is too small and that the commutation rate is unfairly calculated. It has also questioned the correctuess of the standand outturns which are the theoretical bases of the rates of assessment. • This latter point however bas not been pressed except to the extent that the Committee has quoted from various reports regarding other provinces to show the difficultios inherent in any attempt to estimate the actual yield of the soil. It has, however, suggested no more satisfactory method of arriving at the outturn which must be ascertained if land revenue is to be adjusted according to fertility. The point whether the standard outturns were excessive was examined in paragraph $40(f)$ of the Scheme Keport and figures were given to show that the settlement classification based on these standard outturns was substantially correct.

Further evidence regarding outturns has been abstracted from the claims preferred by ryots before the Land Acquisition Officer or a Civil Court in connection with the recent railway acquisitions in these districts. The figures are given below. They indicate that the settlement outturns are anything but excessive.

(b) Allowance for vicissitudes of season.-The deduction made for vicissitudes of season and uncultivable areas has been attacked on several grounds. It is argued that these allowances of 10 per cent in the deltas and 20 per cent in the uplands are insufficient to cover the vicissitudes of the season, since seasons sufficiently adverse to damage the erops are nore frequent than the allowance made could cover. The Committee has criticized the rainfall statistice given by the Settlement Officer as ' not only worthless but thoroughly misleading.' The form in which the statistics were presented is that laid down by Government and it has been adopted in all recent Scheme Reports. It is moreover difficult to reconcile the Committee's criticism with the fact that it has accepted the only deduction which the Settlement Officer made from the rainfall figures, viz., that there had been no appreciable change in the character of the seasons. The reason for this may be that the Committee desired to apply the results of its examination of the rainfall figures for the yeara $1890-1899$ (Appendix 2) to the period of the expiring settlement which opened in 1900. The Committee professes to have experienced some difficulty in obtaining similar figures for later years. It is not easy to undorstand why it should have been able to obtain figures 40 years old and not those of later yoars. The figures are all equally available in every.

Collector's office in a printed Board's Proceedings containing the monthly rainfall returns for each station for the 45 years ending 1914. Whatever the diffioultios or disadvantages of quoting more relevant figures may have been, the Committee bas enunciated the sweeping generalizatiou [paragraph 388 (1)] that in half the years ander consideration, the seasonal conditions were such as to cause damage to crops, on an examination of the rainfall recorded during ten years prior to the resettlement period at only six stations in an area covering some 12,000 square miles. It is obvious that tigures will vary considerably even in adjoining stations. over periods as short as a month and the Committee's evidence for so serious a conclusion can only be described as inconclusive. Moreover the argument it draws from its figures, that the allowance for vicissitudes of seasons is inadequate, is weakened further by the fact that the crop experiments on which the staudard outturns were estimated were conducted in the year 1894 which the Committee itself has marked as adverse in the East Godavari district and which was distinguished in Kistna and West Godavari by heavy rains in the harvest months.

The other criticisms levelled against the adequacy of the allowance for vicissitudes of season and unprofitable areas assume that the standard outturn is the maximum or ideal. It has been seen that the experiments on which the standard outturns were fixed were carried out in an unfavourable year and consequently such outturns cannot be assumed to represent even the normal, much less the perfect, crop. It is therefore quite incorrect to claim that further deduction should be made on account of late transplantation. Any effect which the date of transplantation has on the outtnrn must have been reflected in the standard outturne. The arguments in paragraphs 29 and 30 are therefore at best irrelerant and in paragraph 30 in particular are based on quite inadequate grounds. The same considerations apply to the contentions in paragraphs 42 to 47 , to the effect that no allowance is made for insect and other pests.

In paragraph 34 the Cummittes has pressed for low rates of assessment in view of the losses to which the ryots are liable owing to vicisaitudes of season. In this connection it must be emphasised that the Government rates are low as compared with the rents realized by the ryots from their sub-tenants and as compared with the rents paid by occupancy ryots in proprietary villages. The fact that the Government ryot can secure a rent which may be as much as ton times the assessment he pays to Goverament and that the occupancy ryot is prepared to pay considerably more than the Government assessment to the zamindar indicates that the revenue rates cannot be considered anything but low.
(c) Allowance for unprofitable areas. -The arguments besed on the area of current fallows are vitiated by the fact that the Committee is mistaken about the meaning of the statistics it has quoted. It has taken them from Appendix 1 of Benson's Statistical Atlas and has been led, no doubt inadvertently, into the fallacy of claiming that Government assessment is paid on fallows in proprietary estates. An examination of this Appendix would have shown that it related not only to Government lands but also to lands in zamindari and whole inam villages. The figures required by the Committee might have been found in paragraph 7 of the letter press of the Statistical Atlas from which it would have been seen that only 11 per cent of the occupied ryotwari area is uncultivated in Kistna and West Godavari and 27.5 per cent in East Godavari. In the latter district most of these fallows lie in the Rajahmundry and Peddapur Ealuks where the soil is poor and the assessment extremely low. Moreover much of this fallow contains trees from which the owner receives an appreciable return. It may incidentally be noticed that in no settlement has the allowance for uncultivable areas been intended to cover current fallows. It is intended to cover only small areas such as paths, channels, bunds, threshing floors, etc., which are measured in with the holdings. It must be remembered also that much of this current fallow is deliberately kept waste to be leased as pasturage for delta cattle, a practice which yields a reliable income considerably in excess of the assessment.
(d) Remissions.-The dissertation on remissions in section VIII of thereport is not particularly relevant to Kistne and Godavari which are as thoroughly:
protected against famine as any district in the Presidency. Since the construction of the anicut seventy years ago there has been no wideapread calamity in these districts and it requires more than a quotation from Mr. Clarke's report of 1898 to prove that the remission rules as now worked do not afford relief in the case of individual lands which suffer on occasions from excess or deficiency of water.
(e) Ryots' improvements.-In section $X$ the Committee has raised the question of ryots' improvements and expressed an opinion that there should be sume reduction of land revenue in consideration of the expenditure incurred by ryots in bringing their lands under wet cultivation. It is no doubt true that in most cases it requires some labour or expenditure to convert dry land into wet but it has never been the practice to regard this as a ryot's improvement, provided that the water is supplied from a Government source of irrigation. Where bowever the ryot digs a well or a private tank for the improvement of his land he is exempted from any enhanced assessment on this account. It must be remembered also that under the existing scheme of classification lands which are on the fringe of ad ayacut or in an undeveloped area are invariably assessed at low rates. Carried to its logical conclusion the Committee's argument would necessitate the assessment of all lands at jungle rates since at one time or another they must have been cleared by the labour of some ryot. I'he Committee has offered no practical suggestion and, in view of the fact that the lands which require improvement are, as a rule, assessed in the lowest tarams it seems unnecessary to consider the adoption of any further relief.
6. The Irriyation Systoms.-The section on Irrigation consists largely of the opinions of the Conmittee as to the conditions of irrigation in the deltas in question. In the case of the Kistna delta it has expressed the opinion in paragraph 60 , of which it was not altogether convinced in paragraph 54, that in the Kistna delta the more chronic insufficiency of supply from which the system had suffered almost throughout the period under report had been in a very large measure set right by the fitting up of 6 feet shutters over the Kistur anicut.

In paragraph 57 however the Committee has strayed into the question of the second crop zone which has recently been fixed in the Godavari Western delta and has claimed to have discovered " numerous cases of people who were wot at all anxious to raise a second crop cultivation but who, on the other hand, desired to have their lands excluded from the second crop zones." In the face of this assertion it is worth noting that out of the 132 petitions concerning the second crop zone received by the Board of Revenue only eight were from parties requesting the exclusion of their lands. The remaining 124 contained the requests of 1,800 ryots for the supply of water in the second crop season to some 15,000 acres of land and of the eight desiring exclusion most of them were under the misapprehension that the oupply for second crop would mesn the loss of the supply in the first crop season which they had hitherto enjoyed. Not only did the vast majority of ryots, who had any representations to make, desire the inclusion of their lands but certain registered companies and private individuals, who own property at present outside the limits of the area irrigated by direct flow, have petitioned in no hall-hearted terms for the inclusion of their lands at almost any cost. These parties are prepared to pay an 'inclusion fee' of Re. 25 per acre, to set aside lands for the benefit of the depressed clasess and discharged sepoys, to construct at their own expense all the channels and engineering works necessary to bring the water on to their properties and undertake to pay such water-rate as Government may care to fix. It is difficult to believe that, if irrigation were so unsatisfactory and the profits of cultivation so exiguous and unreliable as the Committee maintains, unsentimental entities like registered companies would be prepared to offer such bandsome terms for the supply of water.
6. The relevance of the statistics regarding Population, Cultivation, Communications and Trade.-In view of the Committee's reply to the statistics given in the Scheme Report conoerning the economic condition of the district, it will be advisable to restate briefly the besis of the resettlement proposals. Land revenue represents the commuted value of Government's share of the produce. This value was at the last settlement commuted at a rate calculated on the prices of food-grains
prevailing prior to 1894. It has been demonstrated in the Scheme Report that these prices have increased by over a 100 per cent since the Government share was last commuted. It follows, therefore, that the Governmeut's share is worth at least twice what it was worth when the existiug rates of assessment were fixed. It has, however, been proposed to enhance the land revenue only by $18 \frac{8}{4}$ per cent. The enhancement has been proposed not because there has been an increase in the population, in the mileage of maintained roads, in the trade of the district, in the extent of holdings or in the sale and lease values of land, but simply because that share of the crop which represented the Government assessment 30 years ago is now worth twice as much as it was then worth. In other words, the ryot requires to sell only half as much of his crop to-day as he did some 30 years ago to meet the Government assessment. Much therefore of the argument advanced by the Committee to the effect that the increase in population, the expansion of maintained roads and the development of trade, eto., do not justify any enhancement of revenue, is irrelevant. Statistics regarding these points were introduced into the Scheme Report merely to illustrate the condition and development of the tract during the expiring settlement perind and to throw light on the effect of the previous rates of assessment. If the old rates had been pitched too high, the effect would have been seen in a progressive deterioration of the tract.
7. Population.-The Committee has pointed out that an increase of population is not an unmixed blessing and has argued as if there had been a rise in population of 21 per cent. This is not quite accurato. The correct figure is 19 per cent. The Cummittee has also stressed the fact that there was a retarded rate of expansion in the decade 1911-1921 which is not entirely explicable as being due to the influenza epidemic. Its argument in this paragraph would have been worthy of more attention if its figures had been correct. It has, however, quoted for East Godavari the figures for Kistna and for Kistna the figures for Guntur. It is, however, a fact that in the Godavaris and Kistna there was a marked falling off in the rate of increase during the decade 1911-1921 and that there was less immigration than during previous decades. During those periods, bowever, the rate of increase in these districts had been very much above the Presidency average and an eventaal retardation was in such sircumstances inevitable.

The Committee's main point, however, is that an increase of population bas its dangers. While it is true that increased population involves increased pressure on the land the statistics of cultivation given in the Scheme Report show there has been an expansion in cultivation greater than the increase in population. In paragraph 67 of its report the Committee has questioned the calculations made by the Settlement Officer regarding the expansion of cultivation in the Godavari districts. The figures furmished by the Settlement Officer will be found in paragraph 28 of the Scheme Report where it is explained that the comparison is made between the average of the figures for the five years 1919-20 to 1y23-24 and the area of cultivation given in the previous Resettlement Scheme Reports for the two districts. These figures in the case of the Godavari districts were the average of the four years immediately preceding 1894. Using these figures which relate to cultivation in Government villages only the Settlement Officer has calculated that the cultivated area has increased by 22 per cent in Kistna and West Godavari and by 21 per cent in Last Godavari. The Cominittee has attacked these results on the ground that the Settlement Officer has based his calculations on the irrigated area of 1899 in which year second crop in the Godavari delta was cultivated on only 66,000 odd acres whereas in 1897 the second crop area was 166,000 . The Committee's figures are taken from the Annual Administration Report of the Public Works Department, Part II (Irrigation) and it must be noted in passing that they refer to non-Government as well as Government villages, whereas the Settlement Officer's figures in paragraph 28 of the Scheme Report refer to Government villages only. Because of the disparity in the irrigation returne for 1897 and 1899 the Committee has argued that it is justified in reducing the increase of cultivation claimed by the Settlement Officer by 100,000 acres and accordingly with the help of an erroneous statement that the increase in population was 21 per cent (instead of 19 per cent) it has gone on to show that population has increased more than the cultivated area.

The Committee's argument is fallacious. The Settlement Officer has explained that his early period figures were taken from the figures in the Resettlement Scheme Report of 1894. The Committee has ignored this and argued as if his calculations were based on the Irrigation returns of ly99. It has further committed a serious blunder in having deducted from the Settlement Officer's cultivated area for 1919-20 to 1923-24, which referred to the cultivation in Government villages only, the fyures from the Administration Report (Irrigation) for the year 1847, whicb include inam and zamindari villages as well.

To prove how misleading is the argument of the Committee in this connection, the figures from the Annual Administration Keports (Irrigation) have been collected and compured. Second crop cultivation fuctuates from year to year and therefore averages have been taken for the five years 1895-96 to 1899-1900 (eurly period) and 1920-21 to 1924-25 (late period). Totals for the main systems are compared below :-

|  | Godnvari Della. | Kistna 1)elta. | Muniyera Projeos. | Divi F'roject. | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\triangle \mathrm{Cs}$. | Acs. | Acs. | Acs. | Acs. |
| Early period | 750,353 | 522,067 | 1,445 | Nil. | 1,272,998 |
| Jate period | 956,541 | 738,676 | 6,247 | .37,255 | 1,738,719 |
| Percentage increase | $+27$ | $+41$ | + 332 | .. | + 37 |

In the main irrigated areas ulone there has been an increase of 37 per cent. This of course does not mean that the cultivated area has similarly increased, since much of the land now irrigated was probably under dry cultivation formerly.

The statistics given in paragraph 28 of the Scheme Report showing that in the Government villages in Kistna and West Godavari there had been an increase in cultivation of $2 火$ per cent and in East Godavari an increase of 21 per cent remain unaffected by the Committee's mistaken criticisms. There has therefore been an increase in the area cultivated actually greater than the increase in population and when it is remembered that it has been mainly under wet crops the suggestion that the increase is due only to the opening up of lands on the margin of cultivation may be decisively rejected. It follows therefore that the pressure of the population on the land must actually be less now than it was thirty years ago especially in view of the enhanced productivity of the area cultivated. There is therefore, not the menace in the figures of population which the Enquiry Committee apprehenda and despite its quotation from Adam Smith it can hardly be denied that a marked increase in population is a generally accepted sign of prosperity. Before leaving this subject it may be noticed that the Committee's contention in paragrapli 78 regarding the pressure of surplus labour upon the land, in support of which it quotes from the report of the Royal Commission on Agriculture, is hard to reconcile with its subsequent argument that owing to a marked scarcity of labour the cost of cultivation has increased out of all proportion to the rise in prices.

Owing to the fundamental errors in the Committee's figures which have been exposed ubove the argument in paragraph 68 falls to the ground. As to the minor points referred to in paragraph 69 a reference to the totals given by the Settlement Officer in his Scheme Report will show that the decreases noted are too trivial to merit comment.
8. Communications and Trade.-The statistics regarding communications, markets and trade are intended simply to show that the ryot is in a better position than he was thirty years ago in regard to the disposal of his produce. The ' higher prices from improved communications and conditions of marketing' are among the material benefits enumerated by the Royal Commission on Agriculture in the passage quoted by the Committee in section 7\% of its report. It is clear therefore that the figures are relevant, as concerning a factor that affects agricultural prosperity.
9. Mr. Srinivasa Raghava Ayyangar's historical arror.-Paragraph 79 contains a historical inaccuracy that requires contradiction. The Committee has quoted from Mr. Srinivasa Raghava Ayyangar to the effect that when the principles regulating the land tax were settled in 1856 it was intended that the charges for the maintenance of roads should be met out of the Government assessment and
that, owing to the development of the local land ceas, the cbarges which it was intended should be met out of the Government share of the produce have actually been met out of the ryot's share.

The papers in which the principles of the land tax were settled have been scratinized but nothing has been foend which bears out Mr. Srinivasa Raghava Aygangar's dictum. In fact the policy which is explicitly stated in these paper is the direct opposite. In paragraph 5 of the letter of the Madras Government, No. 44 of 1855, dated 11 th October 1855, to the Hon'ble the Court of Directors, the following words occur: "The proportion is intended to be that taken for the general purposes of the State; but we have it in contemplation, besides to establish cesses for local objects . . . especially for the msintenance and improvement of the district roads and for education." In this letter the Government of Madras proposed to take a percentage of the gros produce as the assessment. The Hon'ble the Court of Directors replied in a letter No. 17 of 1856, dated 17th December 1856 in which, while recommending that the assessment should be a percentage of the net produce, they stressed the advisubility of forming road funds in accordance with the principles accepted by them for South Arcot.

In acknowledging the despatch of the Hon'ble the Court of Directors the Government of Madras in extract from the Minutes of Consultation under date April 22nd, 1857, No. 372, referred again to the intention they had expressed in their letter of 1855 and eventually when passing orders on the settlement of the South Areot district directed the levy in addition to the rates calculated on half the net produce of a cess of four pice in every rupee 'to be laid out on roads in the taluks.' It is evident that Mr. Srinifasa Raghava Ayyangar laboured under a misapprehension regarding the policy of Government.
10. Agricultural statistics.-The accuracy of the Scheme Report figures regarding the number of cattle, ploughs, etc., in the East Godavari district for 1920 has been attacked in paragraph 86. The Committee bas relied on Benson's Statistical Atlas, Appendix IV. These figures are, owing to a mistake in the Collector's office, misleading and for this reason were not adopted by the Settlement Officer. He observed that in the case of East Godavari, the figures in the Statistical Atlas included returns from non-Govervment as well as from Government villages and he secured the figures for the latter villages only from Statistical Return A-4 in the Collector's office. To this extent the figures in paragraph 91 of the Committee's Report regarding the East Godavari district are inaccurate and inferences drawn from them must be abandoned. The figures for Kistna and West Godavari may, however, be further examined. The Committee professen to show that the amount of straw or other fodder obtained from the area under cereals and pulses will not feed more than one-sixth of the cattle in these districts. In so doing it has assumed that one acre produces 1,5c0 pounds of straw or other fodder. In the "Hand-book of Agricultural Facts and Figures "published by the Madras Agricultural Department, it is stated, however, that the yield of paddy straw is 2,500 to 3,000 pounds per acre and of cholam from 5,000 to 7,000 pounds. Another formula in use in the Agricultural Department is that cholam straw is to grain by weight as 3 is to 1 and paddy straw as $1 \frac{1}{2}$ to 1 . With an outturn of ten bags ( $1,660 \mathrm{lb}$.) to the acre the weight of paddy straw should reach $2,500 \mathrm{lb}$. It is clear, therefore, that $1,500 \mathrm{lb}$. is an underestimate and that it would be erring on the side of moderation to assume for purposes of calcalation an average yield of 1 ton of straw or $2,240 \mathrm{lb}$. per acre. At this rate the total fodder yield of the district is 2,150 million pounds. The Committee has estimated that 9,000 million pounds of fodder are required to feed 600,000 head of cattle. This is based on an assumption that $15,000 \mathrm{lb}$. of straw or other fodder is required for one unit of cattle per annum. The formula in use in the Agricultural Department is 5 tons ( $11,200 \mathrm{lb}$.) per pair per annum or $5,600 \mathrm{lb}$. per head per annum. At this rate the amount of fodder required for the cattle of the district is only 3,360 million tons. There is still a shortage, but it is nothing like so serious as that estimated by the Committee, and it must be remembered that no allowance has been made forgrazing on stubble, bunds and porambokes. Moreover the figures for cattle on which the above calculations are made include all the stock in the Government villages, and not only those animsls which are required for agriculture. It is no doubt true that the
manure of all the animals is available for use on the fields but it is not fair to debit on that account the whole cost of their keep to the agricultural budget, unless at the same time, the receipts from dairy produce, cattle rearing, sale of skins and carting are also credited. The Committee, however, has concluded that the figures given in paragraph 91 prove how inadequate is the supply of paddy. straw for the requirements of the cattle and has argued that the settlement practice of setting off the cost of feeding cattle against the value of straw is, therefore, indefensible. It is generally accepted that one pair of ploughing cattle is required for the cultivation of 5 acres of wet land. It has been seen that on a moderate estimate one acre of wet land yjelds 1 ton of straw per annum. Five acres will therefore yield 5 tons of straw per annum which is the accepted ration for a pair of ploughing bullocks. There is, therefore, not so much wrong with the time-honoured practice of the Settlement Department as the Committee is disposed to think.
11. Slatistics of holdings, darkhasts and sales for arrears of land revenue.The treatment of the subject of holdings and revenue, darkhasts and relinquishments and sales for arrears of land revenue in sections 17 and 18 of the report cannot be described as impartial.

In paragraph 96 there is no reference to the explanation given in the Scheme Report for the apparent excess of the increase in dry holdings over that in wet holdings, which is due to the system bitherto prevailing in these districts, by which a very large area of land which was under longstanding wet cultivation was shown as nominally dry in the revenue accounts.

Paragraph 97 of the report gives the impression that the proportion of the area of darkhasts to relinquishments is as 2:1. This is true only of the Kistna district and only so long as the figures for the Kaikalur taluk; the special difficullies of which are fully explained in the Scheme Report, are taken into consideratinn. The proportion in East Godavari is $11: 1$, in West Godavari $10: 1$, and in Kistna excluding Kaikalur 5:1.

It is impossible to follow the Committee in its conclusions that the Scheme Report figures, which show the extreme rarity of sales for arrears of land revenue, prove that 'the demand for land is everywhere so great that the ryot would generally manage somehow or other to pay up his dues'. This can only be described as a petilio principii and is not supported by a single fact.
12. Sale value of land.--In paragraph 100 the Committee has stated that the Settlement Officer 'has nade no attempt to trace the progress of the rise and fall (of land values) since 1925.' The suggestion conveyed by the language used is that the Settlement Officer has deliberately excluded from consideration the statistics of the jears subsequent to 1925 . The Committee can hardly have been ignorant of the fact that the Settlement Officer's report was submitted in August 1926.

