

**IRRIGATION STATISTICS OF BRITISH INDIA
1890 - 1946-47**

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PUNE 411 004**

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Preface

(6)

Under the comprehensive project entitled 'Historical Statistics of India - First Phase' the ICSSR approved a scheme aimed at building up a historical series of irrigation statistics was submitted by the Institute in late 1979. Broadly, three kinds of such series were sought to be built up, as proposed in the scheme.

- (a) Province-wise and district-wise areas irrigated (1890-1946/47) under government canals, private canals, tanks, wells and other sources.
- (b) Province-wise and district-wise areas of crops irrigated (1920-1946/47) under rice, wheat, barley, maize, jowar and other cereals and non-food crops, and
- (c) Financial results of irrigation projects.

The first two, namely (a) and (b) of the above, have been completed. The third was subsequently dropped as (i) on maturer reflections, it was feared that it would develop into a major research work by itself involving considerable reading, computation and analysis. The decision was taken by the Project Director in consultation with the research worker, an economic historian and the initial formulator of the scheme. He also left the

Institute subsequently; (ii) part (c) of the scheme could not be fitted into or presented as a 'series' for both the teaching community and the researchers in the field of in India as originally conceived by the Project Director and (iii) the principal objective of historical statistics, by definition, is to bring together and provide, in a neat, comparable and annotated form, specific type of data which is presently only partially available, or is unorganised or dispersed in several sources and/or time periods.

The brief mention of the methodology in the scheme proposal proposed that as a test case for further level of checking and attainment of accuracy of the proposed time series data of irrigation statistics, the irrigation statistics for the present day Maharashtra for the period 1890 to 1946/47 would be checked and verified with the data available in Survey and Settlement Reports. Such cross-checking and verification had also to be abandoned as it was found that (i) the data in the Survey and Settlement Reports did not give irrigation figures as such but areas of certain crops which could have been either irrigated or unirrigated and (ii) most often the Survey and Settlement Report pertained to either a group of villages or a taluka (as then organised) and this could not be inflated to the level of district as then constituted.

The only type of checking that could be done was to

ascertain that the figures given in the Agricultural Statistics of British India were culled from the Annual Season and Crop Reports pertaining to a given District in a given year. This has been done and the gaps or changes in definitions and concepts that had crept in have been explained in one of the accompanying appendixes.

Thus, again by definition, these series would contain, apart from the actual quantities, explanatory notes, clarification of definitions and their variations with reference to different and relevant provinces and reasons for absence of data for certain areas or years. Likewise, the explanatory notes contain the reconstitution of new districts, splitting of an old district into new ones and the cessation of an earlier district altogether over the period of time.

The data contained in the time series also pose a major problem namely that of presentation. Apart from specific textual notes concerning individual districts, the total number of entries, at the district level, amount to a little over 3,00,000, each entry ranging from unit to six digits. At the provincial level the entries amount to about 14,500 each comprising of 8 to 9 digits.

The decision as regards presentation of the data, whether in typed, mimeographed or printed form yet remains to be taken.

Note on "Irrigation Statistics of
British India - 1890 - 1946/47"

1. Introduction

In 1972, the Gokhale Institute of Politics and Economics proposed to the Indian Council of Social Science Research, an extensive project entitled "A Comprehensive Annotated Bibliography on the Economic History of India". In a paragraph, sub-headed 'Follow-up Programme', in the final proposal of the above project, the Project Director wrote :

"After the completion of this project, in addition to publishing the Bibliography, a programme for publication of the material on Indian economic history will be prepared for the consideration of the Council. This may consist of reprinting of rare books, compilation and publication of historical statistics pertaining to India, preparation and publishing a series of Readings on various aspects of Indian economic history and also possibly a translation of important works in Indian language."

Accordingly, a separate project, entitled "Historical Statistics of India - First Phase" was formulated

and submitted to the Council, on the eve of completion of the 'Comprehensive Annotated Bibliography' in 1977. In the 'Scope and Objectives of the Project', after emphasizing the importance and the need of a volume of Historical Statistics of India, for both the teaching community and the researchers in the field in India, the Project Director observed:

"There is a vast amount of statistical material on India, particularly for the British period. It should be possible to produce a volume comparable in scope and quality to ... (similar volumes on historical statistics in U.K., Canada, U.S.A., etc.). The Gokhale Institute of Politics and Economics, Pune, is about to complete its four-volumed "Annotated Bibliography on the Economic History of India, 1500-1947". In addition, the two volumes of the Cambridge Economic History of India, containing large numbers of historical statistical tables are about to go to the press. The present, therefore, appears to be the right time to embark on the project of historical statistics of India."

First Phase of the Project

The entire work relating to compilation of historical statistics of India is divided into two phases. The present project is the

first phase. In the first phase of the project all the available historical statistical series on India, scattered in various works, will be brought together, arranged, edited with notes and published in one single volume. In this volume, the closing date for all the series will be 1947. The starting year may vary from series to series depending on the availability of the material. As for the regional break-up the series will stop at the level of province or princely state. In the second phase, preparation of remaining series will be taken up. The ICSSR will be approached again at the time of taking up the second phase."

The Abstract of the Research Proposal briefly mentioned the methodology as follows : "District is taken as the ultimate unit of reference. Statistical series will be built up taking into consideration changes in the boundaries and definitions of the concepts. Data culled from the major sources will be checked and cross-checked with available data from the Provincial series... As a test case for further level of checking and attainment of accuracy, the irrigation statistics for the present day Maharashtra State for the period 1890 to 1946/47

will be checked and verified with the data available in Survey and Settlement Reports".

Before presenting the provincial aggregates of irrigation statistics according to sources and crops, the note discusses the peculiar characteristics of Indian agricultural statistics, as compiled and published by the government.

2. General Characteristics of Indian Agricultural Statistics

Statistics of Indian agriculture have been collected for centuries because most rulers assessed taxes against either the land or its produce. The kind of data varied regionally depending on the form of land revenue assessment. Towards the close of the Nineteenth-Century, government interest in famine control and commercial needs for information led to central publication of coordinated agricultural series for British India and the Provinces.¹ There was no systematic collection of agricultural statistics in India before 1882 when a beginning was made at the instance of the Secretary of State who forwarded a set of tables compiled in India Office for use in India. The inquiry made at the time by the Government of India revealed

¹ George Blyn, 'Agricultural Trends in India, 1891-1947: Output, Availability and Productivity', Oxford University Press. Bombay. 1966. p. 39.

lack of uniformity in the nature and method of collection of statistics, which loudly called for standardisation.²

The agricultural statistics as available from the publications by the Government, have been subjected to severe comment and criticism by a number of scholars. According to Dr. M.M. Islam, the quality of the basic core of statistics is of primary importance in any quantitative study. But it is in this respect that students of Indian agriculture have been faced with their greatest problem.³ As noted earlier, statistics had been collected in India in the pre-British period,⁴ but it was only in the second half of the Nineteenth-Century that government interest in famine control and in the commercial needs of India led to the creation of a Department of Agriculture, in 1883,⁵ which addressed itself, at least in the early years, primarily to the task of compiling reliable statistics, as this was

2 H. Sinha, Indian Agricultural Statistics in Journal of Royal Statistical Society, London: Vol. XCVII-1934-Part I, p. 155.

3 Dr. M.M. Islam, Bengal Agriculture : 1920-1946 : A Quantitative Study, S. Chand and Co. Pvt. Ltd., New Delhi, 1978, p. 19.

4 Lord Meston, 'Statistics in India' in Journal of Royal Statistical Society, Vol. XCVI (1933), pp. 1-20.

5 Report of the Royal Commission on Agriculture in India : Bombay, 1928, p. 21.

recognised to be the first step in the direction of agricultural development.⁶ But it was generally believed that, in spite of this long history, agricultural statistics for all parts of India were unreliable.

The Agricultural Statistics of India were published annually in two volumes, the first of which related to British India and the second to certain Indian states. For each province figures were given of the total area, classified as cultivated (area sown and current fallows), uncultivated (culturable waste and area not available for cultivation) and forests; the area and crops irrigated; the total area under crops and under each important crop; the number of livestock, ploughs and carts; the incidence of the land revenue assessment; the harvest prices of certain important crops; and average yields of principal crops in each province. In this context, The Royal Commission on Agriculture recommended that the date of publication of these volumes might be expedited with advantage as an interval of at least eighteen months used to elapse between the end of the agricultural year (June) and publication.⁷ Uptill 1920-21, the figures in the tables in these volumes were given separately for each district. This practice was dropped mainly on the ground that it largely increased the cost of publication : As the district figures

6 Ibid., p. 20.

7 Ibid., p. 601.

were of great value in all agricultural and economic inquiries, the Royal Commission was of the opinion that a reversion to the former practice of giving districtwise figures was highly desirable. Accordingly, the practice was adopted again since 1930 onwards.

The area of each province, as given in the Agricultural Statistics of India, was divided, till the time of the Royal Commission, into land cultivated and uncultivated and forests. The cultivated area was further subdivided into the net area actually sown and current fallows. The maximum period for which land left uncultivated was treated as fallow varied according to local laws and customs, from two years in the Punjab to ten years in Bombay. After the expiry of these varying periods, the land, if still left uncultivated, was included, for statistical purposes, under the head of culturable waste.

The uncultivated area was divided into "culturable waste other than fallow" and land "not available for cultivation". The Commission thought that such a division was to a large extent arbitrary. They had recommended, in the chapter on Forests, that a reclassification of forest areas should be undertaken with a view to deciding what proportion of forest areas could more profitably be put to some other purpose. They also regarded it as important that the classification both of culturable waste and land not available for cultivation should be carefully reexamined.

It was pointed out in the introductory note to the Agricultural Statistics of India that most of the barren and unculturable lands of British India lay in the hilly tract of Burma and of Southern India and in the dry and desert regions of north-western India and that of the culturable waste other than fallow, exactly one-half was contributed by the underdeveloped provinces of Burma and Assam. None the less, the Commission found it difficult to believe that the whole of the vast area then classified as "not available for cultivation" amounting, as it did, to 150 million acres or twenty-two and a half per cent of the total area of British India was not available or suitable for cultivation.⁸

The principal publications giving the agricultural statistics of the country were the two volumes of "Agricultural Statistics of India" (Vols. I and II) dealing with Indian provinces and states respectively and the "Estimates of Area and Yield of Principal Crops in India". Well-conversant with the agencies collecting and maintaining these statistics, the Government were aware that with respect to the statistics of acreage the available data was not of the same uniform standard of accuracy and reliability in the different provinces and states. This was, according to them, mainly due to the differences in the methods of collection, which depended on the systems of land revenue

⁸ Ibid., pp. 604-5.

settlement in the different provinces. Broadly, the provinces could be divided into two classes, viz., the temporarily settled provinces and the permanently settled provinces, based on the modes of revenue assessment and collection. This distinction, however, was not a clear-cut one, for in the U.P., Madras and Assam, which were temporarily settled, there were areas which had been permanently settled while in Bihar, Orissa and West Bengal which were permanently settled provinces, there were areas which had been temporarily settled. In the temporarily settled provinces, there existed a village revenue agency which maintained agricultural statistics as part of land records. The statistics of area under crops which were based on periodical field-to-field inspection of crops were fairly accurate in those provinces. In the latter, viz., the permanently settled provinces, where no such revenue agency existed, the figures were furnished by the police chaukidars who based their estimates on their impression of the crop in any particular year, in relation to the normal crop. The acreage figures in these latter areas were not considered to be as reliable as in the former. The reporting states fell into one or the other of the above two classes of provinces.

Although most of the area of the temporarily settled provinces was cadastrally surveyed, there were some portions which were not surveyed in such great detail, i.e. for which

the individual field boundaries were not surveyed and mapped. Since no field-to-field inspection was possible in these areas in the absence of a cadastral survey, the estimates of acreage under crops supplied by the revenue agency were only approximate. However, as the reporting agency was trained and was in touch with the cultivators and the crop-conditions, the estimates furnished by those officers were slightly more reliable than the figures reported by chaukidars, in the permanently settled provinces. However, they could not be considered as of the same degree of accuracy as those in cadastrally surveyed areas.

The topography of these unsurveyed areas was also different in different places. Most of those areas were covered by hills or inaccessible forests and that was mostly the reason why those areas had not been surveyed. In the plains, if no survey had been carried out, it was because the system of tenure under which the lands were held and the methods of revenue assessment did not require any detailed settlement and survey operations. As long as the Provincial Governments got their share of the revenue, from the Zamindars or the Landlords for the area held by them under the permanent settlement, they had no special incentive to undertake a detailed settlement survey.

The country can thus be divided into three categories with respect to the availability and the reliability

of the statistics of acreage, namely, (i) temporarily settled provinces, (ii) permanently settled provinces and (iii) Indian states.

(i) Temporarily settled provinces : In these provinces, the village revenue agency maintained regular agricultural statistics as part of land records, since the assessment of revenue was based on the land-use and the crops grown in each season. The revenue agency consisted of village officials called patwaris, one in charge of every village or a group of villages, who collected the primary data on the basis of field-to-field inspection of crops at regular intervals. After each crop inspection, the patwari was required to submit consolidated statements showing the areas under different crops, etc., in each season, to the superior officer in standard forms prescribed for the purpose. The superior officer, called the Kanungo, or revenue inspector, in charge of one revenue circle, consisting of about 100 villages, controlled and supervised the work of patwaris. The work of collection and compilation of agricultural statistics was further controlled and supervised at successive stages by the tehsil and the district officers of the revenue department. In the areas where all the fields had been cadastrally surveyed and mapped, the geographical area of each survey number and sub-number was accurately known and thus the acreage under the crop in a given region was determined accurately. If,

however, the whole field was not under the same crop or if there were uncultivated patches in the field for which only the total geographical area was known, the area under the crop was generally estimated approximately by the patwari.

There was, however, considerable variation in respect of the jurisdiction of each patwari, the number of crop-inspections done, and the extent of surveyed and unsurveyed areas in the different temporarily settled provinces. Some noteworthy details were as follows in some of the major temporarily settle provinces.

