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Pilot Development Project Etawah



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PILOT DEVELOPMENT PROJECT ETAWAH

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Etawah was the school where we—the Government, the people and the officers on whom lies the ultimate responsibility for seeing that the decisions taken by the Government are implemented—learned our first lessons in Planning. There were no examples to go by at least in this country, on such a large and comprehensive scale. Some work had previously been done in, what used to be called, the Rural Development Department. It did coincide, to some extent, with what is being attempted now under the Community Development Programme. But the scope of our present ideas is so sweeping, the canvas is so wide, that the experience gained in rural development work could not be much of a guide for the tasks we have set ourselves to-day. Lessons had to be learned in the hard way, through a period of trial and error, and it speaks volumes for the sincerity of purpose and hard work put in by those in charge of the Etawah Pilot Project in 1948 and subsequent years, that the pattern which they evolved has found wide acceptance not only in this State but elsewhere also. There have necessarily been additions and adaptations. The area covered by the Project has grown from 64 villages to over 360 covering a population of over 2,50,000. A number of new pilot projects are being tried in the State to-day, some of them in areas outside Etawah. Among other things, this helps us to arrive at results independent of conditions which may be limited to special localities. But all this activity has branched off from Etawah which still continues to be our major field research laboratory. This book, containing detailed information about the pilot development project in Etawah, should provide very interesting and informative reading. It gives an idea of the field covered by development activities, the difficulties

which have to be encountered and the success which has been achieved in conquering these difficulties and solving some of the problems posed by the social, cultural and economic conditions obtaining in our countryside. I commend it to everyone interested in the subject.

SAMPURNANAND,

Chief Minister,

Uttar Pradesh.

PREFACE

Pilot Development Project, initially launched in 64 villages of district Etawah in the year 1948-49 and at present extending to 365 villages covering a population of 2.5 lakhs, has unique importance in the history of Community Development Programme in Uttar Pradesh. Many new ideas have been tried through action-research and many more are under way. On the basis of trial and error process, the successful results have been applied on a large scale with a view to improving general working of the Development Programmes in the State.

The book in brief, gives a picture of initial efforts continued with gradual advancement of the Pilot Development Project, Etawah, during the last ten years. For readers' convenience, this book has been divided into three parts.

The first part deals with the projects which were started in the beginning and are still continuing. On the basis of experience gained, certain modifications in their working have been introduced from time to time. This part, therefore, gives a narrative of all the activities since the very inception of the project together with subsequent modifications.

The second part deals with the new projects which were undertaken during the period—1957 to 1959. The progress achieved in each has been indicated.

The third part deals with the normal block programmes like those in other Development blocks of the State.

This book, by no means, claims to be comprehensive, though an effort has been made to cover all aspects of the action-research projects by collecting the material from all available sources.

I express my great sense of gratitude to the Chief Minister of the State who has been kind enough to write a Foreword for this book. Thanks are due to those workers who have been associated with this project from the very beginning and also to those who are carrying out present action-research programmes

with devotion and enthusiasm. They supplied facts and figures about their experience in their special fields of work in the requisite form. The Senior Economic Intelligence Inspector and his Investigators who compiled the statistical tables for this book, deserve special mention for their help. I am also grateful to the Team Members of the Institute who have gone through the manuscript and made useful suggestions.

RAM DAS,

Director,

*Planning Research and Action Institute,
Uttar Pradesh, Lucknow.*

August 31, 1960

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PART I

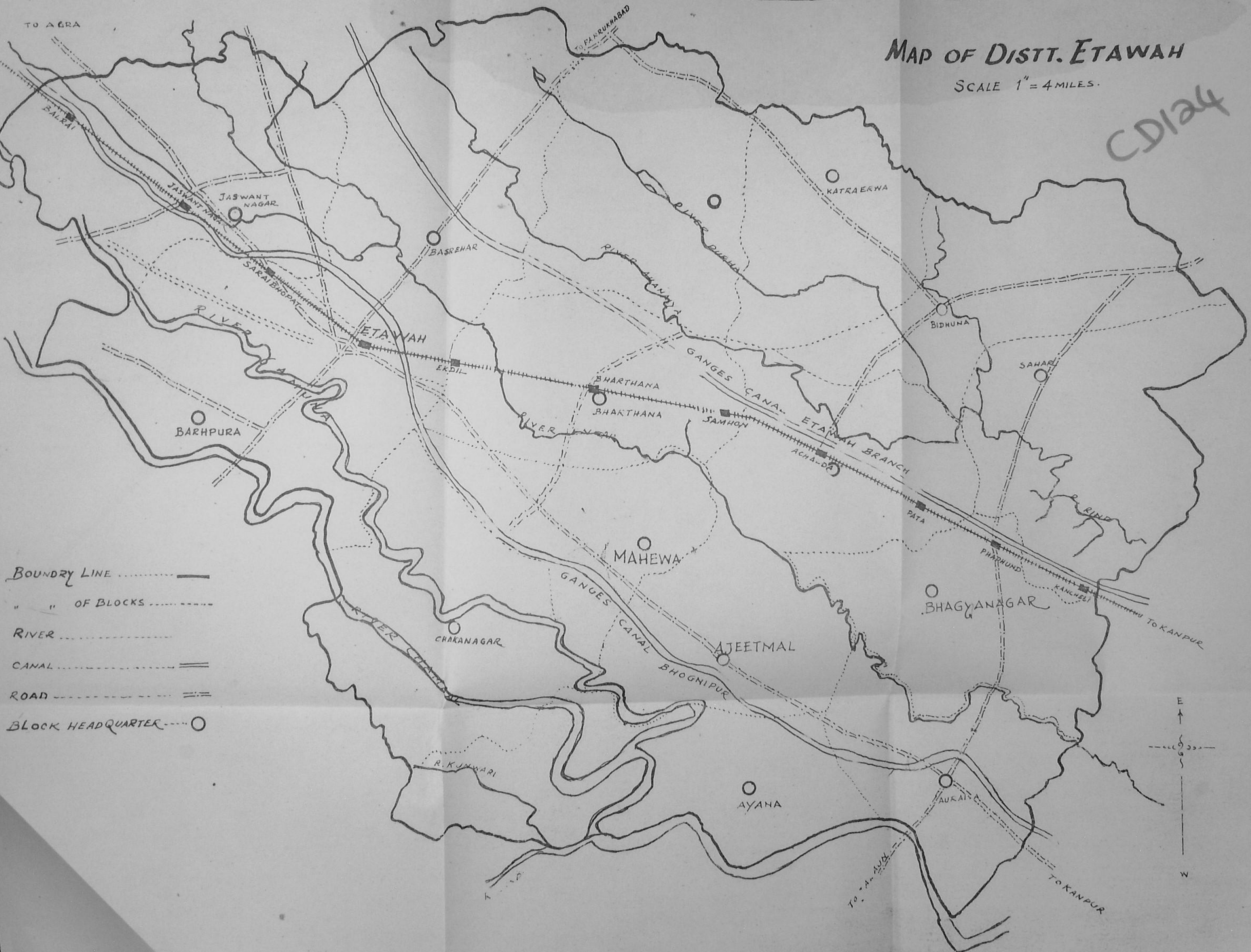
GENERAL INFORMATION

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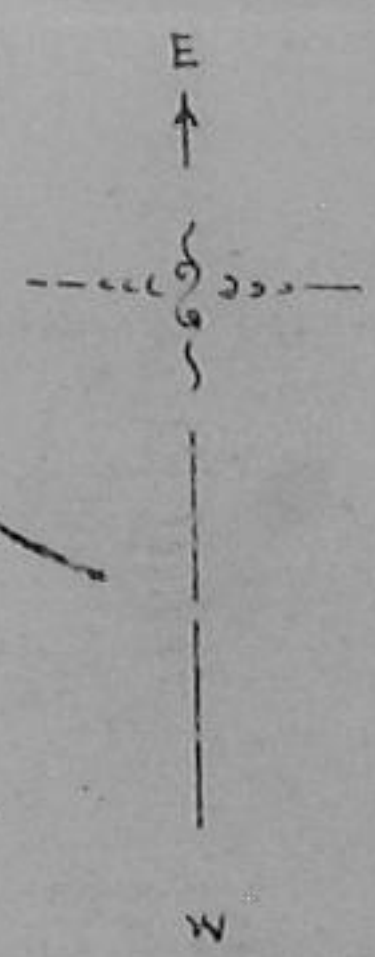
MAP OF DISTT. ETAWAH

SCALE 1" = 4 MILES.

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- BOUNDARY LINE ————
- " " OF BLOCKS - - - - -
- RIVER - - - - -
- CANAL - - - - -
- ROAD - - - - -
- BLOCK HEADQUARTER - - - - - O



PART I

GENERAL INFORMATION ABOUT PILOT DEVELOPMENT PROJECT

The Pilot Development Project, Etawah, was started on the 15th September, 1948, in 64 villages round about Mahewa and gradually expanded to 100 villages in 1950, 235 villages in 1951 and 317 villages in 1954. Experimental work for evolving a suitable pattern was carried out during the course of about three years. The training of Village Level Workers was taken up simultaneously in the project area to make more field workers available for various development programmes. From 1950 onwards, extension work was started in a greater measure in the fields of agriculture, soil conservation, animal husbandry and social education. Gradually, the area of operation of the block was further extended to an area of about 365 revenue villages, having 271 Gaon Sabhas. Since the area was considered to be unwieldy, the block was split up into two parts, i.e. Mahewa and Bhagyanagar, but with the incoming of the National Extension service scheme, one more block was demarcated, known as Ajitmal. The final position after readjustment of boundaries in 1956-57 with regard to each block is as follows :

| Serial num- ber | Name of the block | | | | Revenue villages | Gaon Sabhas | Population |
|-----------------------|-------------------|----|----|----|---------------------|----------------|------------|
| 1 | 2 | | | | 3 | 4 | 5 |
| 1 | Mahewa | .. | .. | .. | 119 | 102 | 1,03,887 |
| 2 | Ajitmal | .. | .. | .. | 112 | 89 | 63,235 |
| 3 | Bhagyanagar | .. | .. | .. | 134 | 90 | 83,330 |
| | Total | | | | 365 | 281 | 2,50,452 |

Mahewa and Ajitmal blocks are Stage I blocks while Bhagyanagar is likely to be declared as Stage I Block from next year. Mahewa and Ajitmal Blocks have got the normal National Extension Service staff while research staff and Block staff of Bhagyanagar are still borne on Pilot Development Project budget. These three blocks represent average conditions so far as the fertility of the soil is concerned. Of the total area of 1,94,000 acres of these blocks, 1,43,000 acres are under cultivation. From the point of view of irrigation, Mahewa Block happens to be very

fortunate in having good irrigation facilities covering about 62 per cent of the total cultivated area which is almost double of the average percentage in the State. The other two blocks, i.e. Ajitmal and Bhagyanagar have comparatively less irrigation facilities and irrigated area is 40 and 31 per cent respectively.

The main *kharif* crops are those of *Bajra* and paddy. Wheat, pea and Gram are the major crops of *rabi* season. Sugar-cane is grown as a commercial crop in canal irrigated areas, but the acreage under it is comparatively small, as due to the absence of any sugar factory in the area, cane is generally converted into jaggery. It can thus be stated that Pilot Development Project area mostly specialises in food crops and forms a surplus pocket for food-grains.

Mahewa is located at a distance of about 18 miles from Etawah on the Etawah-Kanpur Road, while Ajitmal is situated on the same road at a distance of about seven miles from Mahewa towards Kanpur. While travelling from Kanpur, one has to take Moghul Road at Bhognipur which is situated at a distance of about two miles from Pukhrayan town in district Kanpur. Another important town on this road is Auraiya which is also the Tahsil headquarters of Auraiya Tahsil. Auraiya is situated at a distance of about 26 miles from Bhognipur and is a big *mandi*. One moving from Auraiya to Etawah, reaches Ajitmal first and then Mahewa. Neither of the two Block Headquarters of Ajitmal and Mahewa is connected by rail. The nearest railway station from Mahewa is Bharthana which is at a distance of 12 miles from that village. Bhagyanagar is situated on the Auraiya-Phaphund road at a distance of about 12 miles from Auraiya. The nearest railway station is Phaphund which is four miles from it. Adjoining the railway station is Dibiapur which has developed to a remarkable commercial importance during the last ten years. It is an important assembling market of paddy and a number of rice mills have sprung up in that village. Phaphund is situated at a distance of about seven miles from the Railway Station. From the communication point of view, Bhagyanagar is slightly better, though the condition of the *pukka* road from Auraiya to Bhagyanagar is not very satisfactory. A map showing the locations of these Blocks together with their boundaries, Railway lines, canals, etc., is given on the opposite page to give an idea of the areas of different blocks. More statistics about these Blocks are available in a compiled form in the District Plan of Etawah. Some basic statistics about area and crops are, however, given in Appendix "A".

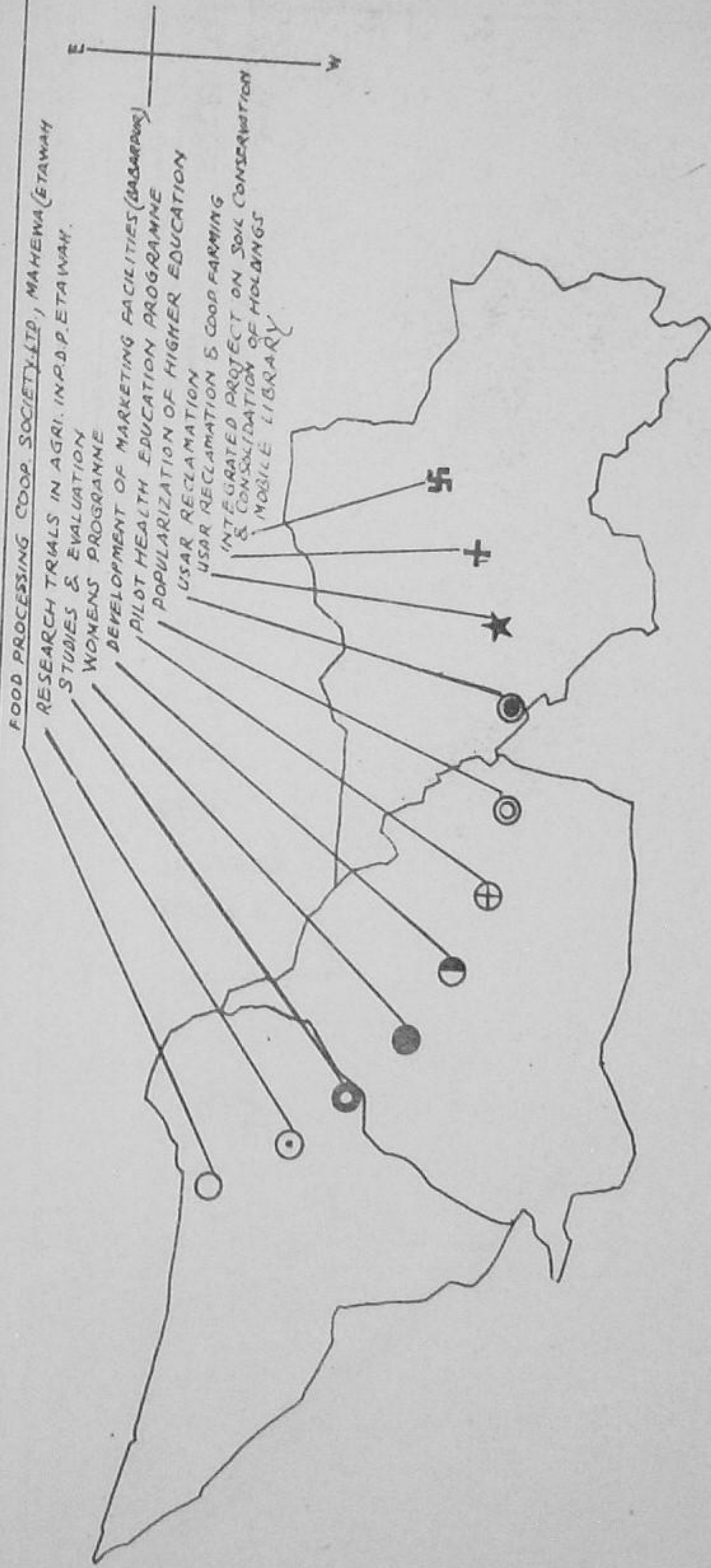
PART II

RESEARCH AND ACTION PROJECTS



RESEARCH & ACTION PROJECTS

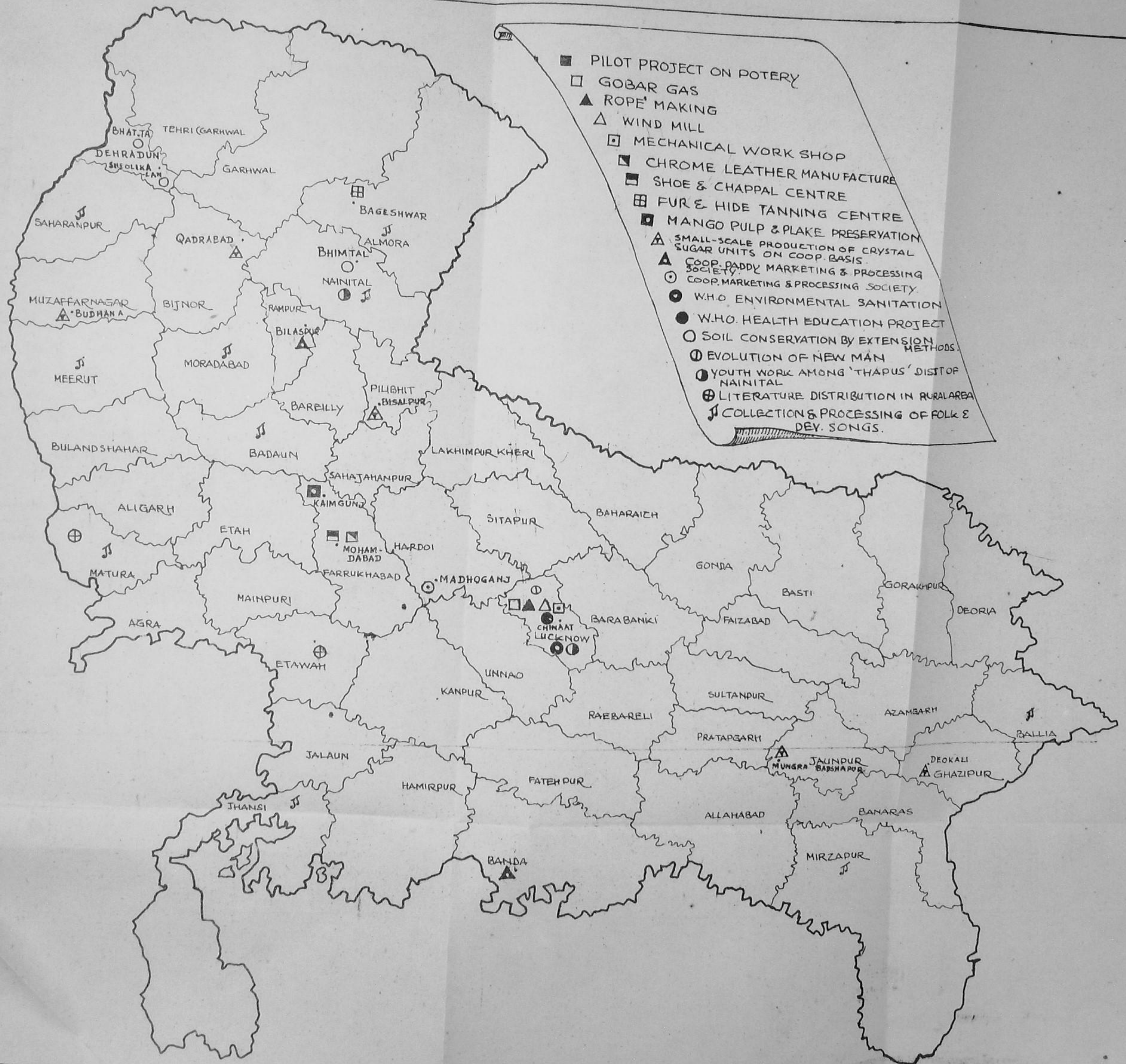
OLD PROJECTS - 1948-57 STILL CONTINUING.



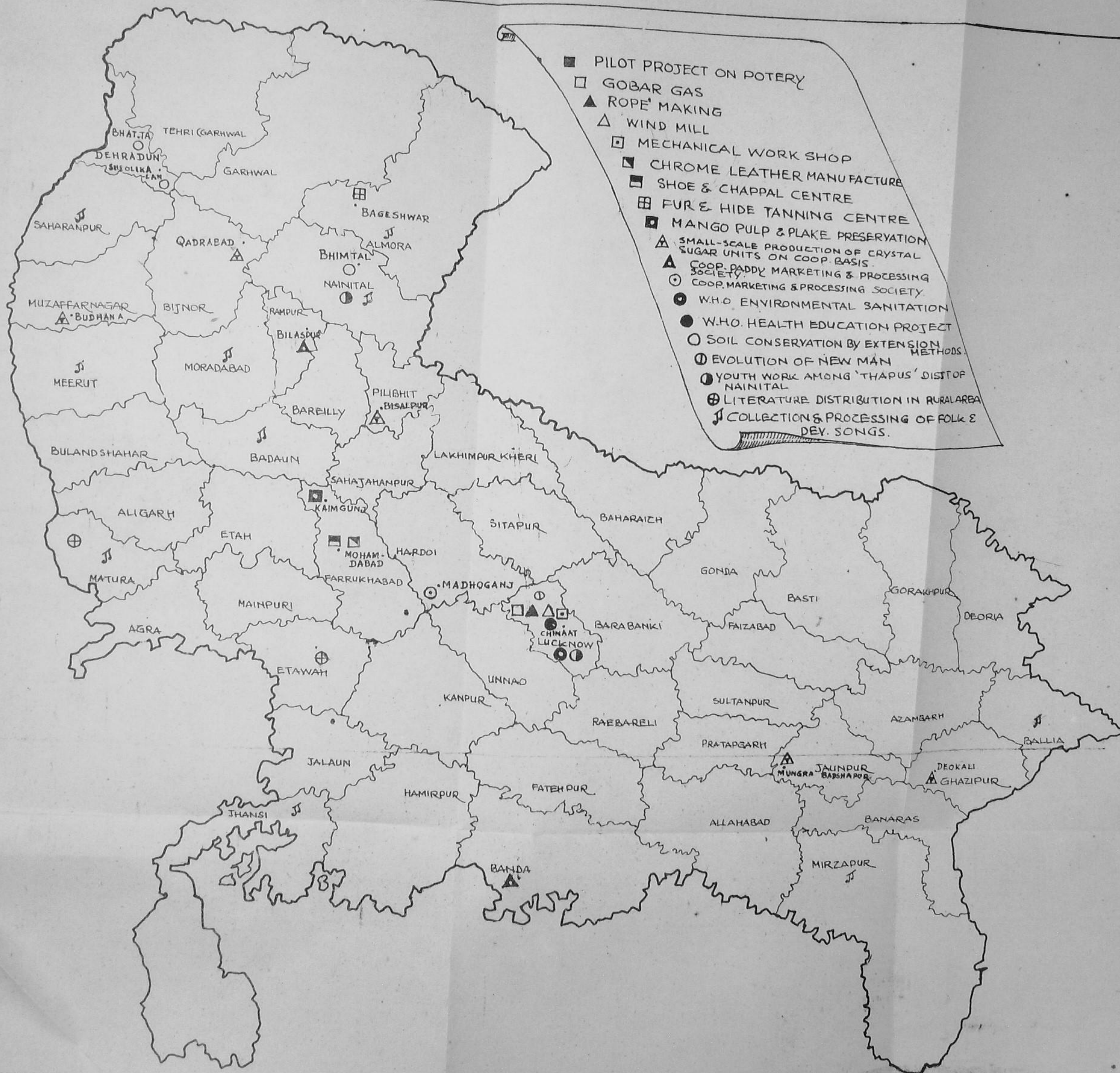
NEW PROJECTS & STUDIES

NEW PROJECTS STARTED 1957-59 IN P.D.P. ETAWAH.

NEW PROJECTS UNDERTAKEN IN 1957-59 IN OTHER DISTRICTS OF THE STATE



NEW PROJECTS UNDERTAKEN IN 1957—59 IN OTHER DISTRICTS OF THE STATE



CHAPTER I

PRESENT POSITION OF RESEARCH AND ACTION PROJECTS

This part deals with research and action projects which are being carried out in the Pilot Development Project, Etawah, in addition to the normal block programmes. Eight research projects were in operation, when in the year 1957 the working of the Pilot Development Project was reviewed. These projects were on soil conservation, extension work among younger age-groups, village replanning, agricultural implements programme, multi-purpose co-operative union project, co-operative farming at Ashokpuri and artisan well scheme. Their working was also examined and as a result of that it was emphasised that necessary modifications and amendments be made, as and when necessary, to make these programmes more effective.

It was further suggested that, as far as possible, new projects should be tried elsewhere as the pilot areas in Etawah were usually conditioned by continuous operations for the last ten years. Accordingly, 30 projects were tried in other areas. The list of these projects is given in Appendix "B". The location of these new projects is also indicated on the map given on the opposite page.

In the Pilot Development Project, Etawah, 11 new projects were taken from the year 1957 onwards taking into consideration the availability of the personnel resources and willingness of the people for undertaking them. During this period special emphasis was laid on involving people and obtaining necessary finances for such projects from the people themselves. Besides continuance and follow-up of the eight old projects, the Institute has taken up 41 new action research projects in different districts of the State including Pilot Development Project, Etawah, in collaboration with various operational agencies.

CHAPTER II

1. CONTINUING PROJECTS AND MODIFICATIONS MADE IN THEM TO MAKE THEIR WORKING STILL MORE EFFECTIVE.

Extension Work among Rural Youths

A pilot project on evolving and popularising a suitable pattern of Rural Youth Organization was taken up in the Pilot Development Project, Etawah, in the year 1954. A beginning was made in a few villages by organizing youth clubs in them for inculcating in the youths self-confidence and self-reliance by giving them suitable programmes. The programme principally patterned on 4-H Club model of the U. S. A., was fitted into our conditions. Implementation of the programme was carried out in the initial stages with the help of a foreign expert, Sri G. E. Roelofs, who was appointed in the Institute to work out the programme. An Indian counterpart worked with him. The programme showed considerable potentialities. Youths were mobilised in carrying out various agricultural programmes and special emphasis was laid on the organization of individual projects in the fields of agriculture, animal husbandry, crafts, etc. Subsequently, individual projects were tried with varying degrees of success in other four districts of Saharanpur, Gorakhpur, Ballia and Lucknow. Inter-club meets were also organized from time to time and efforts were made to develop the personality of the youths.

The experiments carried out in the field, however, revealed that to foster community-mindedness, increasing emphasis should be laid on group projects. Though individual agricultural projects continued, yet, the collective projects were preferred in so far as they provided a venue to the workers, the club-members and the village people for discussing the details of club activities effectively. With the coming in of the Consolidation of Holdings Scheme in the Pilot Development Project during 1958-59, the Gram Samajs have been persuaded to earmark one to two acres of land for the use of the youth clubs in each village. Though youth clubs in each and every village in that area have not yet been organized, a survey recently made by the workers of youth programme in that area, reveals that more than three-fourths of the villages have agreed to spare the requisite pieces of land for the use of the youth of the villages. For the remaining one-fourth too, there will be no difficulty as soon as the programme is explained to the people and clubs are organized in such villages. Recent emphasis has been to organize clubs in such a way that healthy fellow feeling and community spirit may develop while

the members work together on various programmes such as economic projects, social service projects, health and fitness projects and discipline and character building projects.

Progress of Youth Clubs in the Pilot Development Project, Etawah

Expansion of the programme has been permitted with caution so that the contents of the programme and the quality of work may not suffer. Accordingly, there has been a steady increase in number of youth clubs. The following table shows the number of clubs along with the membership in different years in the three blocks of the Pilot Development Project, Etawah :

| Year | | | | | | Number of clubs | Number of club members |
|-------------------------|----|----|----|----|----|-----------------|------------------------|
| 1 | | | | | | 2 | 3 |
| July, 1954 | .. | .. | .. | .. | .. | 2 | 36 |
| July, 1956 | .. | .. | .. | .. | .. | 12 | 225 |
| July, 1957 | .. | .. | .. | .. | .. | 31 | 640 |
| September, 1958 | .. | .. | .. | .. | .. | 53 | 841 |
| September, 1959 | .. | .. | .. | .. | .. | 68 | 1,172 |

Club activities

(i) *Agricultural Activities*—The main emphasis has been on growing crops with improved agricultural methods, use of better manures and fertilisers and popularisation of common vegetables in the villages. The following table shows the total financial gains to the members through these projects:

| Year | | | | | Number of clubs | Number of members | Total financial gain to members | | |
|-----------|----|----|----|----|-----------------|-------------------|---------------------------------|----|---|
| 1 | | | | | 2 | 3 | 4 | | |
| | | | | | | | Rs. a. p. | | |
| 1955-56 | .. | .. | .. | .. | 12 | 159 | 3,613 | 0 | 0 |
| 1956-57 | .. | .. | .. | .. | 39 | 473 | 6,455 | 10 | 6 |
| 1957-58] | .. | .. | .. | .. | 45 | 500 | 6,073 | 3 | 0 |
| 1958-59 | .. | .. | .. | .. | 53 | 641 | 9,926 | 14 | 9 |

From the above table it will be seen that the total income per head comes to about Rs. 15 only which is not much; but this has created an urge and curiosity in the youths for growing vegetables and crops better by giving proper distances from plant to plant and row to row and using suitable doses of the fertilisers and manures required for the healthy growth of the plants. These practices provide engagement to the rural youth and thereby give them some additional income.

(ii) *Animal Husbandry Activities*—In the field of animal husbandry, the clubs have been developing small pockets of improved breed cattle in the four villages and have been popularizing poultry development programme in selected villages. During 1958-59, a herd of 46 Haryana heifers was purchased from the Government Farm, Babugarh (Meerut) and supplied to the members of the clubs in the four villages of the project. Since these heifers have been distributed in four villages only, it is easy for the Veterinary Surgeon to visit the villages once in a while and give necessary instructions to the members of the youth clubs in their proper rearing and also in the prevention of the diseases which are common in the countryside. The poultry programme in the project could not make much headway in previous years. A study, however, revealed that there was something lacking in the initial stages. Now these weak links have been removed. A poultry unit was started jointly by the members of the youth club of village Nagaria. The way the youths attend by turns to the feeding of birds, collection of eggs and their disposal, and the leaders within the village support the members in their activities, is something which was never witnessed before. The poultry unit is running on successful lines and three more units have been started recently in five more youth clubs. It is expected that the poultry development programme will expand further through youth clubs. Individuals have also shown keenness to start poultry units in their villages. It will, however, take time to expand this programme as collection and marketing facilities will need to be developed further before launching the programme on a large scale.

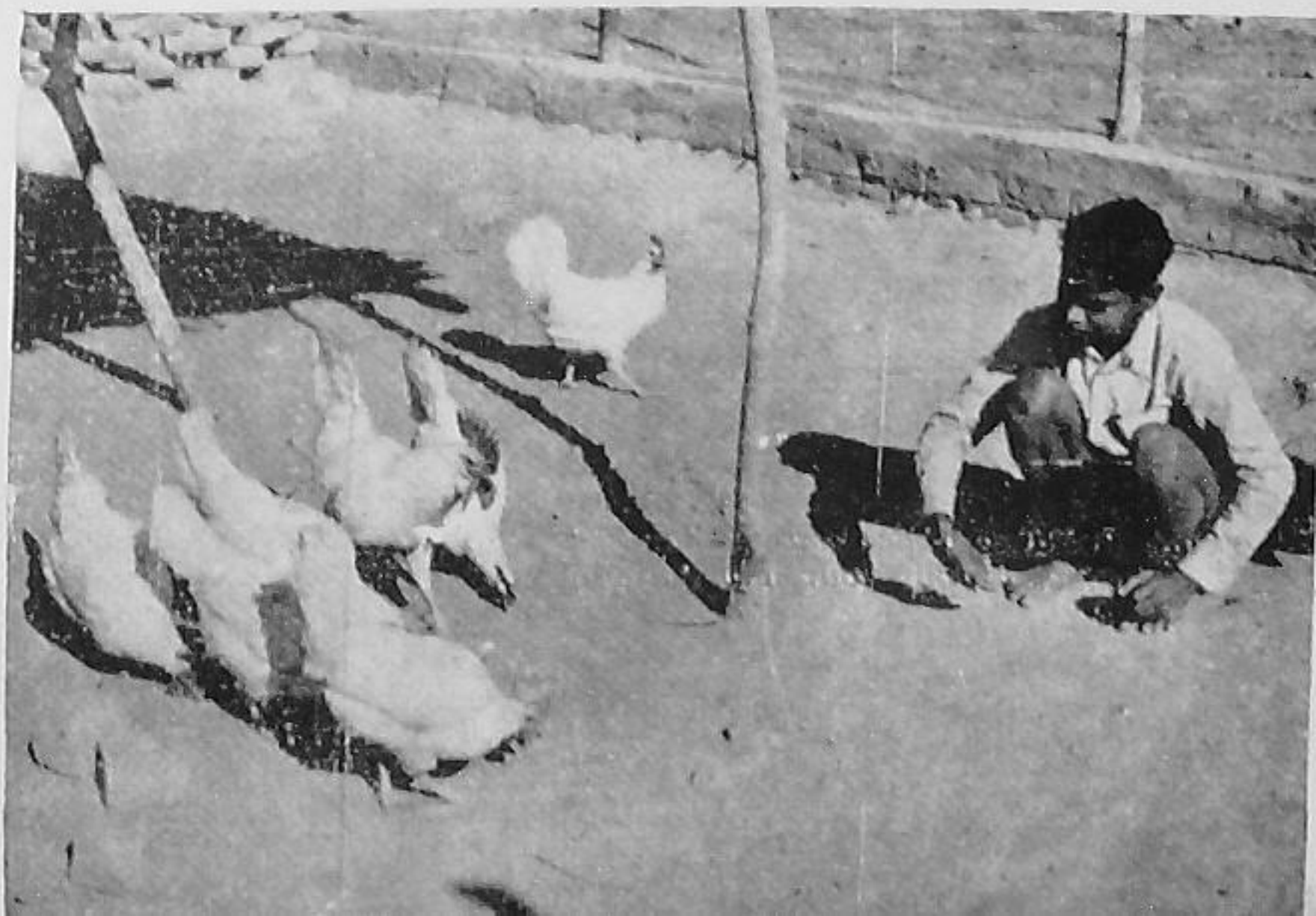
(iii) *Crafts*—Of the various crafts tried, dari-weaving and toy-making could not succeed and had to be abandoned. Bee-keeping could not be continued on profitable lines. Sericulture, however, proved successful and is giving dividends to a few clubs who are now engaged in this programme. The sericulture programme was started with a modest beginning in a couple of clubs. The programme, however, had its own limitations due to the difficulties in getting green leaves and in disposing of cocoons promptly. With the opening of a sericulture farm in village Garhia

Silk Worm Rearing

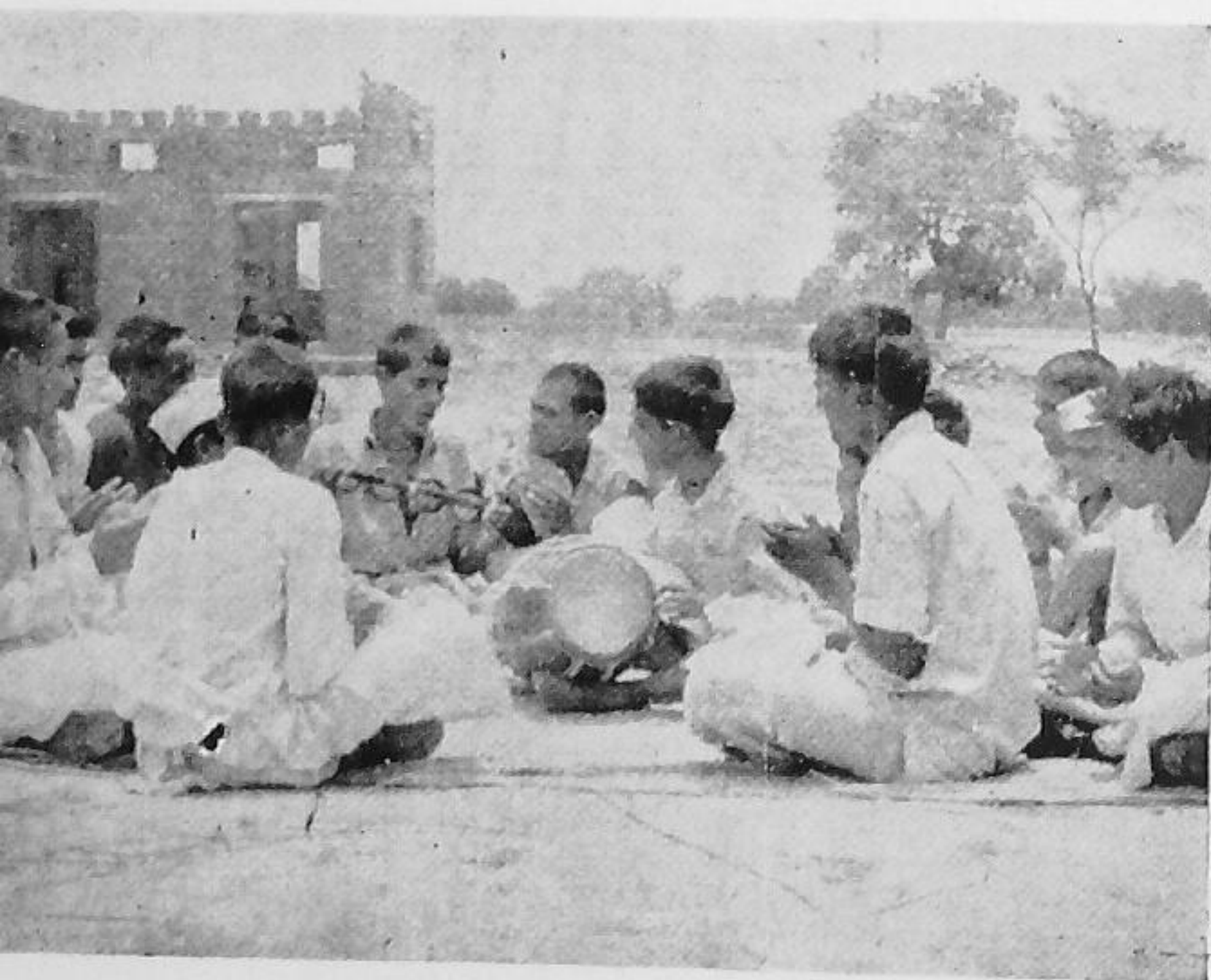
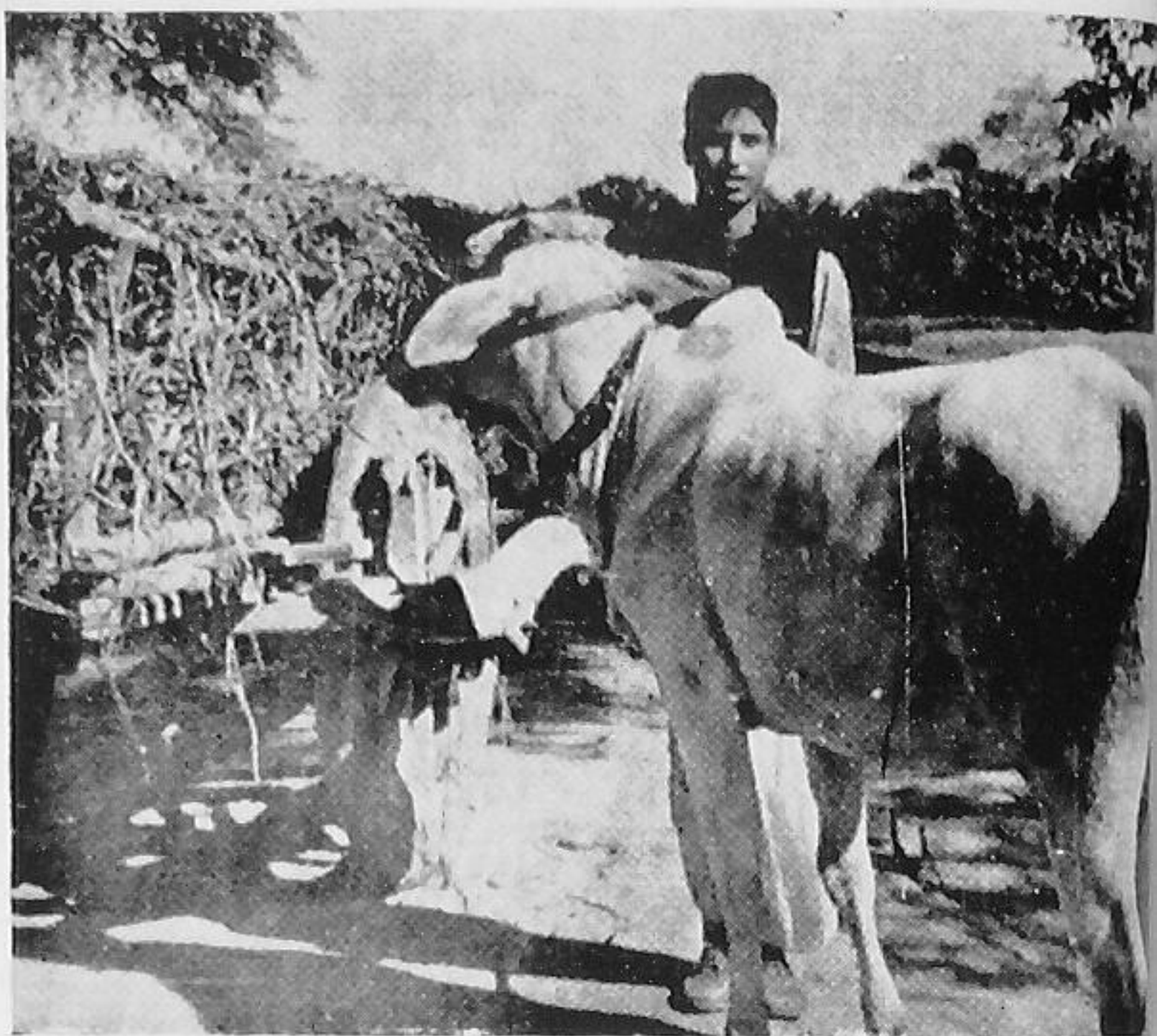


New Pattern of Group Projects

Poultry Farming

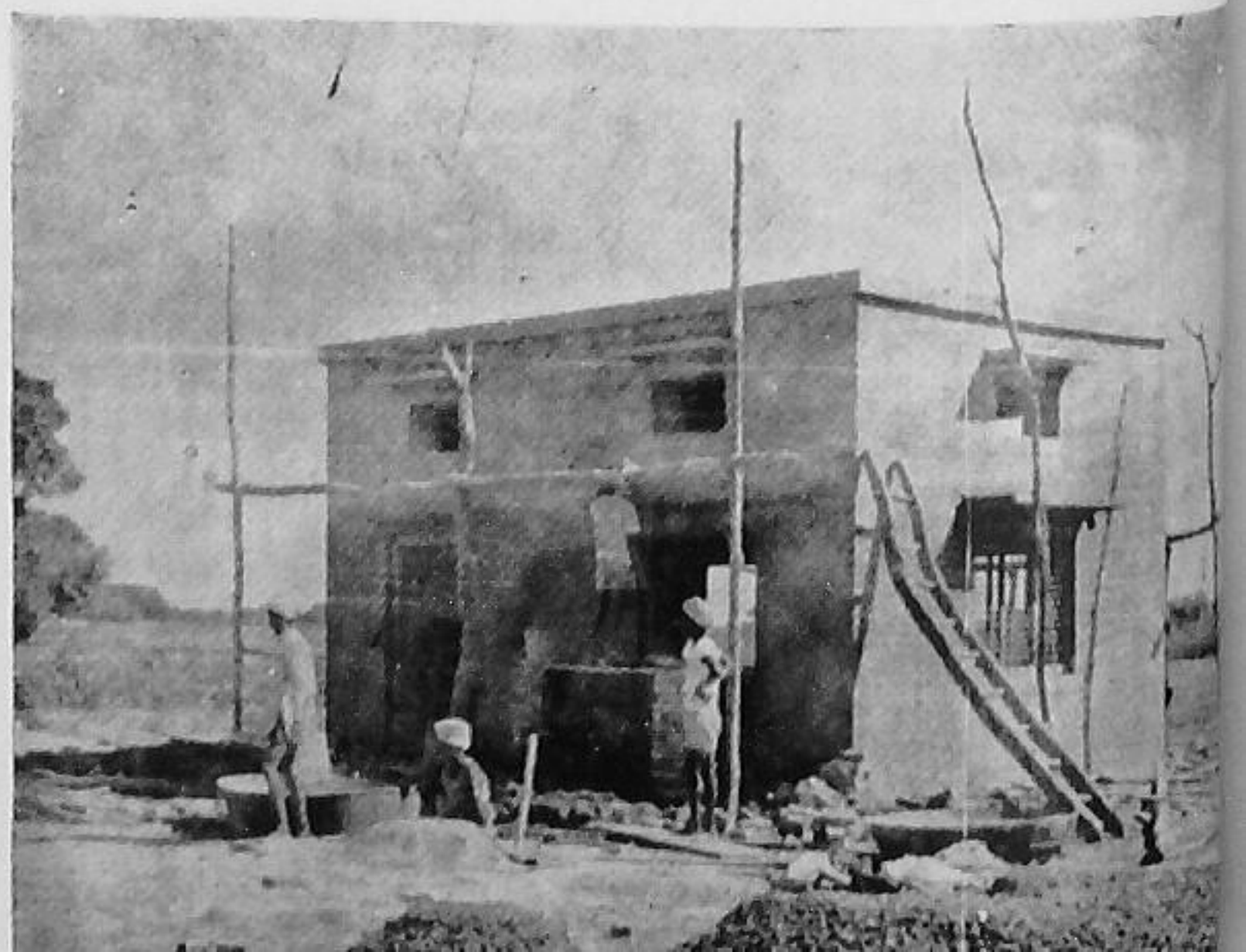


*Developing of Pockets of Improved
Breeds in Selected Villages*



Cultural Programme

*A club Building under construction at village
Chaksallapur (our new Pattern)*



CD 124

and a collecting depot by the Industries Department during 1957, these difficulties have been overcome. The sericulture projects are being run in two villages, i.e. Garha and Garhia. Two more youth clubs of Jagatpur and Amautha have taken up this programme recently. In all, about 20 youth club members are involved in this programme so far. The following table gives the financial position of this programme during 1958-59 :

| Total number of youths involved in the project | Total yield of cocoons | Total income from the project | Net income from the project | Income per member |
|--|------------------------|-------------------------------|-----------------------------|-------------------|
| 1 | 2 | 3 | 4 | 5 |
| | (mds.) | (Rs.) | (Rs.) | (Rs.) |
| 20 | 11-35-2 | 1,580.75 nP. | 1,510.75 nP. | 75 (approx.) |

In years to come, it is expected that the income from this project will further increase.