It has next eniumerated the factors other than an anticipation of profits which might account for a rise in land value. The pressure of population on the soil might certainly send up the demand for land, but it would also send up equally the price of food-stuffs. The Committee admits that prices naturally vary with the rise of food-stuffs which is in itself an admission that the price fluctuates with the receipts from cultivation. It is scarcely fair to advance the accidontal circumstances detailed in paragraph 107 -sales in satisfaction of debts, family arrangements, charitable sales, special lands, double orop lands, seed bed lands, lands which have apecial value for a particular ryot, lands which contain a house and cattle-shed-since it is equally easy to place on the other side the accidental circumstances which depress prices below the norual. The sale in satisfaction of debt may show only a nominal consideration; the family arrangement is just as likely to result in a low price as a high price; and as against the special lands there are just as many lands which have nothing special about them at all and the Committee has not advanced a single fact in support of its bare assertion that these special lands 'form a numerous class in sales.' There are just as many circumstances in which a ryot has to sell for what he can get as there are in which a ryot can get a fancy price for his land. Even if it were admitted, however, that all the prices recorded in the thousands of registered sale-deeds examined by the Settlement staff
represented a price above the real value (whatever this may be) of land, the Conamittee's contention fails to affect the Settlement Officer's case. He hes carefully pointed out in his Scheme Report that the proposal to enhance the rates of aseosment does not reat on the fact that the price of lands has reached any particular figure in the years 1920 to 1925. The proposal rests on the proved rise in the price of food-grains and it is merely supported by a reference to sale and lease values. This reference moreover is not so mucb to the actual level of values at the present time as to a comparison between those values and the values prevailing at the time when the existing rates of assessment were introduced. The Committee will not presumably contend that the land hunger of the Indian ryot is a new phenomenos; that family arrangements and charitable sales are more numerous now than in the past and that special lands are more frequentiy brought to sale now than they were in 1900. The special factors which may poseibly vitiate the averuge of the later period must equally have vitiated the averages of the earlier period. The Settlement Officer's argument that the value of lands has increased faster than the price of food-stuffs is unaffected by the arguments advanced by the Committee in depreciation of the present prices realized by the asle of land.

The Committee has further stated that subsequent to 1925 there has been a marked fall in the value of lands corresponding to the fall in the price of paddy. The Committee has however advanced nothing more than an assertion of this fact and a reference to information furuished by ryots in course of its enquiry. It has not produced a single figure verifiable by a reference to documents nor has it indicated the extent to which prices have been affected.

With a view to ascertaining to what extent the values of lands have fallen and how far the ryots support the allegations advanced by the Committee the records relating to the acquisition of lands for the three new railways in these deltas, Gudivada to Bhimavaram, Nidadavole to Narsapar and Cocanada to Kotipalli have been scrutinized. These acquisitions took place in 1926, 1827 and 1928. The results are tabulated below showing -
(1) the land values as stated in the Scheme Report (based on sale-deeds for five years $19: 0-1925$ ), (2) the values claimed by ryots before the Land Acquisition Officer or before a civil court, and (3) the values eventually awarded.


The ryots' estimates are considerably higner than the Scheme Report figures as are also the sums awarded. Claims preferred before a Land Acquisition Oticer are naturally pitcled high and cannot of course be taken too serionsly; but they constifute oral evidence similar in kind to and entitled to just as much weight as the stateinente made to the Committee in their tours. In the one case the natural tendency would be to exaggerate and in the other to depreciate values. If the claims preferred before the Land Acquisition Officer are to be suspect as naturally biased, the oral complaints received by the Committee are open to exactly the same suspicion.
13. Lease palues.-There is a certain irony in the Committee's description of the Settlement Officer's arguments from recorded lease values as 'crade and bald'. To enumerate, as it has done in paragraph 111, the factore which might account for an unusually high rate of rent without adverting to the exactly similar and opposite factors which might lead to a low rate of rent is certainly not an impartial statement of the case. The Committee has insisted that no arguments should be drawn from these figures unless all the factors relating to each individual document have been carefully ascertained. It may again be pointed out that the Settlement Officer's argument is not one based on the actual rate of lease revealed in modern figures, so much as on a comparison between the figures of to-day and the figures of 25 years ago. It might have been possible with the expenditure of enuch time and money to obtain a history of each individual lease during the past five years, but for the Settlement Officer's purpose it would have been equally necessary to investigate the history of the leases from 1900 which was patently out of the question. The same argument however holds good here as in the case. of sale-deeds that the Settlement Officer's conclusions being based on a comparison' of the figures of two periods, the vitiating facturs cancel out.

In paragraph 115 of its report the Committee practically arcepts the contention underlying the Settlement Officer's argument from the rental figures. "If therefore," it says, "a comparison of the grain leases in the earlier period and, the later period showed that there was very little difference in these, it means that tie difference in the money values of leases in two periods is merely due to the increase in the price of grains." Later, in paragraph 116 , the Committee claims to have produced statements which are 'self-explanatory' and show 'that, as a rule, grain leases are not altered in the two periods under reference'. If theq Committee imagines that the Settlement Officer attempted at any time to show that there had beeu an increase in the rate of rents expressed in kind, it has failed to appreciate the argument contained in the Scheme Report which is precisely that accepted by it, that the value of leases expressed in terms of cash is several times greater now than it was 30 years ago. The fact that the rates in kind have remained constant is no argament against the resettlement proposals but is, as will be seen later, the strongest possible proof that the Committee's contention that cultivation expenses have increased by 300 per cent is not borne out by facts.

The Committee has not however contented itself with dextructive criticism on this point. It has made certain enquiries of its own the results of which are tabulated in Tables 1 to 5 of paragraphs 117 to 123 of the report. Apart from a few minor difficulties such as an entry in Table No. 2 of an avorage holding of 80 cents in the case of 23 'rentiers' who are described as owning no land at all and a persistent entry in all the five tables of an average holding of less than 5 acres against the class of ryots described as owning less than 10 but over 5 acres, its treatment of the figures calls for further notice. In view of its criticism of the Settlement Offer's arguments as 'crade and bald' it is interesting to ubserve that the Committee has drawn contradictory generalizations from each of the tive tables though the cases examined in each are not sufficiently numerous to justify any generalization at all.

Table No. (1), e.g., is alleged to prove that small holders 'are not very much' in the ran for lands to be rented' becanse 'landiords who would like to lease out, their lands do not have much trust in them'. Table No. (2) however shows that the 'lands rented by the landless people and ryots having only one acre and less, is very considerable and it is generally admitted that by renting the lands the Jandless people become more credit-worthy and are able to raise nore credit.' It
is also observed that the bigger ryote pay a higher rent per acre ' possibly because they are more anxious to rent some land at any cost and don't mind their rents being in arrears.' Table No. (3) shows that 'three big ryots rented as much land as 11 ryots who have very little or no land and that they are willing to pay very much higher rent than the latter.' Table No. (4) shows that "most of the rented land is taken up by the bigger ryots who pay very nuch lower rent than is demanded from the others. This is largely due to their greater bargaiaing capacity and stronger economic conditions." These points however are by the way. The Committee's contention is that in practically every one of theee cases the tenant has lost during the last four years. It is not quite clear what is meant by the ' loss during the last four years' particularly as in some cases it is given in terms of lands and in other cases in terms of rupees and on occasion in terma of one when probably the other was intended. Does it mean that by their cultivation in general these ryots have lost money in the sense that they have spent more than they have secured or does it mean that the ryots had to borrow these sums during the last four years for no other purpose than to defray their rentals?

Fuller particulars are given in Appendix $\mathbf{X}$ (i) and $\mathbf{X}$ (ii) regarling the condition of lessees. We are told that the ryots interrogated were able to distinguish between debts due to 'renting lands' and debts due to other cauger, between the property they had lost through ' renting lands' and the property they had lost through other causes. The keeping of accounts is not a strong point with the Indian ryot. It is difficult to see how he could produce the information furnished by the Committee and it is still more difficult to accept the conclusion that out of the 129 cases examined in histna there were 12 people who had had to sell property or cattle owing to their pernicious habit of 'renting land' while there was no single case in which any of these ryots had to sell property for other causes. If this information is to be accepted as reliable there are is cases out of 129 in which the ryot was indebted owing to his baving taken lands on lease. In 31 of these cases this was the only reason for indebtedness. There is no conceivable reason why a ryot should deliberately reduce himse!f to a state of destitution simply to enrich an idle landlord. The ryots of these deltas cannot be so blind to their interests as to te unable to refrain from spending tbeir labour and their resources on the cultivation of another man's lard with a net result to themselves which is not only nil but in the majority of cases a minus balance. The Committee's schedules show that the majority of the lessees examined had quite a reasonable holding of their own. They cannot therefore hare been driven to the disastrous expedient of leasing land by poverty or hunger. It is significant that, as we shall see when we examine the accounts submitted to the Committee by certain gentlenen of these districts, that the suceesful ones bave increased the area of lands they take on lease and that the unsuccessful odes have had no difficulty in securing tenants to tale the cultivation off their bands. It is extremely dificicult therefore to accept the Committee's views in this respect as sound; but even if they were, they afford no argument why the Government should withhold its claim on the handholder for the assessment. It is not be who is losing but the over-optimistic tenant. The landjord is receiving a rent of about ten bags or Res. 65 to an acre of wet land and paying a kist of about Rs. 8 and it is obvious that in his case the assessment represents nothing like balt or even-quarter of the net produce. There is therefure no reason, on the facts adduced by the Committee, why the enhanced rates of assessment proposed shouid not be accepted.

The Committee would doubtless reply' that no weight can be attached to documentary or oral evidence regarding rates of rental since the tenaut is, as a rule, unable to pay the rent agreed upon and the landlord bas to reduce or remit his dues. There must, of course, be cases where this occars but it is extraordinary that the practice of leasing should continue if the defaulting tenant is the rule and not the exception. It is only to be expected that in supplying information to the Committee's staff the ryots would represent things in as tlack a light as possible and it is significant of the importance to be attached to their vague and unsubstantiated complaints before such a sympathetic audience as the Committee, that ther had not the least reluctance during the rai'way acquisitions in adrancing
before the Land Acquisition Officer and on oath in civil courts claims regarding the value of their land which they supported by oral and documentary evidence regarding the rates of rental they received. The rentals claimed are tabulated below:-


It is evident that the ryote, whatever they may say when the question of enhancing the land revenue is in issue, do not in actual fact treat rental agreements as mere formalities and worthless as ovidence of agricultural values and profita. It is not ouly the ignorant ryot who has advanced such olaims. One of the members of the Committee itself, for all his professed distrust of recorded rentals, had no hesitation in filing a lease deed before the Land Acquisition Officer in support of what the latter has described as "an exorbitant claim" and has even carried the case to a civil court where he must be prepared to support this agreement with evidence given on oath.
14. The commulation prices.-In paragraph 129 the Committee has written as follows: "A perueal of the tables given in Appendix XV to the Soheme Report will ohow that the Special Settlemeut Officer has, for purposes of arriving at the commutation rate, selected 20 years which give the highest rates possible for the 30 years period." The years selected by the Settlement Officer were the last two decades of the 30 years immediately succeeding the year in which the previous commutation price was calculated, i.e., 1893-94. It would have been possible for the Settlement Officer writing in 1926 to calculate the commutation price from the actuals of the 20 years ending with the year 1925-26; but a moment's thought will show that this would bave resulted in an even higher commutation rate than that on which his proposals are based since the three yeqrs of relatively high prices between 1923-26 would have been substituted for the first three years of comparatively low prices in the period actually taken.

The commutation prices worked out from the figures of the 20 years ending 1928-29 will be found below. They are considerably higher than those adopted in the Scheme Report. The Coumittoe seemed to imagine that if the trend of prices subsequent to 1923 had been taken iuto consideration the commutation rate would have been lower. It has pointed out that in the last few years prices have tended to fall. If the price on which the settlement proposals were based had
been the actual market price prevailing at the time of writing, the criticisms advanced by the Committee would have been cogent. It is, however, precieely with a view to avoiding hardships: that might be caused by a fall in the price of paddy that revenue rates are calculated from an average price over a period of $\mathbf{2 0}$ yearn. This price is always very much lower than the prices ruling at the time of the settlement or resettlement and this margin is left in the ryot's favour precisely in order that Goveranent may guard agaiust their demand becoming excessive owing to a fall in prices.

In paragraphs 134 ct grq . the Committoe has discussed the theoretical reasons which bave led to the increase in prices. These paragraphe are interesting but not altogether relerant. It is inpossible to conjecture what will be the course of prices in the years to come and it would be impracticable to base any assessment on a guess of this sort. It is true that prices have fallen generally since 1922 and it may be that they will not again touch such a high figure. It may even be that prices will fall below the present level, though this is pure conjecture. The movement of prices is not uniformly downward. These facts would be telling argunients against a proposul to base the nssessment on the prices actually ruling today. It canuot, however, be too strongly emphasized that the resettloment proposals are based on the average of prizes ruling over a period of 20 years and that the tigure taken as the commutation price and on which the proposals under examination are based is considerably lower than the present price and is in fact lower than any actual price recorded since the year 1910.

The Committee has objected particularly to the Settlement Officer having included in his figures the prices ruling in the years immediately after the war on the ground that they were abnormal and that there has been a marked fall since 1922. It may be noted in passing that the figures of these years were taken into consideration in connection with the resettlemeats of Tanjore and Trichinopoly. In view, however, of the Committee's contention fresh commutation prices for paddy down to and including the figures for the year 1928-29 have been prepared. The detailed figures are given in Appendix I. The resulta for the deltas are tabulated below.

| Commutation price for 20 years euding 1923-29. | Percentage inorease over commatation price of lant rettlement. | Boheme Beport commatanion price. | Porcentape increace socording to Soheme Roport. |
| :---: | :---: | :---: | :---: |
| East and West Godavari. |  |  |  |
| 294 | 149 | 258 | 119 |
| Kistna. |  |  |  |
| 272 | 131 | 241 | 104 |
| Commutation price for 20 years ending 1928-2t omitting the thiee years 191y-20 to 1921-22. | $\cdots$ |  |  |
| East and West Godarari. |  |  |  |
| 269 | 128 | 258 | 114 |
|  |  |  |  |
| 253 | 114 | 241 | 104 |

It may be observed that the xise in prices disclosed even after the exclusion of the years of abnormal'conditions is greater than that taken by the Special Settlement Officer in formulating his proposals.

The Committee has also questioned the accuracy of the prices used in framing the commutation price. These prices are taken from the montbly returus submitted by Collectors to the Board of Revenue. The old commutation price was similarly calculated at the last settlement from the official prices and if, as the Committee has suggested, these are exaggerated, the common error will cancel out on comparison. In support of its contention the Committee bas in Appendix 11 (i) and (iii) contrasted the official figures with those furnished to it by certain private parties and public bodies. There is no means of checking the accuracy
of the non-official figures as presented by the Committee and in view of the obvious errors in the prices purporting to Lave been obtained from the Cocanada Chamber of Commerce for the years 1913, 1914, 1915 and 1916 in Appendix 11 (iii) and of the diserepancy between the Cocanada rates as quoted by the Committee in paragraph 150 of Volume I for the years 1921 and 1929 and as given in Appeudix 11 (iii) for the same years, it is at least open to doubt whether the Ggures have been accurately stated. A point which can be checked is the Committee's presentation of the Settlement Officer's figures which are given in Appondix XV of the Scheme Report in terms of prices per garce of 3,200 Madras measures. In Appendix 11, the Committee has calculated these in terms of prices per bag of 164 lb . The arithmetic approxinates to accuracy but the method of presentation involyes a serious misrepresentation of the official figures. In calculating the commutation price the Settlement Officer reduced the officially recorded figures by 15 per cent to allow for cartage and 'merchants' profits. The figures quoted as his by the Committee are the official figures unreduced by 15 per cent. To suggest, as is implicitly done in Appendix 11, that the figures given there are those on which the resettlement proposals are based is a grave error. It was no doubt an oversight, but it is unfortunate that an oversight shoald have occurred in such a way as to misrepresent the official position. The figures have been recalculated so as to show the price per bag actually taken by the Settlement Officer in calculating his commutation rate and are given below in comparison with the prices attributed to him by the Committee, and the prices returned by Mr. Gopalakrishnayya. A reference to Appendix 11 will- show that.it is only in three years that the Settlement Officer's figures are not exceeded by one or more of the fgures taken from private sources in Kistna, and six years in Godavari. The Committee's statement in paragraph 149 that it finds the Settlement Officer's figures are always very considerably in excess of those of Mr. Gopalakrishnayya is simply due to the fact that it has misrepresented the Settlement Oficer's figures.

If Mr. Gopalakrishnayya's figures are used instead of the official figures, the commutation price for the 20 years ending 1922-23 becomes for Kistna 230 instead of 241 -an increase of 95 per cent over the old commutation price as against the 104 per cent increase revealed by the official figures. It is clear, therefore, that there still remains a good case for an increase of $18 \frac{3}{4}$ per cent in assessment in view of the very much greater increase in prices.

Pricis of Paddy per bac or 164 lb .


| Yent. |  |  |  | Mr. Holdowerth'a priece es repromentel by the Cominittor. |  | The priou ecteally ued iy Min Hodiemorth. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Anoral averaga | Eyoter pollings monthe. | Ammel | Ryoter malime moothe |
| (1) |  |  |  | (2) | (8) | (c) | (0) |
| 1903-04 | - |  | $\cdots$ | $\operatorname{ma.}_{8} A_{6} \text { P. }$ | $\begin{array}{ccc} \text { Rs. } & \text { A. } \\ 8 & 5 & 0 \end{array}$ | $\begin{aligned} & \text { In } 4 . \\ & 8 \\ & 8 \end{aligned}$ | $\mathrm{man}_{8} 14$ |
| 1904-05 | . | 0 | . | 3140 | 8140 | 849 | 8611 |
| 1905-06 | - |  | . | 4110 | 4120 | 8158 | 415 |
| 1906-07 | . | . | . | 570 | 590 | 410 | 418 \% |
| 1907-08 | . | . | . | 5130 | 515 . | 41411 | 518 |
| 1908-09 | $\bullet$ | - | $\cdots$ | 650 | 640 | 580 | 58 |
| 1909-10 | . | - | - | 50 | 4110 | 456 | 4 |
| 1910-11 | - | . | $\bullet$ | 4180 | 480 | 4.6 | 8180 |
| 1911-12 | - | - | - | 5100 | 5120 | 4185 | 681 |
| 1912-18 | $\ldots$ | - | .. | 670 | 660 | 575 | 580 |
| 1912-14 | -. | . | . | 660 | 650 | 5610 | 571 |
| 1914-15 | $\cdots$ | $\ldots$ | - | 600 | 5140 | 580 | 508 |
| 1915-16 | $\bullet$ | * | - | 660 | 660 | 588 | 588 |
| 1916-17 | - | - | - | 630 | 680 | 588 | 358 |
| 1917-18 | .. | - | - | 640 | 650 | 5810 | 571 |
| 1918-19 | - | - | - | 7100 | 7150 | 6117 | 70 |
| 1919-20 | -. | - | $\cdots$ | 910 | 1010 | 888 | 815 |
| 1920-21 | . | $\bullet$ | .. | 10180 | 1060 | 974 | 918 |
| 1921-22 |  |  | .. | 980 | 950 | 859 | 817 |
| 1922-23 | . | - | . | 820 | 7120 | 712 | 618 |

15. Cultivation expenses.-The only sound reply to a proposal to enhance assessment slightly on the ground of a mueh greater increase in prices is to show that the costs of cultivation have increased so much more than the price of foodgrains that the additional incone produced by the rise in prices is absorbed by the excess in the cultivation expenses. It is an elementary fact but one that is worth pointing out to avoid misunderstanding that if, on account of a 100 per cent rise in prices, Government euhanced its assessment rates by the full 100 per cent, there would still be twice as much money left fur cultivation expenses as there was at the previous settlement and a balance twice as large for the cultivator. In other words until the rise in cultivation expenses exceeds the rise in prices, the costs of cultivation cannot encroach apon the other shares of the produce. The Committee has therefore set itself to prove that cultivation expenses have increased abnormally and out of all proportion to other prices.

The question of cultivation expenses is one of considerable difficulty. It has been the practice in recent resettlements not to attempt the recalculation of these expenses in any detail for the reason that the enhancement proposed was far below the rise in prices and that it was unnecessary to embark on so debatable a subject as the detailed cost of cultivation since it might be taken to vary similarly with the prices. - For this reason the Settlement Officer gave no elaborate calculations in the Scheme Report. He recommended an enhancement of rater by only $18 \frac{3}{4}$ per cent as against a rise in prices of over 100 per cent. He however came to the conclusion that the costs of cultivation had risen in much the same proportion as grain prices. The Committee has complained that a Settlenent Officer's scale of expenses corresponds to noihing actoal and that the assumption that expenses fall with the fertility of the land is not founded on fact. It must be realized that any estimate of caltivation expenses is an abstraction. The settlement scale does not profess to be the ideal or the maximum. It is an approximation to the expenditure that will ordinarily be incurred in securing the standard outturn and making allowance for the facts that in addition to his crop the ryot gets the straw, that he uses his bullocks and carts for other than agricoltural purposes and that his cattle produce some of the manare required for the holding and some return in the way of dairy products. The situation is well
described in the memorandum submitted by the Board of Revenue in reply to the criticisms of Mr. Dutt in 1900, the relevant portion from which is extracted below :-
"It must be perfectly obvious to all that cultiration expenses differ not merely from soil to soil, but from man to man, crop to crop and from year to year; in one field a man will spend 10 , 20 , or more rupees on manureaccording to crop, etc.-while his neighbour may spend little or nothing: one man cultivates his land with his own hand. drives a plough cut from a tree in his own field with a team he has bred on the land, und weeds and harvests with the labour of his own family, whilmhis neighbour, perhaps a Brahman, a merchant, or other non-cultivator, hires labour and buys material at every step. But since it is necessary to allow for the cost of raising a crop, the Settlement Officers prepare tables based upon many years of enquiry and experience and apply them to the soils in rough proportion to their productiveness, knowing full well that the less productive lands do, as a matter of fact, generally get far less spent upon them than the more productive ; it is not that expenses on the poorer lands would not be as great or greater if they were highly cultivated, or that they would not cost more than good lands if they had to be raised to a given productiveness or to yield a given produce, but that in fact they are not so highly cultivated and are not so productive ; the best lands get the most attention, the most manure, the most labour; the ryot prefers to spend less upon the less productive and more precarious lands. Consequently the gradation, though only a geueralized approximation, has a real foundation in fact."

The Economic Enquiry Committee has reported that the estimate of the cost of cultivation given by the settlement investigators is too low since they have omitted provision for certain items of cultivation and made inadequate provision for others. What constitute the esseutial items of cultivation is a moot point and the Committee itself admits to duabts in Appendix 16 (i). The settlement investigators were not restricted to any pre-conceived table of cultivation items. What they reported was the information they gathered in the village and if there are omissions or underestimates they are the omissions and underestimates of their informants, the ryots of the village examined. The Committee claims to have made more exhaustive enquiry into this question and has produced a mass of statistics which are the result of euquiries in 60 villages.