(a) Assam : The area of Assam could be divided into three categories. Firstly, in the plains of the temporarily settled districts, the village mandals (one in charge of about 10 villages) furnished the estimates of area based on field-to-field inspection. Secondly, there were certain areas comprising the hilly districts of Assam and the hilly portions of the plains districts, covering about 20 million acres, which were temporarily settled but where the revenue assessment was based on the household, instead of on the land. With respect to these areas, the revenue agencies were not required to maintain any land records. Lastly, there were the areas covered by the permanently settled plains portions of Golpara district which were neither cadastrally surveyed nor had any revenue agency. The

estimates of acreages under the forecast crops for the last two categories of areas were based on the figures furnished by the district officers in charge of the respective areas. For non-forecast crops, only quinquennial estimates were furnished by the Deputy Commissioners. In the permanently settled areas, the assistance of the Zamindars and other intelligent headmen was taken in estimating the area in any particular season. Thus the basis of agricultural statistics in three-fourths of the area of Assam was largely conjectural.

(b) Bombay : The reporting agency in Bombay consisted of about 5,400 talathis (one in charge of three to four villages) and revenue inspectors towards the end of our accounting period i.e. in 1949. The whole area was surveyed but for some Inam and alienated villages for which approximate estimates were furnished by the revenue agencies existing in those areas. In making the estimates for the unsurveyed villages, the ordinary distribution of crops in the neighbouring government villages was borne in mind, as well as the opinions of leading men and patels of the villages.

(c) C.P. and Berar : Although the whole area of C.P. and Berar was temporarily settled, the systems of land revenue followed and hence the land records maintained in the Central Provinces and in Berar differed in many details. The patwari agency existed throughout the province and on

an average there was one patwari in charge of 7 villages in the C.P. and 3 villages in Berar.

(d) Punjab : The agricultural statistics in the Punjab were collected ^{by} patwaris are in charge of 4 villages on an average. About 3.9 million acres comprising of mountainous tracks of Simla and Kangra districts and of river bed in Gurgaon district was unsurveyed. But the rest of the province was surveyed and the statistics were based on field-to-field inspections.

(e) Madras : About two-thirds of the cultivated area of the province was under the Raiyatwari system of tenure and had been carefully surveyed. The village officers called karnams (one in each village) furnished the revenue inspectors, by the 25th of each month, with a detailed cultivation statement showing the sowing of crops and out-turn of harvested crops for each village on the basis of a monthly field-to-field inspection. Similar revenue agencies existed in the remaining one-third of the cultivated area also which was whole Inam or Zamindari, but since most of those areas were not surveyed, the acreage statistics furnished for the unsurveyed area of the Inam villages were not based on field-to-field inspection, and were consequently largely conjectural.

(f) U.P. : The whole area was surveyed, but for the hilly portions of Naini Tal, and hill districts of Almora

and Garhwal for which the required particulars were not available. Since 1938-39, however, conventional estimates for these areas were included in the provincial returns of agricultural statistics.

(g) Ajmer-Merwar : The estimates of area in Ajmer-Merwar in Khalsa, Jagir and minor Istimrari villages were based on field-to-field inspection made by the patwari at each of the two principal harvest inspections done in the autumn and spring respectively. The Kanungo supervised the work of patwaris in these areas. In the large Istimrari estates, the preparation of the field books was done by the estate officials and the government agency did not supervise the collection of figures in these areas. As such the estimates of area under certain crops in respect of these areas were conjectural.

(h) Coorg : Coorg is a temporarily settled area where the shanbags (patwaris) maintained the agricultural statistics as in the other temporarily settled provinces. The shanbag was not only a revenue accountant but also a surveyor and had, on an average, eight to ten villages under his jurisdiction. The work was supervised by the parpattigars (Kanungos) and subedars (tehsildars). About one-third of the area of Coorg was under reserve forest, worked by the Forest Department and the Revenue Department had no control over this area.

(i) Delhi : The method of reporting agricultural statistics in Delhi corresponded to that in the Punjab. The reporting agency consisted of 87 patwaris and 5 Kanungos the jurisdiction of each Kanungo and patwari extending to about 4 and 70 villages respectively.

(ii) Permanently-settled provinces

In the permanently settled provinces there was no elaborate agency for the collection of agricultural statistics. Firstly, the system of revenue collection did not require the maintenance of agricultural statistics, and secondly, there were no revenue officers in the villages who could be entrusted with this work. Hence, the estimates of area under crops reported for the regions were of the nature of guess work, being furnished by the village officials (i.e. chaukidars) belonging to the police department who were not trained in the crop-reporting work and who were generally illiterate. There was also no adequate supervision over the work of this primary agency. In these areas, a sub-division or circle officer was required to ascertain the relation which the area under the crop in each season bore to the normal acreage under that crop. The normal acreages under the different crops were generally based on the data furnished by the chaukidar agency and were compiled and consolidated at successive stages by the sub-divisional and district officers. The Provincial Governments based the final estimates of area on the figures

supplied by the district officers. Since no objective method was followed anywhere in the process, the final estimates of area were not satisfactory.

The attention of the Provincial Governments had, however, been drawn by the Government of India to the need of improving the reliability of the agricultural statistics. Various schemes for improvement of agricultural statistics had been prepared and implemented by the Provincial Governments.

(a) Bengal : In the absence of a village revenue agency which was necessary for the adoption of the method of complete enumeration for agricultural statistics, the feasibility of employing the random sampling technique of estimating the area under the principal crops had been investigated by the Indian Statistical Institute. Preliminary investigation on this question started with a study of the possibility of the estimation of area under jute in Bengal by the sampling method in the year 1937. This method was extended to the entire province for jute in 1941, and later, for a few other crops including paddy. The official estimates of acreage under paddy were thence based on this method.

The plan of survey consisted in dividing the province into a number of zones either with administrative sub-divisions, viz., thanas or with convenient geographical

sub-divisions of specified areas, as strata. From each zone, a number of sample units were selected at random, each sample unit consisting of a square grid generally 2.25 acres in area; the size of the sample unit and the intensity of sampling, however, varied from zone to zone. The whole sample was divided into two sub-samples and the grids belonging to these two inter-penetrating sub-samples were then enumerated by different groups of investigators who actually visited the individual plots located in the grid and recorded the proportion of land under different crops, etc.

The existing official method of obtaining the data from the district officers was also continued. However, in order to systematise the collection of crop forecast data from the district officers, the Director of Agriculture, Bengal, had circulated standard forms in which the forecast data and other agricultural statistics were to be furnished.

In addition to this, the union agricultural assistants were appointed and entrusted with the work of crop reporting. They were required to compile estimates of areas under crops by a method analogous to the complete enumeration method. In the case of paddy and jute, which were the predominant crops, the agricultural assistant was expected to consult the "Khasra" prepared during the 1944-45 complete

enumeration survey ("Agricultural Statistics by plot-to-plot Enumeration in Bengal 1944-45" published by the Government of Bengal), and base his estimates for the years on the changes that had occurred during that year. This Khasra for land and crops showed in respect of each plot number, the area of the plot and the use to which the land was put. The complete enumeration of area under other crops was not expected to give much difficulty, since the number of such plots was small in each season.

The Director of Agriculture finalised the figures for the province taking into account the different sets of figures furnished by the district officers, union agricultural assistants and the Indian Statistical Institute.

(b) Bihar : The method of random sampling for the estimation of acreage under principal crops had been tried in Bihar during the bhadoi (autumn) and aghani (winter) crops of 1944 and the rabi crops of 1944-45. This method had, however, been discontinued subsequently.

Under the scheme for improvement of agricultural statistics, complete enumeration surveys were being carried out in Bihar with the help of specially appointed field staff of amins from the year 1944-45. The enumeration proper consisted in visiting each field, identifying it with the help of the Field Map and relevant records and noting down the extent of crops grown on the fields. For this

purpose the amin had to visit each village three or four times a year for recording the areas and the outturn of crops during the principal sowing and harvesting seasons of the year. The data collected during these surveys had not till then been utilized for official statistics. It was, however, proposed to adopt these statistics from the current year. The whole area of Bihar was cadastrally surveyed and field maps existed for all but a few hundred square miles of area covered by forests.

The Government of Bihar had decided to utilize the agency of amins for the work in connection with the Zamindari abolition, and had consequently increased the total staff to 5000 and designated them as "karmacharis". The 'Karmachari' had about 10 to 12 villages under his jurisdiction.

(c) Orissa : In Orissa, a similar scheme for the improvement of agricultural statistics by field-to-field enumeration was conducted since 1944 all over the province except the surveyed portions of the Ganjam district where a regular patwari agency existed for reporting the statistics. In the Orissa survey, only the area under cultivation was enumerated no account being kept of the detailed classification of uncultivated land. In the beginning, the amins who were expected to do this enumeration had a large jurisdiction consequent upon a reduction in the number of amins employed under the scheme, the charge of

each amin had been doubled. The revised method of enumeration prescribed that the amin should visit half the number of villages and enumerate all the fields completely and for the other half, the amin should report only the changes in the cultivated area from the previous year. However, this method could not give reliable figures.

In the unsurveyed areas of Korapat and Ganjam the cultivated blocks were enumerated by measuring the approximate dimensions of the separate blocks.

Thus, schemes for the improvement of agricultural statistics had been initiated in the permanently settled provinces in 1943-44, but these improved methods had not been firmly established in those provinces.

Sources of Error : While the government were not entirely complacent about the compilation of agricultural statistics of the country, economic historians and scholars had been virulently critical as to the method and reliability of official statistics. Clive Dewey, of the University of Leicester, has laid down his reaction in unambiguous terms. "Our entire interpretation of modern economic history turns on the reliability of the official agricultural statistics. Whether it is a history of successful growth or disastrous decline depends on the performance of Indian agriculture, the dominant sector of the economy by any criterion; and our quantitative knowledge of the agricultural

sector depends on the statistics of agricultural output compiled and published by the state. Since the 1870s - virtually since agricultural statistics were first systematically collected - the fate of Indian agriculture under British rule has been the subject of impassioned debate."⁹

"The government are very keen on amassing statistics - they collect them, add them, raise them to the nth power, take the cube root and prepare wonderful diagrams. But what you must never forget is that every one of these figures comes in the first instance from the chowkydar (sic) who just puts down what he damn pleases".

Lord Stamp, *Some Economic Factors in Modern Life*, (1929)¹⁰

The accuracy of the official agricultural statistics was directly related to the efficiency of the agency through which they were collected. As noted before, in temporarily settled provinces crop areas were reported by patwaris, the village accountants responsible for maintaining each village's land revenue accounts. "The village, or a little group of adjoining villages has its accountant; he keeps and corrects the (village) map, and all the annual registers; and it is

9 Clive Dewey; The Agricultural Statistics of the Punjab, 1867-1947 in Bulletin of Quantitative and Computer Methods in South Asian Studies, No. 2, March 1974, p. 3.

10 Ibid., quoted

on the shoulders of this overworked, under-paid little man that the whole land-records structure is built-up.¹¹ The patwari usually had no instructions as to the priority to be given to different duties or inquiries and hence went on treating all of them in the same manner, resulting in slipshod work with respect to each.¹² There was no separate agency especially for collecting the agricultural statistics. The revenue staff was utilized for the purpose. While this ensured economy, it also led to a serious difficulty, for statistical considerations had to be subordinated to revenue needs. This entailed lack of uniformity as revenue requirements were different in different provinces. For example, as has been indicated earlier, in some parts of India such as the Punjab, if land was not taken up for cultivation for more than two consecutive years, it was classified as unculturable; whereas in Bombay ten years had to elapse before this could be done. Thus the areas for current fallows and unculturable wastes were of doubtful statistical accuracy.

"No valid inference may be drawn about the pressure of population merely from a study of changes in unculturable wastes, other than fallows, for the proportion of unculturable wastes to total area has remained practically the same in

11 Lord Meston, op. cit., p. 8.

12 Coordination of Agricultural Statistics in India : Report of the Technical Committee, Government of India Press, New Delhi, September, 1949, p. 19.

spite of the recent considerable increase in population."¹³

Another example was provided by "mixed" crops. In the United Provinces oilseeds were grown largely as companion crops with foodgrains such as wheat, barley, etc. But in the form prescribed for the patwari or village accountant there was no heading for unimportant "mixed" crops. Thus the areas for companion crops were credited to the area for the principal crop, which was correspondingly inflated. Thus, for table IV of the Agricultural Statistics, Vol. 1, the United Provinces did not appear to be an important tract for oilseeds. A correct picture was afforded by the Estimates of Area and Yield of Principal Crops in India which gave the areas for "mixed" crops separately.

H. Sinha had also sounded a warning. Even on the side of area figures on which the statistical worker was well served, there was a danger. Owing to the gradual development of the crop reporting system in India, new areas had from time to time been included in the scope of the returns. Consequently, the variation in area figures over two periods widely apart might not reflect the time rate of increase or decrease. A great deal of care and caution was therefore necessary in handling the data and "...prospective workers would do well to learn the genesis of these statistics before they begin to work with these data".¹⁴

¹³ H. Sinha, op. cit., p. 156.

¹⁴ Ibid., p. 162.

