

# METHODS & PRACTICE OF FARM ACCOUNTS

Report on the Pilot Project

Bombay } 1955-56

Uttar Pradesh } 1956-57

G. D. AGRAWAL  
G. J. KHUDANPUR

**RESERVE SECTION**

87.234.N54

K1

705

ONA

KHALE INSTITUTE OF  
POLITICS AND ECONOMICS

---

IA PUBLISHING HOUSE  
BOMBAY · CALCUTTA · NEW DELHI · MADRAS  
LONDON · NEW YORK

# METHODS & PRACTICE OF FARM ACCOUNTS

Report on the Pilot Project

Bombay | 1955-56  
Uttar Pradesh | 1956-57

G. D. AGRAWAL  
G. J. KHUDANPUR

POONA  
GOKHALE INSTITUTE OF  
POLITICS AND ECONOMICS

---

ASIA PUBLISHING HOUSE  
BOMBAY · CALCUTTA · NEW DELHI · MADRAS  
LONDON · NEW YORK

G. D. Agrawal (1914 —)  
G. J. Khudanpur (1930 —)

© Gokhale Institute of  
Politics and Economics  
1961

NO. 40

RES.

X9(J); 87.231. NST4

K1

75705

Price Rs. 2

**PRINTED IN INDIA**

by Shri. K.G. Sharangpani, at the Aryabhushan Press, 915/1 Shivajinagar, Poona 4 &  
Published by D.R. Gadgil, at the Gokhale Institute of Politics and Economics, Poona 4.

**METHODS & PRACTICE  
OF FARM ACCOUNTS**

GOKHALE INSTITUTE STUDIES NO. 40

## CONTENTS

	Pages
<b>Chapter I : Introduction</b>	<b>1</b>
1-1 Introduction	
1-2 The plan and coverage	
1-3 Recruitment of agricultural instructors	
1-4 Training of agricultural instructors	
1-5 Selection of centres	
1-6 Selection of trainees	
<b>Chapter II : Operation of the Project</b>	<b>10</b>
2-1 Arrangement for training	
2-2 Method of training	
2-3 Progress of the work in Bombay area	
2-4 Progress of the work in Uttar Pradesh area	
2-5 Failure of centres	
2-6 Overall coverage of the project	
2-7 Conditions of work of agricultural instructors	
2-8 Attitude and conditions of work of the trainees	
<b>Chapter III : The Account Book</b>	<b>24</b>
3-1 Introductory	
3-2 The day book	
3-3 The ledger	
3-4 Instructions for keeping the day book	
3-5 Instructions for keeping the ledger	
<b>Chapter IV : Response and Performance</b>	<b>38</b>
4-1 Introductory	
4-2 Analysis of errors	
(a) Computational and posting	
(b) Wrong reporting	
(i) Wilful act	
(ii) Negligence by trainees	
(iii) Lack of comprehensive instructions	
(iv) Defects in schedules	
4-3 Certain difficulties in recording data	
4-4 Scrutiny of the account books	
4-5 Response to the ledger	
4-6 Response to the day book	
<b>Chapter V : Modifications in the Project</b>	<b>52</b>
5-1 Modifications in organisation	
5-2 Modifications in the account book	
<b>Appendix : Revised Account Book</b>	<b>59</b>

## LIST OF TABLES

Table No.		Page
1-5-1	Classification of trainees according to status	5
1-6-2	Classification of trainees according to education	6
1-6-3	Number of books maintained in headquarters village and other villages	7
1-6-4	Location of centres and the number of books maintained	9
2-6-1	Completed and accepted account books	17
2-6-2	Classification of accepted account books according to status of trainees	18
2-6-3	Classification of the accepted account books according to educational level of the trainees	19

## FOREWORD

The Gokhale Institute of Politics and Economics has been interested in the keeping of farm accounts by farmers ever since the beginning of its studies in farm business and farm management. The great handicap in these studies in India has always been the lack of sufficient notes or memoranda made by farmers, on the basis of which they could fill survey schedules or give fairly accurate answers to any questionnaire. The Institute prepared in 1937 a farm account book based on books produced in other countries, modified by experience of Indian conditions. This was used to a small extent, in some of our investigations. Attempts were also made, over a number of years, to induce qualified farmers in various places to maintain these books. These attempts were almost uniformly unsuccessful. Many workers at the Institute felt that more success could perhaps be achieved if the idea of keeping farm accounts was implanted at a younger age and training in keeping them was given at school. Such an attempt could be made with sons of farmers in the higher standards of primary schools. When, therefore, it became known that the Indian Council of Agricultural Research was interested in experiments in popularization of farm accounts, a scheme was presented to the Council for an experiment in schools in selected villages. This publication embodies the report of results of experiments made in Bombay State and in Uttar Pradesh.

It will be seen that though the experiments were far from being uniformly successful, they give clear indications of directions in which satisfactory progress may be achieved. In the last analysis, reliable data regarding details of farm management and the operations of the farm economy could be obtained only through widespread records kept by farmers. Both from the point of view of inducing farmers to plan their business better and of obtaining data on the basis of which sound policies could be framed and advice given, the spread of the accounting habit is of the utmost importance. It is hoped that this publication will induce government departments and agricultural institutes to undertake further experimentation with the designing of farm account books and their popularization.

Gokhale Institute of  
Politics & Economics, }  
Poona 4, }  
26th November, 1960. }

D. R. GADGIL



## CHAPTER I

### INTRODUCTION

The practice of keeping accounts by the farmers in India is practically non-existent. Firstly, a very large proportion of the Indian farmers is illiterate; and even those few who are literate get very little guidance from anybody. In countries like U. S. A., most of the agricultural colleges have devised account books for agriculturists. Keeping accounts makes the farmers conscious of the cost and income aspects of the occupation, creates a businesslike attitude towards farming, and eventually induces them to raise their efficiency and improve their earnings. In India, no systematic attempt has been made so far to evolve an account book suitable to the peculiar conditions in which the Indian agriculturist operates nor any techniques for popularising maintenance of accounts have been thought out. With a view to exploring the possibilities of popularising the maintenance of farm accounts by farmers and developing proper technique of instruction to farmers, the Indian Council of Agricultural Research, New Delhi, approved a Pilot Project, namely Methods and Practice of Farm Accounts, and entrusted it to the Gokhale Institute of Politics and Economics, in April 1955. This is a report on the operation and findings of the Project.

#### 1.2 The Plan and Coverage :

The sons of cultivators studying in schools were thought to be the most promising section of the cultivator family for being trained in the maintenance of farm accounts. It was considered that they would be comparatively more enthusiastic about the new idea and would be amenable to instruction.

The Gokhale Institute of Politics and Economics carried out the project in two areas. In Bombay area, the Institute carried out the work through its own staff and in Uttar Pradesh, Dr. G. D. Agrawal, then Agricultural Economist at the Government Agricultural College, Kanpur, executed the project on behalf of the Institute. In Bombay area, work was started in six districts viz. Nasik, North Satara and Karwar of the former Bombay State, Buldhana and Wardha of the former Madhya Pradesh, and Osmanabad of the former Hyderabad State. After States' Reorganization in November 1956, all these districts come in the former Bombay State except Karwar which since formed a part of the Mysore State. In Uttar Pradesh, work was begun in Kanpur district at two centres. The fieldwork in Bombay area commenced in June 1955 and was over

by April 1956. In U. P. area, however, the project started in October 1956 and was completed in May 1957. Due to delay in formal arrangements, the work in U. P. area could not be done simultaneously with that in Bombay area.

### 1.3 Recruitment of Agricultural Instructors :

The scheme for this project was first submitted to the I.C.A.R. in July 1954 and received final sanction on 30th May 1955. In the meanwhile, the Institute decided to obtain on deputation basis the services of six senior primary school teachers to work as Agricultural Instructors. On 9th April 1955, the Institute took up this matter with educational authorities of the Bombay, Madhya Pradesh and Hyderabad States and the respective district educational authorities were subsequently contacted. It was proposed to start training of the selected Agricultural Instructors from the beginning of May 1955. However, only two teachers from North Satara and Buldhana could join the Institute in the first week of May; teachers from Karwar and Osmanabad reported at the Institute in the first week of June and those from Nasik and Wardha joined in the second week of June. The deputies from the latter four districts could not join earlier owing to some routine administrative delay in making formal arrangements as regards terms and conditions of deputation with the respective district educational authorities. The District School Boards in Bombay State transferred the services of their teachers to the Institute on 'Foreign Service Conditions' as prescribed in the Bombay Civil Service Rules Manual Vol. I. The travelling and daily allowances of deputies were, however, governed by the Institute Rules and not by the B. C. S. Rules. The same terms and conditions of service were offered to teachers from Madhya Pradesh and Hyderabad and were readily agreed to. These instructors were expected to impart instruction, supervise and guide the trainees. The scrutiny, tabulation and analysis of the data collected through the farm account books were done by the regular staff in the statistical section of the Institute.

In U.P., two agricultural graduates, with postgraduate training in agricultural economics, were employed for training and guidance of the trainees and supervision of the work of maintenance of the farm account books. They were responsible for checking the accuracy of records and compilation and were subsequently entrusted with the work of tabulation and analysis.

### 1.4 Training of Agricultural Instructors :

The primary teachers on deputation were given preliminary training, at Poona, which consisted of acquaintance with various

schedules employed by the Institute in the farm business surveys conducted from time to time, and associating them with the compilation of farm accounts from the farm business survey data relating to Farm Management Scheme (Madhya Pradesh), then being tabulated at the Institute. Besides, every item in the day-book and ledger, employed in this project, was fully discussed with them and detailed instructions were issued for filling the day-book and ledger. The teacher-instructor was also required to fill in a few specimen books and their entries were carefully scrutinised and errors explained. Though it was proposed to give a full month's training to each selected teacher, as some of them joined rather late, period of their training had to be curtailed in view of the field work which could not be postponed beyond June. Actually two instructors received training for a week only while two others received it for only a fortnight or so.

In U. P., two Research Assistants worked as instructors in this project. The Senior Assistant, who joined on 1st October 1956, had previously worked as Agricultural Extension Assistant in the Department of Agriculture and as Research Assistant in the Farm Management Scheme. The other Assistant was a fresh M. Sc. (Agri.), with Agricultural Economics, and joined on 15th December 1956. The Senior Assistant was given training in farm accounts which included detailed instruction in keeping day-book and ledger. He, in turn, trained the other Assistant. Both the Assistants were asked to mix freely among farmers, to acquaint themselves with their problems, and to extend to them guidance and help in securing agricultural supplies. This approach was useful in gaining confidence and securing co-operation from the farmers in the conduct of the project.

### 1.5 Selection of Centres :

In Bombay area, it was originally proposed to have the same centres for this project which were already selected for the study of economic change being conducted in the Agro-Economic Research Section. But later on it was felt advantageous if villages were selected wherein the teacher-instructor had served for a considerable length of time and so enjoyed respect from and confidence of the residents of the villages. As such, the teacher-instructor was given freedom in selection of the centre where he could work most effectively. The instructors were asked to select villages having first grade primary schools, i. e. those teaching upto seventh standard.

In U. P., the project was operated in two talukas of Kanpur district. With a view to selecting villages without urban influence it was decided to select villages beyond a distance of 10 miles from Kanpur city. The two selected centres were educational institutions, namely Junior High School, Khersa, and Gandhi Vidhyapith High Secondary School, Ghatampur. These two schools were chosen after consultation with the District Inspector of Schools and Extension Guides who are appointed in U. P. in connection with the Agricultural Education Re-orientation Scheme. The following aspects were borne in mind while selecting the schools and villages : ( i ) teaching of agriculture upto VIII standard ; ( ii ) location of the schools in the same direction thus making it possible for effective supervision and frequent mutual consultation and discussion between the Research Assistants; and ( iii ) a Youth Club in the school or nearness of the school to a N. E. S. block. The members of a Youth Club could be selected as trainees in the project. The location of the school in N. E. S. block was considered desirable as some initial assistance could become available in launching the project. The school at Khersa had a Youth Club and the one in Ghatampur was located in the N. E. S. block. The villages around each of these schools were grouped into sub-centres for holding meetings of farmers and trainees.

#### 1.6 Selection of trainees :

Originally, it was proposed to confine the selection of trainees for recording data to only students of cultivating classes studying in sixth and seventh standards. However, it turned out that the number of such trainees, willing to maintain accounts, was very small and so the standards of eligibility had to be relaxed. In Bombay area, this was done by extending training, first, to students from cultivating classes studying in standards higher than seventh, and then, to students studying in standards lower than sixth. Subsequently, students of non-cultivating classes who were willing to maintain accounts of their neighbouring cultivators and non-students who were themselves cultivators and willing to keep accounts of their own farms were also admitted as trainees. In U. P. also, literate farmers and school teachers willing to maintain accounts had to be admitted as trainees, owing to the small number of willing students from cultivator class, studying in standards VI to VIII. It may be noted that in U. P., the teachers admitted as trainees were themselves farmers and were allowed to work in the project as their participation was expected to ensure co-operation of school staff and students in the project.

Table 1. 6. 1 gives the classification of the selected trainees according to their status. It can be seen from the table that of the

Table 1.6. 1 : Classification of trainees according to status.

Centre	Total No. of books main- tained initially	Number of account books maintained by		
		Non-stu- dents in respect of family holding	Students in respect of	
			family holding	holding of neigh- bouring farmer
<i>Bombay Area</i>				
Khatav	129	11	118	....
Chendiye	125	27	83	15
Deulghat	155	26	56	73
Ter	69	35	27	7
Total	478	99	284	95
		Students	Teachers	Farmers
<i>U. P. Area</i>				
Khersa	41	37	....	4
Ghatampur	38	32	5	1
Total	79	69	5	5

(Note—Data for two centres viz. Ozar in Nasik district and Anji Mothe in Wardha district in Bombay area, which were discontinued during the year, are not presented in this report.)

total books maintained, nearly 80 per cent. from Bombay and 87 per cent. from U. P. were maintained by students. Of the total students participating in the project in Bombay area, about 75 per cent. belonged to cultivating classes and kept the accounts of their family holding; the remaining 25 per cent. students belonged to non-cultivating classes and kept the accounts of their neighbouring cultivators. In U. P., the student trainees were 87 per cent., the rest being teachers and literate farmers.

Table 1. 6. 2 gives the classification of the trainees, who began maintaining records, according to their educational standard. It can be seen that, in Bombay area, one-fifth of the total

Table 1. 6. 2 : Classification of trainees according to education.

	No. of books maintained initially				Total
	below VI Std.	VI Std.	VII Std.	above VII Std.	
<i>Bombay Area :</i>					
	<i>Students</i>				
Khatav	2	29	53	34	118
Chendiye	12	22	30	34	98
Deulghat	8	40	53	28	129
Ter	...	7	14	13	34
Total	22	98	150	109	379
	<i>Non-Students</i>				
Khatav	...	...	5	6	11
Chendiye	6	2	5	14	27
Deulghat	5	2	2	17	26
Ter	9	9	9	8	35
Total	20	13	21	45	99
	<i>Grand Total</i>				
Khatav	2	29	58	40	129
Chendiye	18	24	35	48	125
Deulghat	13	42	55	45	155
Ter	9	16	23	21	69
Grand Total	42	111	171	154	478
<i>U. P. Area :</i>					
	<i>Students</i>				
Khersa	...	7	17	13	37
Ghatmpur	...	5	12	15	32
Total	...	12	29	28	69

(Note—Classification of non-students from U. P. was not available.)

trainees were non-students, two-thirds of whom had education above standard sixth. Of the 379 student-trainees joining the project, 40 per cent. were studying in standard seventh, 29 per cent. in standards higher than seventh, while 26 per cent. were in standard sixth. Thus, majority of the students as well as non-students in

Bombay area were with an education of seventh or higher standard. This position was also true in respect of trainees from different centres within the area.