In Appendix 28 (i) it has constructed scales of cultivation expenses for holdings of six different sizes and for three grades of cultivation termed the ' maximun,' 'medium,' and 'minimun,' making is scales in all. This Appendix 28 (i) is a summary of the various appendices, 28 (iii) to (xiii), in which the cost of each of the uperations of cultivation is given for each of the 18 scales. It may be noticed however that in the course of posting the figares of 'maximun' labour costs fron Appendix 28 (xi) to Appendix 28 (i) an anaccountable addition of Rs. $2-4-0$ has bean nuade in the case of holdings of 5 acres and 10 acres. Unfortunately the Committee has not explained how from the varying figures furnished by its investigators it has arrived at the results propounded with such precision and detail for holdings of six different sizes and for cultivation of three grades of intensity. This omission makes the examination of the figures a task of extreme difficulty, which is aggravated by an unusual number of arithmetical errors and the apparent absence of any rational scheme of calculation from holding to holding. It would be tedious to notice in detail all the points where the figares presented require further explanation. Attention is invited to a few examples which are typical of the appendices as a whole and which seriously detract from their value. Appendix 28 (xi) tabulates the costs of labour-both hired and permanent-ander 'maximum' sultivation. Under the item "carting and spreading manure to seed beds," it is reported that for a holding of 3 or 7 acres 3 men are required; for a holding of 12 acres 4 men; for a holding of 17 acres 19 men are required, yet for a holding of 22 acres only 4 men and for a holding of 27 acres only 5 men are required. For the weeding of an area of 7 acres the Committee has estimated that 14 men and 28 women costing Rs. 15-12-0 are
necessary, yet for the same operation on 12 acres it has provided for only 8 men, 8 women and 8 private servants at a cost of Rs. 6. In Appeudix 28 (xii) the 'medium'seale of cultivation expenses is set out in similar detail, but if "Bodi repairs" require only 10 men for 7 aures (in three fields) and 12 men for 12 acres (in four fields), the Committee should have explained why it thought it necessary to allow 34 men for 17 acres (in four fields) and only 33 men for 22 acres (also in four fields). It would moreover be interesting to know why, although for thrashing and carting on 22 acres 62 hired men costing Rupees 46-8-0 are sufficient under the ' maximum' scale, under the so called 'medium' scale the Committee has thought it necessary to provide 64 hired men for Rs. 48. Incidentally it may be noticed that it only requires 20 men or less than a third of the above if the thrashing on 22 acres is of the ' minimum' quality-a fact which suggests that the maximum and medium allowance are unduly liberal. In Appendix 28 (xiii) which is supposed to represent the ' minimum' cost of labour, the Conmittee has omitted to enter the number of workers required for holdings of 3 and 7 acres. It has entered no particulara regarding the sex of the workers up to 12 acres and has given details only in respect of holdings of 17, 22 and 27 acres. In none of these cases has the Committee provided for the employment of women although women are freely employed in the 'maximum' and "medium' scales. There are several discrepancies. The most surprising figures in this schedule are those for "thrashing, carting and hay stack" which amount to Rs. 35 for 17 acres and only Rs. 12-8-0. for 22 acres. The Committee has been so thorough that it has included the 'mamuls' paid to the Public Works Department in the cost of cultivation but has not explained why it has assumed that the ryot who adopts ' maximum' cultivation pays less in the way of ' mamuls' than the ryot who adopts the 'medium' cultivation: so much so that whereas the ryot cultivating 27 acres under ' maximum' cultivation pays only Rs. 12 and the ryot with 'medium' cultivation pays only Rs. 15, the unfortunate ryot with 'minimum' cultivation has to pay Rs. 20. It would be interesting to know why Palerus for 22 acres get Rs. 232 when their masters practise the 'maximum' or 'minimum' scales of cultivation and only Re. 262 when they practise 'medium' cultivation. Further the Committee has failed to explain why it has taken Re. 282 worth of Paleru service on 27 acres to be equivalent to the labour of 324 men in the 'maximum' schedule and to the labour of only 247 men under the 'minimum? schedule whereas the cheaper Palerus of the 'medium' schedule are supposed to be equivalent to 346 labourers although they get Rs. 20 less in the way of wages than their 'maximun' and 'minimum' fellows. These discrepancies justify grave doubts as to the soundness of the figures presented and suggest that the Committee has attempted greater elaboration than the subject admits of.

In Appendix 28 (iii) the Committee has presented its eatimate of the cost of agricultural implements per acre on holdings of various sizes. There is again a specious mass of detail but it is difficult to understand why a cart worth Rs. 80 will do for 7 acres whereas a cart worth Rs. 100 is required for 12 acres; and why a cart worth Rs. 120 is sufficient for 22 acres while two carts at Rs. 100 each are required for 27 acres. The Committee has allowed no longer life for a cart worth Rs. 120 than for a cart worth Rs. 80. Most of the items are open to the same sort of question and the figures cannot be accepted as reliable. It cannot be even an approximation to actual facts that the cost of agricultural implements for a holding of 7 acres should average out to Rs. 3-4-10 per acre while for a holding of 17 acres it averages out to only Rs. 2-7-0.

Appendix 28 (iv) deals with manure. For a small holding of 1 acre and less the calculation is at 5 cart-loads per acre per annum and for the other holdings it is at 10 cart-loads per acre. The Committee has made an allowance for the manure produced by the ryot's cattle and assumed that the remainder is purchased. For some onexplained reason it has charged at 12 annas a cart-load for holdings up to 10 acres and for larger holdings at Re. 1 per cart-load. The point open to mure serious criticism, however, is that the same allowance has been made for manure under the 'maximum' 'medium,' and 'minimum' scales of cultivation, whereas in actual practice it is perhaps in the application of manure more
than in any other reapect that cultivation differs in quality. However that may be, the allowance for manure is excessive. No account seems to have been taken of the manurial properties of the silt brought down the canals and deposited on the fields. In this connection the figures given by the Committee in paragraph 229 of the report regarding the total quantity of cattle manure arailable may be considered. The Committee bas assumed that one head of cattle prodnces only $2,000 \mathrm{lb}$. of dung. This is an underestimate. It is an accepted principle that the dung produced by an animal is equal in weight when dried to about half the weight of fodder consumed. At the rate assumed by the Committee of $15,000 \mathrm{lb}$. of fodder per animal per annum, each bead of cattie would produce $7,500 \mathrm{lb}$. of manure or two and a half times the Committee's estimate. It has been seen, however, that a more reasonable figure for fodder would be $5,600 \mathrm{lb}$. which would yield $2,800 \mathrm{lb}$. of dried manure as against the 2,000 allowed by the Committee. It is further unsound to assume, as the Committee does, that all the dung produced during the day is wasted. This is the dung that is used for fuel. The other assumptions made, viz., that half the cattle are absent for half the year and that half the manure produced at night is used for fuel, are certainly exaggerated : but accepting them for purposes of argument it will be found that the net available yisld of madure per animal per annum would be 700 lb . instead of 500 and the total amount for the Kistna and West Godavari districts would be 420 million pounds. It has to be remembered that the manure produced by other animale such as sheep, goats and pigs as well as the green manure grown by the ryot on his wet land without any revenue charge and which is the best manure for swamp paddy has not been taken into account and that the deductions made from the amount of cattle manure available are excessive. The cattle dung burnt for example is usually that collected from the half of the druppings which the Committee assumes to be totally lost.

Appendices 28 (v), (vi) and (vii) give the figures ior cattle depreciation in the maximum, medium apd minimum schedules but no longer life is allowed in the case of more expensive cattle than is allowed for inferior cattle. The Committee has included an amount for insurance against epidemics and has assumed that every ryot purchases every bead of cattle he uses and no allowance has been made for the use of cattle born from the ryot's existing stock.

Appendices 28 (viii), (ix) and (x) give particulars regarding maintenance of cattle. A serious omission, however, is that there is no set-off for the straw produced on the ryot's own land. The Committee is emphatically of opinion that the settlement practice of setting off the cost of maintaining cattle against the value of the straw is unjastified, but figures have been given in paragraph 10 above which prove that the settlement procedure is correct and fair. Moreover it must not be forgotten that in addition to the straw the ryots raise a fodder crop on extensive areas of wet lands after the paddy has been reaped and without any revenue charge. Whether or no the straw and other fodder raised on a holding is insufficient to maintain the cattle required for the working of the holding, it is certain that such fodder will go a considerable way towards feeding such eattle and to omit it altogether from the calculation of expenses seriously vitiates the results. As a matter of practice the ordinary ryot buys little, if any, food for his cattle. A further point for criticism is that no deduotion from the costs of depreciation and maintenance is allowed on account of the receipts accruing from the hiring of cattle and carts for transport and work on other ryots' land. The cattle are not always required for working the holding and are frequently loaned out to others during the slack season. Even taking the figures as they stand, it is extremely difficult to accept them at their face value. It is illingical that the maintenance of cattle should average as much as Rs . 13-6-3 per acre under 'maximum' in the case of a holding of 7 acres and only Rs. 8-14-7 per acre in the case of a holding of 17 acres. It may be replied that the larger the holding the more economical it is to work per acre particularly in respect of cattle charges but in that case it becomes difficult to explain why the maintenance of cattle for 22 aeres should cost Rs. 10-10-0 an aure while for 17 acres it costs only Rs. 8-14-7 per acre. It is difficult to understand also why
under 'maxinum' cultivation the average cost of cattle maintenance is approximately the same for holdings of 3 acres and 7 acres whereas under the 'medium' cultivation the cost per acre for holdings of 3 acres is only Rs. 8-1-4 and for boldings of 7 acres is Rs. 10-14-10.

Such however are the detailed bases on which the Committee has built Appendix 28 (i). To this it has added a further elaboration, the details of which are found in Appendix 28 (ii), which purports to show the value of the work per acre contributed (a) by the ryot and (b) by dependent. A perasal of this appendix raises several problems. It is not obvious, for example, why on 5 acres of land the ryot's work is twice the value of the dependent's, whereas on larger holdings the dependent's contribution is more valuable than the ryot's. Nor is it clear why a dependent can do work of more value on a holding of 10 acres than on a holding of 5 . ${ }_{\star}+$

The final costs of cultivation as they appear in A ppendix 29 (i) show that under the maximum scale the most expensive holding to farm is that of 5 acres and less. This is as might be expected : but it makes an explanation all the more necessary why under the medium and mininum scales this particular size of holding is the cheapest to farm. This explanation the Committee has not given.

The points of detail criticized above are not exhaustive. Individually some of them are perbaps of no great importance but the cumulative effect is to cast grave doults on the care and impartiality with which the elaborate schedules have been framed. Such a mass of statistics as that which the Committee has presented must create, and was no doubt designed to create, an impression that the results arrived at were the product of a most careful and exhaustive enquiry. The points brought out above however demonstrate that such an impression would be illusory.

Taking the figures however for what they are worth, it is found that the Committee has estimated the maximum cost of cultivation per acre at a figure somewhere between Rs. 64 (which as we have seen includes an unexplained Rs. 2) and Ks. 56 , whereas the medium cost varies between Rs. 55 and Rs. 47 and the minimum between Rs. 48 and Rs. 41. Throughout these appendices every detail that could possibly be included in the cost of cultivation has been inserted, from repair of the cattle-shed to depreciation of the ladders. No allowance has been made for the fodder produced on the ryot's own holding and the cost of one or more "Paleras" has been included in almost every case. The Paleru however is more than an agricultural labourer; he is a whole-time servant of the ryot's family. He cannot be employed on operations directly connected with agriculture for the whole year. It is significant moreover that the cost of the Paleru for the whole year is included in the expenditure on a single crop, whereas the Paleru's services must certainly be debited partly against the second-crop cultivation. The allowances for Palerus are very liberal and even a ryot with 3 acres to farm is assumed to spend Rs. 18 on a servant. Even if a charge under this head is accepted, the cost to be debited against single-crop cultivation must be considerably reduced. It theretore the charges under the head "Paleru" are reduced by a third, which is really too little, and the value of straw is set off against a part of the cost of maintaining cattle, and the receipts obtained froun hiring out cattle and carts are taken into consideration, it would be found that the Settlement Officer's maximum estimate of Rs. 35 per acre on settlement principles is not very different from the figure advanced by the Committee.

On comparing the Committee's estimates with its data, it will be observed that the figures given by the Committee's investigators are not as high as those advanced as the maximum cost of cultivation. The figures furnished by the six ryots referred to in Appendix 26 (ii) will not bear examination as representative of the general run of things. The depreciation in cattle varies from Rs. 10 to Rs. 30 per head. The cost of maintenance varies from Rs. 53-12-0 to Rs. 8-14-0; the cost of Palerus varies from Rs. 46 to Rs. 93 per head and the total cost of labour from Ks. 31 to Rs. 42 per acre. These figures are considerably bigher than those accepted by the Committee. It is not a matter for surprise therefore that four of the six ryots should show a minus amount as their income. It is,
however, a pity that in striking the agricaltural balance the income from dairy and other services shown in column (9) has been entirely overlooked.

The Committee has claimed considerable weight for the 'Khata' accounts, which were submitted for its perusal. It is a curious fact that the accounte submitted should be so few. The first point to be notioed is that the figures in Appendix 12, which give the details of wages taken from the Khatas, do not bear out the rates adopted in Appendix 28. According to Appendix 28 the wage for women for transplantation is 8 annas. The khatas show 6 annas, 5 annas, 4 annas 6 pies and 4 annas. For weeding the charge in 1928 was 6 annas for men and 4 annas for women in Bhimadole (the only entry for this year), whereas in Appendix 28 the charge is 6 annas apparently for man and woman alike. Similarly for reaping the 1928 figures for a man are 8 annas, 6 annas, 5 annas 6 pies and 5 annas and for a woman 5 annas 6 pies and 4 annas; yet in Appendix 28 a flat rate of 8 annas for a man and woman alike is adopted.

In Volume 2 of the report, Appendix 16 (i) to (vi), the Committee has edited extracts from the accounts of six gentlemen and has claimed that the figures contained in these accounts support their calculations. Some examination of them is therefore essential. It may be prefaced with the remark that in every case the Committee has had to adjust the figures. In its own phrase it has found it necessary to use its 'local knowledge and the usual discretion' and confesses that with all this "it remains doubtful whether some more items of expenditure upon labour could not have been added to or subtracted from those which are taken into consideration."

In the case of Mr. Veerasalingam of Idappakallu-Appendix 16 (i)-the figures are complicated by the omission of the value of grain payments and of any allowance for the depreciation of cattle and implements. They are further complicated by the fact that this gentleman was conducting experiments in betel cultivation. His figures as modified in accordance with the Committee's ' local knowledge and usaal discretion' show that in 1925 Mr. Veerasalingam spent Re. 460 on hired labour and Palerus for farming 10 acres, whereas in 1928 he spent only Re. 398 on the same item for farming 14 acres. The Committee has explained the low expenditure for 1928 by saying that he 'had somehow to get on with insufficient hands.' The remark appears to beg the question. According to the figures as edited by the Committee, Mr. Veerasalingam, as a result of oultivating 6 acres of wet lands of his own and 5 acres of wet lands taken on lease, is left with Rs. 18-15-7 per acre, from which he has to pay the kist and the rent on the leased lands before he thinks of his own maintenance. The kist is probably about Rs. 7 an acre. The rent is unlikely to be less than 10 bags per acre which would be valued by the Committee at hs. 65 ; so that out of a net receipt of Rs. 208-11-5 this gentleman has to pay an aseessment of Rs. 42 and a sent of Rs. 825 or Rs. 367 altogether. It has not been explained how Mr. Veerasalingam has managed to balauce his accounts. According to the Comuittee his entries are extremely complete and he could not have omitted so important and apparently disastrous an item as the payment of his xent. It would have been interesting to know how this gentleman has managed to oxist for the past five years which is the period for which the Committee has examined bis accounts. In the circumstances it is all the more to his credit that he was able to purchase an acre of dry land for Rs. 800 in the year 1926; but one cennot help wondering why he has been so blind to the obvious lesson of his accounts as to increase the area of lands taken on lease from 2 acres in 1925 to 5 acres in the years 19261928. The Committee does not suggest that he is indebted.

The account of Mr. Ramayya of Jujuraram-Appendix 16 (ii)-is interesting reading. The Committee has exercised its 'usual discretion' in dealing with his figures, Though his accounts reveal an average expenditure of only Rs. 47-2-2 per acre, the Cummittee has inoreased it to Re. 58-2-2 by including the cost of depreciation of carts and the cost of the manure supplied from his own agricultural stock. This gentleman is something of a stock breeder. Though the Committee has justified the inclusion of the cost of maintaining other than agricultaral cattle on the score that their manure is aseful for the land it is illogical
enough to add to the cultivation expenser Rs. 10 an acre for the same manure on the ground that if the ryot had not got more cattle than usual he would have had to purchase this elsewhere. Since $1 y 21$ this gentleman has purchased 7 acres of wet land and $3 \cdot 6 \pm$ acres of dry tor a sum of Re. 1,27,000. (There is obviously something wrong here but the figures are as given by the Committee.) He borrowed most of this money at 12 per eent interest. At the time of writing the report bis debt was only Rs. 7,000 . The Committee has explained the apparent prosperity of this ryot as being an exceptional case due to his unusual competenco and luck.

The accounts of Y. Ramayya of Bhimadole-Appendix 16 (iii)-are instructive. He kept his accounts in rather a curious manuer and with a view to discovering the mnst economical way of utilizing labour. For this parpose he took credit as against the sums paid to his Palerus for the value of work turned out by them in agricultural operations on the field. The figures show that in the three years 1926 to 1929 he spent Rs. 2,824, while for the work done by the Paleras he has credited ouly Rs. 326. This suggests that it instead of using Palerus he had been content to hire labour according to requirements his expenditure on labour for the three years would have been Rs. 1,237 instead of the figure reported by the Committee, viz., Rs. 3,735, which would have been 20 per cent instead of 59 per cent of his total income.

IThe accounts of Mr. M. S. Ramayya of Kottapeta-Appendix 16 (iv)-are straightforward but present one amazing feature. He has two fields, one $3 \frac{1}{9}$ acres and the other 2 acres, both in the sume village. For each field he keepe separate accounts which show that his costs of labour per acre are Rs. 23-15-10. 'This is a nuch lower figure than the Committee claims in Appendix 28 (i) even for 'minimum' cultivation. The amazing feature, however, is that according to his accounts it takes more people to pull seedlings, transplant them and reap the crop for the field of 2 acres than for the field of $3 \frac{1}{2}$ acres. The Committee has noticed that there is something curious and advanced the reasonable proposition that the number of workers needed per acre diminishes as the size of the field increases. It has not however adverted to the more surprising fact that the number of workers on the 2 -acre field is not only greater per acre than those on the $3 \frac{1}{2}$-acre field, but is greater absolutely-a feature which renders the accuracy of these account somewhat doubtful.

The accounts of Mr. Venkata Razu of Lankalakodera village are discussed in Appendix 16 (v). Unfortunately the Committee has given the details of his expenditure only up to the year 1916, whereas the dedactions they have drawn relate to the figures of $1919-1921$. It would have been interesting to know what accounted for the sudden rise in the cost of cultivation from Rs. 305 in 1918 to Rs. 577 in 1919 and Rs. 526 in 1920. The rise in his costs of cultivation between 1918 and 1919 is about 90 per cent-a rise greater than eren the Committee would care to claim. There must have been some extraneous influence at work which has not been explained and which neutralizes the deduction drawn from the Ggures, viz., that the receipts do not increase in direct proportion to the rise in grain prices between 1917 and 1920. It is perhaps significant that from 1921 Mr. Venkata Razu has found it more profitable to lease out his land to others bat it is difficult to reconcile this fact with the description of this gentleman as boing an 'ideally efficient and hardworking ryot.'

Mr. K. Somayya of Tadikalaipudi village whose accounts are given in Appendix 16 (vi) is reported to have derived a net amount of Rs. 32-6-5 from 10 acres of wet and 41 acres of dry lands. 'This gentleman is really a trader and apparently takes to farming only as a bobby. He has however decided that it is better for him to lease his lands.

A consideration of these khata accounts shows that there is little, if any, reliable evidence to support the cultivation expenses propounded in Appendix 28

A contrary method has been adopted in Appendices 27 (i) to ( $v$ ) in which an attempt was made to estimate in 1928 the cost of cultivation in 1900. It is difficult to see what evidence can have been secured. People are hazy about their
costs of cultivation at the present day and they must be entirely unreliable regarding the costs of cultivation 28 years ago. It would be easy to show the numerons discrepancies and illogicalitios apparent in the schedules constituting Appendix 27. Attention is invited to a few examples. In Appendix 27 (v) no Paleru is allowed for an area of less than 17 acres in 1900, whereas it is assumed that in these degenerate days the services of a Paleru are required for the cultivation of 3 acres -vide Appendix 28 (xi). It is a serious oversight that the Committee should estimate in Appendix 27 (iv) the cost of pasture for the cattle required to farm 3 acres, 7 acros, 12 acres and 17 acros as being alike, Rs. 2-8-0 in the year 1900 whereas cattle for the same areas cost for pasture Rs. 10, Rs. 15, Rs. 25 and Rs. 35 in 1928 according to Appendix 28 (viii). No doubt the cost of feeding cattle has risen, but it is doubtful if any one could support an estimate which claims that it has gone up from Rs. 2-8-0 to Re. 35 or i,400 per cent. It is difficult in these circumstances to attach mach value to the figares for 1900.

By the methods which have been examined above the Comuittee elaims to have eatallished that the costs of cultivation have advanced by 300 per cent. It has been shown that in presenting the detailed material in support of its estimates the Comnittee bas committed many serious blunders. This criticism does not perhaps finally dispose of the Coumittee's case though it strips it of the trappings of meticulous care in which it is decked. It mas be argued that even if the details are artificial, the conclusions may conceivably be sound and might have been reached directly by an inspired guess instead of being calculated by the sumation of individually ascertained details. The fact however that the calculations can be shown to be incorrect casts serious doubts on the reliability of the conclusions also. 'There are, moreover, further considerations that effectually dispose of the Committee's general position that cultivation expenses have increased by 300 por cent.

In the first place why should these expenses have increased so much faster than the price of food grains? Prima facie there should be a more or less similar increase in prices all round and the burden of proving that in any particular sphere prices have risen thrice as high as prices in general lies heavily on those who assert it. With an increasing population and a pancity of openings, wages caunot rise excessively. Much of the wages is paid in kind and this will vary exactly with the price of grain. There is no reason why carts, sacks, spades and cattle should cost three times what they cost 30 years ago, nor why cattle should cost more to feed than is necessitated by the rise in grain prices.

Moreover there has been a fall in the price of paddy during the last five years and with this fall the costs of cultivation like the general costs of living generally must aiso have fallen.

The facts that tell most seriously against the Committee's contention are those relating to rentals. The non-cultivating landholder who leases his land hears no expenses of cultivation other than manuring and sometimes the levelling of his fields. These items account for about 14 per cent of the Committee's cultivation expenses on the 'medium scale' which means that the cultivating tenant bears 86 per cent of the cultivation expenses. If these expenses had during the last thirty years actually risen by 300 per cent as against a rise in prices of only 100 per cent, it must inevitably have resulted in a reduction of the landlord's receipts whether taken in money or in grain at a fixed figure or at a share of the crop. Yet we have it on the authority of the Committee itself that 'grain leases are not altered in the two periods under reference' (paragraph 116 of the report) and comparative statements have been prepured in Appendix No. 9 which are said to demonstrate this fact. Au alleged increase in the practice of sharing as opposed to fixed leases is no proot-as the Committee seems to think-that rents are falling. It proves nothing regarding the rates of rent: whereas there can be no guestion that if cultivation costs had really risen by 300 per cent as against a rise in prices of only 100 per cent there must necessarily have been a revision of the shares taken respeotively by landlord and tenant under the aharing system, as no tenant could possibly continue to meet a 300 per cent rise in cultivation expenses trom the same fraction of the yield as had proved sufficient before the rise. There
is, however, nothing to suggest that there has been any such revision of the shares or that the rates of grain rentals have fallen appreciably.
16. The net produce end its value. The Committee next proceeds to examine the value of the net produce left to the ryot.