The defects of the patwari agency had never been sufficiently recognized. Supposedly efficient civil servants responsive to the orders of his official superiors in the land revenue hierarchy, the patwari in fact looked on his office as a kind of heritable freehold property to be enjoyed. Half hereditary village servant, half servant of the state, the patwari was independent of both his nominal masters. Provided the revenue of his village was punctually collected and accounts regularly written up, the patwari could fill up the returns of agricultural statistics prescribed by an infinitely remote imperial department in any way he chose - frequently repeating the same figures year after year - without fear of reprisal. He paid fleeting visits to the villages under his jurisdiction usually timed to coincide with their superiors' tours of inspections and did their work in the most cursory way. Crop statements were often filled up without seeing the fields, and instances had come to notice of a patwari making one crop statement serve for two or more years even taking the trouble to disguise the trick by superficial alteration of the figures. The girdawari (crop-inspection) was often done in the village gues^t house instead of in the fields. Not surprisingly, the resultant statistics were proclaimed "a farce, and the annual papers a fraud".¹⁵

15 Clive Dewey, op. cit., (quoted), p. 5.

"Snow in the hills, heat in the plains, floods in the river valleys were all additional disincentives to accurate field inspections."¹⁶ The critical factor determining the patwaris' accuracy was the quality of the supervision they received. If their returns were regularly checked and mistakes punished, many patwaris were capable of compiling accurate statistics of crop areas. But the returns of agricultural statistics, as distinct from the revenue returns, were rarely checked. The agricultural statistics, in the eyes of the middle-ranking Indian revenue official had no obvious purpose like the revenue returns. Crop inspections were important in areas under fluctuating assessment, more so in the case of most insecure areas where the crops were dependent on rainfall that might not fail or river floods that might not arise. A different kind of fluctuating assessment was also common in the most secure tracts also; those irrigated by the great perennial canals. In the Punjab canal colonies, cultivators were charged rates varying with the value of different crops on the areas they harvested. The irrigation department maintained a special patwari establishment specifically intended to conduct crop inspections on which the canal revenue charges were based. But both these forms of inspection had their limitations. They were vulnerable to corruption. It was well worth the cultivators' while to bribe the patwaris, so that deliberate

16 Ibid., p. 5.

fraud - the understatement of matured areas and misclassification of the more valuable crops - replaced simple negligence. There was some suspicion, also, that in the irrigated tracts at least, the patwaris' normal inclination to underreport the area of crop failure "to save themselves trouble" and favour government was reinforced by their immediate superiors' determination to conceal extensive failures in case they reflected on their own mismanagement of the water supply. To what extent bribery overcame this tendency to overstate matured areas was impossible to say or estimate.

In permanently-settled provinces, where the state collected its revenue through large landlords rather than directly from the petty cultivator, the patwaris were the landlords' servants; and the state was compelled to collect statistics of crop areas through the only servants it employed at village level, the choukidars, or village watchmen. The chaukidars were members of economically-depressed families and socially despised castes. Often they became chaukidars because they lacked the capital to set themselves up as tenants, or were physically too infirm to work as labourers. Above all, they were illiterate and half-numerate. They made their reports on crop areas orally, at their local police station. They were hampered by the absence of reliable surveys of village holdings in the permanently-settled areas. The areas of thousands of villages and

millions of holdings were unknown. The policemen who were the chaukidars' immediate superiors had neither the incentive nor the opportunity to scrutinise the reports they filed.

There were difficulties even here, however, mainly arising from the absence of a subordinate revenue staff. In Madras, there were village officers in these tracts who acted as a reporting agency, but in Bengal, Bihar and Orissa, where no such officers were available, reliance had to be placed mainly on reports from the police. Wherever possible, assistance was obtained from officers of the Revenue Department such as Khas mahal tahsildars, and circle officers and from district agricultural officers and non-official correspondents. The information thus collected was forwarded through the sub-divisional officers to the district officer who had the discretion to reject or amend reports in the light of his own knowledge or experience. These reports were admittedly often mere guesses and were, not infrequently, demonstrably absurd guesses.¹⁷

Dr. M.M. Islam, however, raised the more fundamental question as to whether the chaukidars really constituted the primary agency in the collection of crop statistics. According to him there was no reference either in the Chaukidari Manual or the Manual for the preparation of Crop Reports and

¹⁷ Royal Commission on Agriculture in India, p. 605.

Agricultural Statistics to any such duty assigned to the Chaukidars. On the other hand, according to the Bengal Paddy and Rice Inquiry Committee, the agency responsible for the submission of acreage statistics was to be :

- (a) Preferably a Khas Mahal Tahsildar, if he had duties in the thana which gave him opportunities of judging the area and the crop.
- (b) Next, a Circle Officer, "who had been appointed to a circle as a permanent measure" provided he must not be asked to submit an estimate for more than a Circle of 20 to 40 unions.
- (c) Failing the above, the Thana Officer.
- (d) In addition, either a Kanungo or District Agricultural Officer might be employed to make an estimate without restriction as to the permanency or knowledge of the crop area covered by the estimate.¹⁸

Thus, Dr. Islam asserts, there was no reference to the fact that the chaukidars were the primary agency for the estimation of crop statistics. The area for which estimates were made by the Khas Mahal Tahsildars must have been very small as the land revenue of nine-tenths of the total area of Bengal was permanently fixed. Therefore, it was reasonable

¹⁸ M.M. Islam, Bengal Agriculture : 1920-1946 : A Quantitative Study, p. 21.

to assume that forecasts were submitted by the Thana and Circle Officers. But it was also obvious that the units (comprising roughly 200 to 400 villages in the case of a Circle Officer) for which such estimates were submitted by the primary agency were too large to enable him to make any objective judgement about the acreage under the cultivation of different crops (and their yield per acre). In this connection it had to be mentioned that neither the Thana nor the Circle Officers belonged to the Department of Agriculture and it seemed that the compilation of crop statistics was but an additional duty discharged by them. Under the same rule of the Manual, the district officers were allowed to "reject or amend" any estimate "received from the interior" in the light of their "knowledge or experience." But it was difficult to see how such estimates could have been improved by district officers who had far less knowledge of agricultural conditions as they were in charge of still larger areas.¹⁹

The defects of the primary agencies were compounded by the rather complicated method laid down in the Manual for the compilation of data. Thus under Rule 7 it was provided that a crop report was to contain estimate of the area sown with the crop in question in current year and to compare it with the "normal area" and the area sown in the previous year. The term "normal area" was defined as "the figure which, in the existing circumstances, might be expected to

¹⁹ Ibid., p. 21.

be attained in the year if the rainfall and the season were of a character ordinary for the tract under consideration; that is neither very favourable, nor the reverse. In other words it was defined to be the crop which past experience had shown to be the most generally recurring crop over a series of years. This was not, however, meant to "imply a mechanically correct arithmetic average which would be misleading". Evidently the average intended here was the mode of a series, but this was hardly clear from the definition. On the other hand it was pointed out in the Manual that there was a tendency to confuse the normal for the maximum area available for the cultivation of the crop. It was found that "in spite of weather and other conditions having been admittedly favourable to the cultivation of a crop, the area sown is estimated at a figure considerably short of the normal."²⁰

The Manual further provided that the normal figures were to be revised at the end of every five years in the light of the information obtained from Settlement Records, cadastral surveys and other sources. These were to be further supplemented by the district and other executive officers. It was true that when the Settlement Reports of individual districts were published, the statistics were usually revised accordingly. But there were many instances

²⁰ Ibid., p. 22.

when figures on 'normal' areas were revised without reference to any changes in their underlying determinants. This was frequently done even for districts where figures were available from the Settlement Reports.

Dr. Islam also commented on the reliability of official agricultural statistics. "The presumption that these weaknesses in the estimating formula and primary reporting agencies made the acreage statistics unreliable, is borne out by three sets of quantitative evidence - District Survey and Settlement Reports, Agricultural Statistics by Plot-to-Plot Enumeration and the Sample Surveys made by the Indian Statistical Institute. As already mentioned the defects of the crop statistics were pointed out from time to time by official bodies and individual authors."²¹

The system through which the Indian agricultural statistics were collected was far more unstable and diverse than the blank prefaces to the published volumes of statistics - with their stereotyped descriptions of uniform procedures rarely operative in practice - would lead one to suppose.²² It varied from province to province, district to district, even from official to official; and it changed,

21 Ibid., p. 23.

22 Clive Dewey, op. cit., p. 11.

also over time. It contained elements of negligence and incompetence, of subjectivity and conservatism, of corruption and absurdity.

But to say this is far from saying that the agricultural statistics are useless. They may provide poor answers for the development economists' questions about national growth-rates; they may have the unhappy result of converting the unwitting econometricians' calculations into elaborate sophistries; but they remain an inexhaustible repository of evidence for the historian of Indian agriculture. Even if the unreliability of the data on yields makes it impractical to construct reliable fifty-year trend rates for every crop in every province, the figures for crop acreage in the temporarily-settled areas are still hard enough to show changes in cropping patterns which are invaluable evidence of farmers' response to price movements, to irrigation, to railways, to different tenurial systems, to the whole range of factors affecting Indian agriculture. Provided they are examined (as statistics should always be examined) in conjunction with the system through which they were collected, the official data - with suitable modifications, and suitable reservations - can still reveal the most rapidly developing and the most disastrously deteriorating agricultural regions; the first step towards any historical analysis of the determinants of growth and

decline. Disaggregation, here, will be the key; large aggregates conceal too much. "All-India averages combine opposing trends-catastrophic deterioration in Bihar with rapid expansion in the Punjab - to give an impression of general stagnation; the averages of superprovinces blend the performances of heterogeneous farming types. The future lies with detailed studies of the agricultural statistics of quite small areas, which add a quantitative dimension to intensive qualitative studies of the history of distinct farming types and regions."²³

23 Ibid., p. 12.

Information on following items is to be compiled

Classification of the area

- 1 Year
- 2 Forest
- 3 Not available for cultivation
- 4 Culturable waste other than fallows
- 5 Current fallows
- 6 Net area sown
- 7 Total

Area irrigated from

- 8 Government canals
- 9 Private canals
- 10 Tanks
- 11 Wells
- 12 Other sources
- 13 Total

Area of crops irrigated

- 14 Rice
- 15 Wheat
- 16 Barley
- 17 Jowar
- 18 Bajra
- 19 Maize

20 Other cereals and pulses

21 Sugarcane

22 Other food crops

23 Cotton

24 Other non-food crops

25 Total

Appendix I

Formation of Provinces*

<u>Provinces/Regions</u>	<u>Period of formation</u>
United Provinces and Area	1877
Punjab	1853
Eastern Bengal and Assam	1905
Bihar and Orissa	1912
Ajmer-Merwara	1871
British Baluchistan	1877
Coorg	1869
Delhi	1912
N.W.F. Provinces (Newly formed)	
<u>Governors' Provinces</u>	
Assam, Bengal, Bihar (formed in 1936)	
Bombay, C.P. & Berar, Madras, NWF Pro Orissa (formed in 1936)	

Under the Constitution of India, 1949, which came into form from January 26, 1950, India was declared to be a Union of Part A, Part B and Part C states and the territory of Andaman and Nicobar islands, specified in Part D.

Part A states included :

Assam, Bihar, Bombay, M.P. (formerly Central Provinces and Berar Province), Madras, Orissa,

* Principally based on "Agrarian Legislation in India (1793-1966)" by Dr. D.C. Wadhwa, Vol. I.

Punjab, The United Provinces, (renamed as Uttar Pradesh by the Constitution) and W. Bengal.

Part B States comprised :

Hyderabad, J. & K., Madhya Bharat, Mysore, Patiala and East Punjab States Union, Rajasthan, Saurashtra, Travancore-Cochin and Vindhya Pradesh

Part C States comprised :

Ajmer, Bhopal, Bilaspur, Cooch-Bihar, Coorg, Delhi, H.P., Kutch, Manipur and Tripura. Cooch-Bihar was, however, merged in W. Bengal from January 1, 1950.

Andhra Pradesh

A.P. was formed on October 1, 1953. It comprised :

Anantpur, Chittoor, Guddapah, E. Godavari, W. Godavari, Krishna, Kaveri

Nellore, Srikahulam, Visakhapatnam (Adoni, Alur and Rayadurg taluks of Bellory in the State of Madras)

Assam

On February 6, 1874 the territories comprising the districts of Cachar, Darrang, Garo Hills, Golapara, Kamrup, Khasi and Jaintia Hills, Lakhimpur, Naga Hills, Nowgong and Sibsagar were separated from the Government of Bengal and taken under the direct management of the Governor-General-in-Council and formed into a separate province of Assam to be known as the Chief Commissionership of Assam.

The district of Sylhet was transferred from Bengal to Assam on September 12, 1874. The North Lushai Hill

district was constituted in May, 1890. The Lushai Hill district was constituted on April, 1898 when South Lushai Hills were transferred from Bengal to Assam and amalgamated with North Lushai Hills District of Assam to form a new district of Lushai Hills in the Province of Assam, the Zongling area, previously under loose political control was included in the Lushai Hills district. The name of the district was changed to Kiso district from September 1954.

On 16th October 1905, the whole of Assam was amalgamated with the tracts commonly known as North Bengal and East Bengal, comprising the districts of the Chittagong, Dacca and Rajshahi Commissionerships with the exception of Darjeeling and the addition of Malda, to form a new province, to be known as East Bengal and Assam, under a Lieutenant Governor on April 1912. Eastern Bengal was reunited with West Bengal and Assam again became a separate province under a Chief Commissioner.

Since April, 1912, there have been no changes in the territorial jurisdiction of Assam till the partition of India - into India and Pakistan - on August, 15, 1947, when as a result of referendum, held in July, 1947, ... the whole district of Sylhet, with the exception of the three thanas of Badarpur, Patnarkandi, and Ratabari and a portion of Karinganj thana, went to East Pakistan. The Khasi Hill States were not affected by the process of integration until the inauguration of the new Constitution of India on January,

26, 1950. These states had formed a federation of their own and had both individually and collectively acceded to the Dominion of India on August 17, 1948, subject to the provisions of an agreement. With the coming into force of the Constitution of India, on January 26, 1950, the Khasi Hill States, along with the adjoining tribal district of Assam known as Jaintia Hill District, were constituted into a separate district of Assam known as Khasi-Jaintia Hill District.

The present State of Assam thus consists of the the Assam Plains Division comprising the districts of Cachor, Darang, Goalpara, Kamrup, Lakhimpur, Nowgong and Sitsagar and the Assam Hills Division comprising the autonomous districts of Garo Hills, Mizo Hills, United Khasi-Jaintia Hills and the United Mikir and North Cachor Hills.