A beginning has been made for popularising rope-making programme with the help of a rope-making machine in one youth club. The programme is basically sound and is likely to expand during the current year.

(iv) *Physical and Cultural Activities*—The physical and cultural activities form an important part of the youth clubs. Economic programmes for providing avenues of employment to the members of the youth clubs have got their place of importance and development of agriculture and horticulture is basically very essential too, but unless efforts are made to develop an integrated personality of the youths, the chief aim of these clubs is likely to remain incomplete. Physical activities are to develop healthy bodies of the youth. Cultural activities, which include national anthem, community singing, Bhajans, dramatics, celebrating festivals, etc. form an integral part of the youth club programme. Besides these, group discussions are frequently held in which problems of General Knowledge, with a bearing on the Community Development Programmes, are posed. This forms an effective medium for inviting views, comments, participation and free and frank expression of the youths on various problems. Group projects, supported by individual projects in the same premises for creating healthy competition, urge the youth for organizing a small library, club building, play-ground, discussion forum, etc. Thus the youth are taking progressive steps and requisite change in their social outlook is being inculcated. This programme, it may be stated clearly, is of a slow process and will take some time before

its full impact will be perceived. Holding of conferences, competition in recitation, one-act plays, story-telling and organization of humorous dialogues, are some of the activities performed and participated by the youths. Celebration of national, historical and religious days is becoming a regular feature. Social services, like organization of village sanitation campaigns on Deepavali, organization of Shramdan and acting as volunteers in Melas are also becoming quite popular.

It may, however, be added that youth clubs require proper guidance and close follow-up of activities from the youth leaders and block workers. The present clubs are being looked after by the regular Block-staff but one Junior Associate (Youth Work) whose headquarter is at Mahewa, is attending to some experimental programmes in some of the clubs directly also. This is to study the various methods and techniques developed in popularization of the programme and also to offer new projects for the members of the youth clubs in such areas. The working of these youth clubs has indicated that they are now getting popular and that the village people are getting convinced of their importance. Village Panchayats are being gradually involved in these programmes. This is how a congenial atmosphere for the extension of the activities of the youth clubs has been created. The youth clubs of the project want to go one step further by organizing a "Youth Foundation" in the area for helping the youths in consolidating and expanding of these activities with the help of the Block Development Committees. Certain educational programmes are also to be sponsored and popularized through the clubs. In the coming years, it is hoped that more villages will have youth clubs on similar lines.

Overall Impact of the Youth Programme

The youth programme is being evaluated by the Planning Research and Action Institute separately. The report will be out shortly. Day-today observations regarding the youth activities are enumerated below :

- (1) About 40 per cent of the eligible youths in the villages where clubs are working are members of the youth clubs.
- (2) There is a favourable response amongst youths and non-member youths are equally interested in joining the youth clubs.
- (3) The programme has gained momentum and there are demands from almost all villages that youth clubs should be started there.

(4) Parents of the club members are happy about the programme and heartily support it.

(5) Experienced village adults happily shoulder the responsibility of guiding the youth members in their programmes, if properly apprised of the various club activities.

(6) Youths have learnt several improved agricultural practices like spacing, distancing and use of fertilizers.

(7) The programme has helped to develop a habit in the members to utilize their leisure hours in a profitable manner.

(8) There are economic gains and hence parents are interested that their wards should have some gainful and constructive programme.

(9) The programme has an educative effect in developing youths as better citizens and better farmers.

(10) Youth's programme provides second string to the bow in all the extension works as youths are the medium of extension and are being utilized for the purpose in some villages already.

(11) Since 1957-58 when the operations of Consolidation of Holdings Scheme in Pilot Development Project, Etawah, were started, an effect had definitely been made to encourage group projects, rather than individual projects, of the members of the youth clubs to prepare them for a collective and co-operative life.

CHAPTER III

VILLAGE REPLANNING WORK

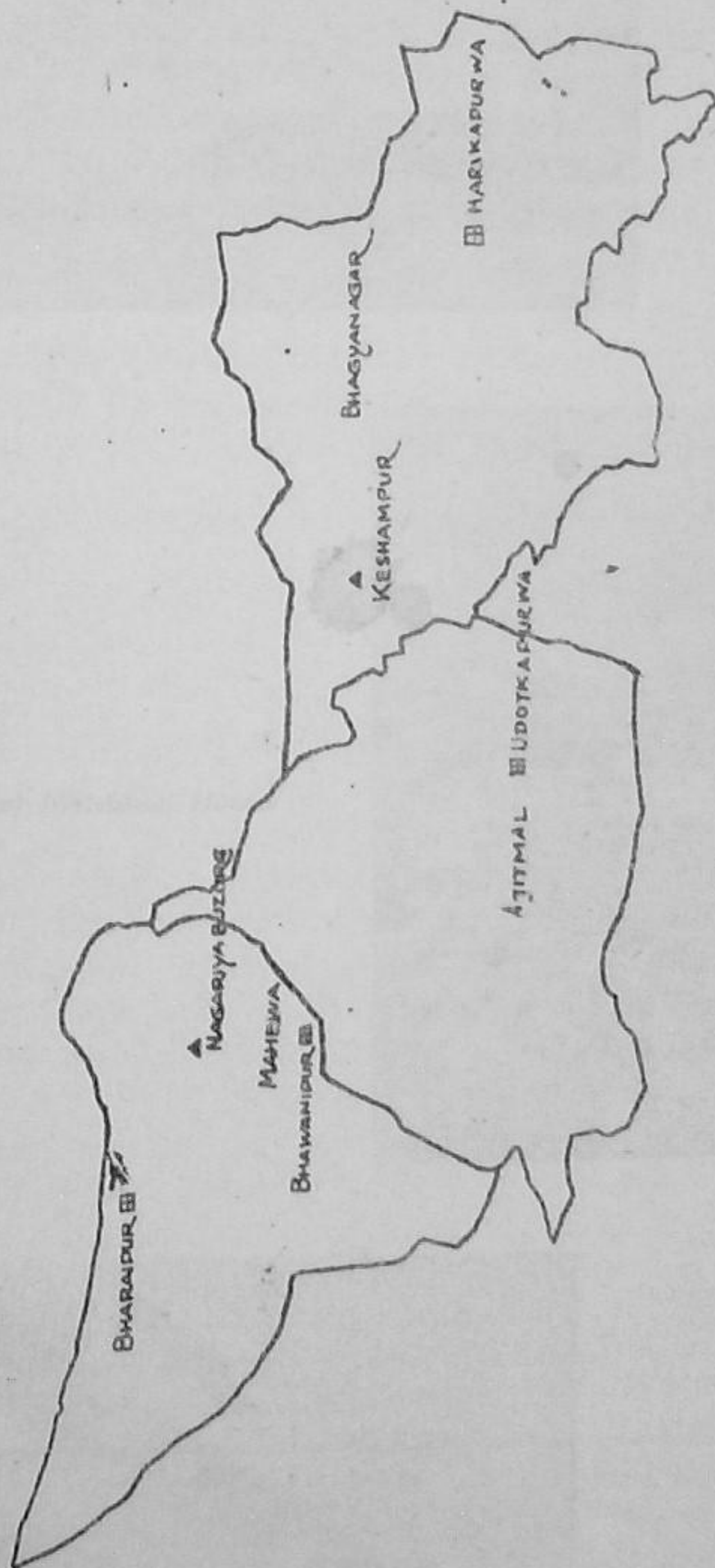
A Pilot project on Village Replanning was launched in the Pilot Development Project, Etawah, during 1954. Four villages, viz. Bharaipur and Bhawanipur in Mahewa Block, Hari-ka-pura in Bhagyanagar Block and Udot-ka-pura in Ajitmal Block were taken under this scheme. The scheme has been started with the following objectives :

- (1) To organize and develop a self-help scheme for construction of houses through people's own efforts. People would mould bricks in leisure time.
- (2) To effect maximum use of local materials.
- (3) To develop proper designs and specifications of buildings befitting the needs of the people at reasonable cost.

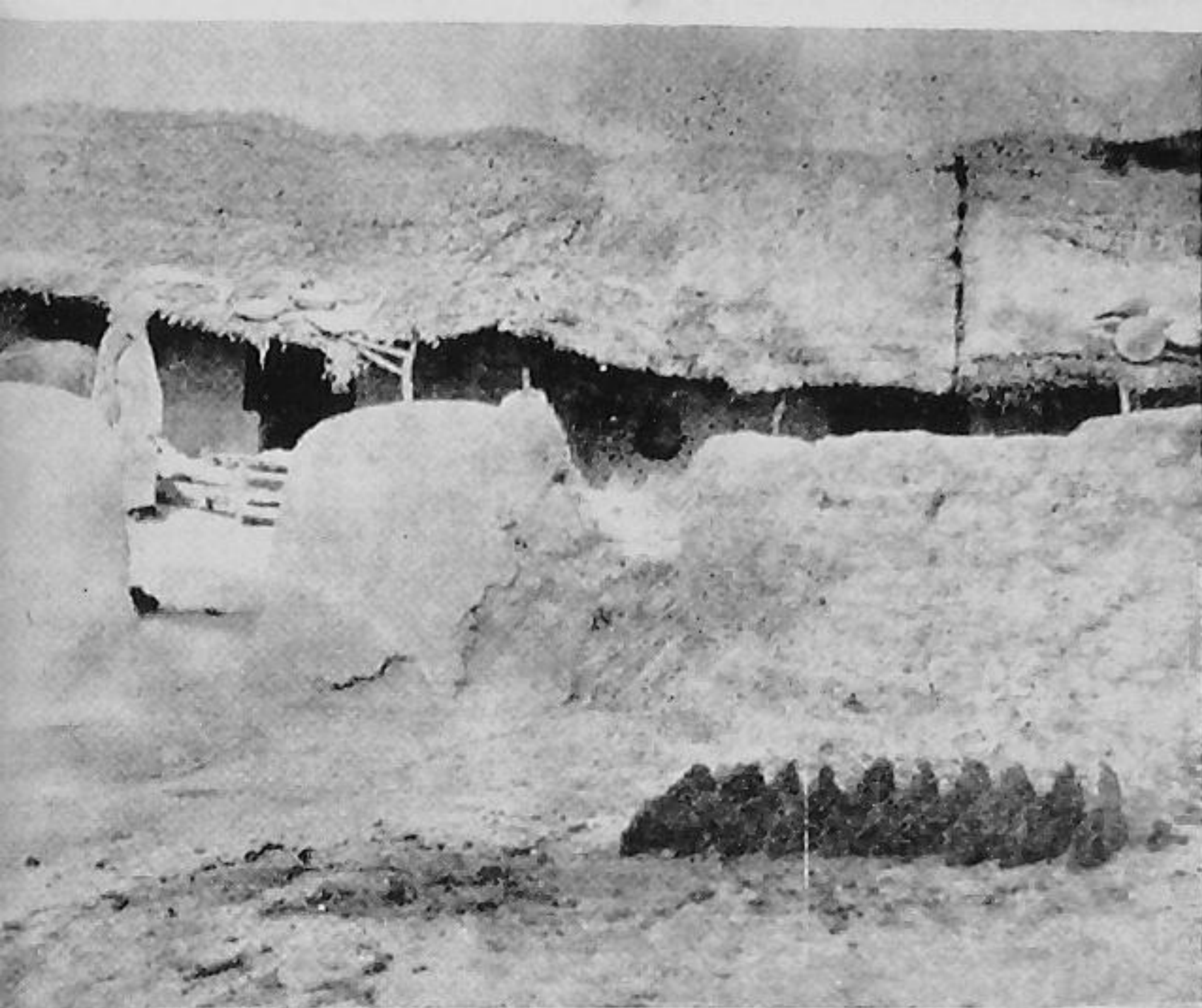
With the above objects, the scheme was started in four villages. Coal subsidy for burning the bricks was allowed from the project budget. Village people were required to pay for the burning charges only at Rs. 6 to Rs. 7 per thousand. Moulding of bricks was done by them with the family labour. The actual cost of burnt bricks came to Rs. 6 to Rs. 7 per 1,000 as against the market rate of Rs. 25 to Rs. 30 per thousand. This was a great attraction to the village people for the construction of their houses.

Mobilization of Man-power—The response of the people to the scheme was slow in the initial stages; but gradually the number of participants started increasing. One hundred and sixty-eight families, out of a total of 280 families in the four villages, have so far been mobilized. The achievement is sixty per cent. They have so far made 40 lacs of bricks. This achievement is 33 per cent of the total estimated requirement. Actual construction work on 70 houses out of 168 families has since been started and work worth Rs. 49,000 has been carried out so far. The programme is a slow one and construction of houses depends on the yield of the cultivators. In one year, a cultivator may construct a room and in subsequent years he constructs accommodation depending upon his yield. Sometimes, for years he is unable to construct anything. Since individuals get busy in constructing their houses, adequate attention has not been given to the cons-

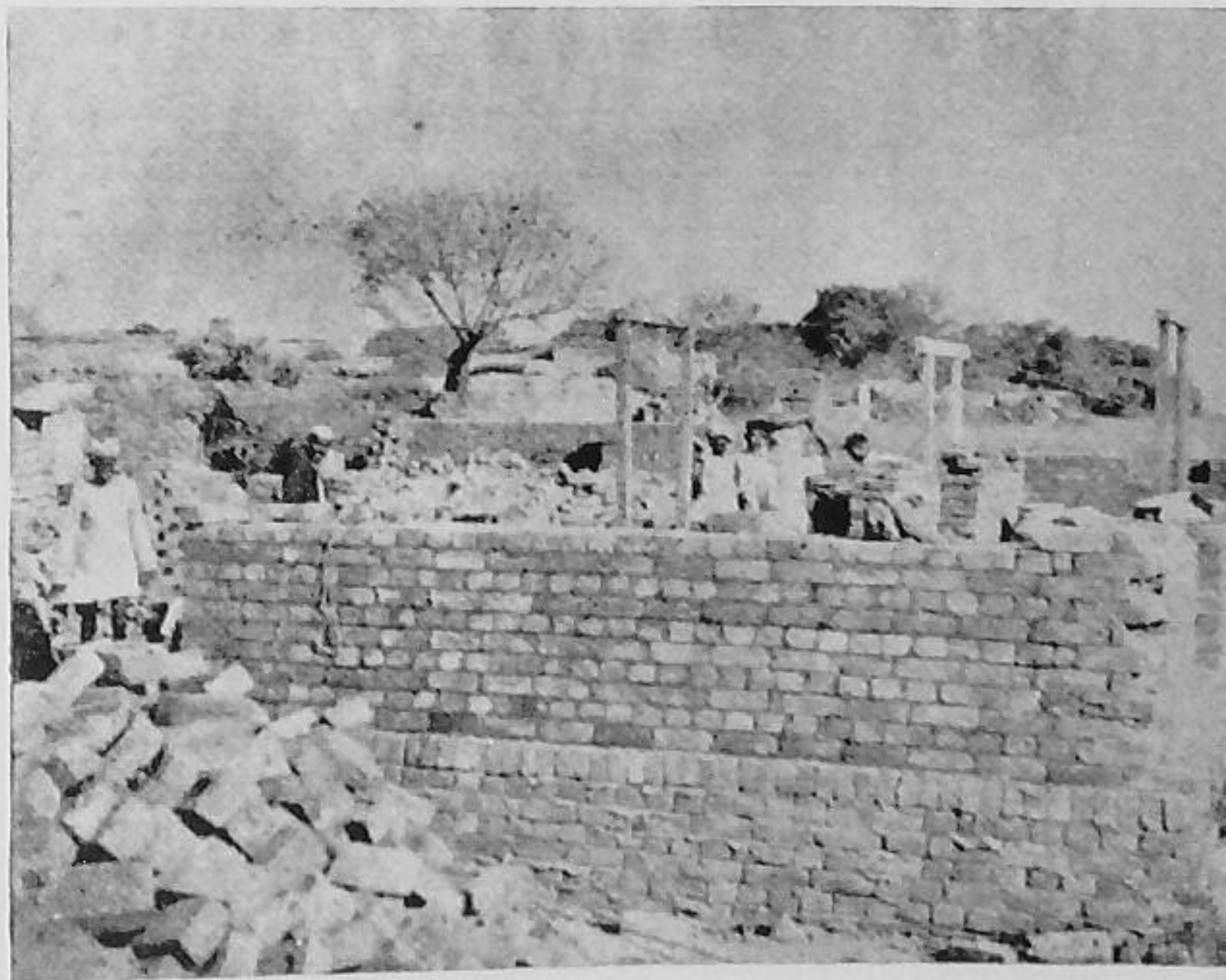
VILLAGE REPLANNING & HEALTH EDUCATION PROGRAMME



VILLAGE REPLANNING.....EB
HEALTH EDUCATIONA



Village before Re-planning



Construction of Individual Houses



*A view of the House constructed under
Re-planning Scheme*

truction of community works in villages. Still the following are the achievements attained so far :

- (1) Lanes—800 ft.
- (2) Drains—600 ft.
- (3) Community Cattle Shed—1.
- (4) Improved wells—8.

The total cost of the above works comes to Rs. 16,000, and the rest has been contributed by the people in cash and labour.

New Steps to expedite Construction Work

Organization of House Building Co-operative Societies during 1958-59—Efforts are being made to channelise village replanning activities through Co-operative Societies of the villagers themselves. Consequently, two Village Replanning Co-operative Societies of Bharaipur and Hari-ka-Pura have already been registered. They have started functioning. By now they have also been able to establish their own brick kilns and run them independently. Proposals for registration of similar societies for the other two villages have also been sent; and it is expected that by next year, they will have their own brick kilns running. Under the Government of India House Building Scheme, loans to the extent of Rs. 750 to Rs. 1,500 are sanctioned to individuals for house-building purpose. The distribution of loans which is mostly for the purchase of building materials is being channelised through the Co-operative Societies, as stated earlier. The following amounts of loans have been sanctioned for the purpose :

| District | Name of the Block | | Name of the Village | Amount |
|--------------|-------------------|-------------|------------------------------|-----------|
| 1 | 2 | | 3 | 4 |
| | | | | Rs. |
| Etawah | .. | Bhagyanagar | .. Hari-ka-Pura | .. 35,250 |
| Do. | .. | Ajitmal | .. Udot-ka-Pura | .. 15,000 |
| Do. | .. | Mahewa | .. Bharaipur and Bhawanipur. | .. 55,000 |

The payment of loans will be made in 20 yearly instalments.

Observations—Village Replanning work taken up on self-help basis has proved to be of use in motivating people for utilization of their idle man-power for building their houses. Success of the programme in the initial stages is dependent upon the extension, approach and regular follow-up by the field worker. Speedy work can be ensured if loans or grants-in-aid, etc. are channelised through Local Co-operative Village Replanning Societies. This is being done at present.

CHAPTER IV

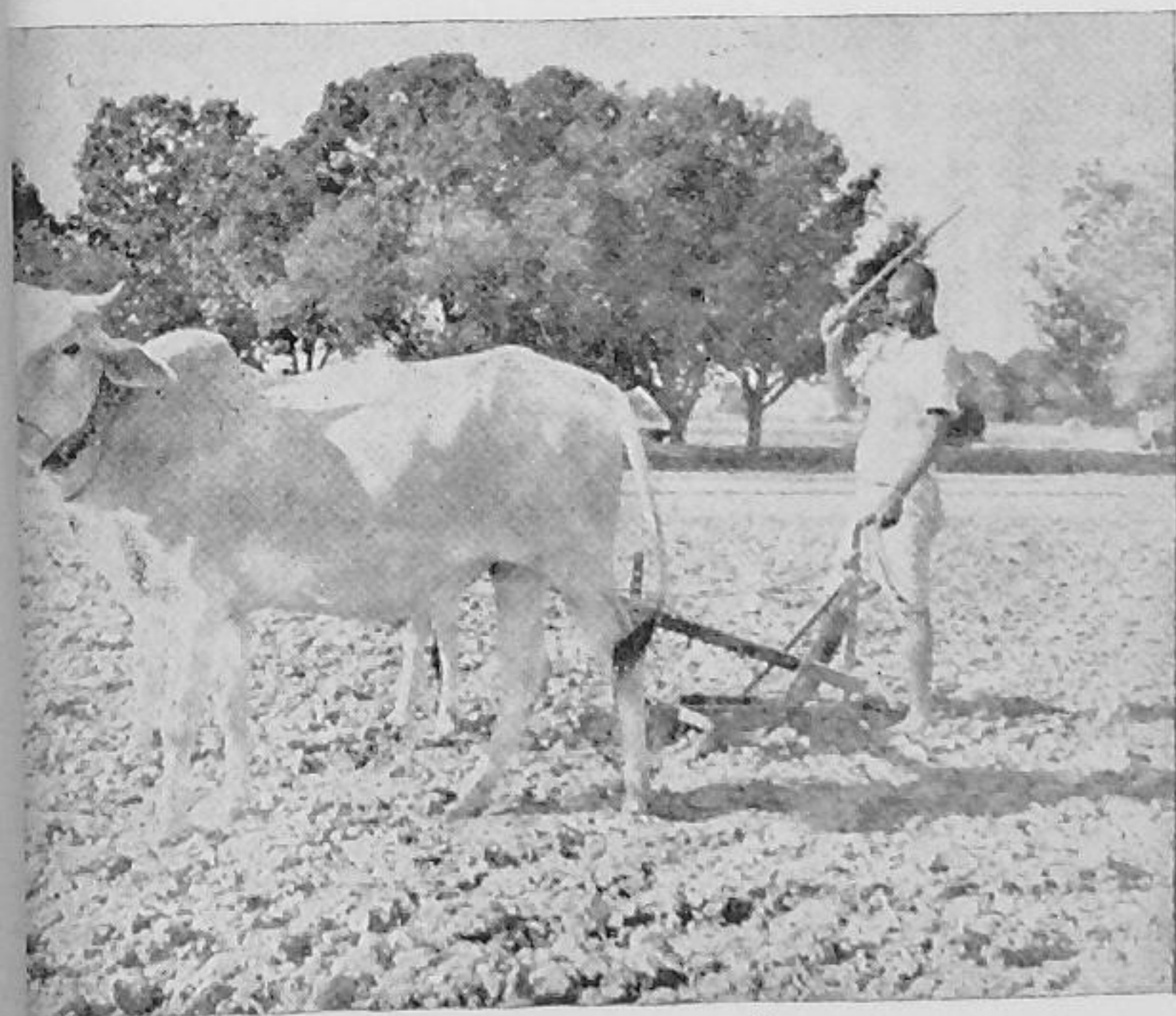
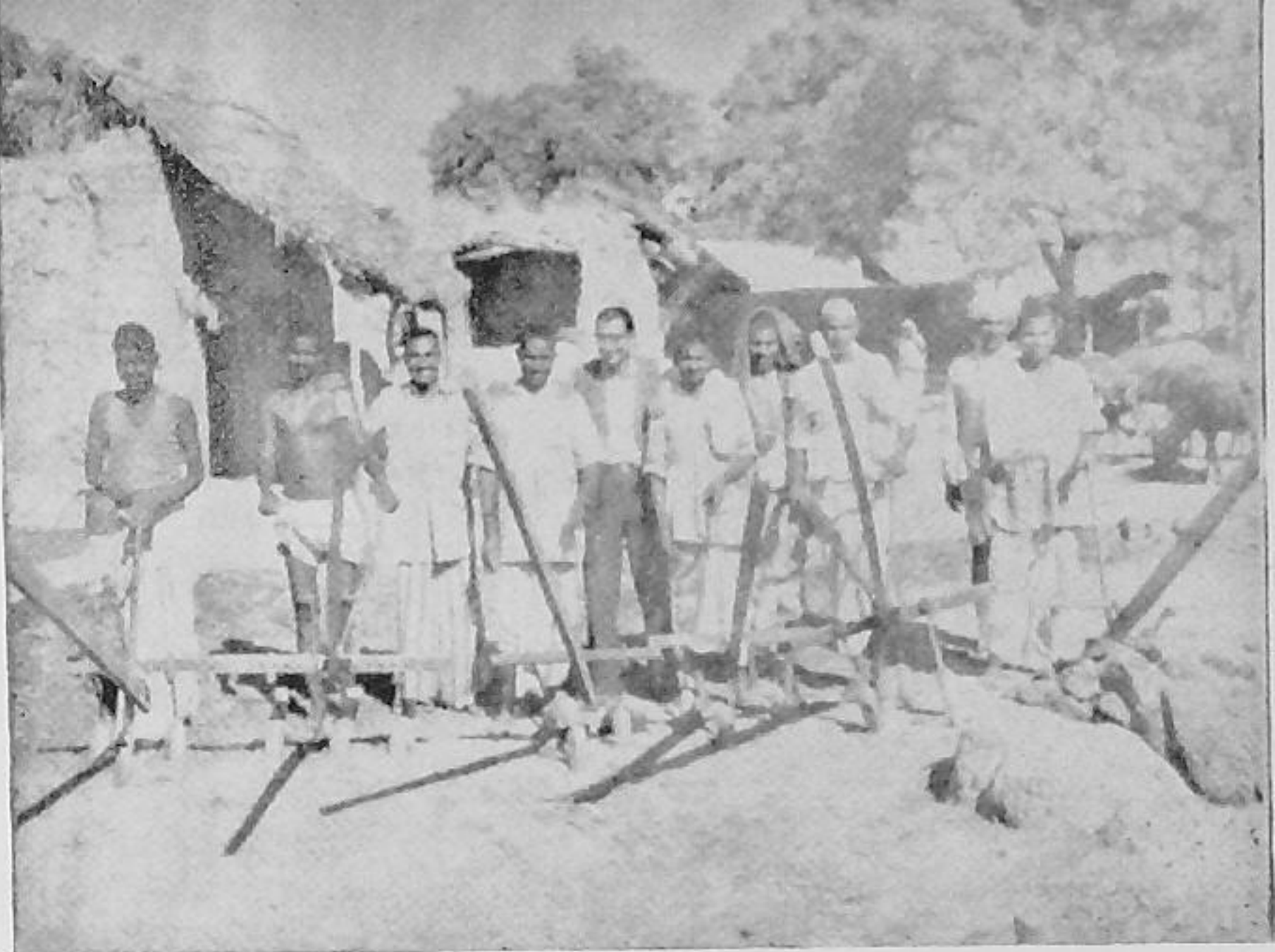
AGRICULTURAL IMPLEMENTS PROGRAMME

For intensive cultivation in agriculture, improved agricultural implements occupy an important place next to seed, manure and irrigation. The Agricultural Implement Demonstration Programme was launched in the Pilot Development Project, Etawah, in April, 1955. To try this programme, a qualified Agricultural Engineer was put in charge of the project. In the Blocks, Assistant Development Officers (Agricultural Engineering) were also provided. A few training camps for training the Village Level workers, some village leaders and Assistant Development Officers were arranged. Demonstrations were arranged to convince the farmers of the efficacy of improved agricultural implements. Arrangements were also made for the supply of improved agricultural implements through the Co-operative Union, Mahewa. Training of village blacksmiths with a view to help them in setting up small repair shops in villages was also carried out. The programme went ahead, though in a small measure, hence it became essential to review the whole progress afresh with a view to finding out as to why the programme is not catching up well. Enquiries revealed that the progressive cultivators were keen to have light ploughs but in view of the fact that necessary repairs and spare parts were not easily available, the programme could not receive the expected impetus. Further, it was felt that without involving the commercial firms in the extension programme it was not possible to extend the Agricultural Implements Programme beyond certain limits. It was also felt that if manufacture of simple types of improved agricultural implements was not taken up locally, dependence on outside import will not help matters indefinitely.

With the above considerations, the following measures were taken :

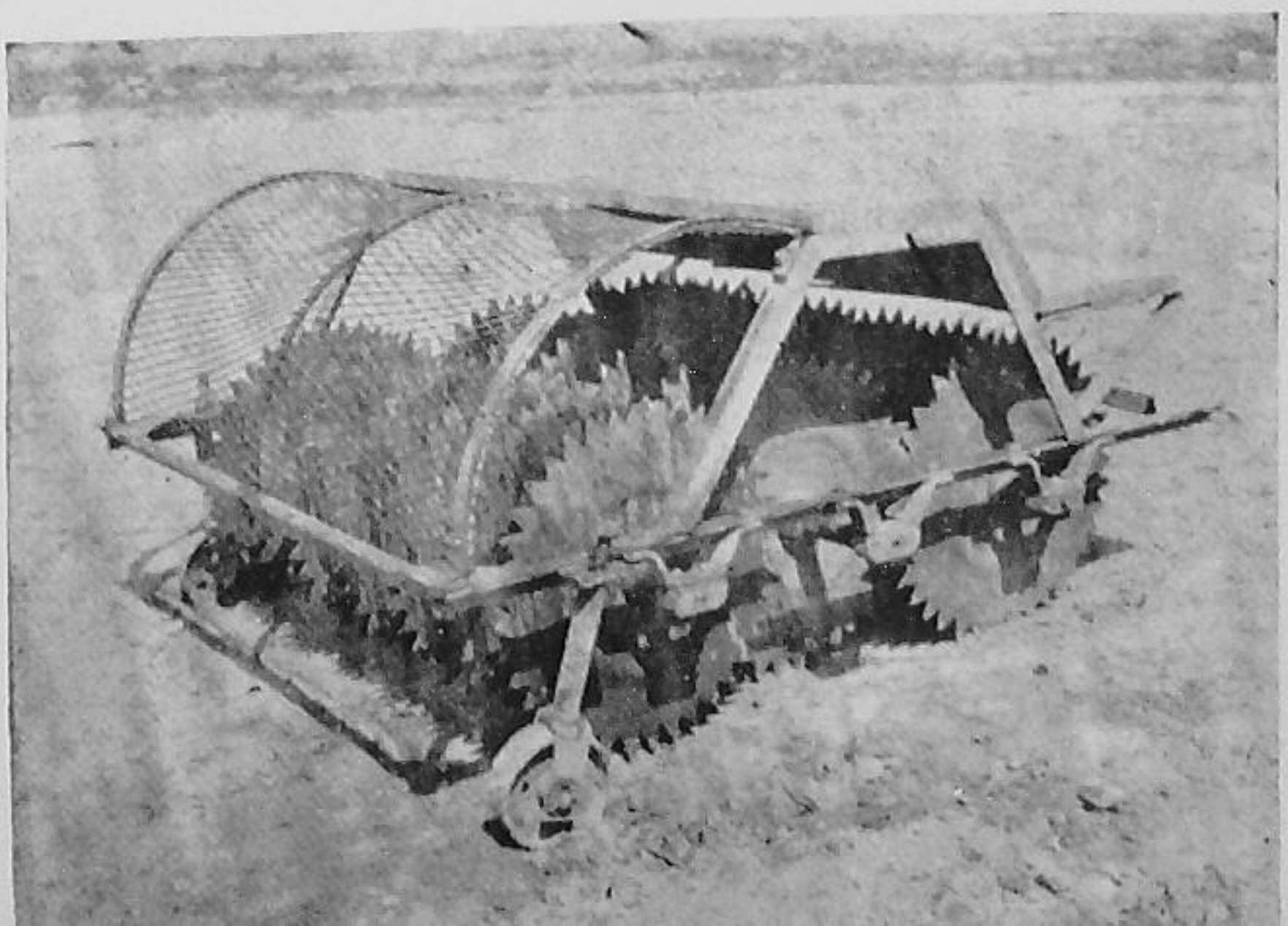
- (1) An Agricultural Engineer from the Agricultural Implements Workshop, Naini, Allahabad, was got stationed in the project area during 1957. He carried out fairly extensive demonstrations of improved implements, particularly known as "Wah Wah" cultivators. These cultivators have been provided with seeding arrangements also. These implements effectively caught the imagination of the farmers.

Culivators are getting very popular

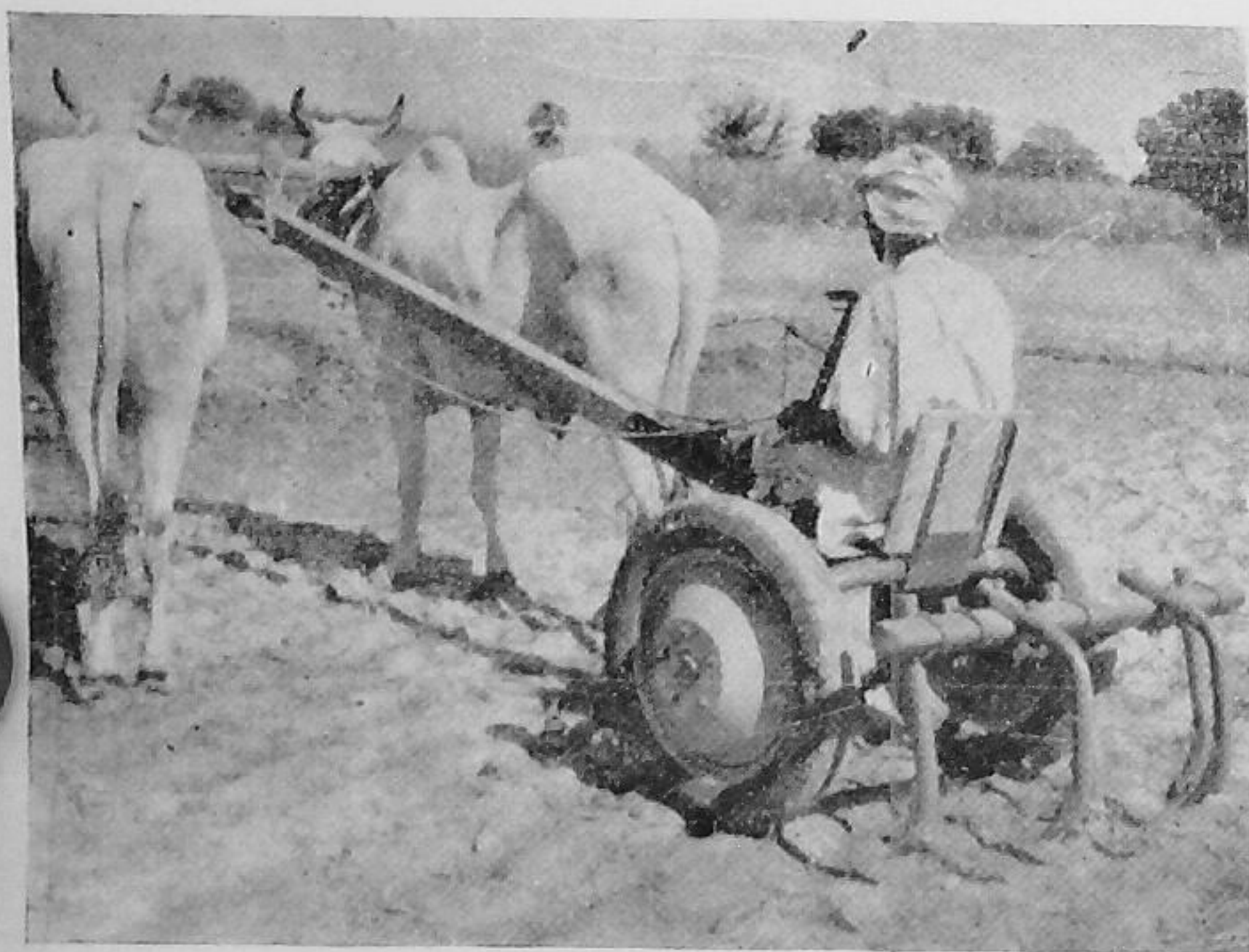
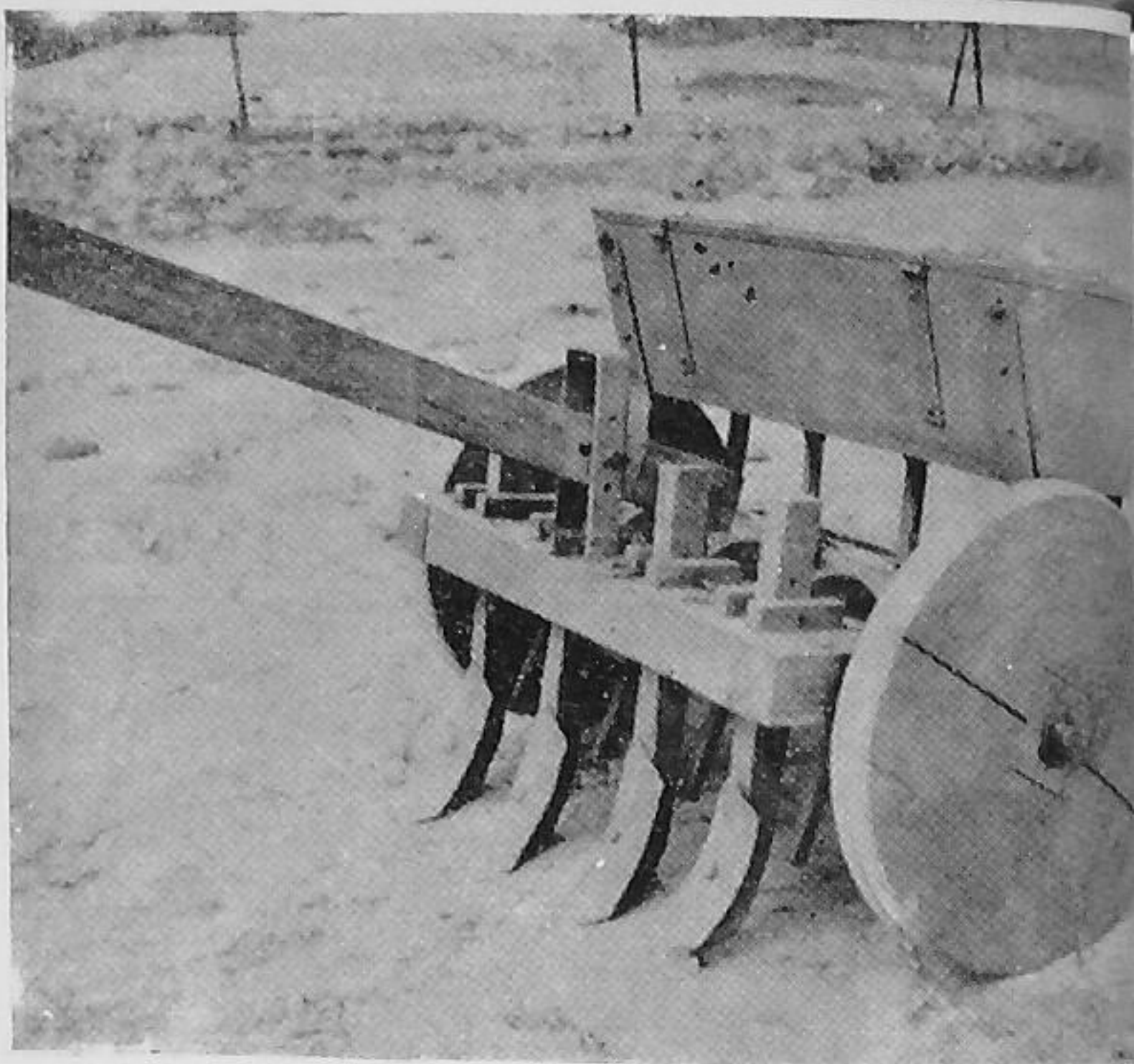