In Appendices 30, 31 and 32 with their numerous sub-heads the Committoe has attempted to show the value per acre of the net produce left to the ryot assuming that his land yields the standard outturn and that the coltivation expenses are according to the estimates in Appendix 28. It is assumed that the same expenditure is incurred on bad land as on good land-an aesumption which is entirely unjustified in fact and a mode of operations so unbusinesslike that there is no cause for surprise if it results in loss. In A ppendix 30 (a) series the standard outturn is valued at the commutation price of Rs. 258 per garce or Ras. 5-9-0 per bag and the cultivation showe a protit only on the top two tarams under 'maximum,' the top three under ' medium 'and the top four under 'minimum ' eultivation, if no allowance is made for the labour of the owner and dependent. This comparison is however fallacious not only for the reason that it assumes that the expenditure is not adjusted to the quality of the land, but aleo becauee a comparison is made between the yield valued at the commutation price which is considerably below the prevailing prices on which the cultivation expenses are calculated.

Appendices 30 ( $b$ ) and (c) series tabulate the results if the arbitrary allowances which the Committee has made for the owner's and dependents' labour, are subtracted from the cultivation expenses. Each of these series has two further subdivisions (ii) a simple piece of multiplication to show the aggregate result on holdings of different sizes and (iii) to show what must be added to the outturn to leave a surplus which shall be double the assessment. The Committee has not explained the purpose of these sub-schedules, bat the above seems to be its intention.

For some unexplained reasons, schedules of this type have been omitted from the parallel appendices 31 and 32. Appendix 32 is designed to show the results if the outturn is valued at Rs. 10 per bug. The result is a very handsome profit for the ryot, but it is noteworthy that the Committee has refrained from adding schedules of the types numbered as (ii) and (iii) in Appendix 30.

Appendix 31 should be the instructive schedule because in it the outturn is alleged to ve valued at Rs. 6-8-0 a bag which the Committee takes to be the present price of $\boldsymbol{p}^{\text {add }} \mathbf{y}$. This schedule should therefore represent a comparison between outturn and cultivation expenses based on contemporaneous standards. Unfortunately the Ccmmittee's arithmetic contains so serious an error that the echedules as prepared understate by more than 20 per cent the value of the produce. The mistake committed by the Committee is not one of arpreciation of evidence or misunderstanding of facts but a simple and elementary arithmetical error which is inexplicable. Instead of multiplying the number of bags in the standard outturn by Rs. $\mathrm{f}-8-0$ it has multiphed by about Rs. 5 . The actual value of the produce at Rs. 6-8-0 a bag is not that shown by the Committee in its schedule but very nearly a quarter as much again. I he Committee's figures and the correct figures are given below :-


Appendices 31 (i; , (ii) and (iii) bave keen re-prepared correctly an an appendix to this report. 'I he wajority of lands in these deltas are assersed at Re. 8. With the 'minimum scale' ci culivation which the Cin.mittee admits to be the
most common of its scales and which is also the nearest approximation of its estimates to facts, the profits, even assuming that the ryot does no work himself and gets no work from his family, are all more than double the assessment and if the ryots' assistance is allowed for, they are three to four times the assessinent. These results are achieved by adopting the standard outturns which it has been reen are less than the ryots claim to realize and by further reducing these low outturns by one-tenth, the allowance made in favour of the ryots for vicissitudes of season, and by deducting a scale of cultivation expenses which is without doubt excessive.

In paragraph 76 the Committee has stated that a tendency is noticeable on the part of owner-cultivators to lease their land to members of the latouring classes. The Committee has argued that this is due to inability on the part of the owner-cultivator to make cultivation pay. This assumption is not justified. It is equally possible and more in keeping with the other observed facts that the growth of sub-letting in ryotwari tracts is an indication that the profits of cultivation are now such as to support the owner-cultivator without his being put to the necersity of conducting his own cultivation. The increase in the money income of the ryot which is inevitable under the present resettlement system by which the Government share progressively decreases in real value is likely to foster the developnent of a non-cultivating-owner class.

Certain items of evidence which will throw light on the actual facts of cultivation have been collected below for comparison with the theoretical views of the Committer.

In the course of the enquiry conducted by the Banking Enquiry Committee in three villages of Ramachandrapur taluk of the East Godavari district, information has been collected concerning the yield and cultivation expenses of twenty ryote with holdings of different sizes. The higbest cultivation expenses claimed are Rs. $27-14-0$ an acre which incidentally resulted in the highest reported yield of Rs. 87-8-0 an acre. The lowest cultivation expense claimed was Rs. 18-1-3 and the yield was valued at Rs. 71-6-10. The lowest reported yield was valued at Rs. 88-15-5 on which an expenditure of Rs. 2:-7-4 had been incurred. The lowest net profit given comes to Rs. 46-8-0 per acre. The assebsment rates were Rs. 7 to Rs. 9.

Profe ssor Ranga, the Secretary of the Committee, in Volume I of his ' Economic Organisation of Indian villages' published in 1920, has given the results of his personal investigations into the economic condition of certain villages in the Guntur district which he knew well. In this investigation he claims that 'he was not actuated by any desire to find out useful reasons against the lerging of any tax, in favour of raising a protective tariff, etc.' (page 55 op. cit.). He has given particulars of the expenditure on caltivation and income from wet land in the case of thirty ryots in three villages and has calculated the net income per acre and the percentage of land revenue to net receipts in each case. He has explained that by 'net receipts' is meant the sum left aiter paying cultivation expenses and assessment. If the existing rates of land revenue really represented half the net produce, this percentage would obviously be 100 . What Professor Ranga actually found was that there was one case in which this percentage was 19: one in which it was 18 , two in which it was 16, and in the remaining 26 cases it was 13 or below. The lowest rate found was 7 per cent. The highest ' net' income per acre was reported to be Rs. 111 and the lowest Ks. 38 this latter being the income of a non-cultivating owner who had leased out his lands. The rates of assessment in Guntur are similar to those in Kistna and the Godavaris and the scheme of settlement is the same and Professor Ranga himself atates that conditions in Kistna and the Godavaris are eesentially similar to those in Guntur.

The annual report of the Directors of the Circars Agricultural Development Corporation, Limited, Narsapur for the year 1927-28 also affords relevant figures. This Corporation nwns a large block of lands at the tail end of the irrigation system in the Bhimavaram taluk of West Godavari. The lands are liable to submersion in the first crop season and are irrigated at present only by pumping.

The area has only recently been brought under oultivation and owing to this fact and the diffioulties of its situation the yield is below that realized on lands within the ayacut proper. The Corporation leases its lands to ryots on the sharing system, each party taking halt the produce. In the year ucder report, 250 acrea were cultivated in the first crop season and 800 acres in the second crop season. The total taxes (presumably land revenue, water-rate and cees) paid by the Corporation amounted to Re. 4,883 and its share of the crop came to Rs. 20,266 . The expenses of cultivation were met by the ryots and presumably also they made something out of their share. The Corporation's share therefore represented at least the net profits after deducting the costs of cultivation. The total tax demand it will be seen represented only 24 per cent of the Corporation's receipts. This, it must be emphasized, was on land newly brought under sultivation and in the face of great natural difficulties and despite a failure of crop on rather more than one-fifth of the second crop area for which the Directors state that they have applied for a remission of revenue.

These are facts. The elaborate schedules of the Coumittee are abstractions and represent what it estimates that a ryot might spend on his land. It has been seen that where the Committee's figures were susceptible of check they were found to contain serious errors and discrepancies. It is therefore reasonable to claim that little value need be attached to its elaborate appendices.

It would appear to be the general contention of the Committee that throughout these deltas a paddy crop costs more to rear than it is worth and that lesseen not only make no profit but actually lose by renting lands in the delta. This contention to any one who knows these deltas is surprising. Moreover, the Committee has not satisfactorily explained why it is that astute lawyers and experienced traders are prepared to purchase at prices running up to $K_{\text {s. }} 3,000$ an acre, the privilege of losing further money, nor why the ryot who finds it inconvenient or unprofitable to cultivate his own lands has no difficulty in finding a tenant. The Committee admits that there has been a considerable improvement in the standard of living during the past 30 years. This cannot have occurred unless the people had money to spend. It would appear that the serious agricultural depression which is represented as being prevalent must be a recent phenomenon of the last few years. It is however no new thing for agriculture to be on its last legs. In fact the ease with which it can be proved that agriculture does not pay has become proverbial. There is a Tamil proverb to the effect that if the costs of cultivation are counted up in money, not even the price of a goad will remain. An almost identical picture of the state of agriculture may be found in the memorial addressed by the Committee of the Godavari District Association to Government in 1896 protesting against the proposal to levy the existing rates. Yet during the currency of these rates the population and cultivation of these districts bave increased appreciably; trade and communications have shown a marked development and the standard of living among the agricultural population has admittedly improved. The jeremiads of 1896 have proved unfounded and there is little more substance in those of 1329.
17. Agricultural indebtedness.-The Economic Enquiry Committee has collected very detailed statistics regarding agricultural indebtedness and has indulged in certain criticisms of the figures furnished by the Settlement Officer. It has complained that his enquiry was irrational and thought of only at the eleventh hour. In Appendix 24 (i) it is also suggested that the figures received were manipulated so as to reduce the total volume of indebtedness. These criticisms are based on a misapprehension which is the more difficult to understand as the Committee had access to all the papers of the Settlement office relating to these statistics. The figures were not collected at the eleventh hour. A begioning was made in March 1925. No special staff was employed to collect the figures and no villages were specially selected for enquiry but to save cust the Special Revenue Inspectors engaged in making enquiries iuto the regiatration of holdings were instructed to make enquires at the same time of all resident landholders they met with in the course of their normal duties regarding their debte and their assets. The statements for Vadlapulu, Tapeswaram and Kundopadu which have been noticed
by the Committee as nmitted, were omitted because they were received as is shown by the date stamp on them after the statistics had been finally tabulated and worked out for the Scheme Report. On his report regarding Yendagandi, the Special Revenue Inspector reported that the figures supplied were obviously wrong and that he could obtain no reliable information from the ryots. The Special Settlement Officer, therefore, ordered their omission. In the circumstances, there is no ground whatever for the suggestion that other villages were substituted for the four omitted since in the case of three the statistics had already been completed before the reports were received. and in the case of the other the figures were definitely rejected. As regards Gollalakoderu and Chilukur the Committee has stated that original reports were cancelled in favour of subsequent figures showing a lower indebtedness. The original figures were those of the Special Revenue Inspector ; the figures actually adopted were those supplied by the Special Deputy Tahsildar whose business it was to overcheck the work of the Special Revenue Inspector and they were naturally accepted in preference to those furnished by the subordinate.

The Committee claims to have conducted enquiries in all the 78 villages investigated by the Settlement party and in ten others. An examination of the Settlement records with the list of its villages given by the Committee in Appendix 24 (i) shows that the Settlement Party made euquiries in 79 villages and the Committee in a nominal 88 of which 58 only were identical with the villages investigated by the Settlement Party, 24 were villages examined by the Committee ouly and 6 cannot be traced in the alphabetical lists, being presumably only hamlets of some other revenue village.

The Committee's statistics are set out in full in Appendices Nos. 20 to 23 and are summarized and discussed in paragraphs 265 to 239 of the report. According to these figures the ryot in Kistna is indebted to the extent of about Rs. 1,070, in West Godavari to the extent of Rs. 1,256 and in East Godavari to the extent of Rs. 925 per family. At first sight this would suggest that the ryot is more eeriously indebted in West Godavari than in Kistna and more seriously indebted in Kistna than in East Godavari. On the other hand when the amount of indebtedness is compared with the reported assets of the indebted ryots, it is found that the percentage of debt to property is 17.07 in Kistna, 19.48 in West Godavari and 23.82 in East Godavari. The one set of figures appears to show that the East Godavari ryot is the least heavily indebted while the other set would suggest that he is the most heavily indebted. Attention is invited to this apparent contradiction since it afforde an excellent warning of the possibilities of error in drawing facile deductions from statistins relating to so complicated a matter as agricultural indebtedness. The Committee has pointed out in paragraph 273 that the aggregate debt per head increases as the value of the total assets increases, a fact which neutralizes the inference which the Committee has suggested in the concluding sentence of paragraph 270 that "it is really significant of the condition of the ryots of these districts that the average debt of indehted ryots should be greater than that of even the larger proprietors of the Punjab.". Incidentally 'larger proprietors' means only those owning more than 8 acres. Before any deductions can be drawn from such a comparison however, the relative values of the assets of the ryots in the different areas must be examined. If the Committee had gone on to state the principle which is proved in the book (Darling: 'The Punjab Peasant in Prosperity and Debt') from which it took its statistica, it would have seen that the indebtedness figures of the Circars were significant of nothing more than that the property and credit of the Madras ryot was greater than that of the Punjabi.

It is not obvious prima facie why there should be any marked difference between the conditions of the ryots of the three districts concerned. The Committee has not suggested that the cultivation expenses are generally heavier in one district than in another or that the yield is inferior. Such special difficulties as do exist are mainly to be found in the Kistas district in which apparently the ryots are better off than elsewhere. The probable explanation of the apparently more serious state of affairs in the East Goduvari district may perhaps be gleaned from the figures in paragraph 271 which show that the ryots examined in this
district and belonging to the first two classes, $i e$. , ryots having property of Rs. 1,000 and less, own on an average less than an acre of land. It is obvious that such a holding is insufficient for the maintenance of a family and that the fortunes of such ryots must be affected more by other factors than by agricultural conditions. It would be fallacious to draw from the circumstances of such cultivators any conclusions regarding the general condition of agriculture.

The Committee has found that only 7.6 per cent of the ryots examined were free from debt and contrasts its figure with the figure of 37 per cent furnished by the Settlement Officer. 'It is a well known fact that the ryot can usually be trusted to oblige, within limits, with such information as any person in authority may be likely to desire and for that reason the Settlement Officer admitted that he attached little importance to the figures given by his staff. It is however, perbaps, an interesting point that of the 129 ryots examined by the Committee in the Kistna district regarding their leases [Appendix 10 (i)], 47 ryots were not indebted, a proportion considerably above the 7.6 per cent admitted to by the Committee. This proves little, if anything, but it shows that strikingly different results can be achieved by different methods and in different areas.

The Banking Enquiry Committee has recently instituted very careful and searching euquiries in certain districts of the Presidency into all the factors sffecting banking and credit. It conducted investigations in three villages of the Ramachandrapuram taluk of East Godavari. In these villages Alamuru, Pedapalla and Penikera, there are 322, 277 and 201 agricultural families. Of these 30 per cent, 22 per cent and 35 per cent are free from debt. Of the indebted families, the average debt per family is Rs. 685, Rs. 642 and Rs. 367 respectively. These figures are the result of an absolutely complete enquiry and, as far as they go, are more reliable than the less intensive though more widespread enquiries of the Settlement Party and of the Economic Enquiry Committee.

It is obvious that reliable figures for an area of the size of these three districts could not be obtained without the employment of a huge staff and the expenditure of considerable sums of money and once the figures were obtained they would have to be treated with caution. An increase of agricultural indebtedness certainly does not prove a decrease of agricultural profits. It rather proves the reverse. Mr. Darling's study of "The Punjab Peasant in Prosperity and Debt" is not a study of this peasant onder two sets of contrasted circumstances but an examination of the truth that the two conditions go together. "It is one of the complexities of the subject", he writes, "that debt may be as much an indication of prosperity as of poverty" and the story of the villager who was too poor to have a debt is well known. The phenomenon that as prices increased and the value of land rose, the volume of agricultural indebtedness increased also is not peculiar to India. It has been observed in Prussia, Switzerland and the United States. It is not suggested that agricultural indebtedness is a good thing: but the point is that an increase in its volume is not a sign of decreased profits or a proof that the peasantry of to-day find it more difficult to exist than those of the previous generation. Agricultural indebtedness is not peculiar to India. It is found in every country where the land is owned by peasant proprietors. It is not therefore connected in any way with the Indian land revenue system and it would be a fatal blunder to suppose that if the present system were abolished and all taxes on land remitted the volume of indebtedness would decrease. On the contrary history shows that the effect would be an increase of indebtedness corresponding to the enhanced value given to landed property by the abolition of land revenue. In Japan where the indebteduess of the agriculturist is less heavy than in the Punjab, the revenue demand amounts to 17 par cent of the gross produce, a figure much higher than the demand in any of the districts under examination. In paragraph 276 the Committee has indicated its position in these words: "Burely people need not borrow for maintaining their families and for constructing houses to live in and for the paymont of kist and miscellaneons parposes, if agriculture was profitable and if they were able to get big enough net incomes. If, in fact, anything is indicated it is that the income from land is not enough to enable ryots to maintain themselves. It is not unreasonable to claim that ryots whose
cultivation is not unprofitable must usually be able to look forward to saving enough to enable them to celebrate the necessary marriages and funerals, whenever such ceremonies come to be celebrated, with the minimum of pomp, festivity and expenditure. Such expenditure necessarily forms a part of the ryot's family budget." 'That the ryot's ceremonies are celebrated with the minimum of pomp is contrary to the general opinion of people in these districts. Writing of the Guntur Delta Professor Kanga, the Secretary of the Committee, says: "Jsually a ryot who has ten acres of land, two or three sons and oue or two daughters is invested with so much social dignity that he spends at least RB. 4,000 on the marriages and he has to borrow most of this sum." (Page 33, Volume I, Economic Orgavization of Indian Villages.) However that may be, the lesson of economic history all over the world negatives the deduction that the Committee seeks to draw. It is particularly notorious that the Indian ryot does not save. This remark conveys no moral reflection ; it asserts merely the absence of any machinery for real saving. When the ryot has a surplus he either invests that surplus in land or jowela or lends it out to others at interest. When therefore the whole ryot population maintains no accumulated balance of any sort it obviously must borrow for special occasions and to meet cultivation expenses which have to be incurred before the harvest is reaped ; but the fact of such borrowing does not prove that agricultural profits are not made or that the profits made are not large enough for the ryot to meet the necessaries of life. The ryot has to borrow not necessarily because he is poor but because he does not believe in accumulating capital. The Committee has produced figures in Appendix 23 (iv) which show that in-


These particulars are taken from replies sent in by the ryots to the Committen's questionnaire. It is not to be expected that the ryots who took the trouble to reply to the questionnaire would be those whose fortunes were most rosy. It is not in human nature to go out of one's way to supply information which could be used in support of an enhancement of taxation. It is only reasonable then to assume that the people who took the trouble to reply to the questionuaire were people who felt that the evidence they would furnish might perhaps serve to reduce or fend off an increase in their assessment aud to conclude therefore that the figures furnished in Appendix 23 (iv) are not likely to be such as to present conditions in an unduly favourable light.

As was stated by Sir Norman Marjoribanks in the Legislative Council, land revenue is a charge on the land and it would be impracticable to vary it in accordance with the circumstances of individual landholders: It would mean, for example, that the assessment on any given plot would vary with every transfer of ownership and from year to year with the fortunes of the owner whatever might be the factors affecting them. No other form of taxation is varied because the person taxed happens to be in debt. It is no reason for a remission of income-tax that an assessee has bad unusually heavy domestic expenditure during the financial year or that prices generally have risen. By the immemorial custom of the country a share of the produce constitutes the land revenue. Since the commutation of grain payments into money rates, the actual share taken by the State has progressively decreased owing to the fact that the assessment has never been enhanced up to the full percentage of the rise in prices. In paragraph 152 of its report the Committee has quoted from Mr. Darling a passage to the effect that a rise in prices is baneficial only to those who have surplus produoe to dispose of. Incidentally, Mr. Darling is very seriously misquoted in the second sentence and the dramatic words with which the quotation coneludes are apparently the Committee's own. At any rate they do not occur in Mr. Darling's book! A ryot who consumes all he produces must have sources of income other than agriculture. No one can live on the produce if his lands alone. To pay his assessment he must have bee a driven either to sell part of his crop or must have paid out of wages received in
return for his labour. With rising prices, wages rise and such a ryot must be able now to pay the assessment fixed 30 years ago either by selling only half the amount of his produce that he was forced to sell originally or to draw on only half the proportion of his other income that he had previously to dram on. Though the small holder does not benefit from increased prices as directly us the large holder, he benefits equally in a more indirect way and even if it were practicable to differentiate the incidence of revenue demand according to the area of the total holding, it would be illogical and unfair.

To sum up, the volume or incidence of agricultural indebtedness affords no proof that agriculture is less profitable now than it was 30 years ago or that cultivation expenses have increased faster than prices. Nor does it necessarily follow from the figures given that the ryot population as a whole is less prosperous than before. If there were the least reason for thinking that a modification of the land revenue demand would improve the position, the question of rural indebtedness might be relevant to a resettlement enquiry. As it is, there is no reason why the Government should surrender the legitimate rights of the State in following a course of action which would not improve the conditions which it was supposed to alleviate.
18. The rise in the cost of living.-Section 41 of the Committee's report (paragraphs 297 to 306 ) deals with the rise in the cost of living and the improvement in the standard of living. It may be remarked at the outset that as the Committee has included in its cost of cultivation remuneration for the members of the ryot's family who work on the land the debiting of the full cost of maintaining the ryot's family for a year against the outturn involves a double debit. It is not accurate to charge for the ryot and his family as hired labourers and to charge for their full maintenance as well. From the figures given in this section the Committee has concluded that "a very moderate estimate will indicate a rise of 150 per cent in the cost of the maintenance of an ordinary family of four adults." This conclusion is based on a comparison of the evidence regarding the cost of living in earlier years with-the Committee's estimate of the cost of living in 1929. The Committee argues that the cost of maintaining a peasant's family of four adults was, prior to the last settlement, Rs. 96 per annum. The exact date, however, is somewhat doubtful. At the end of paragraph 299, Rs. 96 per annum is given as the figure for 1900 whereas in paragraph 304 it is given as the cost of living in 1890. As it was a period of steadily rising prices it is obvious that the cost of living must have altered between 1890 and 1900 and it is important in view of the Committee's comparisons to establish the dates to which the various pieces of evidence collected in paragraphs 297, 298 and 299 actually refer. The first is taken from Mr. Srinivasa Raghava Ayyangar's "Memorandum on the Progress of the Madras Presidency". The figures quoted by the Committeo will be found at page cexxxv of the Appendices to the Memorandum, where they are described as relating to "the scale of diet in use among the ryot population in a village near Coimbatore". It must he particularly noted that the statement in Mr. Srinivasa Raghava Ayyangar's Appendix runs as follows :-" Among labourers of the lower castes the ordinary cost is about Rs. 1-12-6 or one anna per head per diem." The italics are not in the original. They are intended to draw attention to a fact of paramount importance since the present cost of living is estimated not for a " labourer of the lower castes" but for a ryot owning up to five acres of wet land-a very substantial holding.