Bihar

Till March 31, 1912, Bihar formed part of the Presidency of Bengal which also included Assam and Orissa. Following the declaration at Delhi Durbar on the 12th December 1911, the territories comprising the districts of Bhagalpur, Monghyr, Purnea and the Southern Parganas in the Bhagalpur Division; the Chota Nagpur Division comprising the districts of Hazaribagh, Manipur, Palamare, Ranchi and Singhbhum, the Patna Division comprising the districts of Gaya, Patna and Shahabad, the Tirhut Division comprising the

districts of Chaniparam, Darbhanga, Muszaffarpur and Saran, and the Orissa Division comprising the districts of Angul, Balasore, Cuttack, Puri and Sambalpur were separated from the Government of Bengal and constituted into a separate province, to be called the Province of Bihar and Orissa on April, 1912.

On April 1, 1936 the Orissa Division was separated from the Province of Bihar and Orissa to give Orissa an independent administrative status as a Governor's Province.

The administration of former princely states of Kharaswan and Seraikela was transferred to the State of Bihar on 18th May 1948, though the formal merger of the states took place on August 1, 1949. These states were administratively integrated with the State of Orissa on January 1, 1948, following the integration of the princely states with the Indian Union. The territories comprising these two states were included in Singhbhum district.

In 1954, Saharsa until then treated as a sub-district of Bhagalpur district, has constituted into a full fledged district comprising the sub-divisions of Supaul and Madhapura. Similarly in 1956, Dhanbad, until then treated as a sub-district of Manbhum district, was constituted into a full fledged district comprising the local areas included in the old Dhanbad sub-division and Chas and Chandankairi Police Stations of Purulia sub-district.

The territory of Bihar at present consists of Bhagalpur Division comprising the districts of Bhagalpur, Monghyr, Purnea, Saharsa, and Santhal Parganas; the Chota Nagpur Division comprising the districts of Dhanbad, Hazaribagh, Palaman, Ranchi and Singhbhum; the Patan Division comprising the districts of Ganga, Patna and Shahabad; and the Tirhut Division comprising the districts of Champaran, Dharbhanga, Muzaffarpur and Saran.

Gujarat

The State of Gujarat came into existence on May 1, 1960, when the territories comprising (a) the districts of Ahmedabad, Amreli, Baroda, Banashanta, Bhavnagar, Broach, Dangs, Jamnagar, Junagarh, Kaira, Kutch, Mehsana, Panchmahals, Rajkot, Sabarkanta, Surat and Surendranagar, and (b) the villages of Umbergaon taluka of Thana district, the villages in Nandurbar and Nawapur talukas of West Khandesh district and the villages in Akkelkuva and Taloda talukas of West Khandesh district specified in Part I, II and III respectively of the First Schedule to the Bombay Reorganisation Act, 1960, (Central Act II of 1960) were separated from the State of Bombay and formed into a separate State of Gujarat.

Areas in Gujarat

Gujarat Area : The territory comprising the old districts of Ahmedabad, Broach, Kaira, Panchmahals and Surat in the former province of Bombay, now forming parts of the

districts of Ahmedabad, Amreli, Baroda, Broach, Bulser, Gandhinagar, Kaira, Mehsana, Panchmahals and Surat in the State of Gujarat.

Baroda States Area : The territories comprising the four Dangs states, the four Gujarat states, estates, talukas and Thanas and the former Baroda State, now comprising the newly created districts of Amreli, Banaskanta, Baroda, Mehsana and Sabarkanta and forming parts of the old districts of Ahmedabad, Broach, Kaira, Panchmahals and Surat.

Dhrangadhra State Area : The territory comprising the former Dhrangadhra State, now forming parts of the district of Surendranagar.

Gondal State Area : The territory comprising the former Gondal State, now forming part of the district of Rajkot.

Junagarh State Area : The territory comprising the former State of Junagarh, now forming part of the district of Junagarh.

Nawanagar State Area : The territory comprising the former State of Nawanagar now forming part of the district of Jamnagar.

Rajkot State Area : The territory comprising the former State of Rajkot now forming part of the district of Rajkot.

Wadhwan State Area : The territory comprising the former

State of Wadhwan, now forming part of the district of Surendranagar.

Saurashtra State : The territory comprising the districts of Bhavnagar, Jamnagar, Junagarh, Rajkot and Surendranagar, as constituted on the merger of 222 Kathiawad States, estates, talukas and thanas into united state of Saurashtra.

Kutch Area : The territory comprising the former State of Kutch, now comprising the district of Kutch excluding the Adhoi mahal of the former State of Morvi, which has been added to the district of Kutch.

Kerala

On July 1, 1949 Travancore State consisting of three districts Kottayam, Quilon and Trivandrum and Cochin State consisting of six talukas, namely, Chittur, Cochin, Kanayannur, Cramegnore, Mukundapuram, Talapilli and Trichur, were integrated into Travancore-Cochin State. The above mentioned six talukas of Cochin State were grouped with Kunnertuned and Parur talukas of Kottajam district to constitute a new district of Trichur from the date of the inauguration of the Travancore-Cochin Union.

Before the integration of the princely states, Travancore and Cochin on July 1, 1949, the Travancore State had three revenue divisions, namely, Kottayam, Quilon and Trivandrum, each under a Division Peishkar. With the

inauguration of the United State of Travancore and Cochin the revenue Divisions came to be formally called districts, each under a district collector. Thus the districts of Kottayam, Quilon and Trivandrum formally came into existence and the Division Peishkar was re-designated as the Collector. Unlike Travancore State, Cochin State was divided into Kavila-Kalthum vathukkal taluks for administrative purposes before its integration into Travancore-Cochin.

Areas in Kerala

Cochin State Area : The territories comprising the erstwhile State of Cochin, now consisting of (a) the Cochin Kanayannur taluk of Ernakulam district; (b) the Trichur district except (i) the areas of Elapully, Elavancheri, Kootallur, Paldthulli, Panayar, Poruvemba, Theveri and Vadvannur, (ii) the taluks of Kunnathimad and Parur; (iii) the firkas of Chowghat and Naltika, and (iv) the villages of Iringapram, Kadapram, Mamathala, Perakam and Pookode, and (c) the Chittur taluk of Palghat district.

Travancore State Area : The territories comprising the erstwhile state of Travancore, now forming the (a) district of Alleppey excluding Athashiked, Katton, Manakkodam east, Manakkodam west and Thumboli the outlying pattom enclaves of the Fort Cochin village; (b) Kottayam district; (c) Quilon district; (d) Trivandrum district, (e) Thodupuzha and Muwattupuzha taluks of Ernakulam district; and (f)

Manakkunnam village of Cochin-Kanayannur taluk of Ernakulam district.

Travancore-Cochin Area : The territories comprising the erstwhile states of Travancore and Cochin, now comprising the Cochin-State area and the Travancore state area as shown above.

Madras State Area : The territories comprising (a) the districts of Cannanore, Kozhikode and Palghat except the Chittur taluk; (b) the existing Fort Cochin village vis. Henrique Silva, Kallencherry North-bit known as Antony Fernandis, Kallancherry South-bit known as the Thekkepureppinkora, Mundamveli, Pallipat and Santiago of the Ernakulam district; (c) Atha Zhiked, Katton, Manekkodam east, Manekkodam west and Thumbeli, the outlying pattom enclaves of the Fort Cochin village of Alleppy district; and (d) Chowghat and Nattika firkas and five villages vis. Iringapram, Kadepram, Manathala, Perakam, and Pookode of Trichur district.

Appendix II

Provincial Notes

Punjab

Area of crops irrigated

Columns 8 to 18 of Table No. 2 and Columns 8 to 19 of Table No. 3.

Reference upto years 1946-47-57th issue.

Columns 8 to 18 of Table No. 2.

In "State the gross area irrigated", land irrigated in both seasons is counted twice. As regards columns 8 to 13, prior to 1906-07, areas which bore two crops under irrigation in a single harvest were also counted twice; but from 1906-07, such areas are only counted once. As regards columns 14 to 18, prior to 1906-07, the figures were those of harvested areas reduced to a standard of normal productiveness (A note on this follows in the next para) but from that year, areas actually sown have been entered (Ref. upto years 1911-12, 28th issue).

Note : Previous to 1901-02, the figures in this column represented the area on which the crops harvested would have been grown in a year of normal productiveness. That is to say, each of the returns of the actual areas from

which crops were taken was multiplied by a fraction representing the relation of the crop harvested to a normal crop, and the difference between this product and the actual area was added to the fallow area. From 1901-02, however, the area sown has been reported without reference to the area harvested or the condition of the crop.

Note : Since 1943-44, notes as well as the data belong to east Punjab only.

Reference 57th issue.

Coorg : Area irrigated from : Column 8 to 13 of Table No. 2 and Column 2 to 7 of Table No. 3.

Figures of land partly irrigated from springs and mountain streams are not available.

Reference upto year 1946-47 - 57th issue.

Bombay

"Area irrigated from" (various sources)

Columns 8 to 13 from Table No. 2 + 2 to 7 from Table No. 3.

The figures given for private canals, tanks, wells, and other sources are rough estimates.

Reference upto years 1921-22 - 38th issue.

Note : Column 8 to 13 from Table No. 2 - Previous to 1892-93, figures for private canals were included in "Government Canals" and those for tanks and wells in "other sources".

Reference upto year 1897-98 - 14th issue.

"Area of Crops irrigated" :

Column 16 of Table No. 2 - By "miscellaneous food crops" are understood the crops entered in Table on "Area under crops and specification of crops" as Sugar, orchards, garden produce and miscellaneous food crops.

Reference upto years 1921-22 - 38th issue.

United Provinces

"Areas of crops irrigated"

Columns 8 to 13 of Table No. 2 and 2 to 6 of Table No. 3

Reference from 18th to 21st issues.

Government canals include private canals except in Naini-Tal for which district separate figures for private canals have been obtained since 1895-96. From 1903-04, however, the areas irrigated from certain private canals in Budaun and Basti from 1907-08 such areas in Gorakhpur and from 1911-12 those in Dehradun which were formerly included under other sources, have been shown under the proper head,

"Private canals". There are very few private canals in the United Provinces.

Reference : 22nd to 31st issue.

Government canals include private canals except in Basti, Budaun, Dehra-Dun and Naini-Tal, for which districts separate figures for private canals are obtained.

Reference : From 32nd to 57th issue.

Column No. 13 of Table No. 2 and Column 8 of Table No.3

Of the total area irrigated in 1911-12 to 1946-47, only parts are reported from actual returns.

Year	Total area irrigated	Areas based on		Reference Issue No.
		Actual return	Estimates	
		(acres)		
1	2	3	4	5
1911-12	6,323,630	6,287,730	35,900	28th)
1912-13	7,444,283	7,408,383	35,900	29th)
1913-14	8,829,890	8,793,990	35,900	30th)
1914-15	8,288,124	8,252,224	35,900	31st)
1915-16	8,485,752	8,449,852	35,900	32nd) *
1916-17	8,261,958	8,226,058	35,900	33rd)
1917-18	8,143,993	8,108,093	35,900	34th)
1918-19				
1919-20	8,186,174	8,150,274	35,900	36th
1920-21	8,501,276	8,465,376	35,900	37th
1921-22	7,469,447	7,433,547	35,900	38th
1922-23	9,883,814	9,847,914	35,900	39th
1923-24	7,982,152	7,946,258	35,900	40th
1924-25	8,495,261	8,459,361	35,900	41st
1925-26	No information			
1926-27	Issues not available			
1927-28	Issues not available			
1928-29	Issues not available			
1929-30	Issues not available			
1930-31	Issues not available			

contd.

1	2	3	4	5
1931-32	10,071,012	10,029,662	41,350	48th
1932-33	Issues not available			
1933-34	10,221,918	10,180,568	41,350	50th
1934-35	Issues not available			
1935-36	10,765,157	10,723,807	41,350	52nd
1936-37	10,197,866	10,156,516	41,350	43rd
1937-38	11,597,493	11,556,143	41,350	54th
1938-39	11,958,937	11,917,587	41,350	55th
1939-40	11,970,236	11,928,886	41,350	56th
1940-41	11,634,117	11,592,767	41,350	36th
1941-42	12,391,264	12,349,914	41,350	56th
1942-43	11,266,899	11,225,549	41,350	56th
1943-44	Information not given			
1944-45	Information not given			
1945-46	Information not given			
1946-47	11,574,314	11,532,964	41,350	57th

* Note : Since 1912-13, i.e. 29th issue to 1917-18 i.e. 34th issue, the information is given under the head "Agra Province".

North-Western Provinces"Area irrigated from"Columns 8 to 13 of Table No. 2

Government canals include private canals except in Naini-Tal, for which district separate figures for private canals have been obtained since 1895-96. There are very few private canals in the N.W. Provinces.

Reference upto 17th issue

Mysore"Area irrigated from and area of crops irrigated"Columns 8 to 18 of Table 2

Formerly these columns included areas, in some districts, occupied but not cultivated. The error was rectified in the statement for 1893-94.

Reference upto 13th issue

Bikaner"Total Area irrigated and area of crops irrigated"Columns 13 and 18 of Table 2

In Bikaner, the soil cannot stand the annual cultivation; land is therefore sometimes irrigated, but left unsown until the following year. This accounts for the excess in total area irrigated over the total area of crops irrigated.

Reference upto 12th issue.