Similar classification of trainees in U. P. was not available for non-students. Among students, trainees studying in sixth standard were not comparatively large; majority of students in both the centres was studying in seventh or higher standards.

In spite of the extension of the scope of selection of trainees in different directions, the number of trainees in the selected centres in Bombay area was so inadequate that it became necessary to extend the project to other neighbouring villages having first grade primary schools.

In U. P., under each centre there were three sub-centres so that adequate number of trainees could be selected. Table 1.6. 3 shows the total number of account books maintained initially at different centres and sub-centres, from which it is evident that only about 25 per cent. of the total books were at the headquarters villages in both, Bombay and U. P., and that the major portion of books was being maintained at a number of surrounding villages in each centre. Inadequate response from the headquarters villages of different centres led to extension in area of operation and to dispersion of effort and supervision on a relatively large area.

Table 1.6. 3 : Number of books maintained at the headquarters village and other villages.

Centre	Total No. of books maintained	Of which maintained at	
		the Headquarters village.	Other villages.
<i>Bombay Area :</i>			
Khatav	129	21	108
Chendiye	125	49	76
Deulghat	155	34	121
Ter	69	25	44
<b>Total</b>	<b>478</b>	<b>129</b>	<b>349</b>
<i>U. P. Area :</i>			
Khersa	41	12	29
Ghatampur	38	8	30
<b>Total</b>	<b>79</b>	<b>20</b>	<b>59</b>
<b>Grand Total</b>	<b>557</b>	<b>149</b>	<b>408</b>

The need to choose villages with first grade primary schools led to the selection of villages sometimes at considerable distance from headquarters, particularly in Bombay area. At Khatav centre, three of the 8 villages were more than 20 miles from Khatav while the other remaining five were within five miles' distance. In Chendiye centre, all the four villages were at a distance of less than five miles from Chendiye but in Deulghat centre, all the five villages were 10 or more miles away from Deulghat, whereas in Ter centre, two of the three other villages were more than 15 miles away from Ter, the third being at a distance of five miles. The location of centres and the number of books maintained initially can be seen from Table 1.6.4. It is to be noted that no village was more than five miles away from the headquarters in U. P. area and from Chendiye centre in Bombay area.

To sum up, Tables 1.6.1, 1.6.2 and 1.6.3 show how the scope of the project as regards selection of trainees came to be extended in terms of status (student-non-student), educational standard, and jurisdiction, respectively. Table 1.6.4 indicates the consequent large jurisdiction of the centres, particularly in Bombay area.



Table 1.6. 4 : The location of centres and the number of books maintained

Bombay Area				U. P. Area													
Khatav Centre		Chendiye Centre		Deulghat Centre		Ter Centre		Khera Centre		Ghatampur Centre							
Village	(1)*	(2)*	Village	(1)	(2)	Village	(1)	(2)	Village	(1)	(2)						
Khatav	—	21	Chendiye	—	49	Deulghat	—	34	Ter	—	25	Khera	—	12	Ghatampur	—	8
Pusegaon	4	30	Todur	1	23	Sawargaon	20	35	Wagholi	20	11	Katiyara	3	12	Paras	4	10
Jakhangaon	3	11	Amadalli	3	17	Dhad	22	21	Watwadi	5	13	Harbaspur	1	9	Bhadras	2	9
Katgun	3	24	Arage	3	22	Dahid	10	29	Upale	15	20	Hazipur	3	8	Dhuru	4.5	11
Khatgun	3	15	Binage	4	14	Dudha	22	14									
Bidal	21	10				Padli	10	22									
Daruj	3	5															
Gondvale (K)	27	8															
Gondvale (B)	24	5															
<b>Total</b>		<b>129</b>			<b>125</b>			<b>155</b>			<b>69</b>			<b>41</b>			<b>38</b>

\* (1) Distance of the village from H. Qs. in miles.

(2) No. of books originally in force.

## CHAPTER II

### OPERATION OF THE PROJECT

The Institute provided every trainee, participating in this project, with a set of account books, a copy of the instructions for recording data and the necessary stationery. The books of accounts employed consisted of loose leaves, the leaves being held together by a piece of string passing through punched holes at one side. The employment of loose-leaf account books was advantageous as it facilitated the insertion and removal of pages whenever necessary. This facility was, however, found to have led to an abuse by the trainees, who found it convenient to keep account books at home and carry the relevant pages to the school. This practice resulted in soiling, folding and sometimes even in the mutilation of the pages so taken out and often led to their misplacement or loss.

#### 2.2 Method of Training :

At the outset, at each centre, the instructors organised meetings of teachers, students, and cultivators to explain the object of the project so as to secure their participation in the project. A few copies of the account books and instructions were also distributed for perusal amongst those who evinced some interest in the project. It was announced at these meetings that every account book satisfactorily completed would be rewarded Rs. 25 by the Institute, at the end of the year. Later it was announced that students willing to participate in the project should give their names either to their class teachers or to the agricultural instructor, specially appointed for the purpose. The agricultural instructor, then, individually met local teachers as also the cultivators whose sons expressed their desire to keep accounts of their family farms. He, then, supplied every trainee in the project a set of account books, etc.

Each centre with its selected neighbouring villages was placed in charge of one agricultural instructor. The agricultural instructor was required to stay in one of the selected villages and to visit each of the selected villages at least once a week. In order to facilitate the inspection of work done by the agricultural instructor, each of the selected villages was assigned a particular day of the week and the agricultural instructor was required to visit that village on that particular day. During his weekly visits, the agricultural instructor

initiated the trainees in keeping farm accounts by means of tutorials of two to three hours' duration. Each such occasion was also utilised for discussing the difficulties raised by the trainees and explaining the errors in the recorded data as revealed through the weekly scrutiny of the account books. Rest of his time was utilized by the agricultural instructor in scrutinising the account books. In fact, the agricultural instructor was required to inspect each book at least once a month. His work was supervised by a senior field instructor of the Institute and the research assistant attached to this project by means of periodical visits.

In U. P. also, a similar procedure was adopted; the research assistants had three or four classes, of two hours' duration each, at the two selected centres. These classes were also attended by the Extension teachers attached to these schools. The senior research assistant guided them in making the queries and filling the books. During his weekly visit, the research assistant checked their records, corrected the books and guided them. The senior research assistant also supervised the work of the junior research assistant periodically. The officer in charge visited the centres occasionally.

### 2.3 Progress of the work in Bombay area :

*July-September* : It is obvious from the table 1.6.4 that the work-load of an agricultural instructor must have been quite heavy initially. In fact, when the list of the selected centres and the number of trainees was received, it was felt that the work-load was likely to be unmanageable. However, no reduction in the number of trainees was favoured, as it was expected that a number of them would drop out of this project in due course and that consequently the load would go down automatically. After the trainees were selected, they were initiated in keeping accounts and so began the regular work. The accounts so kept were inspected both by the agricultural instructor and the research assistant in charge. During one of his early visits, the research assistant verified the data recorded in the books by a house to house visit and found that some of the data recorded in a few books were bogus. Consequently, the agricultural instructors were asked to verify the data recorded by the trainees by paying periodical visits to their houses. The inspection of the account books also revealed that area and land revenue figures recorded by the trainees were inaccurate. So, the agricultural instructor was subsequently required to get those figures corroborated from the village records. Instructions were also revised from time to time in the light of actual experience, and changes in

instructions were conveyed to the trainees through instructors. Soon after the launching of this project, the agricultural instructor in charge of the centre in Nasik district fell ill and proceeded on a fortnight's leave, which he later extended to 45 days. In view of his continued ill health and absence of any reserve staff to take his place, it was decided to close down the centre and to discontinue deputation of the teacher in charge with effect from 30th Sept. 1955.

*October-December* : In the months of October-November, it came to notice that while the day book was being kept regularly the ledger was being neglected. As such, greater attention was paid to the recording of the data in the ledger, in particular. An attempt was made to ascertain and record information regarding assets and liabilities, and stock of food-grains and fodder in respect of each cultivator whose account was being kept. Special efforts were also made to record the terms and conditions of service of the annual and monthly farm servants. All these data were essential for evaluating domestic labour.

There were now signs that enthusiasm was on the wane and that many of the trainees were finding the task of recording data day after day continuously, more onerous and irksome than they had anticipated. Some of them simply ceased to record data and dropped out of the project. To others who were still hesitating, the terminal examination, approaching in October, became a good excuse and they stopped recording data on the ground that they had to devote all their time to preparation for the examination. The Divali vacation following the terminal examination made matter worse ; for, while some trainees left the village during the vacation others were disinclined to work during holidays. As a result, there was a sharp fall in the number of trainees continuing to record the data. At about this time, in Wardha district where one of the centres was located, the cotton crop, which is the principle commercial crop of the tract, completely failed and this resulted in mounting apathy towards maintenance of accounts. In fact, the agricultural instructor in charge of that centre reported that on account of lack of local response and co-operation, it was not possible for many trainees to make satisfactory progress. Further, a scrutiny of the account books filled in revealed that the books were not properly maintained and hence the centre was closed and the deputation of the teacher was discontinued with effect from 31st December 1955.

Thus after about six months of the project, two centres had been closed while real progress had been achieved in only two

centres of the remaining four, viz. Chendiye in Karwar district and Deulghat in Buldhana district. This was largely due to the fact that the agricultural instructors there, had succeeded in evoking the interest of local teachers in different villages in this project. The local teachers in the two successful centres not only encouraged the trainees in keeping accounts, but even supervised and guided their work. Besides, some of them even set an example to the trainees by keeping accounts of their own family holdings regularly.

*January-March:* The trainees, by now, had become fairly conversant with the work of recording data and had become familiar with the day book and the ledger. The agricultural instructor could, therefore, pay more and more attention to the inspection of the account books. The agricultural instructors communicated to the Institute the types of unanticipated errors they came across, and sought guidance. The Institute, after studying those mistakes, issued instructions from time to time so as to guide against recurrence of such mistakes. For the sake of co-ordination, the Institute followed a practice of communicating to each agricultural instructor the difficulties raised by the others, and solutions suggested by the Institute thereto. In course of their inspection, the instructors came across many errors but due to lack of adequate time at their disposal could not correct those mistakes on the spot. Hence the practice of drawing the attention of the trainees to the errors committed by others was followed. The trainees, however, often failed to carry out these instructions, resulting in the fact that several errors remained unrectified to the end. At about this time, at two centres, viz. Khatav and Ter, the number of books, regularly kept, began to decline sharply due to the approaching annual examination. Efforts to induce students to devote some minimum time to writing the accounts did not yield much fruit. At these two centres, the number of books maintained became very small by this time. However, the closing of these centres at such a late stage would have adversely affected the enthusiasm of the other centres, as also of those few trainees in the two particular centres who were maintaining the accounts. Therefore, these two centres were not closed despite the small number of books.

*April-June:* In this quarter, the work of posting the entries from the day book to the ledger was in good progress. However, it proceeded very slowly as a large number of computational errors were discovered in the day book which had to be corrected before posting the entries to the ledger. In order to

expedite the posting, the instructors took upon themselves the task of rectifying the computational errors in the day book. In the case of Chendiye and Deulghat centers where the number of trainees was large and the number of satisfactory books of accounts also was big, the work proved to be extremely heavy in spite of the co-operation of a number of local teachers who voluntarily and honorarily associated themselves with the agricultural instructors. It was, therefore, decided to provide additional assistance to the instructors of these two centers to cope up with their work. In pursuance of this decision, the two instructors were allowed to recruit additional teachers locally to help them in their work. As the term of deputation of all the teachers recruited to work as agricultural instructors was due to expire, it was decided to stop recording of data by 30th April, 1956 with a view to enabling the agricultural instructors to collect all account books and return to Poona by the middle of May. After their arrival in Poona they were required to sort out the incomplete books. In such cases, a list of trainees was prepared indicating against each the reasons why the books remained incomplete. In the case of completed books, the instructors were required to prepare a list of the cultivators whose accounts were kept, indicating against each cultivator, the name, age, education, relationship to the cultivator and postal address of the trainee. This was necessary to identify the trainees at the time of payment of the reward, for the satisfactory books maintained by them. The agricultural instructors also examined fully, at Poona, each one of the account books of their respective centres at least once, and corrected any errors that came to their notice. The deputation of all the teachers except from Deulghat was discontinued from 31st May, 1956, and they were relieved from the Institute's work. The services of the Deulghat instructor were continued for another month as some ledger work had remained incomplete, and also as he expressed his willingness to finish the work if continued for one month.

#### 2.4. Progress of work in the U. P. area :

The agricultural year in this area begins on June 1 and ends on May 31. But because the research assistant joined late and some time was lost in the selection of centres, the surrounding villages, and the trainees, actual work of keeping accounts began in the middle of October only. The work became fairly well-organised by the beginning of November 1956. The data for the earlier period, i. e. from June 1 to October 31, covering the summer season crop (kharif crop), were obtained by survey method by the

research assistants and were recorded by them in the account books. Subsequently, the trainees started gathering data in respect of various operations for different crops for each farmer's holding, for the remaining period of the year 1956-57. As the senior research assistant went on leave in the month of June 1957, and owing to the spread of cholera and influenza in the selected centres, the work of checking of farm account books was hampered seriously, and the final account books could be collected only towards the end of August 1957. Afterwards each account book was thoroughly checked and completed before granting a reward to the trainee. Out of the 79 account books begun originally, 64 were finally accepted for tabulation and analysis.

### 2.5 Failure of Centres :

In Bombay area, the work on this project was continued in four centres only upto the end of the year. Of these four centres, the work at Khatav in North Satara district and at Ter in Osmanabad district, though continued upto the end of the year, was not quite satisfactory.

The failure of the centre at Ter was due to ineffective training, supervision, and guidance of trainees. The teacher in charge of this centre was young and inexperienced. It was also found that he was not giving his undivided attention to the project work as he was studying for his degree examination that year. The selected villages also were far away from each other and the transport facilities were inadequate and available only in fair weather. In rainy season, it was difficult and sometimes impossible for the instructor to pay a weekly visit to each of the selected villages. Consequently, the tuitions, conducted for 2 to 3 hours, at an interval of a fortnight or a month, were inadequate. Moreover, a large number of trainees at this centre happened to be non-students and so, had to be contacted individually. It was, therefore, not possible for the instructor to meet all trainees in every visit. Imparting individual instructions to different non-student trainees entailed considerable amount of time, leaving little leisure for the agricultural instructor to inspect the account books. The situation might have improved, had the agricultural instructor been able to win the co-operation of teachers in various local schools in his charge. The attitude of the instructor played an important part in the ultimate failure of this centre; he could not arouse enthusiasm among his trainees, and elicit co-operation from other teachers as he himself was thinking of quitting the teaching profession.

The failure of the project at Khatav centre may be traced to a variety of circumstances, the principal among which was the existence of a strong political agitation in which the students were found to take active part. Secondly, the selection of a large number of immature students studying in standards lower than VI and VII, and the selection of a large number of surrounding villages involving considerable transit, contributed to the failure of work at this centre. The participation of the students in the political agitation so worked up their minds that they were neglecting even their regular studies. Consequently, very few students in upper standards were found willing to participate in this project. This forced the instructor to select students from standards lower than VI who were generally young and immature. However, he could not afford to spend any extra time and give intensive training to these immature students, with the result that a majority of them dropped out before the end of the year. Initially, the agricultural instructor obtained active support and co-operation of other teachers by promising that part of the reward of Rs. 25 might be given to the teacher supervising the maintenance of the account books. This assurance was unauthorised and when the Institute could not agree to the suggestion the other teachers did not give the instructor any co-operation.