Paragraph 298 contains information regarding the cost of clothing and here again the Committee has drawn on Mr. Srinivasa Raghava Ayyangar. It must be observed that the evidence relates explicitly to clothing supplied to farm servants only, and incidentally it may be noticed that this information which is recorded on pages 140-141 of the Memorandum seems to have been taken from the reports of Collectors submitted to the Board of Revenue in 1872, so that it is not a sound indication of prices and conditions in 1900. The figures, however, such as they are show that the clothing supplied to farm labourers varied in value from Rs. 4-8-0 to Re. 1. The original passage in the Memorandum relates solely to farm labourers and contains no reference to Brahmans at all. There is not the least justification,
therefore, for the Committee's bland assumption that Rs. 4 would be the cost of the clothing needed by Brahmans and Rs. 2 the cost of the clothing required by a labourer. The figures quoted rary considerably and are not therefore conclusive except of one fact that referring as they do exclusively to labourers, they do not justify the Committee's estimate of the cost of living in an ordinary ryol's family as being Rs. 23 per annum per adult which would rether seem to be, if anything, an underestimate of the cost of living of labourers.

The evidence in paragraph 299 consists of quotations from Mr. Foster and Mr. Stuart written in 1872, or 28. years prior to the beginning of the resettlement period, regarding the wages paid at that time to agricultural labourers and showing that they received approximately Rs. 23-5-4 per head per aunum. This fact not only does not support the Committee's estimate of the cost of living in a ryot's family as being only Re. 24 in 1900, it actually disproves it, since the only legitimate inference is that that if the cost of maintaining a farm labourer in 1872 amounted to Bs . 23-5-4 per adult per annum, it would cost in 1900 or 28 years later, considerably more than Rs. 24 per head per annum to maintain the standard of living in an ordinary ryot's family. The Committee also professes to quote from Dr. Macleane to the following effect: "The total monthly expenditure of a prosperous shopkeeper family consisting of five persons would be about Rs. 8." The passage quoted is found on page cev of the Appendices to Mr. Srinivasa Raghava Ayyangar's Memorandum. It is necessary to note this fact since the Committee's quotation is garbled. What Dr. Macleane wrote was the "total monthly expenditure of a prosperous shopkeeper's family consisting of five persons would be about Re. 14 and that of an ordinary peasant about Rs. 8." Dr. Macleane's work was published in the year 1885. It is, therefore, no authority for the cost of living in 1900.

Mr. Srinivasa Raghava Ayyangar on page 135 of his Memorandum written ir about 1890 to 1892 has, however, left on record the following opinion: "There is, therefore, left for subsistence about Rs. 106 or Ks. 9 a month and this sum will enable the ryot's family to subsist according to the standard of living in force among the ryot population. Probably the family will make also something by growing vegetables, keeping a cow for dairy produce for consumption, etc., all of which will leave a margin above the cost of subsistence."

The evidence, therefore, when fairly examined suggests that the absolute minimum of expenditure in a small ryot's family was about Rs. 106 a year in 1891, a rise of Re. 1 per mensem over the figure given by Dr. Macleane some eight years earlier, and it is reasonable to assume that by 1900 the figures had risen by another Rs. 10 or Rs. 116 per annum. This estimate, it must be emphasized, represents the absolute minimum of subsistence, whereas the budgets for 1929 givan in paragraph $3(1)$ contain a number of luxuries such as soap-nuts, cosmetice, and tobacco. The Committee has estimated that the cost of living in a ryot's family to-day ranges from Rs. 261-12-0 in the deltas to Rs. 236-12-0 in the uplands. It has given the details of its evidence in Appendix 33 and it will be observed that the Conumittee's estimate is considerably in excess of the figure obtained by the Committee's own investigators from an inventory of the budgets of a number of ryots examined. The Committee has explained this at the end of paragraph 306 on the ground that "many labourers' budgets which show lower figures also were inoluded in them." This remark is surprising in view of the fact that practically all the evidence on which the Committee based its estimate of ks .96 ts the cost of living in 1890 (1000?) related to the living expenses of labourers only.

The average cost per family in 1929 delta and uplands is according to the Committee about Re. 250 per annum. We have seen that there is good evidence for taking the cost in 1900 to be Rs. 116. The rise is, therefore, Rs. 134 or 116 per cent-a figure similar to that of the rise in prices.
19. The economic enguiries made in selected villages.-In Appendix 18 of Volume II of the Committee's report certain criticisms are levelled against the detailed investigations conducted by various members of the Settlement Party in individual villages in these districts. It is impossible without becoming tedious
to traverse all these in detail. As an example the Conmittee's treatment of the report for Likhitapudi, Narsapur taluk, which is the first report discussed may be examined. In the second paragraph there is the usual arithmetical mistake. The Committee then goes on to argue that the fact that 21 pattadars sold their holdings because they left the village to settle elsewhere proves that these ryots were unable to make both ends meet on the ground that no ryot will leave his village so long as his financial circumstances are satisfactory. This dictum requires more than a mere assertion to prove it. The village of Likhitapudi is by no means an attractive place. It is some distance from the more civilized parts of the delta, surrounded by gloomy drainage channels and an obscure village of no importance. It is extremely probable that a ryot might be tempted to sell bis land there merely with a view to securing a more attractive environment. That the landholders in this village do to a very marked extent live outside is evident from the budget given in Appendix No. 34 B-6, which shows that about half the produce of the village goes to non-residents. It is surely not 'surprising' or 'complacent' on the part of the Settlement Officer to argue that the fact that 21 ryots left the village to live elsewhere, has no economic significance. The Committee further insists that all sales for narriage and medical expenses and the payment of debt are proof of a low economic condition. It has been seen in connection with the question of rural indebtedness that so long as the Indian ryot is not prepared to invest or bank his surplus but prefers to sink it in the purchase of new lands, it will be necessary for him either to sell land or to borrow on it as security when he has to meet unusually heavy expenditure like a marriage or a severe illness. It is, therefore, reasonable for the Settlement Officer to reier to sales of land in such circumstances as a realization of assets to meet emergencies. It is uot, as the Committee seems to think, "a fundamental fact that land is not like a deposit in the bank" since in the case of the Indian ryot the purchase of land is practically the only form of deposit which he practices.

In paragraph 264 the Committee has analysed the resalts of these village investigations as indicating that 65 per cent of the pattadars of 1900 have failed to maintain their positions. The investigations were conducted in 24 villages but it was in ouly 21 villages that a complete analysis of the details showing the causes for the partial or entire alienation was made by the investigators. The results are as follows :-


It is obvious that the first five classes of cases had nothing to do with the question whether agriculture was profitable or not. These account for 639 out of the $1,1 y 4$ cases or 54 per cent of the cases in which a holding was totally or partially lost. It is clear therefore that the number of cases in which there is no particalar reason for the sale except an inability to make both ends mett is not 65 per cent of the whole but 46 per cent of 65 per cent or 30 per cent.

It is difficult to draw from these figares any conclusion regarding the pressure of the land revenue. There are many factors that must be considered. The subdivision of holdings down to a limit where they become too small to be adequately worked : the attempt to maintain too large a family for the property possessed : extravagance of living or in building houses: the weight of ancestral debt are all factors that account for individual failures. The situation in this respect is much the same as that in respect of indebtedness, that no reduction of the assessment which is a minor item as compared with the cost of living and of cultivation combined would make any difference to the fortunes of those who
owing to ill-luck or extravagance have to dispose of their lands. If it can be shown that the proceeds of agriculture are euch that the assessment constitutes only a small fraction of the net receipts there is no reason why Government should revise the whole principle of land revenue because certain, ryots have for some reason or another failed to adjust their expenditure to their income and have consequently lost their property.
20. The Committee's village budgets.-Section 42 of the report contains comments on the village budgets prepared for eleven villages set out in Appendix 34 (b). There are several arithmetical errors in the preparation of these budgets and certain mistakes in the data on which they are calculated. They depend, moreover, on such very vague and general assumptions that little reliability can be placed on the results. The Committee has selected a set of villages in which while a considerable proportion of the land belongs to non-residents the inliabitants own, with one exception, absolutely no land outside the village. Some 29,000 bags of paddy valued at Rs. 1 lakh and three-quarters are assumed to be drawn annually from these villages by non-residents and only 437 bags come to the selected villages from outside. There must therefore be other villages in which the receipts exceed the outgoings but the Committee has not investigated any such village. Its selection cannot, therefore, be considered as representative. It would appear that the eleven villages were carefully selected so as to yield striking results. The results are, however, too striking. Statistics which purport to show that in the Kistna and Godavari deltas the population generally goes short of about a quarter of the food required cannot possibly carry conviction to any one who has actual experience of these areas.
21. The lankas and zater-rates.- In section 45 the Committee has advocated a reduction of the rates on lanka and padugai lands. Proposals in this connection are already before Government. In section 46 the Settlement Officer's proposals regarding the rates of irrigation cess are discussed. The Committee has not altogether understood the scope of these proposals. From the current fasli consolidated wet assessment will be charged on all ryotwari lands under regular wet cultivation in all the deltas, under the Muniyeru and under all tanks. The only ryotwari lands on which a separate irrigation cess in addition to dry assessment will be levied will be those under the Divi Project and in the Colair-Upputeru region together with dry lands under the other systems and the upland tanks whenever the caltivator chooses to take water. This latter class of cases will be few. Thas the rates of water-cess proposed in the case of the deltas, the upland tanks and the Muniyeru Project will be applied only in rare cases where lands on the fringe of the ayacut do at the option of the cultivator and when the prospects of the season are favourable take water for the irrigation of an occasional wet crop. In
Divi the ayacut is dependent on an extremely artificial system and it is advisable to retain the greater elasticity of the water-cess system over the consolidated wet rate system. The above lands have always hitherts paid water-rate in addition to dry assessment and there is therefore no radical change of system proposed. The only difference is that previously the water-rate in the deltas was that known as the differential water-rate, i.e., the charge for water was the difference between the dry assessment and the corresponding wet assessment. In place of this a fised water-rate will be charged in future, as has always been charged under the Divi Project, the Colair-Upputeru, the Muniyeru system and the upland tanks. In addition to the differential water-rate the lands so charged paid bitherto an extrs fee of Be. 1 per acre known as the "inducement fee". This fee is nuw to be remitted with the result that the resettlement enhancement is correspondingly reduced. Under the Muniyeru system the whole regular ayacut has been classified wet and will hereafter pay a consolidated wet assessment, and under the upland tanks the 'dry' lands under regular wet cultivation will be transferred to consolidated wet up to the irrigational capacity of the source. In Divi, if the resettlement proposals are given effect to, the total revenue from the lands under the project will be enhanced only by $15 \cdot 95$ per cent as against an enhancement of 18.27 per cent in the Kistna delta where the consolidated water-rate system is in force. It is ubvious, therefore, that the Committee's suggestion at the end of
paragraph 340 that "the nain reason why the Settloment Officer propoces to charge separate enhanced dry rates and enhanced water-retes . . . is merely the consideration that by this proposal a larger revenue would aocrue to the State than by the adoption of the consolidated wet rate system" is unjuatified. It is on the face of it impossible to impnse consolidated wet rates on lands that are only occasionally cultivated wet and although it would have been practicable to have imposed wet rates on the Uivi regular ayacut, the enhancement realised by the adoption of the Settlement Officer's proposals is less than that accruing in the Kistna delta where the consolidated wet rate system is in force.

Only two areas remain-the Colair-Upputeru and the non-Governusent, i.e., dry inam and zamindari, lands in the deltas. In both these cases the fired water-rate system has always beeu in vogue and the Settlement Officer has proposed no change of system. It would be impossible to charge consolidated wet assessments in these cases as the Colair-Upputeru cultivation shifts annually in accordance with the fluctuations of the Colair lake and in the latter case the lands have been settled as dry in title-deeds or sanads. In the Colair-Upputeru tract the waterrate hitherto levied has been Rs. 3 less 12 annas for baling. In future it is to be Rs. 4 less Re. 1 for baling. In other words the actual enhancement is only 12 annas per acre which, in view of the heavy crops yielded by this area as a result of its annual submersion from July to November, is extreniely moderate.

Prior to the resettlement the water-rate on all dry inam and zamiudari laude in the deltas was Rs. 5 irrespective of the class of eource. The Settlement Officer has proposed to raise the water-rate to Rs. 6-4-0 on sources of the first and second class and to retain it at Rs. 5 on sources of the third and fourth clasess. The Committee has recommended a different rate for each of the four classes. The provision of four rates of cess would further complicate the accounts and in view of the extreme moderation of the rates proposed as compared with the rate which the ryotwari lands have been paying during the past 30 years under the differential system, the rate of Rs. 10-8-0 payable under the Polavaram Project, or the rate of Rs. 15 which will be levied under the Mettur Project, further refinements are clearly unnecessary.

It is for Government to decide whether the interpretation of their Urder No. 2712, Revenue, dated 18th July 1918, referred to in paragraph 347, is correct or not.
22. The relevance of the Excise Revenue.-In paragraph 374 the Committee has given certain figures regarding the Exoise Revenue. These figures as ussd by the Committee are irrelevant to the point at issue, which is to determine the value of Government share of the crop and the proportion of that value which it can take without interfering with the economic condition of the district. That revenue is also realized from liquor is no reason why Government should reduce its land revenue demand below the figure justified by the principles of assessment. If any inference is to be drawn from the figures of Excise Revenue, it is that they afford another indication of the fact that money is plentifully available for the purpose of luxuries and suggest that the picture of agricultural distress painted by the Committee is overcoloured.
23. Conclusion:-In concluding ita report in paragraph 389 the Committee has made certain recommendations. Its first recommendation is that the basis of assessments in future should be 25 per cent of the net produce instead of 50 per cent as at present. The Committee has given no reason for proposing to change the time-honoured ratio which has prevailed for so many years and.in view of the fact that the present rates of assessment are demonstrably so much lower than the theoretical 50 per cent of the net produce, it seems unnecessary to revise a principle which is of purely academic interest. Its third recommendation is that there should be no resettlements till the value of the net produce exceeds by four times the present assessments. There are numerous indications to shom that this is the position at present. The rates of rent realized by the ryots, whatever may be said to the contrary, do represent an approximation to the net profits. The normal rate is 10 bags to the acre worth Rs. 60 to Rs. 65 on moderate paddy land. The highest rate of assessment in these districts is Rs. 12 which is one-fifth of the rent of
ordinary land. These are facts which the Committee cannot dispute, and it is scarcely possible to regard as a serious challenge the Committee's sweeping and unsupported assertion that the rents agreed on are in excess of the tenants' means and involve widespread loss of land. The conditions postulated by the Committee as a necessary precedent to a resettlement are present to-day in these districts and there is no reason why the proposed enhancement of the assessment should not be given effeet to. The fifth recommendation of the Committee, in which it contemplates with equaninity empowering local bodies to raise cesses up to 25 per cent on the land revenue, further weakens its main case. The rate of cess levied at present in most of the taluks of these districte is 1 anna 3 pies in the rupee or 8 per cent on the land revenue. If this were raised to 25 per cent of land revenue, there would be an increase in cess equivalent to 17 per cent of the land revenue which is almost exactly that recommended in the Scheme Report. This recommendation suggests that the Committee is conscious that the arguments by which it attempted to prove that the districts could bear no increase of taxation were exaggerated and that its objection to the resettlement enhaucement was not so much to the amount proposed as to the method of assessment und the crediting of the revenue to the General Administration of the Presidency.

In the last paragraph of its report the Committee has expressed its confidence that its conclusions will in the main be found unassailable and expressed the hope that its data and conclusions will be received with an open mind. It further claims that it has set out conditions" as it found them as the result of careful studies." Whatever may be thought of the Committee's conclusions, the above examination of its report proves that its data are far from unassailable, and it is impossible to accept as valid conclusions which are based on evidence which has in most particulars crumbled away on examination.

## APPENDIX I.

Statement showing the prices of white paddy per garce for 20 years of the ryots' selling months in the East end West Godavari distriots (including the jears 1919-20 to 1921-22).



Statement ahowing the prices of white paddy por garce for 20 years of the ryot's melling monthe in the Kietna district (including the yeare 1919-20 to 1921-22).


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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1910-11 |  |  |  |  | 217 |  |  | 40 |
| 1911-12 |  |  | $\therefore$ | . | 250 | 212 |  | 49 |
| 1912-13 |  |  | . | . | 290 | 246 |  | 55 |
| 1918-14 | $\therefore$ | . | . | . | 262 | 222 |  | 418 |
| 1914-15 | $\ldots$ |  | . | . | 247 | 209 |  | 48 |
| 1915-16 | . |  | . | $\cdots$ | 255 | 216 |  | 411 |
| 1916-17 | . | $\ldots$ | . | $\ldots$ | 264 | 224 | 6 | 412 |
| 1917-18 |  |  | . |  | 281 | 238 | 14 | 52 |
| 1918-19 |  |  | . | . | 348 | 295 | 18 | 66 |
| 1919-20 |  |  | . | .. | 455 | 386 | 12 | 85 |
| 1920-21 | $\ldots$ |  | - | . | 402 | 341 | 11 | 76 |
| 1921-22 | $\because$ |  | . | . | 369 | 313 | 10 | 612 |
| 1922-23 | . | . | . | . | 322 | 273 | 11 | 514 |
| 1923-24 | .. |  | . | . | 322 | 273 | 11 | 514 |
| 1924-25 | - | . | . |  | 321 | 272 | 14 | 514 |
| 1925-26 | . | - |  |  | 301 | 255 | 14 | 58 |
| 1926-27 | - | . | - | . | 374 | 317 | 14 | 614 |
| 1927-28 | $\cdots$ | . | . | -. | - 323 | 274 | 9 | 515 |
| 1928-29 | . |  |  | . | 290 | 246 | 8 | 56 |
|  |  |  | otal | . | 6,133 |  |  | 1124 |
|  |  |  | rage |  | 307 |  |  | 510 |
| Deduct 15 per cent for cartage and merohants' profits |  |  |  |  | 46 |  |  | - |
| Net commutation rate per garce. |  |  |  |  | 261 |  |  | - |

Statement showing the prices of white paddy per garce for 20 years of the ryots' eelling montha in the East and Weat Godavari districta (exoluding the years 1919-20 to 1921-22).

(ii) Upland.

| 1906-07 | - | -• | $\cdots$ | - | - | - | $\cdots$ | - | 257 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1907-08 | - | $\cdots$ | -• | - | . | $\cdots$ | - | $\cdot$ | 270 |
| 1908-09 | - | $\because$ | $\cdots$ | -. | - | - | . | . | 301 |
| 1909-10 | . | $\cdots$ | . | $\cdots$ | $\because$ | . | . | . | 237 |
| 1910-11 | . . | - | - | . | . | . | . | .- | 208 |
| 1911-12 | . | $\cdots$ | - | - | - | . | $\ldots$ | - | 271 |
| 1912-13 | $\cdots$ | $\because$ | - | $\cdots$ | . | . | . | - | 283 |
| 1913-14 | . | - | - | . | . | - | $\cdots$ | $\cdots$ | 307 |
| 1914-15 | -• | . | $\cdots$ | . | . | $\cdots$ | $\cdots$ | - | 277 |
| 1915-16 | $\cdots$ | . | - | $\ldots$ | . | . | $\cdots$ | - | 289 |
| 1916-17 | - | . . | - | . | . | . | $\cdots$ | $\cdots$ | 276 |
| 1917-18 | $\cdots$ | - | - | . | . | - | $\cdots$ | $\cdots$ | 285 |
| 1918-18 | . | $\bullet$ | - | . | . | . | - | $\cdots$ | 384 |
| 1922-23 | - | $\cdots$ | $\cdots$ | . | . | -- | $\cdots$ | - | 347 |
| 1923-24 | - . | . | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | 400 |
| 1924-25 | - | $\cdots$ | $\cdots$ | - | - | $\cdots$ | $\cdots$ | $\cdots$ | 401 |
| 1925-26 | $\cdots$ | - | -. | - | $\bullet$ | $\cdots$ | $\bullet$ | $\cdots$ | 331 |
| 1926-27 | - | $\cdots$ | $\cdots$ | - | $\cdots$ | - | . | $\cdots$ | 375 |
| 1927-28 | - | . . | -- | $\cdots$ | $\cdots$ | - | $\bullet$ | $\cdots$ | 346 |
| 1928-29 | . | - | - | - | - | - | - | . | 300 |
|  |  |  |  |  |  |  | Tot | . | 6,145 |
|  |  |  |  |  |  |  | erag | . | 307 |
|  | Dedwet 15 per cent for certage and merohants' profite |  |  |  |  |  |  |  | 46 |
|  |  |  | Not commutation price per garoe |  |  |  |  | . | 261 |

Stabement sbowing the pricee of white paddy per garce for 20 years of the ryota' alling monthe in the Kistine distrint (exoluding the years 1919-20 to 1921-22).

(ii) Uplased.

| 1906-07 | . | - |  | $\cdots$ | - | - | - | - | 248 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1907-08 |  |  |  |  | . | . | - | . | 237 |
| 1408-09 |  |  |  | . | - | . | . | . | 278 |
| 1909-10 | - |  |  | - | - |  | . |  | 240 |
| 1910-11 | - | . | . | . | - | . | - | . | 217 |
| 1911-12 | - |  | . | $\cdots$ | $\cdots$ | - | . | . | 250 |
| 1912-13 | $\ldots$ |  | . | . | . | - | . | - | 290 |
| 1913-14 | . | . |  | . | - | . | - | - | 262 |
| 1914-15 |  | - |  |  | .. | - | $\cdots$ | . | 247 |
| 1915-16 |  | .. | . | . | - | - | - | - | 255 |
| 1916-17 |  | .. | . | . | - | . | - | - | 264 |
| 1917-18 |  |  | - | . | - | . | - | - | 281 |
| 1918-19 | $\ldots$ | . |  | . | - | . | - | - | 348 |
| 1922-23 |  |  |  | . | . | . | - | - | 322 |
| 1923-24 |  | $\cdots$ | . | . | . | . . | - | - | 322 |
| 1924-25 | . | . | . | . | . |  | . | . | 321 |
| 1925-26 |  | . | . | . | . |  | . | . | 301 |
| 1926-27 |  | -. | * | - | . | . | . | . | 374 |
| 1927-28 | . | $\cdots$ |  | . |  | . |  | - | 323 |
| 1928-29 |  |  |  | . |  |  |  | * | 290 |
|  |  |  |  |  |  |  | Total | . | 5,670 |
|  |  |  |  |  |  |  | erage | - | 284 |
| Deduet 15 per cent for cartage and merchants' profite |  |  |  |  |  |  |  | -• | 43 |
| Net commatation rate per garce |  |  |  |  |  |  |  | -• | 241 |

Commatation prices per garce (including the years 1919:20 to 1921-22) in the Fast and West Godavari distriots.