Cultivation with cultivators

Thresher

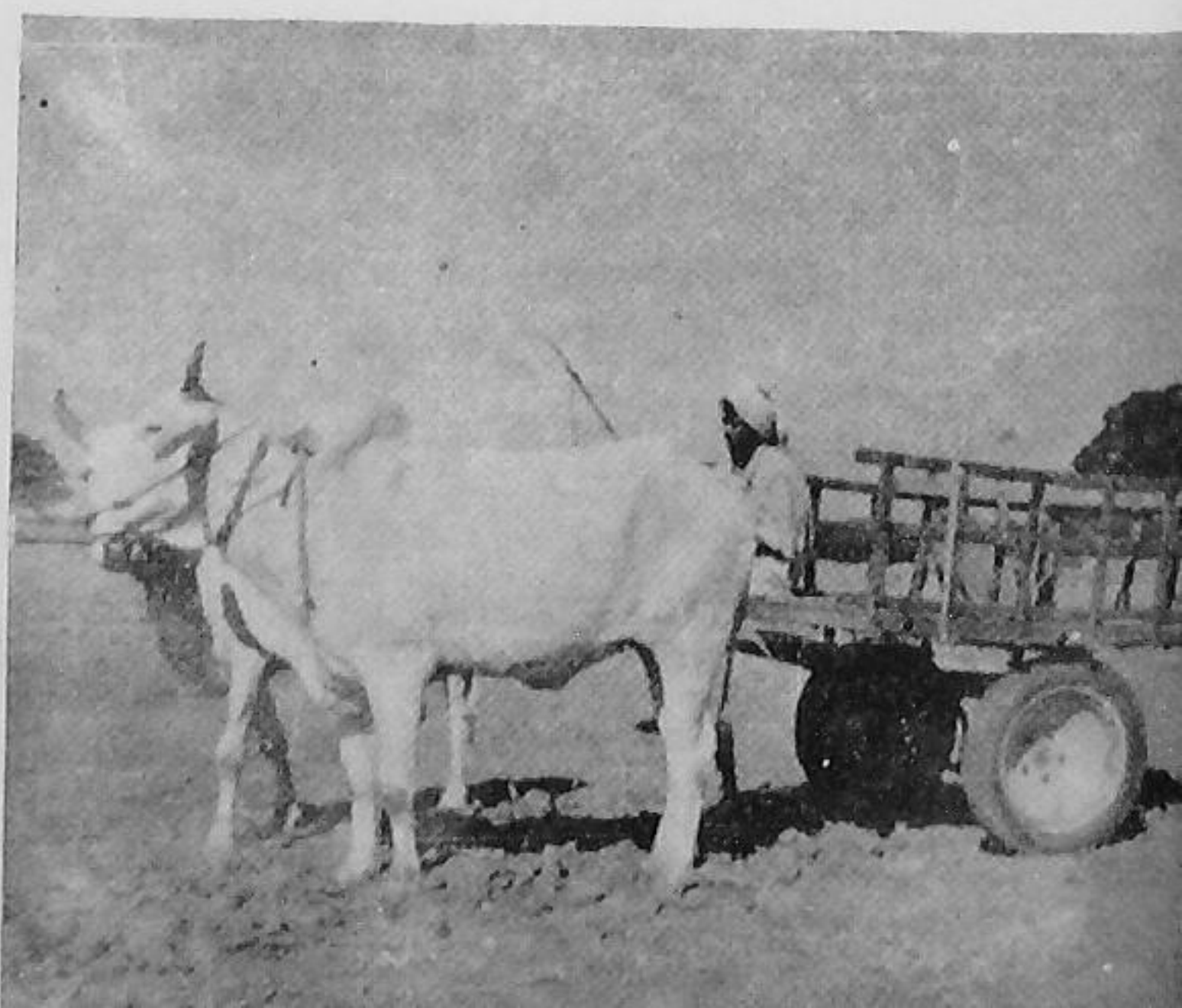


Seeddrill for Line Sowing purpose



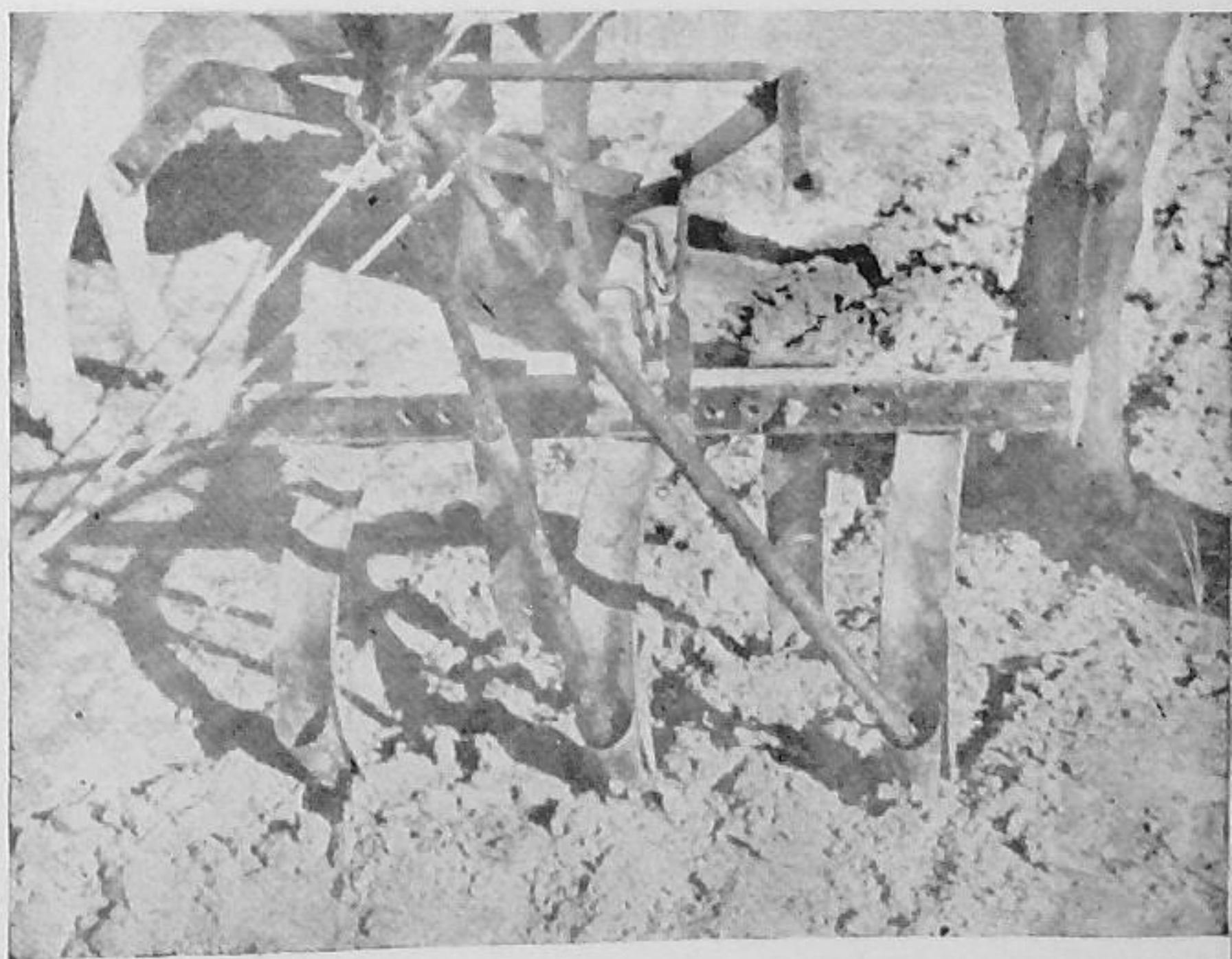
Volta's Autoframe with Cultivator

Volta's Autoframe with cart

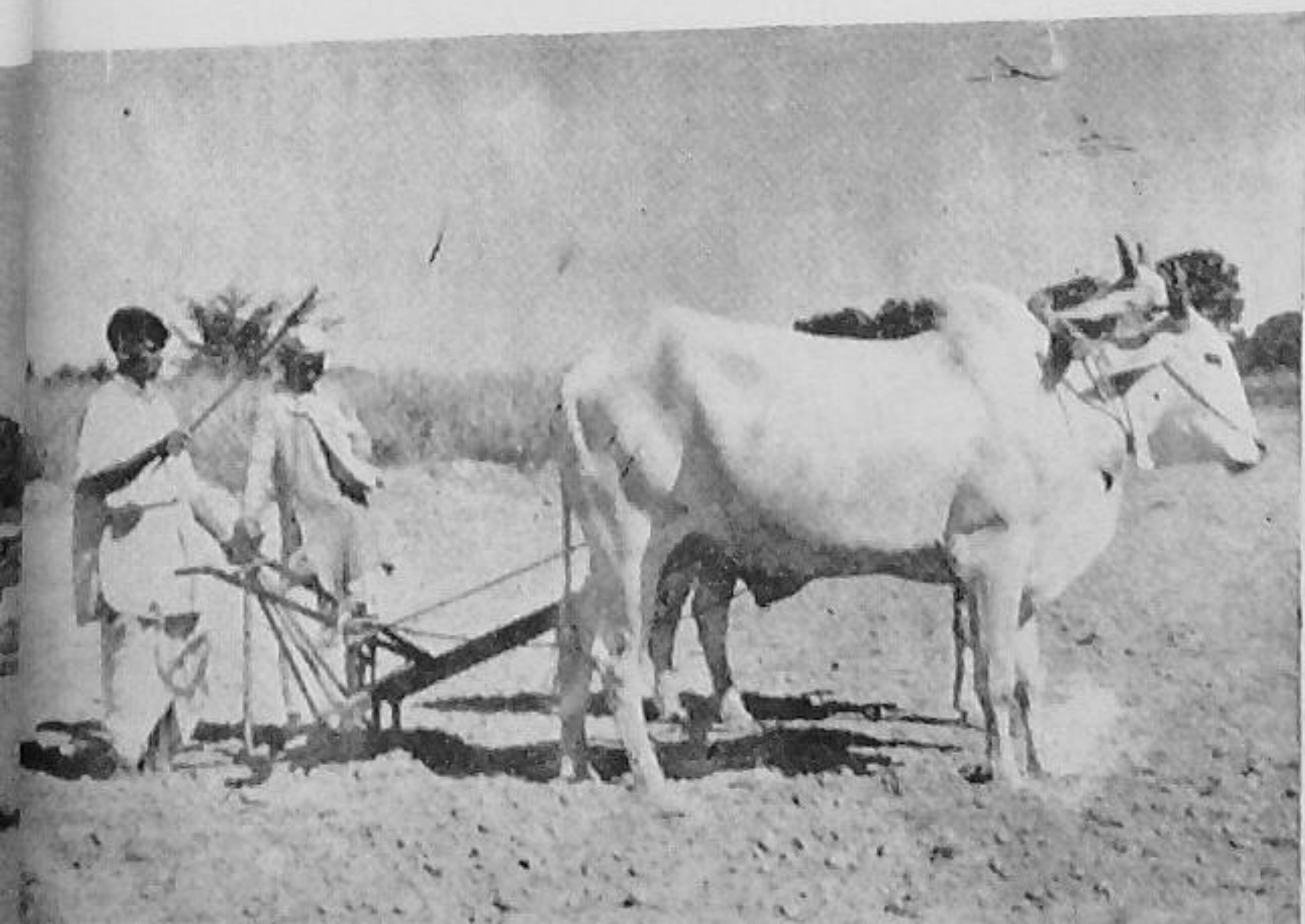




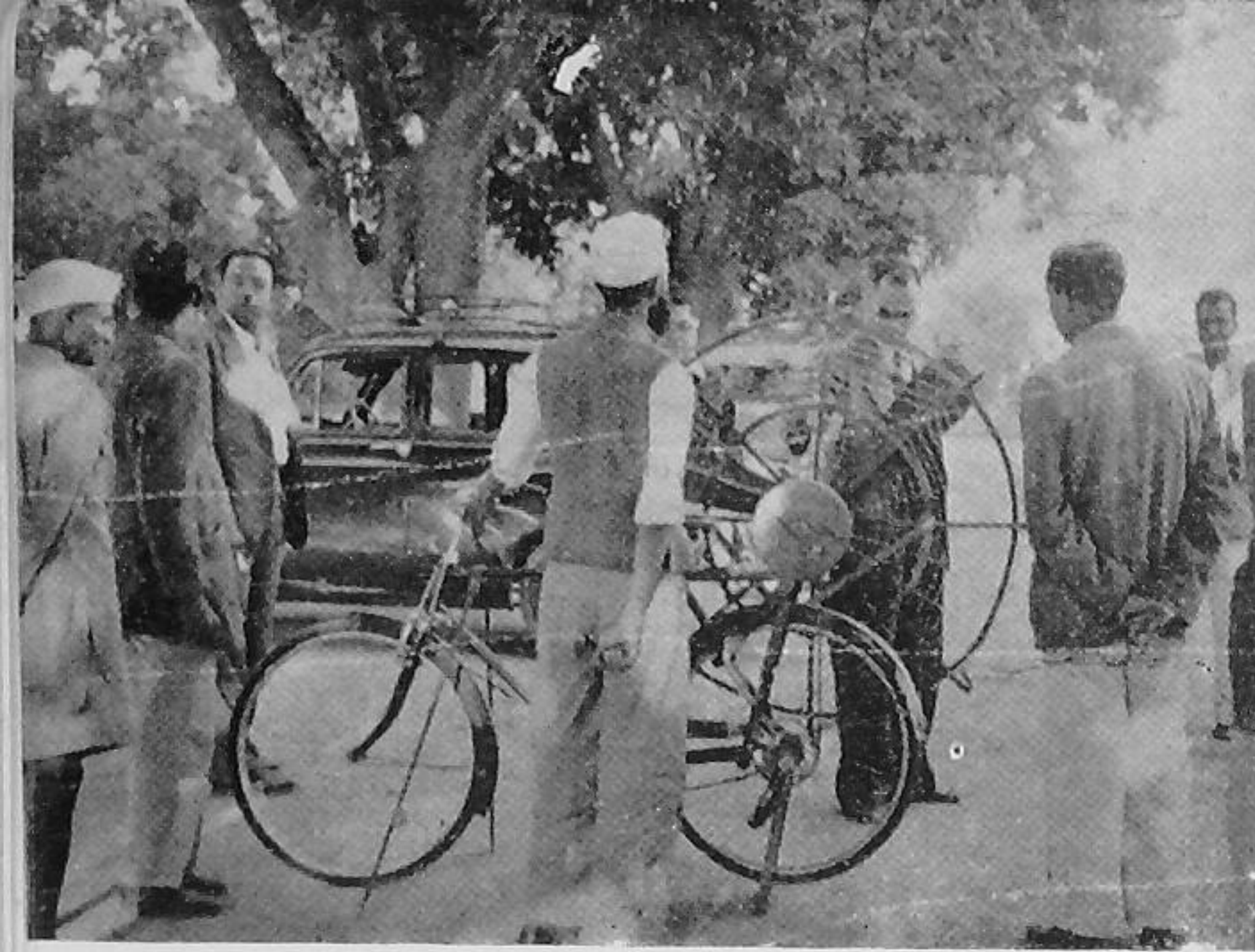
Disc Harrow



*Wah Wah Cultivator with Seeding
arrangements*



Sowing with Wah Wah Cultivator



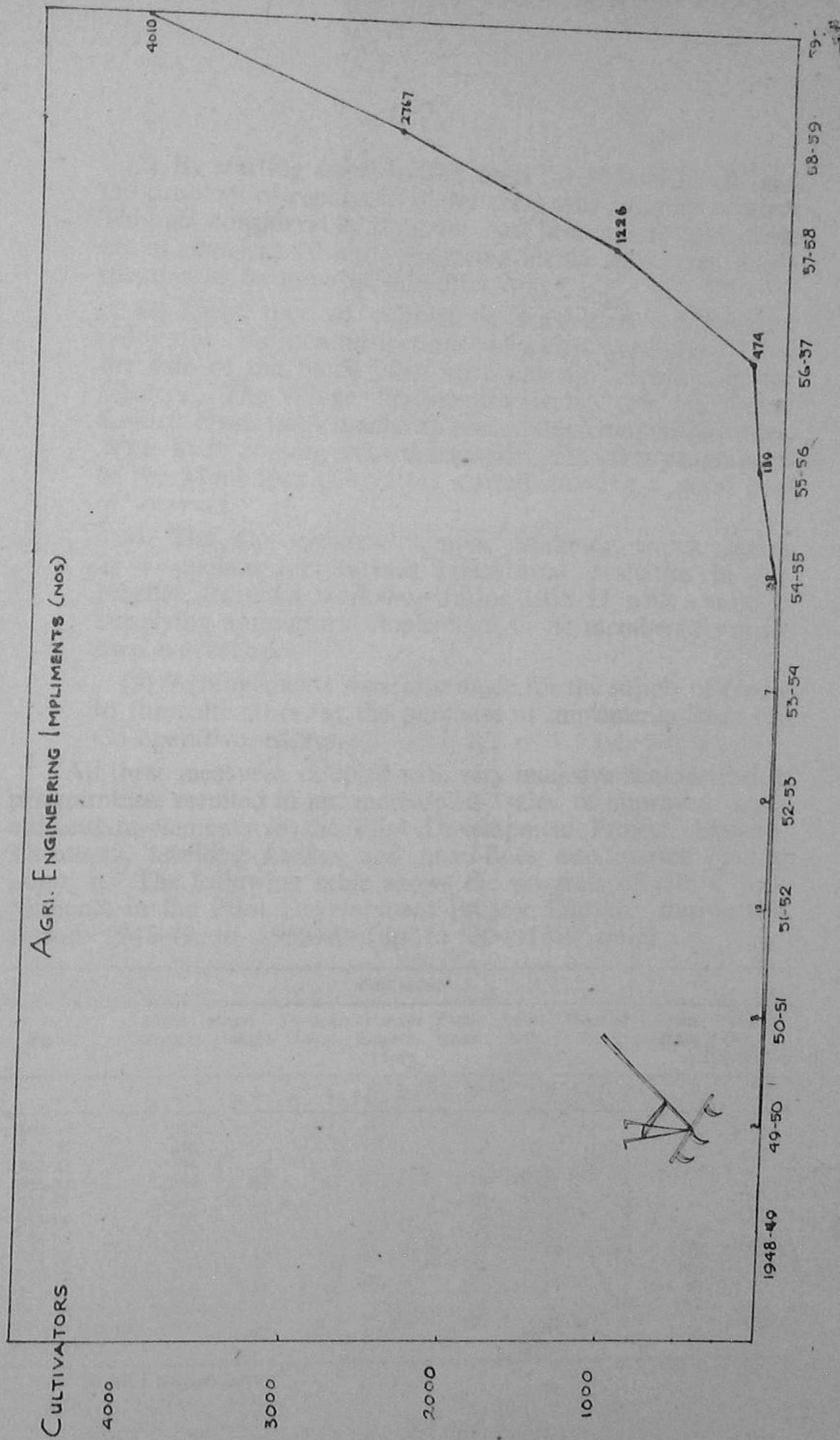
Cycle Winnowing Frame



Wind mill



Bullock driven screw water lift



(2) By starting small smithy units for repairs in villages, the problem of repairs in many areas was suitably tackled. Though considerable progress has been made and there are as many as 10 units operating in the area, yet more remains to be done in this direction.

(3) Light type of cultivators, particularly Mankapur cultivator, the demonstrations of which were given from the side of the block, also attracted the attention of the farmers. The village blacksmiths were able to manufacture these implements at reasonably competitive rates. With their coming into the market, the sales programme of the Mankapur cultivators started showing a good deal of increase.

(4) The Co-operative Union, Mahewa, which serves as a nucleus for various agricultural activities in the locality, started a workshop during 1958-59 with a view to supplying agricultural implements to its members from its own workshop.

(5) Arrangements were also made for the supply of credit to the cultivators for the purchase of implements from the Co-operative Stores.

All these measures, coupled with very intensive demonstration programmes, resulted in an increase in sales of improved agricultural implements in the Pilot Development Project, Etawah. Threshers, levelling *karhas* and hand-hoes also started getting popular. The following table shows the progress of sale of implements in the Pilot Development Project, Etawah, during the period 1948-49 to 1959-60 (up to 30-9-1959 only) :

| Period | Cultivators | | | | | | | | | |
|-----------------------------|------------------|------------------|------------------|-----------------------------|-----------|---------------------------------|-------------------|-------------------|------------------------------|----|
| | Light ploughs | Heavy ploughs | Through Union | Through Private shops | Threshers | Level- ling <i>karhas</i> | Hoes all types | Cane- crushers | Voltas Otto Frame Sets | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1948-49 | .. | 52 | .. | .. | .. | .. | .. | .. | .. | .. |
| 1949-50 | .. | 240 | .. | 3 | .. | 2 | .. | .. | .. | .. |
| 1950-51 | .. | 606 | 2 | 8 | .. | 6 | .. | .. | .. | .. |
| 1951-52 | .. | 296 | 33 | 12 | .. | 14 | .. | 8 | .. | .. |
| 1952-53 | .. | 143 | 6 | 9 | .. | 89 | .. | 7 | .. | .. |
| 1953-54 | .. | 589 | 52 | 7 | .. | 14 | .. | 9 | .. | .. |
| 1954-55 | .. | 210 | 4 | 38 | .. | 33 | 23 | 45 | 2 | .. |
| 1955-56 | .. | 820 | 18 | 189 | .. | 77 | 18 | 89 | 13 | .. |
| 1956-57 | .. | 1,202 | 41 | 474 | .. | 29 | 11 | 57 | 104 | .. |
| 1957-58 | .. | 966 | 37 | 1,226 | .. | 153 | 20 | 111 | 69 | .. |
| 1958-59 | .. | 1,517 | 32 | 2,767 | N.A. | 95 | 26 | 88 | 7 | 5 |
| 1959-60 (up to 30-9-'59) | .. | 1,321 | 24 | 3,061* | 949* | 122 | 24 | 11 | .. | .. |

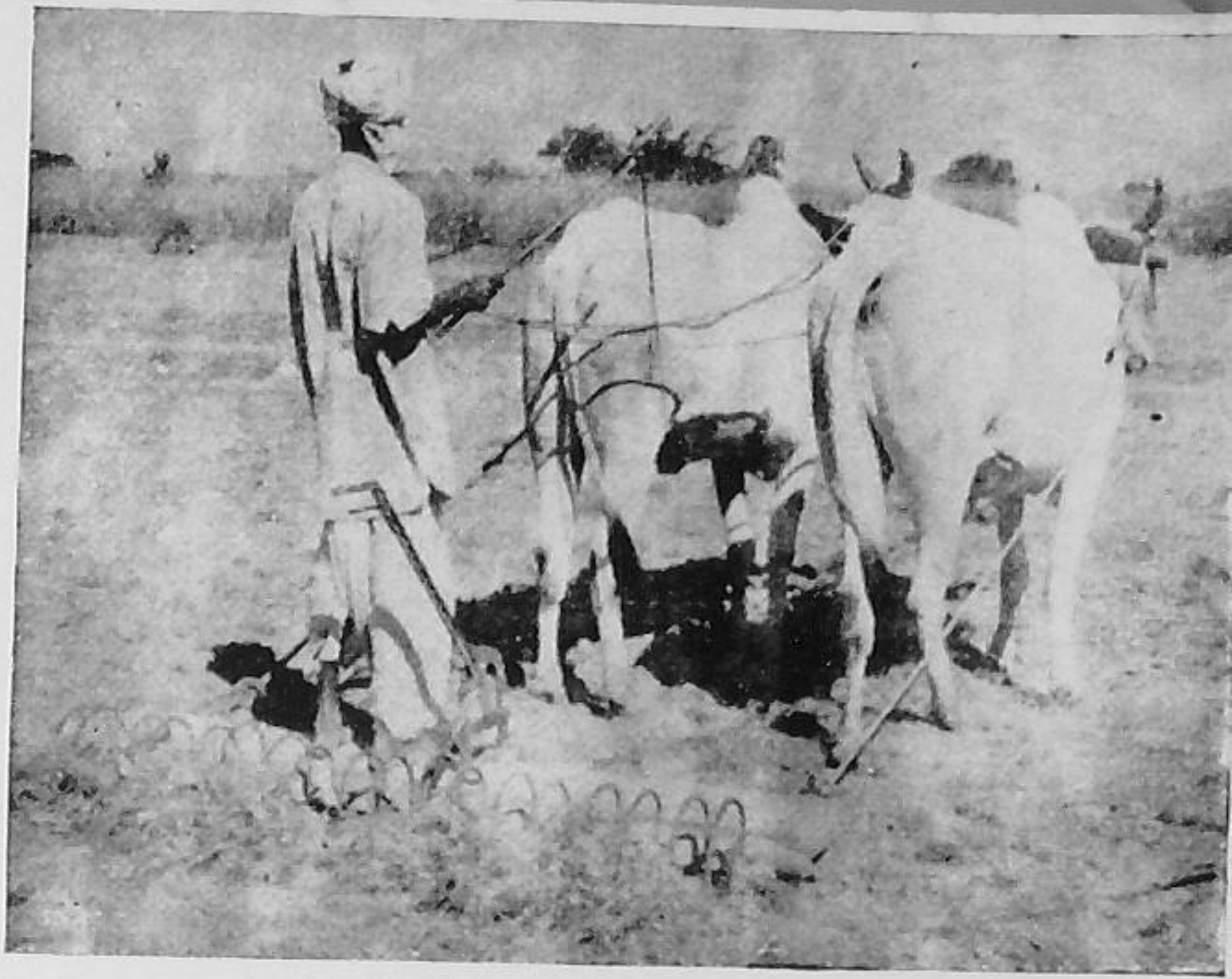
*Sold by local blacksmiths.

It will thus be seen from the above table that the sales of the cultivators from the local union have appreciably increased, particularly from the year 1957-58 onward. The progress has been most significant during 1959-60 (up to 30-9-1959) as 4,010 cultivators have so far been sold during this year. Another significant feature is that of the total of 4,010, the local blacksmiths have sold 949 cultivators which they manufactured themselves. Two blacksmiths in particular, who are stationed at Mahewa itself, are doing this job very efficiently and are able to sell 250 to 300 cultivators in a year. The rest are manufactured in other units also, but these units usually attend to repairs. Besides, some farmers have gone by themselves to Kanpur and have made purchase of their own. These figures could not be accounted for in the total. This shows how popular the improved agricultural implements programme can be, if it is launched in a judiciously planned way after taking into consideration the facilities of making supplies and repair-service available at convenient points.

A New introduction in the Pilot Development Project

Voltas' Otto Frame Set—The Pilot Development Project, Etawah, has gone one step further in accepting the Voltas' Otto Frame Sets in spite of the fact that its cost varies from Rs. 1,500 to Rs. 2,000, depending on the type of the equipment purchased along with the set. Voltas' Otto Frame Set consists of a frame which is drawn by bullocks and has a provision of two rubber wheels. It has got a very simple arrangement for attaching a disc-plough, cultivator, seed drill, etc. There is also an arrangement for using this frame to be served as a cart. The structure of a cart with its accessories costs about Rs. 2,000. Five farmers, having holdings of about 20 acres each, have liked the Voltas' sets and have purchased them with two or three equipments costing between Rs. 1,400 to Rs. 2,000 each. This shows how popular such implements can be, if they are properly demonstrated and farmers are convinced of their efficiency. It will not be out of place to mention here that a German Engineer, who was working with Voltas and who stayed in our country for about two years, undertook the manufacture of this equipment as his side job. Within a short period of about two years, he was able to develop this set. He has now left India but the pioneering work done by him is being used by the firm for popularization of the programme through their various agencies.

Harrow Patela



Hand Ridge Maker

In the field of Agricultural Engineering, the following research work has been further carried out :

(1) *Cycle Winnowing Frame*—It is an attachment of a winnowing frame which is fixed up with an ordinary cycle. The equipment is very simple and can be attached and detached on a cycle easily. A man sits on cycle seat, as usual, and pedals it. The energy so created is utilised in moving the fan. This facilitates winnowing operations, especially when there is bad weather. Cultivators have liked this equipment, but it is still in the experimental stage. Its extension programme has not yet been taken up.

(2) *Bullock driven Screw Water Lift*—It has been developed by Sri Anand Madhav Shukla, a very experienced and energetic type of village leader. It has been successfully tried at two or three places. It can lift 10 to 14 thousand gallons of water per hour from a depth of 2 to 3 feet and is thus quite suitable for areas where canal lift irrigation is in vogue. Its extension programme has not yet been carried out.

(3) *Harrow Patela*—It is an improvement over the existing *patela* which can be utilized for collecting grasses and weeds. The lever provided therein facilitates the collection of weeds through the hooks provided therein.

(4) *Hand Ridge Maker*—It is a new implement for making ridges for sowing crops. It effects some saving in labour as compared to spade work.

(5) *Improvement in the existing country Bullock Cart*—With a view to minimizing the friction resistance of a wheel on the axle, anti-friction bearings have been fitted in both the wheels. Springs have also been provided for safeguarding the bearings against the jerks which are so common on village roads. Experimental work is still in progress.

(6) *Special projects on designing new dibblers*—Work was undertaken last year to design dibblers with an automatic arrangement for dropping seeds. Some initial success has been achieved but the experiment is still in progress.

(7) *Wind Mill*—Sri Fanthome, Sub-divisional Officer, Etawah, who is also qualified in Engineering, is working on the wind mill for lifting water and providing electricity with the help of a generator. The project is being tried at Bhagyanagar. It will be tried at Ajitmal later on. It is still too early to comment on its extension programme in villages at this stage.

All the experimental work as indicated above, has been carried out during the last one year and a half. Though initial success in certain items has been achieved as stated earlier, yet more experimental work shall have to be done and sufficient data obtained before extending the programme in villages. One thing is, however, apparent that the research programme which is of vital importance for improving agriculture in our villages, has not been ignored.

CHAPTER V

SOIL CONSERVATION

District Etawah is one of the heavily eroded districts of the State. Ravines of the Chambal and the Jamuna rivers are well known for the damage they have done to the soil. A number of other rivers have also damaged the soil of other areas. The Pilot Development Project, Etawah, is mostly affected by the erosion of the soil by the Jamuna and the Singur rivers. The Jamuna forms the boundary of Mahewa block while the river Singur passes through Bhagyanagar and Ajitmal blocks. In this way, all the three blocks are faced with soil erosion problems.

Early Attempts in Soil Conservation—The soil conservation work in Mahewa Block was taken up in the eroded areas of the Jamuna during 1949. One American Engineer, Sri E. M. Colliens, with a full Engineering Division, was put in charge of the operations. Heavy earth moving equipment was provided. This work was taken up during May, 1949 and seven big bunds were constructed. The entire work was carried out as a State enterprise.

The work was subsequently reviewed and it was felt that it is expensive and cannot be repeated on a large scale in the Block. The Engineering Division was, therefore, subsequently abandoned and the team of foreign experts made its departure. Nevertheless, the problem of soil erosion was a keenly felt need of the area, hence it was decided to work out a plan in which people may be involved, the cost may not be prohibitive and areas having comparatively gentle slopes should be tackled first. The problem of ravine reclamation was decided to be postponed for some time to come.

Soil conservation with peoples' participation—The first project in Soil conservation with people's participation was accordingly started in village Sherpur (Bhagyanagar Block), on 10 acres of land belonging to seven cultivators, in 1954. Mostly, field-bunding and gully-plugging was taken up. Greater emphasis was laid on educating the cultivators about the need of the programme. The programme evoked good response. Hence, it was felt that with continued efforts this might turn out to be the suitable pattern for repetition in the adjoining areas.

Soil Conservation Programme needed experienced village level workers conversant in the techniques of the programme. Hence, a training programme for them was arranged and subsequently a training centre was started in district Saharanpur

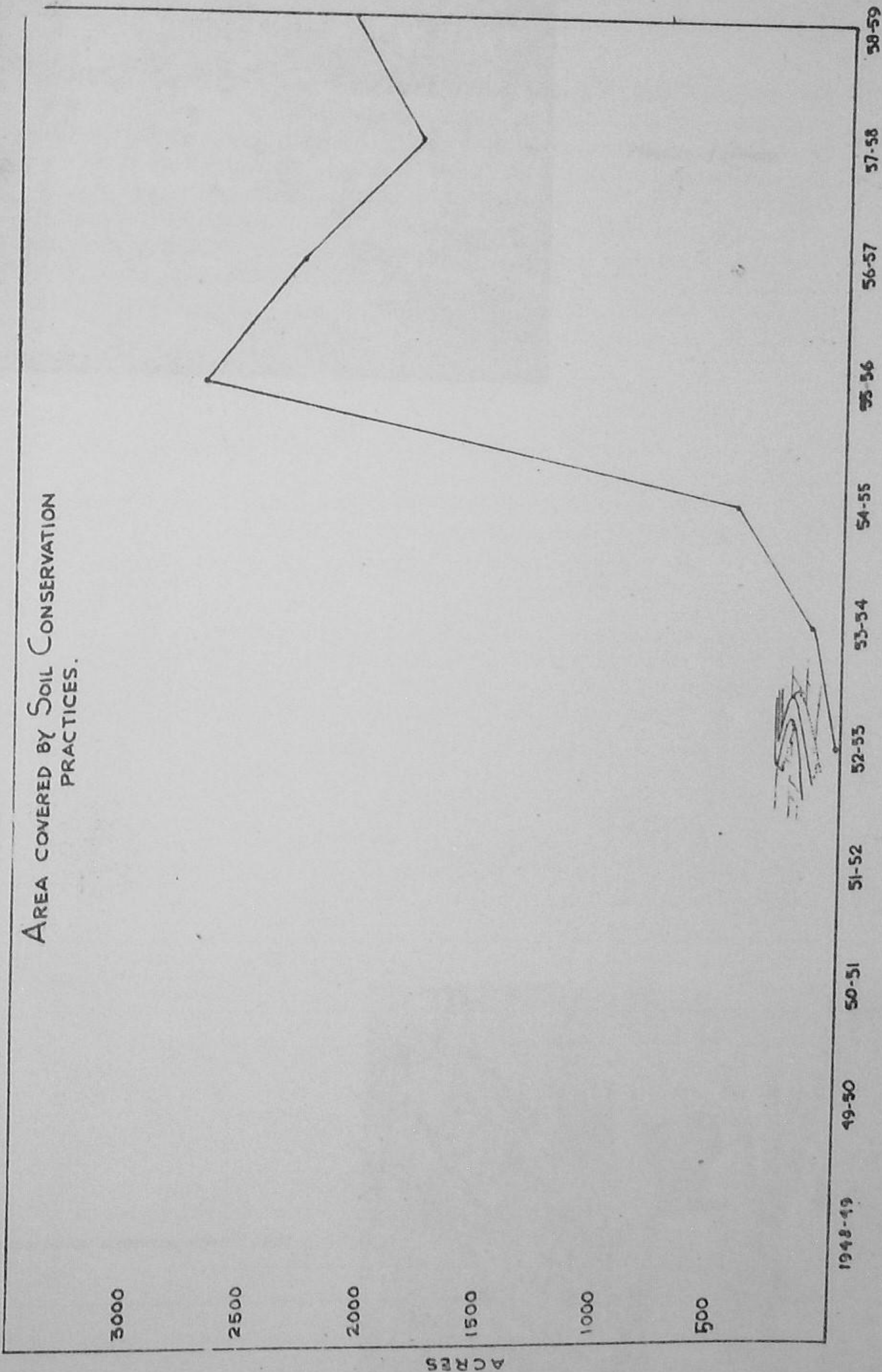
for training the Village Level Workers in soil conservation practices. Gradually, the programme of soil conservation was extended to other areas of the village Sherpur and subsequently more adjoining villages were taken for the implementation of the programme. Six Soil Conservation Lessons were prepared which were supported with some audio-visual aids, like film strips, slides, posters and charts. These techniques had to be extended in the locality to make the villagers conscious about the need of the soil conservation programme. The following simple soil conservation practices were recommended :

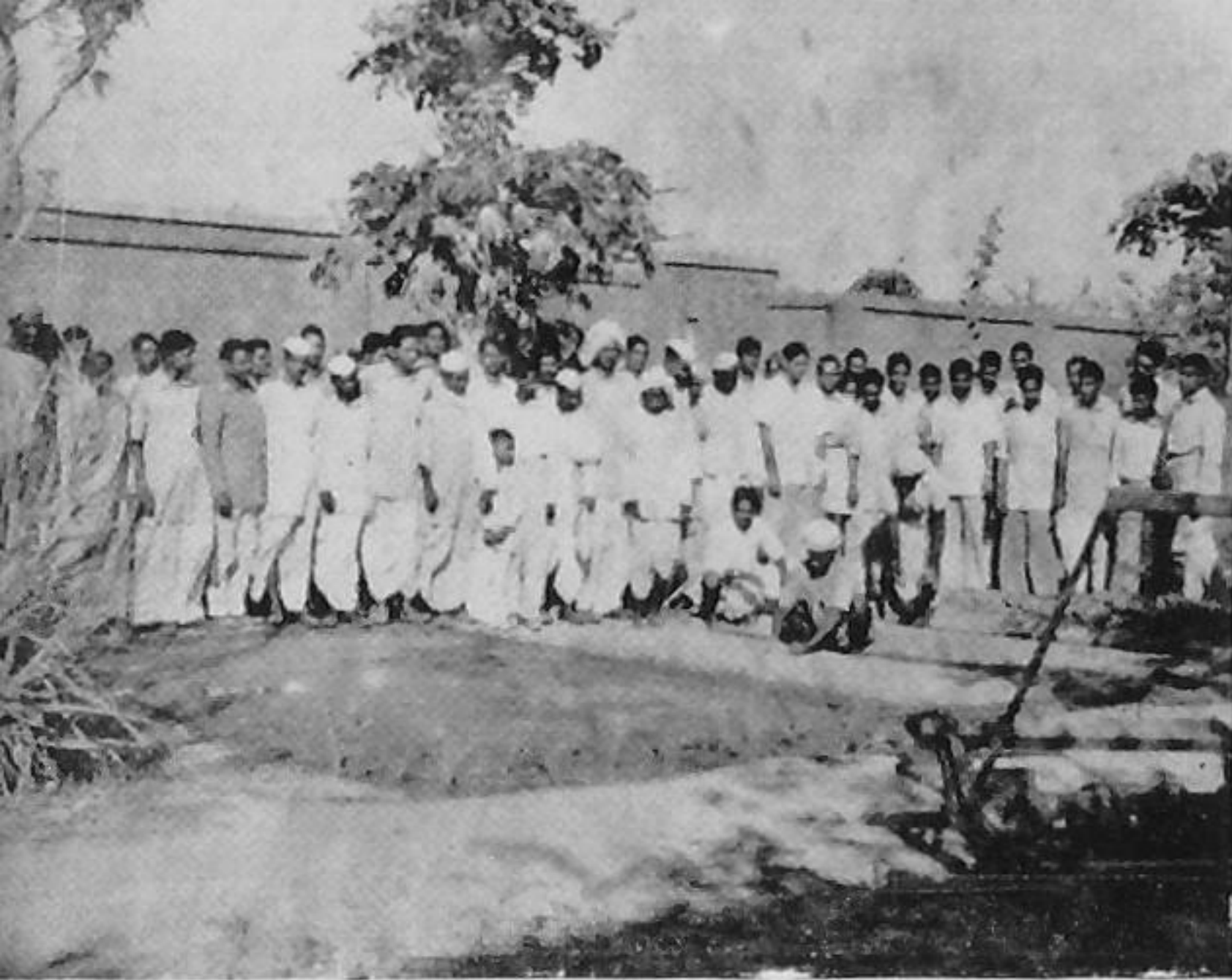
- (1) *Daul bandi* for areas having a slope of up to 0.5 per cent.
- (2) Bunding for areas having a slope over .5 per cent to 2 per cent;
- (3) Terracing and gully plugging for areas having a slope over 2 per cent to 5 per cent;
- (4) Areas having over 5 per cent slopes were recommended for afforestation.

Agronomical practices, such as ploughing across the slope, sowing of crops across the slope, popularization of mixed cropping and introduction of erosion-resisting crops like Mung, Ground-nut along with Jwar and Bajra were recommended. Another important feature of the programme was that for earth work no subsidies were provided. For masonry constructions, however, 40 per cent subsidy was sanctioned to help the cultivators in overcoming this problem. Plantation of *Babul*, Castor and grasses on bunds was also encouraged. The progress of soil conservation work done in the Pilot Development Project, Etawah, during various years, is given in the following table :

| Year | Soil Conservation measures carried out | | | Number of check dams constructed | Pucka escapes provided |
|---------|--|----|----------|----------------------------------|------------------------|
| 1 | 2 | | | 3 | 4 |
| | (Acres) | | | (No.) | (No.) |
| 1952-53 | .. | .. | 10.00 | 1 | 2 |
| 1953-54 | .. | .. | 140.00 | 12 | .. |
| 1954-55 | .. | .. | 450.00 | 26 | 3 |
| 1955-56 | .. | .. | 2,746.50 | 119 | 3 |
| 1956-57 | .. | .. | 2,337.80 | 78 | 4 |
| 1957-58 | .. | .. | 1,850.00 | 90 | 20 |
| 1958-59 | .. | .. | 2,120.00 | 49 | 24 |
| Total | .. | .. | 9,654.30 | 375 | 56 |

AREA COVERED BY SOIL CONSERVATION PRACTICES.

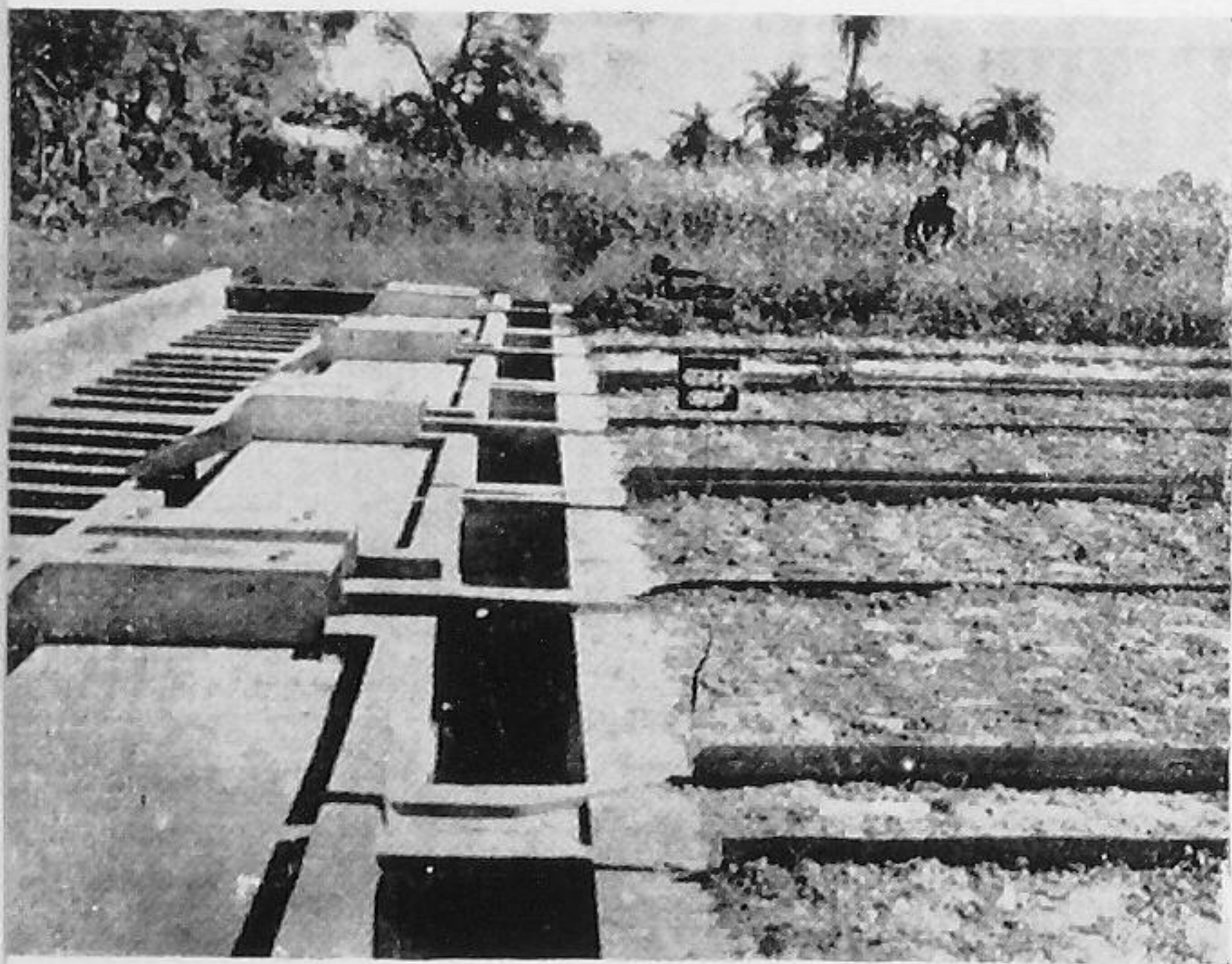




Planting of grasses



Soil conservation measures improve yield



Run off plots



Grass nursery

It will thus be seen from the above table that the work has been gradually expanding. The achievement during 1957-58 received a set-back on account of the scheme of consolidation. The work during 1958-59 was slightly better. It is only this year that newly constructed Chaks have been handed over to the cultivators under the Consolidation of Holdings Scheme. This has slightly affected the programme but it is hoped that the programme will again proceed ahead in full swing from the next year.

New Programmes Introduced

Soil conservation is a very difficult work in agriculture. In the initial stages field bunding, gully plugging and provision of escapes had to be popularized. Making of bunds on contours presented serious handicaps and difficulties, as the cultivators were not prepared to make them by disturbing their field boundaries. Hence, an effort was made to convince the cultivators to agree to a programme of this nature. Undoubtedly, the extension of this programme was fraught with serious handicaps, but the Village Level and the Supervisory Workers were repeatedly impressed about the need of carrying out the soil conservation programme on a scientific basis. Contour-bunding came in its way gradually and in the new areas where soil conservation measures are being carried out, efforts are being made to persuade cultivators to put their bunds on the contours. In some cases there do occur certain defalcations but efforts continue to be made to bring this practice on a sound footing. With the introduction of this practice, the new Block have adopted better soil conservation measures. But in cases where the cultivators do not agree to make bunds on contours, there is no alternative except resorting to field bunding.

(2) *Introduction of some useful Agronomical Practices—* Soil conservation mechanical measures are, no doubt, very important for carrying out this programme but the programme is not completed unless improved agronomical practices are introduced in lands where such measures have been completed. Strip-cropping and mixed cropping are both essential for the successful implementation of this programme. Single-cropped areas are being converted into double-cropped areas. These Soil Conservation measures have increased the yield rate. Crop-cutting experiments have been carried out from year to year and a separate report on this score will be brought out to indicate how soil conservation measures have actually resulted in increasing the yield. These measures have also improved the fertility of the soil. Silting of gullies is taking place every year and the programme can be said to be self-radiating as more demands

are coming in from other parts of the district for taking up this programme. The Department of Agriculture has already started a scheme of soil conservation on the pattern developed at Bhagyanagar in 7 districts of the State.

(3) *Introduction of Erosion-resisting Crops in Bhagyanagar Area*—An experiment of introducing erosion-resisting crops has been found to be very successful. The following table indicates the measures being taken in this connection :

| Serial no. | Slope percentage | Width of erosion-permitting crops | Width of erosion-resisting crops |
|------------|------------------|-----------------------------------|----------------------------------|
| 1 | 2 | 3 | 4 |
| | Percentage | ft. | ft. |
| | 1 | 72 | 12 |
| | 2 | 72 | 24 |
| | 3 | 72 | 36 |
| 2 | 1 | 150 | 30 |
| | 2 | 80 | 20 |
| | 3 | 45 | 15 |

The above table indicates the way by which the erosion-permitting crops can be controlled by erosion-resisting crops, thereby giving increased yield and at the same time reducing the damage done by erosion.

(4) *Run-off Plots*—For carrying out experimental work on various types of crops and the effects of soil conservation practices on different types of slopes, a number of run-off plots have been laid out at the Block headquarters. The results are being compiled and suitable measures for checking erosion through agronomical practices will further be intensified in the light of the results achieved through this experimentation.

(5) *Establishment of a Grass Nursery*—For providing saplings and suckers for the useful types of grasses, particularly for the eroded areas, a nursery has been established in Bhagyanagar Block to find out which grasses will do well in that area. This will also provide necessary data about the yield per acre from such grasses. These data will be usefully employed in developing pastures and also in covering bunds and gullies with suitable types of grasses.

(6) *Gully Grading*—Another experiment has been carried out in gully-grading and in planting grasses in such gullies. This too helps in checking erosion and at the same time provides good source for fodder to the cattle.

(7) *Integrated Soil Conservation and Consolidation of Holdings Project*—An experiment has been taken up in integrating soil conservation with consolidation of holdings scheme. A detailed description is given separately in Chapter XIII.

(8) *Usar Reclamation Work*—Usar reclamation work with already known practices was carried out last year and the experiment is being repeated this year also. A note on the same is given separately in Part III of this report.

From the above description, it will be seen that on the one hand, extension programme of soil conservation through peoples' participation is being gradually extended to the nearby areas, and on the other, a few action projects are being carried out simultaneously to give the soil conservation scheme a new fillip.