Statement of changes in Districts, Divisional and Provincial Boundaries

Province	District or Division from which transferred	Area transferred and land revenue thereof		Land revenue	District or Division to which transferred	Number and date of Notification of transfer	
		Area in acres					
		Cultivated	Total				
1	2	3	4	5	6	7	
External Transfers							
1891-92	Nil						
1892-93	Nil						
1893-94							
Lower Burma	@	24,369	1,512,960	*	@ Upper Burma	Not notified; transferred for purpose of land law only	
United Provinces (N.W.P.until 17th issue)	Ghazipur district	3,862	8,320		Shahabad, Bengal	No. 1729-I-853-B, dated 8th July 1892	
1894-95							
Bombay	Belgaum district	4	4		4 Sanghi State (Southern Mahratta agency)	No. 9080, dated 11th December 1893, and No. 6073, dated 19th July 1894	
Central Provinces	Hashangabad district	31	142		45 Bhopal (Central India)	Not notified	
1895-96							
Bengal	Shahabad district	467	467	*			
	Jalpaiguri district	1,480	1,080		549 Ballia, United Provinces Goalpara, Assam	No. 475, dated 3rd January 1896 No. 1484-J, dated 10th March 1896	
United Provinces (N.W.P.until 17th issue)	Benaras district	397	807		212 Shahabad, Bengal	No. 78-I-971-A, dated 9th January 1896	
Punjab	Kohat district	14	4,066		2 Independent territory	No. 1039, dated 31st August 1895	
1896-97	Nil						
1897-98							
1898-99							
1899-1900							
1901-01							
1901-02							
Bengal	@		146		20 @ United Provinces	No. 3316-J, dated 15th May 1901	
Punjab	@	29,061,900	65,809,210		@ N.W. Frontier	No. 5780, dated 25th October 1901	

contd.

1	2	3	4	5	6	7
1902-03						
United Provinces	@	1,912	4,732	1,734	@ Bengal	No. 950-J, dated 26th May 1902
Bengal	@	3,368	3,368	319	@ United Provinces	No. 951-J, dated 26th May 1902
1903-04	Nil					
1904-05						
United Provinces	Ballia district	827	1,713	840	Saran, Bengal	No. 2809-I-795-1904, dated 6th October 1904
Punjab	Hissar district	1,405	1,767	270	Bikaner State	No. 601-S, dated 16th June 1905
1905-06						
	(Rajahahi district	1,280,100	1,659,520	10,26,204	Eastern Bengal and Assam	Government of India, Home Department No. 2833 dated 1st September 1905
	(Dinajpur district	1,459,900	2,525,440	15,20,635		
	(Jalpaiguri district	928,400	1,895,680	7,57,868		
	(Rangpur district	1,375,900	2,235,520	10,14,825		
	(Bogra district	622,900	869,760	4,92,093		
	(Palna district	865,300	1,176,960	4,08,505		
	(Dacca district	1,214,500	1,780,480	5,15,801		
	(Mymensingh district	2,405,000	4,052,480	8,65,434		
	(Faridpur district	970,400	1,459,840	6,20,060		
	(Backergunge district	1,771,000	2,906,880	17,03,210		
Bengal	(Tippera district	1,209,000	1,599,360	10,90,183		
	(Noakhali district	784,800	1,052,160	6,82,691		
	(Chittagong district	359,800	1,594,815	11,56,004		
	(Malda district	716,500	1,215,360	4,36,759		
	(Chittagong district	*	3,288,320	*		
	(Hill Tracts	*	*	*		
	(Hill Tippera State	*	2,615,040	*		
	(Chang Bhakar State		578,650			
	(Korea State		1,043,840			
	(Sirguja State	*	3,896,960	* Central Provinces		
	(Udaipur State		673,280			
	(Jashpur State		1,246,720			
United Provinces	Ballia district	1,789	2,123	3,054	Shahabad, Bengal	No. 234-L.R. dated 16th January 1907
Punjab	Hissar district	56	918	152	Bikaner State	No. 1085-S, dated 21st July 1906
	(Sambalpur district	1,051,632	2,447,360	1,89,997	Bengal	Government of India, Home Department Notification No. 2833, dated 1st September 1906
	(Bamra State		1,272,320			
Central Provinces	(Rairakhal State	*	533,120	*		
	(Sonpur State		579,840			
	(Patna State		1,535,360			
	(Kalahandi State		2,396,800			
	(Shanda district	95	3,725	50	Nizam's territory	Letter No. 6704, dated 18th October 1905
1906-07	Nil					
1907-08						
Bengal	Darjeeling	4	4	*	Jalpaiguri, Eastern Bengal and Assam	No. 5735-C, dated 9th May 1907

1	2	3	4	5	6	7
1908-09 Bengal	Shahabad district	-	509	1,909	Ballia, United Provinces	No. 1918 dated 10th April 1908
1909-10 Eastern Bengal and Assam	Malda district	*	2,861	*	Purnea, Bengal	No. 529-Ex, dated 25th December 1908
Bengal	(Nadia district	2,928	2,928	797	Pabna, E.B. and Assam	No. 1886-R, dated 6th August 1908 and No. 2981-R, dated 19th December 1907
	(Nadia district	343	1,035	689	-do-	No. 75, dated 13th January 1909
United Provinces Central Provinces	Balia district		438	1,371	Shahabad, Bengal	No. 2174 T.R., dated 25th September 1909
	Chanda district	23,330	**	1,340	Godavari, Madras	Government of India No. 545 dated 15th April 1909
			379,520			
1910-11 United Provinces	Ballia district		176	251	Shahabad, Bengal	Government of Bengal No. 459 dated 16th May 1910
1911-12						
Eastern Bengal and Assam	(Rajshahi district	924,300	1,659,520	10,28,024	Bengal	Government of India Home Department No. 290 dated 22nd March 1912
	(Dinajpur district	1,415,800	2,525,440	15,22,042		
	(Jalpaiguri district	967,300	1,893,737	8,10,213		
	(Jangapur district	1,510,400	2,226,511	10,16,878		
	(Bogra district	469,900	869,760	4,95,717		
	(Pabna district	774,200	1,179,888	4,22,879		
	(Dacca district	1,255,800	1,780,480	5,37,029		
	(Mymensingh district	2,517,300	4,062,352	8,70,016		
	(Faridpur district	895,000	1,459,840	6,28,049		
	(Backargunj district	1,670,200	2,389,436	17,38,354		
	(Tippera district	1,123,400	1,599,360	11,02,205		
	(Noakhali district	1,015,200	1,052,084	7,07,471		
	(Chittagong district	632,900	1,594,892	11,94,909		
(Malda	775,800	1,212,801	4,38,376			
(Chittagong Hill Tracks	85,100	3,288,320	55,715			
(Hill Tippera State	*	2,615,040	*			
Bengal	(Patna district	1,118,000	1,328,000	17,46,462	Bihar and Orissa	Government of India Home Department No. 289 dated 22nd March 1912
	(Gaya district	1,922,900	3,015,680	14,82,097		
	(Shahabad district	1,466,100	2,800,948	17,97,948		
	(Darbhanga district	1,561,700	2,142,690	7,93,280		
	(Muzaffarpur district	1,430,000	1,942,400	9,84,095		
	(Saran district	1,236,100	1,711,286	12,73,712		
	(Champaran district	1,322,700	2,259,840	5,16,060		
	(Monghyr district	1,043,100	2,510,080	9,61,170		
(Bhagalpur district	1,655,900	2,663,319	6,58,180			

contd.

1	2	3	4	5	6	7
1911-12 (contd.)						
	(Purnea district	2,164,600	3,196,153	11,86,381	} Bihar and Orissa	Government of India, Home Department No. 289 dated 22nd March 1912
	(Santhal Parganas	1,637,400	3,466,100	4,76,200		
	(Cattack district	1,229,700	2,840,307	12,54,476		
	(Balasore district	894,200	1,332,621	6,80,272		
	(Angul district	243,800	1,089,280	1,24,677		
	(Puri district	750,100	1,599,360	7,07,046		
	(Sambalpur district	909,100	2,447,360	2,03,729		
	(Hazaribagh district	1,859,500	4,493,440	1,83,161		
	(Ranchi district	2,187,500	4,544,832	3,13,833		
	(Palaman district	572,900	3,144,960	1,39,564		
	(Manbhum district	1,497,600	2,654,080	83,886		
	(Singhbhum district	853,400	2,490,240	1,46,365		
	(Feudatory and Tributary States in Orissa and Chota Nagpur	*	18,334,720	*		
<u>Internal Transfers</u>						
1891-92						
Madras	Bellary district	1,166	12,055	1,866	Anantapur district	No. 226 dated 15th May 1891
	Tanjore district	13	14	25	Trichinopoly district	No. 807 dated 31st August 1891
1892-93						
Upper Burma	Katha district	1,765	768,000	7,846	Ruby Mines district	No. 314 dated 19th December 1892
Lower Burma	Bassein district	502	112,768	744	Sandoway district	No. 132 dated 23rd May 1892
Assam	Darrang district		1,568	*	Nowgong district	No. 225-Rev-3207-R dated 28th April 1893
United Provinces	(Budaun district		859	20	Etah district	No. 1928-A-I-157 dated 29th July 1892
(N.W.Provinces upto 17th issue) (years 1900-07)	(Pilibit district	215	262	450	Bareli district	No. 2596-A-I-157 dated 7th October 1892
	(Jhang district	3,198	10,562	*	Gujranwala district	No. 624 dated 22nd August 1893
	(Montgomery district	694	3,992	*	-do-	
Punjab	(Gujranwala district	2,977	12,723	*	Jhang district	No. 623 dated 22nd August 1893
	(Hazara district	9	25	3	Rawalpindi district	No. 850 dated 15th August 1893
1893-94						
Upper Burma	Katha district	*	256,000	*	Bhama district	No. 173 dated 1st August 1893
	(Upper Chindwin district	100	320,000	*	Bhamo district	No. 173 dated 1st August 1893
Upper Burma	(Shwebo district	*	6,400	*	Ruby Mines district	No. 299 dated 13th December 1893
	(Sagaing district	*	1,920	1,701	Lower Chindwin district	Not notified (see letter No.288-3-T-3 dated 12th January 1893)

contd.

1	2	3	4	5	6	7
Lower Burma	{ Myingyan district	443,829	2,391,680	5,24,557	Eastern division	No. 239 dated 19th October 1893
	{ Pymmana district	29,162	1,632,000	1,20,511	Yamethin district	
	{ Thongwa district	127,360	1,044,154	2,77,140	Myaungmya district Southern division	
	{ Bassein district	208,180	875,302	3,05,253		
	{ Thayetmyo district	144,936	3,047,040	2,48,110		
United Provinces (N.W.P. until 17th issue - years 1900-01)	Budawn	688	1,529	685	Shahajahanpur district	No.532-I-157-A dated 1st March 1894 No.590-I-87-B dated 8th March 1894
	Ghazipur	30,520	36,810	40,075	Ballia district	
Punjab	{ Musaffargarh district	3,062	9,438	3,662	Multan district	No. 440 dated 15th June 1893 No. 623 dated 22nd August 1893 No. 624 dated 22nd August 1893 No. 601 dated 28th August 1894 No. 624 dated 22nd August 1893 No. 968 dated 28th December 1893
	{ Multan district	2,997	9,590	2,960	Muzaffargarh district	
	{ Gajranwala district	2,997	12,723	744	Jhang district	
	{ Jhang district	3,198	10,562	799	Gujranwala district	
	{ Jhang district	327	1,219	360	Shahpur district	
	{ Montgomery district		3,674	*	Gujranwala district	
	{ Lahore		399	*	Gujranwala district	
Sind	Shikarpur district	14,334	60,339	20,132	Karachi district	No. 5353 and 5353-A dated 25th July 1893
Central Provinces	{ Nagpur district		4,288	*	Seoni district	No. 2141 dated 3rd May 1894 No. 2142 dated 3rd May 1894
	{ Seoni district		4,800	*	Nagpur district	
Madras	{ Ganjam district	127	301	147	Visagapatnam district	No. 461 dated 7th September 1893 { No. 489 dated 10th October 1892 { No. 117 dated 7th March 1893 No. 474 dated 16th September 1893
	{ Madras	262	1,040	595	Chingleput district	
	{ North Arcot district		@ 160,000		Chingleput district	
1894-95						
Bengal	{ Dacca district	*	9,600	*@	Faridpur district	No. 41725 dated 6th November 1894 No. 3832-J dated 3rd September 1894 (Note : Information on Hooghly district is given only upto 19th issue)
	{ Hooghly district	*	21,760	*@	Howrah district	
United Provinces (N.W.P. until 17th issue - years 1900-01)	Etah district	180	3,841	310	Budauz district	No.2362/I-157-A dated 29th August 1894 No.1913/I-87-B dated 16th July 1894
	Ghazipur district	275	54	379	Ballia district	
Punjab	Hazara district		120	*	Rawalpindi district	No. 87 dated 1st February 1895
Bombay and Sind	{ Nasik district	440	3,041	125	Khandesh district	No. 5087 dated 13th June 1894 Following on settlement of boundary by Survey Department. Sanctioned by the Commissioner in Sind, Notification not quoted. No. 2062 dated 19th March 1894
	{ Poona district		16	*	Tanna district	
	{ Karachi district	68	3,83	103	Hyderabad district	
	{ Hyderabad district	49,116	452,730	1,14,039	Thar and Parkar district	

1	2	3	4	5	6	7
Madras	Bellary district	65,709	119,254	41,068	Anantapur district	No. 219 dated 19th April 1895
1895-96	{ Shwebo district Ye-u district	69,315,840 102,254	1,968,640 3,392,000	2,67,870 2,58,353	Central division Shwebo district	No. 65, dated 27th March 1895
Upper Burma	{ Myitkyiana district Pakokku district	300 2,000	320,000 2,000	1,450 9,033	Upper Chindwin district Myingyan district	No. 178 dated 19th August 1895 No. 905-3-M dated 20th November 1895 from Financial Commissioner No. 65 dated 27th March 1895
Lower Burma	{ Bhamo district Shwegyin district Shwegyin district Shwegyin district Amherst district Pegu district	206 105,062 33,154 124,962 317,743 370,065	5,204,626 716,633 1,762,087 994,560 2,548,480 489,186	1,44,855 1,58,144 33,923 1,91,755 5,71,791 9,08,570	Myitkyiana district Pegu district Toungoo district Thaton district Thaton district Hantawady district	No. 130 dated 2nd July 1895
Bengal	Shahabad district	*	2,648	3,333	Patna district	No. 354-J dated 1st July 1895
Punjab	{ Gujranwala district Kohat district	161 11,769	755 11,769	196 3,670	Gujrat district Peshawar district	No. 479 dated 23rd June 1896 No. 45 dated 29th January 1896
1896-97	{ Yamethin district Myngyan district	13,000 494	33,641 494	3,644 1,284	Meintila district Minbu district	No. 168 dated 1st September 1896 No. 731-3-M-72 dated 30th October 1896 from Secretary to Financial Commissioner
Assam	Khasi and Jaintia Hills district		13,440		Sylhet district Sylhet district	No. 84 dated 9th January 1896
1896-97	{ Dinajpur district Bogra district	* *	109,440 59,500	* *	Rajshahi district Rajshahi district	No. 6248-J dated 22nd December 1896
United Provinces (N.W.P. until years 1900-01)	Naini-Tal district	1,508	4,313	354	Almora district	No. 4090-I-723 dated 28th October 1896
Punjab	Gujranwala district	{ 336 { 200	1,334 1,150	* 209	Jhang district Gujrat district	No. 158 dated 15th March 1897 No. 479 dated 23rd June 1896
Bombay and Sind	{ Dharwar district Ratnagiri district Karachi district	191 2	1,199 3 1,294	439 * *	Kanara district Sawantwadi State Hyderabad district	No. 415 dated 15th January 1896 No. 4406 dated 14th November 1895 No. 6288-A dated 11th August 1896
Central Provinces	{ Hoshangbad district Nagpur district	126,569	365,769 707	31,815 *	Nimar district Chhindwara district	No. 3298 dated 24th August 1896 No. 3102 dated 17th May 1895 and No. 2092 dated 3rd June 1896

contd.

1	2	3	4	5	6	7
1897-98						
Upper Burma	Pakokku district	600	39,680	250	Upper Chindwani district	No. 242 dated 18th November 1897
Lower Burma	Tharawadi district	7,036	46,080	8,821	Prome district	No. 59 dated 30th March 1897
Bengal	{ Cuttack district	*	2,560	*	Balosome district	No. 2935-J dated 18th May 1896
	{ Balasore district	*	640	*	Cuttack district	
Panjab	{ Ambala district	20,240	357,731	2,37,373	Karnal district	No. 564 dated 17th September 1897
	{ Musaffargarh district	342	1,000	234	Multan district	No. 181 dated 24th March 1898
Central Provinces	Hoshangabad district		1,215	*	Betul district	No. 4521 dated 22nd December 1897
1898-99						
Upper Burma	{ Pakokku district	112,000	112,000	6,650	Minbu district	No. 178 dated 7th September 1898
	{ Sagaing district	1,581	1,581	2,480	Mandalay district	No. 119 dated 7th July 1898
	{ Myingyan district	474	3,275	1,268	Meiktila district	Following on Survey and Settlement
Bengal	Faridpur district	676	5,376	931	Tippera district	No. 3104-J dated 4th July 1898
United Provinces (N.W.P.until 1900-01)	Etah district	47	860	20	Budaun district	No. 1941-1-15 dated 12th July 1898
Panjab	{ Jhang district	4,031	18,178	3,490	Multan district	No. 191 dated 28th March 1898
	{ Montgomery district		605,580	*	Jhang district	No. 370 dated 11th May 1899
	{ Montgomery district	10,552	23,578	*	Gujranwala district	No. 281 dated 11th April 1899
	{ Lahore district	975	4,450	*	Gujranwala district	
	{ Simla district	316	680	427	Ambala district	No. 626-A dated 3rd May 1899
	{ Jalandhar district	404	2,690	280	Ludhiana district	No. 157 dated 19th March 1899
	{ Ludhiana district	374	1,220	615	Jalandhar district	
Sind	Hyderabad district	3	2,365	6	Thar and Parkar district	No. 147 dated 10th January 1899
Central Provinces	Mandla district		1,665	85	Balaghat district	No. 3620 dated 11th October 1898
1899-1900						
Upper Burma	Myingyan district	249	1,964	729	Minbu district	No. 245 dated 28th December 1899
	{ Myaungmya district	865	2,977	1,902	Tongwa district	No. 73 dated 15th May 1899
	{ Henzada district	76	519	122	Bassein district	No. 21 dated 8th February 1900
Lower Burma	{ Myaungmya district	23,616	46,911	48,158		No. 72 dated 15th May 1899
	{ Thongwa district	1,198	3,931	2,635		No. 73 dated 15th May 1899
	{ Bassein district	4,906	23,481	7,747	Myaungma district	No. 72 dated 15th May 1899
	{ Henzada district	{ 708	708	902	Prome district	No. 142 dated 7th August 1899
	{ Thaton district	{ 545	7,684	600	Tharawadi district	No. 197 dated 1st November 1899
			6,444		Pegu district	Encroachment of the Sillang River

contd.

1	2	3	4	5	6	7
United Provinces (U.N.P. till 1900-01)	{ Bijnor district		1,46	50	Muzaffarnagar district	No. 3864-I-993-C dated 8th November 1899
	{ Bijnor district		30	1	Muzaffarnagar district	No. 2015-I-629-D dated 27th June 1900
	{ Moradabad district		5	9	Bulandshahr district	No. 3867-I-992-C dated 8th November 1899
Panjab 1900-01	{ Thang district	2,308	5,44		Gujranwala district	No. 1108 dated 9th December 1899
	{ D.G. Khan district	7	58	3	Muzaffargarh district	No. 590 dated 28th June 1900 and Erratum No. 553 dated 11th September 1897
Upper Burma	{ Ruby Mines district	35,840			Mandalay district	) No. 137 dated 2nd July 1900
	{ Mandalay	7,040			Ruby Mines district	
Assam	{ Naga Hills district		502,59		Nowgong district	) No. 5656-R dated 9th December 1898
	{ Naga Hills district		1,207,46	1,836	Sibsagar district	
	{ Nowgong district		129,85		Sibsagar district	
Panjab	Rawalpindi district	196,600	416,78	1,59,320	Hazara district	No. 5647-R dated 9th December 1898 and No. 1528-R dated 30th April 1900 No. 813 dated 6th September 1900
Sind	{ Hyderabad district		38,86		Thar and Parkar district	) No. 4802 dated 1st August 1900
	{ Thar and Parkar district	451	8,09	1,139	Hyderabad district	
	{ Shikarpur district	7,323	35,06	19,773	Khairpur State	
	{ Khairpur district	1,575	9,07	4,494	Shikarpur district	
	{ Khairpur district		134,00		Thar and Parkar district	
1901-02						No. 341 dated 19th July 1900 (Under Treaty)
Upper Burma	{ Bhamo district	33,920		330	Myitkyma district	) No. 198 dated 30th September 1901
	{ Myitkyma district	5,120		160	Bhamo district	
	{ Myitkyma district	17,920			Katha district	
	{ Katha district	72	13,44	524	Myitkyma district	
	{ Myingyan district				Kyankse district	
Lower Burma	Thaton district	22,047	22,04		Hantawaddy district	) No. 592-3-T-23 dated 17th September 1902
		17,614	75,00	39,492	Pegu district	
United Provinces	Kheri district	53	84	25	Bahraieh district	No. 2005 dated 4th July 1901
Panjab	{ Montgomery district	31	48	201	Jhang district	) No. 485 dated 5th May 1902
	{ Hazara district	197,304	416,78	1,59,290	Rawalpindi district	
	{ D.I. Khan district	380,330	3,614,91	2,92,291	Mianwali district	
	{ Bannu district	368,690	1,380,20	1,89,533	Mianwali district	
	{ D.I. Khan district	67,105	245,62	21,656	D.G. Khan district	
Sind	{ Karachi district	188,115	1,488,58	4,60,545	Larkhana district	) No. 994 dated 17th October 1901
	{ Sukkur district	603,847	1,743,00	20,23,890	Larkhana district	
1902-03	⊙ Sukkur					No. 995 dated 17th October 1901
Upper Burma	Sagaing district	3,193	8,97	9,956	Mandalay district	No. 992 dated 17th October 1901
						No. 4942 dated 16th July 1901
						No. 276 dated 1st December 1902

⊙ Sukkur : Old Shikarpur - Ref 18th issue.

Note : Old Shikarpur was probably distributed into Sukkur, Larkana and others; main portion of it remains with Sukkur.
Larkana is formed out of Sukkur (old Shikarpur) and Karachi.

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1	2	3	4	5	6	7
Bengal	{ Faridpur district Dacca district	1,660 7,870	1,775 18,200	264 8,650	Dacca district Faridpur district) Notification dated 17th September 1902
Panjab	Mianwali district	2,019	14,744	924	D.G. Khan district	No. 321 dated 30th March 1903
Sind	{ Hyderabad district Hyderabad district	4,783 42,229	25,915 161,558	15,604 1,76,259	Thar and Parkar district Thar and Parkar district	) No. 4876-B dated 22nd July 1903
Central Provinces	Saugar district	3,036	9,589	1,510	Narsinghpur district	No. 5111 dated 11th September 1902
Upper Burma	Myingyan district	674	2,220	1,899	Minbu district	No. 172 dated 20th July 1903
Lower Burma	{ Hanthawaddy district	4,942	5,760	21,618	Rangoon Town	) No. 47 dated 19th March 1903 Nos. 214, 215, 219 and 221 dated 7th September 1903
	{ Old Thongwa district	80,119	112,044	2,01,529	Myaungmya district	
	{ Myanngmya district	80,316	324,621	1,87,588	Maubin district	
	{ Old Thongwa district	321,737	730,086	6,60,339	Maubin district	
	{ Old Thongwa district	534,489	1,378,225	16,32,161	Pyapon district	
United Province	{ Bijnor district	1	620	41	Muzaffarnagar district	) No. 1609-I-655 dated 14th June 1904 No. 1630-I-654 dated 16th June 1904
	{ Fyzabad district	253	2,444	252	Gonola district	
Punjab	{ Montgomery district	830	1,778	872	Jhang district	) No. 1269 dated 8th December 1903 and No. 424 dated 29th March 1904 Nos. 342 and 343 dated 11th March 1904
	{ Rawalpindi district	731,063	1,930,273	4,30,423	Atsock district	
	{ Jhelum district	303,107	766,411	1,89,829	Atsock district	
	{ Ludhiana district	127	175	205	Jalandhar district	
Central Provinces	Balaghat district	2,117	8,967	547	Mandla district	No. 2177 dated 18th April 1904
Madras	Salem district	1.6	1.6	.7	Trichinapaly district	No. 463 dated 12th November 1903
1904-05						
Upper Burma	{ Myingyan district	174	646	348	Pakokku district	) No. 211 dated 12th September 1904 No. 143 dated 7th July 1904
	{ Upper Chindwin district	95	216,061	514	Myitkyina district	
Lower Burma	Pyapon district	2,792	3,191	7,427	Myannghya district	No. 225 dated 16th October 1904
United Provinces	Gorakhpur district	16,122	33,161	22,286	Azargarh district	No. 1962-I-241-1904 dated 19th July 1904

contd.

1	2	3	4	5	6	7
Panjab	{ Ferozepore district	1,907	10,090	1,560	Montgomery district	No. 696 dated 3rd July 1905 Nos. 1546 and 1548 dated 17th December 1904 and Nos. 2425 and 2426 dated 20th September 1905 No. 1544 dated 17th December 1904 No. 918 dated 18th July 1904 No. 1545 dated 17th December 1904 No. 5887, dated 21st September 1904 No. 5887 dated 21st September 1904 No. 454 (Public) dated 10th September 1904
	{ Montgomery district	19,064	52,200	258	Lyallpur district	
	{ Gujranwala district	638	2,225	212	Lyallpur district	
	{ Thang district	11,303	136,937	2,835	Shahpur district	
Central Provinces	{ Thang district	39,195	52,710	20,727	Lyallpur district	
	{ Lyallpur district	3,664	19,868	1,622	Thang district	
	Hoshangabad district	8,367	219,988	2,786	Nimar district	
	Madras	{ Godavari district	517,752	1,482,980	31,17,805	Kistna district
{ Kistna district		1,661,026	3,160,581	53,48,675	Guntur district	
{ Nellore district		223,353	509,792	4,84,943	Guntur district	
1905-06						
Bengal	{ Chota Nagpur Division				* Orissa Division	Government of India, Home Department Notification No. 2833 dated 1st September 1905 No. 1069 dated 22nd November 1905 No. 195 dated 20th February 1906 Nos. 2423 and 2426 dated 20th September 1905 No. 459 dated 30th April 1906 No. 249 dated 9th March 1900 No. 7684-A dated 23rd September 1905 No. 6280-B dated 2nd August 1905 No. 178 dated 6th April 1906 No. 225 dated 1st August 1906 No. 334 dated 14th May 1906 No. 2147 dated 30th June 1906 No. 137-III-256-C dated 29th January 1903 Nb90340-I-100 dated 1st March 1907 No. 1765-I-952 dated 7th June 1906 No. 195 dated 20th February 1906 No. 118 dated 2nd February 1907, No. 516 dated 20th May 1907 and No. 770 dated 15th August 1907 No. 139 dated 12th February 1907
	{ Gangapur State		1,594,880			
	{ Boual State	*	829,440			
Panjab	{ Ferozepur district	597	2,688	568	Lahore division	
	{ Lahore district	371	2,276	382	Ferozepur Division	
	{ Montgomery district	2,868	4,733	978	Lahore division	
	{ Montgomery district	6,087	15,602	5,839	Lyallpur Division	
Bombay	{ Montgomery district	47	50	30	Lyallpur Division	
	{ Shahpur district	9	1,849		Attack Division	
	{ Shahpur district	4	629		Mianwali Division	
	Belgaum district	20,928	23,836	7,624	Bijapur Division	
Sind	Karachi district	483	1,059	754	Hyderabad Division	
Madras	Vizagapatam district	128	128	541	Ganjam Division	
1906-07						
Upper Burma	Sagaing district	11,861	23,570	7,404	Myingyan stakx division	
Bengal	{ Hughli district	453	1,030		Bardwan Division	
	{ Khulna district	373	373	878	24 Parganas Division	
	{ Saharanpur district	153	153	*	Jessore Division	
United Provinces	{ Meerut district	85	4,343	89	Muzaffarnagar	
	{ Etah district	69	1,022	330	Moradabad division	
	{ Budaun district	451	6,332	7	Budaun Division	
	{ Montgomery district	2,992	9,082	346	Etah Division	
Punjab	{ Montgomery district	943	2,486	1,004	Lahore Division	
	{ Jhang district	13,501	29,940	422	Lyallpur Division	
				6,681	Shahpur Division	

1	2	3	4	5	6	7
Sind	Thar and Parkar district	3,967	18,683	10,958	Hyderabad district	No. 7399 dated 2nd August 1906, No. 12055 dated 21st December 1906 and No. 743 dated 24th January 1907
Berar	(Akola district (Akola district	4,826	11,558 4,192	971	Buldana district Yeotmal district	No. 5572 dated 19th August 1905
Madras	(Coimbatore district (Malabar district	1,337 332	13,151 373	1,112 2,793	Nilgiris district Anjengo district	No. 132-J dated 7th March 1906 No. 271-P dated 18th May 1906
1907-08						
Upper Burma	Pakokku district	33	320	73	Myingyan district	Village Proceedings No.8 of 1907
Lower Burma	Toungoo district	64	778	127	Pegu district	No. 265 dated 31st July 1907
Eastern Bengal	Rangpur district	*	3,872	*	Maimensing district	No. 400-R dated 21st February 1908
Panjab	(Jalandhar district (Montgomery district	* 45	21 155	* 25	Kapurthala State Lyallpur district	No. 828 dated 8th March 1905 No. 410 dated 2nd June 1908
Sind	(Thar and Parkar district (Hyderabad district	399 *	3,190 110	835 *	Hyderabad district Thar and Parkar district	Nos. 7421, dated 29th July 1907 and No. 11598 dated 26th November 1907 No. 11598 dated 26th November 1907
	(Narasinghpur district	*		*	Sauger district	No. 128-D dated 8th June 1908 and No. 881-D dated 30th July 1907
Madras	(Chanda district (Coimbatore district	139,006 67	386,160 160	3,695 48	Drug district Nilgiris district	No. 576-A-1-51 dated 4th March 1907 and No. 1101 dated 27th June 1907 No. 44-Rev. dated 21st January 1907
1908-09						
Upper Burma	Myingyan district	1,644	1,644	11	Pakokku district	No. 593-I-T-11 dated 19th May 1909
Bengal	Hooghly district	248	49	*	Nadia district	No. 3254 dated 22nd August 1908
	(Hoshiarpur district	4		7	Ambala district	No. 22798 dated 17th December 1908
	(Ludhiana district	169	1,84	267	Hoshiarpur district	No. 602 dated 6th October 1908
Panjab	(Montgomery district	2,702	4,32	1,561	Lyallpur district	No. 634 dated 23rd October 1908
	(Mianwali district	185,169	1,546,90	7,24,239	Muzaffargarh district	No. 211 dated 9th February 1909
Sind	(Thar and Parkar district (Hyderabad district	1,488 360	13,58 1,08	3,283 811	Hyderabad district Thar and Parkar district	Nos. 10782 dated 23rd October 1908, 11018 dated 30th October 1908 and 4751-A dated 11th May 1908 No. 4751-A dated 11th May 1908

contd.

1	2	3	4	5	6	7
Central Provinces 1909-10	Nimar district	7,879	29,479	2,626	Betul district	No. 3367 dated 25th November 1908
Lower Burma	Amherst district	919	1,920	1,338	Thaton district	No. 334 dated 23rd October 1909
Bengal	{ Nadia district Balasore district	* *	1,980 1,747	* *	Hooghly district Cuttack district	No. 4719 dated 14th December 1909 No. 572-Jr. dated 7th February 1910
Punjab	{ Montgomery district Lahore district	23 218,129	40 568,460	25 1,71,373	Lyallpur district Girjnanwalla district	No. 587 dated 20th August 1909 No. 677-3 dated 18th June 1910
Bombay	{ Dangs States Satara district	* 5,451	* 5,810	224 2,070	Khandesh district Shalapur district	No. 8281 dated 24th August 1909 No. 11462 dated 26th November 1909
Madras	{ Kurhool district Cuddapah district Madura district Tinnevelly district	* 2,155 401,385 437,366	* 2,520 2,426,580 732,640	14 2,443 6,37,715 5,64,882	Anontapur district Karnool district Ramnad district Ramnad district	No. 262 dated 23rd June 1909 No. 135 dated 24th March 1909 No. 281 dated 24th May 1910 - do -
1910-11						
Bengal	Bhagalpur district	Two villages	(c)	(c)	Purnea district	No. 269-Jnr. dated 17th January 1911
Eastern Bengal	Japaiguri district	two	86	*	Rangpur district	No. 497-P.L. dated 4th February 1911
United Provinces	Alnora	2,103	16,31	354	Naini Tal district	No. 1818-I-605 dated 1st September 1910
Panjab	{ Montgomery district Lyallpur district Shahpur district	1,247 289 66,835	3,80 1,83 195,84	899 79 40,375	Lyallpur district Montgomery district Gujrat district	No. 2429 dated 15th September 1910 No. 450 dated 24th July 1911 No. 222 dated 27th March 1911
Bombay	Thana district	137	39	868	Kolaba district	No. 4528 dated 18th May 1910
Sind	Thar and Parkar district				Hyderabad district	No. 5608 dated 21st June 1910
Madras	{ Guddapah district Chingleput district Cuddapah district North Arcot district Salem district South Arcot district	244,549 1,259 216,530 329,874 156,944 194,530	740,99 5,75 1,067,45 2,564,33 345,17 646,22	1,95,586 3,165 4,24,019 7,95,608 1,94,242 3,87,853	Anantapur district Nellore district Chittoor district Do North Arcot district Do	No. 381-Rev. dated 16th July 1910 No. 29-Rev. dated 12th January 1911 No. 130-Pub. dated 7th March 1911 No. 127-Pub. dated 7th March 1911 No. 129-Pub. dated 7th March 1911 No. 128-Pub. dated 7th March 1911

contd.

1	2	3	4	5	6	7
1910-11						
Madras	{ Salem district	224,856	441,939	4,12,722	Trichinapally district	Nos. 358-Rev. dated 1st July 1910 and 475-Rev. dated 10th September 1910 No. 474-Rev. dated 10th September 1910 Nos. 564 and 565-Rev. dated 18th October 1910 Nos. 566 and 567-Rev. dated 18th October 1910
	{ Coimbatore district	225,861	391,776	3,78,679	Trichinapally district	
	{ Trinnevelley district	37,581	46,939	25,667	Ramnad district	
	{ Rammad district	1,334	1,908	2,642	Trinnevelley district	
1911-12						
Bengal (d)	{ Bakarganj district	4,815	5,987	7,359	Faridpur district	) No. 662-R.D. dated 25th March 1912
	{ Bakarganj district	4,218	12,106	11,193	Noakhali district	
Panjab	Montgomery district	14	2,564	50	Lyallpur district	No. 123 dated 30th January 1912
Sind	Hyderabad district		95		Thar and Parkar district	No. 7496 dated 8th August 1911
Central Provinces	Mandla		3,165		Balaghar district	No. 3188 dated 31st May 1904
1912-13						
Lower Burma	{ Pegu	121,172	449,920	3,05,944	Insein	) No. 63 dated 17th February 1912
	{ Hantawadi	393,729	737,638	10,85,006	Insein	
Panjab	{ Delhi (old)	201,129	287,345	4,19,836	Rohtak	) No. 2944-S dated 1st October 1912
	{ Delhi (old)	122,146	178,831	2,21,137	Gurgaon	
	{ Ludhiana	40	71	71	Malarkotta State	) No. 429 dated 10th May 1913
	{ Malerkotta State	73	71	71	Ludhiana	
Panjab	{ Montgomery	1,005	5,958	690	Lahore	) No. 660 dated 15th July 1912 and No. 224 dated 11th March 1913 Nos. 222 and 223 dated 11th March 1913
	{ Montgomery	39,726	115,511	42,059	Lyallpur	
Bombay	Belgaum	1,252	1,311	1,033	Dharwar	No. 10953 dated 29th November 1912
Sind	{ Hyderabad	49,294	143,89	14,387	Thar and Parkar	) No. 9707 dated 19th October 1912
	{ Thar and Parkar	79,382	304,42	2,51,573	Nawabshah	
	{ Hyderabad	4,096	2,178,45	38,49,639	Nawabshah	
Berar	{ Amraoti	180	1,26	170	Buldana	) No. 440 dated 29th August 1912
	{ Amraoti	180	18,78	8,089	Akola	

contd.

1	2	3	4	5	6	7
1913-14						
Bengal	{ Mymensingh Khulna	369 2,499	4 3,0	(c) (b)	Dacca Faridpur	No. 25599 dated 7th March 1914 No. 2275 dated 18th November 1913 and No. 3606 dated 28th March 1914
	{ Jessore	5,101	10,7	(b)	Faridpur	- do -
Madras	Chittoor	473	22,2	627	North Arcot	No. 556 dated 5th December 1913
Bihar and Orissa	Ranchi	1,436	1,4		Palaman	No. 6248-R., 11-J-16 dated 11th September 1913
Panjab	{ Shahpur Shahpur Lyalpur	1,901 24,086	3,5 56,9	3,140 12,544	Gujrat Attock Jhang	No. 195 dated 10th February 1914 No. 136 dated 11th February 1913 No. 578 dated 9th September 1913
Upper Burma	{ Yamethin Meiktila	(c) 282	71,8 4,9	(c) 367	Meiktila Kyaukse	No. 59 dated 23rd March 1914 No. 162 dated 19th May 1913
Berar	Akola	3,544	9,0	1,164	Yeotmal	No. 997 dated 21st June 1913
Assam	Sibsagar	(c)	29,0		Naga Hills	No. 6253 dated 18th November 1913
Ajmer-Merwara	Ajmer	68,795	572,0	(c)	Kekri	No. 576-C dated 21st March 1914
1914-15						
Madras	{ Ramnad Madura	8,101 16,774	9,6 19,8	16,083 34,116	Madura Ramnad	No. 80-Revenue dated 17th February 1915 No. 81-Revenue dated 17th February 1915
Sind	Larkara	130	6	974	Nawabshah	No. 3063 dated 3rd September 1914
Panjab	Lyalpur	257	5	214	Montgomery	No. 208 dated 20th March 1915
Upper Burma	Myingyan	443	1,3	1,175	Pakokku	No. 172-5-L-5 dated 10th February 1915
Lower Burma	Henzada	217	2	418	Thardawaddy	Ratification of a survey error
Central Provinces	Nagpur	2,817	4,1	1,719	Wardha	No. 1139 dated 16th May 1914
Assam	Lakhimpur	(c)	95,4		North-East Frontier	No. 5449-P dated 12th November 1914
1915-16						
Assam	Khasi and Jaintia Hills		3,5		Kamrup	No. 4144-R dated 9th September 1915
Madras	{ Trichinapoly Chittoor		1,7 2		Madura Anantapur	No. 10-Revenue dated 27th December 1915 No. 23-Revenue dated 8th January 1916

contd.

1	2	3	4	5	6	7
Panjab	(Amritsar Sialcot Muttan	54 630 9,942	46 1,11 107,36	60 960 13,207	Sialkot Amritsar Montgomery	No. 505 dated 30th July 1915 No. 504 dated 30th July 1915 No. 453 1/2 dated 30th June 1915
1916-17						
Bengal	(Pabna Mymersingh Chittagon Hill Tracts	118	12 7,52	21 6,009	Rajshahi Dacca	No. 988 T.R. dated 2nd June 1916 Nos. 8954 and 8955 jur. dated 13th November 1916 No. 1946-D dated 14th July 1916
Madras	(Anantapur Cuddapah		1,1(2) 3,812)		Cuddapah Anantapur	No. 115-Revenue dated 3rd March 1916 No. 114-Revenue dated 3rd March 1916
Sind	Sukkur		1)		U.S. Frontier	No. 1061 dated 20th April 1917, No. 1543 dated 1st June 1917
Panjab	Lyallpur	3		7	Jhang	No. 10844 dated 28th April 1917
Upper Burma	Myingyan Meiktila	85,125	282,51	44,196	Magwe	Nos. 136 and 137 dated 22nd June 1916
Lower Burma	Bassein		4		Henzada	No. 320 dated 21st December 1916
Central Provinces	Balaghat	1,068	7,21	1,030	Seoni	No. 1239 dated 22nd July 1916
1917-18						
Bengal	Murshidabad	(d)	1,3	(a)	Malda	No. 8607-P dated 11th June 1917
Madras	Trichinapoly	199,594	392,01	334,008	Salam	No. 64-Revenue dated 14th February 1918 "Fort St. George Gazette"
Bihar and Orissa	Palaman	1	1		Ranchi, Chota Nagpur Dn.	No. 1312-R-113-6 dated 2nd March 1918
Panjab	Shahpur	285	1,0	508	Gujrat	No. 3419-R, dated 13th February 1918
Lower Burma	Ma-ubin Irrawaddy Division	393	2,8	1,123	Myaunggrnya, Imawaddy Div.	No. 53 dated 28th March 1918
Central Provinces and Berar	Bhandara, Nagpur Division	117,035	220,8	1,02,910	Balaghat	No. 174-214-H, dated 23rd August 1917
1918-19						
Madras	South Arcot		2		Chingleput	No. 51-Revenue dated 4th February 1919 "Fort St. George Gazette"
Upper Burma	Minbu	2,118	6,2	4,969	Magwe	No. 104, dated 10th June 1918
Lower Burma	Thaton	441,913	53,2	1,09,209	Pegu	No. 207 dated 20th September 1918

@ = District not stated. * = No information X United Provinces -a and Oudh ** = Includes 289,538 acres of Government forests.
 @ = Zamindari villages; cultivated area not known. Land revenue nonproportioned. * = Revenue jurisdiction not changed
 @ = The transfer of this area was made in February 1906 but only 47 acres were shown erroneously in the return for 1905-06, the whole
 area transferred 9,082 acres has been shown in the return for 1-07
 @ = Excluding unsurveyed area (196,871) acres. @ = Given effect to 1910-11 (c) = Figures not available (d) = Not given effect to in the year 1911-12
 (b) = Revenue not affected (c) = Not available

1	2	3	4	5	6	7
External transfers						
1912-13						
United Provinces	Ballia	45	46	41	Shahabad, Bihar and Orissa	Government of Bihar and Orissa No. 1996-R.A. dated 18th July 1914
1913-14						
Bihar and Orissa	Sarran	51	51	15	United Provinces	No. 4701-R(A)-11J-13 dated 7th October 1912
Upper Burma	Vamethin		1,664		Southern Shan State	No. 60 dated 23rd March 1914
1914-15						
Upper Burma	Myitkyina	622,592	622,592		Putao Estate	No. 16 dated 29th July 1914
Delhi		14,703	29,447	18,247	Meerut, United Provinces	No. 984-C dated 22nd February 1915
1915-16						
No information						
1916-17						
Bihar and Orissa	Saran	5,364	5,361	843	Ballia, United Provinces	Board's No. 18-6-2 dated 29th January 1917 and Government's No. 4701-R(A)-1-11.J.-13 dated 7th October 1912
N.W. Frontier Province		26	64	4	Punjab	No. 102-F dated 22nd February 1917

Source : Agricultural Statistics of India, 28th issue :

For years 1890-91 to 1911-12 : Compiled in the office of the Director-General of Commercial Intelligence

Agricultural Statistics of India, 35th issue :

For years 1911-12 to 1918-19 : Published by order of the Government-General in Council, Department of Statistics, India.

Appendix IV

Observed Discrepancies in Provincial Data from "Agricultural Statistics, British India"

1. In general columns 8 to 13 (of table 2 or 2 to 7 of table 3, i.e. Area Irrigated from) give the area actually irrigated during the year, areas cropped more than once being counted once only (i.e. net area is shown). But in cases like Madras and Punjab, some columns show gross areas irrigated and not the net areas.
2. In Bombay and N.W. Provinces (United Provinces later on) columns 8 to 13 (of table 2 or 2 to 7 of table 3, i.e. Area Irrigated from) do not relate strictly to the title of the columns. For example in N.W. Provinces (United Provinces later on) figures for Government Canals include those for private canals and figures for other sources include tank irrigation until 1892-93.
3. For Madras, term 'Tanks' refers to a particular kind of dammed reservoirs which are formed by including depressions or throwing dams across the valleys of small rivulets and streams to intercept water during the rains.
4. For Bengal, irrigation statistics are not available until 1898-99. Areas irrigated from all sources are

estimates only except from the Government Canals. This is different from no artificial irrigation as in Assam.

5. In Coorg, the figures for land partly irrigated from springs and mountain streams are not available.

6. For Mysore, figures for Areas Irrigated include areas occupied but not cultivated until 1893-94.

7. For Bombay, term "Miscellaneous food crops" is taken as the crops of sugar, orchards, garden produce and miscellaneous food crops.

8. For Bihar and Orissa, the figures for areas irrigated from all sources have been given since 1908-09 only, however, the figures are only estimates except in the case of areas irrigated from Government canals.

9. For Madras for years 1901-02 to 1906-07, the total area irrigated include areas belonging to Zamindari, whole inam villages and Raiyatwari also.

10. For Madras and United Provinces during years 1907-08 and 1911-12 to 1946-47 respectively col. 13 (of table 2 or col. 7 of table 3, i.e. Total Area Irrigated) is partly based on estimates only.

11. For Bikaner, the soil cannot stand annual cultivation; land is therefore sometimes irrigated, but left unsown until the following year. This accounts for the excess

in total area irrigated over the total area of crops irrigated.

General Notes (All provinces)

Area irrigated from (various sources)

Columns 8 to 13 of table 2 upto years 1918-19 and columns 2 to 7 of table 3 upto years 1946-47 state the areas actually irrigated during the years, areas cropped more than once being counted once only.

Area of crops irrigated

Columns 14b to 18 of table 2 upto years 1918-19 and 8 to 19 of table 3 upto years 1946-47 state the gross areas of irrigated crops, areas cropped more than once being counted of separate areas for each crop.

The excess in some cases of the total areas of crops irrigated (that is, column 18 of table 2 or column 19 of table 3) over the total area irrigated (column 13 of table 2 or 7 of table 3) is thus due to the inclusion in column 18 of table 2 or column 19 of table 3 of the area irrigated at both harvests.

Reference Issue No. 18 onwards

The variations in areas shown in different years under the same item in the same district do not necessarily

represent an actual increase or decrease in the area in question. In many cases a revised classification are the correction of the faulty estimate responsible for the change.

Reference issues 22 to 28.

Source

These notes refer to data on irrigation only. The information given in table 2, i.e. classification of area, from 1884-85 to 1918-19, i.e. upto 35th issue; and in table 3 i.e. Area under Irrigation, since 1919-20 to 1946-47, i.e. from 36th issue to 57th issue.

The title of publication varies, a little over years, as follows.

<u>11th issue</u>	Agricultural Statistics of British India compiled in the Statistical Bureau of the Government of India
<u>12th to 19th issues</u>	Agricultural Statistics of India published under the supervisions of Director-General of Statistics
<u>20th to 28th issues</u>	Agricultural Statistics of India compiled in the office of Director-General of Commercial Intelligence
<u>29th to 37th issues</u>	Agricultural Statistics of India published by order of the Governor-General in Council
<u>38th to 42th issues</u> <u>48th to 55th issues</u>	Agricultural Statistics of India compiled in the office at Commercial Intelligence, Department of India published by order of the Governor-General in Council
<u>56th & 57th issues</u>	Directorate of Economics and Statistics Ministry of Agriculture, Government of India

"Indian Agricultural Statistics" issued
by the Economic and Statistical Adviser,
Ministry of Agriculture

Provincial Notes

N.W. Frontier Province

"Area Irrigated from and Areas of Crops Irrigated

Columns 8 to 18 at table 2 state the gross area irrigated, that is, land irrigated in both seasons is counted twice.

Reference : From 18th to 21st issues state the gross area irrigated, that is, land irrigated in both seasons is counted twice. As regards columns 8 to 13, prior to 1907-08, areas which bore two crops under irrigation in a single season were also counted twice, but from that year such areas are only counted once. As regards columns 14 to 18 prior to 1906-07 the figures shown in them were those of harvested areas, that is, excluding areas on which the crops failed, but from that year areas actually sown have been entered.

Reference : From 22nd to 28th issue state the gross area irrigated, that is, land irrigated in both seasons is counted twice.

Reference : 29th issue.

Columns 8 to 18 of table 2 and columns 8 to 19 of table 3

state the gross area irrigated, that is, land irrigated more than once in a single harvest are included once in columns 8 to 13 of table 2 and 2-7 of table 3.

Reference : From 30th issue to 56th issue i.e. years 1913-14 to 1942-43.

Bihar and Orissa

(This province appears for the first time in 1907-08 28th issue)

Area Irrigated from and Area of crops irrigated. Columns 8 to 18 of table 2 and column 2 to 19 from table 3 -

Since 1898-99, the areas and crops irrigated from Government canals are stated, estimates of areas irrigated from all sources have been given for each district from the year 1908-09.

Reference : 28th issue

The figures are only estimates except in the case of areas irrigated from Government canals.

Reference : from 29th issue to 50th issue, upto years 1934-35

Bihar (Appears separately in 48th issue onwards)

Columns 2 to 19 of table 3 -

The figures are only estimates except in the case of areas irrigated from Government canals.

Reference : Upto 57th issue. Years 1946-47.

Orissa

Columns 2 to 19 of table 3

The figures are only estimates except in the case of areas irrigated from Government Canals. In the case of Ganjam and Koraput districts, the term "Tanks" refers to a particular kind of dammed reservoirs. These reservoirs are formed by enclosing depressions or throwing dams across the valleys of small rivulets and streams⁴ intercept water during the rains.

Reference : from the years 1931-32 to 1946-47 (from 48th to 57th issue)

Figures for 1934-35 shown in the table relate to district as they were in the old province of "Bihar and Orissa".

Reference : 52nd issue page 32.

Bengal

Area irrigated from and area of crops irrigated

Columns 8 to 18 of table 2

Irrigation statistics are not available for the areas irrigated from Government Canals and hence no figures are given for these provinces.

Reference : Upto 14th issue.

In the tables for 1898-99, the areas and crops irrigated from Government canals are stated. No figures are available of the areas irrigated from other sources except for cadastrally surveyed tracts.

Reference : 15th to 21st issue.

Since 1898-99, the areas and crops irrigated from Government Canals are stated, no figures are available of areas irrigated from other sources except for cadastrally surveyed tracts.

Reference : From 22nd to 24th issue.

Since 1898-99, the areas and crops irrigated from Government canals are stated, estimates for areas irrigated from all sources have been given from the year 1908-09.

Reference : From 25th to 27th issue.

Areas irrigated from all sources are estimates only except in the case of certain cadastrally surveyed tracts in Rangpur and Rajshahi and areas irrigated for Government canals.

Reference : 28th and 29th issues.

Columns 8 to 18 of table 2 and columns 2 to 19 of table 3

Areas irrigated from all sources are only estimates, except in the case of areas irrigated from Government canals.

Reference : From 50th to 57th issue, years 1913-14 to 1946-47.

Note : Since 1943-44, notes as well as data belong to West Bengal only.

Reference : 57th issue.

Eastern Bengal

Information on this province appears for the first time in 22nd issue and it does not appear in 28th issue, i.e. years 1911-12.

Areas of crops irrigated

Columns 8 to 18 of table 2 :

No figures are available of areas irrigated except for certain cadastrally surveyed tracts.

Reference : 22nd issue, 1906-07.

No reliable figures of areas irrigated are available except for Dacca and Makda and for certain cadastrally surveyed tracts in some other districts.

Reference : 23rd issue, 1907-08.

No reliable figures of areas irrigated are available

except for Rajshahi, Rangpur and for certain cadastrally surveyed tracts in some other districts.

Reference : 24th and 25th issues.

No reliable figures of areas irrigated are available except for certain cadastrally surveyed tracts in Rajshahi and Rangpur.

Reference : 26th and 27th issues.

Assam

"Area irrigated from and Area of crops irrigated"

Columns 8 to 18 of table 2

There is practically no artificial irrigation. The small area irrigated from Hill streams has never been distinguished from other cultivation.

Reference : Upto Issue 21, years 1904-05.

From 1905-06 no figures are available of areas irrigated except for the following districts over different period.

District from which		Years	Issues
Estimates are available	Estimates are somewhat incomplete		
1	2	3	4
1. Kamrup, Darrang Sibsagar and Lushai hills	Sibsagar and Lushai hills	1905-06 to 1911-12	22nd to 28th
2. Kamrup, Darrang Sibsagar, Khasi and Jaintia Hills Garo Hills and Lushai Hills	Sibsagar Khasi and Jaintia Hills Garo Hills, Lushai Hills	1912-13 to 1917-18	29th to 34th
3. Kamrup, Darrang and Sibsagar, Khasi and Jaintia Hills, Lushai Hills, Garo Hills Sadiya Frontier Tract	Khasi and Jaintia Hills, Garo Hills Lushai Hills, Sadiya Frontier Tract	1917-18 to 1918-19	35th to issue
4. Kamrup, Darrang Sibsagar, Khasi and Jaintia Hills, Naga Hills, Garo Hills, Lushai Hills, Sadiya Frontier Tract	Khasi and Jaintia Hills, Naga Hills Garo Hills, Lushai Hills, Tract Sadiya Frontier	1919-20 to 1922-33	36th to 39th issue
5. Sylhet, Kamrup, Darrang and Naga Hills, Sibsagar Khasi and Jaintia Hills, Garo Hills Lushai Hills, Sadiya Frontier Tract	Khasi and Jaintia Hills, Naga Hills Garo Hills, Lushai Hills and Sadiya Frontier Tract	1923-24 to 1925-26	40th to 42nd
6. Darrang, Goalpara, Kamrup, Cachar, Sylhet, Garo Hills, Khasi and Jaintia Hills, Naga Hills, Sadiya Frontier	Garo Hills, Khasi and Jaintia Hills, Naga Hills, Sadiya Frontier Tract	1931-32 to 1934-35	48th to 50th

1	2	3	4
7. Darrang, Goalpara, Kamrup, Sylhet, Garo Hills, Khasi and Jaintia Hills, Naga Hills, Sadiya Frontier Tract, Cachar	Garo Hills, Khasi and Jaintia Hills, Lushai Hills, Naga Hills, Sadiya Frontier Tract, Cachar	1935-36 to 1946-47	51st to 56th and 59th

Tanks

Column 10 of table 2 - The term 'Tanks' refers to a particular kind of dammed reservoirs - Ref. upto years 1911-12, 23th issue.

Note : Previous to 1891-92 the area entered in this column was the gross, not the net areas irrigated, areas cropped more than once being added to the net area.

Reference : Upto 1897-98 (14th issue).

Column 10 of table 2 and column 4 at table 3.

The term 'tanks' refers to a particular kind of dammed reservoirs. These reservoirs are formed by enclosing depressions or throwing dams across the valleys of small rivulets and streams to intercept water during the rains.

Reference : Upto years 1946-47 (57th issue)

Total Area Irrigated

Column 13 of table 2

Of the total area irrigated for the years 1901-02 to 1906-07, parts belong to Zamindari, whole inam villages and to Raiyatwari, the details are given below.

Reference : Upto 23rd issue.