Partioulans
White

Rs.
(ii) Opland


Commutation prices per garce (including the years 1919-20 to 1921-22) in the Kistna distriot-
Partioalars. Paddy. ks.
(i) Delta.

(ii) Upland.

| Pıesent commutation price | $\cdots$ | $\ldots$ | . $\cdot$ |  | 261 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Old commatation price .. | . | . | . $\cdot$. | . | 118 |
|  |  |  | Increase | - | 143 |
|  |  |  | Percentage | - | 121 |

Commutation prices per garoe (exoluding the years 1919-20 to 1921-22) in the East and West Godavari distriota.


Cominutation prices per garve (exateding the yeare 1919-80 to 1921-28) fn the Finten divicich

## Particalara.

| (i) Delta. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Present commatation price | $\cdots$ | $\cdots$ |  | 253 |
| Old eommatation prioe .. | .. . |  |  | 118 |
|  |  | Increase | - | 13.5 |
| - |  | Percentage | - | 114 |
| (ii) Upland. |  |  |  |  |
| Yresent commutation price | .. . | -• |  | 241 |
| Old commutation prios .. | . . . | - . ${ }^{\text {- }}$ | . | 118 |
|  |  | Inorease |  | $12 \overline{3}$ |
|  |  | Percentage | . | 104 |

## Paddy.

s.
(i) Della.
commatation price
$\begin{array}{llllll}. & . & . & .- & . & 258 \\ \cdots & . & . & . . & 118\end{array}$
(ii) Upland.

Yresent commutation price Old commatation prion.

## APPENDIX II.

The Committee's Appendices 31 (i), (ii) and (iii) correctly calculatod.
(i)

Owner's labour ie not taken into acoount.

| Partionlars. | $\left\|\begin{array}{c} \text { Standard } \\ \text { ocot of } \\ \text { oultivation } \end{array}\right\|$ | Rs. 81-4-0 | Re. 78-2-0 | Re. 66-0-0 | Re. 56-1t-0 | Res. 48-18-0 | Re. 44-11-0 | R. 40-10-0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ITusimaxm. | ${ }^{\text {ct }}$ 4. P. | 28. A. P\% | ma. 4. P. | 4. 4. 5. | 18. 4. 7. | 20. A. P. | me. A. p. | 18. A. |
| 5 acres and less. | 0488 | 161110 | 88910 | 0710 | $-7109$ | - 1512 | -1618 | - 9814 |
| 10 | 63 7 8 <br> 0 11 4 | $\begin{array}{llll}17 & 12 & 6 \\ 70 & 8 & 8\end{array}$ | $\begin{array}{r}9 \\ \hline\end{array}$ | 186 | -896 | -. 1411 | - $1818{ }^{18}$ | - 8213 |
| 16 " | ${ }_{60} 6$ | 20   <br> 21 8 8 <br>    <br> 1 0  | 1268 | 488 | -818 | - 1116 | - 160 | - 901 |
| 20 " | $\begin{array}{rrrr}60 & 8 & 8 \\ 63 & 8 & 11\end{array}$ | $\begin{array}{llll}21 & 0 & 9 \\ 17 & 11 & 1\end{array}$ | $\begin{array}{rrrr}14 & 14 & 0 \\ 9 & 0 & 1\end{array}$ | 4188 | - 3818 | - 117 | - 1688 | - 19 \% |
| $\begin{array}{ll}25 & \square \\ 30\end{array}$ | ${ }_{66} 0$ | 25811 | 17111 | 81611 | 18 | 1412 | - 181811 | - 281811 |
| Mediman |  |  |  |  |  |  |  |  |
| 5 acrea and lebs. | 47010 | 3488 | $26{ }^{2} 129$ | 17158 | 9182 | 1118 |  | -6 610 |
| 10 " | $\begin{array}{llll}55 & 5 & 1 \\ 53 & 13 & \end{array}$ | 4514811 | 171211 | 911111 | 1811 | - 691 | $-10101$ | - 1411 |
| 15 " | 63137 | $\begin{array}{llll}27 & 6 & 6 \\ 99 & \end{array}$ | 1945 | 1185 | 805 | - 617 | - 27 | $-18 \%$ |
| 20 " | 61180 | 29 480 | 21.6 | 18 ¢ 0 | 620 | - 80 | - 710 | - 1180 |
| -25 | 5398 | 2710 | 1989 | 11.6 | 3 | - 18 | - 143 | - 1815 |
| 30 " | 51. | 29158 | 2118 | 18118 | 69 | -28 | - 04 | - 1010 ¢ |
| Yisuinamen. |  |  |  |  |  |  |  |  |
| 5 acres and leas. | 411210 | 3878 | 3158 | 2832 | 1512 | 6189 | 16 |  |
| $10 \quad \%$ | 48119 | 32 8 10 <br> 39   <br> 8   | 24. 6.10 | $16 \quad 10$ | 8210 | 0010 | -402 | - 12 |
| 15 : | 481810 | 32 6 2 <br> 38   | 94: 4.2 | 1688 | 802 | -0 110 | -4 910 | -8 810 |
| -20 | ${ }_{4}^{47} 98$ | $\begin{array}{llll}38 & 10 & 4 \\ 35 & 2 & 10\end{array}$ | $\begin{array}{llll}25 & 8 & 4 \\ 27 & \\ \end{array}$ | 1764 | 94 | 1 \% 4 | -2148 | -6188 |
| 85 " | 46 | $\begin{array}{llll}35 & 2 & 10 \\ 23 & 11 & 0\end{array}$ | ${ }^{27} 80010$ | 181410 | 101910 | 21010 | -162 | - 58 |
| . 80 | 149 | 36110 | 2890 | 2080 | 1260 | 48. | - 2 | - 816 |

(ii)

The labonr of the owner is taken into ecconnt.

(iii)

Labour of the owner and the dependent is taken into account.

| Portionlart. | Net cost of cultive. tion per sore. | H5, 81-4-0 | E5. 78-2-0 | Re. 65-0-0, | Re. 56-14-0 | Ef. 48-12-0 | Re. 4-11-0 | Re. 40-10-0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Eamimum. | 20. A. P . | me. 4. P. | s. A. P. | 2. 4. P. | 3. . 4. >. | 20. 4. P. | m. 4. P. | 88. A. 2. |
| 5 eores and leas. | 4988 | 811010 | $\begin{array}{llll}28 & 810\end{array}$ | 15010 | 7410 | $-013 \mathrm{~g}$ | -414 9 | 815 |
| 10 " | 4588 | 86 | $2714^{\circ} 2$ | 19189 | 11109 | 888 | - 0810 | - $0^{10}$ |
| 16 " | $\begin{array}{llll}46 & 9 & 8\end{array}$ | 34104 | 2684 | 18.6 | 10.4 | 22 | -1148 | - 5168 |
| 20 " | $\begin{array}{llll}68 & 8 & 4\end{array}$ | 2818 | 19158 | 11188 | 8118 | -4 6 | -87 | - 128 |
| 25 " | $\begin{array}{llll}58 & 1 & 8\end{array}$ | 28.2 | 1604 | 6144 | $-188$ | -9 9808 | -18 68 | - $17{ }^{7} 1{ }^{8}$ |
| 80 | 61.20 | 29102 | 2182 | 1868 | 542 |  | - 61410 | 101510 |
| Madiwn. |  |  |  |  |  |  |  |  |
| 5 acres and leas. | 8249 | 481510 | 401810 | 321110 | 24910 | 16710 | 12610 | 8510 |
| 10 " | 8789 | 48106 | 8585 | 276 | 19 \& 5 | 1185 | 715 | 805 |
| 15 " | 10411 | 40151 | 8218 1 | 2411 | 16.91 | 871 | $4{ }^{6} 1$ | 061 |
| 80 " | 41010 | $40{ }^{4} 8$ | 8212 | 23168 | 15182 | 7118 | 8102 | - 0610 |
| 25 : | 489 | 38 y 0 | 2600 | 16140 | 8180 | 0100 | -87 | - 780 |
| 80 " | 46188 | 8469 | 2649 | 1829 | 1002 | 114 | $-228$ | - 68 |
| Mindmum. |  |  |  |  |  |  |  |  |
| 6 sores and less. | 9840 | 6200 | 48140 | $\begin{array}{lll}36 & 12 & 0\end{array}$ | 27100 | 1980 | 1570 | 11.60 |
| 10 | 81159 | $49 \leqslant 10$ | 41210 | $\begin{array}{lll}33 & 0 & 10\end{array}$ | 241410 | 161810 | 121110 | 81010 |
| 16. | ${ }^{85} 1112$ | 458810 | 87610 | $29 \leq 10$ | 21.210 | 18010 | 81510 | 41410 |
| 80 - | 87.91 | 481011 | $\begin{array}{llll}36 & 8 & 11\end{array}$ | $\begin{array}{llll}27 & 6 & 11\end{array}$ | 19411 | 11.911 | 7112 | 8011 |
| 25 " | 40911 | 40101 | $\begin{array}{llll}89 & 8 & 1 \\ 82 & 15 & \end{array}$ | $\begin{array}{llll}24 & 6 & 1 \\ 94 & 18 & 7\end{array}$ | $16{ }^{16}$ | $\begin{array}{llll}8 & 2 & 1 \\ 8 & 9 & 7\end{array}$ | 411 | 001 |
| 80 | 4086 | 4117 | 82157 | 84187 | 1611.7 | 897 | 487 | 078 |

## Remarks of the Chief Engineer for Irrigation, dated 9th June 1930 and 30th June 1930.

In the Report of the Economic Enquiry Committee, section 11, relating to 'Irrigation' and section 47, 'relating to 'Irrigation and drainage improve* ments' have been dealt with seriatim with the following remarks:-

Section 11-Paragraph 50.-Extension of irrigation has been due to improvement of supply and better distribution brought about by the remodelling of channels and piping of irrigation outlets, the available supplies being found to be quite adequate.

Paragraph 51.-No remarks.
Paragraph 52 assumes that the progress of transplantation is bound up only with the canal supplies as given in any year. This is not correct. Early arrival of freshes in river coupled with the usual rainfall will enable sufficient supplies to be given to enable the ryots to go on with transplantation as vigorously as possible and progress is bound up with the supply of seedlings, labour, cattle.

Paragraph 53.-The relatively higher canal duties noticed in the Godavari Western delta, point to the fact that good supplies are realized from Rallamadugu and Yerracalva both of which drain an area of over 1,000 square miles and enter the Main and Venkayya and Weyyeru canals respectively. The transplantation in Godavari Western delta is not generally backward unless it be in a year when the river arrives in freshes rather late in the season and the rainfall is rather low. It is only in such years, transplantation runs well into August and not in other years. In the experiments made in 1914 or so in Undi canal, it was clearly proved, that under normal conditions, the ryots are able to complete transplantation in six weeks' time counting from the date the river arrives in freshes and that it is not within practical politics to attempt to complete it in a shorter period. As regards second crop, the area grown is the largest in the Godavari Western delta, while in the other two sections, viz., Eastern and Cential, where the supply is reported to be good, the area grown is very much lower proportionately owing presumably to a greater area under garden crops. This being so, the duty figures worked out give no fair criterion as regards sufficiency of the supply for the ayacut, and I do not think the second crop suffers badly in Godavari Western delta.

Paragraph 54.-The fitting up of 6 feet shutters over the Kistna anicut has certainly improved supplies during transplantation season considerably, so much so, that areas outside the registered ayacut in the delta are being irrigated freely owing to favourable conditions. If there is still delay in transplantation in any year, it must be due to other conditions such as want of seedlings, labour and cattle as has been noted already under paragraph 52. It will not be out of place to state here that extension of irrigation is contemplated as a result of increased supplies made available and it is, therefore, futile to contend that the supplies are inadequate to enable transplantation being completed soon.

Paragraph 55.-The absence of supply in June is due to river condition. The inference drawn about the unsatisfactory conditions of water supply by a comparison of duty figures is not entirely correct. It is no doubt true, that with the late arrival of freshes in river coupled with a poor rainfall, the progress of transplantation is hampered and it runs into September in the Divi system. Otherwise, it is completed before the end of August which is what can be expected to be provided in a pumping system like Divi.

Paragraph 56.-No remarks.
Paragraph 57.-The fixing of the second crop zone has solved many of the difficulties referred to and if the yots will take advantage of the rotation
system of closure of channels for second crop and concentrate the area cultivated in that season, the difficulties as regards soakage in contiguous lands will be removed.

Paragraph 58.-It is admitted that a satisfactory piping system would lead to great satisfaction and do a great deal of good. It is equally admitted that the anxiety of the ryots to transplant their fields as early as possible owing to their belief that earlier transplantation means better yield, is responsible for the universal interference with the piping system and the general practice of taking supplies surreptitiously by means of open cuts. It has also to be admitted that such irregular practices do not increase the available supply but only mean misappropriation of it by some at the expense of others. It should also ba admitted that transplantation cannot be done within a very short period after canals are opened as there is the question of supply of seedlings, cattle and labour. In all normal years when the river also arrives in freshes early in the season, there is no difficulty at all as ragards supply, and transplantation is completed within six weeks. It is delayed slightly in bad years ; but this cannot be helped. If the canals are to be made bigger, the larger supplies may not be useful in all years while thers will be difficulty as regards command when the supply gets low. I do not think that any action is called for.

Paragraph 59.-The improvements to Vizeswaram head sluices have been sanctioned and will when carried out, afford greater supplies than at present. The necessity for higher shutters in the Godavari delta is not proved; but means should be provided to lift up the shutters more quickly-please see paragraph 349, section 47.

Paragraph 60.-No remarks.
Paragraph 61.-The drains designed on the principles enunciated in P.M.G. Nos. 3572, dated 19th December 1874 and 3528, dated 22nd December 1876 have answered well so far and recent observations made in Gonteru drain of the Godavari Western delta have shown clearly that no improvements are required. The tentative section adopted for clearance is with a view to prevent silting during times of low flow which occurs for long periods, while the flood flow which occurs occasionally during rains, spills freely on both sides and is fairly rapidly discharged into the sea. Certain low-lying areas are affected here and there; but on the whole there is no submarsion on a large scale for such periods as are likely to injure the paddy crop. Lands which are found to bs difficult of being drained are rightly included in the second crop zone for cultivation and this solution is certainly more effective and economical than sponding large sums to improve their drainage.

Paragraph 63.-The disposal of the full floods estimated from the upland drainages has been provided for as far as possible so as to convey the floods rapidly without damaging the delta and. the principles referred to in paragraph 61 are not applied to these.

Paragraph 64.-I do not think the principle laid down in the passage quoted from P.M.G. No. 3572, dated 19th December 1874, is followed now. The improvements of the Yenamaduru drain which are approaching completion at an expenditure of 10 lakhs and the provision of flood weirs at several places in the delta point to the fact that works relating to the disposal of upland drainages have been constructed in the past and charged to the capital account of the system. Such works as are required to prevent damages caused by upland floods entering the delta will, I think, be carried out if the cost is justified.

Paragraphs 65 and 66.-The village drainages, which are entirely local, are hitherto left in the hands of ryots and in many places drainage takes place by field to field flow. Drains serving a number of villages are generally looked after by Public Works Department and if any instances of such drains, which are not in charge of Public Works Department are brought to notice, they will be examined and taken over for maintenance.

Paragraph 85.-No remarks.

i. , Ph: Paragrapt 349. -The question of increasing the hedight' of falling shutters was considered fully when the question of extention of irrigation the Godavari delta was investigated in detail and it was decided then that it will be sufficient (1) to adjust the pivots of shutters so as to make them fall with a larger depth of flow on top of them, (2) to provide machines for the rapid lifting up of the shutters when once they fall down. The former has been and is being carried out and the provision of the latter will be arranged for shortly.

Paragraph 350.-I do not think the time has yet come for the provision of a reservoir to increase the supplies in the second crop season. The percentage of second crop irrigation is fairly high in the Godavari Western delta while in the other two sections, there is a greater percentage of garden crops. There seems therefore to be no likelihood of a large increase in the area of second crop and without such an increase, the necessity for a reservoir does not arise.

Paragraph 351.-An officer is investigating the question of extension of irrigation in the Kistna delta and the question of adequacy of supplies for transplantation will be examined by him though the belief is that they are quite adequate.

Paragraph 352.-There is now a proposal to extend the East Bank canal and carry water to the Divi island by constructing an aqueduct across the Puligedda arm of the Kistna river. When this matures, adequate supplies will be provided for irrigation in the Divi island.

Paragraph 353.-As explained by me already, the drains have answered requirements and no widening will be required. As regards their maintenance, the difficulty has been mostly in securing labour for doing the work within the closure period more especially when the drains take a good deal of time to dry out to enable excavation being done. Measures will be taken to overcome the difficulty by enlisting the co-operation of the village panchayats and the interested ryots and a more systematic maintenance of drains will be arranged for.

Paragraph 354.-The floods due to Yerracalva are disposed of by the Yenamaduru drain which has been improved recently at a cost of 10 lakhs. A regulator will have to be constructed for shutting out the floods from entering the Venkayya and Weyyeru canal and when this is done, there will be no difficulty as regards Yerracalva floods doing damage to the delta. As regards floods from Rallamadugu, the flood weir at Velpur disposes of most of it and it is carried down to the sea without doing damage to the delta.

The proposal to divert them into the Godavari river below the anicut will not only be prohibitively costly but also impracticable and of doubtful utility for many reasons, the chief of which is the provision to be made to carry them across the main canal by a syphon which is likely to give trouble when discharges of varying quantities will flow down it and there is the added trouble due to the backing up of floods in Godavari. I am therefore inclined to recommend that the proposal might well be abandoned without further consideration.

Paragraph 355.-The remarks of the Superintending Engineer are awaited as I have no personal knowledge of the Collair and Upputeru. The diversion of the Budameru into the Kistna below the anicut will be as impracticable as and more costly than the proposals referred to in the previous paragraph, leave alone the difficulty of negotiating the town of Bezwada which will come in its way.

Paragraph 356.-All works found necessary have been and are being carried out and whatever expenditure has to be incurred will have to be devoted for the most part in increasing the pace of remodelling of channels so as to ensure proper and equitable distribution and proposals relating to other questions will also be considered on their own merits and disposed of.

Shetion 49-Paragraph 366.-The large areas of poramboke lands comprising the banks and margins of canals, channels and drains are being utilized as far as possible to grow babul trees. But the trees so grown in the canal banks are reserved for the use of the department to help the manufacture of bricks, lime and the river conservancy operations for which there is a large
demand of brushwood. As regands the trees grown in the banks of drains and some suitable channels they are allowed to be utilized to meet the demands of others including the ryots; but in the majority of cases, the question of transport has been found to be very difficult and costly as these drains and channels. are not navigable and useful cart-tracks are not available in most cases, with the result that they have not all been utilized so far. The ryots themselves. have recognized the necessity of growing babul trees in some of their waste lands which are found to be easily accessible and so the problem is not as difficult as. it is represented.

Besides the works carried out in the Kistna delta and Divi Pumping system during the period covered by the settlement and shown in the list printed with the Report, some additional works were carried out. Seven lists of such works now received from the Superintending Engineer, Bezwada Circle, are herewith sent for information.

## APPENDIX. <br> Bezfada Crecle. <br> Kistna Central Division.

Additional list of works aanctioned under Capital, Kistna Delta System.

| Serial number. | Name of work. | Amount sanctioned. | G.O. number and dato. |
| :---: | :---: | :---: | :---: |
| 1 | Constructing an iron punt with fittings for lifting iron falling shutters of the Kistna anicut. | $\begin{aligned} & \text { RS. } \\ & \mathbf{3 , 5 6 0} \end{aligned}$ | 387 I., dated 31st February 1903. |
| 2 | Constructing upstair rooms for the quarters of the Executive Eigineer, Kistna Eastern Division. | 3,530 | 1445 I., dated 24th December 1904. |
| 3 | Constructing rough stone drains under the flood bank below the new head sluice, Bezwada. | 2,800 | 106 I., dated 2nd February 1906. |
| 4 | Improvements to the Kistna Eastern Division office. | 4,526 | 1024 I., dated 30th October 1905. |
| 5 | Providing a motor launch for use on the Kistna river. | 33,500 | 504 I., dated 11th May 1906. |
| 6 | Acquiring land along Public Works Department road to Buckinghampet. | 2,240 | 477 I., dated 6th November 1912. |
| 7 | Restoring the Bezwada Headworks .. | 1,05,000 | 245 I., dated 15th May 1915. |
| 8 | Improvements to the Kistna Eastern Division office at Bezwada. | 2,400 | 452 I., dated lith October 1916. |
| 9 | Providing an additional lifting machine for the 6 feet falling shutters on the Kistna anicut and housing the same. | 66,625 | Mis. 1612 I., dated 26th July 1927. |
| Additional list of works sanctioned under Capital, Divi Pumping System. |  |  |  |
| 1 | Constructing quarters for the three engine drivers at Divi. | 3,100 | 210 I., dated 27 th May 1908. |
| 2 | Constructing quarters for 4th driver at Divi. | 3,130 | 378 I., dated 17th October 1908. |
| 3 | Constructing store shed for Div: Pumping station. | 2,260 | 411 I., dated 5th November 1908. |
| 4 | Rebuilding quarters for driver of steamer Wenlock at Puligadda, Divi Headworks: | 1,600 | 428 I., dated 18th November 1908. |
| 5 | Constructing fourth block of lascars quarters at Divi Headworks. | 2,440 | 206 I., dated 11th May 1909. |
| 5 | Constructing a fifth block of lascars quarters at Divi Headworks at Puligadda. | 2,660 | Do. |
| 7 | Constructing an apper storey to the Subdivision office at Divi for use as a resthouse. | 6,650 | 366 I, dated 8th September 1909. |

Additional list of works sanctioned under Capital, Divi Pumping System-cont.

| Serial number | . Name of work. | Amount sanctioned. | G.O. number and date. |
| :---: | :---: | :---: | :---: |
|  |  | Rs. |  |
| 8 | Fixing demarcation stones along the distributary channels in Divi. | 2,900 | 1161 I., dated 30th August 1912. |
| 9 | Widening the foot bridge at $0 / 3$ miles of the Main canal, Divi Pumping Project. | 3,530 | 151 I., dated 3rd March 1913. |
| 10 | Providing a third oil tank for the Divi Pumping station. | 6,700 | 171 I., dated 8th April 1914. |
| 11 | Improvements to the former quarters of the Assistant Superintendent, Divi Pumping station. | 1,610 | 267 I., dsted 31st May 1915. |
| 12 | Excavating Siddayacodu branch channel, Divi Pumping System. | 3,080 | Mis. 85 I., dated 28th February 1918. |
| 13 | Acquiring and demarcating margins along North channel, Divi Pumping System. | 1,720 | Mis. 50 I., dated 19th February 1919. |
| 14 | Acquiring and demarcating margins along channels in Divi delta. | 8,700 | 173 I., dated 27 th May 1920. |
| 15 | Improvements to the lascars' quarters at Divi Pumping station. | 2,380 | Mis. 26 I., dated 24th January 1921. |
| 16 | Constructing quarters to the motor launch driver in Divi Pumping System at Puligadda. | 2,830 | 244 I., dated 6th May 1926. |
| 17 | Constructing quarters for the Storekeeper and maistri in the Head works compound at Puligadda. | 2,500 | Do. |
| 18 | Constructing a telephone and regulating lascars' shed at Bhavadevarapalli. | 1,900 | Do. |
| 19 | Installing a pumping set at Repalli and a pipe line from Repalli to Chatragadda. | 71,000 | $\begin{aligned} & 1368 \text { I., dated 24th } \\ & \text { June 1927. } \end{aligned}$ |