## 2.6 Overall Coverage of the Project :

In U. P. area, out of the 15 books that could not be accepted for analysis of data, nine were found incomplete, one had been destroyed by fire, one was lost, while four others were found unsuitable for acceptance due to improper recording. The incomplete books remained so because the trainees did not devote continuous attention to recording of data, and because some did not find the work interesting. Some books remained incomplete also because of non-co-operation of farmers and because the trainees were very young, i. e. below 12 years in age, and were unable to grasp the significance of certain items. Of the 64 books accepted for analysis of data, four were subsequently rejected because they were found not suitable for tabulation and analysis.

In the four centres, in Bombay area, where the project was in operation to the end, in all 478 account books were originally maintained. Of these, 273 were completely written, but only 244 were found to be written satisfactorily and so were accepted. In Table 2.6.1 are given these data according to the centres.



Table 2.6.1 : Completed and accepted account books

Centre	Total No. of books originally maintained	Of which		
		remaining incomplete	Completed	
			but re-jected	accept-ed and rewarded
Khatav	129	109	1	19
Chendiye	125	22	—	103
Deulghat	155	38	—	117
Ter	69	36	28	5
<b>Total</b>	<b>478</b>	<b>205</b>	<b>29</b>	<b>244</b>

A broad classification of reasons, recorded for the books remaining incomplete, revealed that 19 trainees gave up recording data because of pressure of studies, while 53 were just unwilling to continue. Non-availability of data, signifying the non-co-operation from farmers in respect of whose farms the account books were being kept, was responsible for 10 incomplete books. Non-availability of guidance is the result of the inclusion of a number of distant villages in the centres, and was responsible for 32 incomplete books. Twelve trainees were asked to discontinue because of wilful non-co-operation. Thus, while 35 per cent. of account books remained incomplete because the trainees did not appreciate the importance of the work, 44 per cent. of books were not completed because of wrong choice of trainees and inadequate supervision. Both these drawbacks were such as could have been removed with appropriate steps.

In respect of the 29 account books, completed but found unacceptable, the ledger had not been maintained at all. The record of farm work was inconsistent and some vital information or the other was found to be missing from each of them.

The distribution of the 244 accepted account books according to centres and categories of trainees maintaining them, is given in Table 2.6.2.

**Table 2.6.2: Classification of accepted account books according to status of trainees.**

Centre	Total number of books		Of which maintained by					
			Non-students (in respect of owned holding)		Students (in respect of owned hold- ing)		Students (in respect of other's hold- ing)	
	(a)*	(b)*	(a)	(b)	(a)	(b)	(a)	(b)
Khatav	129	19	11	2	118	17	—	—
Chendiye	125	103	27	18	83	70	15	15
Deulghat	155	117	26	19	56	40	73	58
Ter	69	5	35	2	27	3	7	—
<b>Total</b>	<b>478</b>	<b>244</b>	<b>99</b>	<b>41</b>	<b>284</b>	<b>130</b>	<b>95</b>	<b>73</b>

\* (a) = Initially maintained. (b) = Accepted and paid for.

It is evident from the table that though the overall success was about 50 per cent. the project was not successful in Khatav and Ter. In the remaining centres where it worked, only 60 trainees out of 280 could not continue. In Chendiye and Deulghat, the success was even in all the categories of trainees, students as well as non-students, and both in respect of trainees keeping accounts of own and other's holdings. Whether a student was keeping accounts of his family's holding, or that of his neighbour, does not seem to have affected his chances of successfully maintaining the accounts for the whole of the year. Seventy-nine per cent. of the former and 83 per cent. of the latter completed the training in the two successful centres. Thus we can say that of the six agricultural instructors selected, only two could do their job satisfactorily, and out of the trainees 79 per cent. could be successfully trained. Given suitable instructors, the response of trainees to the task of keeping of farm accounts seems to be very encouraging.

The educational level of students and non-students successfully completing the books is shown in Table 2.6.3; it also shows the percentage of successfully completed books to those originally begun. It can be seen that 54 per cent. of students and 41 per cent. of non-students maintained the accounts successfully. However, of the 99 non-students originally participating in the project,

Table 2. 6.3: Classification of the accepted account books according to educational level of the trainees.

No. of books accepted and paid for						Percentage to books originally maintained.				
Centre	Educational level					Educational level				
	Below VI	VI	VII	Above VII	Total	Below VI	VI	VII	Above VII	Total
<i>Students</i>										
Khatav	—	—	4	13	17	—	—	8	38	14
Chendiye	9	21	25	30	85	75	95	83	88	87
Deulghat	5	27	42	24	98	62	67	79	86	76
Ter	—	—	1	2	3	—	—	7	15	9
<b>Total</b>	<b>14</b>	<b>48</b>	<b>72</b>	<b>69</b>	<b>203</b>	<b>64</b>	<b>49</b>	<b>48</b>	<b>63</b>	<b>51</b>
<i>Non-Students</i>										
Khatav	—	—	2	—	2	—*	—*	40	—	18
Chendiye	3	—	3	12	18	50	—	60	86	67
Deulghat	2	1	—	16	19	40	50	—	94	73
Ter	1	—	—	1	2	11	—	—	12	6
<b>Total</b>	<b>6</b>	<b>1</b>	<b>5</b>	<b>29</b>	<b>41</b>	<b>30</b>	<b>8</b>	<b>24</b>	<b>64</b>	<b>41</b>
<i>Grand Total</i>										
Khatav	—	—	6	13	19	—	—	10	33	15
Chendiye	12	21	28	42	103	67	87	80	87	82
Deulghat	7	28	42	40	117	54	67	76	89	75
Ter	1	—	1	3	5	11	—	4	14	7
<b>Total</b>	<b>20</b>	<b>49</b>	<b>77</b>	<b>93</b>	<b>244</b>	<b>48</b>	<b>44</b>	<b>45</b>	<b>64</b>	<b>51</b>

\* Originally nil.

24 were teachers, all of whom kept the accounts satisfactorily. Hence, if we consider non-students other than teachers, only 17 out of 75 books, that is less than 23 per cent., were accepted as satisfactorily maintained. Of the 24 teachers maintaining the accounts properly, 8 were from Chendiye and 16 from Deulghat. Consequently, in Chendiye and Deulghat centres, 53 and 30 per cent.

respectively of the non-students (other than teachers) maintained their accounts satisfactorily, while in respect of the students, the corresponding percentages were 87 and 76 respectively. As seen earlier, the performance was bad in Khatav and Ter, where only 15 and 7 per cent. trainees completed the books satisfactorily. In these two centres, the performance of trainees, with education above standard VII, was comparatively better than that of trainees with education upto standard VII.

In Chendiye and Deulghat, where the project was successful, the performance of students from different standards was superior to that of non-students with corresponding educational levels. Students and non-students both with higher educational level did somewhat better than those with lower level. It would be normally expected that students from higher standards would give a better performance as they would be mature. However, the differences were not as large as might have been expected. The performance of trainees from standards below VI was only slightly inferior to that of those with higher education. Between Chendiye and Deulghat, the trainees from Chendiye showed relatively better performance.

It may be summed up that given suitable guidance, students of comparatively higher standards can be trained to keep farm accounts. Being members of a farmer's family they have an easier access to information and much more facility for verification of the same as compared to any outside investigator. As such the quality of the data collected by students about their own as also about neighbour's farm is likely to be quite good.

### 2.7 Conditions of work of Agricultural Instructors :

In U. P. area, an experienced Extension Assistant was specially recruited for this purpose while the other one also had good academic qualifications. Both were, thus, quite familiar with agricultural economics in general, and farm economics in particular. In Bombay area, instructors were only primary teachers but they had considerable experience and knowledge of local conditions. The instructors in Bombay area had been given complete freedom to choose their respective centres of work. Consequently, they commanded respect and obedience from the students, and, in a way, were assured of co-operation from the parents.

Throughout the year, the agricultural instructors had to work under heavy pressure. The selection of a large number of villages, distant from the headquarters and inadequately served by transport

facilities, resulted in considerable personal inconvenience and hardship to the agricultural instructors as also in considerable waste of time in moving from village to village.

Further, the selection of non-students and the frequent absence of students from schools prevented the agricultural instructors from meeting all the students jointly in the class, and consequently obliged them to move from house to house for imparting instructions. They also had to meet the parents of students for verifying several of the entries made by them. All this required a lot of time. In addition, the large number of books initially maintained meant further heavy work.

The selection of students of lower age-groups studying in lower standards meant greater attention to instruction, closer and constant supervision, and guidance. It also meant more and various computational errors on the part of the students and hence heavy correction work for the agricultural instructor.

As the students were unable to furnish correct figures of area and land revenue for the individual plots comprising the selected cultivated holdings, agricultural instructors had to obtain the relevant data from the village records which increased this work correspondingly.

Every long leave enjoyed by the agricultural instructor resulted in the staggering of the work as there was no provision for reserve staff to take charge during the leave period of the agricultural instructor.

Thus these teachers were obliged to reconcile themselves to heavy and continuous work, all the year round, without any break or vacation, and it would have been difficult to persuade them to continue on deputation for any more length of time.

**2.8. Attitude and conditions of work of the Trainees:**  
The student trainees undertook the responsibility of keeping farm accounts mainly on the persuasion by the agricultural instructor, in Bombay area, and the headmasters and extension teachers, in U. P. area. A major attraction was the payment of Rs. 25 per book. Even this small sum of Rs. 25 was considered by U. P. farmers as a significant inducement and addition to their earnings. In U. P., the farmers in respect of whose holdings the accounts were maintained and the trainees, both were not quite sure about the payment. This fact came to light when the rewards were finally paid to the successful trainees. The farmers whose

account books were maintained were initially suspicious about the use of information so collected and, even were apprehensive of enhancement of taxes. But fairly satisfactory co-operation was found to be forthcoming subsequently as a result of careful handling by the project staff in U. P. There, the initiation of the project through educational institutions helped to remove the suspicions to a great deal. In U. P., the teachers of the schools are generally held in high esteem and the assurances given by the headmaster and teaching staff to the farmers created a favourable atmosphere. The project staff did not confine its attention to keeping of account books only, but took keen interest in the day-to-day problems of the farmers, provided them information on better methods of farming, helped them in getting improved seeds, fertilisers, etc., and intimated them of the latest market prices. The project staff had stated that after the analysis of the farm information collected through the account books, alternative farm plans would be developed and necessary guidance on better management would be given to help farmers in increasing their production and improving their earnings; but the project ended after one year and the promise of further guidance could not be kept up.

In Bombay area, the trainees were sceptical of the utility of the project. They had no genuine interest in the keeping of farm accounts. They often felt and expressed the view that this project yielded no direct benefit to them beyond a payment of Rs. 25. They further felt that Rs. 25 was a niggardly sum compared to all the trouble they took in recording data. In fact, their participation in this project was largely due to the influence of the instructor, who was usually a senior teacher respected in the village.

The trainees were mainly of two categories : students and non-students; of which the students could be further sub-divided into those maintaining accounts for their family holdings and those maintaining accounts of their neighbour's holdings. Non-students constituted largely of cultivators and teachers belonging to cultivating families both of whom desired to learn. The students, as a rule, did not feel any strong inducement in the reward of Rs. 25 while their parents appeared to be interested in the amount. The student-trainees recording data for their own farms were often found to be engaged in the work, both on and off the farm, and the accounting work was an additional burden to them. To immature students from standards lower than VI, the account work proved to be quite

taxing. They also found the recording of data, day after day, even on holidays and on days of examination, monotonous and irksome. Often, they also received very little encouragement from their parents. In certain cases, it was found that the cultivators were reluctant to divulge their debt position to their sons, as also to neighbour's wards; and as such, the agricultural instructor had to obtain such data himself.

The students, keeping accounts of holdings of their neighbours, suffered from additional disadvantages. They did not participate in the farm work and had no opportunities of personal observation; and being members of different families found difficulties in recording information daily.

The non-students, as a class, were older and comparatively mature. Usually, being cultivators, they had some sort of insight in the business. However, it was found that the non-student trainees who were themselves cultivators were usually fully pre-occupied with their farm work and that, gradually, a large number of them dropped out of the project as daily maintenance of accounts turned out to be onerous. Of the non-student trainees, a small number of non-cultivators kept their account books regularly and satisfactorily; all of these happened to be local teachers belonging to cultivating families.

As compared with the non-student trainees, the students had one definite advantage from the point of view of this project. They could be brought together in a class for the purpose of imparting instructions and guidance. They were also amenable, to a limited extent, to control by the teachers.

## CHAPTER III

### ACCOUNT BOOK

The trainees were required to write the accounts in prescribed forms and schedules, known as day book and ledger, designed by the Institute. The day book and the ledger employed in this project were the same as those employed in the "Farm Management Scheme, Madhya Pradesh", and similar, in contents, to the account books currently used at the various farm management research centres in India. The day book was meant to keep the day-to-day account of the various agricultural operations and of the working of the family and bullock labour. The details about marketing, payment of village artisans in cash or kind, weekly changes in the livestock position and their fodder and feed accounts were also kept in the day book.

The purpose of the ledger was to record assets and other inventories and also the final results of the working of the agricultural economy as gleaned from the day book. The ledgers were finally meant to be kept as a classified record in which all the data from the day book were consolidated in a readily usable form.

Detailed instructions for filling in the day book and the ledger had been prepared and printed. A copy of these instructions was supplied to every trainee participating in this project. These were further supplemented by instructions from the agricultural instructors posted at the selected centres, and also from the supervising research assistant of the Institute in Bombay area and the officer in charge in U. P. area. Circulars were issued by the Institute as experience was gathered and as and when certain unanticipated difficulties arose.

#### 3.2 The Day Book :

The day book was sub-divided into 15 forms. Certain entries were to be posted in the ledger after consolidating certain items from day book. Such details were intimated to trainees through instructions. The following is a brief summary of the different forms used in the day book for recording information from the farmer :

*Form No. 1* : Record of daily work on the farm (family, exchange and/or *gratis* labour of human and bullocks). In this form, information was recorded about daily farm work done on



different pieces of land, its area, the crop, frequency of work, type of materials used, and the hours of work done. Information was separately recorded for work done by men, women, children, and bullocks belonging to the family and taken on exchange ; similarly, the materials used were noted according to their sources, i. e. whether owned, purchased or taken from landlord.

*Form No. 2 :* In this form, the above information was recorded for work done by hired labour, the wages paid in kind/cash, and the type and quantity of kind payment.

*Form No. 3 :* The record of daily work done by family members and by permanent farm servants, on the family farm as well as on others' farms, in exchange or for wages, was maintained here ; wages received in cash/kind were also noted in this form. If a person did not report any work, the reason for idleness was also sought.

*Form No. 4 :* This form was meant for recording daily work done by owned bullocks and other draught cattle. Here also information was noted according to work on the family farm or in exchange on others' farms or for wages. This form was, otherwise, similar to Form No. 3.

*Form No. 5 :* Information about daily work done by owned agricultural machines was recorded in this form. The type and hours of work, and reasons for keeping the machine idle were noted, as well as the character of work, such as on family farm, in exchange or on hire, and the income received, were recorded on this form.

*Form No. 6 :* This form sought details about the farm produce and its subsequent disposal according to crops, piece of land ( whether double-cropped ) and the nature of payments : whether for wages, *baluta*, charity or to landlord. This form would give the gross and net produce according to crops, and the relevant dates.

*Form No. 7 :* This form gave detailed breakdown of disposal of produce to *balutedars* i. e. village artisans, and servants ( useful for cultivation or not), according to crops.

*Form No. 8 :* Particulars of marketing of farm produce, the place, date, buyer, etc., and regarding the costs of marketing were to be recorded in this form. This information was also to be recorded according to commodity.

*Form No. 9 :* This form sought the quantities and the types of payments in kind on account of *baluta* and wages, as well as receipts in kind on account of wages,

*Form No. 10:* Particulars of other receipts and disposals of farm produce, such as share-rent, contributions from and to landlord in the form of seeds, manures, etc. were to be noted down in this form.

*Form No. 11:* Changes in livestock position, fodder and feed fed in quantities and type were to be recorded in this form which also classified livestock according to draught, milch and rest. Information in this form was noted weekly.

*Form No. 12:* Details of produce from livestock and its disposal were recorded weekly in this form. It recorded milk-yield of cows, buffaloes, goat, sheep, etc., the quantity and value of sale according to place and buyer, as also the disposal of milk-products and eggs.

*Form No. 13:* In this form, particulars of seeds, manures, fodder, cattle feed, fuel-oil, etc. purchased were gathered according to their use, quantity, and price.

*Form No. 14:* In this form was maintained the cash account of daily agricultural transactions.

*Form No 15:* This form was used for recording daily expenditure on domestic account such as withdrawals from stocks for consumption, cash and credit purchases, and foodstuffs like grains and vegetables etc. consumed immediately after bringing from the farm, even before harvest.

### 3.3 The Ledger :

The ledger provided for the record of data pertaining to members of the family, permanent farm servants, cultivated holding, livestock, implements, debt position, crops raised on operated area, initial and final stocks of farm produce, and so on. It classified the data, recorded in the day book, on monthly and annual basis.

After noting down the preliminary information about the farmer, on page I was obtained classification of cultivated holding according to owned, leased-in, leased-out, area under crops, etc. The following information was gathered in the ledger :

*On page 2:* General information of the members of the family including permanent farm servants.

*On page 3:* Particulars of work done by family members and the wages earned.

*On page 4:* Particulars of work done by permanent farm servants and details about their remuneration.

- On page 5 :* Details of owned land, land revenue, rights, value, etc.
- On page 6 :* Details of leased-in lands on cash and share-rent.
- On page 7 :* Inventory of property and financial assets  
( i ) houses, buildings, ( ii ) loans.
- On page 8 :* Credit position at the beginning and the end of the year and loan transactions.
- On pages 9 and 10 :* Inventory of implements and machinery at the beginning of the year and costs of renewals, additions, repairs and sales during the year.
- On page 11 :* Sale and purchase of real estate and other assets including financial assets, and capital investment or disinvestment in land,
- On page 12 :* Capital account : Value of land, property, implements and machinery, livestock, dues receivable, etc. at the beginning of the year, transactions during the year, and value at the end of the year.
- On page 13 :* Livestock position at the beginning and the end of the year.
- On page 14 :* Changes in livestock position during the current year on account of purchase, birth, sale, death, slaughter, etc.
- On page 15 :* Particulars of fodder and feed fed during the year.
- On page 16 :* Livestock produce during the year and its disposal.
- On page 17 :* Other expenses on livestock, such as medical expenses, expenses on account of sheep-rearing, breeding fees, shaving of she-buffaloes, etc.
- On page 18 :* Annual receipts and expenditure on account of draught cattle, and total work done by them.
- On page 19 :* Annual receipts and expenditure on account of milch cattle ( including calves below 3 years).
- On page 20 :* Annual receipts and expenditure on account of other animals and fowl.
- On page 21 :* Crops on owned-cultivated land, kharif, rabi, etc.
- On page 22 :* Crops on share rented and cash rented lands.
- On page 23 :* Materials used and disposals of harvested produce, noted cropwise.
- On page 24 :* Farm labour and wages : cropwise, operationwise.
- On page 25 :* Cropwise grouping of farm work done.
- On page 26 :* Cropwise grouping of materials used ( values in Rs. ).

- On page 27 :* -Cropwise classification of other farm expenses.
- On page 28 :* Farm overheads (expenses which cannot be attributed to individual crops such as land revenue, other cesses, repairs to real estate, tools and implements, rent of machinery, etc.)
- On page 29 :* Cropwise accounting : Value of produce, labour charges, raw materials, overheads, etc. : per acre and per maund expenditure.
- On page 30 :* Statement of farm accounts.
- On page 31 :* Receipts and disposals of produce (excluding fodder) during the year.
- On page 32 :* Increase and decrease in stocks of fodder during the year.
- On page 33 :* Statement of family income and expenditure.

### 3.4 Instructions for keeping Day Book :

In the following are reproduced the instructions given for maintaining day book.

#### *General Instructions*

In the following instructions the pages of the day book are termed as 'form' while those of ledger are referred to as 'page No.'.

The daily round of visits to all the selected *khatedars* should be complete. If the head of the family happens to be absent from the village, then the next responsible person in the family should be interviewed.

Cross reference of ledger page should be given while transferring the information from the day book.

Subsidiary occupation means, for our purpose, any occupation besides agriculture.

Number of pages (supplements) of a given 'form' should be indicated in 'Contents'.

*Form 1 :* Record of daily work on the farm.

Labour that cannot be allocated to individual crops should be shown as 'general work'.

The chronological order of operations should be retained.

As this is a record of actual work done, no entry would be made for the day on which no work might be done.

Frequency refers to the number of times each operation is undertaken.

Area means the area on which the work is actually done and not the total crop area.

Material would include items like seeds, manures, fencing material, insecticides, etc. This should be noted in standard weights. Value of material used should be computed at the prevailing rate or purchase price.

Ledger entry of a particular operation should be made only after a cross reference is given.

*Form 2* : Record of daily work on the farm.

In many places, it is customary to give meals as part of wages. In such cases, the cost of meals should be added to the actual wages paid. Meal charges should be put at five annas for a single meal and eight annas for two meals a day. In case of goodwill labour (*irjeek*), the actual expenditure, including the value of home produce used for feeding labourers, should be separately shown as the cost of such goodwill labour. (This expenditure should be excluded from 'daily expenditure on domestic account' i. e. form 15).

Those who undertake continuous operations, starting with keeping watch and ending with threshing crop, for a predetermined share of the harvested produce, should be considered as labourers, and their wages should be computed at the harvesting price.

Such acreage as is sub-let should be excluded from the cropped area right from the beginning. In case, the sub-let area or the operations on it cannot be separated, the sub-tenant should be considered as a labourer and his share as wages be paid to him.

*Form 3* : Record of daily work of family members permanent farm servants.

Casual labour done by guests, or members previously shown as non-earning, should be noted on separate (supplementary) forms.

Daily work should be noted in hours. At least eight hours in a day, whether idle or busy, should be accounted for. Note should be taken of idle hours and reasons thereof.

Wages paid for work done on contractual basis should be properly computed for each individual labourer. Same computation should be made for those who receive a predetermined share in the harvested produce as wages for labour. The latter should be noted as hired labour.

'Other work' refers to the work which cannot be shown crop-wise, for cattle, or as general occupations on the farm.

**Form 4 :** Record of work by owned bullocks and buffaloes.

When a person hiring draught cattle feeds it on his own, the value of such feed should be included in the hiring charges received and also in the items of expenditure on form 11. Information as to who feeds the cattle, while it is on hire, should be specifically noted.

When the unit of labour hired out includes both cattle and men, the wages received should be ascribed to the cattle only and the labour of the accompanying man should be shown on form 3 under 'work done for draught cattle'.

**Form 5 :** Record on daily work of owned machines.

The hire charges earned by the machinery should be properly noted; the receipts from flour mill and the like should be shown separately under earnings from other sources.

A separate statement of account for the year should be prepared whenever such information is available for the full year.

**Form 6 :** Farm produce and its subsequent disposal.

Information regarding items of expenditure can be ascertained, but the harvested produce brought home (as reported by the cultivator) may or may not be inclusive of the disposals to be effected on the threshing floor. In the former case, all such disposals (wages, *baluta* payments, etc.) effected at home should be deducted in order to arrive at the 'net produce', and *vice versa* in the latter case. In this connection, the local customs should be carefully observed.

The value of grain and fodder should be computed at the prevailing market-rate whenever the payments are made in the form of stalks.

Weights should be noted in Bengali maunds and seers.

Share rent received as landlord should be separately shown under 'net produce', and due mention should be made under 'area'.

**Form 7 :** Particulars of payments to village artisans and services.

*Balutedars* are classified into two broad categories, namely, 'essential for farming' and 'rest'. In some regions, *Mangs* and other *balutedars* may not be considered as essential for farming. In such cases, they should be included in 'rest'.

Such farm produce as is not mentioned in the list of crops, should be specifically noted if it is given in *baluta* payments.

The total *baluta* payments given to essential *balutedars* should be allocated, cropwise, on page 29 of the ledger.

**Form 8 :** Particulars of marketing farm produce and its cost.

Farm produce, which is sold, may be newly harvested or from the old stocks. In the former case, specific mention should be made under 'remarks'.

In case of sale of old stock, the price prevailing at the beginning of the year should be noted under 'harvest price'.

Name of the purchaser is not required to be mentioned under 'to whom'. Purchasers should be classified as commission agents, dealers, consumers, processors, etc.

Marketing cost should also include octroi duty, and boarding and travelling expenses.

**Form 9 :** Particulars of *baluta* payments received and other kind wages received and given.

All *baluta* and other kind wages received should be noted cropwise. Kind wages given (excluding items on form 6) should be similarly recorded.

**Form 10 :** Particulars of other receipts, and disposals of farm produce.

When land is taken on share rent, the landlord contributes seeds, manures, and part of other expenses. All such receipts from the landlord, along with other receipts, should be shown, separately and cropwise, in this Form, and *vice versa* in the case of lands given on share rent.

**Form 11 :** Change in livestock position, and fodder and feed used (weekly record).

The change in livestock such as birth, death, sale, purchase, loss, gift, recovery, etc. should be indicated in improvised code numbers, and separately for each class of animal.

**Form 12 :** Particulars of produce of livestock and its disposal (weekly record).

The day's milk yield is to be noted for each milch cattle. The aggregates of milk yield for all sheep and goats should be shown separately for groups of sheep and goats. The numbers of sheep and goats yielding milk should be shown in brackets. The weekly milk yield should be computed on the basis of the yield recorded for a day.

The weekly yield of eggs of hens and ducks is also to be noted and the number of laying fowl should be shown in brackets. The weekly sales should also be noted.

The produce from animals also includes manure, dung cakes, wool, hides, etc. As it is difficult to assess the same every week, the

animal produce should be computed and directly noted on ledger page 16.

*Form 13*: Particulars (about the purchases) of seeds, manures, fodder, cattle feed, etc.

This form takes note of all the material used in production, such as seeds, manure, fodder, fuel-oil, etc.

The 'purpose' of purchase such as 'for crops', 'for feeding draught cattle', etc. should be specified.

*Form 14*: Cash account of daily agricultural operations.

This form should not include receipts from sale of produce, noted on form 8, and expenditure for purchasing materials used, noted on form 13.

The source of receipts and the purpose of expenditure should be particularly noted, such as 'for cultivation', 'for draught cattle', 'for milch cattle', etc.

*Form 15*: Daily expenditure on domestic account.

Withdrawals from stocks for domestic consumption alone (and not the actual daily consumption) are to be noted here.

The produce purchased for cash or received in exchange, should be noted in the third main category.

This Form is to be filled in only for the day on which the relevant expenditure is undertaken.

Credit purchases should be specifically noted.

### 3.5 Instructions for keeping Ledger:

The following were the instructions for maintaining the ledger.

*Page 1*: Classification of the cultivated area,

The period from 1st June 1955 to 31st May 1956 constitutes the year for the purpose of the enquiry.

The name of the cultivator should be written in full.

The cultivators in every village under survey should be numbered serially.

Age should be noted in complete years, and religion, caste and sub-caste should be noted in order.

Subsidiary occupation refers to any occupation besides agriculture. Note of every such subsidiary occupation should be made.

Village refers to the residential village of the cultivator, and his address should be the postal address.



Previous education or training of the Investigator should be noted. (Here, Investigator means the person who keeps farm accounts in the day book and the ledger.)

Under 'classification of land' all the family holdings, in and outside the village (as shown in the village register), should be taken into consideration. Land possessed under mortgage should be separately noted. Share rented and cash rented land should be properly shown. When all these categories are accounted for the remaining land should be the owner-cultivated land, details of which will be noted on page 5. The net cultivated area should include, besides the owner-cultivated land, the land taken on share rent and cash rent. (Refer page 6).

The details such as area under crop, current and permanent fallow, etc. should be copied from ledger pages 21 and 22.

*Page 2:* Members of the family (including permanent farm servants).

Permanent servants should be included in family members and the same serial number of the individual should be followed on form 3.

Age of infants below one year should be noted in months.

Relation with the head of the family, such as grandson, grandfather should be properly described, and civil condition should be described for all individuals. Education means the years of previous schooling or training.

Main occupation is one which is a bigger source of income than the subsidiary occupation. The reasons for not earning should be noted, e. g. due to old age, *purdah* or tender age, etc.

The reason and time of occasional absence of an individual from the village should be noted along with the place visited.

*Page 3:* Particulars of work done by family members and the wage-rate.

The aggregates for male, female and child labour should be separately noted. (However, the work of permanent farm servants or *saldars* should be noted on page 4).

The wage-rate for evaluating family labour should be the same as that of permanent farm servant. This should be three-fourths and one-half of the male labour in the case of female and child labour respectively.

Accordingly, this wage-rate may differ from cultivator to cultivator. In case there are more than one permanent farm servant in the family, the average of their wage-rates should be taken

into account. In the absence of permanent farm servant, this wage-rate should be the average of the wage-rates of all the permanent farm servants falling under the survey.

At the end of the year, the total value of family labour, including the wages received by the family, is to be transferred to page 33.

*Page 4*: Particulars of annual farm servants.

The total work-hours of every month should be entered here from form 3 of the day book.

*Page 5*: Owned land.

Information should be obtained from the village records and by direct inquiry. All the lands possessed by the family, in or outside the village, and as noted in the records, should be noted ownerwise. Land possessed under mortgage should be shown separately.

Area should be exclusive of 'pot kharab'. Assessment should be inclusive of 'local cesses'. Other cesses such as 'Judy', 'non-agricultural cess', etc. should be separately shown.

*Page 6*: Cash rented and share rented land.

Lands taken on cash rent and/or share rent should be separately shown.

*Page 7*: Inventory of property and financial assets.

All debts, including those taken from the same money-lender at different times, should be separately noted. These should also include grain-loans taken for purposes of household consumption, sowing, etc.

Loan transactions during the year should be transferred from form 14 of day book against the particular dates.

*Pages 9 and 10*: Inventory of implements and machinery at the beginning of the year, and the cost of renewals and repairs during the year.

Local variation of implements should be noted. At the end of the year, purchases, sales, and expenditure on repairs should be transferred from form 14 of the day book.

*Page 11*: Sale and purchase of real estate and other assets, and capital expenditure on land, etc.

Capital items of income and expenditure should be transferred from form 14 of day book.

*Page 12*: Capital Account.

Information on this page should be derived from pages 5 to 14.

*Page 13:* Livestock position at the beginning and the end of the year.

The serial number of the cattle head should be followed on forms 4 and 11 of the day book.

The value at the end of the year of each cattle head should be ascertained from the cultivator himself.

Details of use, etc. should be noted in the column 'remarks'.

Information regarding calves and other animals should be taken groupwise. 'Other animals' should also include, dogs, horses, mules, etc.

*Page 14:* Change in the livestock position during the current year.

Information on this page should be taken from forms 11 and 14 of day book.

The causes of increase and decrease should be specifically noted in case of major cattle.

*Page 15:* Particulars of fodder and feed for the current year.

Bimonthly totals should be taken from form 11 of day book. Expenses for cattle attendance should be taken from form 14 of day book.

Value of fodder should be derived in the following manner :

- (a) New stocks of fodder at harvest prices.
- (b) Old stocks valued at the prices at the beginning of the year.
- (c) Actual purchase price for fodder purchased.

*Pages 16 and 17:* Live stock produce during the current year and its disposals. Other expenses on cattle.

Bimonthly totals should be taken from forms 12 and 14 of day book respectively.

*Page 18:* Annual receipts and expenses on account of draught cattle and total work done by them.

This is a monthly transfer of work-hours from form 4 of the day book.

The income from manure and dung-cakes should be proportionately allocated from page 16.

The per hour rate of labour should be derived from the total expenditure on cattle and the total hours of work. The total expenditure can be arrived at by adding the (estimated) cost of attendance and other expenses to the value of total fodder and feed fed to draught cattle. The allocation of each type of work should be computed at the above rate.

Information regarding purchase and sale should be taken from page 14; value at the beginning and the end of the year from page 13; expenditure of fodder and feed from page 15; value of attendance from pages 3 and 4, and other expenditure from page 17.

**Page 21:** Crops on owner-cultivated land.

Mixed crops should be shown as mixed crops, e. g. *Jowar-Kardai* (safflower) where *Jowar* and *Kardai* are sown together. Dry and irrigated crops should be separately shown for the purpose of individual cropwise accounting.

**Page 22:** Crops on cash rented and share-rented land.

The area taken on cash rent and share rent, as also the crops, should be separately shown.

**Pages 23 and 24:** Materials used and disposals of harvested produce. Farm labour and wages.

The serial number on pages 21 and 22 should be followed here.

Information should be transferred as follows:

Material used from form 1 of day book.

Receipts from sales from form 6 of day book.

Work done from form 1 of day book, and (operationwise) on page 24.

Family and exchange labour, of men and bullocks, from forms 1 and 2 of day book.

**Page 26:** Cropwise grouping of material used (valuation).

This cropwise grouping of materials used should be in terms of value, and should be taken from page 23.

**Page 27:** Cropwise classification of other farm expenses.

Information on this page should be derived from form 14 of day book. Only that expenditure which can be separately allocated to each crop should be taken.

**Page 27:** Cropwise accounting.

Information should be derived as follows:

Value of each crop from page 23.

Value of work done and wages (cropwise totals) from page 25.

Materials used (cropwise totals) from page 26.

Overhead expenditure from page 27, cropwise, wherever possible.

The expenses on the following items should be allocated proportionately to the value of each crop:—

Depreciation and repairs of tools and implements from pages 9 and 10.

*Baluta* payments to *balutedars* essential for farming, from page 7.

Charities, gifts, etc. from page 6.

Unclassified labour of men and bullocks, from pages 3, 4 and 18.

Other expenses from page 28.

*Page 30*: Statement of Farm Accounts.

Information should be derived as follows :

Income and expenditure of owner-cultivated land, land cash rented or share rented, etc. should be separately shown from page 29.

Profit or loss from sales of produce, from Form 8 of day book.

Income and expenditure of livestock, from pages 18, 19 and 20.

*Page 31*: Receipts and disposals of produce (excluding fodder).  
Stocks at the beginning of the year should be ascertained at the beginning.

Any discrepancy in the actual stocks at the end of the year and that revealed by the ledger-accounts should be noted, and the cultivator should be asked to explain the same.

*Page 33*: Statement of family income and expenditure.  
Information should be derived as follows :

Net profit or loss from cultivation and livestock, from page 30.

Value of family labour and actual wages, from page 3.

Hire charges, house rent, interest, and remittances received, from form 14 of day book.

Value of farm produce consumed and cash expenditure from form 15 of day book.

Consumption of milk, eggs, and fowl, goats, from pages 19 and 20 respectively.

Items such as income from trees, net profit from other occupation, and remittances sent out should be ascertained by direct enquiry.

## CHAPTER IV

### RESPONSE AND PERFORMANCE.

A broad outline of this project has been given in Chapter I. The operational features and execution of the same are discussed in Chapter II. In Chapter III are given the contents of the account books. This chapter gives an account of performance of the trainees as revealed through the scrutiny and tabulation of the account books, largely in respect of their capacity to maintain farm accounts.

#### 4.2 Analysis of errors.

Before proceeding to a study of the difficulties in recording data and the important points revealed through scrutiny of the account books, it would be proper to discuss the different types of errors, their origin and nature. In the following, different types of errors, committed by the trainees, have been classified in different groups. It may, however, be noted that the types of errors are not necessarily, mutually exclusive.

The errors broadly fall into two types: computational and posting, and wrong reporting.

The scrutiny revealed the existence of a number of computational errors in additions and multiplications involved in the entries. They were partly due to negligence on the part of trainees, and partly, to their inability to compute correctly. Errors in posting or transferring became quite apparent at each inspection. Such errors resulted from lack of familiarity with the schedules and instructions as also from inadequate grasp of the relationship of different items. Generally, errors of computation and posting were easily identified but required lot of time in correction as they were numerous.

The rest of the errors grouped under the type 'wrong reporting' arose out of non-reporting, under-reporting, mis-reporting, or supply of bogus information. Wrong reporting may be due to willful act or negligence, lack of comprehensive instructions, or defect of schedules. In the following, these categories of errors are discussed at some length.

( i ) *Willful act* : These were on account of deliberate under-reporting or non-reporting of facts. In a way, this was incomplete recording of data. There were a few instances of certain items being under-reported, such as the number of members of the family

engaged in agriculture, the number of annual farm servants, the heads of plough cattle owned and the number of crops raised. It transpired that these items were under-reported in order to reduce the workload of recording, as each of these items involved detailed daily accounts. For a similar reason, there were two instances where the trainees did not report the agricultural machinery owned by the family. Such cases were first discovered at the time of inspection by the staff of the Institute, and then, it was suggested that the instructor should pay house to house visits to verify these essential data recorded by the trainees.

(ii) *Negligence of trainees*: The trainees were found to have failed to record some operations in respect of specific crops. This omission could be promptly corrected as precautions to guard against such occurrence were already taken. List of various types of operations, necessary for each crop grown in a particular tract, had been prepared, and the recorded operations were being checked with reference to the list. The area operated also was often wrongly recorded. In a number of cases this area was in excess of the cropped area. In respect of certain field operations in which human and bullock labour are usually combined in a fixed proportion, it was found, in several instances, that the human and bullock hours recorded were not in proper proportion. In some cases, this was undoubtedly due to inclusion, in human labour, of the hours of supervision of that operation. In others, it was due to erroneous recording of hours of work. Account books abounding in such cases were not admitted for final tabulation. If, however, in an account book there were only a few cases of this sort of erroneous recording, the errors were corrected by estimating the hours of work on the basis of data, available in other account books, in respect of the same operation. There were several instances of wages paid to hired labour not having been recorded in form 2, and wages received not having been recorded in form 3.

The missing values of the wages were estimated on the basis of other data, available at the tabulation stage. There were also some instances when work was recorded on non-existing days such as 30th of February or 31st of April. It was found that these were not cases of recording bogus data. The trainees, being unaware of the number of days in the English months, continued to record data on successive days on the lines provided for succeeding dates till 31st. Such errors were few. Often, it was found that the record of farm work done by the members of the cultivator's family, and noted operationwise on form 1 did not tally with the record noted, on form 3, according to the members of the family engaged in cultivation.

In such cases, the recording on Form No. I was treated as correct, and that on Form 3 was corrected accordingly. Whenever such instances were numerous, the particular account book was rejected.

Column titled 'other work' in Form 3 of the day book was meant to record hours of gainful employment other than those for which specific columns had been provided. The recording of domestic work in this column had been strictly forbidden. Yet, not only domestic work but also certain types of farm work and work in respect of livestock were repeatedly recorded in this column.

On form 11, of the day book, inspite of the instructions that milch cattle should include their young stock, the trainees, at least in the begining, did not adhere to it.

Temporary migration of members of the family was not recorded on page 2 of the ledger even though evidence to this effect was available on form 3 of the day book. Such errors could be corrected at the tabulation stage. Non-recording of the date of payment in kind, in Form 6 of the day book, led to some difficulties in determination of gross and net yield. While recording sale transactions on Form 8 the details, necessary to distinguish between the sale of previous year's stock from that of the current year, were not recorded. There were some instances where quantities of other receipts and disposal in kind had been recorded in Forms 9 and 10, but the nature of such receipts or disposals was not specified. There was evidence that expenditure on maintenance and repair of agricultural implements and machinery was not recorded on pages 9 and 10 of the ledger. Consequently, the *baluta* payments had not been reported nor had any expenditure, either in cash or in kind, been reported for repairs of implements and machinery, resulting in under-reporting in respect of this item.

(iii) *Lack of comprehensive instructions*: In this category would fall the mistakes committed unintentionally, arising out of misunderstanding, and lack of comprehension on the part of trainees as well as inadequate instructions. It was thought that the word 'supervision' was self-explanatory, and so the types of work to be included under it were not supplied in detail to the trainees. It was later on discovered that a variety of work such as inspection of embankments of paddy fields, guarding the crops from fowls, from wild beasts and thieves, had been recorded under the category of 'supervision', while the actual work of supervision



in most cases was merged with the work of the operation which was supervised.

The hours of work done by casual labour not employed for any specific work were found not to have been treated as farm work, and so were not recorded in form 2 of the day book. This was largely due to the absence of any instructions in this behalf. Though there was provision for recording daily work of annual farm servants in the employ of selected cultivators, the instructions did not specify that monthly farm servants were to be treated in the same category. This resulted in the fact that the record of daily work of monthly farm servants was not maintained in the beginning.

Recording of credit purchases led to some mistakes resulting in the double-counting of purchases, once at the time when the purchase was recorded, and again when the credit was extinguished by a cash payment. On page 31 of the ledger, where initial stocks were being recorded in the absence of specific instructions, a large variety of farm produce as also of consumer goods including jams and pickles, preserved or purchased and stored for consumption, were found recorded. This mistake could have been avoided by specifying the commodities in respect of which stocks were to be recorded.

It was found that, sometimes, the trainees could not properly grasp the meaning of instructions issued, and therefore, certain mistakes were committed; for instance, overhead expenses were to be recorded in form 1 of the day book, as unclassified farm work chargeable to the farm business as a whole. The trainees were, however, found not to have understood the implication and failed to distinguish between joint costs and overhead costs, and consequently costs which were joint in respect of only some of the crops grown were also recorded as unclassified farm work chargeable to the entire farm business. The term 'other work' was not understood properly. The instruction was that in respect of each member of the family engaged in agriculture, the actual hours of work should be recorded. If the hours of work fell short of eight hours, then, the details were to be asked for by the trainees. For the purpose of this definition 'work' included 'other work' also. However, the agricultural instructors interpreted it as exclusive of 'other work'. This resulted in recording work exclusive of 'other work'. Whenever work excepting 'other work' fell short of eight hours, then only 'other work' was recorded, and not otherwise, and that too only to make up for the shortage.

While checking form 6 of the day book, it was revealed that the difference between the gross and the net yield, as on the harvest day, was much less than the aggregate of the disposal in kind recorded at the harvest time. This happened because certain disposals not made at the harvest time were also included as such.

While recording hours of grazing on form 11 of the day book, the actual hours of grazing were not recorded, but the trainees multiplied the hours of grazing by the numbers of heads of the cattle grazed. This led to considerable over-reporting in hours of grazing. This was, however, easy to remedy. On page 23 of the ledger, where costs were to be consolidated cropwise, the trainees at Deulghat centre recorded them plotwise. This was because of the wrong interpretation by the agricultural instructor.

(iv) *Defects in schedules*: At the time of the final scrutiny, it was found that some mistakes arose because there was no provision for recording certain items in the account book. Community work carried out in the interest of farms, such as construction or repairs of bunds for preventing the onrush of sea, was not recorded in form 1 of the day book as there was no provision in that form for recording such community work. The evidence that such work had been carried out was available in form 3. Another error, resulting from lack of comprehensiveness of the schedules, was the recording as 'purchased' of raw materials borrowed for use in the process of production. This was because there was no provision for recording borrowed material. It was revealed from form 13 that the material reported as purchased was really borrowed. Some trainees had added a foot-note indicating that certain transactions recorded therein as purchases were really borrowings. In form 12, there was provision for recording the production and disposal of all livestock products excepting dung cakes, manure, and wool which were to be recorded directly in the ledger. The exclusion of these items from day book led to under-estimation of production of these items. There was no provision in the account book for recording non-agricultural incomes also.

There was provision in the account book for recording domestic, hired, and exchange labour only. But labour hours obtained *gratis*, such as farm work done by visiting relatives, were not provided for. Instructions were later given to include such free labour hours in the category of that on exchange basis. Similarly, there was no specific provision for recording the hours of work done by members of the family to bring about permanent improvements of lands. In view of the previous experience it is presumed that this

might be a case of under-reporting. It means that capital formation in agriculture was under-estimated, and the role of labour in capital formation was not adequately brought out.

In the record of daily work kept in form 3, the collection of grass, fuel, manure, fencing material, etc. was to be indicated but the corresponding receipts from these were not provided for and so remained unreported in the account book.

In the case of mixed crops, details necessary for allocating the cropped area as between different crops grown were not recorded. Though the actual quantities of seeds for various crops grown were recorded, the fact, whether it was a case of mixed sowing or of row crops, was not indicated, nor the number of rows of various crops in respect of a row crop. The non-recording of these necessary details was primarily due to absence of provision in the day book, as also in the ledger, for obtaining this information.

For any specific operation requiring the use of implements or machinery, it had not been recorded whether the implements or machinery were owned or hired, as there was no provision for the same. Consequently, in cases where the cultivator did not own a particular implement, it was not possible to determine whether the implement had been hired or obtained *gratis*, unless it was specified.

Payments, by way of *baluta*, made at the harvest time to various *balutedars* are indicated in form 7; but in the case of *baluta* payments made at any time other than at harvest, the type of *balutedar* was not indicated as there was no such provision in form 9.

#### 4.3 Certain difficulties in recording data :

During the course of the field work, a number of difficulties in recording data were encountered. Sometimes, the data were not available at all; for instance, the actual hours of work involved in carrying out the operations when certain farm operations were done on contract basis. In other cases, data were not available in the form needed for record in the prescribed *pro forma*; e. g. in the case of loans, provision was made for noting down principal and interest repaid, separately; but in the case of Tagai loans, the instalments of repayments included the principal and interest, and were not known separately. Similarly in the case of fodder consumed by livestock, the total quantity consumed was reported but its division, as between consumption by plough and milch cattle, could not be obtained.

#### 4.4 Scrutiny of account books:

In all, 273 completed account books relating to the Bombay area were collected by the Institute at the end of the year, and were subjected to an exhaustive scrutiny before being admitted for tabulation. Twentynine books had to be rejected for reasons detailed in Chapter II.

The scrutiny of the day book was commenced by ascertaining whether the record of daily work for the duration of the year had been kept in respect of every member of the family working on the family farm. Entries in respect of field operations, raw materials, bullock labour, livestock, etc. were cross-checked, and appropriate forms were verified for transferred entries. The day book was scrutinised, mainly with a view to finding out internal inconsistencies and defective reporting. Inconsistencies were discovered in respect of change in livestock position and corresponding feed fed to cattle as well as in livestock products. Similarly, record of labour inputs, rent, *baluta* payments, etc. was checked as recorded in different forms. As regards the data to be transferred to ledger, it was found that certain items had not been entered in the ledger and often the entries were incomplete or unsatisfactory. A number of wrong computations were also discovered. Therefore, it was decided not to scrutinise the ledgers; instead, the ledgers were re-written on the basis of the corrected day book.

The data examined brought to light certain important areas in which lack of reporting and under-reporting appeared concentrated. This is briefly summarized separately for the two main centres, Deulghat and Chendiye, where respectively 117 and 103 account books were finally accepted.

*Deulghat*: Births of livestock were found not to have been reported in 4 cases out of 29. Out of 34 cases of change in the consumption needs of feed and fodder resulting from changes in the livestock position, 8 failed to report the change. Seventy-six families, out of 117, did not report either hours of work or expenditure on fencing. In 9 out of the 38 cases, the payment of rent was not reported. Non-agricultural incomes had not been reported in 26 cases out of 32. Expenditure in connection with non-agricultural business or occupation had not been recorded in a single case though as many as 32 families had one or more of their members engaged in such occupations.

*Chendiye*: Births of livestock had not been reported in 7 out of 23 cases, deaths in 6 out of 22 cases, and sending cattle away

for grazing in 4 out of 23 cases. Further, of the 36 cases where a change had occurred in the feed and fodder needs of livestock, 7 failed to record such change. Receipts of rent had not been recorded in 15 out of 33 cases, and payments in 38 out of 93 cases. In 15 cases out of 103, neither hours of work nor the expenditure in maintaining the embankment of rice fields in a state of good repair had been reported. Further, of the 103 families, 46 did not report receipts from fuel and 99 receipts from grass, though every one of them had collected free, from the forest, both fuel and grass. Of 49 families with non-agricultural incomes, 24 did not report it. None of the 49 families reported any expenditure in connection with the non-agricultural business in which one or more of its members were engaged. It is possible that overall income was usually under-reported. Overall expenditure of the family was in excess of the aggregate receipts of the family from all sources including borrowings. This was true of a large number of families, big and small.

#### 4.5 Response to the Ledger :

The response to the recording of the essential yearly data, directly in the ledger, was comparatively good. The data pertaining to various assets of the cultivators and changes therein were more or less faithfully recorded. The recording of the details about individual plots in the cultivated holdings and their tenant status, about other property and financial assets, about livestock, agricultural machinery and debt position, were satisfactory. Also the details pertaining to the family members, permanent farm servants, cropping pattern, and initial and final stock of farm produce were recorded with good care. However, there were a few instances where the value of the property and of agricultural implements had not been recorded. There were also instances of non-recording of the terms and conditions of services of permanent farm servants. The most numerous cases of non-reporting were, however, those of stock of farm produce at the end of the year. There were also a few instances in which the debt position at the end of the year had not been indicated. The temporary migration of the family was often not recorded on page 2 of the ledger, even though the evidence to this effect was available from the form 3 of the day book, in which the recording of the daily work was stopped on the ground that the person had migrated.

Another part of the ledger consisted, as pointed above, of the provisions for recording, in a summary form, the large volume of data already recorded in the day book. After completion of the field work, it was expected that the students will cull out the

information from the day book and put it in a summary form in the ledger. However, it was found that in a large number of cases, the data from the day book had not been transferred to the ledger. Even in the cases where the data from the day book had been posted in the ledger, a large number of errors were detected. In only a few cases was the posting both complete and correct, and that too was in respect of certain items only. This was specially so in the cases where the entry in the ledger was a mere copy of those in the day book, such as gross yield of the crop, etc., but the other entries where some adding up or selection of entries was required, the postings in the ledger were far from satisfactory. Particulars of the fodder and feed consumed by the livestock, the work done by the family members, farm servants and also plough cattle were, almost invariably, incomplete in the ledger. A number of accounts, such as income and expenditure accounts of plough cattle, milch cattle, and other livestock (pages 18, 19 and 20), commodity and fodder accounts (pages 31 and 32), and a number of statements such as consolidated cropwise statements of field operations (page 25), seed, manure and other material utilised (page 26), composition of cost per acre and per unit cost (page 29), and the statements of farm cash accounts (page 30) and of daily income and expenditure (page 33), which require to be recorded on the basis of the data in the day book, had mostly been left out unprepared. The data relating to most of these accounts had to be picked from all sorts of transactions, recorded day-to-day in the various forms of the day book; and after the picking of the appropriate data, the different items had to be added to provide a summary which was to be recorded in the ledger. This was evidently too much for the capacity of the student-trainees, and in future, therefore, in preparing an account book, care should be taken that all the data required for making one type of statement should be available at the particular place.

#### 4.6 Response to the Day Book :

Broadly, the response to the day book was comparatively better than that to the ledger; but the reactions of trainees to the recording work in connection with the day book were somewhat different in the two areas in which the project was conducted, and so they are separately presented.

*Bombay area* : The response to the day book may be considered comparatively more encouraging. Only the response to the forms giving the particulars of the *baluta* and other kinds of wages received and given (form 9), and particulars of other receipts and disposals of farm produce (form 10), and cash accounts of the daily

agricultural operations (form 14) may be considered as not very satisfactory. In form 1 of the day book, all the farm work done on the particular holding was recorded. However, in a few cases, community work done in the interest of farm and domestic labour employed on it were not recorded. Such work as the construction and repair of buildings for preventing the onrush of sea, which should have been recorded on this form, had not been recorded as there was no express provision for the same. Similarly, instructions were issued that overhead expenses should be recorded on this form 1 of the day book as unclassified farm work chargeable to the farm business as a whole. However, the trainees failed to distinguish between joint cost and overhead cost, and consequently costs which were joint in respect of some of the crops were also recorded as unclassified farm work chargeable to the entire farm business.

The trainees had, on occasion, failed to record some operations in respect of some specific crops. However, such errors were mainly corrected, as list of various types of operations necessary for each crop grown in that region had been prepared in advance and the recorded operations were continuously checked against it by the agricultural instructors.

Another difficulty, that arose in filling up this form, was with respect to contract labour. When certain farm operations were got done on contract basis, the actual hours of work involved in carrying out the operations could not be obtained and, thus, the details required could not be filled in. Further, hours put in against various operations included, in most of the cases, the hours spent in transit to the particular plot by the family members and the permanent farm servants. Sometimes, these hours also included the hours spent in supervising the work of casual labour employed for that particular operation. This inclusion made it impossible to separate the hours of work actually done on each operation. Transit and supervision time, naturally, differed from plot to plot, as some plots were nearer and others at a distance from the place of residence. Further the work on the plots which were near one another could be supervised by one person at a time, while if the plots were at a distance, that made supervision by several persons necessary. All this depreciated much the value of the data collected for input-output or production function type of analysis. It is necessary, therefore, that the time spent in transit and in supervision, if noted at all, should be separately recorded and, if not noted, the point should be driven home to the persons keeping accounts.

In form 2, of the day book, all hired labour employed for farm had been recorded. In that also, sometimes, the transit time has been recorded as time spent in the operation, resulting in the difficulties mentioned above. The receipts of the work of casual labour not employed for any specific work have not been treated as farm work and have, therefore, not been recorded in form 2 of the day book. This was largely due to the absence of any instructions and alternative recording place for this purpose.

On form 3 of the day book, the record of the daily work of the members of the family engaged in cultivation has been kept. The record of the activities of the permanent farm servants has also been recorded on the same form. The column 'other work' in this form of the day book was meant to record hours of gainful employment other than those for which a specific column had been provided. It was not meant for recording the domestic work done by these particular members. Yet not only the domestic work was recorded many times in this column but also certain types of farm work and the work in respect of livestock which should have been noted in the columns provided for the same. Besides, an immense variety of other work was also recorded. Errors of this type may be minimized by defining 'other work' and preparing a list of various types of work that should be recorded under this category and supplying a copy of the same to every trainee recording the data.

Instructions had been issued that in cases where wages were paid once a week or once a month, receipt of wages should be indicated only on the date on which they were actually received. The wages had, therefore, not been recorded daily. However, in some cases, the trainees failed to record the receipt of wages even when they were actually received.

In this form, hours of gainful employment of the members of the family and permanent farm servants engaged in cultivation were recorded. The gainful employment had been defined as the work which resulted in either a receipt of an income or a saving of an expenditure. The hours of gainful employment were being recorded every day, and if such hours of employment were less than 8 hours on any day, the way in which the remaining time was utilised on that day was also to be noted. However, due to misinterpretation of the word 'gainful employment', 'other work' done was recorded only on those days when the aggregate hours of work for other categories were less than 8 hours, and that too to the extent of the difference between that and the 8 hours, even though the actual hours of the other work done were more.



In this form, columns for unclassified farm work had been provided for recording the work done on farm; but as in form 1, the trainees failed to distinguish between the overhead work and the joint work and consequently in the column of unclassified farm work, even joint work with respect to some crops was also recorded.

On form 4, the recording of the daily work of the owned plough cattle was done. There also, similar difficulties as those experienced in form 3, about the classified and unclassified work and 'other work', were experienced.

Form 5 of the day book was meant to record the daily work of agricultural machinery such as tractors, and pumping sets. In our sample, there were a few cultivators owning pumps, but in spite of the repeated instructions, every one of them failed to fill in this form properly. None of the cultivators in the sample possessed a tractor.

The response to form 6 of the day book was comparatively good. This form gives the details of the farm produce and its subsequent disposal. It was noted that there were only few obvious mistakes in the recording of the gross produce as well as in the recording of the net produce brought home from the threshing floor. But, in a number of cases, the difference between the gross and the net produce on the harvest day was much less than the aggregate of the disposals in kind recorded as made at the harvest time. The internal evidence pointed out that it was due to the fact that certain payments, not made in kind at the harvest time but somewhat later, had been entered as paid at the harvest time. This was so mostly in the case of the kind payment of the share rent as well as of *baluta* payments. The net produce was what was actually brought home from the threshing floor.

Some difficulty in filling this form was noted for the case of cotton crop. In the selected villages, it was not the practice to weigh cotton as soon as it was picked. In fact, cotton was weighed usually only at the time of sale. Besides, cotton was stored in bulk and not in containers of any standard size as in the case of *jowar* and groundnut. Consequently, the yield of cotton recorded on this form was only an estimated weight of the actual picking.

On form 7, the details of the total *baluta* payments made to the village artisans and other village servants were noted. The response to the schedule was particularly good. Payments made to *balutedars* after the threshing were required to be noted on form 9. However, there was no provision on form 9 to indicate the type

of *balutedar* to whom such payment was made. Consequently, in such cases, it was not possible to distinguish payments made to *balutedars* whose services are essential to cultivation, and to those whose services are not.

In form 8, the details of the sale of the farm produce were noted. There was no provision to distinguish the sale of current year's produce from that of the previous year's produce. Besides, in some cases, it is feared, that the sales had been under-reported; for the total of initial stocks and production was found to be much larger than the aggregate of sale and other disposals in kind and the final stock, even in the case of cotton which is usually not utilized in large quantities for household purposes.

Forms 9 and 10 were meant for recording other receipts and disposals in kind. There was little response to these forms and in the case of even the few entries that had been made, the nature of receipts and disposals in kind had not been recorded. Further, as pointed out before, there was confusion in the minds of the trainees as to which *baluta* payments should be recorded on form 7 and on form 9. In practice, they have been recorded almost indiscriminately.

Form 11 of the day book was a weekly record of changes in livestock position and feed and fodder consumed. In the case of fodder consumed by livestock, often, only the total quantity was recorded, and its break up as consumed by plough and milch cattle could not be noted as required in the form as it was difficult, probably, for the student himself to make a correct breakdown. In some cases, it was found that even when there was an addition or subtraction in the number of livestock, the corresponding change in the fodder account was not noticeable.

In this form, under column 'milch' cattle, the number of milch cattle and their young stock was required to be noted; but many trainees had recorded in that category only the cows in-milk; and some others, only the milch cattle but not their young stock.

Form 12 was a weekly record of production and disposal of livestock produce. Here, too, the response was quite good. However, in some cases, the production and sale of poultry produce was very much under-reported. In this form, no provision was made for livestock products like dung, dung cakes, manure, and wool which were to be recorded directly in the ledger. The exclusion of these items from the day book, it was found, resulted in considerable under-estimation of their production.

Form 13 was meant to record raw materials purchased for use in farm production. Purchases of seed, manure, feed and fodder, etc. had been generally satisfactorily noted. So they were in agreement with the particulars given in form 1.

Form 14 was meant to record cash expenditure and receipts. This was one of the most neglected of the forms. Even the expenditure items like rent and land revenue were mostly left unrecorded.

The last form of the day book, No. 15 was meant to record domestic expenditure. The trainees were specially enthusiastic about this account and have recorded regularly even the smallest transaction. However, in the case of credit purchases, they were sometimes recorded twice, first, at the time when they were made, and again, when the credit was extinguished by cash payments.

*U. P. area :* The response to the day book was generally good, but in particular forms it was hardly satisfactory. The trainees as well as the farmers whose records were maintained were averse to supplying full data on forms 3 and 4, maintained to record daily work of individual members of family and owned plough cattle, respectively. In respect of form 5 about the agricultural machinery, though cases of families possessing them were few, information could not be collected. Response to forms 9 and 10 was limited, while to form 11, it was not satisfactory as the cultivators felt that only few changes in feed fed to livestock took place on weekly basis. Form 15 evoked very little response because of the daily nature of the information. It must be mentioned here that daily recording of data in U. P. area was commenced in October-November 1956 while the information for the previous four months of the agricultural year, 1956-57, was collected through Survey method only.

## CHAPTER V

### MODIFICATIONS IN THE PROJECT

In the light of the experience gained in the execution of this project, it would be necessary to modify the organisation of such a project and also to introduce some alterations in the account book. On the basis of the performance of the trainees in this project, the following changes and modifications would seem to be necessary.

#### 5.1 Modifications in organisation :

As regards the coverage, it would be necessary to see that the villages covered are not wide apart. It has been clearly seen that in U. P. area, no village was at a distance of more than five miles from the selected centres and so there was correspondingly little wastage in terms of incomplete account books. In Bombay area, it has been found that the jurisdiction over a number of villages at considerable distance from the selected centre led to dispersal of energy of the instructor and inadequate supervision over the work done by trainees. Therefore, it would be desirable to restrict the coverage of the project to a limited manageable area.

It was amply evident that students studying in standards below VI could not continue to work in the project in the absence of the desirable grasp of the inter-connections and implications of different items in the account book. It would be necessary, therefore, to restrict selection of trainees to students from higher standards only. In U. P., the schools had an advantage in having the study of agriculture as part of their curriculum, which was not available in Bombay area. That the selection of students should be primarily from those coming from cultivating classes hardly need any emphasis.

*Method of Instruction :* The teachers from primary or secondary schools would, no doubt, be a suitable agency for imparting instruction. It may, however, be worthwhile trying allowing teachers to work part-time on the project, instead of taking them on full-time basis. The selected instructors may take a limited number of students in their classes and impart them training in farm accounts and supervise and guide their work. Part-time work of teachers would also be feasible in view of the limited area of operation and the judicious restriction on the choice of trainees, as the teachers would be able to work locally without touring work.

By getting the work of training done by part-time instructors, the need to secure the deputation of services involving protracted correspondence and formal arrangements would also be obviated. Services of part-time agricultural instructors could be secured by persuading teachers, teaching VI or higher classes in full-fledged primary or secondary schools, to participate in this project in their spare time. Approval of the educational authorities concerned would not be difficult to obtain for such arrangement, and informal assurance or understanding could be had from the authorities that such teachers would not be transferred during the period of the project, i. e. one year. There are several instances of primary teachers being permitted to work on salary in their spare time as village postmasters, secretaries of village panchayat, etc. In view of this practice, the educational authorities may be able to permit teachers to work on a part-time basis in this sort of a project also.

The selected teacher-instructor might be paid on a piece-rate or a fixed amount, per book, per month. In order to induce teachers to provide effective supervision and guidance, and to ensure that they see to the regular and satisfactory keeping of accounts, it may be suggested that they should not be paid in respect of books which cease to be kept till the end. At the same time, if all the account books initially kept under the supervision of a teacher are satisfactorily maintained till the end of the year, then a special incentive bonus should be given to that teacher. A reasonable rate may be Rs. 2 per book, per month, with a bonus of Rs. 20 at the end of the year. This high rate of bonus may be a big incentive for seeing the work through.

Normally, the teacher should not be allowed to take more than 10/15 trainees. Further, he should be allowed to select students from a class which he would be teaching, for in that case, he would be able to exercise greater authority over the selected students.

In U. P., there is already a system of regular Extension Teachers serving in certain schools. These Extension Teachers could be conveniently entrusted with the responsibility of both guidance and supervision of the recording work of the trainees. The approval of the Department of Education may be obtained for such an arrangement, and it is suggested that this work should be treated as part of their normal duties. It should suffice if the selected teacher could instruct his trainees in farm accounts, through tutorials of about 45 minutes' duration, on every working day in a week just before or after the working hours, as may be convenient.

*Collection of data :* Information which is to be collected from the village records should be collected by the instructor, and other information should be obtained by the trainees either by personal observation or by interviewing parents every day. Information regarding such items as indebtedness, land revenue, or data about transactions with the co-operative institutions may be collected by the trainees under the direct supervision of the instructors. It is quite likely that cultivators have a number of transactions with the co-operative credit and marketing societies, collection of data from whom under the direct supervision of instructors would provide the trainees with some knowledge of the work of these institutions. The agricultural instructors should also verify, at the commencement of the project, such essential items of information as members of the family, permanent farm servants, their terms and conditions, and the inventory of the cattle, agricultural implements and machinery.

*Recording of data :* The number of errors and omissions may be appreciably reduced if the account books are kept in the custody of the school, and no student is allowed to take them home. Besides, the student should be supplied with ordinary pencils and notebooks on which they should note down the entries for the day to be recorded in the account book at the school. This practice will not only ensure regular keeping of accounts but will also minimize the commission of errors as the instructor would be readily available whenever the students are doubtful about the propriety or otherwise of a particular entry in a particular column. The fact that the selected students would not be too many and would have a fairly mature grasp, would facilitate the work of persuading them to attend the school regularly, and the instructors also would be able to impress upon them the need and importance of this training in farm accounts. At the time of temporary absence of some students, which is bound to occur, some of the other students could be persuaded to visit the houses of their absent colleagues and record the data. Similar arrangements may be made in the case of sickness of the student-trainees. At the time of the examination, however, due to natural pressure of studies, it is likely that some students would be prone to neglect the recording of data. In such a situation, the instructor would have to assume a large share of the responsibility of keeping the accounts of the unwilling students.

*Arrangements for instruction and supervision :* If a number of students are available at a centre because of its being a full-fledged primary school or a secondary school, there should be two instructors, each being responsible for a batch of 10 or so. Consequently,

if one of the agricultural instructors were to fall ill or had to go away on leave, the other would be able to take his charge for the short period. The teacher taking over the charge may, however, be paid for the extra work done by him *pro rata*, the amount so paid being deducted later from the remuneration payable to the agricultural instructor whose charge the other would take. Such an arrangement will eliminate the need of maintaining reserve staff.

It would, however, not be possible at all places to have more than one agricultural instructor. The success of the whole training programme would, therefore, largely depend on the sincerity of the instructor and the devotion he would be giving to the project.

As regards the reward for maintaining the account books in a satisfactory way, the amount of Rs. 25 per account book is in itself quite adequate. Whenever a student goes out of the village for a short time and if his account book is maintained by another student, a proportionate amount may be deducted from the reward of Rs. 25. As a matter of fact, the amount of Rs. 25 for an account book is an inducement not to the student but to his parents. In certain tracts, this amount is likely to be considered as more than enough for the maintenance of accounts. But in some others the amount is quite likely to be considered as negligible. In the present pilot project, the amount of the reward did not create the enthusiasm among the students that it was expected to do. On the other hand, when reproached for their negligence of the work, quite a few students used to reply that they did not care for the paltry sum of Rs. 25, and there was constant grumbling among the students that the amount of the reward was too meagre and incommensurate with the efforts that they had to put in in maintaining the accounts round the year, day by day. Thus, it was observed that the programme was not considered as an educational one, and the idea that the work the students were being implored to do was meant to serve some other purpose, got hold over the students' mind in some centres.

It has also been suggested, that instead of a cash reward certificates of merit may be issued to those students who keep accounts satisfactorily. This certificate may be considered by the students as more important than the amount of Rs. 25 because it would be a permanent asset to them and, as in the academic field, this recognition of a particular merit and passing a test of good work would be deemed more significant. Nevertheless, it may be advisable to combine both (i) payment of cash reward and

(ii) grant of a certificate. These together may serve as a good incentive to the young farmers to keep account books satisfactorily.

### 5.2 Modifications in the account book :

*Ledger* : As indicated earlier, the ledger provided for the record of some essential data and for the classification of information recorded in the day book. From the experience of this project, it may be said that the ledger taxed heavily on the time and energy of the trainees. Many a trainee failed to grasp why particular types of entries were to be noted in particular pages of the ledger. As had been stated earlier, the ledger was completed satisfactorily by a negligible number of trainees and that the ledger was not being properly attended to. It is also true that the ledger was so designed that many of its pages could not be filled till the field work was completed, e. g., the per hour wage-rate to be employed for imputing the value of domestic labour, human and bullock, can be derived only after the field work is completed. In view of the experience of the fact that the ledger could be prepared at the head office, after completion of the field work, it is suggested that the ledger might be altogether dropped. The ledger, however, contained certain data recorded directly in it. Therefore, particulars regarding members of the family, permanent farm servants, holdings, crops raised, etc., entered on pages 2, 4, 5-10, 13, 21-24, 31, and 32 of the ledger, may conveniently be transferred to the day book from the ledger. Thereafter, the ledger need not be kept by the students. The teacher should be asked to provide them instructions in getting a part of the work of transfer of entries to the ledger done by the students under his own supervision. The elimination of ledger keeping from students' work would minimize the work-load on them.

#### *Day book* : (a) *Record of daily work* :

Form 1 was meant to record work done on the cultivated holding by members of the family, permanent farm servants, owned plough cattle and by exchange labour. In form 2, corresponding work on the farm done by hired human and bullock labour was recorded along with the wages paid in cash/kind. Thus, the two forms together were designed to give a complete picture of the work done on the farm. In forms 3 and 4, provision was made for recording work of individual members of family, of permanent farm servants, and by owned plough cattle respectively, whether on the own farm or on other's farm (for wages) or in non-farm work; these would give the total employment of family



labour and owned cattle. Forms 3 and 4 were contemplated as a check on the work recorded in forms 1 and 2. This purpose was not, however, served to the desired extent as entries in forms 3 and 4 were not complete and properly maintained. In as much as the purpose of the account book is to study the farm economy and not the total employment pattern of family labour, etc. on the farm and elsewhere, it would not materially affect the account book if the recording of information in respect of family members in form 3 were dropped. However, as data of work done by farm servants and by owned bullocks are felt necessary for imputation of values to the family labour ( human and bullock ) on farm, the design of forms 3 and 4 may be slightly altered and the record may be maintained weekly instead of daily. This would reduce the workload and simultaneously facilitate meaningful imputation of values to family labour.

Form 5 was designed to obtain details of work done by owned mechanised implements or machinery, and returns therefrom whenever hired out. As, however, no corresponding information is collected about work done by conventional implements, the utility of the information obtained in form 5 seems to be very limited. Therefore it is suggested that this form need not be maintained in such a project.

The omission of forms 3, 4, and 5 would considerably reduce the burden of daily record on the trainees and would facilitate closer supervision and more rigorous inspection by the instructors.

(b) *Record of receipts and disposals in kind*: In the day book, provision was made for recording receipts and disposals in kind in forms 9 and 10. However, receipts and payments in the nature of wages or *baluta* only were being recorded in form 9, other receipts and disposals being recorded in form 10. The trainees were found to have failed to take note of this distinction and made entries indiscriminately. Repetition of this error may be avoided if all the receipts are brought together in one form and disposals in another. Forms 9 and 10 should, therefore, be appropriately modified. It would, however, be necessary to provide specific columns for recording receipts of various nature in form 9, and corresponding disposals in form 10.

(c) *Credit transactions*: It has been seen that there was no adequate provision for recording credit transactions. It would be necessary to add a form for recording the borrowing and lending of seed, fodder, etc.

(d) *Fodder account*: In order to make the day book self-contained it is necessary to add to the day book a fodder account, in which would be recorded, on the receipts side, production, purchases, and other receipts; and on the debit side, sales, and other disposals. This might be a monthly record; and at the end of every month, it should be ascertained that the disposals to date would be less than the receipts to date.

(e) *Record of livestock products*: In form 12, production and disposal of livestock products, such as milk, milk products, and eggs only were recorded. The omission of dung, dung cake, manure, wool, etc. may be rectified by including these items in the form.

(f) *Expenditure on domestic consumption*: Form 15 of the day book provided for information in this category. However, while the quantities consumed out of home-grown produce were recorded as and when they were consumed, quantities purchased and consumed were not so recorded. Instead, all purchases of consumption goods were recorded on the day of purchase, irrespective of whether articles purchased were consumed or not. Hence, unless the initial and the final stocks of every item of consumption are recorded, it becomes difficult, or even impossible, to arrive at the annual family consumption. Further, even if the stocks at the beginning and at the end of the year are noted, it is not possible to determine actual quantities consumed during different months. If, therefore, it is thought desirable to obtain details of domestic consumption, the design of *pro forma* would need suitable modifications. If, however, the recording of consumption data is deemed unnecessary for this project, a new form need not be designed at all for consumption data. In that case, the existing form 15 may be altogether dropped.

In the foregoing paragraphs, some illustrations are given with a view to indicating the type of modifications which would be necessary for introducing simplicity in the account book. One such modified account book is given as the appendix to this report. Appropriate instructions for maintaining the same have to be devised when a project of this type is undertaken. One important fact has to be borne in mind while designing the account book for the training of the uninitiated student: it is that the training should be of immediate use to the students.

## APPENDIX

Specimen Copy

## FARM ACCOUNTS BOOK

Beginning of the year \_\_\_\_\_ End of the year \_\_\_\_\_

Cultivator \_\_\_\_\_

Age \_\_\_\_\_ Religion, Caste / Sub-caste \_\_\_\_\_

Education \_\_\_\_\_ Subsidiary Occupation \_\_\_\_\_

Postal Address \_\_\_\_\_

Investigator \_\_\_\_\_

Qualifications \_\_\_\_\_ Relation with cultivator \_\_\_\_\_

---

### CONTENTS

Form No.	Title	No. of Pages
1	Inventory of owned land	
2	Inventory of cash-rented and share-rented land	
3	Inventory of property and financial assests	
4	Outstanding debt and credit transactions during the year ( cash )	
5	Inventory of livestock	
6	Inventory of implements and machinery at the beginning of the year and cost of renewal and repairs etc. during the year	
7	Members of the family ( including farm servants )	
8	Crops on owned and self-cultivated land	
9	Crops on leased-in lands—cash and / or share-rented	

- 10 Particulars of farm servant and work done  
( Weekly record )
  - 11 Record of work of owned bullocks and buffaloes  
( Weekly )
  - 12 Record of daily work on the farm ( family and  
exchange labour of men, live-stock and implements )
  - 13 Record of daily work on the farm ( hired labourers,  
bullocks and implements )
  - 14 Record of maintenance of livestock ( Weekly )
  - 15 Farm produce and its subsequent disposal  
( Weekly record )
  - 16 Livestock produce and its disposal ( Weekly record )
  - 17 Particulars of commodity receipts
  - 18 Particulars of commodity disposals
  - 19 Particulars of marketing farm produce and its cost
  - 20 Particulars of cash purchases for current cultivation  
and livestock maintenance
  - 21 Record of cash transactions
  - 22 Credit transactions in kind
  - 23 Dues receivable in kind
  - 24 Fodder account ( Monthly record )
  - 25 Commodity account ( excluding fodder ) ( Annual )
-

Village and distance	Survey No., Plot, Sub-plot	Area		Assessment		Other cess		Soil-Type	Current value of land (Rs.)	Nature of title	If purchased, when and at what price? (Rs.)	Since when cultivated?	If rented out	
		A.	G.	Rs.	nP.	Type	Amount Rs. nP.						Cash-rent or share-rent	Reasons for renting
<b>Total</b>														

Cash-rented or share-rented	Village and distance	Survey No., Plot, Sub-plot	Area		Assessment		Other cess		Type of soil	Current value (Rs.)	Since when cultivated?	Cash-rent or share-rent	Name of the landlord, his occupation, place of residence, etc.
			A.	G.	Rs.	nP.	Type	Amount Rs. nP.					
<b>Total</b>													

Form No. 3

Page No.

## INVENTORY OF PROPERTY AND FINANCIAL ASSETS

## (A) Buildings:

Description	1	2	3	4	Remarks
1 Particulars of use					
2 Area under roof : (Sq. feet)					
3 Materials of					
(a) Plinth					
(b) Walls					
(c) Roof					
4 Year of construction					
5 Present value (in Rs.)					
6 If rented, annual rent					
7 Repairs and extentions done during the year					
(a) Type					
(b) Cost (in Rs.)					
8 Purchase during the year					
9 New construction during the year					

## (B) Other fixed capital assets :

Type of asset	Land occupied		Present value of land occupied (Rs.)	Year of asset formation	Value of the asset at the beginning of the year	Improvement or new asset formation during the year		Remarks
	Survey No.	Area (acres)				Type	Cost (Rs.)	
(a) Well :								
1								
2								
3								
(b) Garden and / or Plantation :								
1								
2								
3								
4								
5								
(a) Any other fixed capital asset : (specify)								
1								
2								
3								

## (C) Financial assets :

Type of asset	Deposits in bank	National Savings Certificates	Shares of co-operative societies	Insurance policies	Miscellaneous		
					1	2	3
Value in Rs.							
At the beginning of the year							
At the end of the year							

Form No. 4

Page No.

**OUTSTANDING DEBT AND CREDIT TRANSACTIONS DURING THE YEAR (Cash)****(A) Debt and Borrowings :**

	Loan No.				
	1	2	3	4	5
Outstanding debt at the beginning of the year					
1 Amount of loan					
2 Date of borrowing					
3 Purpose of borrowing					
4 Credit agency					
5 Security given, if any					
6 Rate of interest (per cent per annum, simple / compound)					
7 Duration and terms :					
(a) Duration (stipulated)					
(b) Terms and conditions of the loan ( including mode of repayment ) (stipulated)					
8 Repayment during the year					
(a) Month of repayment					
(b) Amount repaid					
9 Outstanding at the end of the year					

**(B) Dues receivable :**

Dues receivable from	At the beginning of the year	At the end of the year	Remarks
1 Cultivators			
2 Traders			
3 Adatiya / Dalal			
4 Relatives			
5 Others (specify)			
(i)			
(ii)			
<b>Total</b>			











Serial No.	Name	Sex	Age	Relation with the Head of the family	Civil condition	Education	If earner,		If not earning, reasons thereof	If away from the village during the year		
							Main occupation	Subsidiary occupation		Place	Duration	Nature of work

FARM ACCOUNTS

**N. B. - This form should be checked periodically and any new members, not noted earlier, should be separately entered and all particulars regarding their whereabouts in earlier period be noted in the last column.**

Survey No.	Name of the field	Area	Of which permanent fallow	Net cultivable area	Kharif			Rabi			Summer			Irrigated / Dry	Remarks
							Current fallow			Current fallow			Current fallow		
<b>Total</b>															

Survey No.	Name of the field	Area	Of which permanent fallow	Net cultivable area	Kharif			Rabi			Summer			Irrigated / Dry	Remarks
							Current fallow			Current fallow			Current fallow		
<b>Total</b>															

Form No. 10

Page No.

## PARTICULARS OF FARM SERVANT AND WORK DONE ( Weekly Record )

S. No.

Name \_\_\_\_\_ Age \_\_\_\_\_ Caste \_\_\_\_\_

Whether monthly or annual \_\_\_\_\_ Man/woman/child \_\_\_\_\_

Salary : Annual/monthly \_\_\_\_\_

- (1) Cash \_\_\_\_\_ (5) Bed, covers, etc. (Value) \_\_\_\_\_  
 (2) Food (Value) \_\_\_\_\_ (6) Footwear (Value) \_\_\_\_\_  
 (3) Grains (Type) \_\_\_\_\_ (7) Pan, tobacco (Value) \_\_\_\_\_  
     (Quantity) \_\_\_\_\_ (8) Miscellaneous (Value) \_\_\_\_\_  
     (Value) \_\_\_\_\_ (9) Total salary \_\_\_\_\_  
 (4) Clothing (Value) \_\_\_\_\_

*Weekly record of work done*

Last day of week (Date)	Work ( hours )										Wages earned					
	On farm		On exchange	For cattle		For wages	Other work		Without work		Total hours	Cash (Rs.)	In kind			
	Crop-wise	Un-classified		Draught cattle	Other cattle		Hours	Nature of work	Hours	Reasons			Type	Quantity	Value (Rs.)	
<b>Total</b>																

( Actual hours of work done have to be recorded and classified. )

Form No. 11

Page No.

## RECORD OF WORK OF OWNED BULLOCKS AND BUFFALOES ( Weekly )

Name \_\_\_\_\_ Age \_\_\_\_\_ Breed \_\_\_\_\_ Bullock } (Number)  
Buffalo }

Last day of week (Date)	Work ( hours )										Wages earned					
	On farm		On exchange	For wages	Other work		Without work		Total No. of hours	Cash (Rs.)	In kind					
	Crop-wise	Un-classified			Hours	Nature of work	Hours	Reason			Type	Quantity	Value (Rs.)			
<b>Total</b>																

( Actual hours of work done have to be recorded and classified. )

10

RECORD OF DAILY WORK ON THE FARM ( family and exchange labour of men, livestock and implements )

Date	Particulars of work	Frequency	Place of work			Material used ( in standard seers )												
			Survey No.	Crop	Area operated A. G.	Type of material	Owned		From landlord		Purchased		Borrowed					
							Quantity	Value (Rs.)	Quantity	Value (Rs.)	Quantity	Value (Rs.)	Quantity	Value (Rs.)				
	<b>Total</b>																	

Total		Human and bullock labour ( hours )										Implements ( hours )			Remarks		
Quantity	Value (Rs.)	Farm servants	Owned labour				Exchange/gratis labour				Type	Owned	Got on exchange or gratis				
			Men	Women	Children	Bullocks	Men	Women	Children	Bullocks							

APPENDIX



RECORD OF DAILY WORK ON THE FARM (hired labourers, bullocks and implements)

Date	Particulars of work	Frequency	Place of work			Labour hours of men, women, children, bullocks and implements													
			S. No.	Crop	Area operated	Hours of work	Men				Hours of work	Women							
							In cash	Wages paid				In cash	Wages paid						
								In kind					In kind						
								Type	Quantity	Value (Rs.)			Type	Quantity	Value (Rs.)				
Total																			

Labour hours of men, women, children, bullocks and implements														Remarks	
Children				Bullocks				Implements				Hours of work			
Hours of work	Wages paid			Hours of work	Wages paid			Type of implement	Hours of work	Wages paid					
	In cash	In kind			In cash	In kind				In cash	In kind				
		Type	Quantity			Value (Rs.)	Type				Quantity		Value (Rs.)		Type

Last day of week (Date)	Increase and decrease in livestock					Animal groups	Fodder and feed used (quantity)									
	Type of livestock	Increase		Decrease			Number	Kadba	Sarmad	Grass		Other type of fodder		Oil Cake		Pulse-meal, etc.
		Reason	No.	Reason	No.					Green	Type	Quantity	Type	Quantity		
						Draught Milch* Rest										
						Draught Milch* Rest										
						Draught Milch* Rest										
						Draught Milch* Rest										
						Draught Milch* Rest										

\*Includes the young stock also.

Other cattle-feed		Pasture		Labour hours of attendance							Wages paid to hired labour (casual) including grazing fees	Remarks
Type	Quantity	Type of grass	Hours of grazing	Domestic			Farm servant	Hired				
				Male	Female	Child		Male	Female	Child		

FARM ACCOUNTS



Kind of produce	Week No.*				Week No.				Week No.				Week No.				Week No.				Week No.				Remarks
	From : To		From : To		From : To		From : To		From : To		From : To		From : To		From : To		From : To		From : To						
	Yield		Sale		Yield		Sale		Yield		Sale		Yield		Sale		Yield		Sale						
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value					
1 Buffalo milk																									
2 Cow milk																									
3 Goat milk																									
4 Sheep milk																									
5 Other milk																									
6 Curds																									
7 Ghee																									
8 Butter																									
9 Eggs																									
10 Wool																									
11 Dung manure																									
12 Dung cakes																									
13 Hides																									
14 Other																									
<b>Total</b>																									

\* Weeks should be serially numbered and the calendar dates covered by the week should be mentioned.



## PARTICULARS OF COMMODITY DISPOSALS

Date	Mode of disposal	Type of commodity	Name of commodity																
			Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value					
<b>Total</b>																			

**Note:**— The following modes of disposal should be clearly specified : (1) consumption — (a) household consumption, (b) consumption for production; (2) sales against cash; (3) commodity disposals in exchange for other commodities; (4) disposals as owner-share and similar disposals as returns in kind on capital assets rented in or borrowed; (5) *baluta* payments; (6) wage payments in kind; (7) material contributions made to tenants co-sharers; (8) disposals on account of credit transactions in kind; (9) other disposals such as gifts, charity, etc.

The type of the commodity, i. e., whether the commodity involved in the disposal is from the previous stock or from the current production should be recorded against each transaction.

II

Date	Name of commodity	Quantity	Sale value (Rs.)	Harvest price	Place of sale	Buyer	Cost of Marketing				Total expenses	Net value	Receipts out of sale value	Remarks*
							Loading charges	Transport charges	Ware-house rent	Commission and other marketing costs				
<b>Total</b>														

\*Whether the sale refers to that from the previous stock or from the current produce should be specified.



PERTICULARS OF CASH PURCHASES FOR CURRENT CULTIVATION AND  
LIVESTOCK MAINTENANCE

Date	Farm business account				Date	Livestock account			
	Purpose	Type	Quantity	Value		Purpose	Type	Quantity	Value
<b>Total</b>					<b>Total</b>				

RECORD OF CASH TRANSACTIONS

Date	Cash receipts					Cash expenditure*				
	Type	Source	Qty.	Value (Rs.)	Cross reference form No.	Type	Purpose	Qty.	Value (Rs.)	Cross reference form No.

\* Not to record purchases recorded on Form 20.

**PETICULARS OF CASH PURCHASES FOR CURRENT CULTIVATION AND  
LIVESTOCK MAINTENANCE**

Date	Farm business account				Date	Livestock account			
	Purpose	Type	Quantity	Value		Purpose	Type	Quantity	Value
<b>Total</b>					<b>Total</b>				

RECORD OF CASH TRANSACTIONS

Date	Cash receipts					Cash expenditure*				
	Type	Source	Qty.	Value (Rs.)	Cross reference form No.	Type	Purpose	Qty.	Value (Rs.)	Cross reference form No.

\* Not to record purchases recorded on Form 20.

CREDIT TRANSACTIONS IN KIND : DEBT AND BORROWINGS

Commodity→																				
	Loan No.→				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Debt outstanding at the beginning of the year.																				
1. Loan taken																				
Quantity																				
Value																				
2. Date of borrowing																				
3. Purpose of borrowing																				
4. Credit agency																				
5. Security given, if any																				
6. Rate of interest (percent per annum) or excess quantity or value to be returned																				
7. Duration & terms																				
(a) Duration (stipulated)																				
(b) Terms & conditions of the loan (including mode of payments) (stipulated)																				
8. Repayments during the year																				
(a) Month of repayment																				
(b) Repayment:																				
Quantity																				
Value																				
9. Of which outstanding as on 31st May																				
Quantity																				
Value																				

Notes :

CREDIT TRANSACTIONS IN KIND : DUES RECEIVABLE

Dues receivable from	Commodity →	At the beginning of the year								At the end of the year							
		Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value		
1	Cultivators																
2	Relatives																
3	Others (specify)																
	(a)																
	(b)																
	(c)																
	(d)																
	(e)																
Total																	

APPENDIX

FODDER ACCOUNT (Monthly record)

Type	Increase									T o t a l	Decrease								
	Stock at the beginning of the month		Farm produced	Share-rent received	Baluta receipts	Wages received	Materials received from landlord	Other receipts	Purchases		Sales	Share due to landlord	Baluta payment	Wages paid	To the tenant	Fed to cattle	Other	Balance at the end of the month	
	Quantity	Value																Quantity	Value
<b>Total</b>																			

COMMODITY ACCOUNT (excluding fodder) (Annual)

Produce	Stocks at the beginning of the year		Receipts						T o t a l	Disposals						Balance at the end of the year				
	Quantity	Value	Farm produce	Share rent	Baluta	Wages	Materials from landlord	Others		Purchases	Sales	Share to the landlord	Baluta	Wages	To tenant	Used as materials	Other	Home consumption (estimated as residual)	Quantity	Value
<b>Total</b>																				

## LIST OF PUBLICATIONS

1. The Salaries of Public Officials in India : by D. R. Gadgil, 1931, (out of print).
2. Imperial Preference for India, (The Ottawa Agreement Examined) ; by D. R. Gadgil 1932, (out of print).
3. A Survey of the Marketing of Fruit in Poona ; by D. R. Gadgil and V. R. Gadgil, 1933, (out of print).
4. A Survey of Motor Bus Transportation in Six Districts of the Bombay Presidency ; by D. R. Gadgil and L. V. Gogate, 1935, (out of print).
5. Urban Handicrafts of the Bombay Deccan : by N. M. Joshi, M.A., 1936, (out of print).
6. Legislative Protection and Relief of Agricultural Debtors in India ; by K. G. Shivaswami, 1939, (out of print).
7. A Survey of Farm Business in Wai Taluka ; by D. R. Gadgil and V. R. Gadgil, 1940. (out of print).
8. The Population Problem in India—A Regional Approach : by N. V. Sovani, 1942. (out of print).
9. Regulation of Wages and Other Problems of Industrial Labour in India : by D. R. Gadgil, (Reprint in 1954). Royal 8vo, pp. 101. Price Rs. 5.
10. War and Indian Economic Policy ; by D. R. Gadgil and N. V. Sovani, 1944. (out of print).
11. The Aborigines—"So-called"—and Their Future ; by G. S. Ghurye, Professor and Head of the Department of Sociology, University of Bombay, 1943, (out of print).
12. Poona—A Socio-Economic Survey, Part I, Economic : by D. R. Gadgil, assisted by the staff of the Institute. Royal 8vo, pp. 300, 1945. Price Rs. 15.
13. Federating India : by D. R. Gadgil. Demy 8vo, pp. 117, 1945. Price Rs. 6 (out of print).
14. The Socio-Economic Survey of Weaving Communities in Sholapur : by R. G. Kakade. Demy 8vo, pp. 221, 1947, Price Rs. 10.
15. The Federal Problem in India ; by D. R. Gadgil. Demy 8vo, pp. 203, 1947, Price Rs. 8.
16. Bombay Finance—1921-1946 ; by T. M. Joshi. Demy 8vo, pp. 220, 1947, Price Rs. 7-50.
17. Economic Effects of Irrigation (Report of a Survey of Direct and Indirect Benefits of the Godavari and Pravara Canals) ; by D. R. Gadgil. Demy 8vo, pp. 184, 1948. Price Rs. 8 (out of print).
18. The Social Survey of Kolhapur City : Part I—Population and Fertility : by N. V. Sovani, assisted by the staff of the Institute. Demy 8vo, pp. 86, 1948. Price Rs. 4.
19. Some Observations on the Draft Constitution ; by D. R. Gadgil. Demy 8vo, pp. 112, 1948. Price Rs. 3.
20. Reports of the Commodity Prices Board : edited by N. V. Sovani, 1948. Royal 8vo, pp. 236, 1948. Price Rs. 10.

List of Publications—(contd.)



21. Post-War Inflation in India—A Survey : by N. V. Sovani, Royal 8vo, pp. 100, 1949. Price Rs. 5.
22. Planning of Post-War Economic Development in India : by N. V. Sovani. Demy 8vo, pp. 102, 1951. Price Rs. 3-50.
23. Social Survey of Kolhapur City : Vol. II—Industry, Trade and Labour : by N. V. Sovani. Demy 8vo, pp. 346, 1951. Price Rs. 12.
24. Social Survey of Kolhapur City : Vol. III—Family Living and Social Life : by N. V. Sovani. Demy 8vo, pp. 330, 1952. Price Rs. 12.
25. Poona—A Socio-Economic Survey : Part II : by D. R. Gadgil. Royal 8vo, pp. 330, 1952. Price Rs. 15.
26. Report on the Poona Schedules of the National Sample Survey : by V. M. Dandekar. Royal 8vo, pp. viii + 223, 1953. Price Rs. 6.
27. Survey of Fertility and Mortality in Poona District : by V. M. Dandekar and Kumudini Dandekar, Royal 8vo, pp. 191, 1953. Price Rs. 5.
28. Structure and Working of Village Panchayats : A Survey based on case studies in Bombay and Madras : by A. V. Raman Rao. Royal 8vo, pp. 218, 1954. Price Rs. 7.
29. Second Report on the Poona Schedules of the National Sample Survey (1950-51) : by V. M. Dandekar. Royal 8vo, viii + 176, 1954. Price Rs. 6.
30. Economic Policy & Development (A Collection of Writings) : by D. R. Gadgil. Royal 8vo, pp. 248, 1955. Price Rs. 8. (out of print).
31. Fertility Survey of Nasik, Kolaba and North Satara Districts : by N. V. Sovani and K. Dandekar. Royal 8vo, pp. xvi + 167, 1955. Price Rs. 6.
32. Primary Education in Satara District—Reports of Two Investigations : by D. R. Gadgil and V. M. Dandekar. Royal 8vo, pp. 174, 1955. Price Rs. 6.
33. Use of Food Surpluses for Economic Development : by V. M. Dandekar. Royal 8vo, pp. 153, 1956. Price Rs. 5.
34. Poona : A Re-Survey (The Changing Pattern of Employment and Earnings) : by N. V. Sovani, D. P. Apte, R. G. Pendse, 1956. Royal 8vo, pp. 550. Price Rs. 15.
35. Working of the Bombay Tenancy Act, 1948 : Report of Investigation : by V. M. Dandekar & G. J. Khudanpur. Royal 8vo, pp. 194, 1957. Price Rs. 7-50.
36. Food Control in Bombay Province 1939-49 : by V. S. Patvardhan. Royal 8vo, xii + 208, 1958. Price Rs. 7-50.
37. Demographic Survey of Six Rural Communities : by Kumudini Dandekar. Royal 8vo, xiv + 142, 1959. Price Rs. 8-25.
38. Economics of a Multiple-Purpose River Dam : Report of an inquiry into the economic benefits of Hirakud Dam : by N. V. Sovani and Nilkantha Rath. Royal 8vo, pp. vii + 389, 1960. Price Rs. 20.
39. Planning and Economic Policy in India : by D. R. Gadgil. Price Rs. 12.
40. Methods and Practice of Farm Accounts : Report on the Pilot Project : by G. D. Agrawal and G. J. Khudanpur. Price Rs. 2.

**Note :** Rupee prices are applicable only in India, Pakistan, Burma and Ceylon.

## ARTHA VIJNANA

Quarterly Journal of the Gokhale Institute of Politics and Economics.

The quarterly journal of the Institute, *Artha Vijnana* started in March, 1959, publishes, in the main, results of current work at the Institute. Contributions from outside scholars are also welcomed. The journal contains articles in English or in any Indian language. The articles in Indian languages are printed in Devanagari script and all articles carry English and Hindi summaries. The journal, it is hoped, will serve not only as a link between research workers at the Institute and their colleagues in India and abroad, but will also contribute to the efforts of Indian scholars to build up a tradition of research work and communication through the media of Indian languages.

Annual subscription Rs. 15.00.