CHAPTER VI

MULTI-PURPOSE CO-OPERATIVE UNION PROJECT, MAHEWA

Experiment on "One Village One Society"—A number of Co-operative Block Unions with about 15—20 primaries affiliated to each of them were organised in the State in the year 1947-48 to help their members in the supply of seed, fertilizers, implements, and other goods for agricultural and domestic requirements. The activities of such unions, however, mostly remained confined to the supply of seed on Sawai. There was a problem as to how to increase the activities of these unions and ensure their economic working. It was, therefore, decided by the Directors of the Mahewa Union in consultation with the Planning Research and Action Institute that a Multi-purpose Co-operative Union Project should be worked out and tried at Mahewa. The main objectives of this project were to arrange adequate and timely credit, linking it with increased agricultural production and to maintain a good supply line. To increase the business of the union, a well paid and efficient Manager was considered necessary. The project was started in July, 1955.

Meanwhile, the recommendations of the All-India Rural Credit Survey Committee were also published and a project for testing the recommendations of the Committee by farming large-sized and Marketing Societies and linking credit with marketing was worked out and started at Nauranga, district Kanpur. Although, the recommendations of the Rural Credit Survey Committee Report were generally accepted, it was felt that it would be proper to try the recommendations under the old organizational set-up of village primaries also to make a comparative study. As the Multi-purpose Co-operative Union Project at Mahewa had more or less the same objectives, provision for linking credit with marketing, which was originally not envisaged, was also added.

Initially, only ten village primary societies were taken up but, later on, 11 more societies were included in the project.

Cash credit limits of the members of these primaries are fixed in the beginning of the year on the basis of their production requirements and loans are advanced to them from the Mahewa Co-operative Union which works as a branch bank of the District Co-operative Bank, Etawah. If the demand is for fertilizers or implements, etc., the members are advanced loans by the branch bank and are advised to purchase the commodities required

from the supply section of the Union. The members also agree to repay their loans by marketing their produce through the Mahewa Union.

The progress made in the village primaries and the Mahewa Union is, in brief, given below :

A. Primaries

Membership and Share Capital—The following progress has been made since the beginning of the project :

| Period | | Number of societies | Membership | Share Capital |
|-----------------------------------|-------|---------------------|------------|---------------|
| 1 | | 2 | 3 | 4 |
| | | | | Rs. |
| At the time of start, i.e. 1-7-55 | | 10 | 497 | 25,192 |
| On 30-6-1956 | | 10 | 808 | 30,530 |
| *On 30-6-1957 | | 21 | 1,559 | 48,276 |
| On 30-6-1958 | | 19 | 1,470 | 48,920 |
| On 30-6-1959 | | 19 | 1,470 | 48,920 |

*Due to the formation of Large-sized Societies, two societies were merged into a nearby society.

From the above table it will thus be seen that the membership increased from 497 in the year 1954-55 to 1,559 in the year 1956-57. In subsequent years, however, there was some decrease in the membership because two important societies of the area were merged into an adjoining large-sized society.

Lendings—The position of advances and recovery of loans is given below :

| Period | Advance | | Amount Due | Amount recovered | Percentage recovery |
|------------------------|----------|----------------|------------|------------------|---------------------|
| | Amount | No. of persons | | | |
| 1 | 2 | 3 | 4 | 5 | 6 |
| | Rs. | | Rs | Rs | |
| July 1955 to June 1956 | 1,09,865 | .. | 67,697 | 65,632 | 96.9 |
| July 1956 to June 1957 | 1,13,368 | 979 | 1,60,113 | 1,40,037 | 88 |
| July 1957 to June 1958 | 1,57,216 | 1,024 | 1,58,681 | 1,46,601 | 92 |

The above table indicates that the recovery of the dues has not been cent per cent. This is mainly due to the fact that the primaries had old overdues accumulating from year to year. Due to constant follow-up through the Co-operative Member Education Programme and efficient service provided by the Union, the percentage of recovery has, however, been showing improvement.

B. Mahewa Union

The activities of the union have been increasing from year to year. During 1958-59, the Mahewa Union carried out the following activities :

- (1) Disbursing and recovering loans on behalf of the District Co-operative Bank, Etawah.
- (2) Accepting Savings Bank deposits on behalf of the District Co-operative Bank, Etawah.
- (3) Keeping stocks of agricultural and domestic requirements.
- (4) Running a seed store.
- (5) Running a brick-kiln.
- (6) Running a nursery.
- (7) Publishing a fortnightly rural news magazine "Mandir Se".
- (8) Working as a Marketing Society for providing facilities to the members in the marketing of their produce.
- (9) Running a rural workshop to meet the growing demand of the locality for the supply of improved agricultural implements.

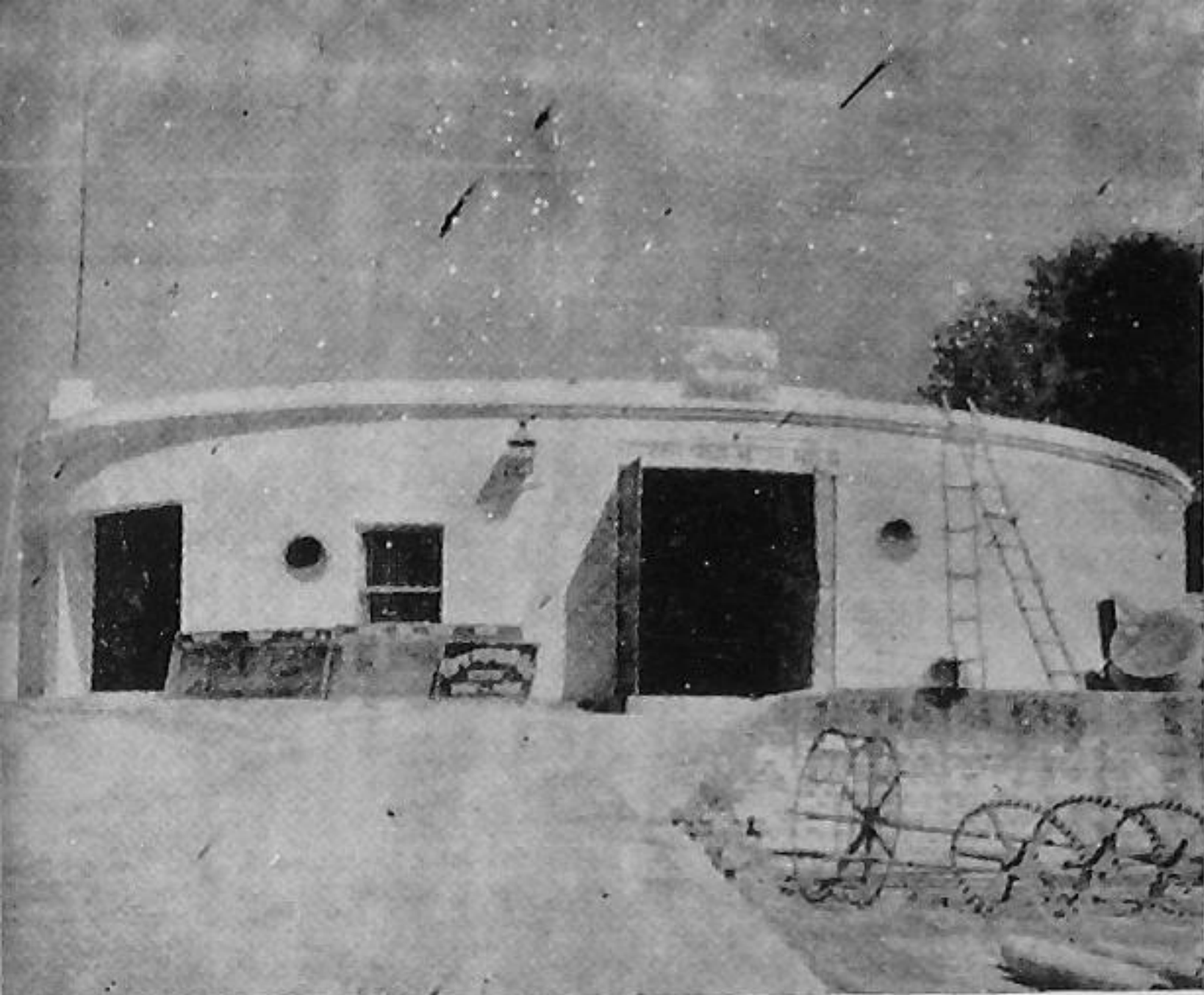
A brief account of the activities of the Union is given below :

(i) *Seed Store*--During 1958-59, 1,471 mds. 15 seers 8 *Chhataks* of seed were distributed to the members on Sawai. The recovery was 100 per cent.

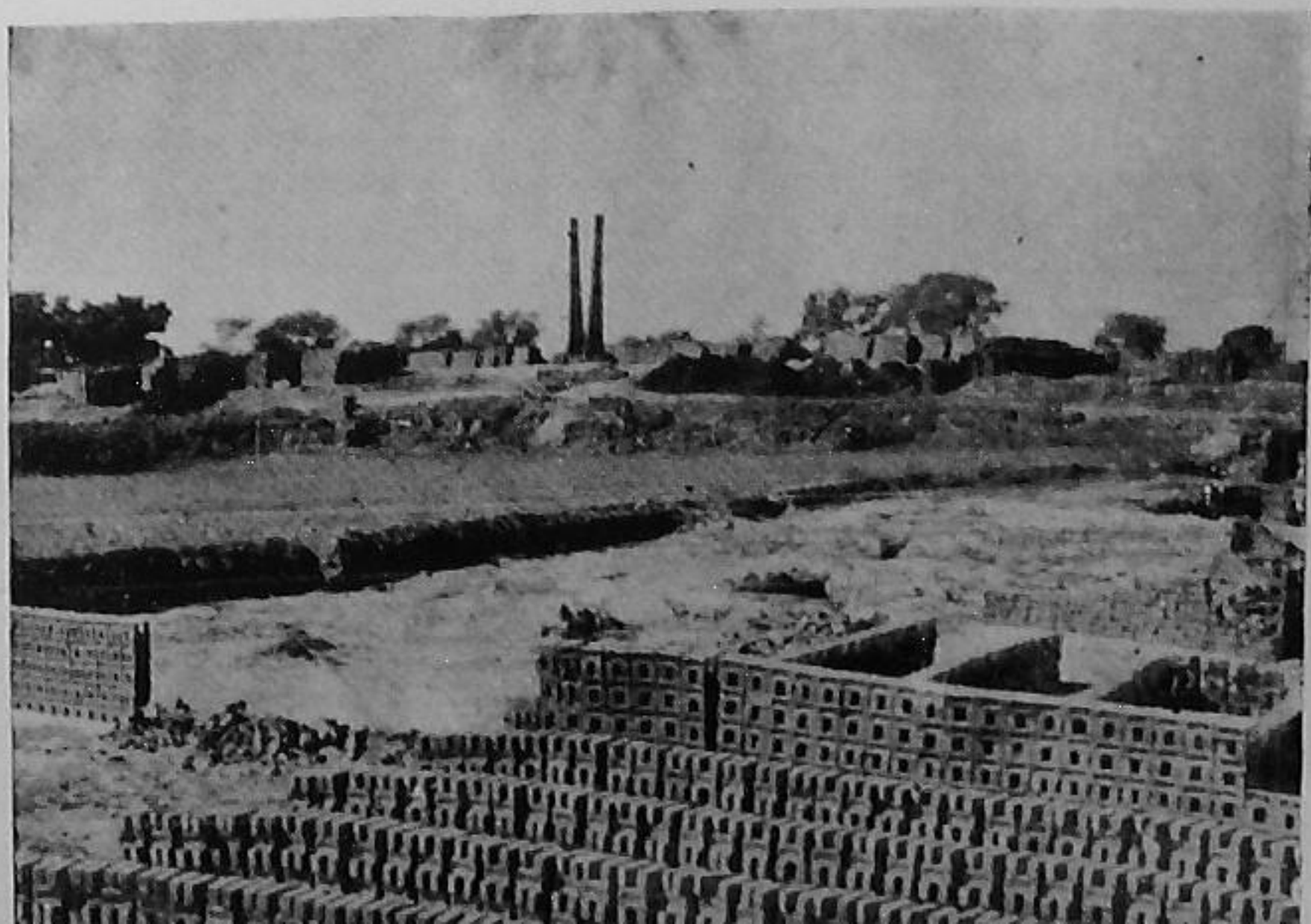
(ii) *Brick Kiln*--The brick-kiln has been running successfully and has yielded good profits as the following figures would indicate :

| Period | | | Number of bricks prepared | Number of bricks sold | Profit |
|---------|----|----|---------------------------|-----------------------|----------|
| | | | (Lakhs) | (Lakhs) | (Rupees) |
| 1955-56 | .. | .. | 13.54 | 23.71 | 8,012 |
| 1956-57 | .. | .. | 27.88 | 24.66 | 17,406 |
| 1957-58 | .. | .. | 29.85 | 33.42 | 25,700 |
| 1958-59 | .. | .. | 27.82 | 23.38 | 12,626 |

The consumers were allowed rebate at 4 per cent and workers' bonus at 50 per cent of the wages earned by them out of the profits for the year 1956-57. This is one of the few brick-kilns in the State which has declared rebate and bonus to consumers and workers respectively.



Seed Store Co-operative Union, Mahewa



Co-operative Brick-kiln

Supply of fertilizers



"Mandir Se" — Magazine of Mahewa

(iii) *Nursery*—The nursery was started in 1949-50 on 1.2 acres of land. In the beginning, it was not profitable but now it is running on profit. The following has been the progress of sales :

| Period | | | Number of vegetable plants sold | Number of fruit plants sold | Income from sale | |
|---------|----|----|---------------------------------|-----------------------------|------------------|-----|
| | | | | | Gross | Net |
| 1 | | | 2 | 3 | 4 | 5 |
| | | | | | Rs. | Rs. |
| 1954-55 | .. | .. | 91,865 | 7,103 | 2,233 | 348 |
| 1955-56 | .. | .. | 1,02,928 | 2,457 | 1,400 | 301 |
| 1956-57 | .. | .. | 95,535 | 3,381 | 2,053 | 497 |
| 1957-58 | .. | .. | 91,016 | 1,074 | 1,489 | 686 |
| 1958-59 | .. | .. | 80,216 | 959 | 732 | 96 |

The progress in the year 1958-59 has been retarded due to continuous sickness of the gardener which ultimately resulted in his death.

(iv) *Marketing*—Mahewa is not the natural market of the area. The entire surplus goes to Bharthana Mandi, a place about 12 miles from Mahewa. The Union had, therefore, to create marketing relations with *Kachcha* commission agents of Bharthana Mandi up to 1957-58 and thereafter with the Co-operative Marketing Society, Bharthana, organized during 1958-59. It handled only 5,091 mds. of agricultural produce during the year 1958-59 with the following details :

| | | | | |
|-----------------|----|----|----|-------|
| | | | | Mds. |
| On pledge | .. | .. | .. | 2,457 |
| Direct purchase | .. | .. | .. | 212 |
| On commission | .. | .. | .. | 2,422 |

(v) *Supply of Farm or domestic requirements*—The work done by the Union in the field of supply of agricultural and domestic requirements has been quite commendable as is evident from the following figures :

| Period | Value of goods sold | | Others | Total |
|---------|---------------------|---------|--------|----------|
| | Implements | Manures | | |
| 1 | 2 | 3 | 4 | 5 |
| | Rs. | Rs. | Rs. | Rs. |
| 1954-55 | 11,914 | 2,049 | 28,352 | 42,315 |
| 1955-56 | 8,781 | 3,270 | 26,259 | 38,310 |
| 1956-57 | 36,200 | 13,376 | 39,767 | 89,343 |
| 1957-58 | 59,043 | 24,208 | 93,458 | 1,76,709 |
| 1958-59 | 1,08,156 | 37,330 | 48,318 | 1,93,804 |

(vi) *Mandir Se*—In order to communicate the message of Community Development in general and of Co-operation in particular and to propagate its different aspects in the villages, the Union is also publishing a fortnightly Hindi rural news magazine "Mandir Se". The annual subscription of "Mandir Se" is Rs.4 only and the paper is at present being subscribed by 1,650 individuals and institutions. A well paid Editor has been provided for this paper since August 10, 1957. A grant of Rs.3,000 has been received so far on this account through the generous help of Sri Albert Mayer.

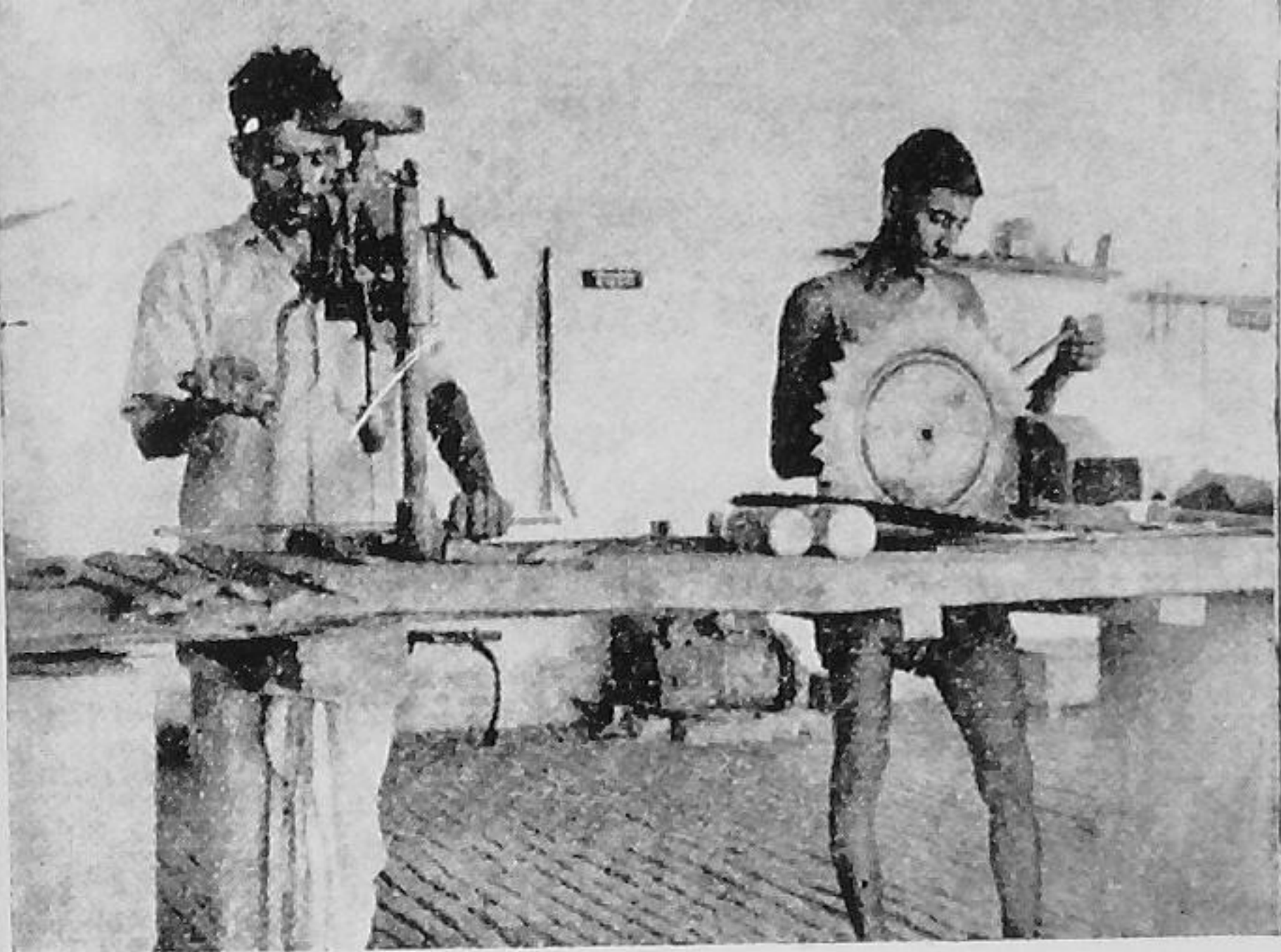
(vii) *Workshop*—Heavy demand of agricultural implements in the area prompted the union to establish its own workshop. No iron quota has yet been fixed for this workshop. Even then, the following implements were manufactured during 1958-59.

| | | | |
|-----------------------------|----|----|-----|
| (1) Levelling <i>Karhas</i> | .. | .. | 20 |
| (2) Potato hoes | .. | .. | 11 |
| (3) Singh hand hoes | .. | .. | 49 |
| (4) Dibblers | .. | .. | 167 |
| (5) wheel hoes | .. | .. | 18 |
| (6) Bore-hole cutters | .. | .. | 24 |
| (7) Threshers | .. | .. | 24 |
| (8) Persian Wheels | .. | .. | 4 |

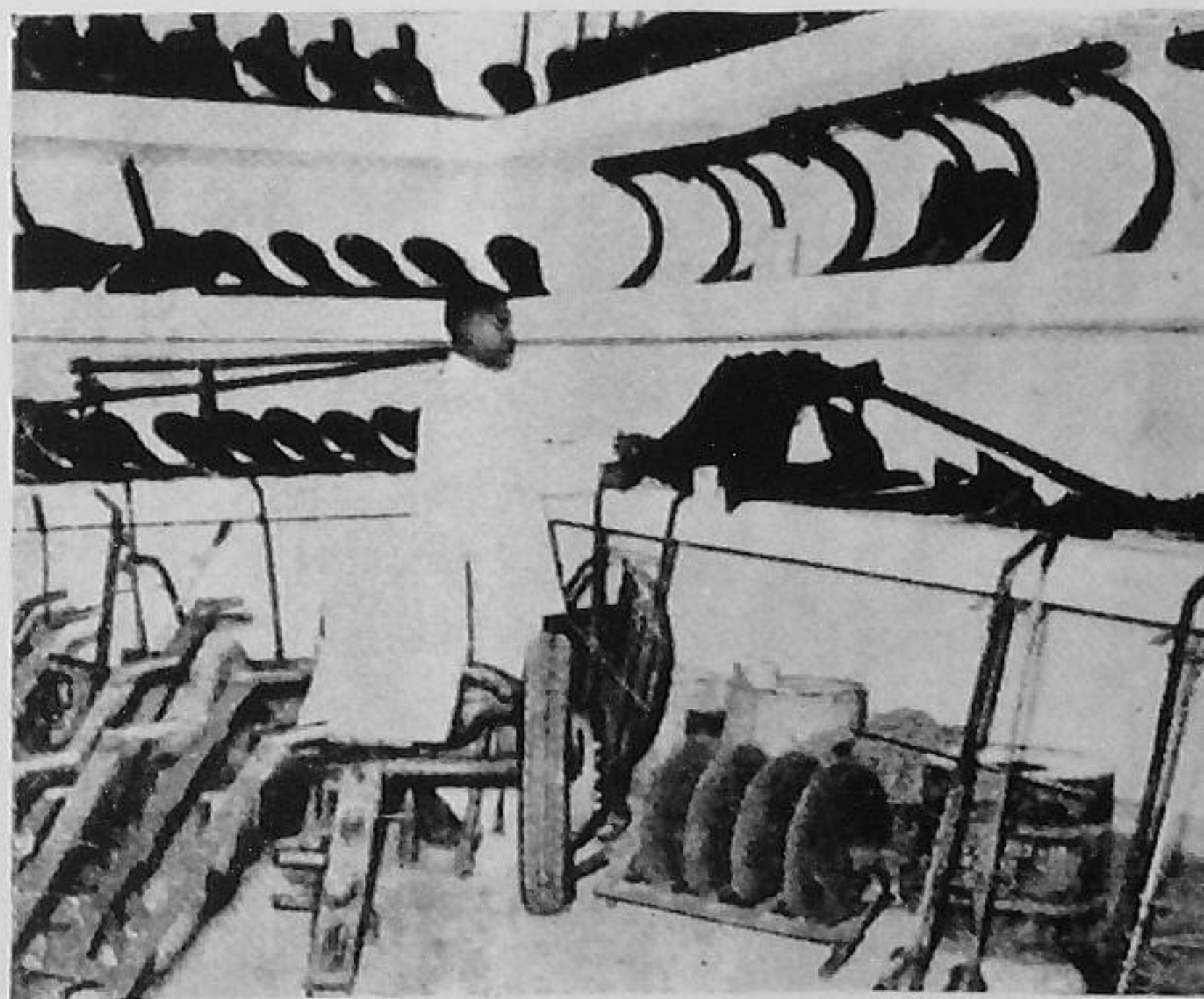
(viii) *Profits*—The Union is now earning good profits. An over-all position of working of the Union is reflected in the following table of profit and loss :

| On the working of the year | | | | Union | Seed Store | Total |
|----------------------------|----|----|----|---------------|------------|------------|
| 1 | | | | 2 | 3 | 4 |
| 1954-55 | .. | .. | .. | .. (—) 8,546 | (+) 4,919 | (—) 3,627 |
| 1955-56 | .. | .. | .. | .. (+) 7,060 | (+) 1,930 | (+) 8,990 |
| 1956-57 | .. | .. | .. | .. (+) 18,845 | (+) 5,267 | (+) 24,112 |
| 1957-58 | .. | .. | .. | .. (+) 34,951 | (+) 9,276 | (+) 44,227 |
| 1958-59 | .. | .. | .. | .. (+) 19,697 | (+) 3,468 | (+) 23,165 |

From the tables given above, it will thus be seen that the activities of the Union have been expanding from year to year. The volume of business has gone up manifold. During 1954-55, the Union showed a loss of Rs.3,627 but with the involvement of the people and better management in the operational programmes, the Union started showing signs of revitalisation and



*Mahewa Union's Bold step to start
Agriculture implements workshop*



Co-operative Farm, Ashokpuri

running with profits. Due to bad crops and Consolidation of Holdings operations being carried out, the total sales, especially of bricks, were adversely affected during 1958-59. Even then the Union made substantial profits.

Following conclusions can be drawn after the study of the over-all working of the Union :

- (1) Efficient management pays in the long run.
- (2) Opening of a branch of a Co-operative Bank at the Headquarters of the Union facilitates and increases the turn-over of the loaning activities.
- (3) Due to existence of the primaries, the mutual contacts of the members are usually more frequent.
- (4) To help the primaries it appears essential that the Union of this nature should look after the regular supply line for meeting the requirements of agricultural production.
- (5) For the efficient working of a marketing society, it is essential that it may be located either in a *Mandior* at some convenient point wherefrom purchases and sales transactions may be carried out easily.
- (6) A few items of service, e.g. supply of seed, fertilizers, implements, etc. may be taken in the initial stages by such Unions. The activities may be expanded gradually in the light of experience gained and the availability of resources. Too many things should not be taken up all at once.

CHAPTER VII

CO-OPERATIVE FARM, ASHOKPURI, DISTRICT
ETAWAH

Tahsil Bidhuna in district Etawah has vast areas under *Usar* and *Banjar*. Under the Grow-More-Food Scheme, which was launched as early as 1949, 500 acres of land were acquired at Ashokpuri for carrying out farming on co-operative lines. This land had large patches of *Usar*. It also had some trees of *Dhak*, *Kareel*, *Gadar*, etc. Etawah had a Pilot Project Division at that time. Hence, it was decided that the Deputy Development Officer (Planning), Etawah, should take up this project and arrange to try an experiment on co-operative farming. As such a Co-operative Society, known as Ashokpuri Co-operative Farming and Industrial Society, Ltd., was constituted in May, 1950, having the farm land as its area of operation. The society was registered later on and the Co-operative and the Planning Departments jointly decided to run it as a co-operative farm.

It was with the help of Government tractors that 325 acres of land were broken, the total expenditure on this score being about Rs.21,200. Another Rs.4,000 was spent on the lay-out of the land, making farm road, lateral roads and 5 acre plots, *Mendhs*, etc. Forty families were engaged in this co-operative enterprise. In order to provide effective irrigation, a sum of Rs.30,000 was spent in boring of tube-wells. Later on, it was felt that the tractorisation charges were very heavy, hence, a tractor along with necessary equipment was purchased by the society at a cost of Rs.9,164-1-0. A brick-kiln was also started. The society invested a sum of Rs.30,000 but later on it was discovered that the soil was not suitable for brick-making.

The project, which was started with a good deal of enthusiasm could not yield the desired results. The working of Co-operative Farm was more with Government help and the families which were involved in it were more interested in getting their wages rather than working on the co-operative aspect. The results achieved were not found to be satisfactory. Gradually, the number of members started decreasing, so also the area under cultivation. The tractor also gave way. In May, 1954, the society took a loan of Rs.5,000 and purchased 14 pairs of he-buffaloes. The members continued cultivating the land on behalf of the society. Production for want of irrigation facilities and unfavourable wheather conditions showed further decrease. In July, 1955, a decision was taken to procure a Government tractor on hire. *Batai* system

was introduced wherein the members and the society agreed to share the costs and the produce half and half. By that time, the total investment of the society in the farm was of more than Rs.50,000 and most of it turned out to be a sort of liability. Liabilities continued to increase further and interest charges went on multiplying. Accounts were also not properly scrutinised and meetings of the members were not held regularly to explain the position of the working of the society. It was in the year 1956 that a decision was taken to liquidate the society.

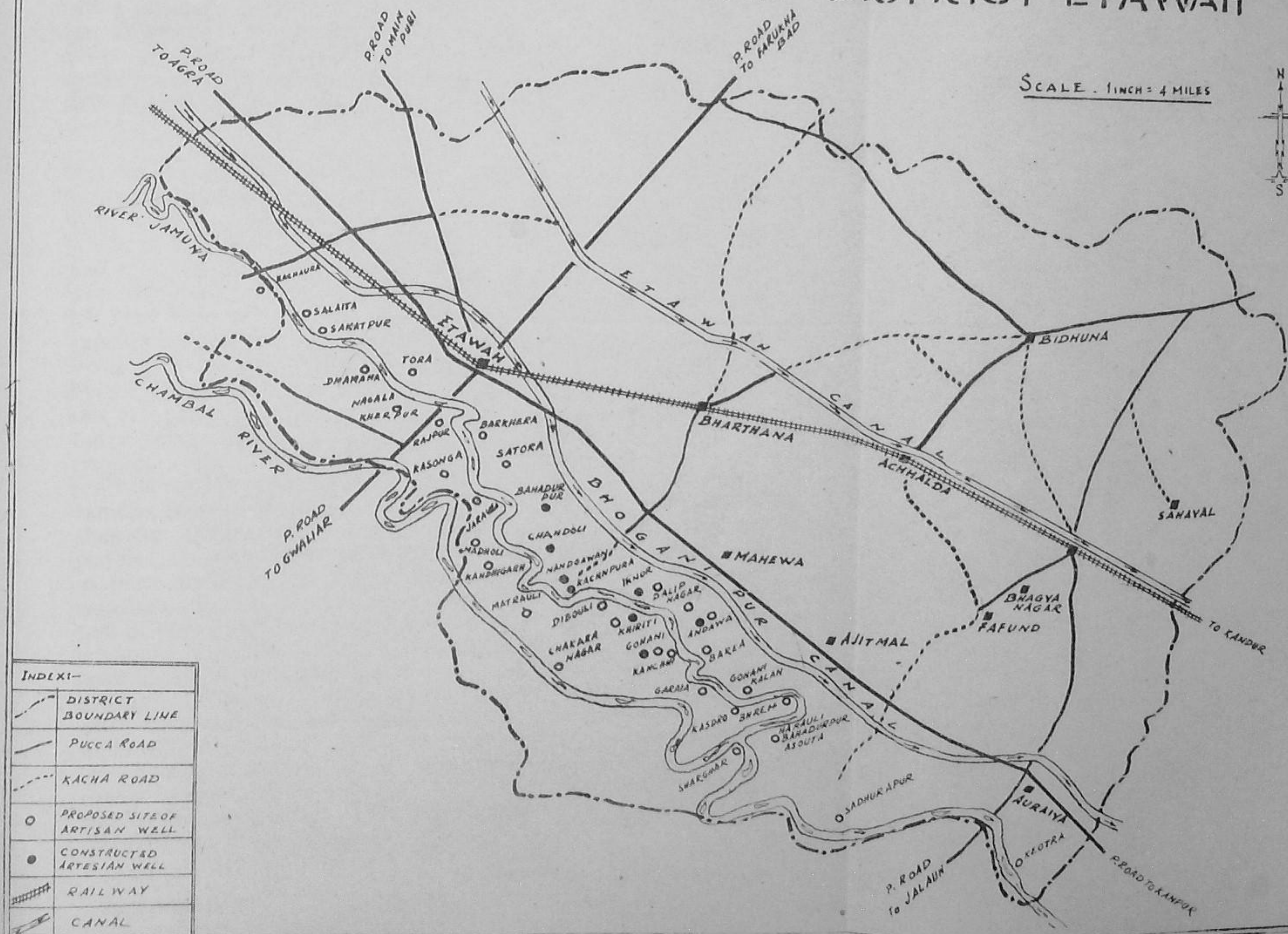
Reorganization—The results of the working of the society gave a serious setback to the co-operative venture. Hence, a meeting was called in April, 1956, to decide as to what further steps should be taken to put the society in a good shape. One of the suggestions was that the Department of Agriculture may take over this farm and run it as a Government farm. The members, however, suggested that instead of having cultivation on co-operative basis for the entire area of all the members, it would be feasible to have small groups of members, say, of five to ten, and then carry out agricultural operations group-wise according to their choice and liking. The area assigned to each group would vary according to its membership, the share per member being about 10 acres. It was further decided that of the total produce, two-thirds may be taken by the group and distributed among the members while one-third should go to the society for paying off the old liabilities.

Working of the Revised System—The revised system of grouping started showing signs of giving new life to the members who started carrying out their operations with enthusiasm. At present, there are eight groups of about 40 members who are working on the farm. The total area which is being cultivated is about 220 acres. The average yield has increased and the society has been able to pay back a sum of Rs.38,360 against its liabilities. The following table gives the financial position in brief of the society :

| Particulars | | | | | | Amount |
|-------------------------------|----|----|----|----|----|--------|
| 1 | | | | | | 2 |
| | | | | | | Rs. |
| Total dues on the society | .. | .. | .. | .. | .. | 67,786 |
| Payment of dues up to 1956-57 | .. | .. | .. | .. | .. | 4,800 |
| Payment of dues after 1956-57 | .. | .. | .. | .. | .. | 33,560 |
| Total payment of the dues | .. | .. | .. | .. | .. | 38,360 |
| Dues unpaid at present | .. | .. | .. | .. | .. | 29,426 |

From the above table, it will thus be seen that during the last three years, the Society has been able to pay off some of its liabilities. The Tube-well and other authorities concerned have been requested to write off a part of the amounts against the society as the tube-wells, etc., could not succeed. It is hoped that this amount will also be squared up. Still the society has got to pay Rs.29,426 against the old liabilities, but the way the programme is proceeding is encouraging enough and it is hoped that the group system will work well and it would be possible to run the Co-operative Farm on sound lines.

MAP SHOWING PROPOSED SITES OF ARTISAN WELLS IN JAMUNA KACHCHAR DISTRICT ETAWAH



ARTESIAN WELLS SCHEME

Artisian wells are commonly found in our State in Tarai area. There are under-ground currents of water but in cases where impervious rocks do not allow further percolation of water in deeper layers of soil, the water begins to move at the level of depression and starts flowing out as it maintains its level.

Sri Anand Madhav Shukla, a progressive farmer of village Dalip Nagar, deserves congratulations for trying out an experiment, as early as 1946, for working on an artesian well in his village which is located in the Kachhar area of the Jamuna River. He had a number of set-backs in carrying out the experiment but he was ultimately successful in getting an artesian well for irrigating his land after working for about four years, i.e. in 1950. This experiment provided an impetus to people of the nearby villages. From 1950 to 1956, eight more new artesian wells were sunk by the people with their own resources, the average being about one well per year. The progress was very slow, hence it was felt that a survey should be made and a scheme worked out to popularise this project in the Kachhar area of the Jamuna River. Accordingly, a survey was made of 33 villages on both sides of the Jamuna River, covering a distance of about 40 miles. Forty-one sites for sinking wells were selected in consultation with the people. A scheme was prepared to help the people in the boring of these wells for which arrangements for necessary equipment were made by the Project staff. It was also decided that the total cost of boring will have to be met by the Gaon Sabhas. This cost is usually about Rs.5,000 but under special circumstances it also goes higher if necessary stratum of under-ground water is not available. The work of boring was started in the year 1957-58 when one well was constructed. In the subsequent year, three wells were constructed and up to September, this year four wells have been constructed. In this way, the number of artesian wells comes to eight, the total being 17. Twenty-four new wells have still to be constructed. The distribution of these wells in the three Blocks is as follows :

| | | | | | | |
|-----------------|----|----|----|-------|----|-----------|
| (1) Mahewa | .. | .. | .. | .. | .. | 8 |
| (2) Chakarnagar | .. | .. | .. | .. | .. | 8 |
| (3) Ajitmal | .. | .. | .. | .. | .. | 1 |
| | | | | Total | .. | <u>17</u> |

This is a very useful scheme but it becomes difficult for cultivators to find adequate finances for constructing artesian wells. Though it has been possible to get funds from these villages as they get good returns from the sale of fish from the waters of the Jamuna flowing in front of these villages ; yet such income is not sufficient as to pay up the total expenses. This is why the programme staggers from year to year. The following table gives the location of 17 wells in different areas together with their costs :

| Serial no. | Name of Block where located | Name of the well | Type of well | Size of well | Total cost of boring |
|------------|-----------------------------|-------------------------|---------------|--------------|-----------------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | | | | | Rs. |
| 1 | Mahewa | .. Dalip Nagar no. 1 .. | Strainer well | .. 4" | 4,800 |
| 2 | Do. | .. Dalip Nagar no. 2 .. | Ditto | .. 4" | 4,700 |
| 3 | Do. | .. Dalip Nagar no. 3 .. | Cavity well | .. 6" .. | 4,200 |
| 4 | Chakarnagar | .. Gohani no. 1 .. | Strainer well | .. 6" .. | 5,900 |
| 5 | Do. | .. Gohani no. 2 .. | Ditto | .. 6" .. | 5,800 |
| 6 | Do. | .. Gohani no. 3 .. | Ditto | .. 6" .. | 6,000 |
| 7 | Do. | .. Khiriti .. | Ditto | .. 6" .. | 7,000 |
| 8 | Mahewa | .. Bahadurpur Ghar .. | Ditto | .. 6" .. | 8,000 |
| 9 | Do. | .. Andava .. | Ditto | .. 6" .. | 18,000 (Semi artisan) |
| 10 | Do. | .. Eknor no. 1 .. | Cavity well | .. 6" .. | 3,676 |
| 11 | Do. | .. Eknor no. 2 .. | Ditto | .. 6" .. | 4,000 |
| 12 | Chakarnagar | .. Khandhesi Ghar no. 1 | Ditto | .. 6" .. | 3,902 |
| 13 | Do. | .. Khandeshi Ghar no. 2 | Ditto | .. 6" .. | 4,000 |
| 14 | Mahewa | .. Chindauli .. | Ditto | .. 6" .. | Accounts are yet to be finalized. |
| 15 | Chakarnagar | .. Gadha Kasda .. | Ditto | .. 6" .. | |
| 16 | Do. | .. Khanchi .. | Ditto | .. 6" .. | |
| 17 | Ajitmal | .. Gohani Kalan .. | Ditto | .. 6" .. | |

From the above table it will thus be seen that the progress of the scheme is very slow still.

Since this scheme is liked by the people and they are evincing interest, the Gaon Sabhas are coming forward to have it implemented in the villages early. The Project staff which is equipped to carry out boring operations, cannot take up the construction of

the wells till necessary finances are arranged. The income from fisheries to these villages is also erratic, depending on the water supply and market rates. It is only now that a provision has been made for advancing takavi loans to Gaon Sabhas for the construction of such wells. Provision has also been made to levy irrigation charges on the farmers being benefited by such wells. Realization of dues will also start from this year. With the help of this income and that of fisheries, new sites will be located in similar areas to sink more wells. Each well is fitted with a sluice valve which controls the flow of water in case water is not required for irrigation purposes. There was a feeling that if this is done, it may affect the flow of water subsequently but so far no adverse effects have been noticed. It is further proposed to start constructing *pucca guls* on these wells with the help of the sand and moraine available at cheap rates in the bed of the Januna River. Moulding of cement-concrete blocks will be helpful in making such *guls*. There is no doubt that the cost of these *guls* will be a bit high but this is necessary as it will result in saving losses of 15 to 20 per cent of water which is lost through percolation, breaches, etc. Village people have pointed out that like the minor irrigation schemes, this scheme too should be subsidised in the initial stages. This request is not being encouraged and it is hoped that with the help of the local resources and by grant of takavi loans, the scheme can be extended to all the villages of this area. Four sets of boring equipment instead of one have been arranged to expedite the completion of the programme.

CHAPTER IX

SERICULTURE SCHEME

The Forest and the Canal Departments deserve congratulations for showing the way that mulberry plants can be grown very successfully in Etawah District, provided necessary care is given to them in the early stages. On the side land of the canal, the Forest Department has carried out large-scale plantation of mulberry trees with a view to developing a source of timber for the manufacture of sports goods. Their experiment is still going on and mulberries have been able to survive very effectively in that area. Though no sports goods industry has been set up so far, as the plants are still young, it was in collaboration with them that the Project staff decided to start a few silk-rearing centres. The Forest Department allowed the use of mulberry for the purpose on nominal payment. This work was started in the year 1953 when eight village leaders were sent for sight-seeing to Prem Nagar (Dehra Dun) for studying the scheme. There was some initial success but the scheme could not make much headway as the rearers had to depend for the supply of seed on outside stations and there were no good arrangements for the disposal of cocoons. Any way, this trial showed the way for giving more consideration to the proposal. It was during December, 1955, that four members of Youth Clubs were sent for one month's training in the silk worm rearing to Prem Nagar (Dehra Dun) so that on return they may start this work in their clubs, supply of leaves being ensured from the Forest authorities. These clubs functioned well and arrangements were also made to collect the cocoons and for their disposal. It was at this stage that the Industries Department was involved in this programme. The Department, after being convinced about the potentialities of the expansion, started a silk rearing centre at Ajitmal in the P. D. P., Etawah, during 1957. They acquired about 7.5 acres of land very close to Ajitmal and started a mulberry plantation programme in the farm with a view to supplying saplings to the villages of the nearby areas. Of late, they have also started a cocoon collecting centre which is located at Babarpur about a mile from Ajitmal. With the introduction of the scheme of the Industries Department, the work in the district is expanding and they have started another farm in Auraiya about 14 miles from Ajitmal. Gradually, the area of operation of the

scheme is increasing and the following table* shows the progress in this direction :

Table showing Progress of Sericulture Programme being run by the Industries Department

| Year | Outpost Villages | Rearers | | Production | Value |
|------|------------------|---------|-----|------------|-------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | | | | Mds. | Rs. |
| 1954 | 1 | 3 | 12 | 0 30 8 | 147 7 6 |
| 1955 | 1 | 9 | 23 | 9 12 6 | 1,777 4 0 |
| 1956 | 2 | 14 | 79 | 52 16 15 | 7,907 9 0 |
| 1957 | 5 | 34 | 250 | 150 12 9 | 20,000 0 0 |
| 1958 | 7 | 50 | 339 | 162 10 8 | 26,568.43 |
| 1959 | 7 | 55 | 230 | 125 30 4 | 18,225.00** |

It is estimated that a family can earn Rs.30 to Rs.80 per crop, i.e. within 15 days if the quality of the silk worms to be reared is ensured well in time.

Grafting of Exotic Plants—Mulberry plants which are grown in our State do not provide good food for the silk. Japanese mulberry plants have bigger leaves though their root system is not as strong as ours. Grafting of these varieties is, therefore, being carried out on a large-scale by the Industries Department farm at Ajitmal on indigenous stocks. The grafts so prepared are being distributed to the villages for multiplication. They are thriving very well in the area. With the availability of mulberry plants from the Forest area and the large-scale expansion programme of planting of mulberry trees by the Industries Department, it is expected that Etawah will turn out to be a very good centre of silk production. A small silk weaving unit is also being installed by the Industries Department at Auraiya. This will provide another fillip to the sericulture programme in the district.

*Figures supplied by the Industries Department.

**6,500 layings are being reared in the villages which is the last crop of this year and a production of 50 mds. is expected which will value about Rs.6,250.00.

achieve its maximum and the following table shows the results in this direction:

Table showing progress of Industrial Development

| Year | General Average | Spinning | Weaving | Other Industries |
|------|-----------------|----------|---------|------------------|
| 1911 | 100 | 100 | 100 | 100 |
| 1912 | 105 | 110 | 108 | 102 |
| 1913 | 110 | 115 | 112 | 105 |
| 1914 | 115 | 120 | 118 | 108 |
| 1915 | 120 | 125 | 122 | 110 |
| 1916 | 125 | 130 | 128 | 112 |
| 1917 | 130 | 135 | 132 | 115 |
| 1918 | 135 | 140 | 138 | 118 |
| 1919 | 140 | 145 | 142 | 120 |
| 1920 | 145 | 150 | 148 | 122 |
| 1921 | 150 | 155 | 152 | 125 |
| 1922 | 155 | 160 | 158 | 128 |
| 1923 | 160 | 165 | 162 | 130 |
| 1924 | 165 | 170 | 168 | 132 |
| 1925 | 170 | 175 | 172 | 135 |
| 1926 | 175 | 180 | 178 | 138 |
| 1927 | 180 | 185 | 182 | 140 |
| 1928 | 185 | 190 | 188 | 142 |
| 1929 | 190 | 195 | 192 | 145 |
| 1930 | 195 | 200 | 198 | 148 |
| 1931 | 200 | 205 | 202 | 150 |
| 1932 | 205 | 210 | 208 | 152 |
| 1933 | 210 | 215 | 212 | 155 |
| 1934 | 215 | 220 | 218 | 158 |
| 1935 | 220 | 225 | 222 | 160 |
| 1936 | 225 | 230 | 228 | 162 |
| 1937 | 230 | 235 | 232 | 165 |
| 1938 | 235 | 240 | 238 | 168 |
| 1939 | 240 | 245 | 242 | 170 |
| 1940 | 245 | 250 | 248 | 172 |
| 1941 | 250 | 255 | 252 | 175 |
| 1942 | 255 | 260 | 258 | 178 |
| 1943 | 260 | 265 | 262 | 180 |
| 1944 | 265 | 270 | 268 | 182 |
| 1945 | 270 | 275 | 272 | 185 |
| 1946 | 275 | 280 | 278 | 188 |
| 1947 | 280 | 285 | 282 | 190 |
| 1948 | 285 | 290 | 288 | 192 |
| 1949 | 290 | 295 | 292 | 195 |
| 1950 | 295 | 300 | 298 | 198 |
| 1951 | 300 | 305 | 302 | 200 |
| 1952 | 305 | 310 | 308 | 202 |
| 1953 | 310 | 315 | 312 | 205 |
| 1954 | 315 | 320 | 318 | 208 |
| 1955 | 320 | 325 | 322 | 210 |
| 1956 | 325 | 330 | 328 | 212 |
| 1957 | 330 | 335 | 332 | 215 |
| 1958 | 335 | 340 | 338 | 218 |
| 1959 | 340 | 345 | 342 | 220 |
| 1960 | 345 | 350 | 348 | 222 |
| 1961 | 350 | 355 | 352 | 225 |
| 1962 | 355 | 360 | 358 | 228 |
| 1963 | 360 | 365 | 362 | 230 |
| 1964 | 365 | 370 | 368 | 232 |
| 1965 | 370 | 375 | 372 | 235 |
| 1966 | 375 | 380 | 378 | 238 |
| 1967 | 380 | 385 | 382 | 240 |
| 1968 | 385 | 390 | 388 | 242 |
| 1969 | 390 | 395 | 392 | 245 |
| 1970 | 395 | 400 | 398 | 248 |
| 1971 | 400 | 405 | 402 | 250 |
| 1972 | 405 | 410 | 408 | 252 |
| 1973 | 410 | 415 | 412 | 255 |
| 1974 | 415 | 420 | 418 | 258 |
| 1975 | 420 | 425 | 422 | 260 |
| 1976 | 425 | 430 | 428 | 262 |
| 1977 | 430 | 435 | 432 | 265 |
| 1978 | 435 | 440 | 438 | 268 |
| 1979 | 440 | 445 | 442 | 270 |
| 1980 | 445 | 450 | 448 | 272 |
| 1981 | 450 | 455 | 452 | 275 |
| 1982 | 455 | 460 | 458 | 278 |
| 1983 | 460 | 465 | 462 | 280 |
| 1984 | 465 | 470 | 468 | 282 |
| 1985 | 470 | 475 | 472 | 285 |
| 1986 | 475 | 480 | 478 | 288 |
| 1987 | 480 | 485 | 482 | 290 |
| 1988 | 485 | 490 | 488 | 292 |
| 1989 | 490 | 495 | 492 | 295 |
| 1990 | 495 | 500 | 498 | 298 |
| 1991 | 500 | 505 | 502 | 300 |
| 1992 | 505 | 510 | 508 | 302 |
| 1993 | 510 | 515 | 512 | 305 |
| 1994 | 515 | 520 | 518 | 308 |
| 1995 | 520 | 525 | 522 | 310 |
| 1996 | 525 | 530 | 528 | 312 |
| 1997 | 530 | 535 | 532 | 315 |
| 1998 | 535 | 540 | 538 | 318 |
| 1999 | 540 | 545 | 542 | 320 |
| 2000 | 545 | 550 | 548 | 322 |
| 2001 | 550 | 555 | 552 | 325 |
| 2002 | 555 | 560 | 558 | 328 |
| 2003 | 560 | 565 | 562 | 330 |
| 2004 | 565 | 570 | 568 | 332 |
| 2005 | 570 | 575 | 572 | 335 |
| 2006 | 575 | 580 | 578 | 338 |
| 2007 | 580 | 585 | 582 | 340 |
| 2008 | 585 | 590 | 588 | 342 |
| 2009 | 590 | 595 | 592 | 345 |
| 2010 | 595 | 600 | 598 | 348 |
| 2011 | 600 | 605 | 602 | 350 |
| 2012 | 605 | 610 | 608 | 352 |
| 2013 | 610 | 615 | 612 | 355 |
| 2014 | 615 | 620 | 618 | 358 |
| 2015 | 620 | 625 | 622 | 360 |
| 2016 | 625 | 630 | 628 | 362 |
| 2017 | 630 | 635 | 632 | 365 |
| 2018 | 635 | 640 | 638 | 368 |
| 2019 | 640 | 645 | 642 | 370 |
| 2020 | 645 | 650 | 648 | 372 |
| 2021 | 650 | 655 | 652 | 375 |
| 2022 | 655 | 660 | 658 | 378 |
| 2023 | 660 | 665 | 662 | 380 |
| 2024 | 665 | 670 | 668 | 382 |
| 2025 | 670 | 675 | 672 | 385 |
| 2026 | 675 | 680 | 678 | 388 |
| 2027 | 680 | 685 | 682 | 390 |
| 2028 | 685 | 690 | 688 | 392 |
| 2029 | 690 | 695 | 692 | 395 |
| 2030 | 695 | 700 | 698 | 398 |
| 2031 | 700 | 705 | 702 | 400 |
| 2032 | 705 | 710 | 708 | 402 |
| 2033 | 710 | 715 | 712 | 405 |
| 2034 | 715 | 720 | 718 | 408 |
| 2035 | 720 | 725 | 722 | 410 |
| 2036 | 725 | 730 | 728 | 412 |
| 2037 | 730 | 735 | 732 | 415 |
| 2038 | 735 | 740 | 738 | 418 |
| 2039 | 740 | 745 | 742 | 420 |
| 2040 | 745 | 750 | 748 | 422 |
| 2041 | 750 | 755 | 752 | 425 |
| 2042 | 755 | 760 | 758 | 428 |
| 2043 | 760 | 765 | 762 | 430 |
| 2044 | 765 | 770 | 768 | 432 |
| 2045 | 770 | 775 | 772 | 435 |
| 2046 | 775 | 780 | 778 | 438 |
| 2047 | 780 | 785 | 782 | 440 |
| 2048 | 785 | 790 | 788 | 442 |
| 2049 | 790 | 795 | 792 | 445 |
| 2050 | 795 | 800 | 798 | 448 |
| 2051 | 800 | 805 | 802 | 450 |
| 2052 | 805 | 810 | 808 | 452 |
| 2053 | 810 | 815 | 812 | 455 |
| 2054 | 815 | 820 | 818 | 458 |
| 2055 | 820 | 825 | 822 | 460 |
| 2056 | 825 | 830 | 828 | 462 |
| 2057 | 830 | 835 | 832 | 465 |
| 2058 | 835 | 840 | 838 | 468 |
| 2059 | 840 | 845 | 842 | 470 |
| 2060 | 845 | 850 | 848 | 472 |
| 2061 | 850 | 855 | 852 | 475 |
| 2062 | 855 | 860 | 858 | 478 |
| 2063 | 860 | 865 | 862 | 480 |
| 2064 | 865 | 870 | 868 | 482 |
| 2065 | 870 | 875 | 872 | 485 |
| 2066 | 875 | 880 | 878 | 488 |
| 2067 | 880 | 885 | 882 | 490 |
| 2068 | 885 | 890 | 888 | 492 |
| 2069 | 890 | 895 | 892 | 495 |
| 2070 | 895 | 900 | 898 | 498 |
| 2071 | 900 | 905 | 902 | 500 |
| 2072 | 905 | 910 | 908 | 502 |
| 2073 | 910 | 915 | 912 | 505 |
| 2074 | 915 | 920 | 918 | 508 |
| 2075 | 920 | 925 | 922 | 510 |
| 2076 | 925 | 930 | 928 | 512 |
| 2077 | 930 | 935 | 932 | 515 |
| 2078 | 935 | 940 | 938 | 518 |
| 2079 | 940 | 945 | 942 | 520 |
| 2080 | 945 | 950 | 948 | 522 |
| 2081 | 950 | 955 | 952 | 525 |
| 2082 | 955 | 960 | 958 | 528 |
| 2083 | 960 | 965 | 962 | 530 |
| 2084 | 965 | 970 | 968 | 532 |
| 2085 | 970 | 975 | 972 | 535 |
| 2086 | 975 | 980 | 978 | 538 |
| 2087 | 980 | 985 | 982 | 540 |
| 2088 | 985 | 990 | 988 | 542 |
| 2089 | 990 | 995 | 992 | 545 |
| 2090 | 995 | 1000 | 998 | 548 |
| 2091 | 1000 | 1005 | 1002 | 550 |
| 2092 | 1005 | 1010 | 1008 | 552 |
| 2093 | 1010 | 1015 | 1012 | 555 |
| 2094 | 1015 | 1020 | 1018 | 558 |
| 2095 | 1020 | 1025 | 1022 | 560 |
| 2096 | 1025 | 1030 | 1028 | 562 |
| 2097 | 1030 | 1035 | 1032 | 565 |
| 2098 | 1035 | 1040 | 1038 | 568 |
| 2099 | 1040 | 1045 | 1042 | 570 |
| 2100 | 1045 | 1050 | 1048 | 572 |

It is estimated that a family can earn Rs. 50 to Rs. 60 per month within 12 days if the quality of the silk rearing is improved and carried well in hand.

Outgoing of Exotic Plants - Mulberry plants are not only in our State but also outside and food for the silkworms. Mulberry plants have been found in various parts of the State. Outgoing of these plants is increasing day by day. It is carried out on a large scale by the Industries Department. About 100 indigenous stocks of the plants are prepared and distributed to the villages for multiplication. They are very well in the State. With the availability of mulberry plants in the forest area and the large-scale expansion programme of planting of mulberry trees by the Industries Department it is expected that Erawas will turn out to be a very good source of production. A small silk rearing unit is also being started in the Industries Department at Anapurna. This will contribute to the silk rearing programme in the district.

There is a need for the Industries Department to take steps to encourage the silk rearing in the villages and to the extent of the Government of India is expected to take steps to this effect.

The Government of India is expected to take steps to this effect. The Government of India is expected to take steps to this effect. The Government of India is expected to take steps to this effect.

PART III
NEW PROJECTS AND STUDIES

CHAPTER X

NEW PROJECTS AND STUDIES STARTED DURING
THE LAST TWO YEARS

As pointed out earlier, some eleven new projects and studies were carried out during the last two years, in addition to eight old continuing ones. No additional finances or personnel were provided for the running of these projects. For the Women's Programme, the posts of male V. L. Ws. provided in the P. D. P. were converted into those of female V. L. Ws. Three Junior Associates were, however, provided for supervisory work from the Planning Research and Action Institute. As regards Co-operative ventures, necessary finances were provided by the people and the Co-operative Department jointly.

1. Food Processing Co-operative Society Ltd., Mahewa (Etawah)

The first co-operative industrial venture of the P.D.P., Etawah is the starting of a Food Processing Co-operative Unit at Mahewa in the early part of 1959. The growers of peas desired that a food processing unit for canning of peas and other local products be started to help the growers in securing better prices for their produce and also for providing employment to the local people. Before starting this unit, some pre-pilot experimentation was carried out during the year 1958 by growing some table varieties of peas and getting them canned at Lucknow. This experimentation confirmed the belief that canning of peas is possible at Mahewa and the cultivators can get higher rates for their crops by selling green peas.

Being encouraged with this venture, the cultivators of the nearby villages of Mahewa decided to start a Food Processing Co-operative Society of their own. They agreed to collect funds towards the share capital and requested the Co-operative Department to help them in financing the project. The industries and the Co-operatives Sections of the Planning Research and Action Institute, under the guidance of Sri Y. Lang Wong, Industrial Adviser, P.R.A.I., undertook to start the project.

Area of Operation—The area of operation of this society consists of 35 villages falling within a radius of five miles from Mahewa.

Membership—The society has five types of membership : (1) Producer-members, (ii) Special members, (iii) Society-members, (iv) Non-producer members, and (v) Nominal members. At present, there are sixty-one producer-members and six society

members. In special membership is the U. P. State Government. It is hoped that the membership will rise as soon as the factory comes in full operation.

Share Capital—The paid-up share capital of the society is Rs.54,650. The producer-members have purchased shares of the nominal value of Rs.16,600, the society members of Rs.8,000, and the State Government of Rs.40,000. In the case of producer-members, the paid-up share capital is Rs.6,650 while the Government and the Society's shares are fully paid.

Management—The management of the society is entrusted to its own Board of Directors, comprising 12 elected Directors from producers, three representatives of the State Government, one District Co-operative Bank's nominee, one representative of the Co-operative Union, Mahewa, and one nominee of the Registrar, Co-operative Societies. The Board of Directors is also authorised to co-opt the Directors from amongst the persons who take interest in co-operative movement and are interested in the working of the society. The President of the society is an elected producer-member and the Secretary is a nominee of the Registrar, Co-operative Societies, Uttar Pradesh. For the factory work, there is a provision of a Production Manager who is supposed to be trained in fruit and vegetable preservation industry.

Factory—The canning factory is located at Mahewa in the building of the Co-operative Union, Mahewa. The building has been altered according to the requirement of the factory.

The society was registered in December, 1958. The time left for the establishment of the factory was very short. Strenuous efforts to erect the factory by February, 1959, were made so that the society may catch the pea canning season. The factory is installed with modern equipment and is designed in such a way as to be completely free from dust and flies. It has got a diesel engine, can reforming unit, exhaust box, retorts, seamers, boiler, generator and other accessories. The total cost of the present equipment is Rs.42,691.

Operation—The factory started work on March, 4, 1959. It purchased 1, 174 maunds of green pea pods from 39 cultivators residing in 19 villages. The rate of pea pod was Rs.7 per maund. Out of this quantity, 952 maunds were actually utilized in canning and the balance was given to other canners or was disposed of otherwise. The shelling of the peas was done through manual labour. About 100 persons—mostly women, children and aged men, worked in the shelling hall and their average earning was of Re.1 to Rs.1-4 each.



*Food Processing Co-operative Society,
Mahewa*

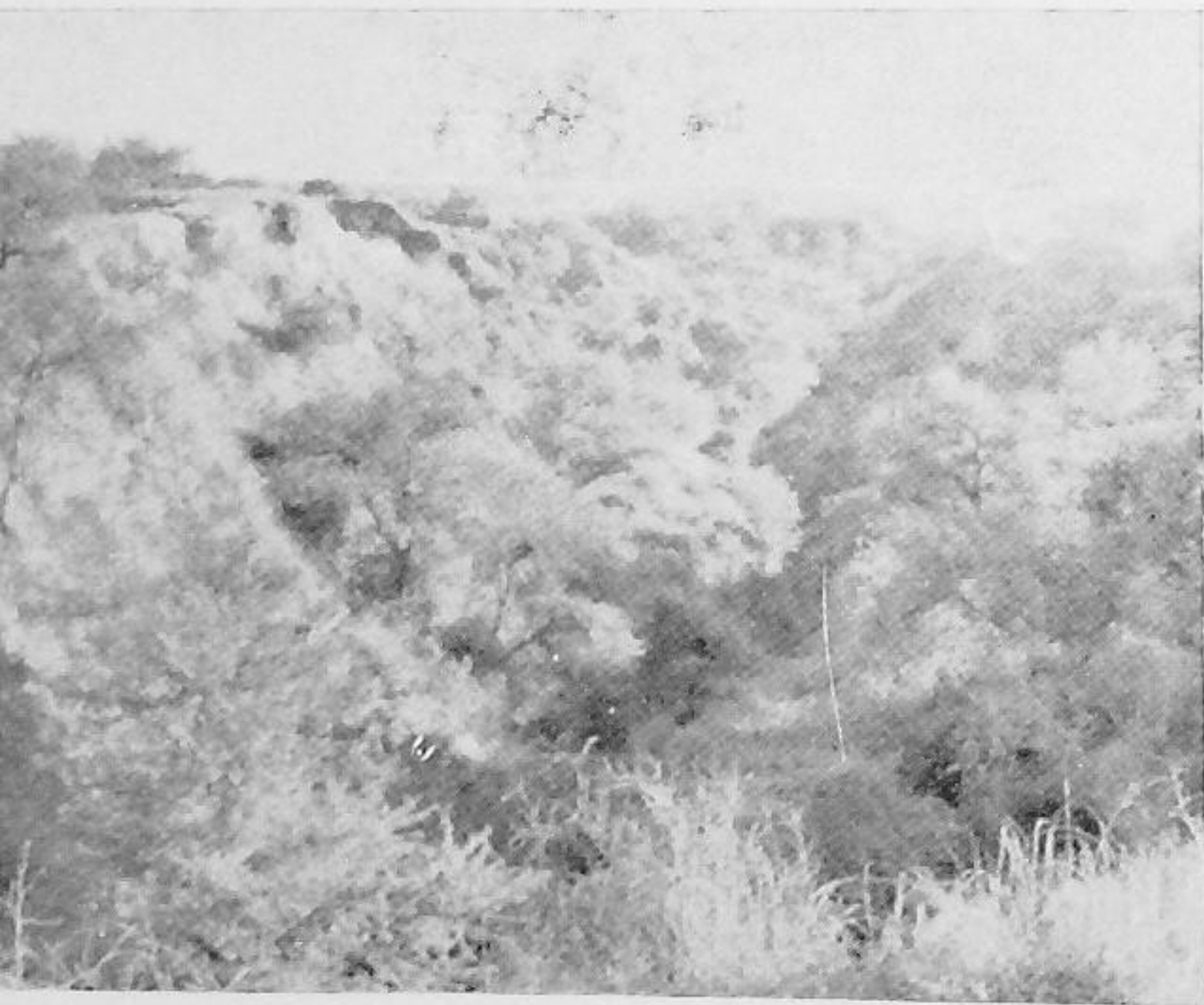


Filling of Peas



Sealing of cans

Pt. Anand Madho Shukla, who is a pioneer in working on Artisan wells. His dream came true after working for four years, i.e., from 1946-50, when the first Artisan well became successful in Yamuna Ravines



Yamuna Ravines

Government Sericulture Farm started by Industries Department at Village Garhiya



The factory worked for six days, single-shift and 15 days, double-shift. It employed another 77 persons, both technical and non-technical, in both the shifts. Ten students of the local Intermediate College also worked in the factory in the night shift, thus earning Rs.1-6 per day. The factory canned peas in 22,803 tins of 2 lb. size and 5,885 cans of 1 lb. size. The sales were mostly in Uttar Pradesh, Delhi and Calcutta.

As an experimental measure, the factory also prepared 156 bottles of tomato sauce and 139 jars of gooseberry jam.

On the whole, the factory worked well from the first year and earned some marginal profits also.

The achievements of this unit are summarised as follows :

- (1) It is a co-operative enterprize.
- (2) The unit has been set up in rural areas.
- (3) Members who grow peas for canning purposes live within a radius of about five miles.
- (4) This is the first industrial activity in the processing of agricultural commodities in the Block.
- (5) It has got a very good potential of providing employment to the local people. During March, 1959, the unit worked in two shifts, employed about 177 persons who were paid Rs.1-4 to Re.1-8 per day according to the type of duties they were required to perform. Besides this, landless labour's and cultivators' families got employment in picking peas from the fields. Some persons found employment in transport of peas from villages to the factory.
- (6) Total investment is to the tune of Rs. 50,000 which is not heavy considering the employment potential.
- (7) Another important feature of the unit is that about 10 students from the local college worked in the night shifts and thereby were able to earn wages to meet their educational expense.
- (8) Other products like canned petha, roseberry Jam, guavas and mangoes can also be prepared in the unit. The unit can remain in operation for about six months in a year and thus can give better returns to the cultivators for their produce and provide employment to the needy persons.

(9) New hands have received training for production work. They are able to handle equipment and can do very good work in the various processes of canning. The maximum daily production has been to the tune of about 2,000 cans but it can be increased to about 3,000 when the workers gain further efficiency in this work.

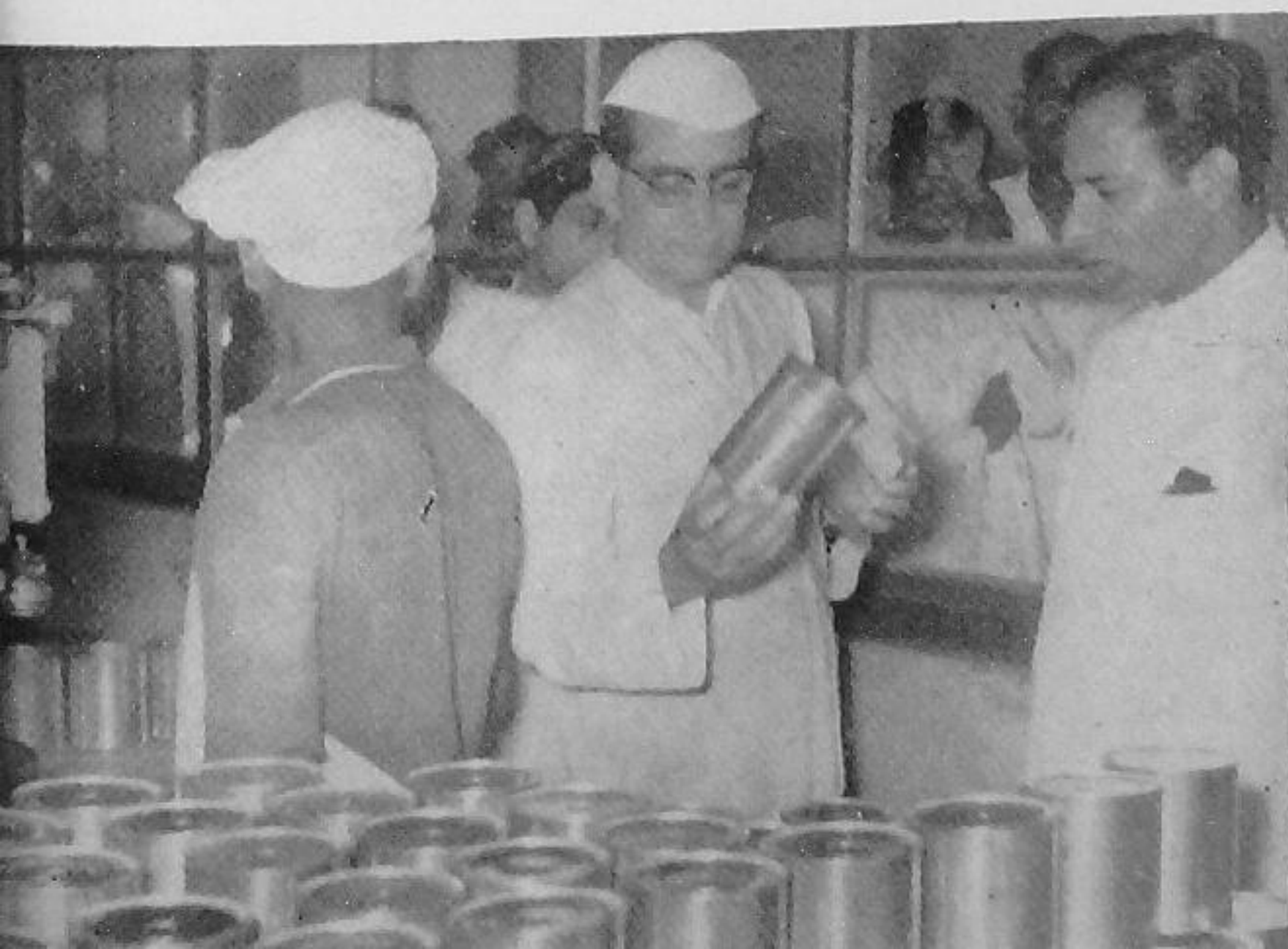
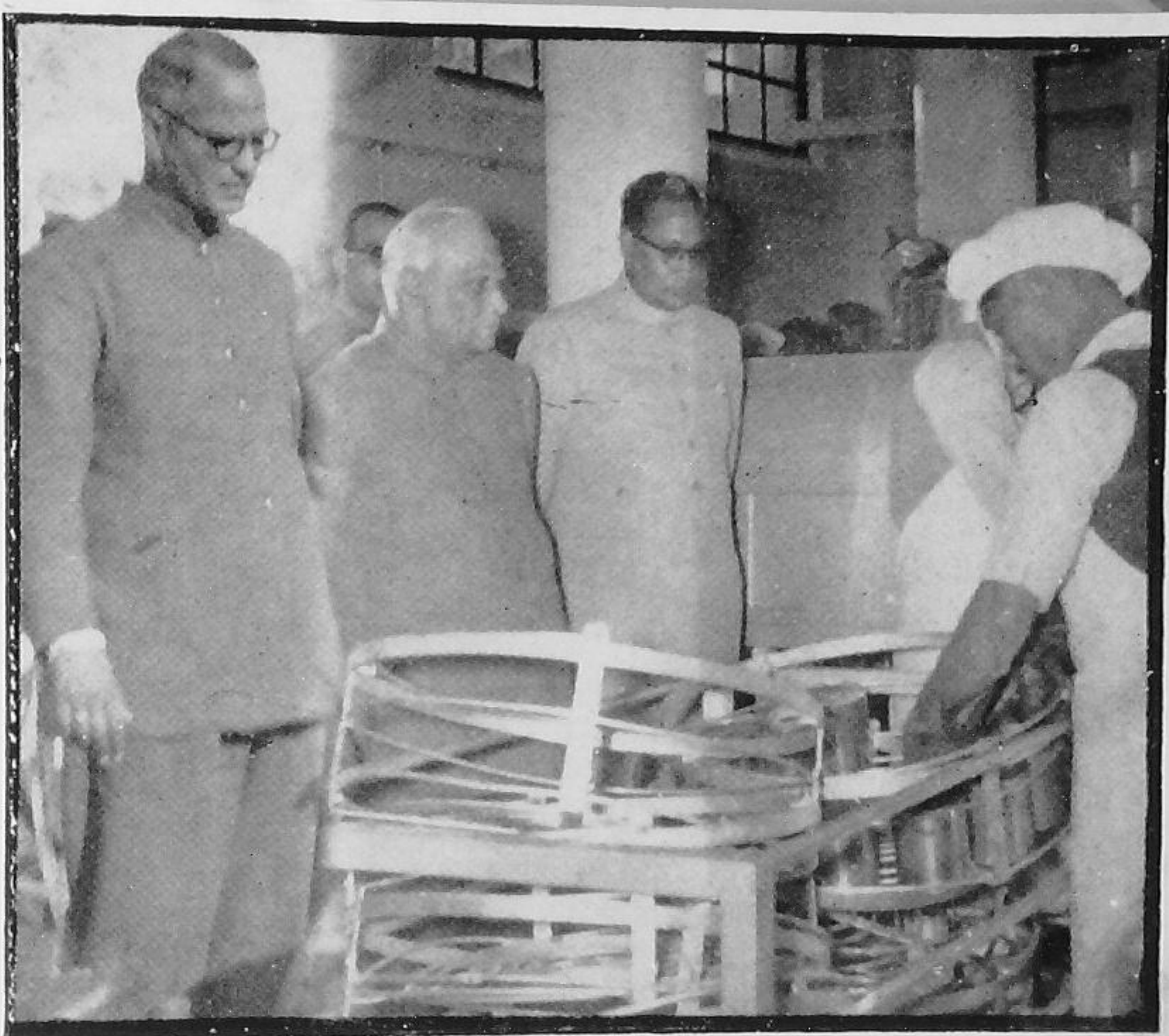
(10) About 29,000 tins were prepared during March, 1959.

(11) The cultivators earn Rs.500 to Rs.600 per acre from green peas as against Rs.250 to Rs.300 from dry peas.

Future Programme

The annual programme of the factory is under preparation and it is expected that the factory would run at least for six months in a year. To enable the factory run for the whole year, more equipment, such as pulper, pea podding machine, grading machine, heavy duty cooking machine, hand flanger, generator, etc., will be needed. Necessary action has been taken in this regard. The factory shall now be running from 15th December, to 31st March, and it is planned to prepare guava jelly, *aonla* preserve, tomato juice, tomato sauce and canning of green peas.

*Sri V. V. Giri,
Rajyapal, U. P.,
keenly observing the
Pea-canning process*



*Sri Mohan Lal Gautam, Minister
for Agriculture, U. P., examining
the finished product on his visit to
the Pea-canning Unit, Mahewa*

CHAPTER XI

USAR RECLAMATION

Etawah District possesses about 1.7 lac acres of *usar* land. Mahewa and Ajitmal Blocks are fortunate not to have any substantial area of *usar* but Bhagyanagar Block possesses about 20,000 acres of *usar* land which is considered unfit for growing any crop. During 1958, the problem of *usar* reclamation was discussed by the members of the Block Development Committee who opined that the Block officials may take up a small area for trying the various known methods for the reclamation of *usar* land. By such trials, it would be known which practices are suitable for adoption in the Block. Dibiapur Gram Sabha passed a resolution for giving 50 acres of *usar* patch by the side of the village for experimental purpose.

Programme Planning—With a view to finding out what measures could be successfully taken for the reclamation of *usar* land, the Agricultural Chemist, U. P., and the T. C. M., Advisers were consulted. The work being carried out in *usar* reclamation by the Director, National Botanical Gardens at Banthara, was examined. The Canal authorities were approached to give an outlet for trying the experiment. As a result of discussions, it was felt that local materials easily available should be utilized for reclaiming this land. Paddy husk, paddy ash, farm-yard manure, fresh cow-dung and gypsum were decided to be tried. The canal authorities evinced keen interest in the project and immediately agreed to provide a 6" outlet from the nearby minor. The area was surveyed and drains were constructed. Out of the 50 acres of land, 8 acres were put under experimental trials. The rest was enclosed and grasses were allowed to grow. Grazing was stopped. In all, nine treatments with four applications were planned to be tried in that area. Soil samples from various depths were also collected to find out the Ph. value of the *usar* land. The Ph. value varied from 9.65 per cent to 12.2 per cent. Soil containing such high alkalinity is not recommended for growing crops. The results of soil analysis are given in the following paragraph.

Soil Analysis—Soil samples were taken before starting the experiments from various depths of soil. They were got analysed by the Agricultural Chemist to Government of U. P., Kanpur.

The results of the first analysis are given below :

| Sample no. | Depth in inch | Ph. | Remarks |
|------------|---------------|------|---|
| 1 | 2 | 3 | 4 |
| 1 | 0—3 | 9.65 | Crops normally do not grow under these conditions. Use of amendments and other reclamation techniques will have to be adopted to make crops grow. |
| 2 | 3—6 | 10.1 | |
| 3 | 6—9 | 12.2 | |
| 4 | 9—12 | 10.1 | |
| 5 | 12—15 | 10.3 | |
| 6 | 15—18 | 10.1 | |

Treatment—The following treatments were recommended :

| | | | | | | | |
|-----|------------------|----|----|----|----|-----|---------------|
| (1) | Gypsum | .. | .. | .. | .. | 2 | tons per acre |
| (2) | Gypsum | .. | .. | .. | .. | 3 | " " " |
| (3) | Gypsum | .. | .. | .. | .. | 4 | " " " |
| (4) | Gypsum | .. | .. | .. | .. | 6 | " " " |
| (5) | Farm-yard Manure | .. | .. | .. | .. | 120 | mds. " " |
| (6) | Paddy husk | .. | .. | .. | .. | 50 | " " " |
| (7) | Paddy ash | .. | .. | .. | .. | 40 | " " " |
| (8) | Fresh cow dung | .. | .. | .. | .. | 60 | " " " |
| (9) | Control | .. | .. | .. | .. | .. | |

Transplantation—Paddy crop can stand alkalinity considerably. Type 9 variety was transplanted in the various plots.

Inter-cultural Operations—Inter-cultural operations, as usual, were carried out and water losses under different treatments were noted down.

Yield from different Treatments—The following table gives the various treatments and the yield obtained per acre from the various treatments :

| Treatments | | | | | | Yield per acre | | |
|------------|------------------|----|-----------------------|----|----|----------------|----|----|
| 1 | | | | | | 2 | | |
| | | | | | | Mds. Srs. Ch. | | |
| 1. | Gypsum : | .. | (i) 2 tons per acre | .. | .. | 5 | 26 | 14 |
| | | | (ii) 3 tons per acre | .. | .. | 7 | 14 | 0 |
| | | | (iii) 4 tons per acre | .. | .. | 8 | 10 | 0 |
| | | | (iv) 6 tons per acre | .. | .. | 9 | 14 | 0 |
| 2. | Farm Yard Manure | .. | .. | .. | .. | 7 | 36 | 0 |
| 3. | Paddy husk | .. | .. | .. | .. | 4 | 20 | 0 |
| 4. | Paddy ash | .. | .. | .. | .. | 10 | 13 | 5 |
| 5. | Fresh cow dung | .. | .. | .. | .. | 12 | 13 | 4 |
| 6. | Control | .. | .. | .. | .. | 0 | 15 | 0 |

From the above table, it will thus be seen that if proper irrigation arrangements are made available, *usar* land can give reasonable yields with different types of treatments. Best yield has been obtained from the application of fresh cow-dung. Fresh cow-dung is a good reclaimant and at the same time increases bacterial activity in the soil. Paddy ash, which is easily available with huller and sheller plants, can be utilized to reclaim *usar* lands. Gypsum, in heavy quantities, is also a very good reclaimant but its cost makes its use prohibitive. Hence, we have to rely more on the local resources. These treatments are being repeated during the current year also.

Analytical Data of the Soil after the Treatment—Samples of the soils after the treatment were again collected and sent to Kanpur for analysis. The results indicated that the Ph. value of the soil has considerably gone down by 1.5 to 2 per cent. It came down to 8 to 10 per cent in various plots. For a good crop, the normal Ph. value should be 7.5 per cent. With the repetition of this treatment, it is hoped that within the next two years, the alkalinity will further go down.

The trials during the first year created an interest amongst the cultivators of nearby villages. Some demands were received for making outlets available for reclaiming land of similar type from nearby villages. The programme started having some radiation effect from the first year. In a nearby village, 40 acres of land have been taken over by the landless people for reclamation purposes from their Gram Samaj where they have started a Co-operative farm. A brief description of the same is given separately.

CHAPTER XII

USAR RECLAMATION AND CO-OPERATIVE
FARMING AT RAGHUNATHPUR

The research project carried out at Dibiapur (Bhagyanagar Block) in *usar* reclamation during 1958, convinced the cultivators of nearby villages that the problem of *usar* reclamation is not difficult to tackle provided adequate water arrangements are made for irrigation purposes. Village people of Raghunathpur evinced keen interest in this programme and the Panchayat of the village decided to spare 40 acres of *usar* land for reclamation purposes and for being used by the landless labourers. Accordingly, the Block staff carried out a topographical survey of the land and demarcated points where irrigation and drainage channels were to be constructed. The land was also divided in fields of suitable sizes for carrying out agricultural operation. Canal authorities were approached to help the village in their reclamation programme. Accordingly, an outlet was given by the Canal authorities for the purpose. The operations of making surface drains and digging of soakage pits were carried out jointly by 15 landless families of the village. Before the rainy season, an effort was made to leach out the land of salts with the help of canal water.

After these preliminaries were completed, periodical meetings were called of the Village Panchayats and the 15 landless families who were interested in the programme. As a result of discussions, the landless families pointed out that 40 acres of land should be put into four blocks of 10 acres each and that they should be allowed to make groups for cultivating that land. This was readily agreed by the village Panchayat and the Block officials started giving necessary technical help to the cultivators in the reclamation of these four blocks of 10 acres each. During the rainy season, further flooding and leaching operations were carried out with a view to removing alkaline salts from the soil. Later on, organic amendments like farm-yard manure and fresh cow-dung, which these families could collect from the village, were applied in the fields. Transplanting of paddy (Type 9) was arranged from the Co-operative Seed Store, Bhagyanagar. The Japanese method of paddy cultivation was advocated for the purpose. In the first year, the cultivators have been able to grow a good crop of paddy in their fields. The expenses per family have been in the shape of labour only. It is proposed to put this area under the Co-operative Farming Society of the village. The emphasis here would be more in the form of service co-operatives and it is not proposed to pool the land in one unit unless the cultivators themselves feel convinced that it would be a better arrangement than the existing one.

Usar Reclamation



*Co-operative Agriculture Farm,
Ragunathpur*

CHAPTER XIII

**INTEGRATED PROJECT ON SOIL CONSERVATION
AND CONSOLIDATION OF HOLDINGS**

The work of soil conservation and consolidation of holdings has been successfully carried out in some areas of Damodar Valley Corporation. The Director, Consolidation of Holdings and the Director, Planning Research and Action Institute, visited D. V. C. during 1957 to study this programme with a view to exploring the possibility of its introduction in our State also. A study of the area in Damodar Valley Corporation revealed that the programme was very good in general but in view of the fact that it entailed heavy financial commitments, it was doubtful whether it could be tried under U.P. conditions. In Damodar Valley Corporation, finances were made available by the Corporation, while in U. P. the burden will fall mostly on the cultivators. After seeing the work being done there, a meeting was called at Lucknow where it was decided that this work should not be taken up in the State on a large-scale unless a pilot project was carried out to find out whether the plan is workable or not. The Planning Research and Action Institute was, therefore, required to carry out a project in Pilot Development Project, Etawah, and, if possible, one more project in district Agra. In view of the availability of the personnel, the Institute decided to carry out only one project in Bhagyanagar Block. Village Chirhulia, which is situated at a distance of 6 miles from Bhagyanagar Headquarters, was selected for the purpose. An area of 40 acres having a gentle slope of 1 per cent, was taken for experimentation.

PROCEDURE OF WORK

(1) **Land Classification**—The “Shajrah” map of the village was obtained from the Lekhpal for finding out the existing holdings of individual farmers. Land classification was then done on the basis of the fertility of the soil in accordance with the instructions of the Consolidation of Holdings authorities. Land was divided into three classes—Type I, Type II and Type III.

(2) **Involvement of the Farmers**—Several meetings of the village people were held to convince them of the need of carrying out soil conservation measures along with consolidation. Some soil conservation education lessons were also given to them. Here, the cultivators were required to agree to take possession of their blocks along the contour lines. After making a topographical survey a contour map of the area was prepared. The cultivators

were then asked to make contour bunds in the area. The bunds were made along the contour lines. The height of the bund was kept at $2\frac{1}{4}$ " with a side slope of 1 : 1 and a cross-sectional area of 8.45 sq. ft.

(3) **Land Use Capability Chart**—Soil samples from three different classes of land were collected and got analysed at the Government Agricultural College, Kanpur. The analytical results are given in the following table :

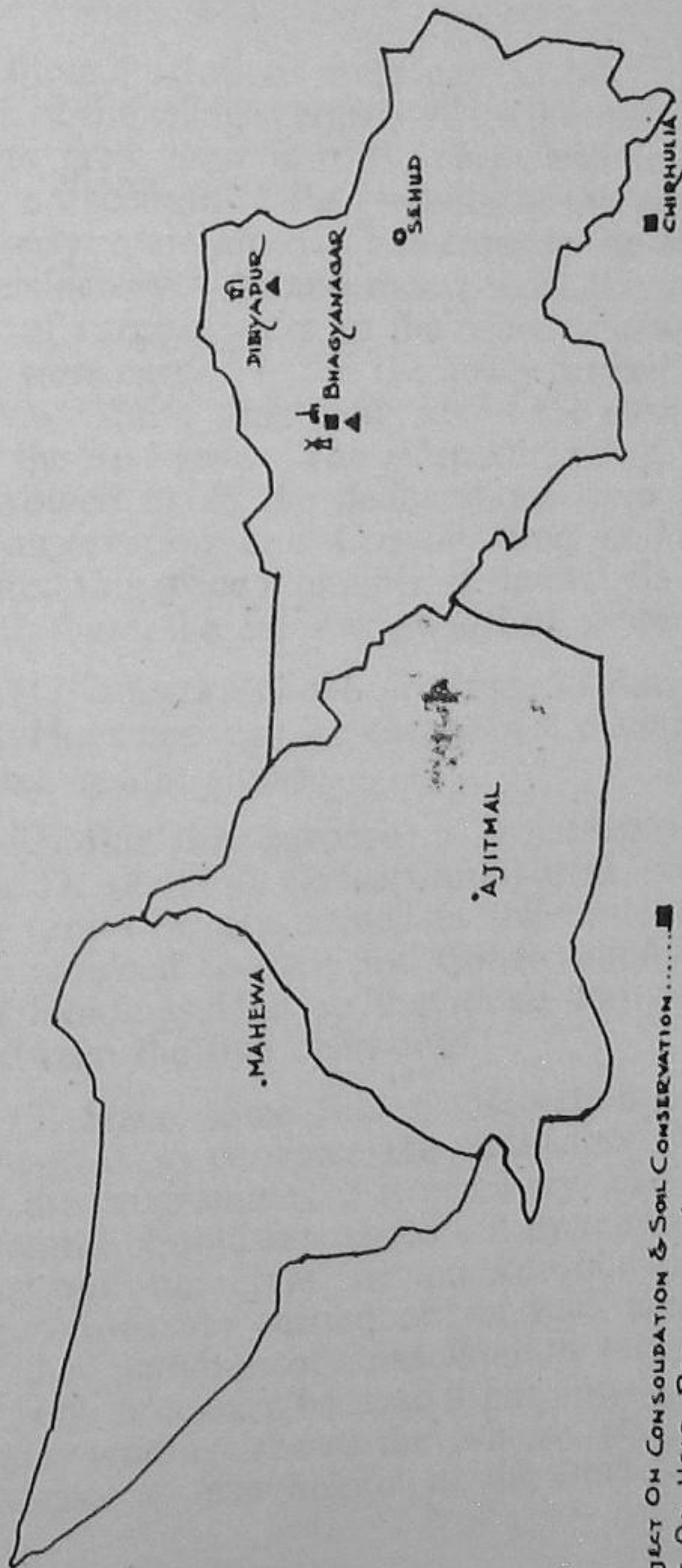
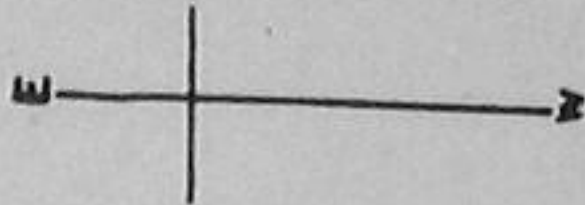
| Lab. no. | Reference number | | Nitrogen | Phosphate | Potash | Organic carbons |
|----------|-----------------------------|------------------|----------|-----------|----------|-----------------|
| 1 | 2 | | 3 | 4 | 5 | 6 |
| | | | Per cent | Per cent | Per cent | Per cent |
| S/C | 12192 pit no. 1 (Class I) | .. Surface soil. | 0.052 | 0.090 | 0.473 | 0.215 |
| | 12193 pit no. 2 (Class II) | .. Ditto | 0.050 | 0.520 | 0.480 | 0.307 |
| | 12194 pit no. 3 (Class III) | .. Ditto | 0.053 | 0.062 | 0.300 | 0.215 |

On the basis of these results, suitable recommendations for each class of land according to its capability were proposed as given below :

RECOMMENDATIONS FOR EACH CLASS OF LAND

| (I) | (II) | (III) |
|---|---|--|
| Judicious Crop rotation, Green Manure, Farm yard Manure and other fertilizers. Irrigation facilities can be extended in it. | Good crop rotation and enriching soil fertility, Strip cropping, Leguminous cover crop, Farm Yard Manures, Ploughing and sowing across the slope. | Fit for pasture and afforestation, but growing crops after carrying out soil conservation practices for a few years. |

(4) **Economics of the Project**—The entire cost of constructing bunds is borne by the cultivators. For completing earthen and masonry constructions a few farmers have, however, been given takavi loans which will be realised from them in three yearly instalments. In all, 21 farmers, were involved in the programme.



- INTEGRATED PROJECT ON CONSOLIDATION & SOIL CONSERVATION.....
- ▲ PILOT PROJECT ON USAR RECLAMATION Δ
- PASTURE DEV. FARM
- ◻ WIND MILL
- ◻ WATER-LIFT & USAR FARM
- ◻ AUTOMATIC DIBLER

(5) **Reallotment of Chaks**—After the land records corrections, *chaks* were given to the individuals in between two bunds. Cultivators having scattered holdings could get their *chaks* at one or two places.

All these operations were carried out with the active co-operation of the village people. After the distribution of the *chaks*, cultivators grew their normal crops and since water could be checked on account of the presence of the bunds, the soil fertility was properly maintained. The crops in the *Rabi* of 1958-59 were very satisfactory. Arrangements were also made for the draining off of surplus water to the nearby nullah. Certain cultural practices were carried out in the newly formed *chaks*. The village people were quite convinced about the efficacy of the measures even in the first year. The Department of Consolidation was kept involved in all the deliberations from the very beginning. Soil Conservation and Consolidation of Holdings authorities also visited this place a number of times. As a result of deliberations with them, the following conclusions were arrived at :

(1) Integration of Soil Conservation and Consolidation of Holdings can be carried out effectively in areas which have gentle slopes.

(2) For this purpose, it is necessary that a team of A. D. O. (Soil Conservation) with about half a dozen of Gram Sevaks trained in soil conservation work should be assigned to each Soil Conservation and Consolidation of Holdings Unit so that there may not be any time lag between the two operations.

(3) Since some Soil Conservation education is to be imparted to convince the cultivators about the feasibility of the programme, it is necessary that the education programme should be carried out by regular V. L. W.s before the soil conservation and consolidation of holdings operations are carried out in such areas. Co-ordination of the activities of Consolidation with the Block officials is very necessary because it helps in creating the necessary understanding about the whole programme and their presence is also helpful at the time of *Chak Tarashi*

CHAPTER XIV

WOMEN'S PROGRAMME

The Pilot Project on Women's Programme was started in the year 1957 with the following objectives :

(1) To arrive at an appropriate content of a programme of Improved Home Living Extension in the direction of health, education (liberal) and occupation among rural families;

(2) To evolve effective extension methods and techniques to implement the above;

(3) To develop suitable type of training programme for women extension workers,

(4) To define suitable working conditions in rural areas for effective functions of women extension workers, and

(5) To develop a suitable organisational structure for administration and execution of a programme of Improved Home Living Extension among women in rural areas.

The organisational set-up of the programme is that the Specialist, Women's Programme, is in charge of the same. She is assisted by the field staff consisting of 15 extension workers and 5 Sahayikas, all posted in Ajitmal block.

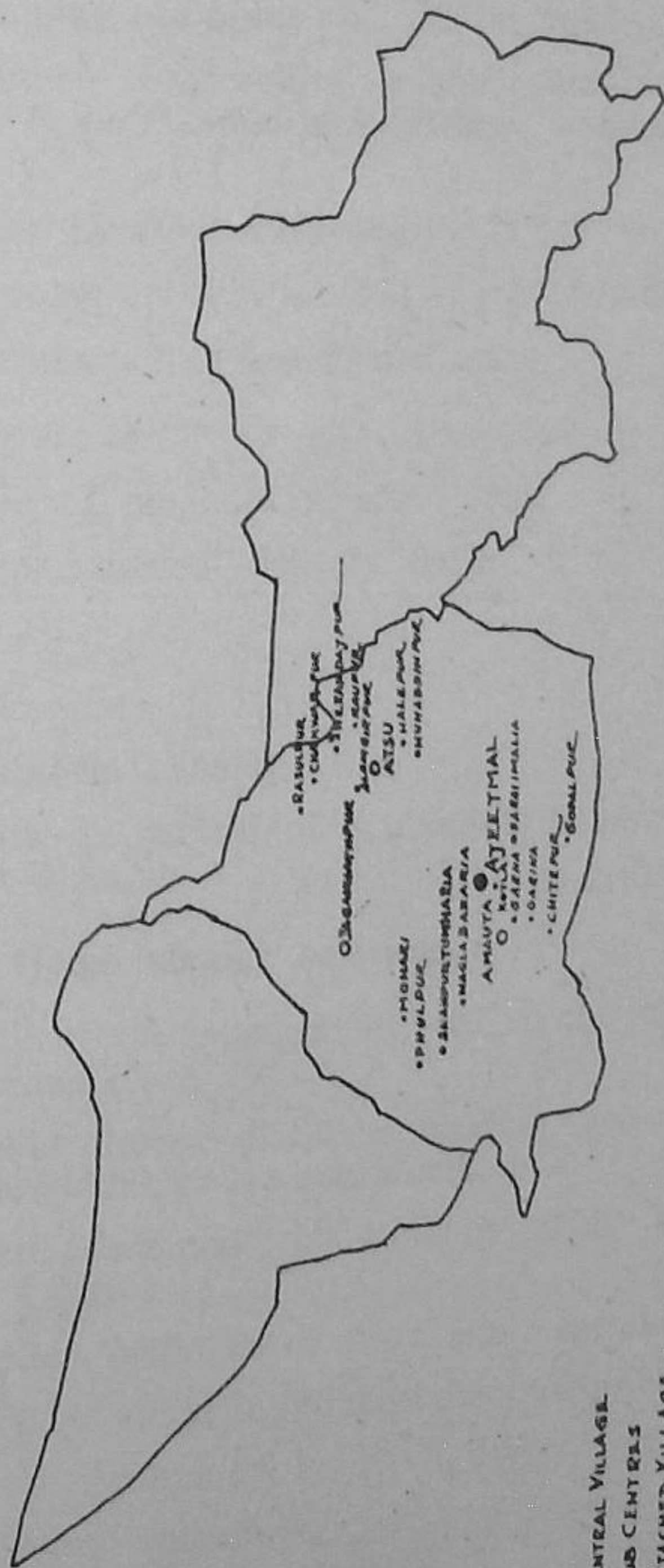
Coverage—The pilot project covers a total of 24 villages demarcated in four different areas of the Ajitmal Block for the present. It is shortly to extend to 8 more villages. The head-quarter villages of the four areas are Ajitmal, Amauta, Atsu and Jagannathpur. Five villages are attached to each of these headquarter villages. Two Gram Sevikas and a Sahayika are posted at the headquarters of each village. Each Gram-Sevika works in the main village with different families and also works in two to three attached villages. All the villages are within a radius of five miles from the Block headquarters. Two Craft Teachers also work in the headquarter villages and periodically move from one place to another for training the workers. The programme content evolved for extension among rural women is as follows :

A. Health :

(a) Health :

(i) Knowledge of common diseases and preventive measures against them ; and

Women's Programme



- CENTRAL VILLAGE
- SUB CENTRES
- ATTACHED VILLAGE.

(ii) Encouragement to develop confidence in scientific treatment and to use hospital services where available.

(b) Home and Environmental Sanitation :

(i) Cleanliness of home and kitchen ; and

(ii) Sanitary construction, washing platform, soakage pit, *Kura Patra, Panala*, septic tank latrine, smokeless *chulha* and food safes.

(c) Personal Health and Hygiene :

(i) Stepping up knowledge of improved habits ; and

(ii) Introduction of better practices.

(d) Maternity :

(i) Care of pregnant women ; and

(ii) Preparation of delivery room.

(e) Child Care :

(i) Cleanliness ;

(ii) Food for children ; and

(iii) How to get rid of bad habits among children and to develop good habits.

B. Better Home Making Activities :

(i) Better Home arrangements with special reference to kitchen, *Angan*, bathing place, etc.

(ii) Better storage of family bedding, drinking and washing water, cattle fodder, house-hold stores, etc.

(iii) Better methods of cooking with understanding of nutritional values ;

(iv) Better methods of fruit and vegetable preservation ;

(v) Kitchen gardening to meet daily requirement of vegetables.

(vi) Tree planting ;

(vii) Cutting and sewing ;

(viii) Home decoration ;

(ix) Embroidery ; and

(x) Better methods of storing seed.

C. Education

(1) *Social Education :*

- (i) Inclucating healthy outlook, removing *Purdah* system, untouchability and superstitions, and developing better family relations;
- (ii) Literacy—Adult literacy ;
- (iii) Encouraging to avail library services and distribution of library books ;
- (iv) Wall newspapers in Home Units ; and
- (v) *Matri shiksha*.

(2) *Cultural Programme and Social Participation :*

- (i) Celebrating festivals, like Nag Panchami, Ram Navami, Janmastami, Holi, Raksha-Bandhan and other cultural programmes;
- (ii) Celebration of national festivals, like the 15th August and the 26th January ;
- (iii) Attendance of Gaon Sabha meetings ;
- (iv) Collection of contribution for road-making and soak-pits; and
- (v) Contacting families for improving social relations.

(3) *Spiritual Phases for Improved Family Life :*

- (i) *Mangal Arti* ;
- (ii) *Sarvodaya Patra* ;
- (iii) *Tulsi Chaura* ;
- (iv) Common prayer for family members ; and
- (v) Formulation of the habits of family members meeting at the end of a day's work.

D. Occupation

Handicraft Programme as Integral to Improved Home Living :

- (i) Weaving (Dari).
- (ii) Spinning ;
- (iii) Making of bag of *san*.
- (iv) Mats of hay ;
- (v) *Asani* ;
- (vi) Knitting (pull-over) ;
- (vii) Cutting, sewing and tailoring ; and
- (viii) Rope-making.



Women's Programme

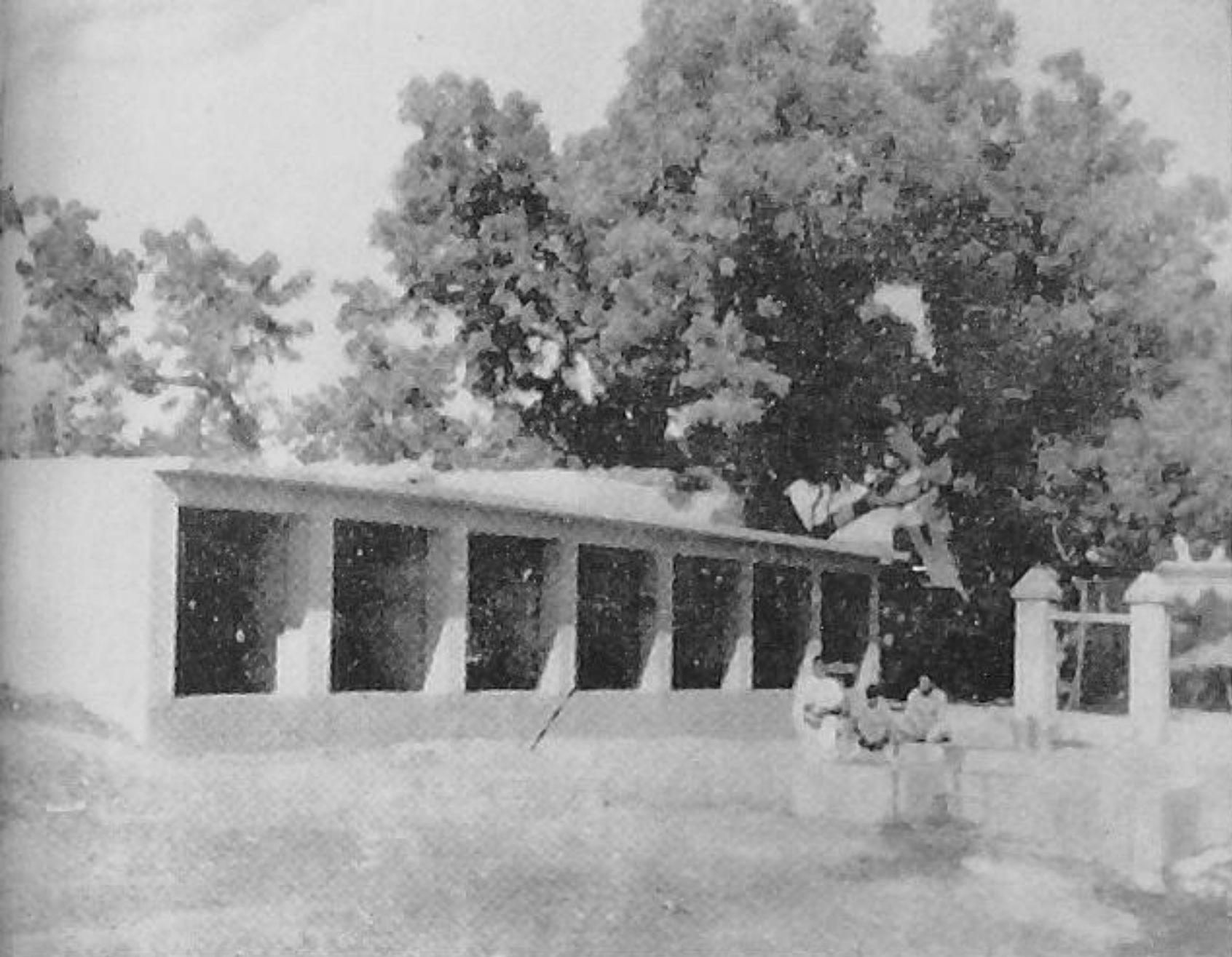


Achievements—During the two years of the Action Programme, the following work has been accomplished. A suitable programme for the rural women of the area is being gradually developed. The programme relates to the fields of Improved Health, Home Living, Education and Co-ordinated work through various agencies. Experiences have been gathered in finding out suitable methods and techniques for involving the village women in the various programmes. Some work has been done in giving suitable economic programmes but still more work is required to be done to evolve out suitable pattern for giving part-time employment in various crafts to needy village women. The economic programmes in agriculture and vegetable-growing are also popularised through village women. The programme has contributed something very tangible by which Gram-Sevikas will be able to participate more and more in the functioning of Village Panchayats and are gradually trying for the participation of the village women in the working of these organisations for the uplift of the women folk.

CHAPTER XV

DEVELOPMENT OF MARKETING FACILITIES IN VILLAGE SARAI BABARPUR IN AJITMAL BLOCK

Sarai Babarpur is an important village market. It is situated at a distance of about one mile from Ajitmal. Bi-weekly markets are held there and the village Panchayat has earmarked areas separately for the cloth merchants, grain dealers, etc. They have also set apart areas for the vegetable market, grain market and meat and hides market. There were *kachcha* shops where carrying out of sales transactions, particularly of meat hides and vegetables, created very unhygienic conditions. In 1958-59 the Block officials met the members of the Panchayat to prepare a master plan for giving adequate facilities to the dealers handling various commodities. The master plan was accordingly prepared. A copy of the plan is given on the opposite page. The total outlay of the plan is about 50,000. It was, therefore, decided that the village should build up its market in a phased manner. It is developing 5 different sites for the different markets, i.e. for cloth, vegetables, grains, general merchandise, meat and hides, etc. Forty-nine shops are to be constructed for the cloth market. A beginning has already been made and six shops have so far been constructed. Thirteen shops with raised platforms are to be constructed for the grain market. Ninety shops are to be constructed for general market and 35 shops for vegetable market. Seven such shops for vegetable market have already been constructed. So far the village has spent about Rs.8,000 on the construction of these shops. A sanitary butcher house with two shops is to be constructed on a slightly distant site so that insanitary conditions which prevail now-a-days, be eliminated. It is further proposed to have a community centre-cum-library, two parks and four hand-pumps for the use of the public. It is estimated that the Gaon Samaj may be able to raise an yearly income of Rs.4,000 to Rs.5,000 when the scheme is completed. The village was keen to have a loan for the construction of the market, but it could not be arranged. The Gaon Samaj has been advised to construct the market with its own resources according to a phased programme. It has already taken some steps and the village people are keen to have a good market for the disposal of the commodities. This appears to be a good gesture for a village market in that locality.



Construction of New shops



Dibbling of wheat

CHAPTER XVI

PILOT HEALTH EDUCATION PROJECT

The Planning Research and Action Institute decided to organise a Pilot Research Project in Health Education. During 1956-57, the Rural Health Section of the Institute undertook an investigation of the existing difficulties experienced by the Community Development blocks with regard to the Health Education programme. A pilot research study was carefully planned, its scope and objectives agreed upon and the action-programme was launched by the Institute's Rural Health Section.

Objectives—It was decided to focus the main effort of the Health Education project on developing the necessary attitudes and beliefs to improve the Environmental Sanitation in the homes and the villages. The installation and use of latrines, improvement of drinking water supplies, construction of paved lanes and covered drains and sanitary improvements inside the home and kitchens are all physical actions which can act as effective indicators for measuring the Health Education process which is going on.

But in addition to the sanitation and health needs of the people, there are other problems which are also felt to be important, such as those in Personal Hygiene, Maternity and Child Health, diseases, etc. For a programme based on a philosophy of improving people's health needs, these aspects of health must not be left out. It was, therefore, decided that in addition to emphasising the sanitation activities, a general health education programme which would involve the total health needs of the rural population, would also be taken up. Within the framework of this overall programme, the specific activities pertaining to Environmental Sanitation would be emphasised and stressed throughout the Health Education programme.

Methods used for Health Education—A group discussion method of Health Education was thought to be well suited to the village conditions and was adopted initially for this Health Education programme. It was planned to organise Health Education classes in each of the villages. The Health Educator was to use the various methods of Community Organisation for contacting the leaders of the villages and holding discussions on health topics. Then regular meetings were planned whereby the same group could get together and discuss health needs in that village. A group discussion

was to be held so that the maximum participation could be secured from the group, i. e. specific health subject would be presented and briefly discussed, and then the large group was to break up into smaller sub-groups depending upon the size of the gathering. The sub-groups were asked several questions presented by the Health Educator. The questions covering the good points of the subject-matter were designed to elicit a maximum of thought-stimulation from the sub-group members. After the sub-group members had finalised their discussion, they were to arrive at some joint decisions and their leader was to report back to the re-assembled group.

It was felt that by conducting this discussion process, the maximum amount of participation by the people would take place resulting into motivation and action towards improved health practices. To help the Health Educators conduct a group discussion correctly, a guide was prepared and given to them with necessary instructions.

Audio-visual Aids—A specially designed tin box was prepared containing the best Audio-visual Aids available in the country. Besides the filmstrips, flash cards, posters, etc., a *khadar*-graph frame with *khadi* cloth, hand pointer, Health Education record forms, etc. were supplied to each Health Educator. A set of ten Health Lessons was prepared by the Institute after pretesting in the field. These lessons cover a wide range of subjects and were meant to supply basic health information necessary for talks to village groups.

Evaluation of the Project—The following methods were adopted to determine the impact of the Health Education programme upon the people in the selected villages :

- (1) A pre-action survey to find out the existing beliefs and attitude of the people towards Health and Sanitation. This would serve as base line in relation to which subsequent effects of educational work could be measured.
- (2) Current appraisal with the help of periodical progress reports submitted by the Health Educators.
- (3) Post-action survey on completion of the project period to assess any change in the attitude of the people toward the concept of healthy and clean living.

Observations made after one year's trial—An appraisal made in December, 1958, showed that the health education programme

had not caught the imagination of the people and was not achieving the results as anticipated. The following difficulties came to light in the group approach followed so far.

(1) The Health Education classes could not be held regularly because of the Sanitary Inspector being busy in other multifarious activities.

(2) Whenever a class was held, it took the shape of an entertainment gathering wherein a group of children and adults joined. These people were mostly different in each of the classes and thus no link could be maintained about the subjects discussed.

(3) No personal relationship existed between the Health Educator and the village people, thus hindering regular participation in the meetings.

(4) Suitable Audio-visual material for the type of work anticipated under the project did not exist.

(5) There was lack of leadership for small group discussions in such meetings.

Revised Line of Action—It was considered necessary to use the individual family contact approach with certain selected families in the beginning. The families selected should be of some leadership status and cover all the different sects or groups existing in the village. A *pro forma* for contacting the families was drawn out to acquaint the Health Educator with their existing problems including those of health, and develop some personal relationship with them. These families were to be contacted at least twice a month and a face to face educational programme with the families was to be pursued. A daily diary was maintained of all contacts thus made and this was found very useful for follow-up talks. This method which was followed from January to June 1957, helped the project personnel to draw out a procedure of making family contacts by Health Workers.

The significant experiences were in the following spheres :

- (1) Act of interviewing people.
- (2) Developing leadership in the selection of families in respect of existing health problems.
- (3) Winning confidence of those contacted.

The Revised Group Approach—From June, 1957 onwards again, the group meetings have been held regularly every fortnight. The following line of action has been adopted for these group meetings :

I. *Pre-planning*—(a) Selection of subjects. Subjects selected so far have been such as are of most common occurrence in the villages, such as (1) flies, (2) latrines, and (3) water supply.

(b) *Preparation of village leaders for conducting the meeting*—Talks, Health Lessons and other resource material available are given to some village leaders to equip them to conduct the group discussions and to utilise them as pivots for disseminating modern health knowledge.

(c) Selection of the most suitable audio-visual material for the talks. Flannelgraphs prepared by the Institute on fly, latrines and water supply have found great popularity amongst the workers. Filmstrips on flies and water supply have also been found useful.

II. *Holding the Group Meetings*—Meetings are usually held at night when villagers are available. President selected for the meeting is one of the village leaders. Health Educator only presents the Audio-visual part and acts as a resource person.

III. *Taking the Group Decisions*—Invariably after the meeting, group decisions are taken on the topics discussed regarding further action proposed by the group of members. Very encouraging responses have been thus obtained.

Experiences gained so far on group discussions are as follows:

1. After individual contacts it has been possible to get the members of selected families attend group meetings more regularly.

2. By having a villager as President of the meeting, very healthy discussions have resulted. The President invariably took the position of a Health Worker in propagating modern health knowledge.

3. Flannelgraph and filmstrip have been found to be the most suitable Audio-visual aids in the meetings.

- (4) Whenever group decisions are taken, resources must be available to set up a few demonstrations immediately afterwards, otherwise the purpose gets defeated.

(5) Many of the intelligent questions have been asked by illiterate people and the Sanitary Inspector could not get proper resource material to reply to them. A link with experts seems to be necessary.

(6) Personal relationship of the Health Inspector has proved to be the biggest individual factor for introducing new sanitary conveniences in the homes. The experiences thus gained are being utilised effectively in Chinhat area as the Planning Research and Action Institute has taken up this programme on intensive scale under W. H. O. Environmental Sanitation Project at Chinhat.

Conclusion—The Health programme carried out so far has provided us with the methodology of starting a Health Education programme in rural areas with the main objective of changing the present behaviour of our rural folk. Much has been said about the place of Health Education in our Public Health programme and the part which each health worker should play in that, but no practical guide lines exist to help the worker plan an educational programme for village and home improvements. This study will provide a broad outline for this work.

It is expected that the post-evaluation survey which is proposed to be conducted in the near future, will provide an overall picture of the improvement brought about in the selected villages as a result of the programme. It will also bring out the other essential resources which should be made available along with use of educational methods so that facilities for contemplated behaviour change are made possible.

The experience so far gained has amply proved that without developing any leadership amongst the villagers and without personal intimacy of the health educator with the people and problems, a group approach to begin with will not bring any fruitful results.

CHAPTER XVII

POPULARIZATION OF HIGHER EDUCATION

Two Degree Colleges in Agriculture and Science were started in the P. D. P. during July, 1959.

Education in general, and in rural areas in particular, has expanded considerably during the last 10 years. Hundreds of institutions have sprung up in the areas where local people are involved and their economic condition is reasonably good. In the Pilot Development Project, Etawah, educational facilities have been expanding and within the last 10 years, three Intermediate Colleges have been started by the people mostly with local contributions, Government help being available in small amounts in accordance with the rules and regulations of the Education Department. The three Intermediate Institutions which deserve special mention for this area are at Ajitmal, Mahewa and Bakewar. All these institutions are situated on Moghul road by the side of these villages.

With the growing demand of education, it was felt whether it could be possible to arrange for educational facilities to a Degree standard in these colleges. It was early in 1959 when these institutions were visited by the Director, Planning Research and Action Institute, and opinions were invited of the Managing Committees if they were prepared to raise their Intermediate Colleges to a Degree standard. In the beginning, it was a news to these institutions. Mahewa and Bakewar colleges in the initial stages pointed out that due to financial difficulties, it would not be possible for them to raise their colleges to a Degree standard. The Principal of the Intermediate College, Ajitmal, however, responded warmly to this suggestion and after meeting his Manager, approached the Director, Planning Research and Action Institute for getting Ajitmal College raised to a Degree standard in Agriculture. Necessary formalities for applying for the affiliation of the college to the Agra University were completed and an application was sent to the Vice-Chancellor, Agra University, for affiliating the college to the University. The University appointed a panel of Inspectors who visited the institution and made its recommendations for raising the college to a Degree standard in Agriculture. The sympathetic attitude of Prof. K. P. Bhatnagar, Vice-Chancellor, Agra University, for helping higher education in rural areas will be remembered by the masses. It was through his kindness that the institution got its recognition in Agriculture for B. Sc. (Ag.) standard and was duly affiliated to

*Lectures are given to B. Sc. (Ag.) students
before their practicals*



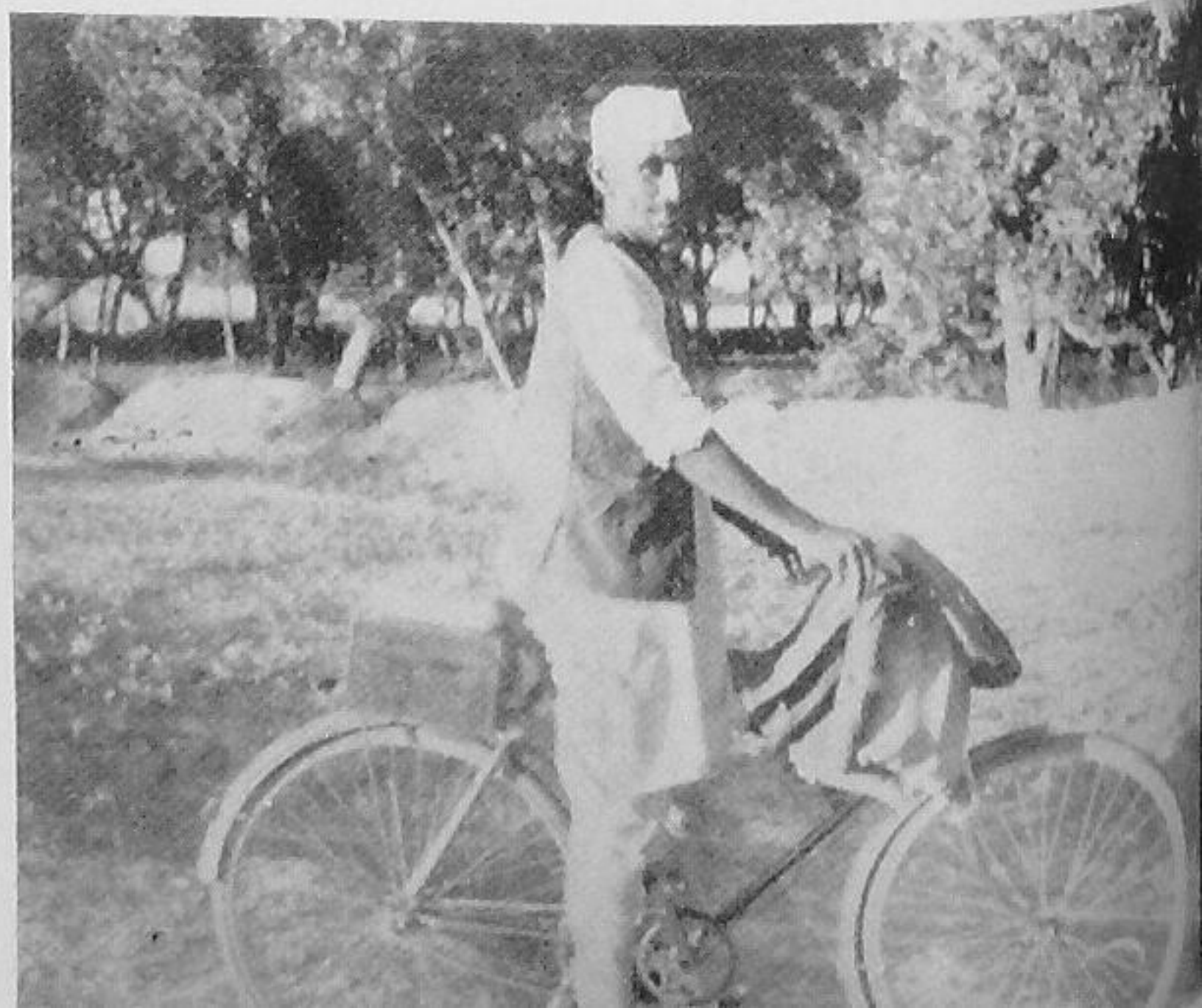
*A view of the Janta Agriculture
Degree College, Ajitmal*

*B. Sc. (Ag.) students at work in
College Laboratory*





Degree College in Science (Bak)



Mobile Library

the Agra University in July, 1959. A brief account of this institution as to how it started functioning and what is its present position, is given in the following paragraph. When news went round that the Ajitmal College had received affiliation to B. Sc. (Ag.) standard, the next institution which applied for affiliation was Bakewar Intermediate College. Agra University has given affiliation to this institution also up to B.Sc. standard. A brief account of this institution is also given later on.

(1) *Ajitmal Degree College in Agriculture*—The people of Ajitmal area started a Junior High School up to the 8th class standard in the local Arya Samaj temple with two teachers and 50 students in the year 1950. Immediately after one year, this Institution was recognised for starting High School classes. The institution was shifted from the temple to its present location. In the year 1952, it received recognition for High School classes in Literary, Commerce and Agriculture groups and the number of teachers and students was raised to 16 and 400 respectively. It received recognition for Intermediate standard in the year 1953 and its first batch of Intermediate in Agriculture passed out in the year 1955. At present, there are 60 teachers and the total number of students from the Junior High School to the Intermediate standard is 1,540.

B.Sc. (Ag). Previous classes have been started this year and there are about 90 students in the class. One Principal and 7 teachers have been appointed for the Degree Classes. The College possesses a farm of about 20 acres, a nursery of 3 acres, a small dairy and an agricultural workshop. It has recently constructed four class rooms and is setting up laboratories for various subjects. It is planning to construct a *pucca* community hall for periodical assembly of the students. The unique feature of this college is that it has been able to construct 15 staff quarters after taking a loan from the Government. According to the statement furnished by the Principal of the college, the total assets of the college are to the tune of about Rs. 3.4 lakhs which include various buildings, teachers' quarters, laboratories, library and other assets. A very big tank of Moghul period is being used as a stadium for games by the college. The College has taken over the old Police Station building to serve as its hostel for the present. The management is trying to have a boarding house in the near future. It is trying to raise contributions and loans for the construction of a hostel. The future plans of the college are to purchase some land as to have about 50 acres of farm. It proposes to construct the Degree College on the other side of the road in the farm premises but it will take them some time to

go ahead with this plan. The members of the Block Development Committee have evinced keen interest in the institution and have passed resolutions to contribute their share from the Panchayat funds for the running expenses of the Degree classes of the college.

Since this institution is situated in typical rural environments and the impact of the Pilot Development Project is visible in some form or the other in the various agricultural activities of the locality, it is hoped that the Agricultural Graduates coming out of this institution will play an effective role in agricultural operation programmes. The people have risen to the occasion because they feel the need of higher education for their children, particularly in the field of agriculture. The main contribution of the project is to create an urge in the people for higher education for their children. It has helped them in getting recognition from the University. It is helping the college authorities in imparting practical agricultural education to the students.

(2) *Degree College, Bakewar*—This institution is located on Moghul road at a distance of about 14 miles from Etawah. It was started in the year 1952 when one Sri Dwivedi donated a sum of Rs. 25,000 for starting a High School. In the same year, donations of buildings valuing at about Rs. 25,000 were received by the institution. Nineteen acres of Military Camping Ground in the vicinity of the college was also attached to the institution. Since then the institution has been making considerable progress from year to year. It has High School and Intermediate Classes with a total enrolment of 1,529. It has received recognition up to B. Sc. standard in July, 1959 and is imparting education in Mathematics, Physics and Chemistry. The total number of students in B. Sc. (previous) is 24 and 3 teachers have been appointed for running these classes. The total assets of the institution are to the tune of Rs. 3.32 lakhs which include school buildings, dairy, farm, library, laboratory, etc. It also runs a co-operative store and a brick-kiln which forms an important source of its income every year. The college maintains a very good dairy where there are about 30 heads of cattle. It proposes to utilise this college for running Agricultural Engineering Classes after Intermediate standard. The matter has been talked over and contacts are to be made with the University for giving affiliation to this college in B. Sc. Engineering in addition.

It is how people have come forward to realize the importance of higher education in rural areas. The two Degree Colleges in

the project area, started in July, 1959, are an evidence of people's enthusiasm in this direction.

Mahewa Intermediate College is also in the run but it will take some time before its financial position improves and it can aspire to have Degree classes in some subjects useful for the boys of the locality.

CHAPTER XVIII

MOBILE LIBRARY

With the increase in education in the rural areas, library service is going to occupy an important place by keeping the masses well informed and for enabling them to have a better outlook for improving their civic life. Though there are some libraries in the villages and central libraries exist at the Block headquarters, these have their limited utility. Only a few people and the Block officials make use of Block libraries.

An experiment was made to start a new library service, popularly known as Mobile Library, in 12 villages of Ajitmal Block, last year. People of 12 villages were contacted who agreed to pay Rs. 2 each per month per village for the service. Similar amount was made available from the Block budget. A librarian was thus engaged on Rs. 48 per month who was required to carry a box containing about 200 books on a cycle. He was required to visit two villages in one day and in this way he was able to cover every village once a week. He had a small bell with him which he used to ring at the time he reached a village. Books on agriculture, co-operation, *sarvodaya*, *bhajan*, folk songs, religion, fiction, literature for neo-literates, literature for women and children, science and general knowledge, lives of great men, etc., were supplied for distribution from the Block funds. Village Panchayats evinced keen interest in the programme. Later on, another 25 villages were taken under this scheme and similar arrangements were made by appointing two more librarians for the purpose. The Village Panchayats do not mind paying Rs. 2 per month for the service. When the man reaches a village, people get books, try to read them and show great interest in this programme. Though it is too early to say as to what impact this service would produce, yet it can be stated with confidence that people are coming forward to take books through the Mobile Library, they read such books and each village is contributing Rs. 2 per month for it. It is hoped that some useful results will come out from this experiment. It is intended to evaluate this programme after one year the results of which will indicate whether this service can be successfully extended to other areas of the State.

CHAPTER XIX

RESEARCH TRIALS IN AGRICULTURE

The programme of Agriculture shall continue to be a dynamic programme in India for a long period to come before it is stabilised in a definite homogenous form. Average yield results of Pilot Development Project, and their comparison with those of other Community Development Blocks of the State is a reasonable index to measure the efforts put in by the Pilot Development Project staff to reorganise agriculture on scientific basis. This programme has been carried out by trials and demonstrations over successive years in the cultivators' fields so as to replace the old varieties and practices by new ones. Much has been done but still more remains to be done. Since experimental method is the only method known to Agricultural Science, hence demonstrations and trials were laid out by the Deputy Development Officer (Agriculture), Pilot Development Project, last year to tackle those crops of the area which hitherto could not get the necessary attention from the Block Officials. Nothing definite can, however, be concluded on the results of one year's experiments. Successive trials will enable workers to arrive at definite conclusions. These trials are classified as below :

(a) *Varietal Trials of Laha—Laha* or mustard occupies a substantial area in the project as it is a cash crop of the season. Hence, varietal trials with a view to recommend the suitable variety for the area were conducted. No less than eight varieties are under experiment. These trials are under repetition this year.

(b) *Varietal trials of Pea*—Although the area is saturated with as high a percentage as 99 per cent with pea T. 163, and has marked radiation effect in the non-block area, but with the introduction of Pea Canning and Food Processing factory at Mahewa, it was necessary to make the Pilot Development Project area as a source for the supply of table varieties of Pea to feed the factory and maintain a continuous supply of raw material. Eighteen table varieties of Pea, comprising of six early, six medium and six late varieties, were tested through trials last year. This year, six of these have been dropped and the remaining twelve are being again put to trial.

(c) *Varietal, Manurial and Insecticidal Trials of Sugarcane*—Sugarcane is another cash crop of the area ; but present variety Co. 312 has degenerated very much and is highly susceptible to

diseases like red rot and white fly, thereby giving very low yield. Hence, to replace this variety, to suggest optimum manurial doses and to study the effects of insecticides and pesticides, 6 varietal trials, 4 manurial and 4 insecticidal trials have been laid down by the Deputy Development Officer (Agriculture) in close collaboration with the Director, Sugarcane Research Station, Shahjahanpur. The latter is supervising these trials through his own staff.

(d) *Varietal trials of Cotton*—Although cotton 216-F is quite popular in the area, yet this is susceptible to raid by leaf roller. Some disease-resisting variety is, therefore, being tested against 216-F. First *Desi* varieties are being tested against local 35/1 variety. The trials are being repeated this year also.

CHAPTER XX

STUDIES AND EVALUATION PERTAINING TO SOME DEVELOPMENT PROGRAMMES AND THEIR COVERAGE IN THE PILOT DEVELOPMENT PROJECT, ETAWAH.

Agricultural Sample Surveys

From the Rabi season of 1956-57, a series of Agricultural Sample Surveys are being conducted year after year in the Pilot Development Project, Etawah. The main purpose behind these surveys is to assess the progress of the Agricultural programmes. Two surveys which have been conducted under this general heading are listed below :

(1) Estimation of average yields of wheat, barley, gram and pea crops.

(2) Seed saturation of wheat, barley, gram and pea.

I. Estimation of average yields of wheat, barley, gram and pea crops—This sample survey was designed to estimate the average yields of four principal rabi crops, namely, wheat, barley, gram and pea in the Pilot Project, district Etawah. This survey is also being carried out from year to year for *rabi* crops only. The design of the present sample survey was worked out in collaboration with the Department of Agriculture, U. P., and about 600 crop cutting experiments were carried out at random in 18 villages of Pilot Development Project, Etawah.

The average yields of the four principal crops listed above during the years 1956-57 and 1957-58 are given in table no. 1 below for the three blocks, viz. Mahewa, Ajitmal and Bhagyanagar separately.

TABLE NO. 1

| Blocks | CROPS | | | | | | | |
|------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Wheat | | Barley | | Gram | | Pea | |
| | 1956-57 | 1957-58 | 1956-57 | 1957-58 | 1956-57 | 1957-58 | 1956-57 | 1957-58 |
| Mahewa | 16.51 | 17.98 | 19.46 | 17.16 | 17.73 | 15.10 | 24.08 | 19.57 |
| Ajitmal | 15.00 | 19.41 | 17.55 | 16.34 | 18.19 | 14.64 | 26.71 | 17.96 |
| Bhagyanagar .. | 19.58 | 18.91 | 21.29 | 17.18 | 16.79 | 16.56 | 22.39 | 21.42 |
| Average for Pilot Project .. | 17.01 | 18.73 | 19.52 | 16.93 | 17.58 | 15.48 | 24.44 | 19.57 |

Besides estimating the average yields of these crops, the percentage area under improved agricultural practices was also worked out in each year. The yield estimates from this survey were compared with the survey estimates of the N. S. S.—C. E. Survey results in community development areas in U.P. as well as with the General Crop Estimation Survey Estimates from Etawah District. The average yields of Pilot Development Project are much higher than those of the whole district. Table no. 2 provides a comparison of the above yields.

TABLE NO. 2

*Agricultural Sample Survey in the Pilot Development Project,
Etawah, 1956-57.*

Comparison of Survey Estimates with General C. E. and N. S. S.—C. E. Survey Estimates.

| Crops | Number of experiments in the present survey | Yield/acre from present survey (Mds.) | Sampling error per cent | N. S. S.—C.E. Survey estimates for all Development Blocks (C.P. C.D. N.E.S.) in U. P. —Rabi 1955-56 | | | | General crop Estimation Survey- Estimates for Etawah District 1955-56 | |
|-----------|---|---------------------------------------|-------------------------|---|--------------------|--------------------------|---|---|--|
| | | | | Number of experiments | Yield/acre (Mds.)* | Sampling error per cent. | Per cent excess of Col. (4) over Col. (7) | Yield/acre (Mds.) | Per cent excess of col. (4) over Col. (10) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Wheat .. | 273 | 17.01 | 7.56 | 1,811 | 10.62 | 1.8 | 60.17 | 10.01 | 69.93 |
| Barley .. | 125 | 19.52 | 3.57 | 599 | 12.52 | 3.2 | 55.91 | 11.42 | 70.93 |
| Gram .. | 146 | 17.58 | 5.05 | 782 | 8.20 | 2.9 | 114.39 | 5.59 | 214.49 |
| Peas .. | 143 | 24.44 | 4.90 | .. | .. | .. | .. | 6.41 | 28128 |

*The yield figures have been converted from pounds to maunds.
NOTE—Survey estimates of General C.E. and N.S.S.—C.E. are not available for 1957-58, hence no comparison could be done.

A survey of this nature helps in assessing the tangible effects of Development programmes launched by Community Development Projects. The results of such surveys determine the efficacy of the various improved techniques used to increase the average yields of various crops.

II. Seed saturation of wheat, barley, gram and pea—This is another series of the Agricultural Sample Survey carried out in the Pilot Development Project, Etawah. Through this survey, it is attempted to assess the area covered by the improved varieties of various crops, viz., wheat, barley, gram and pea. From the two years' results, the following percentage of saturation in the three blocks of the Pilot Development Project in the crops under study are given in the tabular form below :

TABLE NO. 3

Extent of saturation (in percentages) with improved varieties of Rabi crops (1956-57 and 1957-58)

| Blocks | Wheat | | Barley | Gram | Peas |
|------------------|---------|---------|---------|---------|---------|
| | 1956-57 | 1957-58 | 1957-58 | 1957-58 | 1957-58 |
| Mahewa | 99.57 | 99.89 | 85.14 | 80.13 | 99.89 |
| Ajitmal | 90.60 | 93.72 | 77.81 | 51.49 | 100.00 |
| Bhagyanagar .. | 90.85 | 99.08 | 41.62 | 45.25 | 100.00 |
| Whole Project .. | 94.35 | 97.38 | 73.41 | 64.85 | 99.96 |

Reports of the Seed Saturation, Survey for the years 1956-57 and 1957-58 are available in printed form.

From this year, i.e. 1959, the agricultural sample surveys will also be conducted for the *Kharif* crops in the Pilot Development Project, Etawah.

III. Coverage Survey on Improved Agricultural Practices in the Pilot Development Project, Etawah, 1959—It is now from 6 to 10 years that the agricultural extension work is being carried out in the Pilot Project area of the district Etawah. In all the three units of the Pilot Development Project, emphasis continues to be on the improved agriculture and allied items consisting of :

- (i) Improved seeds.
- (ii) Use of organic, inorganic and green manures.
- (iii) Agricultural implements.
- (iv) Improved agricultural practices.
- (v) Green fodder and vegetables.

Normally, the figures of achievements are being reported through the monthly, quarterly and yearly progress reports, from the blocks ; but it does not show the exact coverage of various activities. This coverage survey attempts to assess the coverage by various improved agricultural techniques with respect to large, medium and small cultivators. The classification of cultivators in different categories was necessary so as to find out the impact of agricultural programmes on small, medium and large land-holders. The coverage of cultivating households with respect to various agricultural items have been presented in the following paragraphs with necessary data.

Method of Study

Selection of villages—The villages of all the three units were classified into following three categories after discussion with the field staff after taking into consideration the distance from the block-headquarters, transport and communication facilities, frequency of contacts and attitudes of the people for accepting new practices :

- (i) Highly progressive villages—where the agricultural programme was closely followed up,
- (ii) Average progressive villages—where the agricultural programme was not followed up so closely, and
- (iii) Less progressive villages—where the agricultural programme could not gain the desired momentum.

In all 21 Villages were selected for the study—9 from Mahewa and six each from Bhagyanagar and Ajitmal Blocks. Selection of villages from the list was by random method.

Selection of Cultivators

Within each selected village, a complete census was taken, i.e. all the cultivators were contacted for this survey, but for the purpose of analysis of the data, the cultivators were classified in the following categories :

- (i) small size cultivators—those possessing cultivation holdings from 1—5 acres,
- (ii) medium-size cultivators—those possessing cultivation holdings over 5 to 10 acres, and
- (iii) large-size cultivators—with holdings above 10 acres.

The sample constituted of 157 large-size, 322 medium-size and 775 small-size cultivators.

Schedules and Questionnaires

The questionnaire for collecting information from the cultivators was quite comprehensive but a brief one having very simple questions so as to cover all the major aspects of agricultural programme. Before actually conducting the survey, the questionnaire was pre-tested in one village of each block and thereafter finalized in consultation with the subject-matter specialist. Each of the respondents was personally interviewed.

(1) *Improved Seed*—The data in this respect is presented in table below :

TABLE NO. 4
Use of Improved Seeds (Percentage)

| Items | | | | | | Large-size cultivators | Medium-size cultivators | Small-size cultivators |
|---------------------------------------|----|----|----|----|----|------------------------|-------------------------|------------------------|
| <i>(Highly Progressive Villages)</i> | | | | | | | | |
| Wheat | .. | .. | .. | .. | .. | 100.00 | 98.0 | 100.0 |
| Gram | .. | .. | .. | .. | .. | 88.4 | 80.0 | 33.0 |
| Barley | .. | .. | .. | .. | .. | 85.0 | 80.3 | 46.0 |
| Pea | .. | .. | .. | .. | .. | 100.0 | 100.0 | 100.0 |
| Average | | | | | | 93.4 | 89.6 | 69.8 |
| <i>(Average Progressive Villages)</i> | | | | | | | | |
| Wheat | .. | .. | .. | .. | .. | 94.0 | 100.0 | 95.0 |
| Gram | .. | .. | .. | .. | .. | 52.0 | 73.0 | 77.5 |
| Barley | .. | .. | .. | .. | .. | 86.0 | 66.4 | 66.6 |
| Pea | .. | .. | .. | .. | .. | 96.0 | 100.0 | 94.0 |
| Average | | | | | | 82.0 | 84.9 | 83.5 |
| <i>(Less Progressive Villages)</i> | | | | | | | | |
| Wheat | .. | .. | .. | .. | .. | 94.0 | 100.0 | 95.0 |
| Gram | .. | .. | .. | .. | .. | 34.0 | 26.0 | 27.1 |
| Barley | .. | .. | .. | .. | .. | 42.0 | 37.0 | 32.3 |
| Pea | .. | .. | .. | .. | .. | 94.0 | 100.0 | 95.0 |
| Average | | | | | | 66.0 | 65.8 | 62.4 |

The data in the above table indicates that almost cent per cent saturation has been achieved in wheat and pea crops which are the main *rabi* crops of the area. In the initial stages of Pilot Development Project, wheat Pb. 591 was introduced, but later on it was replaced by N. P. 720 on the basis of the results of varietal trials and recommendations of Economic Botanist to Government of Uttar Pradesh. Farmers are using both the improved varieties of wheat. In pea, T-163 is a high yielding variety which completely replaced the local variety. As regards Barley and Gram.

the improved varieties, viz. C-251, K-12 and T-81 are comparatively not much superior than local ones. Hence the saturation programme in respect of these crops has not progressed with the desired momentum.

(2) *Fertilisers and Green Manuring*—Ammonium Sulphate, Urea and Ammonium Sulpho-Nitrate are used as Nitrogenous fertilizers. Superphosphate and Bonemeal are used as Phosphatic fertilizers. The position as emerged from this survey is as follows :

TABLE NO. 5
Use of fertilizers in Kharif and Rabi crops (Percentage)

| Items | | | | | Large-size cultivators | Medium-size cultivators | Small-size cultivators |
|---------------------------------------|----|----|----|----|------------------------|-------------------------|------------------------|
| <i>(Highly Progressive Villages)</i> | | | | | | | |
| NITROGENOUS FERTILIZERS : | | | | | | | |
| Kharif .. | .. | .. | .. | .. | 95.2 | 97.7 | 51.0 |
| Rabi .. | .. | .. | .. | .. | 100.0 | 90.5 | 08.0 |
| PHOSPHATIC FERTILIZERS : | | | | | | | |
| Kharif .. | .. | .. | .. | .. | 35.7 | 46.5 | 8.0 |
| Rabi .. | .. | .. | .. | .. | 95.2 | 86.9 | 47.0 |
| CAKES : | | | | | | | |
| Kharif and Rabi | .. | .. | .. | .. | 54.4 | 76.6 | 51.0 |
| <i>(Average Progressive Villages)</i> | | | | | | | |
| NITROGENOUS FERTILIZERS : | | | | | | | |
| Kharif .. | .. | .. | .. | .. | 68.0 | 47.0 | 43.0 |
| Rabi .. | .. | .. | .. | .. | 92.0 | 68.0 | 34.0 |
| PHOSPHATIC FERTILIZERS : | | | | | | | |
| Kharif .. | .. | .. | .. | .. | 14.0 | 6.0 | 3.5 |
| Rabi .. | .. | .. | .. | .. | 52.0 | 40.0 | 31.4 |
| CAKES : | | | | | | | |
| Kharif and Rabi | .. | .. | .. | .. | 42.0 | 33.0 | 42.3 |
| <i>(Less Progressive Villages)</i> | | | | | | | |
| Nitrogenous Fertilizers | | | | | | | |
| Kharif .. | .. | .. | .. | .. | 44.0 | 31.0 | 32.0 |
| Rabi .. | .. | .. | .. | .. | 80.0 | 50.8 | 54.0 |
| Phosphatic Fertilizers | | | | | | | |
| Kharif .. | .. | .. | .. | .. | 28.0 | 25.0 | 21.8 |
| Rabi .. | .. | .. | .. | .. | 28.0 | 25.0 | 21.8 |
| Cakes: | | | | | | | |
| Kharif and Rabi | .. | .. | .. | .. | 2.0 | 10.0 | 11.0 |

A very significant fact emerging from the above data is that consumption of fertilisers and cakes is higher in *rabi* against the *kharif* crops. Though there did not appear to be much difference between the large and medium cultivators, as regards

the extent of use of fertilisers, but the percentage consumption is definitely small in case of small-size cultivators. Almost all the cultivators use nitrogenous fertilisers in all the villages, but phosphatic fertilisers were popular mostly in *rabi* crops and that too with large and medium-size cultivators only. One of the obvious reasons for the greater use of nitrogenous fertilisers is very quick and visible results in the form of top-dressing. One of the reasons for lesser use of fertilisers by the small-size cultivators is the limitation with respect to availing the credit facilities from co-operatives due to small holdings which govern their *haisiyat*.

TABLE NO. 6

Green Manuring (Percentage)

| Items | | | | | Large-size cultivators | Medium-size cultivators | Small-size cultivator |
|--------------------------------|----|----|----|----|------------------------|-------------------------|-----------------------|
| 1 | | | | | 2 | 3 | 4 |
| (Highy Progressive Villages) | | | | | | | |
| Sanai | .. | .. | .. | .. | 83.3 | 78.9 | 54.0 |
| Moong T-1 | .. | .. | .. | .. | 25.5 | 18.9 | 5.0 |
| Dhaincha | .. | .. | .. | .. | 20.4 | 9.0 | 1.5 |
| Guar | .. | .. | .. | .. | 27.2 | 11.5 | 5.7 |
| Indigo | .. | .. | .. | .. | 51.0 | 36.1 | 22.4 |
| (Average Progressive Villages) | | | | | | | |
| Sanai | .. | .. | .. | .. | 57.1 | 38.2 | 30.5 |
| Moong T-1 | .. | .. | .. | .. | 8.2 | 10.8 | 1.0 |
| Dhaincha | .. | .. | .. | .. | 6.1 | .. | .. |
| Guar | .. | .. | .. | .. | 10.2 | 4.2 | 1.4 |
| Indigo | .. | .. | .. | .. | 22.4 | 10.0 | 7.5 |
| (Less Progressive Villages) | | | | | | | |
| Sanai | .. | .. | .. | .. | 58.0 | 44.0 | 24.7 |
| Moong T-1 | .. | .. | .. | .. | 6.0 | 2.5 | .. |
| Dhaincha | .. | .. | .. | .. | .. | .. | .. |
| Guar | .. | .. | .. | .. | 4.0 | 3.5 | .. |
| Indigo | .. | .. | .. | .. | 12.0 | 7.5 | 3.0 |

Green manuring programme has been one of the very important programmes of Community Development. In Pilot Project area the

more popular types of green manuring crops are *Sanai*, *Dhaincha*, *Guar*, Indigo and *Moong* T-1. *Sanai* was the most popular green manuring crop. *Moong* T-1 is not at all popular in average and less progressive villages. *Dhaincha* is popular in paddy area. The green manuring programme has, however, caught the imagination of the people and is expected to be a self propelled programme in future. The position regarding acceptance of the green manuring programme can be summed up as follows :

TABLE NO. 7

| Serial no. | Category of cultivators | | | | Total no. of cultivators included in the sample | Number of cultivators adopting the green manuring programme | Percentage |
|------------|-------------------------|----|----|----|---|---|------------|
| 1 | 2 | | | | 3 | 4 | 5 |
| 1 | Large-size | .. | .. | .. | 157 | 103 | 65.7 |
| 2 | Medium-size | .. | .. | .. | 322 | 179 | 55.6 |
| 3 | Small-size | .. | .. | .. | 775 | 356 | 46.0 |
| | Total | | | | 1,254 | 638 | 50.9 |

(3) *Agricultural Engineering Programme*—This head can be broadly divided into two parts :

- (i) Agricultural Improved Implements, and
- (ii) Irrigation.

The figures of coverage are as given below :

TABLE NO. 8

Popularization of Agricultural Engineering

| Item | | | | | Large-size cultivators | Medium-size cultivators | Small-size cultivators |
|--------------------------------------|----|----|----|----|------------------------|-------------------------|------------------------|
| 1 | | | | | 2 | 3 | 4 |
| <i>(Highly Progressive Villages)</i> | | | | | | | |
| Light Iron Ploughs | .. | .. | .. | .. | 93.5 | 85.3 | 35.8 |
| Cultivators | .. | .. | .. | .. | 95.2 | 70.5 | 24.6 |
| Heavy Ploughs | .. | .. | .. | .. | 40.8 | 7.4 | 1.3 |
| Threshers | .. | .. | .. | .. | 52.7 | 11.5 | Negligible |

TABLE NO. 8—(concl'd.).

| Item | | | | | Large-size cultivators | Medium-size cultivators | Small-size cultivator |
|--------------------------------|----|----|----|----|---------------------------|----------------------------|--------------------------|
| 1 | | | | | 2 | 3 | 4 |
| (Average Progressive Villages) | | | | | | | |
| Masonry Wells | .. | .. | .. | .. | 10.2 | 8.2 | 2.3 |
| Persian Wheels | .. | .. | .. | .. | 6.8 | 7.4 | 2.3 |
| Boring of Masonry Wells | .. | .. | .. | .. | 5.1 | 4.9 | .. |
| Light Ploughs | .. | .. | .. | .. | 67.3 | 49.8 | 30.9 |
| Cultivators | .. | .. | .. | .. | 65.3 | 40.0 | 16.6 |
| Heavy Ploughs | .. | .. | .. | .. | 8.2 | 4.1 | .. |
| Threshers | .. | .. | .. | .. | 14.3 | 3.3 | .. |
| Masonry Wells | .. | .. | .. | .. | 2.04 | 3.3 | .. |
| Persian Wheels | .. | .. | .. | .. | 2.04 | 4.1 | .. |
| Borings | .. | .. | .. | .. | 2.04 | .. | .. |
| (Less Progressive Villages) | | | | | | | |
| Light Iron Ploughs | .. | .. | .. | .. | 82.0 | 56.8 | 36.6 |
| [Cultivators | .. | .. | .. | .. | 62.0 | 20.9 | 8.9 |
| Heavy Iron Ploughs | .. | .. | .. | .. | 6.0 | 1.2 | .. |
| Threshers | .. | .. | .. | .. | 8.0 | .. | .. |
| [Masonry Wells | .. | .. | .. | .. | 6.0 | 1.2 | .. |
| Persian Wheels | .. | .. | .. | .. | 6.0 | .. | .. |
| Borings | .. | .. | .. | .. | .. | .. | .. |

Since a substantial area (about 45 per cent which is an average for 3 blocks), is covered by canals, the masonry wells, persians wheels and boring of wells only supplemented the irrigation facilities to a little extent.

As regards the use of agricultural implements, it is clear from the above data that cultivators are the most popular implement used in the Pilot Development Project, Etawah. The percentage coverage for small-size cultivators is about 33 per cent because ordinarily they either borrow or hire these implements. Threshers and heavy ploughs are popular mostly with large-size cultivators in progressive villages.

(4) *Improved cultural practices*—Agricultural production is also much dependent upon the technique and methods of cultivation, hence the importance of agricultural practices. The table below gives an idea of coverage with various improved practices :

TABLE NO. 9
Coverage with various improved practices
(Percentage)

| Items | | | | | Large-size cultivators | Medium-size cultivators | Small-size cultivators |
|---------------------------------------|----|----|----|----|------------------------|-------------------------|------------------------|
| 1 | | | | | 2 | 3 | 4 |
| <i>(Highly Progressive Villages)</i> | | | | | | | |
| Reduced Seed Rate | .. | .. | .. | .. | 95.2 | 78.7 | 51.8 |
| Line Sowing of crops | .. | .. | .. | .. | 98.6 | 82.0 | 57.6 |
| Preparation of fields by : | | | | | | | |
| (a) Light Ploughs | .. | .. | .. | .. | 100.0 | 68.0 | 34.2 |
| (b) Heavy Ploughs | .. | .. | .. | .. | 61.2 | 10.7 | 2.0 |
| (c) Cultivators | .. | .. | .. | .. | 100.0 | 81.0 | 24.0 |
| Use of Insecticides | .. | .. | .. | .. | 85.0 | 73.8 | 51.0 |
| Multiplication of green manuring seed | .. | .. | .. | .. | 90.5 | 70.5 | 39.0 |
| <i>(Average Progressive Villages)</i> | | | | | | | |
| Reduced Seed Rate | .. | .. | .. | .. | 85.68 | 69.7 | 50.3 |
| Line Sowing | .. | .. | .. | .. | 63.2 | 60.6 | 52.7 |
| Preparation of fields by : | | | | | | | |
| (a) Light Ploughs | .. | .. | .. | .. | 67.3 | 56.4 | 31.62 |
| (b) Heavy Ploughs | .. | .. | .. | .. | 8.2 | 10.0 | .. |
| (c) Cultivators | .. | .. | .. | .. | 51.0 | 47.3 | 17.0 |
| Use of Insecticides | .. | .. | .. | .. | 94.0 | 73.7 | 51.7 |
| Multiplication of green manuring seed | .. | .. | .. | .. | 90.5 | 70.5 | 39.0 |
| <i>(Less Progressive Villages)</i> | | | | | | | |
| Reduced Seed Rate | .. | .. | .. | .. | 66.0 | 33.0 | 72.0 |
| Line Sowing | .. | .. | .. | .. | 40.0 | 23.7 | 31.8 |
| Preparation of fields by : | | | | | | | |
| (a) Light Ploughs | .. | .. | .. | .. | 82.0 | .. | 39.0 |
| (b) Heavy Ploughs | .. | .. | .. | .. | 6.0 | .. | .. |
| (c) Cultivators | .. | .. | .. | .. | 62.0 | .. | 14.4 |
| Use of Insecticides | .. | .. | .. | .. | 24.0 | .. | 31.2 |
| Multiplication of green manuring seed | .. | .. | .. | .. | 8.0 | .. | .. |

Among the improved cultural practices, people have adopted the practice of reduced seed rate and line sowing of crops in most cases. A large number of cultivators are also using improved implements in preparation of fields. Use of insecticides has been adopted mostly in highly progressive and average progressive villages by the large and medium-size cultivators.

(5) *Vegetable and Fodder Crops*—Growing of vegetables is a source of income also and adds nutritive constituents to diet. Good quality seeds were distributed by Project.

Green fodder crops have helped to overcome the fodder problem to some extent.

TABLE NO. 10

Growing of vegetables and fodder crops

(Percentage)

| Items | | | | | | Large-size cultivators | Medium-size cultivators | Small-size cultivators |
|---------------------------------------|----|----|----|----|----|---------------------------|----------------------------|---------------------------|
| <i>(Highly Progressive Villages)</i> | | | | | | | | |
| Vegetables | .. | .. | .. | .. | .. | 97.9 | 86.9 | 63.0 |
| Chari | .. | .. | .. | .. | .. | 100.0 | 100.0 | 100.0 |
| Berseem | .. | .. | .. | .. | .. | 30.6 | 9.7 | 1.2 |
| Lucern | .. | .. | .. | .. | .. | 4.1 | .. | .. |
| <i>(Average Progressive Villages)</i> | | | | | | | | |
| Vegetables | .. | .. | .. | .. | .. | 85.0 | 71.8 | 62.3 |
| Chari | .. | .. | .. | .. | .. | 100.0 | 100.0 | 100.0 |
| Berseem | .. | .. | .. | .. | .. | 10.2 | 1.6 | .. |
| Lucern | .. | .. | .. | .. | .. | .. | .. | .. |
| <i>(Less Progressive Villages)</i> | | | | | | | | |
| Vegetables | .. | .. | .. | .. | .. | 22.0 | 31.0 | 30.0 |
| Chari | .. | .. | .. | .. | .. | 100.0 | 100.0 | 100.0 |
| Berseem | .. | .. | .. | .. | .. | .. | .. | .. |
| Lucern | .. | .. | .. | .. | .. | .. | .. | .. |

The cultivation of vegetables appears to be quite popular. It appears that a sizeable number of small cultivators in different categories of villages have also started growing vegetables. Berseem cultivation has been adopted only by large cultivators in highly progressive and average progressive villages and by medium cultivators in highly progressive villages.

PART IV
BLOCK PROGRAMME

BLOCK PROGRAMME
PART IV

CHAPTER XXI

NORMAL BLOCK PROGRAMMES

Just like other blocks in the State, normal programmes of the block pertaining to agriculture, horticulture, irrigation, animal husbandry, co-operation, rural, health, social education, panchayat and community works are being carried out in the Pilot Development Project, Etawah, emphasis being laid on agricultural programmes in particular. Key indications of progress are given in Appendix C. In Agriculture, distribution of improved seeds of various crops, varietal demonstrations and cultural practices are being carried out on an intensive scale in order to increase agricultural production. It is not considered here necessary to touch all the points on this subject. A brief mention, however, is given of the important items which are of particular significance in the project area.

AGRICULTURE

(1) *Introduction of Improved Seeds*—It has been the effort in the project area to introduce seed of improved varieties in place of local ones and to replace the same in case there is either deterioration in quality of such seeds or in the mean-while some improved varieties are released by the Plant breeders for extension. In the early stages, Punjab 591 variety of wheat was distributed to the cultivators which gave very good results but later on new varieties, known as N. P. 710 and 720, were recommended by the Department of Agriculture. In the first instance these varieties were tried on a small scale in certain areas of the district in collaboration with the local district authorities and later on extension programme was taken up. N. P. 720 is early-maturing, is smut-resistant, has shorter but stronger stumps and the ears are hairy and broader at the top. The yield is reported to be slightly higher than Pb. 591. Previously distributed variety is now being gradually replaced. Extension of N. P. 720 wheat seed is going on from year to year and about one-third of the area has already been covered with this variety. Crop-cutting experiments are being carried out systematically in these blocks to watch the trend of yield.

Pea, Type 163, is another important crop which has virtually replaced the local variety. This variety is a high yielder and the cultivators are greatly impressed with it. There is virtual saturation of this variety in the P. D. P. area. Pea seed is purchased from this district and supplied to other areas of the State also. Potato seed, especially Patna Phulwa, is also introduced in this area.

As regards barley and gram, improved varieties have also been introduced in the area but their superiority over the local ones is not so significant as to warrant its natural spread. Hence, their extension is proceeding gradually.

As regards mustard (*Laha*), which forms a very important cash crop of the area, some trials were carried out to find out the extent to which improved varieties are superior to the local variety. The Economic Botanist of Oil Seeds, Kanpur, in collaboration with the Project staff laid a number of trials last year in the project area. The trials will be repeated this year also.

Superior varieties of *Arhar*, *Juar* and *Bajra* do not appear to have been developed for Etawah area. A few new varieties of *Bajra* and *Juar* have been tried but as their superiority in yield could not be established, local varieties are being grown. Cotton, Type 216-F, which has a long staple, is gaining popularity, but from the point of view of this crop this district is not very important.

From the above it will thus be seen that the Project is quite alive to carrying out varietal trials for various crops to find out if any superior variety can be introduced in the area.

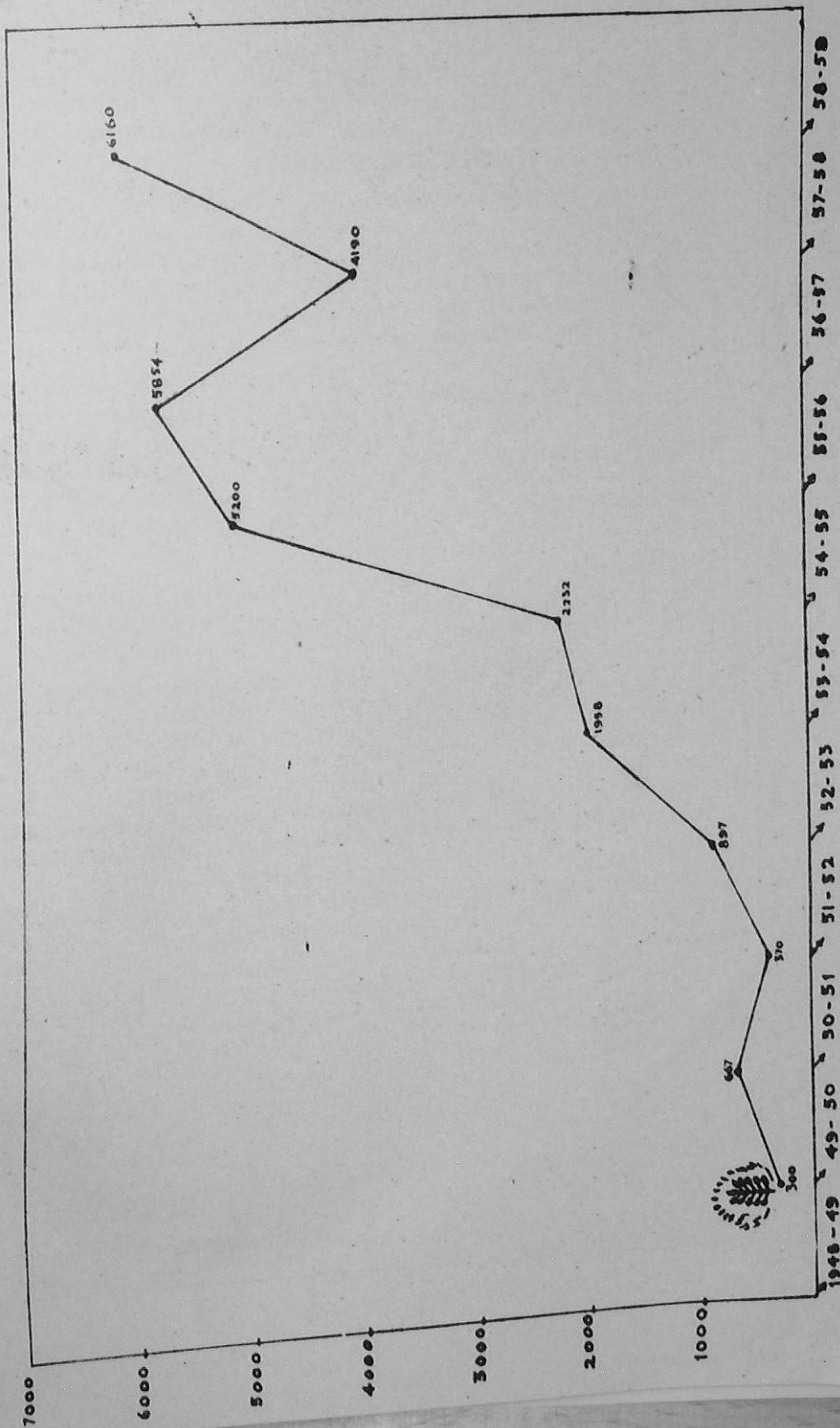
(2) *Green manuring*—The programme of green manuring has caught the imagination of progressive cultivators in the Pilot Development Project, Etawah. First efforts were made to popularise green manuring programmes as early as 1949-50, when 300 acres of land were sown with green manuring crops. Since then, demonstrations are being carried out and the area under this crop has been increasing, as will be seen from the following table :

Table showing acreage under Green Manuring Crops in the Pilot Development Project, Etawah

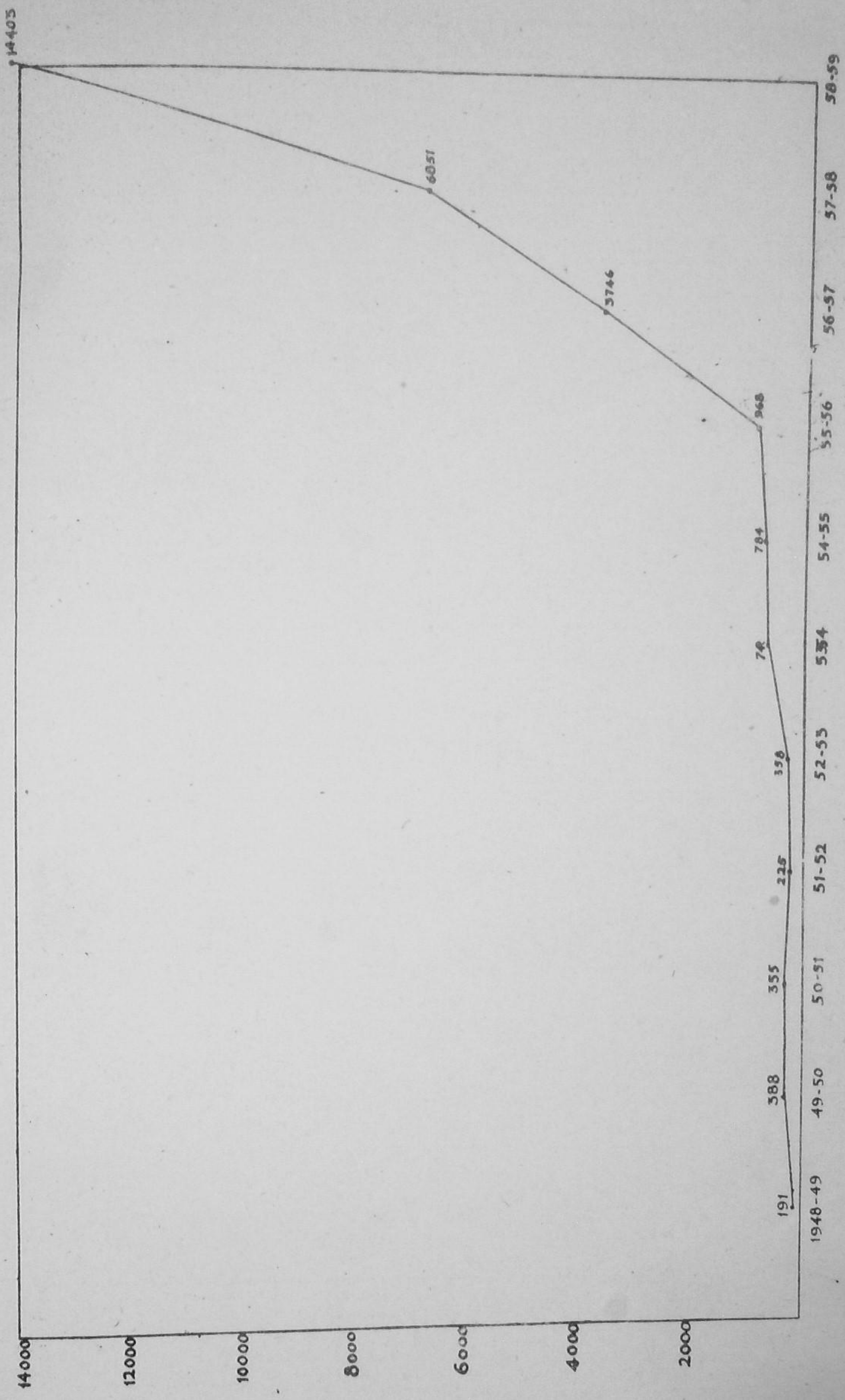
| Year | Acreage under green manuring crops | | | | | |
|---------|------------------------------------|----|----|----|----|-------|
| 1949-50 | .. | .. | .. | .. | .. | 300 |
| 1950-51 | .. | .. | .. | .. | .. | 667 |
| 1951-52 | .. | .. | .. | .. | .. | 370 |
| 1952-53 | .. | .. | .. | .. | .. | 897 |
| 1953-54 | .. | .. | .. | .. | .. | 1,958 |
| 1954-55 | .. | .. | .. | .. | .. | 2,232 |
| 1955-56 | .. | .. | .. | .. | .. | 5,200 |
| 1956-57 | .. | .. | .. | .. | .. | 5,854 |
| 1957-58 | .. | .. | .. | .. | .. | 4,190 |
| 1958-59 | .. | .. | .. | .. | .. | 6,160 |

From the above table, it will thus be seen that the green manuring programme is becoming popular with the cultivators.

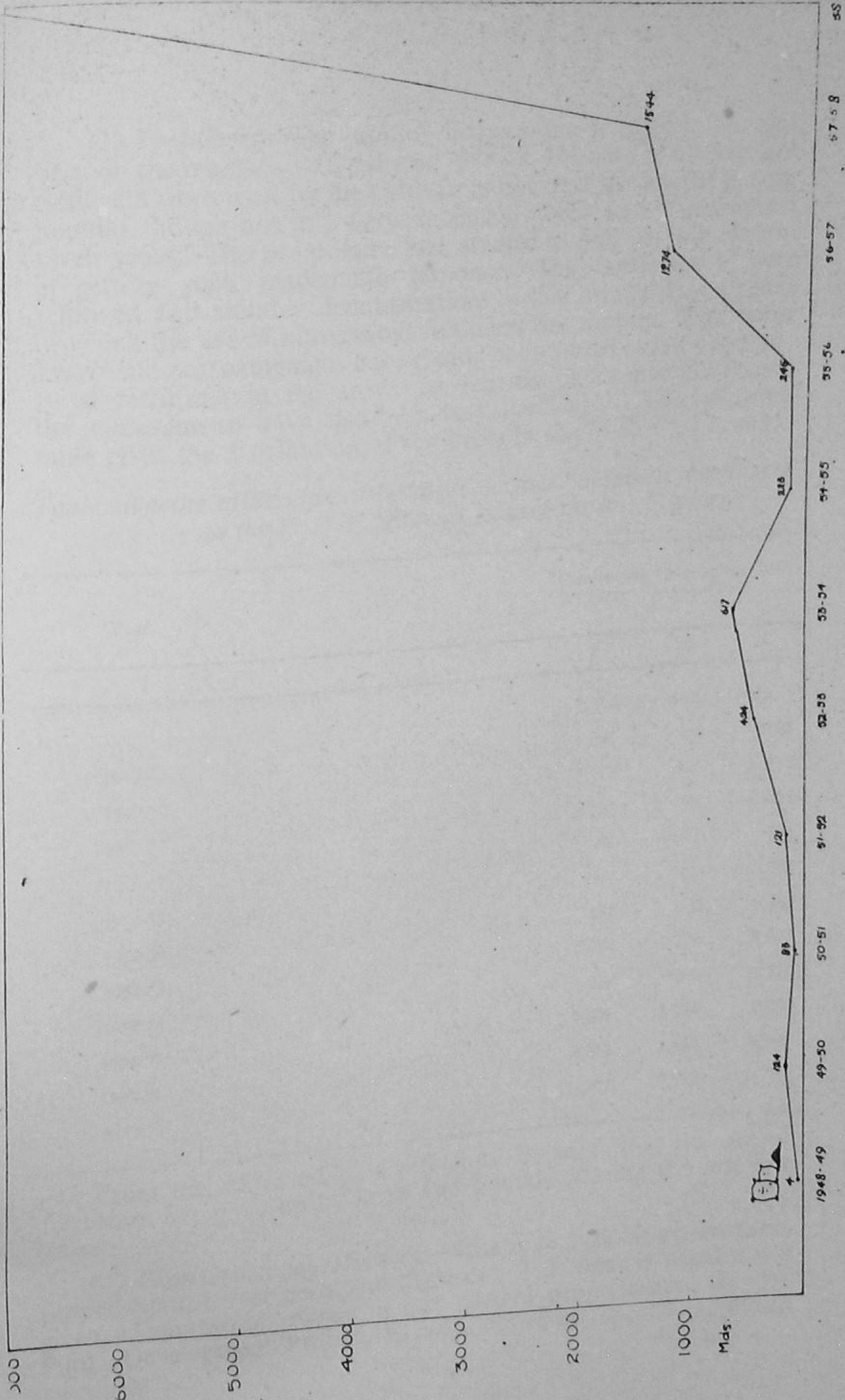
AREA UNDER GREEN MANURE IN ACRES.



SUPPLY OF FERTILIZERS (NITROGENUS)
IN MAUNDS.



SUPPLY OF FERTILIZERS (PHOSPHATIC)



(3) *Fertilizers*—The use of nitrogenous fertilizers has also been on the increase. In the year 1948-49, 191 mds. of nitrogenous fertilizers were used by the cultivators but their use started getting popular though not in a very significant degree in the subsequent seven years. The programme was studied to find out the reasons of getting such inadequate response. The bottle-necks were removed and suitable demonstrations further arranged, as a result of which the use of nitrogenous fertilizers has shot up. The recent *kharif* and *rabi* campaigns have greatly contributed to the popularity of fertilizers in the area. As regards phosphatic fertilizers, the achievements have also been very significant. The following table gives the distribution of fertilizers in the P. D. P., Etawah :

Table showing utilization of Nitrogenous and Phosphatic Fertilizers in the P. D. P., Etawah, during the last 11 years

| | | | | | Nitrogenous fertilizers | Phosphatic fertilizers | Total |
|---------|----|----|----|----|----------------------------|---------------------------|--------|
| Year | | | | | 1 | 2 | 3 |
| 1 | | | | | Mds. | Mds. | Mds. |
| | | | | | 191 | 4 | 195 |
| 1948-49 | .. | .. | .. | .. | 388 | 124 | 512 |
| 1949-50 | .. | .. | .. | .. | 355 | 83 | 438 |
| 1950-51 | .. | .. | .. | .. | 225 | 121 | 346 |
| 1951-52 | .. | .. | .. | .. | 358 | 424 | 782 |
| 1952-53 | .. | .. | .. | .. | 745 | 617 | 1,462 |
| 1953-54 | .. | .. | .. | .. | 784 | 223 | 1,007 |
| 1954-55 | .. | .. | .. | .. | 968 | 245 | 1,213 |
| 1955-56 | .. | .. | .. | .. | 3,746 | 1,274 | 5,020 |
| 1956-57 | .. | .. | .. | .. | 6,851 | 1,544 | 8,395 |
| 1957-58 | .. | .. | .. | .. | 14,403 | 7,317 | 21,720 |
| 1958-59 | .. | .. | .. | .. | | | |

From the above table, it will thus be seen that the use of fertilizers has gone up by leaps and bounds during the last few years.

(4) *Plant Protection Measures*—Intensive agriculture warrants proper control over pests and diseases. This item is usually not given adequate importance in our normal programmes. In the Pilot Development Project, Etawah, however, special emphasis

was laid on seeing that the produce in the fields is not damaged due to the attack of pests. Pesticides are now getting popular as will be seen from the following table :

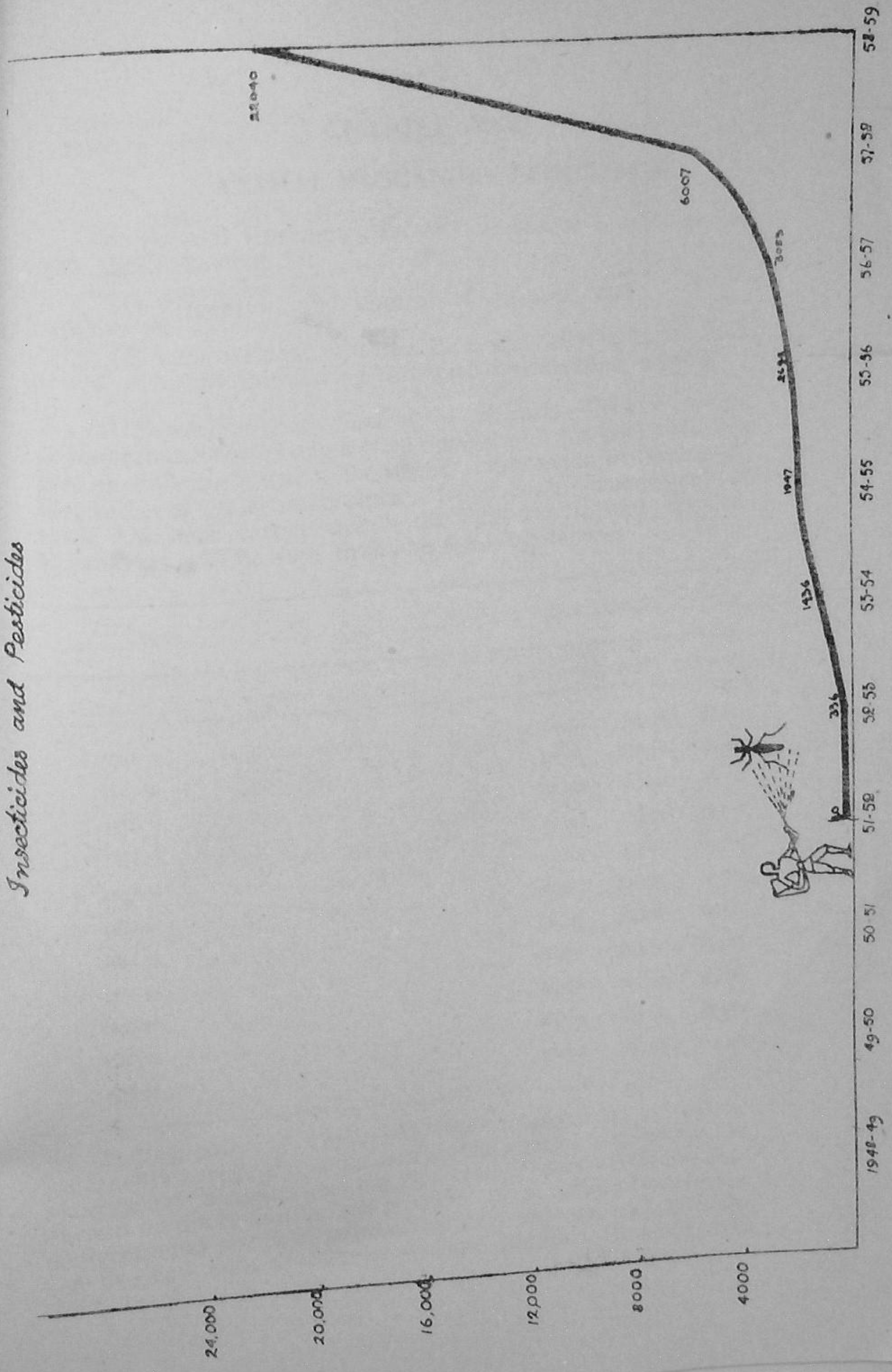
Table showing use of pesticides in P. D. P., Etawah

| Year | | | | | Insecticides distributed in lbs. | Area covered with plant protection measures |
|---------|----|----|----|----|----------------------------------|---|
| 1951-52 | .. | .. | .. | .. | 110 | 20 |
| 1952-53 | .. | .. | .. | .. | 336 | 146 |
| 1953-54 | .. | .. | .. | .. | 1,436 | 488 |
| 1954-55 | .. | .. | .. | .. | 1,947 | 273 |
| 1955-56 | .. | .. | .. | .. | 2,694 | 233] |
| 1956-57 | .. | .. | .. | .. | 3,053 | 363 |
| 1957-58 | .. | .. | .. | .. | 6,007 | 1,300 |
| 1958-59 | .. | .. | .. | .. | 22,040 | 2,752 |

Further intensive work is being planned to overcome the losses which occur in the fields due to the attack of pests and diseases.

(5) *Agricultural Engineering and Soil Conservation Programmes*—Agricultural Engineering and Soil Conservation Programmes have also become exceedingly popular with the cultivators. Brief comments have already been given in Part II of this report. Hence, it is not considered necessary to repeat them here.

Insecticides and Pesticides



CHAPTER XXII

ANIMAL HUSBANDRY PROGRAMME

The Animal Husbandry Programme can be roughly divided into the following :

(1) Prevention and control of diseases; and

(2) Improvement of cattle by supply of pure breed bulls or by introducing artificial insemination scheme.

(1) *Prevention and Control of Diseases*—Etawah District is very famous for having a large number of cattle fairs which are held in different parts of the district. Prevention of diseases is, therefore, of vital importance. Large scale inoculation of cattle has been carried out in the Pilot Development Project, Etawah, as will be seen from the following table :

| Year | | | | | H. S. | R. P. | Total |
|---------|----|----|----|----|--------|--------|--------|
| 1 | | | | | 2 | 3 | 4 |
| | | | | .. | 4,227 | 11,116 | 15,343 |
| 1948-49 | .. | .. | .. | .. | 18,559 | 23,116 | 41,675 |
| 1949-50 | .. | .. | .. | .. | 21,508 | 11,284 | 42,792 |
| 1950-51 | .. | .. | .. | .. | 19,911 | 29,286 | 49,197 |
| 1951-52 | .. | .. | .. | .. | 53,941 | 41,846 | 95,787 |
| 1952-53 | .. | .. | .. | .. | 43,083 | 27,570 | 70,653 |
| 1953-54 | .. | .. | .. | .. | 33,351 | 32,208 | 65,559 |
| 1954-55 | .. | .. | .. | .. | 30,904 | 20,497 | 51,401 |
| 1955-56 | .. | .. | .. | .. | 60,984 | 32,764 | 93,748 |
| 1956-57 | .. | .. | .. | .. | 49,164 | 42,651 | 91,815 |
| 1957-58 | .. | .. | .. | .. | 60,518 | 33,642 | 94,160 |
| 1958-59 | .. | .. | .. | .. | | | |

(2) *Up-grading of Cattle*—As regards upgrading of cattle, there are two artificial insemination centres which are being run at Mahewa and Bhagyanagar, the two headquarters of the blocks. There is no doubt that the full potential of the artificial insemination centre has not been achieved as there are two buffalo bulls and two cow bulls at each of the two centres. However, the

following table shows that the programme is getting quite popular :

| Year | | | | | Artificial Insemination | | |
|---------|----|----|----|----|-------------------------|--------------|-------|
| | | | | | In cows | In buffaloes | Total |
| | 1 | | | | 2 | 3 | 4 |
| 1950-51 | .. | .. | .. | .. | 100 | 56 | 156 |
| 1951-52 | .. | .. | .. | .. | 430 | 100 | 530 |
| 1952-53 | .. | .. | .. | .. | 535 | 101 | 636 |
| 1953-54 | .. | .. | .. | .. | 625 | 99 | 724 |
| 1954-55 | .. | .. | .. | .. | 518 | 158 | 676 |
| 1955-56 | .. | .. | .. | .. | 804 | 266 | 1,070 |
| 1956-57 | .. | .. | .. | .. | 1,173 | 390 | 1,563 |
| 1957-58 | .. | .. | .. | .. | 1,665 | 711 | 2,376 |
| 1958-59 | .. | .. | .. | .. | 2,038 | 773 | 2,811 |

In the early stages, it was feared that due to orthodoxy and superstition the artificial insemination centres may not receive the desired attention of the cultivators, but, as the above figures indicate, there is no superstition against this scheme and people are bringing their cows and buffaloes even from distances of 5 to 10 miles for insemination. The Poultry Development Programme is being taken up by the Animal Husbandry Department separately.

CHAPTER XXIII

PUBLIC HEALTH AND RURAL SANITATION

The usual programmes in Public Health and Rural Sanitation are being carried out in the Pilot Development Project, Etawah. Construction of drinking water wells, hand-pumps, etc., is done with the help of people's contributions and subsidy granted from the Block budget. The only significant feature in this programme is that construction of under-ground drains for village conditions as over-ground drains have been considered very ineffective. The advantage of the under-ground drains is that the general sanitation of the village improves and the breeding places of mosquitoes are eliminated. The following table shows the construction of under-ground drains from the year 1952-53 onwards :

| Year | | | | | | Pucca lanes paved with bricks | Pucca under- ground drains |
|---------------|----|----|----|----|----|--|-------------------------------------|
| | | | | | | Yds. | Yds. |
| Up to 1955-56 | .. | .. | .. | .. | .. | 5,748 | 6,610 |
| 1956-57 | .. | .. | .. | .. | .. | 1,952 | 3,214 |
| 1957-58 | .. | .. | .. | .. | .. | 6,562 | 10,454 |
| 1958-59 | .. | .. | .. | .. | .. | 2,880 | 5,503 |

During 1958-59, the emphasis shifted to agricultural programmes.

Table showing People's contribution to Health Programmes since the Inception up to 1958-59

| Block | | | | Cash | Labour | Total |
|-------------|----|----|-------|----------|--------|----------|
| | | | | Rs. | Rs. | Rs. |
| Mahewa | .. | .. | .. | 1,63,287 | 38,995 | 2,02,282 |
| Bhagyanagar | .. | .. | .. | 62,686 | 9,684 | 72,370 |
| Ajitmal | .. | .. | .. | 82,694 | 17,998 | 1,00,692 |
| | | | Total | 3,08,667 | 66,677 | 3,75,344 |

From the above table it will thus be seen that the people's contribution in cash and kind has been to the extent of Rs.3.75 lakhs during the last 11 years.

CHAPTER XXIV

SOCIAL EDUCATION

The Social Education Programme, which aims at bringing about a change in the outlook of the people and broadening the mental horizon of the masses, is being carried out in the Pilot Development Project, Etawah. The Programme usually consists of training village leaders and Gram Sahaiks. Holding of adult literacy classes, provision of libraries and reading rooms in villages, opening of community centres, arranging of sight-seeing of adults within the State and outside are some of the other important activities under Social Education Programme. One significant feature of the entire programme, however, is that sight-seeing is becoming quite popular in the area. Last year, people hired four buses, contributed fully for the charges and went to see the 1958 Exhibition at New Delhi and also visited Bhakhra Nangal Dam. In one of the buses, members of the youth clubs went to Delhi and met the President and the Prime Minister of India, who evinced keen interest in the youth work. The following table shows the number of persons who participated in the sight-seeing programme :

| Year | | | | | | Number. of persons participated in sight-seeing |
|---------|----|----|----|----|----|---|
| 1949-50 | .. | .. | .. | .. | .. | 611 |
| 1950-51 | .. | .. | .. | .. | .. | 2,975 |
| 1951-52 | .. | .. | .. | .. | .. | 2,590 |
| 1952-53 | .. | .. | .. | .. | .. | 2,986 |
| 1953-54 | .. | .. | .. | .. | .. | 4,329 |
| 1954-55 | .. | .. | .. | .. | .. | 5,431 |
| 1955-56 | .. | .. | .. | .. | .. | 3,067 |
| 1956-57 | .. | .. | .. | .. | .. | 9,470 |
| 1957-58 | .. | .. | .. | .. | .. | 6,465 |
| 1958-59 | .. | .. | .. | .. | .. | 5,585 |

For details pertaining to other activities, a reference to Appendix C will be helpful.

From the above table it will thus be seen that the people's contribution in cash and kind has been to the extent of Rs. 3.75 lakhs during the last 11 years.

Coop. Societies

300

250

200

150

100

50



1948-49

49-50

50-51

51-52

52-53

53-54

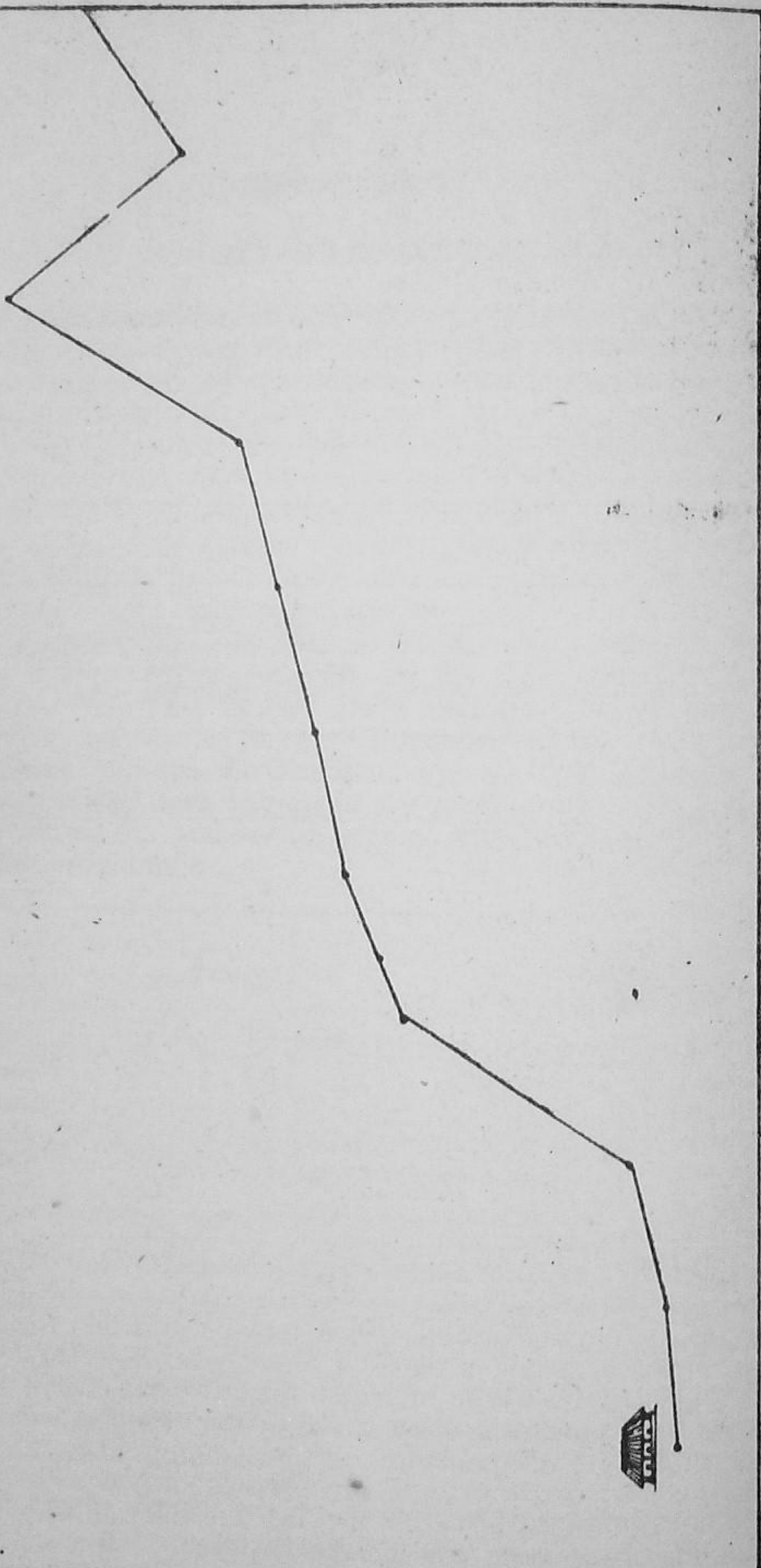
54-55

55-56

56-57

57-58

58-59



CHAPTER XXV

CO-OPERATION

The co-operative movement has been expanding in the Pilot Development Project, Etawah, from year to year. The number of societies, membership, share capital and loaning operations have been on the increase. In order to help the primaries with supplies and services, the number of co-operative unions has also gradually increased. The following table shows the yearly progress of the co-operative movement in the Pilot Development Project, Etawah :

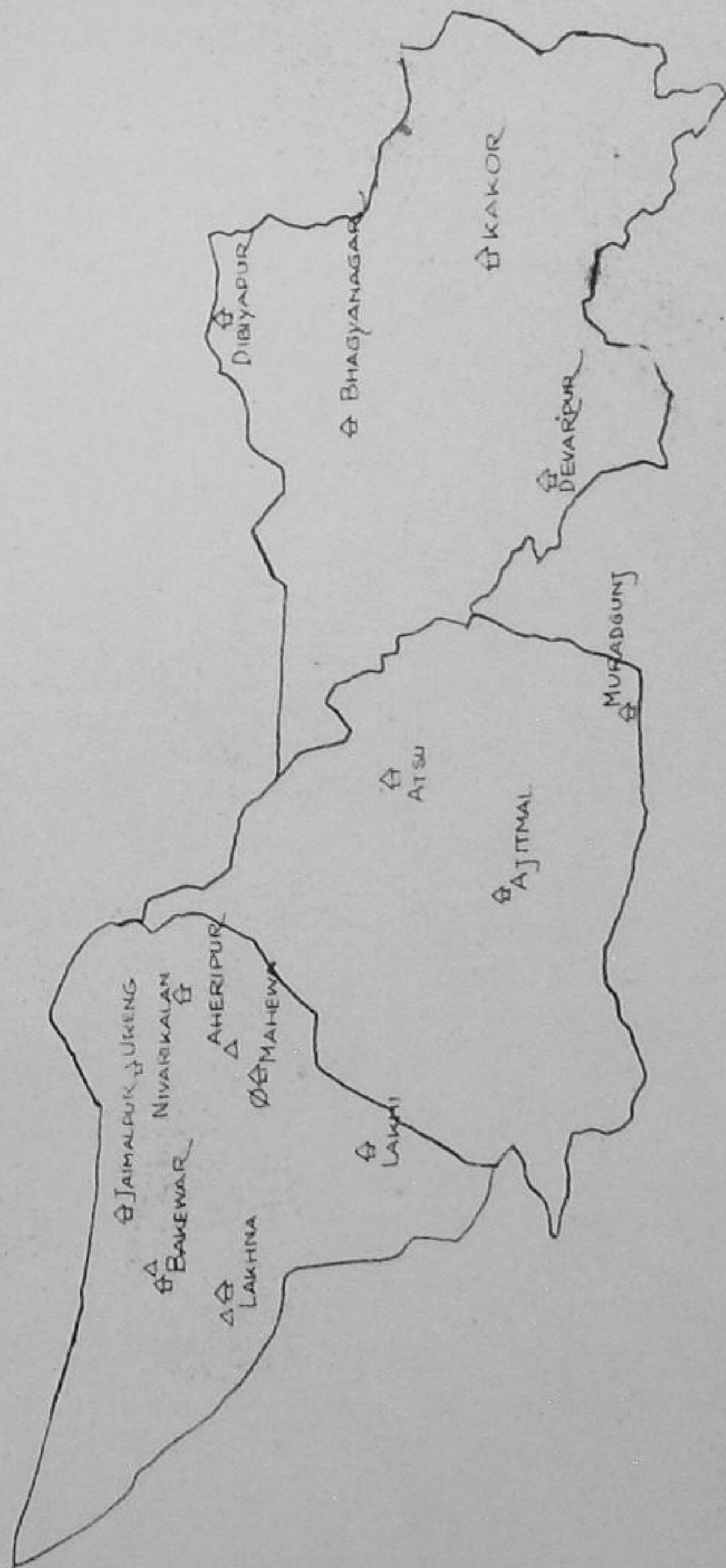
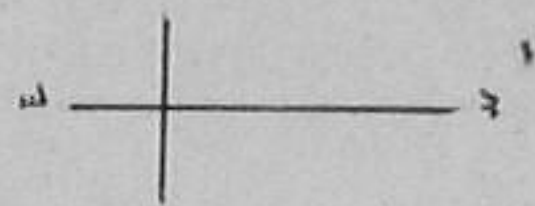
| Year | | | Number of Co-opera- tive Unions | Number of societies functioning | Number of members in the societies | Share Capital | Loan advanced |
|---------|----|----|--|---------------------------------------|---|------------------|------------------|
| 1948-49 | .. | .. | 2 | 30 | 608 | 3,086 | 19,566 |
| 1949-50 | .. | .. | 2 | 39 | 639 | 4,944 | 28,671 |
| 1950-51 | .. | .. | 5 | 48 | 1,418 | 10,063 | 36,908 |
| 1951-52 | .. | .. | 8 | 127 | 3,486 | 24,417 | 2,00,633 |
| 1952-53 | .. | .. | 11 | 149 | 5,143 | 93,751 | 3,67,036 |
| 1953-54 | .. | .. | 12 | 158 | 5,306 | 97,484 | 3,50,702 |
| 1954-55 | .. | .. | 12 | 171 | 7,128 | 1,43,098 | 2,68,232 |
| 1955-56 | .. | .. | 12 | 185 | 9,168 | 2,21,169 | 6,20,868 |
| 1956-57 | .. | .. | 15 | 265 | 10,759 | 2,63,659 | 7,42,878 |
| 1957-58 | .. | .. | 15 | 203* | 11,129 | 3,10,758 | 11,60,410 |
| 1958-59 | .. | .. | 15 | 238* | 13,197 | 3,74,550 | 14,32,024 |

*The fall is due to the formation of 2 large-sized societies in the Project, i.e. at Mahewa and Aheripur.

From the above table, it will thus be seen that the movement has made a steady progress. There was, however, one shortcoming in the working of the co-operative movement that repayments were not being made in full by the members with the result that a lot of accumulation of outstanding loans took place. During the year 1958-59, a drive was launched which has been continued during this year also, as a result of which the outstandings have been considerably reduced. All the co-operative unions except two are working very satisfactorily and are providing necessary services to the members of the co-operative

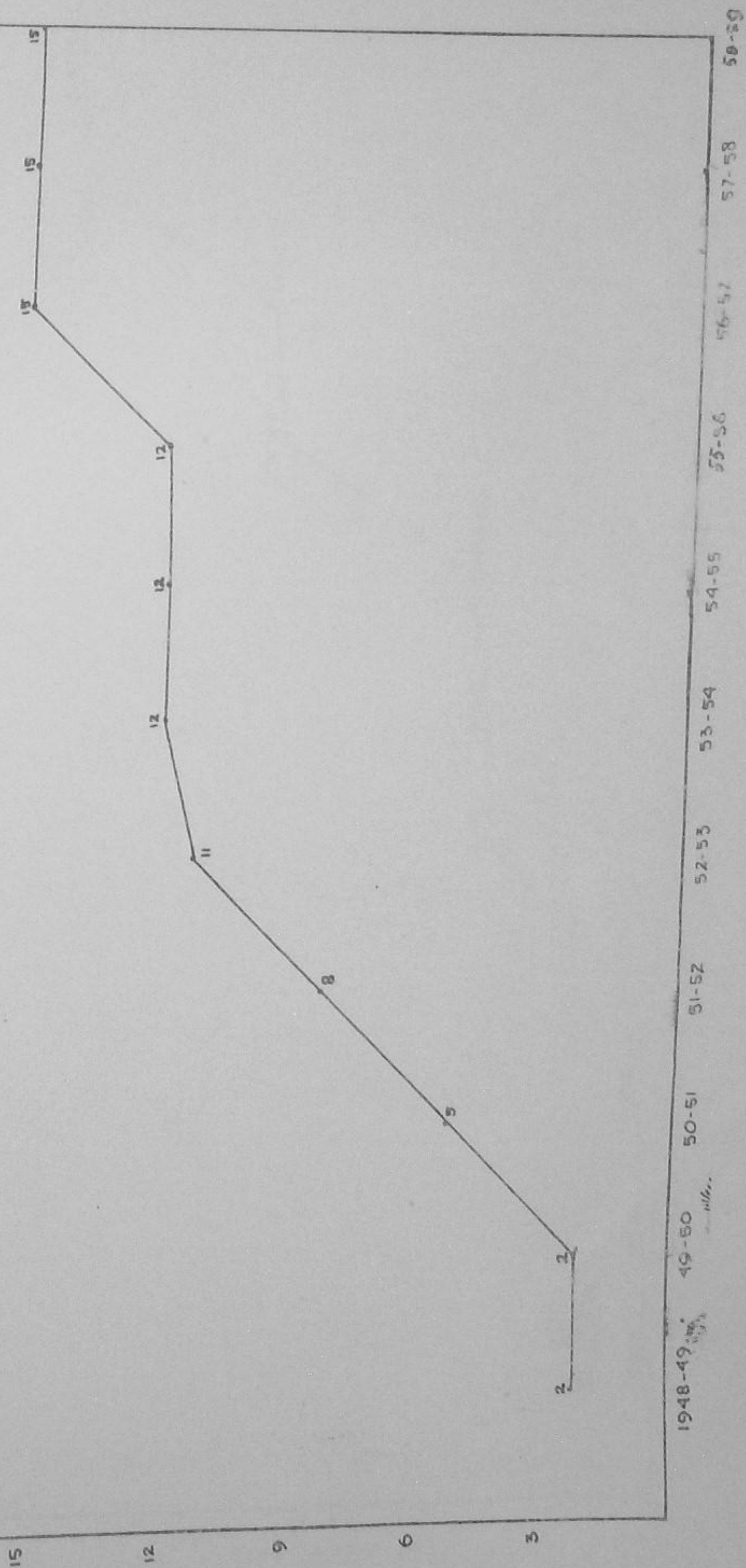
societies. The working of the two unions has also been examined and steps are being taken to improve their working in consultation with the members. Co-operative Union, Mahewa is one of the successful unions of Pilot Development Project area, a brief mention of which has already been made in part II of this report to indicate the way in which this union has contributed to help the members of the society in overcoming their financial and other difficulties.

COOP. UNIONS



COOP UNIONS... ⌘
 LARGE SIZE SOCIETIES... Δ
 COOP PEA CANNING FACTORY... ⌘

COOP. UNIONS. (Nos)



1948-49

49-50

50-51

51-52

52-53

53-54

54-55

55-56

56-57

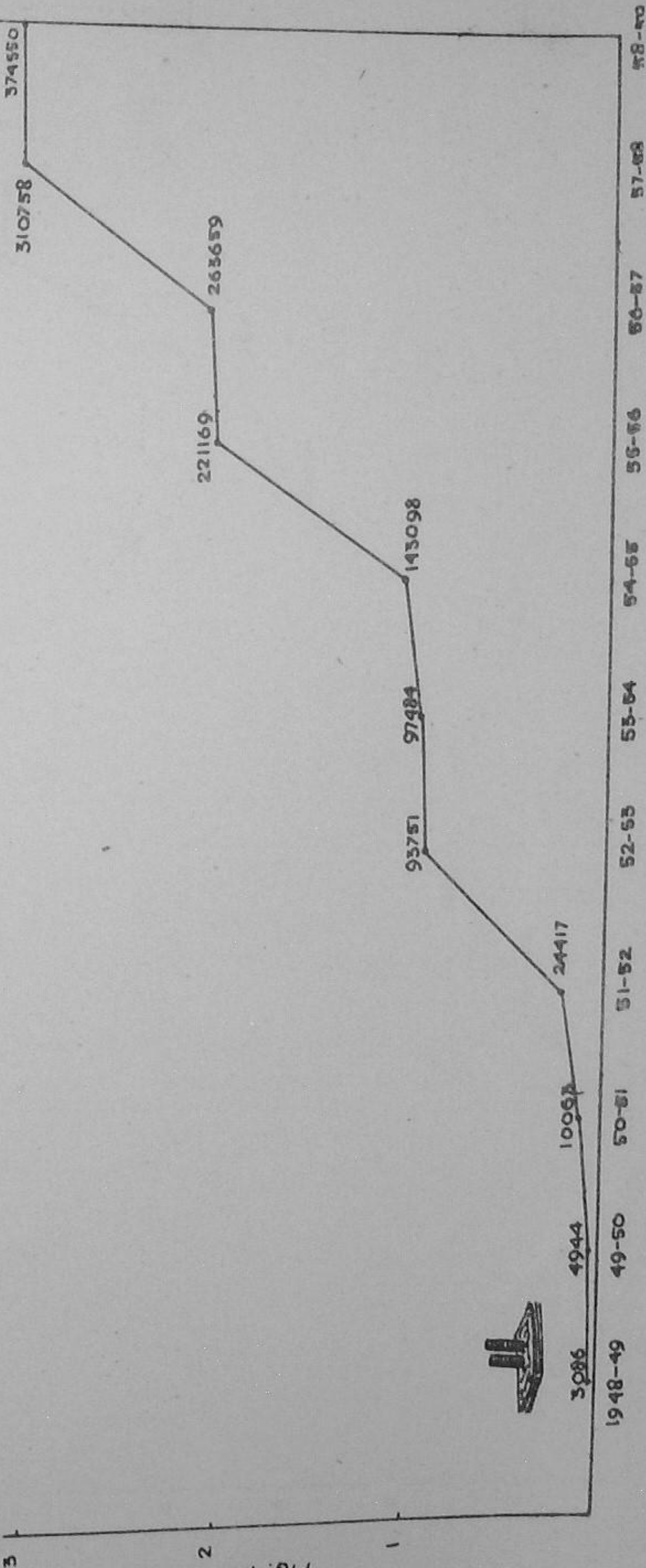
57-58

59-60

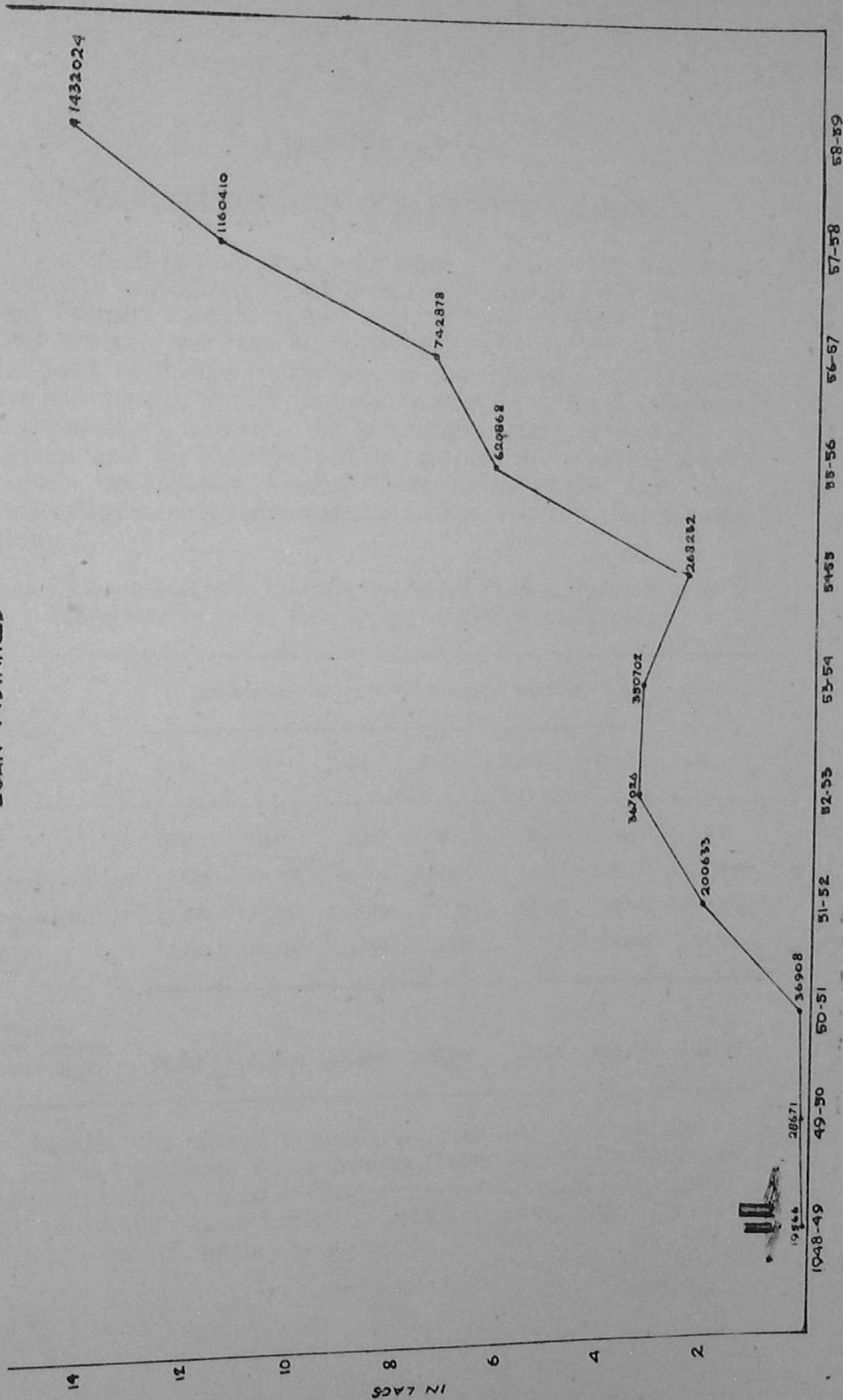
SHARE CAPITALS



FIG. IN LACS



LOAN ADVANCED



CHAPTER XXVI

PANCHAYAT AND COMMUNITY WORKS

An effort has all along been made to involve the local Panchayats in community development activities in Pilot Development Project, Etawah. There are frequent contacts of Village Level Workers with the members of Panchayats of their areas. The posts of Panchayat Secretaries and Village Level Workers have been merged to find out how the working of the development programmes is affected. An evaluation study is already in progress and the findings will be out shortly. On the whole, people's contribution towards community works and communications is fairly encouraging as will be seen from the following table :

People's contribution in Pilot Development Project, Etawah towards community works, Panchayats and Communications

| Block | Communications | | | Multi-purpose buildings | | | Grand Total of A and B |
|-------------------------------------|----------------|----------|----------|-------------------------|--------|----------|------------------------|
| | Cash | Labour | Total | Cash | Labour | Total | |
| | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| Mahewa .. | 54,628 | 12,307 | 66,935 | 2,08,819 | 41,764 | 2,50,573 | 3,17,508 |
| Bhagyanagar .. | 21,280 | 1,18,009 | 1,39,289 | 74,361 | 18,565 | 92,926 | 2,32,215 |
| Ajitmal .. | 2,160 | 32,224 | 34,384 | 39,000 | .. | 39,000 | 73,384 |
| Total for Pilot Development Project | 78,068 | 1,62,540 | 2,40,608 | 3,22,170 | 60,329 | 3,82,499 | 6,23,107 |

Besides the above contribution, another contribution of Rs.3.75 lacs has been made towards Public Health Programmes which has been discussed in Chapter 23 of this report. The grand total of people's contribution in cash and kind, including that of Public Health, comes to about Rs.10 lacs.

CHAPTER XXVII

TRAINING-CUM-EXTENSION CENTRE, LAKHNA
(ETAWAH)

For training the Multi-purpose Village Level Workers, the Training Centre of Lakhna was started in October, 1948. The centre was started with the idea of giving training to village level workers in agriculture, animal husbandry, co-operation, panchayats, public health, social education, etc. The training period of village level workers was six months up to 1954-55. Later on, it was extended to 1½ years. The total number of trainees trained during different years, is as follows :

| Year | | | | | | | No. of trainees trained |
|-------|----|----|----|----|----|----|-------------------------|
| 1949 | .. | .. | .. | .. | .. | .. | 91 |
| 1950 | .. | .. | .. | .. | .. | .. | 23 |
| 1951 | .. | .. | .. | .. | .. | .. | 73 |
| 1952 | .. | .. | .. | .. | .. | .. | 63 |
| 1953 | .. | .. | .. | .. | .. | .. | 68 |
| 1954 | .. | .. | .. | .. | .. | .. | 76 |
| Total | | | | | | | 394 |

From 1955 onwards, the training period of Village Level Workers has been extended to 1½ years as indicated earlier. The total number of trainees so far trained from 1955 onwards is as follows :

| Period of training | | | | Number of trainees trained | |
|---------------------------------------|----|----|----|----------------------------|-----|
| 1st June, 1955 to 10th October, 1956 | .. | .. | .. | .. | 56 |
| 4th February, 1956 to 22nd June, 1957 | .. | .. | .. | .. | 39 |
| 25th June, 1957 to 24th June, 1959 | .. | .. | .. | .. | 104 |
| Total | | | | .. | 199 |

Panchayat Ghar



Gram Sewak Trainees in an Animal Husbandry class (Lakhna)

Of late, the training period has been extended from 1½ years to 2 years. Besides the training of Village Level Workers, other officials are also given short training at the centre. The following table gives the number of various categories of workers trained besides the village level workers from 1955 onwards.

| Serial number | Category of trainees trained | Number of trainees trained |
|---------------|--|----------------------------|
| 1 | Block and District Level Workers | 239 |
| 2 | Village Level Workers | 116 |
| 3 | Village leaders and Adult teachers | 187 |
| 4 | Women | 48 |
| 5 | Others (Irrigation Department, <i>Patrols</i> and <i>Amins</i>) | 116 |
| Total | | 706 |

The Training Centre is located in a private building at Lakhna. The farm attached to the Centre is of a small size. It is proposed to shift the Centre from Lakhna to Bakewar. Site plans have already been prepared for the same. The proposals are under scrutiny by the Planning Department. About 20 acres of land will be available for farming operations at Bakewar:

A brief account of Pilot Development Project, Etawah, has been given to apprise the readers about the progress made with regard to normal programmes of the block and also about the various research projects which are being carried out in the field since September, 1948 when the project was started in our State.

APPENDIX A

*Agricultural Basic Data of Pilot Development Project,
Etawah*

| Particulars | | | | Mahewa | Bhagya- nagar | Ajitmal | Total for Pilot Develop- ment Project |
|---|----|----|----|--------|------------------|---------|---|
| | | | | Acres. | Acres. | Acres. | Acres. |
| Area irrigated | .. | .. | .. | 26,987 | 14,863 | 16,875 | 58,635 |
| Area unirrigated | .. | .. | .. | 31,800 | 31,361 | 22,003 | 85,164 |
| Total area under cultivation | .. | .. | .. | 58,787 | 46,224 | 38,878 | 1,43,799 |
| <i>Area under Principal Kharif crops—</i> | | | | | | | |
| (a) Sugarcane | .. | .. | .. | 1,372 | 1,236 | 1,312 | 3,920 |
| (d) Early paddy | .. | .. | .. | 951 | 1,440 | 1,171 | 3,561 |
| (c) Late Paddy | .. | .. | .. | 376 | 3,009 | 27 | 3,712 |
| (d) Cotton | .. | .. | .. | 314 | 204 | 388 | 906 |
| (e) Maize .. | .. | .. | .. | 1,688 | 1,737 | 675 | 4,100 |
| (f) Bajra .. | .. | .. | .. | 8,980 | 1,308 | 1,161 | 11,449 |
| (g) Juar .. | .. | .. | .. | 1,045 | 724 | 51 | 1 820 |
| (h) Bajra and Arhar | .. | .. | .. | 11,817 | 8,148 | 9,794 | 29,759 |
| (i) Juar and Arhar | .. | .. | .. | 1,536 | 4,162 | 1,545 | 7,243 |
| <i>Area under Principal Rabi crops—</i> | | | | | | | |
| (a) Wheat .. | .. | .. | .. | 8,767 | 7,476 | 6,321 | 22,564 |
| (b) Barley | .. | .. | .. | 239 | 285 | 486 | 1,010 |
| (c) Gram .. | .. | .. | .. | 2,452 | 2,715 | 1,856 | 7,113 |
| (d) Wheat and Gram | .. | .. | .. | 1,378 | 2,286 | 500 | 4,164 |
| (e) Barley and Gram | .. | .. | .. | 10,927 | 531 | 7,538 | 18,996 |
| (f) Wheat and Barley | .. | .. | .. | 362 | 8,756 | 256 | 9,374 |
| (g) Pea .. | .. | .. | .. | 13,605 | 2,629 | 5,648 | 21,882 |
| (h) Laha .. | .. | .. | .. | 3,737 | 2,925 | 2,645 | 9,307 |

APPENDIX B

Statement showing projects taken by Planning Research and Action Institute outside Pilot Development Project, Etawah during the last two years

Industries—

1. Pilot Project on Pottery.
2. Gobar Gas.
3. Rope-makng.
4. Wind-mill.
5. Mechanical Workshop.
6. Chrome Leather Manufacture at the Tanning Project, Mohammadabad.
7. Shoe and Chappal Centre, Mohammadabad.
8. Fur and Hide Tanning Centre at Bageshwar (Almora).
9. Mango Pulp and Flake Preservation at Kaimganj (Farrukhabad).

Co-operatives—

Small-scale production of Crystal Sugar Units on Co-operative basis.

10. Budhana (Muzaffarnagar).
11. Bisalpur (Pilibhit).
12. Deokali (Ghazipur).
13. Qadrabad (Bijnor).
14. Mungra Badshahpur (Jaunpur).
15. Co-operative Paddy Marketing and Processing Society at Attara (Banda).
16. Co-operative Paddy Marketing and Processing Society at Bilaspur (Rampur).
17. Co-operative Marketing and Processing Society at Madhoganj (Hardoi).

Rural Health and Environmental Sanitation—

18. World Health Organization Environmental Sanitation Project, Chinhat (Lucknow).
19. World Health Organization, Health Education Project, Chinhat (Lucknow).

Soil Conservation by Extension Methods—

20. Pilot Project on Soil Conservation, Bhimtal (Naini Tal) —4,000 to 5,000 ft. height.
21. Pilot Project, Sheolakalan—2,500 ft. height.
22. Pilot Project, Bhatta block (Dehra Dun)—5,000 ft. height.

Special Extension work in younger age groups—

23. Evolution of New Man, Chinhath—Social Education Project.
24. Youth Work among “Tharus” of district Naini Tal.

Information and Publications—

25. Literature distribution in rural areas of Farrah Block (Mathura).

Audio-Visual Aids—

26. Collection and Processing of folk and development songs.

Special Projects—

27. Trial and demonstration of new irrigation devices. Experimental work on small tube-wells and some water lifts.
 28. A study project to find out the relative acceptability of the improved agricultural implements and its effect on the cost of production of some selected crops.
 29. Determination of acceptability of Tapioca mixed flour (550 Mds.) supplied by Central Food Technological Research Institute at Lucknow.
 30. Evaluation and studies on behalf of the :
 - (a) Departments of State Government.
 - (b) Planning Department.
 - (c) United Nations (E.C.A.F.E.)
-

APPENDIX 'C'

Statement of Key indications of progress of Pilot Development Project, Etawah, 1984 to 1959

| Serial no. | Indication of Progress | 1948-49 | 1949-50 | 1950-51 | 1951-52 | 1952-53 | 1953-54 | 1954-55 | 1955-56 | 1956-57 | 1957-58 | 1958-59 |
|--------------------------------------|------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------------|
| 1. Agriculture— | | | | | | | | | | | | |
| Pedigree seeds distributed (Mds)— | | | | | | | | | | | | |
| (a) Wheat | .. | .. | 37 | 1,923 | 6,714 | 3,990 | 5,898 | 6,587 | 5,145 | 5,162 | 7,413 | 6,001 6,613 |
| (b) Barley | .. | .. | .. | 100 | 610 | 724 | 1,432 | 2,464 | 1,297 | 1,446 | 2,083 | 1,329 1,708 |
| (c) Pea | .. | .. | .. | .. | 5 | 209 | 1,608 | 5,928 | 3,236 | 3,426 | 5,323 | 4,707 7,570 |
| (d) Gram | .. | .. | 3 | 110 | 561 | 1,175 | 2,186 | 2,736 | 1,327 | 932 | 1,150 | 1,167 1,315 |
| (e) Cotton | .. | .. | .. | .. | .. | .. | 6 | 7 | 12 | 6 | 351 | 53 11 |
| (f) Maize | .. | .. | .. | .. | 6 | 24 | 12 | 13 | 14 | 13 | 12 | 38 3 |
| (g) Paddy | .. | .. | .. | .. | .. | .. | 121 | 316 | 79 | 55 | 50 | 70 250 |
| (h) Potato | .. | .. | 300 | 329 | 846 | 1,097 | 1,175 | 1,412 | 678 | 395 | 548 | 1,157 1,129 |
| 2. Seed Purchase (Mds.)— | | | | | | | | | | | | |
| (a) Wheat | .. | .. | .. | 6,993 | 12,909 | 5,898 | 7,430 | 3,588 | 514 | .. | 664 | 817 1,694 |
| (b) Barley | .. | .. | .. | .. | 553 | 696 | 2,097 | 538 | 21 | .. | 205 | 115 50 |
| (c) Gram | .. | .. | .. | .. | 806 | 1,718 | 3,106 | 1,452 | 299 | .. | 909 | 108 120 |
| (d) Pea | .. | .. | .. | .. | 37 | 1,524 | 3,894 | 13,785 | 10,551 | .. | .. | 27,250 2,279 |
| 3. Area under Green Manure—.. | | | | | | | | | | | | |
| | | .. | .. | 300 | 667 | 370 | 897 | 1,958 | 2,232 | 5,200 | 5,548 | 4,190 6,160 |

| Serial no. | Indication of progress | 1948-49 | 1949-50 | 1950-51 | 1951-52 | 1952-53 | 1953-54 | 1954-55 | 1955-56 | 1956-57 | 1957-58 | 1958-59 |
|--|------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 4. Demonstrations Nos— | | | | | | | | | | | | |
| (a) Varietal | .. | .. | .. | .. | 460 | 139 | 285 | 536 | 307 | 407 | 382 | 204 |
| (b) Manurial .. | .. | .. | .. | .. | 103 | 233 | 441 | 752 | 917 | 731 | 430 | 440 |
| (c) Cultural .. | .. | .. | .. | .. | 23 | 71 | 169 | 764 | 232 | 569 | 214 | 441 |
| (d) Implemental | .. | .. | .. | .. | 114 | 50 | 340 | 205 | 550 | 182 | 340 | 62 |
| 5. Supply of Fertilisers— | | | | | | | | | | | | |
| (a) Nitrogenous (Mds.) | .. | 191 | 388 | 355 | 225 | 358 | 745 | 784 | 968 | 3,746 | 6,851 | 14,403 |
| (b) Phosphetic | .. | 4 | 124 | 83 | 121 | 424 | 617 | 223 | 245 | 1,274 | 1,544 | 7,317 |
| (c) Cakes .. | .. | 31 | 236 | 449 | 485 | 380 | 339 | 202 | 186 | 1,126 | 2,587 | 1,544 |
| 6. Horticulture— | | | | | | | | | | | | |
| (a) Fruit trees planted | .. | .. | 1,196 | 5,251 | 4,353 | 2,404 | 14,561 | 10,806 | 18,054 | 21,674 | 13,893 | 13,068 |
| (b) Fuel trees planted | .. | .. | 207 | 2,718 | 2,392 | 1,013 | 25,151 | 3,079 | 12,365 | 7,328 | 22,194 | 4,316 |
| (c) Afforestation | .. | .. | .. | .. | .. | .. | 24 | 10 | 55 | 105 | 32 | 22 |
| 7. Plant Protection— | | | | | | | | | | | | |
| (a) Pesticide in lb. | .. | .. | .. | .. | 110 | 336 | 1,436 | 1,947 | 2,694 | 3,053 | 6,007 | 22,040 |
| (b) Area in controlled against disease and pests | .. | .. | .. | .. | 20 | 146 | 488 | 273 | 233 | 363 | 1,300 | 2,752 |

IV. Agricultural Engineering Implements (nos.)—

| | | | | | | | | | | | | | |
|------------------------|----|----|----|-----|-----|-----|-----|-----|-----|-----|-------|-------|-------|
| (a) Light iron ploughs | .. | .. | 52 | 240 | 606 | 296 | 143 | 589 | 210 | 820 | 1,202 | 966 | 1,517 |
| (b) Heavy iron ploughs | .. | .. | .. | .. | 2 | 33 | 6 | 52 | 4 | 18 | 41 | 37 | 32 |
| (c) Cultivators | .. | .. | 2 | 3 | 8 | 12 | 9 | 7 | 38 | 189 | 474 | 1,226 | 2,767 |
| (d) Threshers .. | .. | .. | .. | 2 | 6 | 14 | 89 | 14 | 33 | 77 | 29 | 153 | 95 |
| (e) Hoes (all types) | .. | .. | .. | .. | .. | 8 | 7 | 9 | 45 | 89 | 57 | 111 | 83 |

8 Minor Irrigation Works—

| | | | | | | | | | | | | | |
|---------------------|----|----|----|----|-----|----|----|----|----|----|----|----|----|
| (a) Masonry wells | .. | .. | .. | .. | 121 | .. | .. | 57 | 54 | 65 | 62 | 44 | 42 |
| (b) Boring of wells | .. | .. | .. | .. | .. | .. | 3 | 8 | 3 | 5 | 2 | .. | 7 |
| (c) Persian wheels | .. | .. | .. | .. | 40 | .. | 8 | 23 | 49 | 52 | 53 | 38 | 51 |
| (d) Pumping sets | .. | .. | .. | .. | .. | .. | 1 | 2 | 3 | 16 | 18 | 1 | .. |
| (e) Artisan wells | .. | .. | .. | .. | 1 | 1 | 1 | 2 | 2 | .. | 1 | 1 | 7 |

V—Soil Conservation

| | | | | | | | | | | | | | |
|-----------------------------------|----|----|----|----|----|-----|-------|--------|--------|--------|--------|--------|--------|
| (a) Reclamation of <i>usar</i> | .. | .. | .. | .. | .. | 12 | .. | .. | .. | .. | .. | 100 | 183 |
| (b) Field constructions | .. | .. | .. | .. | .. | .. | 21 | 140 | 450 | 2,746 | 2,350 | 1,850 | 2,120 |
| (c) Check dams | .. | .. | .. | .. | .. | .. | 1 | 12 | 26 | 119 | 78 | 46 | 49 |
| (d) Pucca escapes | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 3 | 4 | 14 | 24 |
| (e) Grass Out lets | .. | .. | .. | .. | .. | .. | .. | 10 | .. | .. | .. | .. | 40 |
| (f) Plantation on bunds (in feet) | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (i) Babool | .. | .. | .. | .. | .. | 250 | 400 | 800 | 17,673 | .. | .. | .. | .. |
| (ii) Castor | .. | .. | .. | .. | .. | .. | 600 | 11,192 | 26,925 | 73,450 | 49,115 | 59,701 | 18,430 |
| (iii) Grass .. | .. | .. | .. | .. | .. | 500 | 2,000 | 4,497 | 13,220 | 16,955 | 30,480 | 95,616 | 13,785 |
| (g) Survey and Planning | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4,892 | 4,589 | 3,075 |
| (h) Agronomical Demonstrations | .. | .. | .. | .. | .. | .. | .. | 10 | 30 | 110 | 250 | 226 | 136 |

| Serial number | Indication of Progress | 1948-49 | 1949-50 | 1950-51 | 1951-52 | 1952-53 | 1953-54 | 1954-55 | 1955-56 | 1956-57 | 1957-58 | 1958-59 |
|------------------------------------|------------------------|---------|---------|---------|----------|---------|---------|----------|----------|----------|-----------|-----------|
| VI—Animal Husbandry— | | | | | | | | | | | | |
| (1) Cattle inoculation against : | | | | | | | | | | | | |
| (a) H. S. | .. | 4,227 | 18,559 | 21,508 | 18,911 | 53,941 | 43,083 | 3,351 | 30,904 | 60,984 | 49,164 | 60,518 |
| (b) R. P. | .. | 11,116 | 23,116 | 11,284 | 29,286 | 41,846 | 27,570 | 32,208 | 20,497 | 32,764 | 42,651 | 33,642 |
| (2) Catsration by V. L. W. | .. | .. | 29 | 243 | 221 | 318 | 196 | 100 | 377 | 763 | 461 | 746 |
| (3) Hariyana cows supplied | .. | .. | 17 | 13 | 57 | 8 | 68 | 31 | 12 | 19 | 10 | 14 |
| (4) Artificial insemination | | | | | | | | | | | | |
| (a) Cows | .. | .. | .. | 100 | 430 | 535 | 625 | 518 | 804 | 1,173 | 1,665 | 2,038 |
| (b) Buffaloes | .. | .. | .. | 56 | 100 | 101 | 99 | 158 | 266 | 390 | 711 | 773 |
| (5) Cattle treated by V. L. W. | .. | .. | 890 | 3,717 | 3,031 | 2,997 | 5,608 | 6,650 | 9,580 | 14,088 | 10,471 | 13,566 |
| VII—Co-operation— | | | | | | | | | | | | |
| (1) Societies functioning (nos.) | .. | 30 | 39 | 48 | 127 | 149 | 158 | 171 | 185 | 265 | 203* | 238* |
| (2) Members in the societies (no.) | .. | 608 | 639 | 1,418 | 3,486 | 5,143 | 5,306 | 7,128 | 9,168 | 10,759 | 11,129 | 13,197 |
| (z) Share capital | .. | 3,086 | 4,944 | 10,063 | 24,417 | 93,751 | 97,484 | 1,43,098 | 2,21,169 | 2,63,659 | 3,10,758 | 3,74,550 |
| (4) Loan advanced | .. | 19,566 | 28,671 | 36,908 | 2,00,633 | 367,026 | 350,702 | 2,68,232 | 6,20,868 | 7,42,878 | 11,60,410 | 14,32,024 |
| (5) No. of co-operative unions | .. | 2 | 2 | 5 | 8 | 11 | 12 | 12 | 12 | 15 | 15 | 15 |

*The fall is due to the formation of 2 large sized societies in the project i.e. Mahewa and Aheripur.

1948-49 1949-50 1950-51 1951-52 1952-53 1953-54 1954-55 1955-56 1956-57 1957-58 1958-59

Items

Serial
no.

VIII—Public Health and Rural Sanitation—

| | | | | | | | | | | | |
|---|------------------------|----|-------|-------|--------|-------|--------|--------|--------|--------|--------|
| 1 | Drinking water wells | .. | .. | 17 | 31 | 86 | 49 | 120 | 112 | 169 | 90 |
| 2 | Hand pump installed | .. | .. | .. | 11 | 31 | 36 | 28 | 42 | 81 | 87 |
| 3 | Wells renovated | .. | .. | .. | 14 | 4 | 32 | 56 | 73 | 112 | 125 |
| 4 | Pucca lanes (in yds.) | .. | .. | .. | 1,233 | 1,185 | 1,020 | 2,346 | 1,925 | 6,562 | 2,880 |
| 5 | Pucca drains (in yds.) | .. | .. | .. | 2,814 | 473 | 1,662 | 1,761 | 3,214 | 10,454 | 5,503 |
| 6 | Food stuffs | .. | .. | .. | .. | 100 | 48 | 167 | 80 | 280 | 140 |
| 7 | Bathing platforms | .. | 12 | 60 | 126 | 30 | 52 | 303 | 120 | 232 | 145 |
| 8 | Septic latrines | .. | .. | .. | .. | .. | 1 | 6 | 14 | 22 | 31 |
| 9 | Small pox vaccination | .. | 1,260 | 5,935 | 15,130 | 7,022 | 18,655 | 13,571 | 17,037 | 11,896 | 24,541 |

IX—Social Education—

| | | | | | | | | | | | |
|---|--|----|-----|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | Village Leaders and Gram Sahaik trained | .. | 119 | 58 | 40 | 78 | 84 | 155 | 638 | 2,984 | 3,709 |
| 2 | Adults made literate | .. | 233 | 404 | 669 | 920 | 1,053 | 541 | 758 | 827 | 618 |
| 3 | Mobile libraries and reading rooms in villages (no.) | .. | .. | 22 | 24 | 53 | 84 | 77 | 92 | 68 | 36 |
| 4 | Community Centres | .. | .. | .. | 6 | 4 | 5 | 10 | 5 | 6 | 9 |
| 5 | Persons participated in sight-seeing | .. | 611 | 2,975 | 2,590 | 2,986 | 4,329 | 3,067 | 9,470 | 6,465 | 5,558 |

X—Panchayat and Community Works—

| | | | | | | | | | | | |
|---|---|----|---------------------------|----|----|------|-------|--------|--------|--------|------|
| 1 | Kachcha Road constructed and repaired | .. | .. | .. | .. | 84—4 | 100—2 | 72 | 96 | 105—6 | 63—6 |
| 2 | Pucca roads constructed | .. | .. | .. | .. | .. | .. | 1—1 | 5—0 | 4—1 | 8—6 |
| 3 | School building-cum-Panchayat ghars-cum-Community centres constructed | .. | 3 | 6 | 3 | 4 | 14 | 21 | 8 | 10 | 16 |
| 4 | Culverts constructed | .. | .. | .. | .. | 15 | 24 | 28 | 20 | 27 | 37 |
| 5 | Panchayat tax realised | .. | Rs.69,977 (up to 1955-56) | .. | .. | .. | .. | 16,580 | 22,768 | 75,558 | .. |

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