## Kistna Eastern Division.

Additional list of works sanctioned under Capital, Kistna Delta System.

| Serial number. | Name of work. | Amount of estimate. | G.O. number and | date. |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Excavating Pedans branch of Lingayacodu of Dammalacodu main branch of Mamillacodu. | $\begin{gathered} \text { RS. } \\ 1,350 \end{gathered}$ | 537 I., dated June 1899. | 26th |
| 2 | Excavating Tummacodu Right side channel at 28 miles 2 furlongs of Pedalanka channel. | 2,550 | 822 I., dated September 189 | 28th |
| 3 | Revised estimate for constructing resthouse and outhouses at Vadali. | 4,962 | 821 I., dated September 189 | 28th |
| 4 | Excavating Penjendra channel, Pulleru canal. | 4,920 | 983 I., dated November 1899 | 20th <br> 9. |
| 5 | Improvements to old Malapalli channel, Masulipatam canal. | 1,380 | 114 I., dated February 1900. | 5th |
| 6 | Extending Nakkalacodu branch of Gudivadn channel. | 1,570 | 590 I., dated July 1900. | 10th |
| 7 | Excavating right and left side channels to the Salt Factory canal at Pandraka. | 1,055 | 665 I., dated August 1900. | 13th |
| 8 | Constructing wharf superintendent's shed and wharf lascar's shed at Chintaguntapalem. | 1,470 | 792 I., dated September 1900 | 22nd <br> 0. |
| 9 | Constructing a wharf wall and wharf superintendent's and wharf lascars' sheds at Ellore. | 8,170 | 246 I., dated March 1901. | 11th |
| 10 | Constructing Gunadala eecape, Ellore canal. | 2,500 | 257 I., dated March 1901. | 13th |
| 11 | Converting old Bhumicodu into an irrigation channel known as Unikili channel. | 2,000 | 343 I., dated April 1901. | 22nd |

## Additional list of works sanctioned under Capital, Kistna Delta System-cone.

| Serial number. | Name of work. | Amount of estimate. | C.O. number and dato. |
| :---: | :---: | :---: | :---: |
|  |  | RS. |  |
| 12 | Constructing rest-house with outhouses on Dosapad channel, Ryves Canal at Ventrapragada. | 4,770 | Not traceable. |
| 13 | Constructing Wharf superintendent's and lascars' sheds at Ellore. | 13,800 | 525 I., dated Ind July 1901. |
| 14 | Excavating minor distributaries to Medur channel, Masulipatam canal. | 18,600 | 808 I., dated 15th November 1901. |
| 15 | Improving and extending Boddapad Zamindari channel and excavating a branch from it. | 44,800 | 992 I., dated 18th December 1901. |
| 16 | Extending the Daggumalli main channel from 0 mile 5 furlongs to 2 miles 4 furlongs 146 feet, Masulipatam canal. | 4,800 | $\begin{aligned} & 72 \text { I., dated } 18 \text { th } \\ & \text { January 1902. } \end{aligned}$ |
| 17 | Constructing a wharf wall at Ellore near the Railway goods shed. | 3,600 | 197 I., dated lith February 1902. |
| 18 | Constructing six lascars' sheds at Akumarru lock, Masulipatam canal. | 3,140 | 310 I ., dated 10th March 1802. |
| 19 | Constructing a fender bridge in front of the Chataparru escape. | 4,240 | 534 I., dated 12th May 1902. |
| 20 | Improvements to Gunadala escape | 1,439 | 572 I., lated 20th May 1902. |
| 21 | Raising the lock bridge of head lock, Polraz canal, at 39 miles and 27 chains. | 1,500 | 630 I., dated 4th June 1902. |
| 22 | Raising the lock bridge of Bantumalli canal. | 1,860 | Do. |
| 23 | Providing counterweighted lift shutters for the West Tammileru escape. | 24,000 | $\begin{aligned} & 660 \text { I., dated 12th } \\ & \text { June } 1902 . \end{aligned}$ |
| 24 | Opening the first reach of the East Bank canal. | 4,150 | 1309 I., dated 27th November 1902. |
| 25 | Constructing an undertunnel at 0 mile 6 furlongs 450 feet of Kondongi channel, Pulleru canal. | 1,200 | 1455 I ., dated 15 th December 1902. |
| 26 | Constructing quarters for the Traffic Superintendent and lascars at the West Tammileru escape, Ellore canal. | 3,330 | 1470 I., dated 17th December 1902. |
| 27 | Extending the Chintaguntapalem wharf, Masulipatam canal. | 4,170 | 1488 I., dated 22nd December 1902. |
| 28 | Constructing a wharf at Cowtaram | 5,560 | 113 I./A, dated 31st January 1902. |
| 29 | Constructing an undertunnel at 2 miles 8 chains of the North Side channel of the Dosapad channel. | 1,410 | $\begin{aligned} & 313 \text { I., dated 12th } \\ & \text { March } 1903 . \end{aligned}$ |
| 30 | Improvements to inlets of Ellore canal . | 2,520 | 474 I., dated 2nd May 1903. |
| 31 | Constructing bridge over Bandar canal at Pamarru, | 10,880 | 494 I., dated 6th May 1903. |
| 32 | Reconstructing a bridge over Junction canal at Pamarru. | 8,650 | 1043 I., dated 7th November 1903. |
| 33 | Providing double gates to Pamarru lock, Pulleru canal. | 6,440 | 1096 I., dated 26th November 1903. |
| 34 | Constructing inspection bungalow with outhouses at Tadinada, Polraz canal. | 7,550 | 705 I., dated 30th June 1904. |
| 35 | Constructing inspection bungalow with outhouses at Veeranki lock at 24 miles $44^{*}$ chains, Masulipatam canal. | 6,830 | 1426 I./A, dated 218t December 1904. |
| 36 | Constructing bridge across Mamillacodu at 2 miles 1 furlong, Pulleru canal. | 2,200 | 1433 I., dated 22nd December 1904. |
| 37 | Constructing wharf superintendent's shed at Cowtaram, etc. | 1,630 | 204 I., dated 23rd February 1905. |
| 38 | Improvements to West side channel, Masulipatam canal. | 2,120 | 172 I., dated 15̈th February 1905. |

Additional list of works sanctioned under Capital, Kistna Delta System-cont.

| $\begin{gathered} \text { Serial } \\ \text { number. } \end{gathered}$ | Name of work. | Amount of estimate. | G.O. number and date. |
| :---: | :---: | :---: | :---: |
|  |  | RS. |  |
| 39 | Reconstructing Boddapad dam on Pulleru canal at 14 miles 2 furlongs 190 feet. | 2,750 | 426 I.'A, dated 4th May 1905. |
| 40 | Constructing an undertunnel on Mallavole main channel at 2 miles 4 furlongs, Masulipatam canal. | 2,090 | 454 I., dated 12 th May 1905. |
| 1 | Constructing a combined store and lime shed at Veeranki lock, Masulipatam canal. | 1,030 | 484 I., dated 22nd May 1905. |
| 42 | Constructing regulator to Bantumalli South side channel, Pulleru canal. | 1,590 | 1055 I., dated 4th November 1905. |
| 43 | Improvements to Nadimicodu branch of Pedalanka channel, Pulleru canal. | 3,300 | 1183 I., dated 1st December 1905. |
| 44 | Revised estimate for improving and extending the Boddapad Zamindari cbannel and excavating a branch from it. | 11,760 | $\begin{aligned} & 43 \text { I., dated } 11 \text { th } \\ & \text { January } 1906 . \end{aligned}$ |
| 45 | Constructing quarters for four lascars at Tidal lock, Masulipatam canal. | 2,240 | 107 I., dated lst February 1906. |
| 46 | Constructing establishment sheds at Atukur, Ellore canal. | 2,000 | 478 I., dated 5th May 1906. |
| 47 | Constructing establishment sheds a, Kesarapalli on the Ellore canal. | 1,900 | Do. |
| 48 | Constructing a surplus sluice on the left bank of the Pandraka Salt Factory channel. | 1,550 | 180 I.. dated 17th June 1907. |
| 49 | Constructing an office building for Subdivision office at Cowtaram. | 2,630 | 505 I.. dated 23 rd November 1907. |
| 50 | Constructing quarters for the Subdivisional Officer at Cowtaram. | 3,670 | 168 I., dated 14th April 1908. |
| 51 | Acquisition of land and construction of sheds for wharf establishment at Pamarru, Masulipatam canal. | 2,540 | 337 I., dated 21st September 1908 |
| 52 | Improvements to Jalipudi under tunnel at 39 miles 3 furlongs 89 feet of Ellore canal. | 2,550 | $\begin{aligned} & 81 \text { I., dated } 23 \mathrm{rd} \\ & \text { February } 1909 . \end{aligned}$ |
| 53 | Raising the bridge of head lock of Bantumilli canal at 36 miles 5 chains at Cowtaram. | 1,780 | 2.29 I. A, dated 2nd June 1909 . |
| 54 | Raising the lock bridge of Vinjaram lock, Polraz canal at 53 miles 28 chains. | 1,820 | 229 I. A, dated 2nd June 1909. |
| 55 | Improvements to Kotimerakacodu branch of Mallavole main channel, Bandar canal. | 4,440 | $\begin{aligned} & 163 \text { I., dated } 27 \text { th } \\ & \text { August } 1910 . \end{aligned}$ |
| 56 | Constructing a retaining wall at Perikeed bridge at 27 miles 0 furlong 330 feet of Ellore canal. | 2,350 | 305 I., dated 14th September 1910. |
| 57 | Constructing a store shed at Akumarru lock, Bandar canal. | 1,550 | 411 I., dated 19th December 1910. |
| 58 | Constructing a store shed at West Tammileru escape, Ellore canal. | 1,530 | Do. |
| 59 | Improvements to lock bridge at Ellore | 1,370 | 51 I., dated 2nd February 1912. |
| 60 | Revised estimate for constructing a bridge at Morva crossing 8 miles 7 furlongs of Medur channel, Masulipatam canal. | $1,1 \supseteq 0$ | 141 I., dated 12th April 191?. |
| 61 | Revised estimate for constructing a syphon sluice across Budameru new cut at Savaragudem 8 miles 4 furlongs on the left bank of Ellore canal. | 1,250 | 284 I., dated 30th July 1912. |
| 62 | Compensation for land taken up at Kaza for excavating Manageroodu Main channel. | 1,229 | 427 I., dated 8th Octo ber 1912 . |

Additional list of works sanctioned under Capital, Kistna Delta System-cont.

| Serial number | . Name of work. | Amount of extimate. | G.O. number and date. |
| :---: | :---: | :---: | :---: |
|  |  | RS. |  |
| 63 | Raising the Mudenepalli bridge at 43 miles 5 chains of Polraz canal. | 1,8.50 | 81 I., dated 31st January 1913. |
| 64 | Constructing an undertunnel at $3 / 0$ of Kunderu channel. | 1,520 | 364 I., dated 24th June 1913. |
| 65 | Constructing a goods shed at Pamarru wharf, Masulipatam canal. | 2,400 | 522 I., dated 8th September 1913. |
| 66 | Constructing an undertunnel at 17 miles 6 furlongs of Dosapad channel, Ryves canal. | 3,700 | 604 I., dated 12th December 1913. |
| 67 | Improvements to the road culverts on Ellore-Sreeparru Road. | 3,820 | 170 I., dated 8th April 1914. |
| 68 | Improvements to the Gunadala escape, Ellore canal. | 2,500 | 515 I., dated 10th November 1916. |
| 69 | Converting the Boddapad dam into a regulator at 14 miles 32 chains of Pulleru canal. | 3,350 | 153 I., dated 16th May 1921. |
| 70 | Constructing a combined head sluice and aqueduct for the new Tamaraboka channel at 52 miles 2 furlongs right bank of Polraz canal. | 3,720 | 141 I., dated 24th April 1922. |
| 71 | Constructing a bund across the Endapalli swamps. | 2,832 | $77 \underset{\text { March } 1924 .}{ } \quad$ dated |
| 72 | Constructing a bridge at 17 miles 24 chains of the Ramarajupalem channel. | 4,500 | 19 I., dated 6th January 1925. |
| 73 | Constructing combined head sluices and aqueducts for the new Syamalambapuram channel at 51/2 and new Tamarakollu at 52; 2 of Polraz canal. | 3,700 | Mis. No. 2 I., dated 3rd January 1925. |
| 74 | Remodelling Polraz canal 2nd reach | 12,100 | 617 I., dated 21st March 1927. |
| 75 | Excavating the Manimeswaram channel branch of Bantumilli canal. | 10,762 | 2014 I., dated 12th September 1927. |
| 76 | Remodelling Pamarru channel, branch of Pulleru canal. | 12,033 | L. Dis. 4431-26, dated 13th May 1927. |
| 77 | Regrading the Ponukumad channel, branch of the Ellore canal. | 8,800 | 532 I., dated 22nd February 1928. |
| 78 | Improvements to Gunadala escape at 4/3, right bank of Ellore canal. | 5,590 | 1078 I., dated 11th April 1928. |
| 79 | Remodelling Kaldindi right side channel of Mantumilli canal. | 6,530 | Mis. 1138 I., dated 26th April 1928. |
| 80 | Constructing a lock weir at Akumarru lock at 43 miles 8 . chains of Masulipatam canal. | 12,660 | 1123 I., dated 6th April 1929. |
| 81 | Remodelling and extending the Watlur main channel, branch of Ellore canal. | 15,590 | Mis. 1515 I., dated 17th May 1929. |
| 82 | Constructing a surplus weir at 59 miles 25 chains, right bank of Bantumilli canal. | 8,660 | 1728 I:, dated 12th July 1928. |
| 83 | Remodelling the Kaikalur channel, branch of Polraz canal. | 24,650 | 1805 I., dated 24th July 1928. |
| 84 | Constructing a surplus weir at 5 miles 59 chains of East side channel. | 4,264 | 2570 1., dated 17th October 1928. |
| 85 | Constructing wharf superintendent's quarters and telephone room at Perikeed. | 1,600 | 1701 I., dated 10th. July 1928. |
| 86 | Corstructing a Delta lascars' quarters at 35 miles 24 chains, right bank of Ellore canal near Watlur. | 1,060 | 898 I., dated 18th. March 1929. |
| 87 | Reconstructing the sweepers' quarters at Ellore wharf at 38 miles 46 chains left bank of Ellore canal. | 1,060 | Do. |

Additional list of works sanctioned under Capital, Kistna Delta System-cont.

| Kistna Western Division. |  |  |  |
| :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { Gerial } \\ \text { number. } \end{gathered}$ | Name of work. | Amoant sanctioned. | G.O. number and dato. |
|  |  | RS |  |
| 1 | Compensation for land for distributaries of Bapatla branch channel. | 4,000 | $765 \text { I., dated 4the }$ $\text { October } 1898 .$ |
| 1899-1900. |  |  |  |
| 2 | Extending and improving No. I Branch of west side channel extension. | 1,330 | 193 I., dated 20th February 1900. |
| 1900-1901. |  |  |  |
| 3 | Constructing wharf establishment sheds at Tenali, Chebrole and Sitanagaram to Nizampatam canal, Commamur canal and Main canal. | 8,050 | ```467 I., dated 18th May 1900.``` |
| 4 | Constructing a cattle crossing at Pedapulivarru 28 miles 3 furlongs of Bank canal. | 1,410 | 918 I., dated Ist November 1900. |
| 5 | Constructing a cattle crossing at Pidapartipalem and Bommavaripalem of Bank canal 10 miles 4 furlongs and 13 miles 4 furlongs. | 4,130 | $\begin{gathered} \text { I., dated } \\ \text { Jthary } 1901 . \end{gathered}$ |
| 1901-1902. |  |  |  |
| 6 | Constructing a Feader pile foot bridge in front of Commamur canal head sluice. | 3,190 | 424 I., dated 23rd May 1901. |
| 7 | Constructing a double lascars' shed at Aremanda and Alavala regulators at 11 miles 7 furlongs of Tungabhadra side channel. | 1,650 | 402 I., dated 13th May 1901. |
| 8 | Constructing a bridge at 1 mile 6 furlongs of Kollipara channel. | 2,530 | 396/A, dated 10th: May 1901. |
| 9 | Excavating Pedaravur side channel .. | 1,800 | 709 1., dated 17th September 1901. |
| 10 | Excavating branch channel at 2 miles 3 furlongs 300 feet left bank Vankapuram channel. | 2,000 | 932 I., dated 4th December 1901. |
| 11 | Excavating and constructing masonry works on Pundla channel. | 20,200 | 665 I., dated 2nd September 1901. |
| 12 | Constructing lock establishment sheds at Pedaparru 11 miles of Bank canal. | 2,240 | 252 I., dated 24th February 1902. |
| 13 | Excavating Karenchedu new channel | 1,920 | 312 I., dated 10th March 1902. |
| 1902-1903. |  |  |  |
| 14 | Improving the east side channel of Kistna Western Division. | 45,318 | 1307 I., dated 12th November 1902 and 1485 I., dsted 22nd December 1902. |
| 15 | Constructing side walls to Revendrapad lock at head of Bank canal. | 4,674 | 168 I., dated loth February 1903. |
| 16 | Improving and extending to Potumeraka channel to Nawab tank No. 7 channel. | 1,820 | 286 I., dated 7th March 1930. |
| 17 | Improving the Potumeraka west branch taking of at 2 miles 0 furlong 500 feet of Potumeraka channel Bank canal. | 2,841 | 350 I., dated 21st March 1903. |
| 18 | Constructing a 6 feet girder bridge across the Aremanda, Minor branch of the Tungabhadra side channel. | 4,863 | 477 I., dated 2nd May 1903. |
| 19 | Constructing a cattle crossing below bow string girder bridge over Tungabhadra | 4,551 | 619 I., dated 18th June 1930. |

## Additional list of works sanctioned onder Capital, Kistna Delta System - oont.

Serial
Name of werk number.

Amount anctioned. C.O. number and dato.

Rs.
1903-1904.
Improvements to Vellatur side channel and its branches.

49,689
840 I., dated 3rd September 1903 and 1154 I., dated 8th December 1903.

1904-1905.
Constructing lock establishment sheds and wharf office at Vellatur lock 26th mile of Bank canal.
Excavating Kasukurru No. 2 Branch channel at 11 miles 400 feet of the right bank of Sri Rangapuram channel.
Constructing a Fender pile foot bridge across weir channel above Vellatur lock, Bank canal.
Constructing lock establishment and mile coolies' sheds at Tail lock, Bank canal.
.Raising the right bank of the Bank canal and the left bank of the Razu channel and connecting both the banks.
Improving and extending the Mannava channel.
Constructing a cattle crossing at 32 miles 2 furlongs of Bank canal.
Constructing two sheds with compound walls for tappal lascars at Karemchedu at 325 left bank of Commamur canal.
Reconstructing the kitchen, godown and stables attached to the inspection bungalow at Intur lock, Nizampatam canal.
Improvements to inspection bungalow at Pallapatla with outhouses.

Improving and extending Jumala tank channel.
Fixing mile, furlong and demarcation stones along Tungabhadra, Kopalli and Konderu affluents.
Fixing mile, furlong and demarcation stones along the irrigation channels of Ponnur section.
Fixing mi e, furlong and demarcation stones on the distributaries of the Commamur canal in upper section.
Fixing mile, furlongs and demarcation stones on the Tungabhadra side channels and its branches in Aremanda section.
Improvements to inspection bungalow with outhouses at Sodayapalem 47 miles 77 * chains, Bank canal.
Replacing the steel girders to the masonry arch below Kollimerla lock bridge.
Improving the Chinapalem channel at 8 miles 70 chains of Main canal.
Sluicing Gullapalli channel at 27 miles 2 furlongs east side channel of Main canal.

4,366 414 I., dated 14th April 1904.

4,991 736 I., dated 6th July 1904.

3,567 836 I., dated 3rd August 1904.

941 I., dated 24th August 1904.
1144 I., dated 20th October 1904.

11,2291200 I., dated 31st October 1904.
163 I., dated 13th February 1905.
494 I., dated 24th May 1905.

886 I., dated 20th September 1905.

1,894. 105 I., dated lst February 1906 and 399 I., dated 9th April 1906.
535 I., dated 16th May 1906.
644 I., dated 13th June 1906.

2,128646 I., dated 13th June 1906.

2,214 656 I., dated 14th June 1906.

4,797
Do.

3,600
127 I., dated 18th March 1907.

184 I., dated 21 st June 1907.

28 I., dated 21st June 1907.
3,063 426 I., dated lat October 1907.

Additional list of works eanctioned under Capital, Kistna Delta System-cont.

| Serial number. | Name of work. | Amount sanctioned. RS. | G.O. nuraber and dato. |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
|  | 1909-1910. |  |  |
| 40 | Improvements to Karumur branch of Vellatur side channel, Bank canal. | 2,183 | 726 I., dated 19th March 1909. |
|  | - 1910-1911. |  |  |
| 41 | Resluicing Jagarlamudi channel from its head sluice. | 3,106 | 120 I., dated 22nd April 1910. |
| 42 | Excavating a side channel at 15 miles of east side channel, Main canal. | 2,209 | 123 I., dated 25th April 1910. |
| 43 | Remodelling the Bethapudi channel of Vellatur side channel, Bank canal. | 3,690 | $\begin{aligned} & 208 \text { I., dated 29th } \\ & \text { June } 1910 . \end{aligned}$ |
| 44 | Constructing pipe sluice on Tungabhadra side channel, Commamur canal. | 2,200 | 213 I., dated 30th June 1910. |
| 45 | Constructing a cattle crossing at 2 miles 3 furlongs 330 feet of the Bapatla east drain. | 430 | 19 I., dated 6th January 1913. |
| 46 | Excavating a new Velicherla channel . . | 2,300 | 108 I., dated 11 th February 1913. |
|  | 1914-1915. |  |  |
| 47 | Construct ng three bridges on Tungabhadra side channel. | 7,600 | 213 I., dated 12th May 1914. |
| 48 | Raising the body wall of Emileru outlet. | 2,100 | 52 I., dated |
| 49 | Excavating Palliconde-branch at 2 miles 2 furlongs 248 feet of Bethapudi channel. | 3,962 | 459 I., dated 8th September 1914. |
|  | 1915-1916. |  |  |
| 50 | Constructing a trip crossing at 130 of Bank canal. | 2,223 | 117 I., dated 13th March 1916. |
|  | 1916-1917. |  |  |
| 51 | Improvements to the Goparaju channel of the east side channel extension. | 1,300 | 304 I., dated 13th July 1916. |
| 52 | Improving the Thotapalli north branch channel of the Vellatur channel, Bank canal. | 1,550 | 299 I., dated 7th July 1916. |
| 53 | Excavating Ponnapalli branch of the Gollapalli channel. | 14,703 | 430 I., dated 25th October 1916. |
| 54 | Fixing pipes in masonry in Kollipara channel supplemental to improvements to Kollipara channel sanctioned in G.O. No. 454 I., dated 5th September 1914. | 3,800 | 425 K.W., dated 2nd November 1916. |
| 55 | Providing head walls to pipe sluices in Edlapalli channel. | 2,855 | 559 K.W., dated 4th January 1917. |
| 56 | Fixing pipes in masonry in Chivalur channel. | 1,250 | 451 I., dated 2nd April 1917. |
| 57 | Closing the outlet at 50 miles 47 chains of Commamur canal. | 19,585 | 577 I., dated 15th December 1917 and 441 I., 26th October 1917. |
| 58 | Providing revetment to the towpath in the Main canal. | 1,580 | 78 I., dated 21st February 1918. |
| 59 | Improvements to Burripalem channel branch of Nandinelugu channel of east side channel. | 4,464 | 48 I., 1918-19 and 379 <br> I., datad 20th November 1918. |
| 60 | Fixing pipes in masonry on Kollipara channel. | 2,976 | 133 I., dated 2nd May 1919. |
| 61 | Providing means of irrigation for Mannava lands cut off by Doppalapudi affluent. | 2,034 | 181 I., dated 11th June 1919. |
| . 62 | Constructing a bridge at 8 miles 1 furlong 200 feet of Tungabhadra side channel. | 3,300 | 268 I., dated 9th September 1919. |


| $\begin{aligned} & \text { Serin! } \\ & \text { number. } \end{aligned}$ | Name of work. | Amount manctionod. | G.O. number and deto. |
| :---: | :---: | :---: | :---: |
| 1919-1920. |  |  |  |
| 63 | Improvements to Murkondapadu block under the Commamur canal revised eatimate. | 13,200 | 249 I., dated 19th August 1919. |
| 64 | Resluicing Yerikalapudi channel .. | 1,972 | 289 I., dated 4th |
| 65 | Fixing pipes in masonry in the Alaparru channel. | 2,728 | 290 I., dated 4th October 1919. |
| 66 | Fixing pipes in Kollipara channel . . | 2,620 | 81 I., dated lst March 1920. |
| 67 | Revised estimate for fixing pipes in masonry of Ullipalem channel, branch of Isukapalli channel. | 2,150 | 160 I., dated 11th May 1920. |
| 68 | Providing means of irrigation for Mannava lands cut off by Doppalapudi affluent. | 1,880 | 258 I., dated 3rd September 1920. |
| 69 | Revised estimate for constructing sheds for two mile coolies and one watchman at the Inspection Bungalow, Firangidibba. | 2,080 | 62 I., dated 17th February 1922. |
| 70 | Improvements to East side channel extension. | 2,160 | 237 I., dated 23rd September 1922. |
| 71 | Constructing a paved ramp over the Tungabhadra cut on Tsandole-Bapatla road. | 2,200 | 102 I., dated 3rd May 1923 . |
| 1923-1924. |  |  |  |
| 72 | Constructing cattle crossing at 22/3 of Bank canal. | . | 173 I., dated 7th June 1922. |
| 73 | Fixing pipes in channels in the Kistna Western Division. | 6,200 | 176 I., dated 22nd April 1825. |
| Additional list of works sanctioned under "Capital" for Drainage, Divi Pumping System. |  |  |  |


| Sorial number | Name of work. | $\underset{\text { Amount }}{\text { Eanctioned. }}$ | G.O. number and date. |
| :---: | :---: | :---: | :---: |
| 1 | Improvements to the drainage of the Mangaleru basin, Divi Pumping system. | $\begin{array}{r} \text { Rs. } \\ \mathbf{4 , 2 0 0} \end{array}$ | 417 I., dated 14th September 1916. |
| 2 | Improvements to Sitapati tank drainage basin. | 7,964 | 415 I., dated 14th September 1016. |
| 3 | Excavating Hamsaladivi drain | 4,257 | Do. |
| 4 | Excavating Yabanna drain, Divi Pumping sytem. | 2,850 | 29 I., dated 26th January 1021. |
| 5 | Improvements to the drains in the Divi subdivision. | 15,000 | 882 27, C.E.P., dated 14th February 1928. |
| 6 | Acquiring and demarcating margins along drains in Lingayyacodu basin. | 1,190 | 271 I., dated 11th September 1919. |
| 7 | Acquiring and demarcating margins along drain in Divi delta. | 2,500 | 173 I., dated 27 th May 1920. May 1920. |
| Addit onal list of works sanctioned under "Capital" for Drainage, Kistna Delta System. |  |  |  |
| Kistna Eastern Division. |  |  |  |
| 1 | Excavating Edavalli drain | 1,770 | Not traceable. |
| 2 | Improving Palacodu drain | 2,360 | 1018 I., dated 30th November 1899. |
| 3 | Supplying stoneware pipes for undertunnel under Sivaganga drain from pipe sluice at 47/1. | 2,320 | 124 I., dated 9th Feb ruary 1901. |
| 4 | Excavating Kallicodu drain | 3,230 | 422 I., dated 23 May 1901. |

Additional list of works sanctioned under "Capital" for Drainage, Kistna Dolta System-cont.

| Serial number. | Name of work. | Amount eanctioned. | G.O. number and date. |
| :---: | :---: | :---: | :---: |
|  |  | Rs. |  |
| 5 | Excavating Penjendra side drain .. | 1,990 | $\begin{aligned} & 857 \text { I., 票 dated } 14 \text { the } \\ & \text { October } 1903 . \end{aligned}$ |
| 6 | Constructing superpassage and drainage inlet at 16 miles $\mathbf{r}$ furlong of Masulipatan canal. | 5,430 | 367 I. K. dated 2nd April 1904. |
| 7 | Excavating Paidimukkala drain | 1,930 | $\begin{aligned} & 368 \text { I., dated 4th April } \\ & 1904 . \end{aligned}$ |
| 8 | Improvements to the Polraz drain .. | 44,500 | 993 I., dated 8th September 1904. |
| 9 | Excavating Amaravathi drain | 1,140 | 542 I., dated 5th June 1905. |
| 10 | Excavating Arisepalli drain .. | 1,170 | 1144 I., dated 21st November 1905. |
| 11 | Excavating Amudalapalli, affluent of Pedalanka drain. | 3,170 | 721 I., dated 3rd July 1906. |
| 12 | Diversion of Bheemarru drain | 1,550 | 89 I., dated 5th March 1912. |
| 13 | Excavating Kanderu drain | 2,300 | 262 I., dated 26th June 1917. |
| 14 | Excavating Pesaramalli affluent | $\begin{gathered} 1,800 \\ \text { May } \end{gathered}$ | $\begin{aligned} & 189 \text { I., dated 31st } \\ & 1918 . \end{aligned}$ |
| 15 | Excavating Kudaravalli drain below Kuda ravilli undertunnel. | 1,650 | 46 I., dated 8th February 1919. |
| 16 | Constructing an undertunnel at 4 miles 2 furlongs 250 feet of Kodur channel above Bantumili road and improving the road side drain. | 1,780 | 319 I., dated 18th November 1919. |

## Kistna Western Division.

1898-1899

1 Reconstructing a drainage aluice in river bank at Vellatur lock.

1889-1900.
2 Bridge over Kopaili drain .. .. .. 7,300 596 I., dated 14th
Constructing a railway bridge over Peravali drain.
$30,100 \quad 725$ July 1900 . ${ }^{190}$ dated 30 th August 1900.

1901-1902.
4 Providing a second trough to the aqueduct over Repalli Main drain, straight cut to carry Vellatur channel.
Excavating Pedaravur drain
9,560 924 I., dated 30th November 1898.

[^12] ,

| Serial anmber. | . Matastof work | - Anctiva anctionel. | C.O. mamber and drea. |
| :---: | :---: | :---: | :---: |
| 1906-1907. Es. |  |  |  |
| 9 | Constructing a foot bridge across Rayakampad affluent at 5 miles 1 furiong and 120 feet. | 2,564 | 535 I., dated 16th May 1906. |
| 10 | 'Extending the Rayakampad affluent . . | 1,602 | 1030 I., dated 27th September 1906. |
| 1911-1912. |  |  |  |
| 11 | Appapuram project drainage scheme | 38,236 | 267 I., dated 18th August 1910. |
| 1915-1916. |  |  |  |
| 12 | Excavating Doppalapudi affluent | 5,353 | 332 I., dated 5th July 1915. |
| 13 | Excavating Palakayagunta drain .. | 4,000 | 229 I., dated 23 rd May 1916. |
| 1916-1917. |  |  |  |
| 14 | Improvements to Pollards channel for converting the Tenali-Jampani channel into a drain. | 4,156 | 454 I., dated 11 th October 1916. |
| 1917-1918. |  |  |  |
| 15 | Lowering the floor of Gudlavalli bridge over Repalli Main drain. | 5,413 | 341 I., dated 22nd October 1918. |
| 16 | Excavating a straight cut for the Tungabhadra drain near Kbttampudi village. | 4,344 | $\begin{aligned} & 216 \text { I., dated 17th } \\ & \text { June 1918. } \end{aligned}$ |
| 17 | Constructing a masonry arched bridge at 14,4 of Bhattiprolu drain. | 5,700 | 224 I., dated lst July 1921. |
| 18 | Excavating side drains along left outer toe of the Bank canal from 10,2 to 442. | 2,000 | $\begin{aligned} & 230 \text { I., dated 15th } \\ & \text { 1923. } \end{aligned}$ |


| Remarks of the Director of Agriculture, dated 9th April 1930. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Paragraph 86-Calculation of ploughs with reference to the number of working catlle.-The figures for the working cattle taken at the census held in October 1924 and in January 1930 are appended below :- |  |  |  |  |  |  |
| Number of working cattile. Perantage. |  |  |  |  |  |  |
| Distriot. | Bulle. | Bullooks. | Male buftaloes | Total. | Ploughe. | Percentage of ooluman. (3) to (2). |
| (1) | (2) |  |  |  | (3) | (4) |
| East Godavari- |  |  |  |  |  |  |
| October 1924 | 107,684 | 190,634 | 50,319 | 348,637 | 154,016 | 44 |
| January 1930 | 80,141 | 245,789 | 64,134 | 390,064 | 166,086 | 43. |
| West Godavari- |  |  |  |  |  |  |
| October 1924 | 123,908 | 70,808 | 58,165 | 252,881 | 113,163 | 45 |
| January 1930 .. | 39,790 | 151,693 | 63,527 | 255,010 | 111,783 | 44 |
| Kistna- |  |  |  |  |  |  |
| October 1924 | 83,913 | 106,077 | 86,799 | 276,789 | 96,307 | 35 |
| January 1930 .. | 54,191 | 130,631 | 57,947 | 242,769 | 94,552 | 39 |

The assumption of the Committee that the number of ploughs has been calculated automatically on the basis of a pair of working cattle for each plough does not seem to be warranted.

Time of cattle census.-The two previous censuses were taken in the third week of October for the reason that village officers had comparatively less work then than in the other times of the year. It has been stated by the Committee that in October-November cattle are taken to the Agency and Hyderabad. But crop reports show that in October first-crop paddy is harvested and that the second crop covers but a small area as noted below:-

| District. |  |  | Total area under paddy. | Area under second orop. | Percentage. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | -• | - | $\begin{gathered} \text { ACS. } \\ 637,729 \end{gathered}$ | $\begin{gathered} \text { AOS. } \\ 104,894 \end{gathered}$ | 16 |
| West Godavari |  |  | 658,256 | 120,406 | 18 |
| Kistna | . | . | 562,629 | 853 | 0.2 |

It is unlikely that cattle would be taken at a time when pasture and fodder would be available on account of paddy harvest. The recent census was taken in the third week of January 1930 when the cattle, if any, that had gone out of the district should have returned. But the statistics do not show large disparity. The number of cattle in West Godavari was almost the same while in East Godavari it was more and in Kistna less.

Paragraphs 87 and 88.-If the facts stated herein are true, it seems a large number of ryots are labouring under uneconomic conditions.

Paragraph 89.-The number of ploughs 113,003 in East Godavari noticed by the Committee does not agree either with the census figures of October 1924 or January 1930.

Paragraph 90.-Details of cattle in the East Godavari district are said to have been seriously under-estimated. I have no data to offer my remarks on this observation:

Statistics of the total number of cattle are given below for all the three districts:-


Paragraphs 91 and 92.-The area under cultivation in these two districts Kistna and West Godavari is $1,885,218$ acres. Of this, $1,101,707$ acres are under irrigation and 723,51l acres are rain-fed.

With a ratio of $1: 5::$ pairs of bullocks: acres cultivated in the case of paddy and of $1: 10$ for the remainder the total bullock power necessary is 292,692 pairs, say 293,000 .

Taking a more conservative figure for the working life of a bullock than that quoted by the Royal Commission 8 years instead of 10 a section through the bullock population will show ten classes-

A Bullocks in their eighth year of work.

| B | " | seventh | " |
| :---: | :---: | :---: | :---: |
| C | " | sixth | , |
| D | " | fifth |  |
| E | " | fourth | " |
| F | " | third | , |
| G | , | second |  |
| H |  | first |  |
| K | Bull calves | two years old. |  |
| L | " | one year old. |  |

The number of pairs of bullocks to be replaced every year is $\mathbf{3 6 , 6 2 5}$.
To allow for wastage about 40,000 pairs of bull calves have to be produced. every year.

The Ongole cow will drop her first calf when about four years old and will calve on the average every two years. With an average of four calves per cow, a section through the breeding population will show-

| A Cows about to have their fourth calf |  | . | . | . | 15 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| B Cows a year younger than A |  | . |  |  | 15 |
| C Cows about to have their third calf |  | . |  |  | 15 |
| D Cows a year younger than C |  | . |  |  | 15 |
| E Cows about to have their second calf |  | $\ldots$ | . |  | 15 |
| F Cows a year younger than $\mathbf{E}$ |  | . | . |  | 15 |
| G Cows about to have their first calf |  | - | - |  | 15 |
| H Heifers three years old . . |  | - | - |  | 17 |
| K. Heifers two years old . . | - | . | . | . | 17 |
| L Heifers one year old | . | . |  | . | 17 |

With a ratio of one bull to $\mathbf{6 0}$ cows likely to come in heat the numbers in each class will run about those quoted alongside each.

Assuming that 60 cows in calf raise only 54 calves, there will be produced 27 bull calves and 27 heifers. Set aside 1 bull calf to keep up the bull strength. This leaves 26 possible bullocks. At least 7 of the heifer calves can be disposed of as soon as fit to leave their dams. For every 26 possible bullocks there are therefore 156 breeding stock a ratio of $1: 6$ which will make a demand on fodder.

The total number of livestock to be maintained each year is therefore 293,000 pairs; the total number of bullocks classes A to H, plus young stock classes K to L , i.e., $2 \times 40,000$ pairs $=80,000$ pairs plus breeding stock $6 \times 40,000$ pairs $=240,000:$ in all 613,000 pairs, i.e., $1,226,000$ animals. The actual number according to the latest census is $1,610,000$ of which about 160,000 will be young calves. The comparable figure with our calculated figure is therefore $1,450,000$, i.e., 224,000 more than is necessary for ballocks production.

The position is uneconomic in the extreme in that not only could the Ongole cow provide milk and so make the keeping of she-buffaloes unnecessary, but also it could be used for work and if properly cared for could be induced to calve at a little over three years old and to give a calf once every year. Moreover there is no real reason why the working life of bullock should not be ten years if it were properly treated.

In regard to fodder, the areas of crops in these same two districts are-
$1,220,000$ acres of paddy first and second crops.
425,000 " other cereals chiefly cholam.
170,000 " pulses.
The yield of paddy straw may be taken at 1 ton per acre, of other cereals half a ton per acre, and of pulses one-fourth of a ton per acre. The total yield of fodder is therefore-
$1,220,000$
212,000
42,000 $\overline{\prime \prime}$
as against the Committee's estimate of 160,000 tons. One pair of cattle fed properly will consume in a year 5 tons of dry fodder, i.e., there is enough fodder for 294,800 pairs of cattle.

Paragraphs 93 and 94.-There are 1,100,000 acres of current fallows and culturable waste in these two districts. According to the Committee this should keep 550,000 pairs of cattle for three months in the year. To my mind this is non-sense. It may allow room for this number of cattle to roam about it, but not to feed them properly. Without a careful examination of the area in question I cannot say what density of stock it could maintain during the monsoon, but I should be inclined to assess it at nearer 10 acres per pair than 2.

It is not known how the Committee's figure 331,006 for the districts of West Godavari and Kistna was arrived at.

Paragraph 95-Sheep and Goats.-The Committee was of opinion that the number was seriously under-estimated. The statement below compares the total number of sheep and goats found in the districts of East Godavari, West Godavari and Kistna during the last two censuses. The last' census shows increase under sheep except in West Godavari ; a similar increase under goats in East Godavari ; and decrease in goats in West Godavari and Kistna.

The decrease under goats in the districts of West Godavari and Kistna is apparently due to the fact that ryots were induced by forest panchayats to give up rearing of goats as they kill vegetation.

| October 1924- Godavari. Kistna. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
| Sheep | . | . | . | - |  | 70,585 | 184,943 |
| Goats | .. | . | . | . | . | 96,919 | 175,957 |
| January 1930- |  |  |  |  |  |  |  |
| Sheep | - | - | -• | - | $\cdots$ | 63,884 | 185,327 |
| Goats | . | . | . . | . | . | 77,071 | 116,100 |

Paragraph 357.-Quite true.
Paragraph 358.-It is true that most work has been done in the deltaic area.
Paragraph 359-
VI.-Area under Cotton, Oil-seeds, Gingelly and Cholam.

|  |  | East Godavari. |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | ---: | ---: |
| Years. |  |  |  | Cotton. | Oil-seods. | Gingelly. | Cholam. |
|  |  |  |  | ACs. | $\Delta C S$. | ACS. | ACs. |
| $1924-25$ | $\ldots$ | $\ldots$ | $\ldots$ | 13,545 | 110,005 | 75,934 | 114555 |
| $1925-26$ | $\ldots$ | $\ldots$ | $\ldots$ | 13,306 | 141,349 | 81,083 | 98,329 |
| $1926-27$ | $\ldots$ | $\ldots$ | $\ldots$ | 9,596 | 130,652 | 70,158 | 101,163 |
| $1927-28$ | $\ldots$ | $\ldots$ | $\ldots$ | 7,760 | 136,619 | 77,618 | 108,433 |
| $1928-29$ | $\ldots$ | $\ldots$ | $\ldots$ | 11,200 | 143,676 | 83,267 | 101,665 |

West Godavari.

| Yeara. |  |  | Cotton. |  | Oilmeedr. | Gingally. | Cholam. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Acs. | $\Delta \mathrm{cs}$. | Acs. | acs. |
| 1924-25 |  |  | - | 1,238 | 94,888 | 64,984 | 84,717 |
| 1925-26 |  |  | . | 1,296 | 109,556 | 80,759 | 66,428 |
| 1926-27 |  |  | - | 1,254 | 73,692 | 47,655 | 73,653 |
| 1927-28 |  |  | $\cdots$ | 1,165 | 84,225 | 59,612 | 76,213 |
| 1928-29 |  |  | . | 1,105 | 82,060 | 60,503 | 77,253 |
| Kistna. |  |  |  |  |  |  |  |
| 1924-25 | . | - | . | 64,526 | 39,201 | 11,933 | 238,113 |
| 1925-26 | $\cdots$ |  | . | 62,978 | 34,880 | 9,088 | 239,713 |
| 1926-27 | . . |  | . | 41,635 | 31,520 | 7,724 | 243,620 |
| 1927-28 | $\cdots$ |  | - | 43,197 | 41,534 | 12,834 | 253,707 |
| 1928-29 | $\cdots$ |  | $\cdots$ | 48,519 | 50,088 | 9,324 | 245,599 |

The Committee is of opinion that the area under the crops is decreasing. This is not warranted by the figures given above except in the case of cotton. The decrease under cotton is due mainly to the fall in prices of cotton owing to the large output of American cotton. The variations in the case of other crops are due mainly to seasonal vicissitudes.

It would be very nice to have a research station in the uplands but there are other areas with more pressing problems.

Paragraph 360.-The incidence of this disease is probably due to the monealthy conditions under which the coconuts are grown.

Paragraph 361.-See paragraph 360.
Paragraph 362.-Their information may be correct, it may not. There are many lines of work waiting to be taken up, but a reduction in the assessment will not cause this to take place any quicker.

Paragraph 363.-The question of keeping up the fertility of the land is not difficult. The difficulty is to get the cultivator to adopt the proper procedure. We do know that artificial manures exist and we have carried on experiments for years, it is only recently that their price has become reasonable.

Paragraph 364.-Village agricultural associations are needed.
Paragraph 365.-More District Agricultural officers are needed and too much time is taken up in keeping accounts. There is a tendency to assume that the accounts are the work instead of being merely incidental to the work. It can be remedied without any great difficulty if the point of view is changed.


[^0]:    - Memorantum on the progresa of the Madras Preadenoy by B. Srinivasa Kaghava Ayyangar (page 19p).
    + Ibid (page 192).

[^1]:    Bahadur Srinivasa Raghava Ayyangar to the Government of Madras upon the results of the British Administration up to 1890 in Madras Presidency clearly show that there
    Wages have risen in the last 40 years. had taken place a distinct increase in the wages paid to agricultural workers even as I-12

[^2]:    - Vide District Gaselteer, Godavari Distriet.

[^3]:    224. The different kinds of manure available in the three districts, the facts Pati mannu. which has scarcely been touahed by anyone till now. To enumerate but a few
[^4]:     for oar empeiry, eaty haded peoperty, ras ecosidered in the Gowernwent engairy. Hewen the perceatage of debte to tutal property in stoven as sighty hutber in ve fovernment enquiry.

[^5]:    - Fide Appondix No, 21.
    t Vide Appendix No. 22.

[^6]:    
     the etamiting orepe It is simizat to the farsureanetroth

[^7]:    - Eoonomics of the Handloom Weaving Induetry by N. G. Kanga.
    + Working clase budgete by E. Shirrse.
    $\ddagger$ Progrese of the Madras Presidenoy, page 141

[^8]:    * Figares mocording to inventory.

[^9]:    - For the grain payment made by this ryot, osah equivalents are caloulatod acoording to the average prives ruling in that yeer, indioated by his own khata. To theeo pagments are added the mmall cash paymento made by this ryok

[^10]:    －And he onltivatea 80 aoren of the landowner＇s land as ganden and had thin for hio own eultivation．

[^11]:    - The figaros in italiof represent the oaloulations made in the ofllisil reports.

[^12]: