COMMUNITY DEVELOPMENT AND CHANGE

Case Study of a Block in Gujarat

M. B. DESAI & R. S. MEHTA
Department of Agricultural Economics
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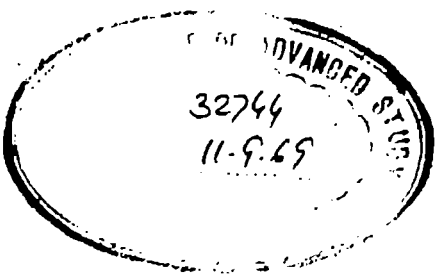

Foreword

The community development programme is meant to generate enthusiasm for self-help activities in local communities and to create a new and wider social consciousness. The attempt is to promote development of the society and the individuals who constitute it. While economic development is not the whole of the programme, yet it is an important aspect of it. Some programmes might, however, over-emphasise immediate welfare considerations at the expense of development. It is, therefore, important to know whether the programme is aiding economic development in the rural sector. Has this programme made any impact on the agriculturists, if so, to what extent and, if not, what are the deficiencies and handicaps ? To obtain answers to these queries, the former Ministry of Community Development and Co-operation in the Government of India sponsored through the National Institute of Community Development, Hyderabad, a study in depth, of the impact of community development programme in seven selected villages in Padra block of Baroda district of Gujarat State. The study was conducted by the Department of Agricultural Economics, M.S University, Baroda, during the period 1961–63 and this publication embodies the results of the study.

National Institute of
Community Development,
Rajendrangar, Hyderabad–30.
March 25, 1967.

George Jacob
DEAN

Preface

The research project reported in the following pages was sponsored by the Union Ministry of Community Development and Co-operation through the National Institute of Community Development, at the Department of Agricultural Economics, Faculty of Arts, M. S. University, Baroda.

The main objective of the study was to measure the economic effects of the community development programme in a block in Gujarat. The task was difficult on two counts: first, to isolate the economic effects from various other inter-related effects is not easy; second, the time span over which these effects were studied was five years, an extremely short duration as some of the changes noted here may have been the cumulative effects of numerous measures, evolutionary and sponsored.

The report has been delayed considerably for which we wish to be forgiven. The nature of the work and the circumstances in which we had to carry it out proved more time-consuming than originally planned. The drudgery and frustration inherent in a research project like this were made light by the devotion and co-operation of a team of scholars deeply involved in scientific research.

We wish to record our grateful thanks to the authorities of Maharaja Sayajirao University of Baroda for permitting us to undertake this research project; to Dr J. M. Mehta, Vice-Chancellor and Dr C. S. Patel, Pro-Vice-Chancellor of the University for their abiding personal interest in the progress of the work; to Sarvashri P. K. Pandit, N. M. Pandya, K. V. Patel, and S. K. Varma, for collection of data analysed and presented in this report; to Shri D. M. Mehta and Shri C. H. Shah, the block development officers successively of Padra taluk during the period of our survey; to Shri D. A. Harsha, mamlatdar of Padra and his staff; the State ministers, officials, M. L. As and many non-officials for their whole-hearted co-operation during the survey; and lastly, to the farmers of Padra taluk who cheerfully stood the ordeal of prolonged and intensive interrogations and exerted their memory in an unusual way which lent historical perspective to the data.

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Introduction

At the request of the *National Institute of Community Development*, Ministry of Community Development and Co-operation, Government of India, the Maharaja Sayajirao University of Baroda submitted three proposals to investigate the economic and social implications of the community development programmes in India. This report, prepared under the auspices of the Department of Agricultural Economics, examines the working of the community development programmes in agriculture in order to identify the handicaps under which these programmes operate and the conditions in which these are smoothly assimilated.

For an intensive study of this nature, Padra taluk of Baroda district was selected. Its nearness to Baroda and the existence of relatively progressive agricultural conditions were largely responsible for the choice of this taluk for the purpose of this study.

The community development programme in Padra taluk was started in 1957. Pre-extension activities were undertaken in the area a year in advance. The quality of the agricultural extension work was also quite advanced here. Being a part of the former Baroda State, this area has had a long history of extension work. The taluk grows a variety of crops and consists of both progressive farmers and very backward cultivators and landless labourers. Locationally, the layout of the villages and the communication system were accessible for easy supervision of the field work.

Sampling design

The research project was a case study of seven villages. The selection of villages for intensive study was purposive. The possibility of bias in such a method cannot be rule out. Consequently, the results of such a study cannot be aggregated, or be made wholly applicable even to the taluk and much less to the country. The conclusions would, however, be useful under identical conditions. The number of villages for study was kept limited so

that it would be possible to have intensive investigation to reach the realities which inspire or hinder farmers' acceptance of the programmes.

During the selection, care was taken to make the sample villages representative of the agricultural regions of the taluk. In doing this, their geographical position, distance from the block headquarters, types of soils and crops grown, rainfall, social and economic conditions of the farmers and the general representativeness of the people, etc. were kept in mind. Background data on these aspects relating to the villages were collected with the help of the local institutions, such as Baroda Central Co-operative Bank, social workers, the block development officer, the *mamlatadar* and a few eminent and enlightened farmers. The seven villages selected finally for detailed investigation were : Amla, Dabka, Karakhadi, Latipura, Masar, Mobha and Vanachhara.

In all the seven villages, a house-to-house census was carried out on the basis of a schedule. The families were then suitably stratified and the requisite sample was drawn from various strata in proportion to their size in the universe with the help of a table of random numbers. The landless labourers and artisans without land were dropped from the sample as they did not fit into the objectives of the study. Since the idea was to concentrate more on the agricultural programmes, the cultivators were categorized into four groups on the basis of the size of their operational holdings: group A, 1+ to 10 acres; group B, 10 to 25 acres; Group-C, 25 to 50 acres; group D, 50 acres and above.

Farmers with holdings of less than one acre were not quite relevant for our assessment as they tended to be part-time farmers, and presumably had the major source of income from labour. Hence they were left out of the sample.

After stratifying all the cultivators, as mentioned above, a sample of about 15 per cent of the total cultivators in each village was drawn on a stratified random basis, using random numbers.

In group D, the universe of cultivators was found to be comparatively small while the universe for group A was found to be fairly large. For example, in Dabka, there were 344 cultivators with holdings between 1+to 10 acres, whereas there were only 3 cultivators, who possessed more than 50 acres of land. It was assumed that assimilation of the benefits of the community development

programme was greater for bigger farmers. To test this hypothesis, a study of the cultivators in groups C and D was of special interest.

It was, therefore, decided to attach greater weightage to cultivators of groups C and D and lesser weightage to cultivators in groups A and B. Hence the weightage system was based on the size of the holding as far as possible and the weightage was made directly proportional to the size of the holding.

Keeping 15 per cent as the fixed sample size from each village, nearly 100 per cent sample was taken from group D. There were never more than three cultivators falling in this group in each village. For selecting cultivators from group C, a random number of cultivators round about 40 per cent of the total universe in that group was chosen. The remaining cultivators were selected at random from groups A and B in such a way that the final size of the sample from the village, taken as a whole, was about 15 per cent in all cases. At the same time the sample from each stratum was never less than 10 per cent of the corresponding universe. The same procedure was followed for each village as far as possible.

Schedules

Four schedules were framed and canvassed during field investigation. The first schedule was the village questionnaire eliciting basic information on land utilization, holdings, crops, working of co-operatives and panchayats, livestock, etc. Attempt was made to obtain these data at two points of time 1956 and 1961.

The second schedule was designed for the census of all the families in the village and to provide basic information for classification and selection of families of cultivators for detailed investigation. The information collected on the basis of this schedule related to castes, main and subsidiary occupations, size of the family, size of the work-force, extent of land cultivated, irrigation facilities, crops grown, improved implements owned, membership of co-operative societies, livestock and migration.

The third schedule was drawn up to obtain opinions of various categories of farmers about changes in crop pattern, farm practices, and general assimilation of developmental activities. The schedule was comprehensive enough encompassing practically all the aspects of agricultural development.

The fourth schedule sought to elicit through personal interviews, the opinions of officials, non-officials, social workers associated with the programme and of farm leaders who were in a position to give first-hand information on the working and impact of community development. The persons covered by the interviews through this schedule were from all over the State, the idea being to bring together at one place the varied experiences and reactions to the programme.

Field survey

The research staff was recruited in the beginning of January 1961 and was given intensive class-room training to familiarize them with the methods and techniques of field survey. To reinforce the class-room instruction with actual field work and also to test the schedule, a pilot survey was conducted in the village Darapura in Padra taluk. The experience of handling a situation surcharged with frictions and of tackling difficult respondents proved very valuable in the field work later. The schedules were finalized and printed only after they were put through this rigorous testing. The main part of the field work commenced in June 1961 and was completed in August 1961. The work of checking and supplementing the data, however, continued for a long time. Data were also collected from the taluk and district headquarters. All this work could not be completed until June 1963. The difficulty of securing trained field investigators, the intricacy of the theme, the number and elaborate nature of the schedules, and the rapid changes of the potential respondents in the administration were some of the factors that made field work both time-consuming and extremely trying.

Tabulation and analysis

Data from the village census and the family schedule were coded and machine-processed. Information contained in the basic village information schedule and the opinion survey was hand-tabulated.

Plan of the report

The report is divided into six chapters. The introductory chapter lays out the origin, scope, nature of the inquiry and the sampling design. Chapter II presents the regional background of Padra taluk in the setting of Baroda district. This account includes a narrative of tenurial relations that existed in the former Baroda State

and the subsequent developments culminating in the abolition of tenancy cultivation. The history of community development, commencing with the rural reconstruction measures initiated in the former Baroda State in 1932 are presented in chapter III. With this background, chapters IV and V detail the results of the field work. Chapter VI is a summary of findings and conclusions emerging from the analysis and offers suggestions for future research.

II

The Taluk of Padra

We shall outline in this chapter, the major physical and socio-economic characteristics of Padra taluk.

Padra is one of the taluks of Baroda district of Gujarat State which has nine taluks and two mahals. The present district of Baroda with some territorial adjustments was also one of the districts of the former Baroda State. The State of Baroda was integrated with the former Bombay State in August 1949. Baroda State was divided into three districts viz., Baroda, Mehsana and Amreli, after certain boundary adjustments with the neighbouring districts and other merged areas. In this process, portions of Chhota Udepur, Bhaderva, Sankheda States and of Pandu Mewas were included in Baroda district. Baroda district is roughly in the shape of a trapezium with its southern and northern boundaries determined by the Narmada and Mahi rivers[1]. Geographically, it forms a central compact block in the heart of Gujarat. Padra taluk is surrounded on the east, by the Baroda taluk; on the west, by the Jambusar taluk; on the north, by river Mahi and Borsad taluk of Kaira district; and on the south, by Amod and Karjan taluks of Baroda district. River Dhadhar winds round the taluk in the south, till the extreme corner is formed near village Chansad[2].

Padra taluk covers an area of 202.9 sq. miles. The farm land of the taluk is of even surface dotted by numerous trees and a few ponds here and there[3].

Climate

Padra region has more temperate and healthy climate than Dabhoi and Baroda. In summer, the heat is less and sunstrokes are infrequent. In 1957, the highest temperature in summer was 44.4°

1. Socio-Economic Review and Statistical Abstract of Baroda District, 1956-57.
2. Gazetter of the Bombay Presidency, Vol. VII, P. 1883, p. 540.
3. Gazetter of the Baroda State, Vol. II, p. 551.

centigrade and the lowest in winter was 11.4° centigrade. Because of suitability of the water, Padra town in the past was known for the dyeing industry, especially of clothes and garments for ladies.

Rainfall

The average rainfall of the taluk ranges from about 75 cm. to 146 cm. The duration of the rainy season is from June to October. The type and prospects of *kharif* and *rabi* crops are very largely dependent on the timely and adequate rainfall at different intervals but the last showers in September and October are crucial.

Soil

The taluks of Baroda and Padra have a composite soil in which sand and lime are intermixed. There are mainly three kinds of soils in Padra taluk: (*i*) *gorat* or light, (*ii*) black, and (*iii*)*besar* or a mixture of the two. There is also an admixture of limestone in some places. The predominant soil type is the fertile *gorat*, which is highly suited to heavy cropping and irrigation; thus, offering scope not only for stable and intensive cultivation, but also for growing richer crops of a large variety. Almost half of the area of the taluk is of superior black soil which would not stand irrigated cultivation and requires only light manuring and interculture.

Rivers

Rivers Mahi and Dhadhar form the northern and southern boundaries of the taluk, respectively. Mahi River flows into the Gulf of Cambay and brings the tidal influence to the villages of Dabka and Munjpur of the taluk. The villages on the bank thus enjoy equable climate but limitations regarding water supply for drinking and irrigation are consequently affected.

Natural regions

The nature of the soil, climatic conditions and the crop pattern broadly divide the taluk into three regions. In the north, the important crops are bajra, rice, pulses and cotton. The black soil of the southern part resembles the land in southern Gujarat and the main crops grown are cotton and jawar. The central portion has a mixed cropping, dominated largely by cotton, pulses and fruit and vegetables. The crops and the rotational practices are relatively simple in the northern and southern parts; in the central region they are more variegated and complex.

Transport and communications

The narrow gauge railway line between Chhota Udepur and Jambusar runs through the middle of the taluk. Padra town is about eleven miles from Baroda and is connected by State transport buses which run fairly frequently. The State transport buses together with the narrow gauge railway, provide good transport facilities. The villages of the taluk are fairly well connected by roads. The total road mileage in the taluk is about 92, but the bulk becomes unserviceable during the rainy season. Many of the villages become inaccessible during this period. About 22 miles of roads were constructed and are maintained by the District Board, whereas the highways are the responsibility of the State government. For every 100 sq. miles, there are 21.5 miles of metalled roads and 56 miles of unmetalled roads. The Bombay/Ahmedadad national highway passes through the taluk covering a distance of eighteen miles. The roads connect the villages with the taluk town, which is an important trading centre.

There are two post and telegraph offices, 34 branch post offices, 92 letter-boxes, and two telegraph and telephone offices in different parts of the taluk.

Population

According to the census in 1961, Baroda district had a population of 15,27,326 and Padra taluk 1,39,160. The density for the district was 515 persons per sq.mile and for Padra taluk it was 665 per sq. mile. The population data for the taluk during the last seven decades are given in Table 1.

Table 1 : Population of Padra Taluk

Year	Population
1891	92,328
1901	73,395
1911	76,252
1921	78,462
1931	90.633
1941	1,03,028
1951	1,16,472
1961	1,39,160

The decline in the population in 1901 was attributed to the famine of 1899, inadequate rainfall, adverse seasonal conditions and plague.

During the five decades from 1911 to 1961, the increase in population was 82.5 per cent, the annual rate of increase being 1.65 per cent. The increase from 1921 to 1931 was 15.5 per cent; from 1931 to 1941, 13.7 per cent; from 1941 to 1951, 13.04 per cent and from 1951 to 1961, 19.49 per cent. Thus the decennial rates of population growth vary.

Caste and communities

Tables 2, 3 and 4 present the composition of the population and its distribution village-wise.

Table 2: Area and Population of Padra Taluk, 1961

Area in sq. miles	Males	Females	Total
202.9	72,857	66,303	1,39,160

Table 3: Rural and Urban Population of Padra Taluk, 1961

Urban			Rural			Total		
Males	Females	Total	Males	Females	Total	Males	Females	Total
9,031	8,238	17,269	63,826	58,065	1,21,891	72,857	66,303	1,39,160

Table 4: Villages by Population in Padra Taluk, 1961

Less than 200	200 to 499	500 to 999	1,000 to 1,999	2,000 to 4,999	5,000 to 9,999	Total
3	12	17	34	18	...	84

There are 84 villages and a town in the taluk, out of which 15 villages had a population of less than 500 people. The number of villages with a population up to 1,000 was 32 out of the total of 84 in the sub-division. The remaining 52 villages each had a population of over 1,000 persons. The average population per village in Padra taluk was 1,196 in 1951 and 1,556 in 1961. The predominance of large villages is common in Padra taluk.

In 1951, Padra taluk had 1.15 acres of land *per capita* as against 1 49 acres *per capita* for the district. In 1961, these figures declined to 0.93 acre of land *per capita* in Padra taluk and 1.26

acres in Baroda district.

While the Patidars, Rajputs and Brahmins comprise the upper strata of the society, the Kolis, Barias and Harijans constitute the lower rung of the social ladder.

Educational facilities and literacy

In 1960-61, there were 90 primary schools and 427 teachers in Padra taluk. The number of pupils in these schools was 16,875. In addition, there were 10 secondary educational institutions with 120 teachers and 2, 810 pupils. There were three special schools with 11 teachers and 530 pupils. Almost all the villages in the taluk have libraries and reading-rooms.

One of the policies of the former Baroda administration was to provide facilities for free and compulsory primary education. The percentage of literacy in Baroda district of the former Baroda State was about 13.48 per cent in 1921, 17.15 per cent in 1931 and 22.12 per cent in 1941. The percentage of literacy in the reorganised Baroda district in 1951 was 28.62[4]. In 1961, the proportion of literates in the taluk was 35 per cent[5], while it was 35.2 per cent for the district, 30.5 per cent for the State and 24.0 per cent for India[6].

Occupational distribution

The distribution of population according to means of livelihood has been presented in Table 5.

The ratio of workers to non-workers was-in India, 43:57; in Gujarat, 41:59; in Baroda district, 38:62; and in Padra taluk, 37:63. Thus, the taluk had a higher proportion of non-working population. The livelihood pattern indicated that an overwhelming majortiy of the workers (81 per cent) were engaged in agriculture.

Land utilization

The total area of Padra taluk is 202.9 sq. miles. Data on land utilization in the taluk have been examined at two points of time, one before the community development programme was started

4. Socio-Economic Review and District Statistical Abstract of the Baroda District (1956-57) p. 2).
5. Worked out from the figures given in Quarterly Bulletin, Vol. 1, No. 1, January-March 1961 .Bureau of Economics and Statistics, Gujarat State.
6. Census of India Papers, Supplementary Union Table IV, p. 326.

in the taluk in 1957 and again in 1960-61 when the programme had completed four years. The idea was to ascertain possible shifts in the pattern. Table 6 presents the data.

Table 5 : Population and Work-force Distribution, 1961

	Number of persons	Percentage to total population
1. *Total workers*	*51,240*	*36.82*
(a) Cultivation	25,301	18.18
(b) Agricultural labour	16,630	11.95
(c) Mining, quarying, livestock raising	130	0.09
(d) Household industry	1,943	1.40
(e) Manufacturing, other than household industry	1,182	0.85
(f) Construction	219	0.16
(g) Trade and commerce	2,148	1.54
(h) Transport, storage and communications	273	0.20
(i) Other services	3,414	2.45
2. *Non-workers*	*87,920*	*63.18*
Total	**1,39,160**	**100**

Table 6 : Land-use Pattern in Padra Taluk

	1955-56	1960-61
	in acres	
Total geographical area	*1,32,270*	*1,29,856*
Forest	3,284	3,284
Barren and uncultivable land	7,336	4,149
Land used for non-agricultural purposes	253	38
Cultivable waste	432	3,024
Permanent pastures and other grazing lands	17,405	17,072
Current fallows	1,204	996
Other fallows	...	567
Net area sown	1,02,716	1,03,121
Area sown more than once in a year	1,387	1,990
Gross cropped area	1,04,103	1,05,111

The total area shows a slight reduction because of reshuffle of land in some of the villages and adjustments made *inter se* between taluks. The area under forest has remained the same. It

is interesting to note that there was a reduction in the barren and uncultivable land during the period, while there was a sudden increase in the cultivable waste. It is quite likely that the operational definitions of these two terms were overlapping. Even the land under non-agricultural use had declined. The area under permanent pastures had remained constant. The extent of current fallows had declined but other fallows had risen more in proportion to the rate of earlier decline. This might be due to definitional changes. The net area sown had risen but not significantly. Area sown more than once had risen by about 43 per cent. Extension of irrigation through more wells, engines, electric pumps and motors might be a complementary factor. The gross cropped area had also registered a rise. The study of the land-use pattern of the taluk showed increased land utilization during the period 1955-56 and 1960-61.

Irrigation

The only source of irrigation in Padra taluk is wells. Figures in Table 7 give the relevant data.

Table 7 : Irrigated Area in Padra Taluk, 1955-61

Year	Area irrigated by well in acres	Percentage to net area sown
1955-56	1,430	1.39
1956-57	1,535	1.54
1957-58	1,350	1.34
1958-59	2,358	2.33
1959-60	2,986	3.00
1960-61	4,357	4.00

There were 250 wells for agricultural purposes, 735 for domestic use and 575 wells in disuse in 1960-61. Some of the wells reported to be in disuse, however, actually might be under use for irrigation. If this is true, then the number of wells utilized for irrigation as cited above may be an under-estimate. The records of the taluk development office reveal that in the entire taluk there were 220 oil engines in use providing water to 6,000 acres spread over different parts of the taluk.

Agriculture in Padra is contingent on the monsoon. The proportion of double-cropped area is meagre. The acreage under double cropping fluctuates considerably from year to year. It was

highest, 5,695 acres in 1959–60 being 5.7 per cent of the net area sown, but was 1,990 acres or 1.5 per cent in 1960–61. This is indicative of the fact that the extent of double cropping is dependent upon the monsoon.

Crop pattern

The trends in the cropping pattern of the taluk during the last decade could be seen from Table 8. During that period, the area under food crops declined from 66,500 acres to 45,900 acres or from about 65 per cent to 44 per cent of the gross cropped area. It is difficult to explain the lowest limit registered in 1956–57. Among food crops, cereals occupied about 72 per cent of the total area cultivated under food crops in 1950–51 and 1960–61. Among cereals also, bajra, kodra and rice occupied substantial area at both these points of time. Pulses covered 25 per cent and 23 per cent of the area under crops in 1950-51 and 1960-61, respectively. The sub-group of fruit and vegetables claimed a substantial rise from about 2 per cent in 1950–51 to about 5 per cent in 1960–61.

The area under non-food crops registered a rise from 36,200 acres in 1950–51 to 58,100 acres in 1960–61. However, positive relationship for the highest limit of 62,802 acres registered in 1955–56, could not be established. Among non-food crops, cotton, the most important single cash crop, claimed a rise in the acreage under non-food crops, from about 59 per cent in 1950-51 to about 69 per sent in 1960–61. From the beginning of the present century up to the period 1939–40, in the erstwhile Baroda State as a whole, cotton remained as the most important crop in terms of area and total value of sale proceeds[7]. The practice of wider spacing is known in the taluk and has been practised for the last three to four years. Irrigated cotton is also coming into vogue in the area. Cotton dibbling is an advanced practice but few farmers have adopted it. The general standard of raising cotton is better than in respect of food crops. There is a growing demand from the cultivators of cash crops for manures and chemical fertilizers, particularly ammonium sulphate, oilcakes, etc.

The area under tobacco has roughly doubled during the period. As in the case of cotton, cultivators pay more attention to tobacco as it is an important cash crop. In contrast, the acreage under oilseeds had declined during the period under review.

7. Rural Baroda, p. 34.

Table 8 : Crops of Padra, 1950-61

(in thousand acres)

Name of the crop	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61
FOOD CROPS											
Cereals	48.1	52.4	48.2	42.2	34.8	29.5	29.5	29.1	33.0	37.6	32.8
Pulses	17.1	12.9	12.8	13.9	11.5	9.4	9.4	11.0	12.0	11.0	10.6
Fruit and vegetables	1.3	2.1	1.5	1.6	1.4	1.7	1.4	1.9	2.5	1.9	2.5
Total area under food crops :	*66.5*	*67 4*	*62.5*	*57.7*	*47.7*	*40.6*	*40.3*	*42.0*	*47.5*	*50.5*	*45.9*
NON-FOOD CROPS											
Cotton	21.4	26.5	26.4	30.4	41.2	44.8	45.9	46.1	42.7	37.2	40.0
Oilseeds	3.1	3.1	3.8	4.0	3.5	3.6	1.4	2.1	2.2	2.3	3.0
Tobacco	4.6	3.8	4.2	4.4	4.6	7.9	5.3	5.0	4.9	7.6	8 5
Fodder	7.1	1.5	7.3	5.8	5.6	6.5	7.9	5.5	6.2	6.5	6.6
Total area under non-food crops :	*36.2*	*34.9*	*41.7*	*44.6*	*54.9*	*62 8*	*60.5*	*58.7*	*56.0*	*53.6*	*58.1*
Total area under food crops and non-food crops :	**102.7**	**102.3**	**104.2**	**102.3**	**102.6**	**103.4**	**100.8**	**100.7**	**103.5**	**104.1**	**104.0**
Percentage of area under food crops	64.75	65.88	59.98	56.40	46.49	39.26	39.98	41.70	45.89	48.51	44 13
Percentage of area under non-food crops	35.25	34.12	40.02	43.60	53.51	60.74	60 02	58.30	54.11	51.40	55.87
	100.0	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Data relating to use of chemical fertilizers in the taluk during the five years from 1957, is given in Table 9.

Table 9 : Use of Chemical Fertilizer in Padra, 1957–61

Year	Quantity (in B. Mds.)
1957–58	1,312
1958–59	19,400
1959–60	48.584
1960–61	30,798
1961–62	30,710

Until 1959-60, the demand for chemical fertilizers was increasing. From 1960–61, however, the trends reversed because of inadequate supplies. It could still be presumed that the actual use of fertilizers might be more because cultivators obtain them from more than one source and this data are difficult to obtain.

Land rights

The principal tenure in Baroda State is the *Ryotwari* or the individual tenancy system under which the farmer pays the rent directly to the government without the intervention of a third party. Out of 2,896 villages in the State, 2,483 were settled on the *Ryotwari* basis. The rest are *Narvadari*, *Bhagdari*, *Ankadabandi*, *Ekankda* and charitable institutions.

Previously, the districts were annually leased out to the highest bidders and the cultivators enjoyed neither security of tenure nor assessment. After the accession of Sayajirao III in 1875, and during his minority from 1875–81, Sri T. Madav Rao's administration prevailed. During this period and later under Sri Sayajirao III, the administration contributed substantially to the fixity of tenure for the cultivators and improvement of land revenue administration. A Survey and Settlement Department for the State was organized in 1883.

The settlement was based on the principle that land should be assessed on the basis of its potential capabilities. The land was surveyed and the assessment fixed after determining the productivity of the soil. In addition, while assessing the land, the Settlement

Department kept in mind the revenue history, vicissitudes of seasons, price of the produce, proximity to the marketing centres, communication facilities, economic conditions of the tract, etc. A lump sum was then fixed for the taluk and was apportioned over villages and plots of farms. The soil of each survey number was valued in annas, according to the depth, texture, moisture-retention capacity and other physical properties of the soil. The governing principles in such determination were: (*i*) the amount paid in the past and the capacity to pay without harming the prosperity of agriculturists; (*ii*) the rate was not to be raised unless there was a rise in prices or for some other suitable reason ; and (*iii*) no cultivator was required to pay more than half of the net produce of his field.

Reassessments were made at intervals of 15 to 30 years. During the period between the assessments, the cultivator paid the same revenue annually. The periodical revisions raised the fundamental question of income taxation resulting from improvements. In this behalf, the policy of Baroda State was defined in the Land Revenue Code and Revision Settlement Rules. These enactments secured to the cultivator in perpetuity, the whole of the profit arising from improvements in his land carried out at his cost, such as sinking of wells or building of tanks. Enhancement of settlements was fixed solely on the basis of a general rise in the prices of standard crops. During the depression period, permanent reduction of 32 per cent in land revenue was granted. Even then the revenue for the State was never less than Rs. 2-3/4 crores. At the time of Pratapsinghrao's accession to the throne of Baroda State in 1939, general remission in land revenue, given earlier, was made permanent.

In Padra taluk, the original survey settlement rates were introduced in 1889 and the revision settlement in 1908 for 30 years. The groups into which the taluk was divided and the rates fixed for each group were : (I) Padra alone, Rs. 4; (II) Sadhi and 33 other villages, Rs. 3-12-0; (III) Dudhwada and 10 other villages, Rs. 3-8-0; and (IV) Dabka and 22 other villages, Rs. 3-4-0.

Since, then, no further revsion had taken place; only *ad hoc* remissions were given. This situation continued even after the merger of Baroda State with the Bombay State, and it was found that, inspite of remissions in land revenue, the rates of land revenue in the villages of Padra taluk were higher than the adjoining areas of

Bombay State and, therefore, a series of *ad hoc* remissions were given up to 1960.

The pattern of owned and operational holdings by the *khatedars* in the erstwhile Baroda State from 1905–40 could be seen from Table 10. The data in the Table are self-explanatory. There has been over the years an increase in the number of *khatedars* which together with the increase in the land owned, keeps the average size of the holding more or less the same. The number of cultivating owners and the area covered by them has registered a rise. There is a noticeable increase in the number of non-cultivating owners and the area owned by them, leading to a progressive increase in tenancy cultivation. The transfer of land from 1913–42 from cultivators to non-cultivating owners could be easily judged from another set of data compiled from the Baroda Statistical Abstract. The transfer among various groups over the period is summarised in Tables 11 and 12.

Corresponding figures in respect of each head for the earlier years could not be obtained. It is difficult to make precise evaluation of the actual transfer over the period. Nevertheless, the figures show a significant trend of increasing total transfers in favour of non-agriculturists than those in favour of agriculturists[8]. Recognising the importance and seriousness of the trade, Baroda State decided to undertake special tenancy legislation. Three acts were passed viz., (1) Rent Regulation Act, 1934; (2) Backward Classes Land Protection Act, 1938; and (3) Ankadia Village Tenants Act. Exact data regarding the implementation of these Acts are not available. An objective evaluation of the effectiveness of these measures is therefore rendered difficult. Meanwhile, the Baroda State was merged in the former Bombay State on the 1st August 1949. The tenurial relations took a significant turn after the merger. The Bombay Tenancy and Agricultural Lands Act, 1948 was applied to the territories under Baroda State from the 1st January 1950 with certain modifications. Though no precise information regarding ejectment on grounds of personal cultivation is available, it was likely that before the Bombay Act was applied, many tenants were ejected on the ground of personal cultivation thus reducing significantly the number of tenants at the time of the actual implementation of the Act. Information on the implementation of the Act

8. For details, please refer to Baroda Blue Book No.2, Vol. XV of 1946.

Table 10 : Pattern of Land Holding among Khatedars in the Erstwhile Baroda State, 1905–40

Year	Cultivating Khatedars				Khatedars cultivating through others				Total Khatedars		Average size of holding per Khatedar in acres
	Number	Percentage to the total	Acres	Percentage to the total	Number	Percentage to the total	Acres	Percentage to the total	Number	Acres	
1905–6	2,58,636	84.9	28,89,204	79.3	45,931	15.1	7,57,217	20.7	3,04,567	36,46,421	11.83
1906–7	2,59,020	83.8	28,89,181	78.4	49,968	16.2	7,96,854	21.6	3,08,988	36,86,035	12.3
1907–8	2,52,603	82.3	31,78,412	78.8	53,976	17.7	8,59,104	21.2	3,06,579	40,37,516	12.6
1908–9	2,54,049	82.4	32,12,012	70 2	53,990	17.6	8,47,552	20.8	3,08,039	40,59,564	12.6
1909–10	2.53,812	82.4	32,39,628	80.0	53,991	17.6	8,09,922	20.0	3,07,753	40,49,550	12.6
1910–11	2,49,449	81.0	31,81,106	78 0	58,500	19.0	9,00,531	22.0	3,07,958	40,81,637	13.3
1911–12	2,50,256	81.3	32,18,860	79.1	57,251	18.7	8,51,997	20.9	3,07,507	40,70,857	13.3
1912–13	2,53,424	81.3	31,66,206	77.5	58,124	18.7	9,24,178	22.5	3,11,548	40,90,384	13.3
1913–14	2,55,442	81.4	31,91,738	77.3	58,411	18.6	9,38,862	22.7	3,13,853	41,30,600	13.3
1914–15	2,58,817	81.4	32,32,709	77.9	59,029	18.6	9,22,337	22.1	3,17,846	41,55,046	13.3
1915–16	2,58,156	81.0	32,29,277	77.6	60,493	19.9	9,37,064	22.4	41,66,341	41,94,175	13.3
1916–17*	2,60,130	80.9	32,47,436	77.6	61,440	19.1	9,47,539	22.4	3,21,570		13.3
1917–18*	2,62,583	80.0	29,57,974	77-6	65,766	20.0	8,56,798	22.4	3,28,349	38,14,772	11.6
1927–28*	2,71,106	80.0	29,98,546	74.0	67,237	20.0	10,36,992	26.0	3,38,337	39,75,538	11.75
1937–38	2,80,270	79.2	29,05,529	72.6	73,603	20.8	11,01,680	27.4	3,53,873	40,07,209	11.33
1939–40	2,80,233	78.5	28,97,929	72.4	76,450	21.5	11,09,990	27.6	3,56,683	40,07,919	11.24

* Figures for the intervening period were not available.

Table 11 : Transfer of Land, 1913-33

Quinquennium	Land transferred to agriculturists		Land transferred to non-agriculturists	
	Acres	Percentage to total	Acres	Percentage to total
1913-14 to 1917-18	3,41,020	30.6	3,39,348	22.2
1918-19 to 1922-23	2,44,848	21.9	4,22,448	27.6
1923-24 to 1927-28	2,64,425	23.7	4,51,854	29.6
1928-29 to 1932-33	2,65,378	23.8	3,14,260	20.6
Total	**11,15,671**	**100.0**	**15,27,910**	**100.0**

Table 12: Transfer of Land, 1932-33 to 1941-42

S.No.	Land transferred from	Area in acres	Percentage to total value in Rs.	Value with percentage to total value in Rs.	Average value per acre in Rs.
1.	Agriculturists to agriculturists	3,62,335	33.34	4,54,44,206	55
2.	Agriculturists to non-agriculturists	3,57,991	32.94	3,60,33,576 (30%)	45
3.	Non-agriculturists to agriculturists	1,75,011	16.10	1,75,00,475 (14%)	44
4.	Non-agriculturists to non-agriculturists	1,91,537	17.62	2,19,05,722	18
	Total	**10,86,875**		**12,08,83,981**	**49**

abolishing tenancy cultivation and the progress made in its execution during the four years 1957-62, is both interesting and revealing.

One important feature may be mentioned here for the proper understanding of the problem. The shift from the tenancy law in the former Baroda State to the comprehensive Bombay Tenancy Act of 1948 was a radical change. The ultimate transition to tenancy abolition almost seven years later, would show that the evolutionary process which continued for 20 years, came to an end in another seven years. The farming community thus saw waves of reforms the full implications of which they could hardly grasp.

It was difficult to secure response from the farmers on delicate issues involved in the tenancy abolition. Any enquiry into the subject was received with suspicion. It was, therefore, thought prudent to resort to the records built up by the land tribunals that were examining the claims filed under the Act. This information

was supplemented by observation and discussions with officials, social workers and farmers intimately acquainted with the problem.

Extent of tenancy

Information on the extent of tenancy in Baroda State as on the 1st April 1957, when the Act came into effect, is given in Table 13.

Though the proportion of land cultivated by tenants did not anywhere exceed 25 per cent of the cultivated land, the proportion of cultivators hiring land was sizeable. It thus corroborates the results obtained elsewhere that the spread of tenancy cultivation was considerable and it seemed to include both the small and the big farmers; further, the cases of tenancies as reported originally are not final. Not only are there farmers who hold more than one tenancy but there are more than one claimants for the same tenancy. For instance, in Padra taluk the original claims to land on the basis of tenancy were 10,459 which, as the work of the tribunal progressed, swelled to 11,342. They may further increase by the time the work of settling claims and granting to tenants the ownership of land is completed. The task before the land tribunal was thus difficult and time-consuming.

Tenancy abolition

Data in Table 14 give an idea of the progress made up to 31st October, 1962 in implementing the tenancy abolition. The data relating to Baroda district, Padra taluk and the seven villages which were intensively studied during the course of the field study are presented in this Table.

As the data reveal, the progress of tenancy abolition has been slow. Experience has indicated that the simple cases, where it was easy to determine the rights of tenants and fix the amounts of compensation and instalments to be paid, were easily settled. With the passage of time, more difficult cases started coming in. The cases yet to be settled involved incomplete or out-of-date records and more than one claimant to the same land. The basis for determining compensation involved is complicated. This has considerably slowed down the speed of work of the land tribunals.

Table 13 : Tenancy in Baroda as on April, 1957

(1)	Total number of cultivators (2)	Total cultivated land (acres) (3)	Cultivators holding land under tenancy (4)	Extent of tenancy (acres) (5)	Percentage of (4) to (2) (6)	Percentage of (5) to (3) (7)
Baroda district	1,30,671	13,40,029	71,635	2,56,326	53	19
Padra taluk	13,064	11,03,922	10,459	25,399	80	24
Seven villages intensively investigated	2,148	15,248	1,115	3,249	52	21

Table 14 : Progress of Tenancy Abolition (as on 31st October, 1962)

	Total number of cultivators on 1st April 1957	Those holding land under tenancy on 1-4-57	Percentage of Col. (3) to (2)	Total cultivated area (acres) as on 1st April 1957	Extent of tenancy (acres) as on 1st April 1957	Percentage to total cultivated area	Number	Area (in acres)	Percentage of Col. (8) to (3)	Percentage of Col. (9) to (6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
I. Baroda district	1,30,671	98,827	75.6	13,40,029	2,81,667	21.0	16,633	49,696	16.8	17.6
II. Padra taluk	13,064	11,342	86.8	1,03,922	25,400	24.4	3,336	3,612	29.4	14.2
III. Seven villages intensively investigated	2,148	1,115	51.9	15,830	3,248	20.5	415	1,057	37.2	32.5

	Number of cases decided				Denial of tenancy and refusa to become owners				Cases where tenants became owners			
	Number	Percentage to area Col. (3)	Area (in acres)	Percentage to Col. (6)	Number	Area (in acres)	Percentage of Col. (16) to (12)	Percentage of Col. (17) to (14)	Number	Percentage of Col. (20) to (12)	Area (in acres)	Percentage of Col. (22) to (14)
	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
I. Baroda district	79,988	80 9	2,30,056	81.6	30,805	75,137	38.5	32.6	32,550	40.7	1,05,223	45.7
II. Padra taluk	11,067	97.6	18,719	73.7	4,045	5,721	36.5	30.6	3,686	33.3	9,386	50.1
III. Seven villages intensively investigated	1,062	95.2	2,354	72.5	647	1,298	60.9	55.1	314	29.4	331	22.5

Emerging pattern

It would be interesting to reflect on the data presented in Table 14. In the district, the proportion of tenancies that will continue as a result of exemptions provided in the Act, would be 15 per cent and would constitute 13 per cent of the total rented land. The information for the taluk and the villages shows that exemptions seem to be larger in areas of progressive and intensive cultivation. More important, however, are the cases decided in which the tenants have become owners of land. The data indicate that in Baroda district, 81 per cent of the cases have been decided involving 81 per cent of the area. The corresponding percentages for the taluk are 98 and 74. It will take some time for the bulk of the tenants to legally acquire titles to lands they occupy. The complicated procedure provided in the Act for examining the cases in the presence of all the parties, has caused delay. As pointed out earlier, the difficulties of determining prices and the amounts of compensation as well as the conflicting claims to tenancies are additional handicaps brought to the surface by the working of the Act.

It would be interesting to examine the cases where the tribunals could not grant ownership of land to tenants. Though detailed information is not available for the district as a whole, a scrutiny of Table 14 would, however, show that up to October 1962, 3,686 tenancy cases (or 33 per cent) out of 11,067 cases examined in Padra were settled in favour of tenants who became land owners. In respect of 4,045 cases, the tenants refused to purchase land. In the case of roughly over 37 per cent of them, the tenants denied the existence of tenancies before the tribunal. These denials came from the same people who filed claims for ownership of land on grounds of their being tenants in April 1957. It is thus clear that this had arisen on account of collusion between the owners and the tenants of lands. It may also be surmised broadly that between the exemptions and the refusal and denial of tenancies a substantial proportion of land will continue to be worked as before but perhaps under more unfavourable terms.

Two processes emerge from the labours of the land tribunals. The cases where people refused to become owners would be examined further by the *Mamlatadars*. The possession of lands in these cases would be given to the land owners concerned if they hold agri-

cultural lands below the ceiling limits. Alternatively, they would be sold in the prescribed order of priority. In any case, the tenants would lose these lands. May be, in the final analysis such cases may not be too numerous. This would, in any case, involve ejectment of tenant cultivators under the Act, a process which has been causing anxiety to the government.

But the cases in which the tenancies have been denied should cause serious concern. The collusion which we referred to earlier arose from an understading between the parties that the tenancy arrangements would continue off the record. The tenants would enjoy the occupancy of the lands but with a difference. The observations in the seven villages brought out the fact that these tenants would continue to occupy the lands till they enjoyed the confidence of the land owners. The land owners on their part appear to be changing the informal tenants every two to three years to avoid establishment of any claims. Almost all such tenants cultivate on a half-crop share. In quite a few cases the tenant/landlord relationships are further complicated by the land owner supplying some of the farm equipment and machinery or farm resources so that even in the event of a dispute it would be extremely difficult for the tenant to establish his claim. In the case of quite a few tenants, it is difficult to distinguish their residence, barns and cattle sh ds which might have a clue to tenancies. In such cases, moreover, some charged rents in addition to the half-crop share.

We thus find a peculiar phenomenon in which a large proportion of land is cultivated under not only concealed tenancies but also under occupancies which are likely to change hands every few years. The Act thus indirectly generates insecurity of tenure and high rents. The position seems to be that the agriculturists are today worse off than under the previous tanancy Acts which aimed at giving them relative security of tenure and fair rent. The abolition of tenancy thus seems to take us back to the days of pre-land reforms. There are no records or data about the informal tenancies analysed above. No basis thus exists to enable any legislative action to provide succour to tenants of concealed tenancies either in respect of security of tenure or fair rent.

Land holdings

Table 15 brings out the pattern of land holdings in different size groups for Baroda district and Padra taluk. The data give an

Table 15: Pattern of Land Holdings in Baroda District and Padra Taluk, 1961

Size group (in acres)	Baroda district				Padra taluk			
	Number of holders	Percentage to the total	Area (acres)	Percentage to the total	Number of holders	Percentage	Area (acres)	Percentage to the total
1—10	1,28,401	74.6	5,26,933	39.7	15,289	84.89	50,451	49.72
10—25	36,313	21.1	5,52,935	41.6	2,416	13.49	40,680	40.09
25—56	7,046	4.1	2,14,325	16.2	286	1.60	10,079	9.93
56 and more	365	0.2	33,695	2.5	4	0.02	266	0.26
Total	1,72,125	100.0	13,27,938	100.0	17,995	100.00	1,01,476	100.00

idea of the concentration of land in the larger size groups and concentration of landholders in the smaller size groups. In Baroda district, about 75 per cent of the cultivators own about 40 per cent of the land up to 10 acres; in Padra taluk the group having land up to 10 acres constitutes 85 per cent of the cultivators and owns 50 per cent of the land. If the size-group is extended up to 25 acres, it would be noticed that about 97 per cent of the cultivators in Baroda district and about 98 per cent of the cultivators in Padra taluk owned 81 and 90 per cent of the land, respectively. The balance, constituting a small section, would command a sizeable area. This is broadly in conformity with the figures of concentration of land ownership brought out by the National Sample Survey. The average holding per family in Baroda district and Padra taluk comes to 7.7 and 5.6 acres, respectively.

FARM RESOURCES

Agricultural implements

In 1920, there were 7,471 ploughs and 2,664 carts in Padra taluk. In 1961, there were 9.271 ploughs in Padra taluk of which 9,218 were of wood and 53 were of iron. In addition, the region had 4,250 carts, 162 oil engines with pumps for rrigation and 19 tractors. Most of the cultivators use wooden ploughs and follow the traditional methods of cultivation. The government and the land mortgage banks are encouraging installation of irrigation pumps by providing *taccavi* advances, with the result that their use is spreading. Since the inception of the block, 1,250 improved implements were supplied of which there were 142 hoes, 9 Hyderabad ploughs, 22 Karachi ploughs, 1 Jay Hind plough, 969 plant pullers, 80 dust sprayers, 1 harrow, 1 leveller, 1 iron plough and 4 winnowing fans. Despite this, the impact of improved implements is little and by and large the cultivators continue to use traditional implements.

Manures

Judicious and adequate use of both farm-yard manure and fertilizers has been undertaken and these are increasingly demanded by cultivators. The consciousness of the farmers can be judged from the fact that the farmers are prepared to pay more than the controlled prices for the fertilizers, if the supplies are assured. In 1957, 1,312 B. md. of fertilizers were supplied to the cultivators. In

1961, the supply was 30,710 B. md. Since the inauguration of the block, 3,712 farm manure pits and 1,606 compost pits were dug; 36,125 B. md. of ammonium sulphate, 6,800 B. md. of superphosphate and 26, 200 B. md. of other chemical fertilizers were also distributed.

Livestock

In 1920, there were 1,874 cows, 12,147 bullocks, 4,890 buffaloes, 1,176 goats and 349 horses[9]. In 1961, the position changed to 19,638 livestock which included 1,414 cows, 14,037 bullocks, 22,175 buffaloes, 345 sheep, 5,410 goats, 273 horses and ponnies and 2,489 poultry[10]. There is an increase in the number of buffaloes from 4,899 in 1920 to 22,175 in 1961 which constituted an additional source of income through sale of milk and milk products since the area is close to Baroda City. Private traders ply their motor vans to collect milk at strategic points in the area. Similarly, the increase in the number of bullocks from 12,147 in 1920 to 14,037 in1961 not only indicates enlarging farm operations but also the emergence of new farm units. The ratio of a pair of bullocks to cultivated area which was 1:20 in 1920 changed to 1:15 in 1961. However, the quality and breed of the bullocks is inferior and it seems little attention is paid towards improvement of the cattle wealth. It was also observed that poultry farming was not practised systematically in this area.

CO-OPERATIVE MOVEMENT

Erstwhile Baroda State

As in the fields of social and economic uplift, the co-operative activity too, owes its origin to the far-sighted policy of the late Sayajirao III. The Co-operative Credit Societies Act of 1904 envisaged the spread of the movement to provide easy and cheap credit to the cultivators of the State. In the very first year, 24 societies were organized. This figure rose to 79 by 1911. An amendment in 1912 facilitated the organization of other types of societies. The co-operative movement recorded rapid and all-round development during the decade 1911–21. Increasing attention was paid to organizing non-credit societies.

9. Gazetteer of Baroda, Vol. II, p. 557.
10. Quarterly Bulletin of Economics and Statistics, Vol. II, No. 1, January-March, 1962, p. 150.

The progress of co-operative movement in Baroda State from 1921 to 1937 can be judged from the data in Table 16.

Table 16 : Progress of Co-operative Movement in Baroda State, 1921–37*

Year	Average membership per society	Average working capital per society Rs.	Average working capital per member Rs.	Fresh loans advanced per society Rs.	Overdues as percentage to outstanding
1921–22	33	5,133	153	2,296	19.6
1922–23	33	4,866	147	2,443	15.8
1923–24	31	4,606	147	2,608	12.0
1924–25	Figures not available				
1925–26	34	5,195	153	3,561	13 7
1926–27	34	6,384	187	3,651	17.5
1927–31	Figures not available				
1931–32	37	7,217	194	2,110	26.5
1932–33	38	6,399	169	2,274	30.7
1933–34	40	6,707	168	1,855	31 1
1934–35	44	7,293	164	1,867	36.1
1935–36	46	7,373	161	1,921	35.2
1936–37	49	7,910	164	1,910	34.7

*Compiled from the Administrative Reports of Baroda State.

It is heartening to note that the average membership per society rose from 33 in 1921 to 49 in 1937. The working capital per society and per member also registered a rise during the period. Fresh advances actually declined over the period. The position of percentage of overdues to outstanding, declined from 19.6 in 1921-22 to 17.5 in 1926-27. Data for the period from 1927 to 1931 were not available. Because of the fall in prices and income during the great depression, overdues substantially increased thereafter and rose to the highest level of 36.1 in 1934-35. The policy followed during 1930–37 was that of going slow with the formation of new societies, and the existing societies were consolidated and strengthened. A noteworthy feature of the co-operative movement in the post-depression period was the increasing emphasis on the development of non-credit societies. Even the credit societies undertook non-credit work. It is reported that the Central Bank in the State used to undertake the business of joint purchase and sale whereas the primaries distributed improved seeds and manures to the farmers.

Amongst non-credit societies, more important ones undertook various functions such as purchase and sale, marketing and co-operative ginning and pressing. These developments led to rapid expansion of the movement. The number of societies rose from 1,244 in 1938-39 to 1,628 in 1947–48. During this period membership increased from 60,379 to 1,61,000; share capital from Rs. 11.45 lakhs to Rs. 46 26 lakhs; working capital from Rs. 95.31 lakhs to Rs. 263.62 lakhs and the loans advanced, from Rs. 24.38 lakhs to Rs. 125.63 lakhs. The position of reserves also improved from Rs. 22.12 lakhs to Rs. 116.31 lakhs during the period. As against this, the outstandings rose from Rs. 67.20 lakhs to Rs. 107.64 lakhs. Table 17 gives the progress of the movement in the State, during 1938-39 to 1947-48.

The figures reflect a striking progress. Both the average membership per society and loan advanced per member doubled during this period; and average share capital per society increased more than three times. But the share capital per member did not rise proportionately. Actually the percentage of share capital to working capital registered a downward trend.

Baroda district

After the merger of Baroda State in the former Bombay State, the co-operative movement in Baroda district which comprised the bulk of the area of the former Baroda State, continued to show progress, as could be seen from Table 18.

Data in Table 18 indicate the progress of the co-operative movement over a period of a decade of planning. The average share capital and working capital per society increased three-fold. The rise is more marked during the second Plan period, because of the implementation of the recommendations of the All-India Rural Credit Survey Committee, especially on account of the increasing State participation in the movement. During this period the number of societies rose from 653 in 1951-52 to 1,091 in 1960-61; the membership from 88,341 to 1,84,794; share capital from Rs. 32.86 lakhs to Rs. 183.02 lakhs and working capital from Rs. 240.61 lakhs to Rs. 1,132.62 lakhs.

As in other parts of the country, in Baroda district too, the rural co-operative credit societies predominate over the non-credit societies.

Table 17 : Progress of Co-operative Movement in Baroda, 1938–48 *

Year	Average membership per society	Average share capital per society Rs.	Average capital per member Rs.	Average working capital per society Rs.	Average loan advanced per member Rs.	Percentage of share capital to working capital
1938–39	49	920	19	7,662	40	8
1939–40	51	954	19	7,863	41	8
1940–41	52	1,040	20	8,427	44	8
1941–42	55	1,155	21	9,107	57	7
1942–43	58	1,325	23	10,590	70	7
1943–44	81	1,740	21	11,808	80	6
1944–45	84	1,896	23	13,416	60	7
1945–46	87	2,146	25	13,373	74	6
1946–47	96	2,730	29	15,496	76	5
1947–48	99	2,842	29	16,193	78	5

* Compiled from the Administrative Reports of Baroda State.

Table 18 : Co-operative Movement in Baroda District, 1951–61*

Year	Average membership per society	Average share capital per society Rs.	Average share capital per member Rs.	Average working capital per society Rs.	Percentage of share capital to working capital
1951–52	135	5,031	37	36,846	7
1952–53	134	5,588	41	38,350	6
1953–54	157	5,957	37	43,961	7
1954–55	148	6,341	42	52,514	8
1955–56	149	7,107	47	54,743	7
1956–57	152	7,875	51	65,241	8
1957-58	162	10,905	67	78,536	7
1958–59	167	13,163	78	88,928	6
1959–60	165	15,270	92	93,738	6
1960–61	169	16,775	99	1,03,814	6

* Compiled from the records of the office of District Registrar of Co-operative Societies, Baroda district.

For providing finance to the agriculturists and to make funds available to the primaries, the Baroda Central Co-operative Bank was started in 1913. The working of the bank in Baroda district as a whole in relation to the Padra taluk could be seen from Table 19. It could be seen on a closer analysis of data in Table 19, that there was a cent per cent increase in institutional membership of the Baroda Central Co-operative Bank, whereas the number of borrowers rose by more than five times.

Fresh advances per member rose by eight times whereas those in case of borrowing members increased by three times. The recovery position in respect of borrowing and non-borrowing members registered a substantial rise. It is also significant to note a rise in the loans outstanding per society during the period. During the period of the first two Plans, but more particularly during the second Plan period, the loan policy of co-operative institutions had been liberalised considerably. The basis of loans has been the production. The rate of loan to a cultivator varies for progressive and backward areas. An owner cultivator used to get finances at a higher rate than a tenant cultivator. Inspite of the liberal loan assistance, the smaller borrowing per member and, therefore, the thinner spread of loans could be explained by expansion of the movement consequent on the organization of smaller societies. This situation could also be held responsible for the low recovery and mounting outstandings per member.

Table 19: Number of Member Societies, Borrowing Members, Loans Advanced, Recovered and Outstanding during 1951-62, of Baroda Central Co-operative Bank Together with Position of Padra Branch.

Year	Number of society membership, Baroda district	Fresh loans				Recoveries				Loans outstanding			
		Number of member societies	Amount Rs.	Number of member societies	Amount Rs.	Number of member societies	Amount Rs.	Number of member societies	Amount Rs.	Number of member societies	Amount Rs.	Number of member societies	Amount Rs.
1951-52	431	109	13.42	10	0.44	105	8.17	10	0.13	163	9.89	10	0.31
1952-53	489	159	16.56	9	0.33	195	14.61	15	0.56	166	11.84	5	0.07
1953-54	505	172	22.75	6	0.33	216	18 84	11	0.41	142	15,75	3	0.01
1954-55	528	215	32.71	7	0.52	233	28.68	7	0.34	164	19.78	2	0.19
1955-56	551	308	52.85	9	0.61	287	40.42	9	0.62	204	31.64	1	0.18
1956-57	556	272	78.12	10	2.41	304	59.06	10	2.10	226	50.70	5	0.49
1957-58	574	318	145.95	10	2.89	333	96.61	10	3.69	279	99.86	7	3.86
1958-59	644	396	131.42	18	3.61*	396	149.96	19	2.49*	306	81.31	6	1.45
1959-60	772	540	224.29	49	20.31	561	143.52	44	10.57*	532	162.08	34	11.19*
1960-61	802	563	190.33	54	17.08	671	201.94	55	15.52	534	150.46	42	12.75
1961-62	823	563	215.78	56	17.07*	660	183.09	61	16.25	600	182.02	47	13.57*

* Medium-term loans included.

Compiled from the annual reports of Baroda Central Co-operative Bank and records of Padra branch.

Padra taluk

Co-operative societies in this taluk were formed from the beginning of the movement in the former Baroda State. Immediately after the merger in the former Bombay State, the work of consolidation of the movement was taken up. The inactive societies were wound up and weaker units amalgamated. At the end of June 1950, there were 82 societies in Padra taluk of which 57 were rural credit and multipurpose societies. As a result of conversion of credit societies into multipurpose societies, the number of societies fell from 21 in 1949-50 to 9 in 1955-56. When the community development programme was initiated in 1957, there were, in all, 69 societies of various types in the taluk, of which 39 were credit and multipurpose societies. The total number of societies in 1960-61 rose to 101. The membership figures rose from about 4,340 to about 13,230 during the period. The share capital rose from Rs. 1,10,500 to Rs. 5,07,000 and the advances from Rs. 44,000 to 17,07,000 during the period. It is significant to note that all the villages in the taluk have been covered by the co-operative movement. It has been estimated that the co-operative movement is serving about 45 per cent of the agricultural population. An analysis of the age composition of credit, multipurpose and service co-operatives in the taluk as on 1st July 1960 showed that 26 societies (41.3 per cent) were 2 years old, 11 societies (17.5 per cent) were between 2 to 5 years old, 10 societies (15.8 per cent) between 5 to 10 years old and 16 societies (25.4 per cent) have been in existence for 10 years and more. It could thus be seen that co-operative movement as a way of life has been on trial since early days.

An analysis of fresh loans advanced, their recovery and outstandings in Padra taluk has been given in Table 20.

These figures are self-explanatory. With rise in the advance of loans per society, the recovery position had deteriorated and outstandings have mounted. These trends were in the general run of things in the district, as analysed earlier. Further analyses of the financial position of the co-operatives show that the average working capital per society rose from Rs. 10,390 in 1958-59 to Rs. 34,416 in 1960-61. Similarly, the average working capital per member rose rom Rs. 147 to Rs. 328 and membership per society from 71 to 105 during 1958-61. A deeper analysis of the working of credit,

Table 20: Co-operative Advances, Recoveries and Outstandings in Padra Taluk, 1951-62

Year	Advances per society (borrowing member) Rs.	Recovery per society (borrowing member) Rs.	Outstandings per society (borrowing member) Rs.
1951-52	4,400	1,300	6,100
1952-53	3,666	3,733	1,400
1953-54	5,833	3,727	333
1954-55	7,428	4,857	9,500
1955-56	6,777	6,888	18,000
1956-57	24,100	21,000	9,800
1957-58	38,900	36,900	52,571
1958-59	20,055	13,105	24,166
1959-60	42,312	24,022	32,911
1960-61	31,629	28,218	30,357
1961-62	30,482	26,639	28,872

multipurpose and service co-operatives in Padra taluk relating to 1958-61 is presented in Table 21.

Table 21 : Working Funds of Co-operatives, 1958-61

	1958-59		1959-60		1960-61	
	Rs.	Percentage	Rs.	Percentage	Rs.	Percentage
1. Paid-up capital, reserves and other funds	2,59,279	47.6	5,10,560	28.93	6,31,928	31.11
2. Deposits (Members and non-members)	1,38,900	25.6	1,32,362	7.50	1,25,028	6.16
3. Borrowings (from Central financing agencies & others)	1,45,400	26.8	11,22,212	63.57	12,74,106	62.73
Total working capital	5,43,579	100	17,65,034	100	20,31,062	100

There is a growing dependence on borrowing and decline in the quantum of owned funds during the period. Deposits show a marked fall in the total quantum of working capital. This is a countrywide feature which is due mainly to the state of the sector financed and the purposive rapid expansion towards certain wider objectives of development. Similarly, the deposits have lost ground relatively and have not fallen absolutely. There might be differences of opinion about the quality of this expansion. A more positive answer to this may be found a few years hence if the purpose of the policy is fulfilled and institutional credit acts as a catalytic agent of agricultural development.

The audit classification of credit and multipurpose societies during 1958–61 shows an improvement, in the sense the number of D class societies has declined, as shown in Table 22.

Table 22 :Audit Classification of Rural Credit Co-operatives in Padra Taluk, 1958–61

Year	Audit Classification				Unclassified	Total
	A	B	C	D		
1958–59	6	14	14	9	13	56
1959–60	7	32	12	3	9	65
1960–61	8	38	15	...	2	63

Marketing

Cotton, tobacco, pulses, fruit and vegetables are the important cash crops of the taluk. All these commodities provide the bulk of the total cash income of the farmers. The private agencies tap some of the production centres to purchase agricultural produce like bananas and raw milk, which has led to ribbon development alongside the State highway and district's earthen roads. Padra taluk specialises in pulses trade and is a wholesale market centre for fruit, vegetables and condiments. Sixty-three per cent of the total tobacco received at Padra comes from Luna, Dabhasa, Sejakuva, Ghayej, Tejpura and Latipura. The Agricultural Produce Market Act has been applied to Padra taluk from 15th March 1957 and the market committee enforces the provisions of the Act.

The sharp fall in cotton prices in 1960–61 was seriously weighing on the minds of the cultivators when the field work was in progress. Large stocks had accumulated with the co-operatives. For the disposal of cotton, there are four marketing centres in Padra taluk: (1) Masar Road, (2) Ranu, (3) Mobha, and (4) Padra. The ginning facilities for cotton grown in the taluk are available at Ranu, Mobha and Masar. Until recently, there were no pressing facilities in the taluk. The farmers, therefore, utilized co-operative pressing facilities available at Itola, Karjan, Varnama, Amod and Jambusar, which are outside Padra taluk. Only recently, one press has been installed by a private agency at Masar. Table 23 gives production and sale of cotton in Padra.

It could be seen that in 1959–60, co-operatives handled 52 per cent of the produce, which in 1960–61 fell to 44 per cent. The share of private agencies increased from 48 to 56 per cent over this period.

Table 23 : Disposal of Cotton Crop of Padra by Centres Within and Outside the Taluk by Co-operatives and PrivateAgencies, 1959-61

	1959-60	1960-61
Total production (in bales)	16,487 (100)	22,783 (100)
Number of bales pressed and sold by co-operatives within Padra taluk	6,023 (37)	7,111 (31)
Number of bales pressed and sold by co-operatives outside Padra taluk	2,500 (15)	3,000 (13)
Number of bales pressed and sold by private agencies within Padra taluk	6,819 (41)	10,722 (47)
Number of bales pressed and sold by private agencies outside Padra taluk	1,145 (7)	1,950 (9)

Figures in brackets show percentage to the total of the year.

Summary

This brief account of the socio-economic characteristics of Padra taluk, considered in the setting of the district, is relevant to the analysis of the working of the community development programme. Both the district and the taluk are progressive, but are surrounded by backward areas. The region under study had witnessed extension work and ameliorative measures for a long time under an enlightened administration. The values, however, were different and with the merger of the State in Bombay, a different set of values and a faster pace of change were transplanted on relatively placid waters. Partly on account of lack of preparedness and partly because of resistance, the initial reactions of the people to numerous progressive measures and systematic and intensive community development activity were rather mixed.

III

Rural Reconstruction-A Historical Perspective

The term 'community project' which is of American origin came to be used in India only a decade back, since 1952, when the first set of such projects was started. The Planning Commission, in the First Plan described community development as the method, and rural extension as the agency through which the transformation of the social and economic life of villages was proposed to be initiated[11]. It was intended to develop the areas through peoples' own democratic organizations such as panchayats and co-operatives. It was intended that the programme would be planned and implemented by villagers themselves and the government would provide technical advice, supplies and credit.

In the early twenties of the present century, attempts were made to undertake rural development programmes in different parts of the country. These programmes were initiated either by individuals or by certain institutions. Gandhiji's organization at Sevagram in Wardha district, Shri Rabindranath Tagore's work at Santiniketan, Dr. Spencer Hatch's village reconstruction programme at Marthandam in the then Travancore State, the rural reconstruction centres set up by the late Sayajirao III of Baroda, Mr. and Mrs. F. L. Brayne's programme of extension work in the Gurgaon district, the firka development scheme in Madras, the sarvodaya centres in Bombay State and the extension projects at Etawah, Nilokheri, Faridabad and Faizabad, are all outstanding experiments in rural development[12]. Improvements in agriculture and village

11. First Five-Year Plan, p. 223.
12. For detailed account of these programmes, please refer to :
    (a) Evolution of community development programme in India — Ministry of Community Development, Co-operation and Panchayati Raj.
    (b) Panchayati Raj by Shri S. K. Dey, pp. 63-66.

life formed the core of all these programmes. Benefiting from the earlier experiments, a programme of community development was drawn up and initiated under Indo-American Technical Co-operation Agreement in 55 blocks covering 27,338 villages and a population of 16.7 million on October 2, 1952, the birth anniversary of Mahatma Gandhi. The programme covered the whole range of rural life. Special emphasis was given to programmes relating to animal husbandry, minor irrigation, communications, public health and medical facilities, education, co-operation, village industries and amelioration of backward classes and the tribal people. The programme in the initial stage continued to be a pilot programme of rural reconstruction. Additional blocks came to be organized, stage by stage and year by year. Special training facilities for extension officers formed an important part of this programme. The report of the Grow More Food Enquiry Committee under the chairmanship of V. T. Krishnamachari also recommended that the national extension service be given a permanent shape. At the end of the First Plan 1,200 (of which 300 community development and 900 national extension service development) blocks were set up covering 1,22,957 villages and 79.8 million population under this programme. To further strengthen the programme, a separate ministry was formed in September 1956. With the large and growing outlays in the Second Five-Year Plan and also in order to ensure economy and efficiency in the working of this programme, it was thought necessary to assess the work done under this programme. A committee on plan projects was constituted by the National Development Council to study individual schemes with a view to improving their working. Under this arrangement, the community development was the first scheme taken up for evaluation. A study team under the chairmanship of Balwantrai Mehta was appointed in January 1957. The committee submitted its report in November 1957. The study team considered the working of the programme since its inception. The team endorsed in broad terms the approach of the programme. It recommended a two-staged programme, each of a six-year duration. The first stage of the programme was to have an intensive programme of development. On completion of stage I, the block would enter stage II. Stage I was to be preceded, by a phase of 'pre-extension' stage preparatory work of one year duration, during which period, the emphasis was to be placed on

agricultural development. The amount provided for pre-extension work was Rs. 18,800 for a block. A higher budget provision of Rs. 15 lakhs was recommended for stage I than for stage II. The amount recommended for stage II was Rs. 5 5 lakhs. The personnel and organizational set-up in both the stages were recommended to be the same. The team suggested that stage II budget should be repeated year after year even on completion of the six-year period. The study team found that the speed of setting up blocks was too fast and attributed many of the defects to this rapid expansion. The report, therefore, suggested that the whole country should be covered by 1963 instead of by 1961.

The most important recommendations of the study team related to democratic decentralization. It suggested that more faith should be reposed in the people for their own amelioration and that the village panchayat should be the basic unit of development. A three-tier system of administration for developmental purposes at the village, block and district level was suggested. The National Development Council broadly accepted the recommendations of the study team with a few modifications. This led to the adoption of a single scheme of community development in two stages, each for five years. A sum of Rs. 12 lakhs and 5 lakhs were budgeted for stages I and II, respectively. It was also decided to cover the entire rural area by October 1963. A broad-based programme drawn up with the co-operation of the Sarva Seva Sangh after the Yelwal conference (Mysore State) has been in operation since 1957.

Community development in Baroda

It would be useful to examine the rural development programme of the former Baroda State which had many similarities with present community development programme. Under the able stewardship of Maharaja Sayajirao III, the former Baroda State had a highly enlightened, welfare-oriented administration. In quite a number of spheres, the administration made advances which stand as models for development and planning for the country even today.

The State was progressive in social legislation and introduced free and compulsory primary education as early as in the nineteenth century and subsequently was operative throughout the State which greatly helped in removing certain social disabilities. In Baroda State the amount spent per year for every school-going child of 6–10

years was Rs. 6. Every village in the State was statutorily provided with a panchayat. The government of the former Baroda State was anxious to see that panchayats become live bodies, actively interested in the well-being of villages. It was thought that rural reconstruction would be meaningful only in this way. During the great depression, the Baroda State had granted relief through remissions and suspension of land revenue and had followed a liberal co-operative policy to enable the peasants to get loans. The State also increased its developmental expenditure.

Reconstruction centres

Rural reconstruction centres in Baroda in a way were miniature community development blocks. Areas from certain districts were selected for intensive propaganda, in the first instance. They were split into blocks of 20–24 villages, which were further divided into four sub-divisions. The centres comprised roughly of 6 to 8 villages with the taluk town as headquarters[13]. There were three such centres at Kosamba, Karjan and Vankal. The centre at Kosamba in Mangrol taluk of Navasari district was started in April 1932, the one at Karjan began work in 1939 and the third one at Vankal, which is a backward area in Navasari, was organized in 1943. These centres were supervised by the Director of Agriculture of Baroda State. The Kosamba centre was selected in consultation with Mr. Jacobi, an experienced non-official worker of the Y.M.C.H. and other officials. The relative coolness and the proximity to forests, made this area extremely suitable for poultry farming and apiary.

The centres, being more experimental than a part of a phased Programme, chose villages for developmental activities within their easy reach. The programme was thus free from unwieldiness and perhaps more composite or homogeneous economically and socially. The centres had a number of objectives which, for reference, are enumerated below.

(i) The centres aimed at effecting an improvement in all aspects of rural life, changing especially the outlook of the agriculturists and developing a desire in them for a higher standard of life.

13. Baroda Administration Report, 1936-37, p. 169.

(ii) The work was to begin intensively in a small area in the first instance, so that the trained workers and supervisory personnel could have personal contact with the agriculturists. This would also bring all the farmers of that small area under the beneficient influence of the centre's programme.

(iii) Nursing and encouraging village leadership of the best type was another aim so that a continuing and stable local agency for rural welfare activities was available. This task was primarily assigned to the superintendent of the centre.

(iv) The centres were to have economic, educational and moral programmes. The economic programme laid special emphasis on occupations subsidiary to agriculture. These were bee-keeping, sericulture poulty farming, kitchen gardening, spinning and weaving, etc. A good deal of emphasis was also placed on the arrangements for the proper marketing of agricultural produce. Under the educational and moral programmes were included adult education, development of community sense, propaganda against evils like early marriage and similar customs, proper use of village libraries, the scout movement and other educative work. The audio-visual aids were to be employed to make these ideas effective[14]. The purposes underlying these objectives were defined elaborately, which not only bring out the unfavourable experiences of the past but also pinpointed the positive steps to be taken.

Extension training

Right from inception of the programme, the importance of the right type of personnel to implement this programme was recognized. Short-term courses of three months' duration in rural reconstruction were organized. The trainees were given scholarships. The subjects included in the short-term course were: (a) agriculture with special emphasis on kitchen gardening, (b) poultry-keeping, (c) bee-keeping, (d) veterinary, (e) co-operation, (f) spinning and weaving, (g) sanitation, (h) library, (i) village panchayat, (j) adult

14. Baroda Administration Report, 1934-35, p. 147.

education, (k) rural games, (l) rural welfare, and (m) sericulture. In addition, visual instruction was given with the help of lantern slides dealing with the subjects of importance to rural life. Though details of the implementaton of extension training programme of the former Baroda State are not available, yet the information called out from records and presented here provides useful guidelines for future efforts.

In the first batch, there was a provision of ten scholarships of Rs. 6 each. Many applications were received but ultimately only six persons reported for training. In addition, six local persons also joined the batch for training as non-stipendary students. The second batch consisted of nine students, seven stipendary and two non-stipendary, but they were all from outside. The amount of scholarship was raised to Rs. 10. This, however, did not improve the response. The third batch consisted of sixteen students. Of these, four left the training and only 12 continued; they were, six from Baroda, two from Mehsana and four from Navasari. Again, of the twelve, six were Patidars, two Barhmins, one Rajput, two Christians, and one Kaliparaj. From the point of view of educational qualifications they were equally divided between those knowing Gujarati alone and those knowing, in addition, English also. One of them was a non-matriculate and three had studied up to matriculation.

An analysis of the students who were trained under this programme on the basis of their caste, area to which they belonged and their age is given in Table 24.

Table 24 : Trainees by Caste, Area and Age Group

Caste	Number	Area	Number	Age group	Number
Brahmin	6	Navasari	11	16-19	5
Backward classes	5	Baroda	3	20-23	9
Patidar	4	Mehsana	2	24-29	4
Muslim	3	Ameali	2	Over 30	3
Christian	3	Others	3	...	...
Total :	21		21		21

The most crucial test, however, in the course of this kind of training is the follow-up. In this connection, it is reported that from the first batch of the students only one imbibed the right spirit of work and was engaged in doing what he could and reported the results of his efforts in rural reconstruction. As this was anticipated to some extent, it was not depressing. The Kosamba centre had in one year about 1,400 visitors from Navasari and other districts of Baroda State as well as from outside the State. After having gathered experience for about eight years, additional 22 villages were taken for development in 1938. In 1939, the centre worked in 35 villages within a radius of 10 miles. In addition, 15 villages derived benefits indirectly from the centre.

The villages covered were divided into four sub-groups and each sub-group was placed in charge of a fieldman. In the villages which were covered by the centre, the officer held small demonstrations with a view to creating interest in the work done at the headquarter. Tractor ploughing, distribution of improved seeds, supply of stud bulls, etc. were the agricultural activities undertaken. Secondary occupations such as spinning and weaving were also taken up. A health unit also worked in each group of villages. The unit staff consisted of a male and a female medical officer, a nurse and a sanitary inspector. During the year 1940–41, every village of the unit was visited four times by one or the other member of the staff. During the visits, attention was paid to antenatal cases, prevention of contagious diseases, examining the health of school children and general sanitation. It was learnt from some of the observations of the visits to the villages by superior officers that the people showed some interest in weaving and sericulture, but not much interest was shown for improving agriculture, co-operative movement, educational and panchayati activities and kitchen gardening. It was also found that Dublas and Antyajas, who were the poorest and the most backward, were not touched by the programme.

The observations of V. T. Krishnamachari about this programme are noteworthy. He stated that for a lasting improvement in the conditions of rural life, simultaneous attack from all sides was needed. Different government departments concerned themselves with individual aspects of village life and approached the villagers in an isolated way. It must be recognised that all aspects of village life are interrelated and that concentrated efforts were

necessary to bring about awakening among the people. The village school should be the centre of all efforts for improvement and the village panchayat and the co-operatives should be the agencies through which the initiative for improvement should come. These observations show how the policy makers of the Baroda State visualised the problem and how we missed taking advantage of them even when taking up the reconstruction work through community development in a big way*.

The measures for agricultural development actually gained considerable momentum after the accession of the late Maharaja Sayajirao III. It was since that time that the essentially subsistence agriculture turned into commercial agriculture and the crops instead of being raised for domestic needs of the family began to meet the requirements of the far-off market. This period may be called the period of commercialised agriculture. More and more commercial crops, the most important of which was cotton, began to be cultivated. The entire State benefited in regard to improved methods of agriculture which were introduced during the thirties. The State agriculture department intensively campaigned for the introduction of improved types of implements like iron ploughs, tube wells, distribution of seeds and provision of finance for irrigation in blocks. The change may be examined, for convenience, under three periods. The years 1889-1908 were the years where a good part of the attention was paid to intensive agricultural development, provision of agricultural education, setting up of experimental farms and organizing agricultural banks. Agricultural development programme during this period included introduction of improved varieties of seeds, better manures and use of iron ploughs. In the

* "Throughout my reign, I have never ceased to study the problems of the countryside and the agriculturists seeking the best methods of reconstruction and uplift. The broad outlines of the policy I laid down were that the people should be shown what improvements could be effected in their social, moral and economic status and that they should be stimulated to a consistent desire and effort for their own advancement. Government could and obviously must provide the original initiative and the bulk of the finance, but ultimate success depends upon the personal factor–the ambition of the individual for a happier, healthier and more prosperous life and the determination to secure it." From the speeches of H. H. Sir Sayajirao III, Gaekwad of Baroda and from the speeches of Sir V. T. Krishnamachari delivered on 25-1-34 and 25-1-35 (pp. 86-89).

second stage, covering the years 1909-27 work done in the first stage was consolidated and continued. In addition, facilities of veterinary relief and agricultural engineering were also provided. The third stage between 1928 and 1944 was known as the "rising barometer" and was noteworthy for the remarkable all-round increase in the activities of the agriculture department. It would thus be seen that from the last quarter of the 19th century and the four decades of the present century, efforts were made in various directions to improve the lot of agriculturists. Students were sent to Europe and America for the study of scientific agriculture. An agricultural school had also been opened. Several experimental and demonstration farms were started with the object of making experiments, giving instructions to cultivators and producing good seed for distribution. Veterinary dispensaries were opened in almost all the taluks and a department of agriculture was organized. Agricultural shows and cattle fairs were held from time to time. The State had placed considerable emphasis on effective propaganda. Propaganda took two forms, intensive and extensive. In the former, groups of 20—25 villages were divided into sub-groups of 7—8 villages. Each sub-group was controlled by a fieldman or an overseer and three trained kamgars. In the latter, the means of approach was the use of equipped touring carts in charge of a graduate assistant. These carts toured from November to June visiting 12 villages a month with a halt of two days at each village. The carts were equipped with 16 mm. cinema apparatus. These demonstrations explained the work of the department and brought the knowledge of improved methods of agriculture to the doors of the cultivators. The size of the effort and the spread of the benefits to the agriculturists could be seen from the data given in Table 25.

All these activities indicate the lines of improvement which helped to increase agricultural production and brought larger economic benefits to agriculturists. Separate figures for Padra taluk are not available but as a part of Baroda, Padra shared these activities. This was the background and tempo of developmental activities when the community development programme was initiated in Padra taluk as a part of the nation-wide effort. It would also be seen from the above discussion that the area had fairly developed agricultural practices and traditions on which further efforts were to be made. Thus the ground was already prepared for the community

Table 25 : Rural Development in Baroda State, 1935-43

Item	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43
1. Number of villages under intensive attention	19	226	280	351	383	417	464	446
2. Number of field demonstration plots arranged on farmers' fields	18	710	1,048	1,432	2,546	2,160	1,275	1,548
3. Number of demonstrations in manure conservation		627	1,232	1,435	1,768	2,115	3,277	3,605
4. Number of demonstrations in implements and simple machines	12	1,735	2,513	2,401	2,614	3,215	3,116	2,108
5. Improved seeds (in'000 B.md.)	5.8	6.6	7.4	12.2	17.2	41.4	52.9	105.9
6. Distribution of bonemeal manure (in'000 B. md.)	0.2	0.7	0.8	1.7	2.7	2.5	10.8	16.5
7. Cartloads of new manures made by villagers (in'00s)	...	0.7	1.1	6.7	14.8	20.3	23.3	31.4
8. Number of major farm implements supplied to farmers	27	113	1,033	859	913	735	806	335
9. Number of cases of livestock treated by veterinary surgeons (in'000s)	31.9	29.0	43.1	49.4	61.6	58.5	60.4	70.0

10. Number of animals protected from epidemic diseases (in'000s)	9.7	11.8	47.9	68.4	88.5	117.6	102.5	91.3
11. Number of wells deepened	20	86	95	445	589	242	254	236
12. Area ploughed by State tractors on contract (in acres)	...	23	395	1,244	2,143	959	1,762	1,760
13. Supply of fruit plants (in'000s)	1.7	6.0	7.1	6.7	11.1	5.2	14.9	17.0
14. Total bales of cotton certified (in'000s)	...	...	2.1	2.8	7.6	5.6	11.2	5.1
15. Persons trained in agriculture and allied subjects through courses of 3 months' duration and over	47	89	146	146	227	317	318	252
16. Total expenditure on the department (in lakhs of Rs.)	2.98	...	4.75	6.18		6.67	8.28	

development work to increase agricultural productivity and ensure better standard of living.

Community development

During World War II and later the merger of Baroda administration in the Bombay State disrupted to some extent the rural development work. The Baroda district which represented a substantial area of the former Baroda State suffered a set-back in the intensive constructive work it had known for long. Only in 1954, one NES block was started in Jabugaom taluk of the district. Thereafter, Sankeda block was taken up in October 1954 and Naswadi followed on the 1st May, 1956. The Padra block was taken up from the 1st April, 1957. At the end of March, 1959, five blocks comprising of 1,081 villages, covering 1,428.5 sq. miles and a population of 4,72,270 were functioning embracing 63.6 per cent of the villages and 39.5 per cent of the population of the district. At the end of March, 1961, all the taluks and mahals of the Baroda district were covered by the community development programme which included five pre-extension blocks also. A sum of Rs. 69.10 lakhs was spent under this programme in the district since the beginning of the programme till March, 1961.

Under the programme of agricultural development 1,31,580 B. md. of seeds were distributed benefiting an area of 1,80,000 acres, up to the end of Second Plan. Similarly, 2,62,730 B. md. of chemical fertilizers were distributed free, by way of experimental initiation. Measures had been undertaken to popularise use of improved implements through the village level workers and 4,450 such implements were supplied in the district. Under the programme of crop protection services, 5,858 maunds of insecticides and pesticides were distributed. Crop competitions were also held to popularise the improved agricultural practices; 4,605 acres were covered under the scheme of extending area under fruit and vegetables. About 5,000 agricultural exhibitions were organized in the district. Under the programme of livestock improvement 5,092 bulls were castrated, 440 standard bulls were supplied, 37,700 cattle vaccinated and 1,49,405 cattle were provided with veterinary services. In addition, measures for expansion of educational and medical facilities public health programmes, setting up of co-operatives and constructing roads were also undertaken. It is in this background the study of

the community development activities in Padra taluk was undertaken.

Padra taluk block

As stated earlier, Padra block was inaugurated on the 1st April 1957 and was categorised as stage I block from the 1st April, 1958. A financial outlay of Rs. 18 lakhs was allotted to this block to make agriculture progressive and prosperous by making available social overheads, spreading knowledge among farmers, providing better cultivation practices, making judicious and adequate use of fertilizers, improved seeds, insecticides and pesticides and also creating an urge among the people for better living and for assuming more responsibilities to solve their own problems.

The break-up of the total financial outlay for each head of developmental activities is given in Table 26 together with the actual expenditure incurred till the 31st March, 1962 in respect of each major head.

Table 26 : Community Development in Padra Taluk, 1957-62

	Particulars	Allocation	Percentage to the total allocation	Actual expenditure up to 31-3-62	Percentage to the total allocation
1.	Project headquarter	2 71	15 06	2.78	17.46
2.	Agricultural extension and animal husbandry	1.65	9 17	0.45	2.83
3.	Irrigation	5 10	28 33	5.49	34.49
4.	Health and rural sanitation	1.97	10 94	1.76	11.06
5.	Education	1.88	10.45	1.60	10.05
6	Social education	1.19	6 61	0 79	4.96
7.	Communication	1.02	5.67	0.91	5.72
8.	Rural arts, crafts and industries	0.98	5.44	0.84	5.28
9.	Housing	1.50	8.33	1.21	7.60
10.	Miscellaneous	...	...	0.09	0 55
	Total :	18.00	100	15.92	100

Out of the total financial provision of Rs. 18 lakhs, a sum of Rs. 15.92 lakhs was spent at the end of March, 1962. It would also

be seen that the development of agriculture under items 2 and 3 (Table 26) had been assigned high priority in the budget, accounting for about 38 per cent of the total outlay. This is followed by the project headquarter expenditure accounting for about 15 per cent of the total. Health, rural sanitation and education together account for about 28 per cent of the total allocation. Housing, communication, rural arts, crafts and industries, also have been assigned their place in the schematic budget.

The actual expenditure for the agricultural extension and animal husbandry together with irrigation programme accounted for 37.32 per cent of the total expenditure. Irrigation programme which comprised of financial assistance for installation of electric motors, oil engines, etc. was well received by the people and accounted for 34.49 per cent of the expenditure. The programme of agricultural development and schemes of animal husbandry fell short of the original allocation both in actual expenditure and in percentage distribution. The actual expenditure on project headquarter in terms of absolute figures as well as percentage was higher than the amount allocated. The actual expenditure in respect of each head falls short of the budgeted amount.

Table 27 : Pysical Targets and Achievements in Padra Block, 1957–62

		Unit	Target	Achievement
1.	Compost pits	Number	4,800	2,280
2.	Distribution of fertilizers	B. md.	42,000	92,077
3.	Improved seeds	B. md.	20,275	23,050
4.	Area brought under fruit gardening	Acres	95	306
5.	Area brought under vegetables	Acres	5,750	3,013
6.	Distribution of improved implements	Number	540	1,545
7.	Agricultural demonstration	Number	3,100	1,259
8.	*Kachha* wells constructed	Number	...	22
9.	*Kachha* wells repaired	Number	...	21
10.	*Pucca* wells constructed	Number	100	127
11.	*Pucca* wells repaired	Number	...	158
12.	Pumping sets and electric motors installed	Number	...	110
13.	Oil engines	Number	75	35

The achievement of physical targets of some of the important agricultural schemes would make meaningful reading in the context of the budget of allocation and outlays (Table 27).

Conclusion

This account of the rural development work in Baroda State and Padra taluk during the last half a century or so, would show that the core of the programme was the same throughout. The pattern of activities and outlays as well as the machinery for implementation were also very similar. The differences between the past efforts and the present-day development lies mainly in the intensity of inputs and coverage.

The experiments carried out in Baroda and other places will prove that the idea of organized community development is not entirely foreign to our thought. Although the Baroda experiment was on a much smaller scale, its achievements are noteworthy and the present community development movement is a logical extension of the past experiment.

IV

Community Development and Change-1

With a view to provide background for a discussion on the economic change in agriculture due to community development, it is proposed to set out in this chapter the broad features of the selected villages. The data relate to land utilization, crop pattern, irrigation, communications, occupational structure, etc.

Salient features

The seven villages selected for intensive study represent largely the local conditions of the taluk. The average population of a village in the selected villages was 2,570 as against 1,656 for the entire taluk. It means that the selected villages had relatively larger populations as compared with other villages of the taluk. Out of the seven villages, three villages had population exceeding 3,000, one village had more than 2,000 but less than 3,000 and the remaining three villages had less than 2,000.

The distance between the selected villages and the block headquarter varied from 2 to 18 miles. Almost all the selected villages have railway facilities though the distance from the village to the railway station varies from 1 furlong to 6 miles. The selected villages are connected with the important marketing centres by roads. Most of these villages are not easily accessible during the monsoon. All the villages, except one, have state transport bus service. During monsoon, however, the service is suspended practically in all the selected villages and during this period, they could be reached only by foot. All the seven villages have post offices. One of the villages, Masar, has, in addition, telephone and telegraph facilities also.

Population

The change in population and households during the period 1951-61 are indicated in Table 28.

Table 28 : Number of Households and Population of the Selected Villages

Village	Number of households		Percentage increase in col. (3) over col. (2)	1951 census			1961 census			Percentage increase in col. (8) over col. (5)
	1951 census	1961 census		Persons	Males	Females	Persons	Males	Females	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Amla	318	318	...	1,393	719	674	1,498	804	694	7.54
Dabka	692	892	28.90	3,427	1,743	1,684	4,674	2,486	2,188	36.39
Karakhadi	657	680	3.50	3,292	1,786	1,506	3,620	1,907	1,713	9.96
Latipura	299	321	7.35	1,530	783	747	1,706	882	824	11.50
Masar	450	469	4.22	2,041	1,061	980	2,303	1,220	1,083	12.84
Mobha	548	588	7.30	2,461	1,302	1,159	3,053	1,635	1,418	24.40
Vanachhara	183	218	19.13	896	444	452	1,142	581	561	27.46
Total :	3,147	3,486	10.77	15,040	7,838	7,202	17,996	9,515	8,481	19.65

Source: Statistics collected from the Office of the Superintendent of Census Operations, Gujarat State, Ahmedabad.

The figures show an increase in the number of households as well as population in 1961 over that of 1951 except in Amla where the number of households remained unchanged. The percentage increase of households for all the seven villages together was 10.77 while the increase in population was 19.65 over the decade. The average number of persons per household for the selected seven villages, according to 1961 census, was about 5. All the selected villages had registered an increase in population. Dabka ranked first with a percentage increase of 36.39 closely followed by Vanachhara and Mobha. The smallest increase in population was registered in Amla (7.54 per cent) where, as noted above, the number of households also remained the same.

Castes

Data on caste composition of families in the seven villages, obtained from the village records, are presented in Table 29.

Patidars appear to be the major caste, closely followed by Harijans and Rajputs. In some villages, the picture was a little different. In Dabka, for instance, there was predominance of Rajputs whereas in Vanachhara the Barias were in majority. In addition to this, information in respect of castes was also collected through a house-to-house survey.

Data in Table 30 bring out the excessive dependence of population on agriculture. As many as 88 per cent of the total number of families derived their livelihood from agriculture either as cultivators or as agricultural labourers. Agricultural labourers accounted for a large proportion of the total number of families. Dairying was insignificant as a full time occupation. The data also indicate that with all the efforts directed at agricultural development, Indian agriculture still remains, by and large, a monoculture:

The relationship between occupations and the castes is significant. Of the total families having agriculture as their main occupation, 43.4 per cent were Patidars and 20.3 per cent Rajputs and the two, between them, accounted for 64 per cent of the total families. Next in importance were the Barias (7 per cent). Other castes having agriculture as their main occupation, were comparatively few. Of the total number of 2,799 families covered in the census, 49.45 per cent pursued agriculture as their main occupation. Agricultural labourers constituted about 39 per cent of the total

Table 29 : Percentage Distribution of Castes in the Selected Villages, 1961

Caste	Amla	Dabka	Karakhadi	Latipura	Masar	Mobha	Vanachhara	Percentage to total number of families
Patidar	33.16	...	41.27	34.59	19.57	46.30	...	26.08
Rajput	...	36.17	6.04	4.07	1.28	1.41	16.59	10.94
Baria	5.10	1.79	2.12	12.20	16.17	...	41.47	7 94
Brahmin	6.63	3.43	3.75	2.71	2.34	2.46	13.82	4.04
Harijan	19.39	9.80	13.70	1 02	19.78	8.11	8.56	11.54
Muslim	7.65	2.28	2.61	1,69	12.98	0.88	0.46	3.94
Others	28.07	45.83	30.51	43.43	27.88	40.84	19.10	35.52

Table 30 : Distribution of Family by Occupation and Caste, 1961

Main occupation	Number of families by castes							Total	Percentage to the column
	Patidar	Rajput	Baria	Brahmin	Harijan	Muslim	Others		
Cultivators	601	289	98	63	53	42	238	1,384	49.45
Agricultural labourer	6	207	77	5	230	53	503	1,081	38.62
Dairying	...	1	1	...	...	1	10	13	0.46
Traders	10	8	4	2	...	11	63	98	3.50
Service	7	12	5	11	6	4	30	75	2.78
Artisans	2	2	1	...	9	5	35	54	1.93
Other occupations	5	6	2	38	12	7	24	94	3 36
Total :	631	525	188	119	310	123	903	2,799	100.00
Percentage to the total in the row :	*22.54*	*18.76*	*6.72*	*4.25*	*11.08*	*4.39*	*32.26*		*100 00*

families. The Harijans, Rajputs, Vagharis, and Pagis* were the important castes having labour as their main occupation, accounting for 21.28 per cent of the total respectively, while other castes were comparatively less important. Traders accounted for 3.5 per cent of the total families. Of the total families, only 0.46 per cent depended on dairying as a source of livelihood. Virtually no Patidar family had reported having dairying even as a subsidiary occupation. Only one Rajput family had reported having dairying as its main occupation.

The proportion of workers to the total population in none of the selected villages, as shown in Table 31, exceeded 50 per cent. The highest percentage was recorded in Amla, where 47.40 per cent of the total population were workers. It would also appear from an analysis of the data that smaller the population of the village, the greater the percentage of the workers to total population. In the three villages, Vanachhara, Latipura and Amla, the percentages of workers to the total population were higher than the percentages in the other four relatively bigger villages.

Among workers, cultivators and agricultural labourers accounted for 70 to 80 per cent of the total work-force in all the villages. The percentage of agricultural labourers was the highest in Amla and Vanachhara followed by Latipura, and the lowest in Dabka. Perhaps, there is an inverse relationship between the size of population and land-holding in these seven villages.

At least one per cent of the total workers were engaged in household industry. In case of Mobha this was as high as 2.16 per cent. The percentage of workers engaged in trade and commerce was notable in Dabka, Karakhadi aud Mobha which reflects their trading characteristics and urban contact.

Literacy

As mentioned earlier, in the former Baroda State education was made free and compulsory. It is no surprise, therefore, that all the seven villages, selected for intensive field investigation were well served with educational facilities. All the seven villages have primary schools, and three have balmandirs (nursery schools) also. There are separate arrangements for the education of girls in every village. There were two secondary schools at Padra. All seven

*Pagis are backward classes ordinarily engaged in agricultural watch and ward.

Table 31 : Percentage Distribution of Working Force in Different Occupations in the Selected Villages, 1961

	Amla	Dabka	Karakhadi	Latipura	Masar	Mobha	Vanachhara
1. Total workers ...	47.40	35.13	35.28	39.06	37.82	35.54	43.70
(a) Cultivators ...	13.82	21.18	13.09	13.02	15.68	11.53	15.50
(b) Agricultural labourers ...	31.11	7.13	15.88	22.04	18.98	13.51	24.61
(c) Mining, quarrying, livestock ...	0.13	0.13	0 06	...	0.08	0.20	0.09
(d) Household industry ...	0.93	1.90	2.62	0.48	0.96	2.16	1.92
(e) Manufacturing, other than household industry ...	0.07	0.28	0.08	0.06	0.22	0.75	...
(f) Construction ...	...	0.17	...	...	...	0.26	...
(g) Trade and commerce ...	0.53	1.26	1.46	0.76	0,34	3.22	0.52
(h) Transport, storage & communication	0 07	0.06	0,14	0.18	0.26	0.46	0.18
(i) Other services	0.74	3.02	1.95	2.52	1.30	3.37	0.88
2. Non-workers	52 60	64.87	64.72	60.94	62.18	64.46	56.30

Source: Office of the Superintendent of Census Operations, Gujarat State, Ahmedabad.

villages have reading room and library facilities. The village panchayat in each of the villages maintains a radio set which relays rural programmes.

The extent of literacy in the selected villages could be judged from Table 32. Percentage of literacy rose from 42.85 in 1951 to 43.06 in 1961. Surprisingly, literacy among males had declined from 29.25 per cent to 28.68 per cent and rose among females from 13.60 per cent to 14.38 per cent over the period. Among the seven villages, Amla, Mobha, Vanachhara and Karakhadi registered substantial improvement in literacy; in case of Latipura, it improved by about 3 per cent. In Dabka, the percentage of literates declined from 43.51 in 1951 to 30.47 in 1961; in Masar the percentage had declined from 52.37 in 1951 to 42.12 in 1961. Literacy was highest in Masar and lowest in Mobha in 1951. In 1961, village Amla showed the highest percentage, whereas Dabka had the lowest percentage of literates.

Data in Table 33 give a comparative picture of literacy in the seven villages and the district, state and national averages.

Medical and public health

As in most other taluk headquarters of the district, Padra also has a dispensary. With the setting up of a health unit consisting of a rural health training centre and a primary health centre, more facilities were made available to the rural area. At the time of the survey, the villages were served by eleven sub-centres and a centre at the headquarter. The main activities of the rural health training centres are to give medical relief, maternity and child care, control of communicable diseases, health education, training medical trainees, family planning and also providing laboratory services. The health unit, together with the sub-centres, has facilities of 38 beds of which 36 are for maternity and 2 for general use. Most of the patients are treated as out-patients. The taluk, on the whole, is well served with medical and public health facilities. The effectiveness of the public health programme was, however, found to be difficult to judge.

Land utilization

The details of land utilization in different villages are given in Table 34. The net area sown *per capita* was 0.89 acres for Padra taluk and 1.16 acres for the selected villages. The proportion of cultivated land to the total area was as high as 92 per cent in

Table 32: Literacy in the Selected Villages, 1951–61

Selected villages	1951				1961			
	Population	Literacy	Males	Females	Population	Literacy	Males	Females
Amla	1,393	654 (46.95)	462 (35.17)	192 (13.78)	1,498	849 (56.98)	502 (33.51)	347 (23.17)
Dabka	3,427	1,491 (43.51)	1,012 (29.53)	479 (13.98)	4.674	1,443 (30.37)	1,127 (24.11)	316 (6.76)
Karakhadi	3,292	1,327 (42.44)	927 (28.16)	470 (14.26)	3,620	1,795 (49.58)	1,106 (30.55)	689 (19.03)
Latipura	1,530	735 (48.04)	451 (29·48)	284 (18.56)	1,706	885 (51.88)	554 (32.47)	331 (19.41)
Masar	2,041	1.068 (52.32)	802 (39.39)	266 (13.03)	2,303	970 (42.12)	672 (29.18)	298 (12.94)
Mobha	2,461	798 (32.42)	557 (22.63)	241 (9.79)	3,053	1,337 (43.79)	893 (29.25)	444 (14.54)
Vanachhara	896	301 (33.59)	188 (20.98)	113 (12.61)	1,142	470 (41.16)	307 (26.88)	163 (14.28)
	15,040	8,444 (42.85)	4,399 (29.25)	2,045 (13.60)	17,996	7,746 (43.06)	5,161 (28.68)	2,588 (14.38)

Source: Statistics collected from the Office of the Superintendent of Census Operations, Gujarat State, Ahmedabad.

Figures in the brackets indicate percentage to the total.

Table 33 : Literacy Compared, 1961.

	Literacy in rural areas (Per cent)	Literacy in urban areas (Pe. cent)
Selected villages	43.20	Nil
Padra taluk	40.48	50.98
Baroda district	28.70	53.57
Gujarat State *	24.09	48.77
India *	18.99	36.29

*Source: Quarterly Bulletin of Economics & Statistics, Gujarat State-Vol. III No. 1, January-March, 1963, p.4

Latipura and Amla and as low as 41 per cent in Dabka. In Mobha and Vanachhara it was 86 per cent, in Masar 90 per cent and in Karakhadi about 59 per cent. It is significant that the land left fallow was almost negligible in these villages, whereas for the taluk as a whole it was substantial. The reason for this appeared to be the extreme scarcity of land which leads to a peculiar crop rotation under which little land was left fallow. The forest area was non-existent in these villages except in Karakhadi. Land put to non-agricultural uses was as high as 44 per cent in case of Dabka, whereas it varied from 1 to 13 per cent in other villages. Here again, the difference was probably due to lack of uniform computation of agricultural statistics. Irrigated land was not considerable in almost all the villages. In Karakhadi it was 12 per cent of the cultivated area, in Mobha it was 4.5 per cent and in Dabka it was 2.5 per cent. The remaining villages did not show any irrigated farming. Unirrigated area in most of the remaining villages could be explained only by the fact that divergent interpretations had been given to the term "irrigated land" by the officials concerned. But even after making due allowance for this, irrigated area was not found to be substantial in the selected villages.

Crop pattern

Table 35 presents details about the crop pattern of the selected villages during 1960-61. Out of the seven villages, two villages had more than 50 per cent of the area under food crops. Of these two, Dabka had about 65 per cent and Karakhadi had about 52 per cent of the total cultivated land under food crops. Latipura comes third with 48 per cent acreage under food crops, followed by Masar

Table 34 : Utilization in the Selected Village, 1961

(Area in acres and guntas)

Selected villages	Total geographical area	Cultivated area	Uncultivated area	Forests	Land put to non agricultural use	Cultivable waste land including fallows	Permanent pasture & other grazing land	Irrigated land	Total
	A. G.	A. G.	A. G.	A. G.	A. G.	A. G.	A. G.	A G.	A. G.
Amla	2,524-20	2,324-02 (92.04)	33-23 (1.35)		116-13 (4.59)	...	50-22 (2.02)	...	2,524-20 (100.00)
Dabka	4,710-05	1,933-35 (41.06)	642-71 (13.63)		2,069-32 (43.95)		64-01 (1.36)	-50 (2.5)	4,710-05 (100.00)
Karakhadi	4,099-27	2,404-36 (58.67)		743-11 (18.13)	528-05 (12.88)	...	423-15 (10.32)	300-00 (12.00)	4,099-27 (100.00)
Latipura	864-17	799-22 (22.48)			13.03 (1.50)	...	51-32 (6 02)		864-17 (100 00)
Masar	3,362-29	3,026-22 (90 01)	31-26 (0.95)		227-06 (6.75)		77-15 (2.29)		3,362-09 (100 00)
Mobha	3,282-09	2,830-12 (86.23)	37-07 (1.13)		308-24 (9.41)		106-06 (3.23)	130-05 (4.5)	3282-09
Vanachhara	2,124-33	1,821-02 (85.74)	160-13 (7.53)		27-38 (1.82)		115-20 (5.41)	...	2,124-23 (100.00)

Note: Figures in brackets indicate percentage to the total

* 1 acre = 40 guntas.

with 44 per cent. Vanachhara had 31 per cent and both Mobha and Amla had 27 per cent each under food crops. Even the cropping pattern of co-operative farming societies in two of the selected villages showed predominance of food crops with primitive methods of cultivation. Among food crops, a sizeable area was devoted to raising inferior cereals, indicative of subsistance-oriented cropping. Except Karakhadi. which had 6 per cent and Latipura which devoted 3 per cent to fruit and vegetables, all the villages had negligible areas under fruit and vegetables. Among superior cereals, paddy occupied an important place ranging from 7 per cent to 11 per cent in different villages.

Of the seven villages selected for the study, two villages showed a predominance of tobacco as an important cash crop. Latipura which is about 2 miles from the taluk headquarters had 32 per cent of the cultivated area under tobacco and Dabka had about 16 per cent under the same. In the remaining five villages, cotton as a single crop occupied the predominant position with an acreage ranging from 28 per cent to 69 per cent. Karakhadi had about 17 per cent of the area under oilseeds.

Land holdings

Table 36 sets out the details of cultivated holdings. In all the seven villages selected for the study. about 82 per cent of the cultivators possessed holdings below 10 acres covering about 46 per cent of the land. The percentage of cultivators owning less than 10 acres in Dabka was as high as 92. This hardly provided a decent standard of living and much less the capital formation needed for agriculture. The distribution of holdings in different villages also brought out a similar trend of farmers owning less than 10 acres. As against this, the percentage of cultivators owning above 25 acres was also less striking. It was strange to find that in the two villages viz. Latipura and Karakhadi, no cultivator owned more than 25 acres. One should, however, take these figures with caution as paper 'partitions' might have taken place in anticipation of comprehensive land reforms. But the fundamental problem of uneconomic land-holding remains which continues to defy efforts at making agriculture self-sustaining. In this context the problem of small farmers has to be faced and the assimilation of community development programe judged.

Table 35: Crop Pattern in the Selected Villeages, 1960-61

(Percentage to the total cropped area)

Crop	Amla		Dabka		Karakhadi		Latipura		Masar		Mobha		Vanachhara	
	Acres	Per-centage	Acres	Per-centage	Acres	Per-centage	Acres	Per-centage	Acres	Per-centage	Acres	Per-centage	Acres	Per-centage
Food Crops														
Paddy	156	6.86	149	6 64	171	7.46	84	11.16	387	12.78	272	9.31	119	6.53
Wheat	104	4.57	7	0 32	10	0.44	3	0.39	1	0.04	68	2.33	64	3.51
Jawar	190	8.35	59	2.64	10	0.44	37	4.91	18	0.59	127	4 34	219	12.02
Bajra	3	0 13	457	20 34	114	4 97	70	9.30	185	6.11	58	1.99	18	0.98
Other millets	57	2 51	367	16.33	375	16.35	51	6.77	254	8 39	58	1.99	9	0 48
Gram	Negligible		4	0.18	...	...	Negligible		3	0.10	22	0.75	...	...
Tur	80	3.52	263	11.70	251	10.95	47	6.24	390	12 88	118	4.04	83	4.55
Other pulses	1	0.04	147	6.54	113	4.93	38	5.05	27	0.89	34	1.16	38	2.08
Sugarcane	...		1	0.05		...	8	1.06		...		...		...
Fruit and vegetables	20	0.88	1	0.05	138	6.02	24	3.19	75	2.48	38	1.30	15	0.8_2
Total area under food crops		*26.86*		*64.79*		*51.56*		*48.07*		*44.26*		*27.21*		*30.97*

Non-food crops														
Cotton	1,563	68.70	101	4.49	631	27.52	40	5.31	1,493	49.32	1,903	65 10	1,136	62.41
Tobacco	24	1.05	361	16.07	25	1 09	244	32.40	1	0.04	50	1.70	1	0.05
Groundnut	...	...	Negligible		...	....	22	2.92	...	...	...	...	8	0.44
Other oilseeds	8	0.35	147	6.54	382	16.25	25	3.32	82	2.71	35	1.20	7	0.38
Jawar fodder Bata etc.	45	2.02	93	4.14	...		38	5.06	1	0.04	68	2.32	9	0.48
Other fodder	...	...	8	0 36	...	...			86	2.84	23	0.79	24	1.32
Grass	14	0 62	19	0.81	9	0.39	...	...	18	0.59	39	1.34	72	3.95
Miscellaneous	9	0.40	63	2.80	64	2.79	22	2.92	6	0.20	10	0.34		
Total under non-food crops		*73 14*		*35.21*		*48.44*		*51.93*		*55.74*		*72.49*		*69.03*
Total:	**2275**	100.00	**2247**	100.00	**2,223**	100.00	**753**	100.00	3,027	100.00	2,923	100.00	1,820	100.00

Source: Records of the respective villages.

Table 36 : Percentage Distribution of Cultivators and their Landholdings

(Area in acres and guntas)

Size group	Amla				Dabka			
	No. of cultivators	Percentage to total cultivators	Land involved	Percentage to total area	No. of cultivators	Percentage to total cultivators	Land involved	Percentage to total area
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
			A G				A G	
1–10	165	68.18	564–20	25.55	506	92.67	1,390–05	57.41
10–25	45	18.60	677–27	30.72	36	6.59	478–23	19.75
25–50	32	13.22	964–32	43.73	2	0 37	65–29	2.73
50 above	...	...	...	...	2	0.37	486–25	20.11
Total :	242	100.00	2,206–39	100.00	546	100.00	2,421–02	100.00

Size group	Karakhadi				Latipura			
	No. of cultivators	Percentage to total cultivators	Land involved	Percentage to total area	No. of cultivators	Percentage to total cultivators	Land involved	Percentage to total area
	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
			A G				A G	
1–10	399	84.53	1,317–35	58.94	180	90.00	510–04	65.55
10–25	73	15.47	917–39	41.06	20	10.00	267–02	34.45
25–50	...	...	...	...	...	...	...	...
50 above	...	...	...	...	...	...	...	...
Total :	472	100.00	2,235–34	100.00	200	100.00	777–31	100.00

Table 36—*Contd.*

Size group	Masar				Mobha			
	No. of cultivators	Percentage to total cultivators	Land involved	Percentage to total area	No. of cultivators	Percentage to total cultivators	Land involved	Percentage to total area
	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
			A G				A G	
1-10	379	80.30	1,418-31	45.85	317	70.25	1,431-08	52.80
10-25	80	16 95	1,236-17	39.94	77	19.25	1.053-16	38.86
25-50	12	2.54	382-09	12 34	6	1.50	225-39	8.34
50 above	1	0 21	57-37	1.87	...	...	...	...
Total:	472	100.00	3,095-14	100.00	400	100.00	2,710-23	100.00

Size group	Vanachhara				Total			
	No of cultivators	Percentage to total cultivators	Land involved	Percentage to total area	No. of cultivators	Percentage to total cultivators	Land involved	Percentage to total area
	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)
			A G				A G	
1-10	107	62 57	432-25	23.81	2,053	82.02	7,055-08	46.78
10-25	44	25.73	720-09	39.58	375	14.98	5,351-36	35 05
25-50	18	10 53	559-03	30 73	70	2.80	2,197-32	14.00
50 above	2	1.17	107-19	5 88	5	0.20	652-01	4 27
Total:	171	100 00	1,819-16	100 00	2,503	100.00	15,256-39	100.00

Source: From the village records of Talati.

Note: Figures do not include three co-operative farming societies.

RESOURCE INVENTORIES

Agricultural implements and machinery

Table 37 presents statistics about agricultural implements and machinery in the selected villages obtained from the village records at two points of time viz. 1956 and 1961.

Table 37: Farm Resource Inventories in Selected Villages, 1956-61

Village	Tractors,		Engine pumps		Electric motors		Iron plough		Barodu hoe		Spray-ing pump	
	1956	1961	1956	1961	1956	1961	1956	1961	1956	1961	1956	1961
Amla	2	2	–	2	–	–	1	1	1	1	1	2
Dabka	2	2	–	–	4	4	2	2	–	–	–	–
Karakhadi	1	2	8	3	–	11	1	2	–	1	1	1
Latipura	–	–	12	–	–	14	–	2	1	3	–	2
Masar	2	2	4	3		7	–	–	–	–	–	1
Mobha	2	3	5	–	–	6	–	1	3	5	–	3
Vanachhara	–	–	–	3	–	–	–	–	–	1	–	–
Total	9	11	29	11	4	42	4	8	5	11	2	9

It could be seen from Table 37 that all the implements listed were already in use. The initiation of the community development block and its activities, accelerated the pace of their utilization, mainly due to the liberal financial assistance. In the villages where power is available, people had changed over from diesel sets to electric motors. This explains the drop in the use of engine pumps and a high rise in the use of electric motors. Of the selected villages, only Vanachhara showed little adoption of improved implements. This might have been partly because of the absence of enterprising cultivating Patidar families in the village and partly because of its inaccessibility and locational disadvantage. In order to measure the technical change in agriculture it would be worthwhile to find out the contribution of various factors such as size of holding, caste, crop pattern and work-force. For this purpose, data obtained during the village census have been relied upon and therefore, do not tally with the figures presented in Table 37, as the two sources were different.

Technical change and size of holdings

It would be useful to examine the adoption of improved implements by the farmers in different land-holding categories. The

census conducted revealed interesting data which are presented in Table 38.

Table 38: Use of Improved Implements by Land-holding

Land-holding categories (in acres)	Tractors and trailors	Engine pumps	Electric motors	Baroda hoe
1 -10	...	17(56.67)	2(33.33)	1(25.00)
10-25	...	9(30.00)	2(33.33)	2(50.00)
25-50	3(28.57)	3(10.00)	1(16.67)	1(25.00)
50 & above	5(71.43)	1(3.33)	1(16.67)	...
Total	8(100.00)	30(100.00)	6(100.00)	4(100.00)

(Figures in the brackets indicate the percentage to the total of the respective columns).

The improved implements were thus adopted both by the well-to-do farmers as well as relatively small cultivators. Their use in different social layers is even more striking (Table 39).

Table 39: Use of Improved Implements by Castes

Castes	Tractors	Engine pumps	Electric motors	Baroda hoe
Patidar	5 (71.43)	25 (83.34)	3 (50.00)	3 (75.00)
Rajput	2 (28.57)	1 (3.33)	2 (33 33)	...
Baria	...	1 (3.33)	...	...
Brahmin	...	1 (3.33)	...	...
Muslim	...	...	...	...
Others	...	2 (6.67)	1 (16.17)	1 (25.00)
Total	7 (100)	30 (100)	6 (100)	4 (100)

In the adoption of improved implements, Patidars predominate over other castes. The figures substantiate the generally held view about the adoption of improved implements by the families having social enlightenment, progressiveness and ability and enterprise in farm operations. Similarly, it would be useful to try to correlate the use of implements with the crops cultivated (Table 40).

The change, as indicated by the use of improved implements, appears to be confined to cotton and fruit and vegetables cultivation. This may be either because these are more remunerative crops and probably quickly react favourably in terms of yield and

ease of application. Moreover, there seems to be close relationship between the use of improved implements and the number of adult workers in the family which is brought out in Table 41.

Table 40: Use of Improved Implements, by Major Crops

Crops	Tractors	Engine pumps	Electric Motors	Baroda hoe
Cotton	5(71.43)	13(43.33)	3(50.00)	2(50.00)
Fruit and vegetables	2(28.59)	16(53.34)	3(50.00)	2(50.00)
Superior cereals	...	1(3 33)	...	...
Coarse grains	...	...	...	...
Pulses	...	...	...	...
Total	7(100)	30(100)	6(100)	4(100)

Table 41 : Use of Improved Implements by Number of Adults Working

No. of adults working	Tractors	Engine pumps	Electric Motors	Baroda hoe
1	...	...	...	...
2	...	1(3.33)	...	1(25.00)
3	1(14 29)	2(6 67)	...	1(25.00)
4	2(28 57)	5(16.67)	1(16.67)	1(25.00)
5	...	5(16.67)	...	...
6	2(28 57)	3(10 00)	1(16 67)	1(25 00)
7	...	3(10.00)	2(33.32)	...
8	...	4(13.33)	1(16 67)	...
9	1(14.29)	4(13.33)	1(16 67)	...
10 and more	1(14.29)	3(10.00)	...	...
Total	7(100)	30(100)	6(100)	4(100)

The figures in Table 41 are self-explanatory. There is increasing use of engines and pumps with the increase in the number of adult workers. These trends make a revealing reading in a different context. Improved implements cannote technical change and would, as part of labour intensive techniques, involve larger labour absorption. Their assimilation by families commanding a larger work-force would thus appear to be consistent. But the investigation in the selected villages showed that cultivators, by and large, used the wooden plough. Though for interculturing operations

Baroda hoe was found suitable, not all the cultivators had taken to Baroda hoe which is made in Baroda and is made to suit the soil and agricultural conditions in Gujarat. In areas growing fruits and vegetables, particularly bananas, oil engines and pumping sets are used for irrigation. The government also gives *taccavi* loans for the purchase of the same through the block office. Wherever electric power is easily available, people are taking to installing electric motors for water lifting, though it was noticed that because of power shortage and its staggering supply, people experienced considerable difficulties. It was also noticed that in adopting the use of electric motors, Patidars were comparatively more responsive. Amongst them, even small and medium type cultivators have taken to using pumps and electric motors. It is clearly noticeable that progressive farmers have enthusiastically taken to sinking of wells, installing engines and electric motors or adopting iron ploughs and tractors. Inspite of this, however, the general picture still remains to be that the average cultivator operates on his land only with a pair of bullocks, a plough, a *kos* for drawing water from wells, and other farm implements. Some may also have a cart in addition to these limited old-fashioned equipment.

Livestock

Ordinarily a pair of good bullocks can plough an area of eight acres. The average area ploughed in the selected villages per pair of bullocks ranged from 5.75 to 20.69 acres (Table 42). This is rather high. This indicates a shortage of good plough cattle. Not much attention seems to have been paid to improve the quality of the plough cattle to ensure a sturdy variety. From the census of families in selected villages undertaken for the research project, it was noticed that 575 families or 21 per cent of the total families had one bullock, 502 families or 18 per cent had two bullocks, 32 families or 1 per cent had 3 bullocks and 30 families had four and more bullocks.

The ratio of dry to milch buffaloes was the lowest in Vanachhara which is farthest from the block headquarters while Latipura, the nearest to the block headquarters, had the highest ratio. The ratio of dry cows to milch cows is based on approximate figures as precise figures could not be collected. It had, therefore, to be taken with caution. In regard to the relative pressure of cattle population on cultivated land, the highest pressure was noticed in

Table 42: Livestock in the Selected Villages, 1961

Selected villages	Stud-bulls	Bullocks		Buffaloes			Ratio of dry buffaloes to milch	Cows				Ratio cows to milch cows	Sheep and goat	Poultry	Total	Averake Culti-vated-per area per pair of bullock	Number Cattle 1000 acres culti-vate area
		Bull-ocks	Total	Milch	Dry	Total		Milch	Dry	Young	Total						
Amla	...	303	303	60	21	81	0.35	4	1	...	5	0.25	127	516	54	15.29	225
Dabka	2	336	238	381	200	581	0.52	78	6	335	419	0.07	336	1669	59	15.38	313
Karakhadi	...	300	300	272	138	410	0.51	30	119	154	303	3.97	164	1178	64	16.03	490
Latipura	...	278	278	116	100	216	0.86	15	3	45	63	0.20	185	742	...	5.75	928
Masar		345	345	298	14	303	0.05	34	7	110	151	0.21	6	819	7	17.59	268
Mobha		304	304	188	80	268	0.45	6	5	41	52	0.83	123	747	34	18.62	254
Vanachhara	...	176	177	84	2	86	0.02	62	22	93	177	0.35	33	473	10	20.69	259

Latipura and the lowest in Amla.

Family-wise milch cattle census data are given in Table 43.

Table 43: Census of Milch Cattle in Selected Villages

Number of milch cattle	Families	
	Number	Percentage
Nil	1,573	56.20
One	953	34.05
Two	214	7.65
Three	28	1 00
Four & more	31	1.10
Total	2,799	100 00

The maintenance of milch or dairy animals as an adjunct to agriculture is a small occupation. Figures show that most of the farmers have one or two milch cattle. More than two animals is a rarety.

Co-operation

In 1957, there were 67 different types of co-operative societies in Padra taluk. Out of these, 41 were credit, service and multi-purpose societies constituting about 61 per cent of the total number of societies in the taluk. The number of societies increased to 102 in 1961. Of these, 64 societies or 62 per cent were credit, service and multi-purpose societies. The trend of increase in the number of societies, membership and share capital is healthy and encouraging.

In the selected villages, out of 2,799 families covered in the census, 720 families were members of co-operatives. An analysis of the membership in co-operatives is given in Table 44.

Table 44: Membership of Co-operatives, 1961

Membership in co-operatives	Families	
	Number	Percentage
In one society only	499	17.83
In two societies only	198	7.08
In three or more only	25	0.80
In no society	2,077	74.20
Total	2,799	100 00

Only 26 per cent of the families constituted the membership of co-operative societies. As seen earlier, co-operative societies in Padra taluk were organized much earlier and the members have, therefore, a good deal of experience in the management of co-operatives. Of the total number of members, 280 or 39 per cent, have been members for the last five years and more; 214 or 30 per cent, for the last four years; 150 or 20 per cent, for the last 3 years; and 78 families or 11 per cent, for the last two years. Here is a development which points to the recent co-operative activity and may well be connected with the campaign under integrated scheme or community development, or both.

An analysis of the distribution of membership in different land-holding categories would provide useful information. The classification of membership of credit and service societies, on the basis of the size of holdings, is given in Table 45.

Table 45: Classification of the Members on the bases of Land-holding and Castes 1960—1961

Name of the village	1—10 acres	10—25 acres	25—50 acres	50 and above	Total	Main caste to which majority belonged
Amla	39	20	4		63	Patidar Pagi
Dabka	44	5	–		49	Rajput Machhi
Karakhadi	116	40	1		157	Patidar
Latipura	18	5	–		23	Patidar
Masar	36	57	13	...	106	Patidar
Mobha	...	...	–	...	...	...
Vanachhara	16	22	6	...	44	Patidar

The above data relating to 1960–61 could be gathered from the normal credit statement of societies and thus refers to the borrowing members only. In none of the societies, cultivators operating on land above 50 acres have borrowed. Patidars predominate as members in the four villages.

The management pattern of the various types of co-operatives in the seven villages in relation to the various land-holding categories can be seen from Table 46.

Table 46: Management Pattern of Co-operatives in Selected Villages 1961

Land-holding categories (in acres)	Amla	Dabka	Kara-khadi	Lati-pura	Masar	Mobha	Vana-chhara
1 —10 (small)	3	8	4	3	–	–	–
10—25 (medium)	2	2	3	3	5	–	3
25—50 (Big)	2	1	–	1*	2	–	4
50 & above	–	–	–	–	–	–	
Total:	7	11	7	7	7	–	9

* These figures were collected from the records of the co-operative society. The figures given here and provided in Table 36 in case of Latipura differ because of the two independent sources.

There were 7 executive posts in the primary credit co-operatives at Amla, Masar, Karakhadi and Latipura and 9 and 11 in Vanachhara and Dabka, respectively. Excepting in Mobha, Masar and Vanachhara, in the remaining four villages, small farmers were represented on the executive committee of the village co-operative. Of these, in Amla, Karakhadi and Latipura, small farmers (1–10 acres) formed a substantial portion of the committee. In Dabka also small farmers predominated. Only in Masar, there was no one from the group of small farmers on the executives. Significantly, however, there were five members of the executive drawn from the medium farmers. There was nobody on the executive committee from the small farmers in Vanachhara either.

In the other types of co-operative societies, the substantial and big farmers got representation on the executive committee in Vanachhara. Only one member in each society from the medium farmers was represented on the executive committee, and none from the small farmers in this village. The continuity of these executives in different societies could be judged from the fact that in most of the villages, the executives were in office for the last two years. Only in a few cases the executives were in office for a fairly long period. An idea about participation of ordinary members in the management and working of co-operatives could be had from the figures of attendance at the general meeting given in Table 47. These figures show that the participation in decision-making or leections to offices in primaries was not encouraging.

Table 47 : Membership and Attendance at Meetings of the Primary Co-operative Credit Societies, 1956-61

Selected villages	1956-57		1957-58		1958-59		1959-60		1960-61	
	Total members	Attendance at general meeting	Total members	Attendance at general meeting	Total members	Attendance at general meeting	Total members	Attendance at general meeting	Total members	Attendance at general meeting
Amla	...		86	35	110	82	161	127	212	134
Dabka	49		49	14	75	9	109	51	111	45
						(5)				
				(11)		(23)		(23)		
Karakhadi	160	28	172	43	171	52	179	45	190	125
Latipura	71	28	72	28	73	24	108	25	127	31
Masar	Nil	Nil	Nil	Nil	Nil	Nil	155	64	106	42
Mobha	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Vanachhara	37	14	37	27	53	17	59	20	63	40
								(38)		

Figures in the brackets indicate the attendance at the special meetings.
Source : Records of the respective village co-operative societies.

Village panchayats

In the former Baroda State, efforts were made to preserve as many of the old elements of self-government as possible. According to this, every village used to have a panchayat. It was to render local services in accordance with the accepted practices. Elective system was introduced in 1901 and wider powers were also given to the panchayats. Elaborate rules for the organization of panchayats were framed. Accordingly, each village or a group of villages had a panchayat depending upon the size of population. It was no surprise, therefore, that all the selected villages in Padra taluk had a good deal of experience in self-government. Supply of drinking water, construction and maintenance of village roads and drains, maintenance of proper conservancy arrangement, etc. were some of their important functions. The panchayats in the villages perform some additional functions, such as, civic, revenue, judicial, etc. which help them to undertake developmental activities. A close observation of the working of the panchayats showed that in these villages, leadership is forthcoming in greater measure to undertake the ever increasing civic and developmental functions.

The sources of revenue of the panchayats together with the amounts collected under each have been shown in Table 48. It would be seen that the importance of sources of revenue differ from village to village. In Amla, Vanachhara, Karakhadi and Latipura, the major source of revenue is land revenue, house tax and shop tax. Dabka and Mobha panchayats have substantial revenues from the sale of fruit of trees; auction of tax-collection also made a fairly good contribution to the revenue of Mobha panchayat.

Public participation

One of the main objectives of the community development programme is to change the outlook of the people, make them progress-conscious, provide new knowledge and inculcate in them a habit of self-reliance to attain a measure of self-confidence which alone would ensure the self-sustaining character of the developmental programmes. These qualities would be reflected in voluntary public participation through spontaneous group action or by means of appropriate popular bodies like panchayats.

Table 48 : Sources of Revenue of Panchayats in the Selected Villages, 1960-61
(Figures in brackets indicate percentages)

Source of revenue	Amla		Dabka		Karakhadi	
	1956	1961	1956	1961	1956	1961
(1)	(2)	(3)	(4)	(5)	(6)	(7)
House tax.	580.75 (23.2)	622.06 (10.2)	1,078.25 (18.8)	119.76 (12.00)	1,120.00 (38.0)	1,524.21
Levy on ceremonies, marriages, etc.			95.0 (1.7)		...	
Tax on pilgrims.	...		30.69 (0.5)	58.50 (0 6)		
Share in L.R. & grant.	1,438.37 (57.4)	3,777.02 +1,327.55 (61 7) +(21.7)	3,702.95 (64.6)	3.914.48 (42.6)	1,127.00 (39.3)	1,415.15 (44.5)
Revenue from trees.	...	...	...	475.00 (5.2)		
Sale of trees.	233.00 (9.3)	...		897.11 (9.8)		
Auction of grazing land.	...	...	...	...	...	...
	...	...	...	...	...	...
Cattle pounding.	205.00 (3.2)	361.90 (5.9)	368.75 (6.4)	103.50 (1.1)	...	...
Shop tax.	47.00 (1.9)	24.00 (0.5)	81.00 (1.4)	126.00 (1.4)	627.50 (21.8)	92.00 (2.9)
Water tax.	...	...	...	277.00 (3.0)	...	...

Tax on mill factory/machine	...			175 00 (1.9)		150.00 (4.7)
Auction of boat.		...		459.50 (5 0)		
Collection from religious places.	...			90.00 (1.00)		
Diamond Jubilee grant.		...	369.97 (6 6)	1,500.00 (16 4)		
By interest.			...	...		
Notice fee.						
Grant in the salary of police.						
Village guard tax.						
Aid from the village in developmental work.	...	...	...	...	...	...
Total	2,504.12 (100.00)	6,112.53 (100.00)	5.726.61 100 00	9,185.85 100.00	2,874.50 100.00	3,181.36 100.00

Table 48—(*Contd.*)

Source of revenue	Latipura		Masar		Mobha		Vanachhara	
	1956	1961	1956	1961	1956	1961	1956	1961
(1)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
House tax.	600.00 (32.6)	910.00 (33 7)	1,076.50 (15.2)	923.25 (5.6)	2,387.00 (37.8)	2,890.50 (33.1)	315.76 (8.6)	389.50 (9.7)
Levy on ceremonies, marriages, etc.	15 0 (0.8)	15.0 (0 6)				10.0 (0.2)	2.0 (0.2)	13,00 (0.3)
Tax on pilgrim.	...	...	...	...	...	...	...	...
Share in L. R. & grant.	1.200.00 (65.2)	1,200 00 (44.4)	5,721 00 (80 2)	7,075.42 (42.8)	3,777,00 (59 9)	5,123.83 (58.7)	3,316.20 (90.5)	3,593.14 (89.1)
Revenue from trees.			51.00 (0.7)	32 60 (0.2)				
Sale of trees.	...		...	...				
Auction of grazing land.	25 00 (1.4)		...	...				
Cattle pounding.	...	150 00 (5.6)	12.75 (0.2)	83.22 (0.05)	7.25 (0.2)	9.00 (0.1)		
Shop tax.		26.00 (0.9)	60.00 (0.8)	42.00 (0.33)	127.00 (2.1)	339.00 (3.9)	27.00 (0.7)	36.00 (0.9)
Water tax		400.30 (14.8)	...	...	...	...	...	...

Tax on mill/factory/machine.			100.50 (1.4)	...	...	350.00 (4.0)		
Auction of boat.			...	...		...		
Collection from religious places.			...	...				...
Diamond Jubilee grant.			...	...				...
By interest			49.87 (0 7)	129.11 (0.8)				...
Notice fee.		...	6 50	16.00				
		...	(0.1)	(0.1)				
Grant in the salary of police.			47.50 (0.7)	...				...
Village guard tax.			...	3,080.25 (18.5)				...
Aid from the village in developmental work.	...	...	...	5,162.00 (31.2)	...	...	...	...
Total:	1,840.00 (100.00)	2,700.00 (100.00)	7,125.62 (100.00)	16,543.85 (100.00)	6,298.25 (100.00)	8,722.23 (100.00)	3,660.96 (100.00)	4,031.64 (100.00)

Table 49 : Public Participation in the Selected Villages, 1961

	Amla Rs.	Dabka Rs.	Karakhadi Rs.	Latipura Rs.	Masar Rs.	Mobha Rs.	Vanachhara Rs.
Panchayat help	46,473	26,065	15,050	4,231.25	44,895.51	7,500	7,378.24
People's contribution	19,474	19,500	10,000	7,625.00	32,821.53	67,900	7,051.00
Block aid	7,947	17,500	11,460	11,015.00	26,485.00	31,900	16,530 00
Total	73,894	63,065	36,510	22,871.25	1,04,202.44	107.300	30,959.24

Source: Records of the Padra Block Development Office.

An analysis of people's participation in the selected villages is given in Table 49. Out of the seven villages, six villages had taken up the programme of water-works and four villages had undertaken the provision of facilities like maternity service with nurses' quarters attached. The scheme of village dispensary, however, was undertaken in only one village. Two villages contributed to setting up of reading rooms and libraries. Except one village, the rest contributed towards the school buildings and balmandirs. In addition, other types of activities like the facilities of repair of panchayat office, provision of science instruments, repairs to roads, stone-paving, etc. were also undertaken. One noteworthy feature of the participation has been the absence of contribution in terms of physical labour or any contribution in kind. Most of the contributions were given only in cash.

CONCLUSION

A study of the farm economy and structure of the seven villages shows that they are above average but their individual examination reflects the best and the worst of the taluk. This will be borne out by the land-use pattern, population data, the social structure, the pattern of land-holdings, literacy, social overheads, crops, the co-operative movement and the community participation in developmental work. Most of the trends are in the normal direction of growth. They also show people's participation of a high order but only in terms of cash, rather than labour or kind. Data regarding dairy farming, the role of the small farmer in the co-operative movement are encouraging. An analysis of the working of the village panchayat shows that this area already had a long tradition of fully developed local self-government. The panchayats have taken over more functions under the sponsorship of the community development blocks. The use of improved implements has been found to be labour-absorbing. One could also put it a little differently by saying that where work-force is available, the improved implements are assimilated. Either way it does demonstrate that technical change in agriculture is compatible with more employment and higher production.

V
Community Development and Change-2

In the earlier chapters a full account of the conditionsand the changing agrarian landscape in Baroda district and its taluks has been given. It furnished us with information on the changes that have taken place so far due to planning and community development programmes. Although it is extremely difficult to differentiate the effects of one from the other, further analysis of field data would help us to demarcate these to some extent.

In this chapter, data collected with the help of the family schedule, have been analysed. There were in all 2,799 families in the seven villages selected, from which 232 families, who reported agriculture as their principal occupation, were selected for intensive study. Table 50 gives the number of families chosen from each selected village.

Table 50 : Distribution of Sampled Families by Villages

Name of the village	Number of families selected	Percentage of selected families to the total
Amla	30	12.93
Dabka	55	23.70
Karakhadi	50	21.55
Latipura	18	7.75
Masar	32	13.79
Mobha	30	12.93
Vanachhara	17	7.35
Total:	232	100.00

Caste and occupation

In the rural areas, a close relationship exists between the caste and occupation. Of the total number of families, 48.27 per cent are Patidars. The next largest group are the Rajputs (18.11

per cent) followed by Barias (8.62 per cent), Brahmins (5.60 per cent), Harijans (4.74 per cent), and Muslims (3.88 per cent). Other communities constituted 19.78 per cent of the total number of families.

Land-holding

Table 51 gives the distribution of families by operational holdings.

Table 51 : Farm Families by Operational Holdings

Size of group	Number of families	Percentage to the total
1-10 (Small)	128	55.77
10-25 (medium)	68	29.31
25-50 (big)	23	9.92
50 and over (large)*	13	5.60
Total :	232	100.00

* The discrepancy in the figures in Table 36 and Tables 51 and 52 is accounted for partly by leasing in lands, but mainly by sub-division of owned holdings by large farmers in the records of ownership but not in actual cultivation.

The data show the predominance of small-sized farms. Of the total number of selected families, 55 per cent operated on holdings below 10 acres. About 29 per cent of the families operated on farms with sizes between 10 and 25 acres which, considering the dry farming operations, would barely be within the variable limits. Only 15 per cent of the families operated on holdings above 25 acres. Table 52 below attempts to analyse the pattern of land ownership in different size groups.

Table 52 : Farm Families by Land-ownership Categories, 1961

Acres	Families	Percentage of the selected families
1-10	114	49.13
10-25	61	26.29
25-50	26	11.21
50 and over	12	5.18
Others	19	8.19
Total :	232	109.00

The pattern of land ownership brings out the predominance of small farms constituting about 50 per cent of the total. About 8 per cent were tenant–farmers, indicating the extent of tenancy in the villages. The over-all picture was favourable when compared with the all–India pattern. The estimate of the extent of tenancy has been measured by the difference in the acreage under operational and owned holdings. This would again be a rough estimate, because this will not take into account the element of overlapping involved in leasing in and leasing out. For such a small sample, however, this could possibly be the only way to make a rough estimate.

Table 53 brings out the relationship between land leased in and the total holdings. In 1961, out of 232 families, 64 families leased in land. Out of these 64 families, 41 leased in land up to 5 acres. Among the families leasing in, 33 families had holdings up to 10 acres. Another group of 17 families leased in land from 5 to 10 acres. Of these, 13 families had holdings of 1–10 acres. Thus the largest group that leased in is the group of small farmers who owned 1 to 10 acres. Their holdings, considering the dry operations, are uneconomic in size and hence they make up for this deficiency by leasing in land.

Irrigation facilities

As pointed out earlier, there is no canal irrigation in the taluk. Irrigated farming is done only by wells. Some farmers have installed diesel engines and quite a few of them have installed electric motors. These farmers also supply water to other farmers on payment. Table 54 gives a picture of the utilization of irrigation facilities at two points of time, i.e., 1956 and 1961.

The number of families utilizing irrigation facilities increased from 39 to 57. It is likely that these figures are under-estimates, because larger irrigated area might mean higher imposts in one way or the other. The extent of utilization of irrigation facilities by different farmers provides useful results. Table 55 brings out the distribution of the irrigated area of these families in various size groups in 1956 and 1961. The significant fact is the increasing utilization of irrigation facilities by the small farmers. This indicates intensive farming to overcome handicaps of small farms.

Table 53 : Land Leased and Total Holding, 1961

Holding by size groups	Land leased in							Families leasing in	Families not leasing in	Total
	0–5	5–10	10–15	15–20	20–25	25–50	50 & above			
1–10	33	13		...				46	82	128
10–25	7	4	2	3	1		...	17	51	68
25–50							...		23	23
50 & above	1			...		...		1	12	13
Total :	41	17	2	3	1	...		64	168	232

Table 54 : Families by the Extent of Utilization of Irrigation Facilities

Extent of irrigation (in acres)	Number of Families	
	1956	1961
1–10	36	53
10–15	2	2
15 and above	1	2
Total :	39	57

Table 55 : Size of Holding by Irrigated Area

Size of holding	Irrigated area					
	1–10 acres		10–15 acres		15 & above acres	
	1956	1961	1956	1961	1956	1961
1–10 (Small)	16	23	...	...	...	...
10–25 (medium)	14	22	...	...	...	...
25–50 (big)	4	5	...	...	1	1
50 & more	2	3	2	3	...	...
Total :	36	53	2	3	1	1

The data in Table 55 clearly show that whatever increased use of irrigation facilities was registered, it was largely concentrated among the small and medium farmers. This does not by itself indicate that small and medium farmers have evinced greater interest in irrigated farming because their resources position had considerably improved during the period under study or they had displayed a larger measure of assimilation of information disseminated through the agency of the community development than the big and the large farmers. This might have occurred possibly because, by and large, the small and medium farmers did not and, in many cases, could not avail of the irrigation facilities. But over a period of time, they were convinced about the benefits of irrigated farming, the example having been well demonstrated by more resourceful and comparatively more progressive sections in the village. This increased use of irrigation facilities in turn, has also influenced the cropping pattern. The farmers have taken to the cultivation of chillies, bananas, etc. Increasing use of irrigation facilities by the small and medium cultivators also testifies to the scarcity of land and hence the imperative need to intensify cultivation.

Crop pattern

Cotton is the most important cash crop of Padra taluk. As many as 66.4 per cent of the total families cultivated cotton as the main crop. Even the small land-holders grow cotton and thus display monetised agriculture. In some of the villages, cultivators have taken to growing fruit and vegetables. Tobacco is another cash crop, but its importance is declining owing to price uncertainties and the problems of marketing under oligopolistic conditions created by the merchant and trading interests.

In each of the seven villages selected for intensive investigation, the well-to-do farmers have installed either diesel engines or electric motors for water lifting depending upon the availability of electric power. These farmers also give water to others on payment of charges. This facility is availed of by small farmers for growing fruit and vegetables. Forty-six families or 20 per cent were growing fruit and vegetables.

The results of the survey also show that out of 232 families, 62 families or 26 per cent have changed either to cash crops or irrigated crops. Most of these farmers who have changed over have done so on account of price incentive, better markets or with a view to getting immediate cash. As against this, 170 families or 74 per cent have not made any change of this nature. A large proportion of the holdings of farmers has to be devoted to the production of inferior cereals which constitute the normal food. In spite of this, one cannot escape the conclusion that a beginning has been made in the matter of cultivating more remunerative crops particularly by small farmers. This change may be both as a result of the demonstrations and the activities under the community development programmes. The incentives of high incomes, and emulation of community development effort by farmers are so intermingled that it is difficult to differentiate them. Most of the farmers gave the effect of demonstration as the cause for change, but the regions providing demonstrations were mainly influenced by the intensive developmental effort.

Diversification of employment

In order to have an idea about the economic change brought about in the villages as a result of the community development programme, it would be useful to ascertain the trend towards diversification of employment and sources of income. Such a trend,

by reducing the pressure on land and creating more opportunities for gainful employment during the larger part of the year, would improve the incomes of the rural population.

The survey indicated that in this region dairying has not been organized and pursued systematically for the market. May be due to non-availability of milch cattle, only a few families reported pursuit of dairying as a business proposition. Of the 232 families, those producing more than 10 B. md. of milk in 1956, were 22; in 1961, the number of families rose to 38, constituting about 16 per cent of the total number of families. There was not a single family producing more than 20 B. md. during the year. But as against about 20 families in 1956, 38 families realised some income from dairying in 1961. For most of them the income from this source was less than Rs. 250 per annum. Similarly, only a few families produced ghee for the purpose of sale. Most of the families could not give the exact reasons for pursuing dairying. Of the total, only 53 families could give some reason for it. About 10 families stated that they pursued it for increasing income; 37 families mentioned their interest in it for domestic requirements; the remaining six families adopted dairying both for increasing income and also for satisfying their domestic needs. Most of the families used the income on the milch cattle themselves and only five families reported the use of income for agricultural improvement. It is disconcerting to note that none of the families investigated realised the importance of dairying. Lesser still was the recognition of the importance of having improved stock of milch cattle to diversify income and strengthen the agricultural base. Least of all is the recognition of diversification of agriculture through dairying along the lines followed in the West which had never occurred to these farmers. For the purpose of feeds, stray grazing could not completely be eliminated but has been reduced in the region. Of the 232 families, 175 families or more than 75 per cent have reduced this practice and have taken to stall feeding. The feeds used were of inferior type; only ten families gave cottonseed and three gave guvar.

In the field of service to dairy animals also, the picture is equally discouraging. The major service was only veterinary service to animals. This involved calling of a veterinary doctor or taking cattle to a doctor in an emergency. Measures for the improvement

in quality of cattle were not adopted by any of the families selected for study. No one had taken interest in artificial insemination for better breed. It is equally surprising to find that none of the farm families investigated, showed knowledge about dairy co-operative, though it is equally true that such co-operatives were not in existence at the time of the study.

It is extremely difficult to relate community development to dairy development directly. No doubt, it was on the plank of the programme, but could not be taken up in right earnest in all its ramifications. The main emphasis under the programme was on agricultural production as the main economic activity. The emphasis of the second category has somehow been on social overheads. And yet it cannot be said that nothing has been done. Within a period of five years some change was noticed. It is true more could have been done to improve the livestock by better breeds and feeds, but they would not have gone far without cultivating the markets and organizing a network of co-operatives far collection and disposal.

Manures and manuring

Almost all the cultivators covered by the study reported the use of farm-yard manure. Most of it was available at home, and only a negligible number reported marginal purchase of farm-yard manure from outside. The use of manure mixture, on the other hand, had a better spread over the period. As against 7 per cent of the families in 1956 who used it, the percentage went up to 38 in 1961. Out of 232 families, four families spent more than Rs. 100/– on manure mixture from their own funds. No farmer reported borrowing from the co-operative for the purchase of manure mixture. The records of the co-operatives, however, have shown otherwise. There is a growing *awareness* among the cultivators about the use of ammonium sulphate. Out of the 232 families, 48 families or 21 per cent indicated the use of sulphate mostly from their own funds. It is significant to find that the percentage of farm families using 'other' manures has increased from 38 in 1956 to 96 in 1961. Of the 96 families using 'other manures' about 80 per cent used more than 100 B. md. The use of 'other manures' is made mostly from the owned funds. It is being increasingly used by small farmers up to 10 acres; the rise registered was about 79 per cent in 1961, from 28 per cent in 1956. Regarding the use of

sulphate, some cultivators were critical and felt that it spoiled the land; others said it affected badly the taste or flavour of the grains. Nonetheless, they welcome the use of the manure mixture. It is for the extension agency to convince the farmers. It is clear that a change in this farming practice over such a short period of five years could not have come over except by the efforts of community development. The 'owned funds' employed for their acquisition is both a healthy sign and a limitation. Given the scope for use and shown the benefits in terms of higher yield, considerable work can be done to increase its application and the funds of the co-operatives can be utilized to acquire the manure mixture. Further possibilities of the extensive use of fertilizers may be carefully examined after suitable soil tests and the technical appropriateness of their use and the capacity to ensure sustained good results over long periods is decided. The role of extension agency in this behalf is truly immense.

Of the 232 families examined, only 36 families or 16 per cent adopted the use of D. D. T., Gammexine or such other insecticides. It was found that except Gammexine dust powder, not much use is made of any other insecticide. The cultivators do confront the menace of crop diseases, but extensive use of insecticides was absent. Some of the progressive farmers complained about the incompetency of the community development agency to guide them in this field. Most of the farmers used less than 5 lb. of insecticides each. Only five farmers used more than 12 lb. each. The expenditure incurred was thus negligible. Of the 36 families benefited from the use of insecticides, 31 families or 86 per cent restricted the use of these insecticides in respect of less than 5 acres. These farmers who used insecticides to protect their crops were drawn from all size groups more or less evenly.

Improved seeds

Improved seeds seemed to have been introduced in respect of cotton only. The use of improved seeds in respect of other crops like paddy, bajra, jowar, etc. have begun, but their spread has been negligible. Almost all the farmers have taken to growing the registered 'Digvijay' variety of cotton. The number of farmers using these improved seeds increased from 97 to 196 over the five-year period. It seems that the farmers in the higher size groups

were already familiar with the variety even before the commencement of the block activity in the region. Almost all the cultivators reported that the adoption of improved seeds was from their own funds.

Other land improvements

The two common land improvement practices adopted by the farmers are field embankments and levelling. Table 56 indicates the extent of land improvements undertaken by the cultivators in various size groups at two points of time viz. 1956 and 1961.

Table 56 : Land Improvements by Land-holding Categories, 1956–61

Land-holding categories (in acres)	Land improvement					
	Field embankment		Field levelling		Both	
	1956	1961	1956	1961	1956	1961
1–10	...	3	1	13	28	25
10–25	1	1	2	6	28	35
25–50	...	...	2	3	23	17
50 & above	...	1	...	...	...	7
Total :	1	5	5	22	79	84

It is very difficult to draw any clear-cut conclusions regarding the relationship between the adoption of land improvements and the land-holdings of the farmers. But a few points appear relevant. The necessity to undertake these activities is felt or experienced only casually because it is not necessary for a farmer to embank or level his land every year except in case of a particular type of land with peculiar type of soil which might need it regularly. Moreover, the farmers are interested in incurring expenditure mainly on land which belongs to them. Here also, the interesting fact which repeated itself during the investigation is that the bulk of the expenditure on these improvements is self-financed. Another trend the data in Table 56 highlights is the *awareness* among small farmers about the value of such land improvements. It is thus in one way difficult to associate these land improvements with a type of technical change that leads to better agriculture and realization of benefits. Especially when a special effort in terms of guidance and financial help is made to introduce such a change, it becomes difficult to distinguish and pinpoint it from that occurring in the normal run.

Improved implements

The use of improved agricultural implements in a region, generally reflects the state of agricultural change in that area. Table 57 sets out the data regarding the use of improved implements by cultivators in different size groups at two points of time, 1956 and 1961.

A cursory look at the figures would indicate that improved implements are not much in vogue among the farmers. Out of all the farmers investigated, only four reported the use of tractors and five the use of engine pumps in 1956. The corresponding figures for 1961 were six and twelve, respectively. As supply of electricity was available after 1956 it was only subsequently that five farmers took to electric motors. While in 1956 no farmer reported the use of iron plough, in 1961 two farmers reported its use. In case of 'Baroda hoe' the figure shows a rise from 6 to 8 and for spraying pumps from 3 to 5 over the period. The use of other types of implements also shows a similar rise from 31 to 45.

An analysis of the rest of the figures in Table 57 brings out a positive correlation between the size of the holding and the use of improved implements. In respect of some improved implements like oil engines and electric motors, it should be realised that their adoption may not be quite related to the single factor of the size of the farm. The scope for irrigated farming is conditioned by a number of physical and economic factors and the traditions and knowledge of irrigated cropping, are equally important pre-requisites. We should bear these in mind while reading the subsequent analysis. None of the 128 small farmers reported the use either of tractor, iron plough, Baroda hoe or spraying pump. Only one farmer had engine pump and one had installed electric pump only in 1961. About 10 were using other types of implements in 1961. Of these, as many as nine were using them even in 1956. Thus the impact of community development on the small farmers appears to be insignificant. Out of 68 farmers in the second group or medium-sized farmers, only two reported the use of engine pumps and electric motors in 1961 and two and one were using Baroda hoe even in 1956 and 1961, respectively. The number of farmers using other implements rose from 12 to 19 over the period. No farmer reported the use of the tractor, iron plough or spraying pump from this category.

Table 57: Use of Improved Implements by Land-holding Categories, 1956-61

Land-holding categories (in acres)	Total number of farmers in the group	Improved implements													
		Tractors		Engine Pumps		Electric Motors		Iron plough		Baroda hoe		Spraying pumps		Others	
		1956	1961	1956	1961	1956	1961	1956	1961	1956	1961	1956	1961	1956	1961
1-10	128			1	1		1					...	...	9	10
10-25	68			1	2		2			1	1	...	...	19	19
25-50	23	2	3	2	5		1		1	2	2	1	2	4	9
50 & above	13	2	3	1	4		1		1	3	5	2	3	6	7
Total using		4	6	5	12	...	5	...	2	6	8	3	5	31	45
Rest		228	226	227	220	232	227	232	232	226	227	229	227	201	187
Total:	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232

The remaining two groups of farmers distinguish themselves from the earlier two groups in a few respects. All the types of improved implements were in use in these two groups. Besides, a wholesome progress was achieved in their adoption and use among the big and large farmers after the commencement of the community development programme. In all, there were 23 big farmers of which three had tractors in 1961 as against two in 1956. The farmers reporting the use of engine pumps rose from two to five over the period. In case of both electric motors and iron plough, the figure rose from zero to one over the period. There were two farmers using spraying pumps in 1961 as against one in 1956. The corresponding figures for other implements were seven and six, respectively. Those using 'Baroda hoe' remained constant at two over the period.

The group of large farmers provides a clearer picture. Out of total of 13 large farmers in this group, the number of farmers using tractors increased from two to three and of those using engine pumps increased from one to four over the period. In case of both electric motor and iron ploughs the figure increased from zero to one over the years. There were five farmers who reported the use of 'Baroda hoe' in 1961 as against three in 1956. The corresponding figures for the use of spraying pumps were three and two, respectively. In case of other implements, the figure rose from six to seven between 1956 and 1961.

Thus, farmers in every size group seem to have taken to improved implements of minor type. Judged from the point of view of technological change both the small and medium farmers remained more or less unaffected. The big farmers reflect some progress but not in the case of every implement as the number of farmers using 'Baroda hoe' remained constant at two while in case of large farmers there was definitely some progress in the use of each type of implement. It is very difficult to isolate the contribution of community development programme in bringing about these changes. The block did give financial assistance to farmers and its agency did succeed in enabling certain types of farmers to assimilate the change. And yet a substantial proportion of farmers, especially small and medium size, have yet to be convinced about the advantages of technical change and have to be provided with the necessary financial assistance.

Society and change

A further analysis of the figures showing the relationship between the use of improved implements and the castes of the farmers brings out an interesting picture (Table 58). In the use of improved implements viz. tractors, iron plough, 'Baroda hoe' and spraying pump, Patidars, as a single predominant community have shown greater enthusiasm. One co-operative farming society also reported the use of iron plough, 'Baroda hoe' and spraying pump. Out of five farmers reporting the use of engine pumps in 1956, four were Patidars and the remaining one was a Baria with a big holding which is in turn a measure of his financial ability, and with a progressive outlook comparable with that among the Patidars. The 12 farmers who reported the use of improved implements in 1961 consisted of Patidars (9), Barias (1) and Rajputs (2). Of the five farmers having electric motors in 1961, four were Patidars and one was Rajput. Similarly, in case of other implements, Patidars dominate the field. In addition, eight Baria and one Muslim family also reported the use of the other implements in 1961. No farmer from other castes reported the use of any of the improved implements. The predominant role of Patidars in this change is due to their long tradition as enterprising farmers and their resources aud resourcefulness. The communication line which is so very important for the flow of technical knowledge is also very much alive in respect of these cultivators. They have a higher attitude of responsiveness and capacity of assimilation.

Cropping and change

It is generally maintained that there is a close relationship between the level of technology and the cropping pattern in agriculture of a region. An attempt is made to ascertain this relationship in Table 59. Cultivators raising cotton as their main crop adopted improved implements to a greater extent. Even the farmers having superior cereals or fruit and vegetables as their main crops had not taken to these implements on a large scale.

The adoption of improved implements has also some relation to the number of adult working members in the family. Data in Table 60 provide an explanation to this.

Table 58 : Use of Improved Implements by Caste

Caste	Total number in the group	Improved implements													
		Tractors		Engine pumps		Electric motors		Iron plough		Baroda hoe		Spraying pumps		Others	
		1956	1961	1956	1961	1956	1961	1956	1961	1956	1961	1956	1961	1956	1961
Patidar	112	4	6	4	9		4		1	6	7	2	4	19	28
Rajput	42				2		1							2	3
Baria	20			1	1									7	8
Brahmin	13				...		...							1	3
Muslim	9													1	
Others	33		...												
Co-operative farming society	3								1	...	1	1	1	1	2
Total	232	4	6	5	12		5		2	6	8	3	5	31	45

Table 59: Use of Improved Implements by Crops, 1956-61

Main crop	Total farmers	Improved implements													
		Tractors		Engine pumps		Electric motor		Iron plough		Baroda hoe		Spraying pumps		Others	
		1956	1961	1956	1961	1956	1961	1956	1961	1956	1961	1956	1961	1956	1961
Cotton	154	4	6	5	11		3		1	6	7	2	4	29	42
Fruit and vegetables	19		...		1										
Superior cereals	4	...	...			...	...				...				
Coarse grains	48						1							1	1
Pulses	2								...						
Cotton & tobacco	1	...	...	...			1		...			...	...		...
Mixed	4		...	...	...	...			1		1	1	1	1	2
Total	232	4	6	5	12		5		2	6	8	3	5	31	45

Table 60 : **Use of Improved Implements by the Number of Adult Workers in the Family, 1956-61**

Adult workers	Improved Implements													
	Tractors		Engine pumps		Electric motors		Iron plough		Baroda hoe		Spraying pumps		Others	
	1956	1961	1956	1961	1956	1961	1956	1961	1956	1961	1956	1961	1956	1961
One	4	6	2	5		3			5	5	1	1	21	28
Two			2	3		1		1	...			1	6	12
Three				3									2	2
Four				...		...				...				
Five		...	...	...		1	...		...	1		1		
Six			1	1					1	1	1	1	1	1
Seven & more								1		1	1	1	1	2
Total :	4	6	5	12		5		2	6	8	3	5	31	45

Education and change

Adoption of improved implements is closely related to the levels of education among the farm families. Table 61 attempts to examine the contribution of education in the use and adoption of improved implements. Judged from this angle, neither of the two graduate farmers used any of the improved implements except electric motor. Of the 12 having engine pumps in 1961, six had only primary education, four studied up to secondary level and only two had passed the S. S. C. In the case of farmers who reported the use of electric motors, only one was a graduate, two studied up to secondary level, one had passed Gujarati school leaving examination and the remaining one had only primary education. The three farmers who had iron ploughs had not studied beyond the S.S.C. In the case of 'Baroda hoe' it seems to be more popular with the farmers who have gone up to secondary education. Out of the total number of six farmers possessing tractors in 1961, three had studied up to secondary stage, two passed the Gujarati school final and one had been educated up to the fourth standard. Of the five farmers having spraying pumps, two had secondary education, one had passed the Gujarati final and one was S. S. C.; the remaining one was a co-operative farming society. In the case of other implements, the highest response was shown by the farmers having primary education. Out of 45 farmers who adopted other implements, 15 had completed primary education. Next comes the group of 10 farmers who had studied up to the Gujarati school leaving standard and 10 had some secondary education. Even the uneducated farmers did not lag behind in the adoption of technical change. Thus, not all the farmers with the highest level of education necessarily adopted new techniques, while some of those with little or no education did take to new techniques of cultivation. Surprisingly the greatest response seems to have been extended by the farmers having secondary education- The analysis reveals that education has very little to do with the adoption of improved implements. A word of caution is necessary. Here the term education refers to the education of the head of the family. In a joint agricultural family the decision very often is not taken by the head of the family alone. There were many instances within the families investigated where the head of the family was uneducated or had very low level of education but either his son, brother

Table 61: Use of Improved Implements by Level of Education, 1656-61

Education	Total in the group	Improved implements													
		Tractors		Engine pumps		Electric motors		Iron plough		Baroda hoe		Spraying pumps		Others	
		1956	1961	1956	1961	1955	1961	1956	1961	1956	1961	1956	1961	1956	1961
Primary-4	116	1	1	2	6	...	1	...						13	15
Gujarati School leaving	35	2	2	...	...	...	1			1	2		1	5	10
Secondary	25	1	3	2	4		2	...		3	3	2	2	7	10
S.S.C.	7		...	1	2				1	1	1		1	1	2
Under-graduates	1									1	1			1	1
Graduates	2						1		...		...				
Rest	46			...	...				1		1	1	1	4	7
Total;	232	4	6	5	12		5	...	2	6	8	3	5	31	45

or a relative was highly educated or had been abroad. Their advice played a substantial role in decision-making in adopting technological changes. For example, one farmer who adopted 'Baroda hoe' tractor and other implements had only elementary education but had a son who had passed the S. S. C. examination and was working with him in agriculture and who considerably influenced the farmer's decisions on the subject.

The analysis about the education of the farmer together with the earlier evaluation of community development reinforces our feeling that none of the factors singly could be regarded as a distinct contributor to change. Nor could it be argued that any one or the other factor was totally a failure in enforcing change. It will not be a surprise to find that in other areas both factors might be present and yet will fail to spark a change. In such circumstances, perhaps the climatic and other natural conditions might prevent the assimilation of change. Where these factors were favourable, a small measure of extension effort coupled with financial assistance would speed up the change otherwise initiated on a modest scale. It would be safe to ascribe these changes to a number of factors when they operate simultaneously. Another fact that should be remembered is the small number of villages chosen for this study and the size of the sample of farm families from an area which is much above the average of the country or even the State. In this context the degree of change should be treated as significant. When it is realised that the difference that is noticed is over a period of five years, the role of a push factor will not escape anybody's attention. That there was an overall planning effort no one will deny, but that should not make an observer oblivious of the important role of community development as probably the single most important push factor.

Agencies of changes

Table 62 gives data regarding factors and agencies inducing farmers in various size groups to take to improved implements Only 49 families could assign reasons for the adoption and use of the improved implements. Forty-two families or 86 per cent of the total adopted them on their own initiative; four did not give specific reason; two were induced by demonstration effect and only one reported to have adopted them under the influence of the extension agent. Of these, ten were small farmers, 19 were medium, 12 were

Table 62: Reasons for Adoption of Improved Implements by Land-holding Categories, 1956–61

Total holding (in acres)	Reasons for adoption of improved implements							
	Own initiative	Plan effort	Community development block	Demonstration effect	Other reasons	Total number of families adopted improved implements	Rest	Total
1–10	8			1	1	10	118	128
10–25	18			1		19	49	68
25–50	12		...			12	11	23
50 and above	4		1	...	3	8	5	13
Total:	42	...	1	2	4	49	183	232

big farmers and eight belonged to the large-sized group. Most of the small farmers (nearly 80 per cent) reported that they adopted improved implements on their own initiative; 10 per cent took to them by demonstration effect and the remaining 10 per cent could not assign any specific reasons for switching over to them. Similarly, 18 medium farmers (90 per cent) also adopted them on their own and 5 per cent were affected by demonstration. All the 12 big farmers adopted improved implements on their own initiative. About 50 per cent of the large farmers (four out of eight) adopted them on their own initiative; only one was helped by the block efforts and three did so without assigning any reason.

Of these 42 farmers who adopted change in this sphere, 71 per cent were Patidars and 17 per cent Barias, whereas Brahmins constituted 6 per cent, Rajputs 4 per cent and Muslims 2 per cent. The data indicate both a promising as well as disappointing trend. The majority of farmers came forward on their own to assimilate this technical change. The extension agencies made little contribution in effecting it. Only the farmer in the largest size group reported some inducement from extension agency to effect this change. This is rather unusual as such a large cultivator should have waited all along for the change for the extension agency to each and advise him.

Other agricultural practices

In order to have an idea about the extent of technological change that occurs in agriculture, it would be worthwhile examining the extent of the spread of improved agricultural practices. Table 63 analyses the adoption of these practices by the selected farmers.

Table 63 : Adoption of Improved Agricultural Practices, 1956-61

Agricultural practices	Number of families in 1956	Percentage to the total	Number of farm families in 1961	Percentage to total
Cotton sowing with wide spaces	...	...	91	39.22
Crop rotation	3	1.29	89	38.36
Improved crop combination	3	1.29	79	34.05
Crop changes	2	0.86	25	10.78
Deep ploughing	...	...	11	4.74
Green manuring	1	0 43	6	2.59
Seed mixing with cultivation	...	...	3	1.29
Mixed farming	...	...	2	0.86
Other practices	...	...	1	0.43

Some of the superior agricultural practices appear to have been fairly known among the farmers as more than one-third of total number of farmers have reported them in 1961. The practice of crop rotation has been accepted by about 10 per cent of the farmers. The remaining practices were not very widely known to the farmers as the percentage of farmers reporting their use in 1961 did not exceed five. The most widely adopted practice of sowing cotton with wide spacing has been recently introduced and seems to have become popular with farmers.

Table 64 enables us to ascertain the relationship between the size of the holding and adoption of these practices. Out of 91 farmers who reported adoption of the practice of sowing cotton with wide spacing in 1961, 33 belonged to the size group of one to ten acres, another 34 belonged to the size group of 10 to 25 acres, while 16 and eight belonged to the group of big and large farmers. Only three farmers reported having adopted better crop rotation in 1956. All of them belonged to the first two size groups of small and medium farmers. In 1961, the picture altered. Out of 89 farmers who reported adoption of the practices, 37 were small farmers, 32 were of medium type, 12 belonged to the bip group and eight fell in the group of large farmers.

The families which reported adoption of crop changes in 1956 belonged to the bigger size groups. Of the 25 who reported the adoption of this innovation in 1961, four were small, 12 were medium, three were big and six were large farmers. But deep ploughing became popular only after 1956. Of the 11 farmers who adopted deep ploughing, three were medium farmers and the remaining eight were equally distributed over big and large size groups. As for the remaining practices, the response did not seem to be impressive. These practices have been adopted to a greater extent by Patidars, Barias and Harijans than Rajputs, Banias, Brahmins and other castes.

This brief study of changing practices highlights certain very encouraging trends. The short period of five years has meant a tremendous shift in this sphere. The rate at which new practices have been adopted is striking. It is also equally heartening to find a wider spread of the change among all strata of the farmers, though the social insulation of the change prevails even here. The short span in which the change occurred and its spread can only be attributed to the community development programmes. The role of the

Table 64 : Adoption of Agricultural Practices by Farm size, 1956-61

	Total number in the group	Practice and year of adoption																	
		Cotton sowing at wide space		Crop rotation		Crop combination		Crop changes		Deep ploughing		Green manuring		Seed mixing		Mixed farming		Other practices	
		1956	1961	1956	1961	1956	1961	1956	1961	1956	1961	1956	1961	1956	1961	1956	1961	1956	1961
1-10	128		38	1	37	2	28	...	4		...	...	...		...		1		1
10-25	68		34	2	32	1	28	...	12	...	3	1	1		1		1		
25-50	23		16	...	12	...	14	1	3	1	4		1	...					
50 and more	13	...	8	...	8	...	9	1	6	...	4	...	4	2	...	...	...	...	...
Total	232	...	91	3	89	3	79	2	25	1	11	1	6	2	1	...	2	...	1

village level workers in this performance cannot be minimized.

Mixed farming has a great stabilizing influence on agriculture both from the point of view of income as well as employment. There was no family pursuing any subsidiary occupation like poultry raising and dairying in 1956. In 1961 only two families, one of them a small farmer and the other a medium cultivator practised mixed farming. This may probably be because the small farmers do not have necessary financial resources to buy and keep milch cattle, nor the capacity to bear loss in case the milch animal dies. A small farmer would have also problems of fodder and grazing as he cannot afford to use a part of his limited land for the purpose. Development of dairying and adoption of new activity like poultry are time-consuming. In the national context, the consumption of eggs and poultry is mainly limited to the higher social classes. Pursuit of the occupation is regarded as socially low. The stigma attached to poultry farming has limited its spread considerably. It is interesting to compare the farmers' perception of the role of change agents against these objective facts. Opinions on the efficiency, equipment and knowledge of the village level worker sharply differed. According to the farmers, the block development officer and the assistant agricultural officer were not very effective in persuading farmers to adopt improved practices. None of the respondents had anything to say about the contribution of the district agricultural officer. An analysis of the causes of non-adoption or difficulties experienced by the farmers showed that the chief factor in non-adoption was indifference of the farmers. A few, however, stated lack of resources or cost aspect as a reason for non-adoption. Quite a few indicated that an earnest, persuasive and patient approach by community development personnel would have meant a much larger coverage by improved practices. Senior non-officials and officials felt that it would be enough if community development reaches only a section of the enlightened, progressive and responsive farmers to stabilize the change.

Livestock

Draught cattle is an important productive farm resource. Table 65 provides a study in its pattern.

The number of families without bullocks has not significantly changed; they have declined from 19 per cent to 18 per cent. The number of families having one bullock increased from 69 to 75

Table 65: Ownership of Draught Cattle, 1956-61

Number of bullocks	Number of farm families having them			
	1956	Percentage	1961	Percentage
One	69	29.74	75	32.33
Two	92	39.65	69	38.36
Three	10	4.31	15	6.47
Four	10	4.31	11	4.74
Five	1	0.43	...	0.43
Six	3	1.29	1	...
Seven	...	...	...	...
Eight	2	0.86	...	...
Nil	45	19.40	41	17.67
Total	232	100.00	232	100.00

during the period. The number of families possessing two bullocks has gone down from 92 to 89. The precarious sector is delicately balanced in the supply of draught cattle. As a whole, their position worsened. The farmers having six bullocks each, increased from three to six. The farmers also exchanged bullocks. Some purchased a bullock or a pair by selling those they had, but the overall position remained materially unaltered. The reasons for changing draught cattle was old age of the animals or death.

Farmers in this area generally prefer to rear she-buffaloes than cows. In all, only 11 farmers reared cows. The entire region is noted for its unsuitability to rear cows. Almost all the farmers keep she-buffaloes and the maximum number a farmer keeps is five and he invariably happened to be the large farmer. The small farmer also keeps she-buffaloes and the most common number is one buffalo to meet the needs of milk and milk products at home and for selling marginally to earn a little cash. The picture of relationship between the number of milch cattle maintained and the subsidiary occupation of the farmer is not very clear. Out of 103 farmers having one she-buffalo, 94 returned no subsidiary occupation, four are servicemen, two are labourers and only one reported pursuing dairying as a subsidiary occupation.

Co-operation

Out of 232 families, 156 families or 66 per cent were members of co-operative societies. Table 66 brings out the distribution of co-operative membership in their respective farm-size groups.

Table 66 : Membership of Co-operative Societies, 1961

Size group	Member	Percentage to total	Non-members	Percentage to total	Total
1-10	58	37.2	70	92.1	128
10-25	62	39.7	6	7.9	68
25-50	23	14.7			23
50 and more	13	8.4	...	...	13
Total	156	100.00	76	100.00	232

Most of the non-members fall in the smallest size-group. Table 67 brings out the extent of double and more, membership in the different size groups of cultivators. The membership analysis of the co-operatives brings out the predominance of Patidars and Rajputs (Table 68). The analysis further brings out the extent of borrowing. Not all of the 156 member families depend on the co-operative society for loan assistance (Table 69). About 64 per cent of the members do not borrow from the co-operatives at all. They prefer borrowing from relatives or private agencies rather than the institutions. Twenty-five families complained that borrowing from a co-operative is cumbersome. Twenty-six families stated that the co-operative loans were inadequate and untimely. Eleven families said that co-operative finance was costly. Some of them stated that borrowing from a co-operative involves loss of prestige.

On co-operative marketing, our data show the following trends. In 1956, 33 families took advantage of co-operative cotton sale societies. This number rose to 72 in 1961. Twenty families sold five *bhars* of cotton to co-operatives, and 13 families sold more than five *bhars* of cotton to co-operatives in 1956. The corresponding figures for 1961 were 43 and 29. The small cultivators started taking advantage of co-operatives, by selling small quantities.

Table 67: Multiple Membership in Co-operatives by size of Holdings, 1961

Size groups (acres)	Membership in one society	Membership in two societies	Membership in three societies	Membership in four societies	Membership in five and more societies
1–10	58	12	4		...
10–25	62	26	6	1	
25–50	23	14	6	2	2
50 and more	13	9	7	3	2
Total	156	61	23	6	4

Table 68 : Co-operative Membership by Caste

Caste	Membership in one society	Membership in two societies	Membership in three societies	Membership in four societies	Membership in five and more societies
Patidars	93	40	16	4	4
Rajputs	15	2	2		
Barias	12	6	1		
Brahmins	11	5			
Muslims	...	...			
Others	25	8	5	2	
Total	156	51	24	6	4

Table 69 : Borrowing and Non-Borrowing Members of Co-operatives and Size of Loans

Size group	Non-borrowers	Percentage to total	Borrowers	Percentage to total	Amount borrowed from Co-operative Society (in Rs.)											
					1–100	Percentage to total	101–200	Percentage to total	201–300	Percentage to total	301–500	Percentage to total	500–1000	Percentage to total	1000 and more	Percentage to total
1–10	37	37	21	37.5	5	88.3	6	75	9	64.3	1	16.7	...	...	...	...
10–35	35	35	27	48.2	1	16.7	2	25	6	35.7	5	83.3	4	100	10	55.5
25–50	20	20	3	5.4					...						3	16.7
50 and over	8	8	5	8.9	...			...	...		...				5	28.8
Total	100	100	56	100	6	100	8	100	14	100	6	100	4	100	18	100

The amount received by the families dealing with marketing co-operatives during 1956 and 1961 are shown in Table 70.

Table 70 : Amount of Receipts from Marketing Co-operatives

Amount received in Rs.	Number of families	
	1956	1961
Up to 200	...	3
201 to 1000	9	14
1001 to 2000	10	19
More than 2001	14	36
Total	33	72

The farmers indicated that co-operatives have reduced their dependence on private agencies. But the movement does not seem to have generated uniformly favourable response. Thirty-five families were agreed about the benefits of co-operation, whereas 197 families were of the contrary view. Thus 85 per cent of the farmers interviewed, were not convinced of the advantages of co-operative marketing.

Village panchayat

Thanks to the erstwhile State administration, Baroda district inherited a well developed panchayati system. All the villages selected for study had panchayats. However, people's interest, in panchayati system was not commensurate with the long traditions. Of the 232 families selected for study, 176 families did not take active interest in the functioning of the panchayats. Only 52 families took active interest in the working of the panchayats. Among these 52 families, the number of small-holders elected to panchayati bodies was negligible. It shows that the village leadership still continues to be in the hands of big farmers, because they alone have the time and money to devote to panchayati work. Only 32 families reported that they contested in the panchayati elections some time or other. Ninety families extended their co-operation in the activities of the panchayat, while 107 families were completely indifferent. Of the 32 families who contested in the elections, nine families owned less than ten acres of land. Regarding working of the panchayats, 139 families reported that the working of the panchayat was good; 34 stated it to be bad; 56 were

completely indifferent. On the whole, one could find that panchayat and its activities have not interested the small farmers.

Extension agencies

In the following pages an attempt is made to discuss the staffing pattern under community development programme and the attitude of the people towards them. The opinions of the people about the officers and personnel connected with the programmes and their background and equipment for work entrusted to them have also been attempted.

Block development officer

The block development officer or the taluk development officer is the king-pin of the entire developmental programme in the taluk, around whom the gamut of activities in the block revolve. He not only inspires but also arbitrates over situations of frictions between the personnel in the lower level and the people and interse. He should know the area and the people and should be given time to acquire this experience. Since the inception of the programme in 1957, three officers held this position, and all Padra block belonged to the revenue department. It is quite natural, therefore, that the programme of community development received a slant more of a departmental organization rather than of a properly coordinated welfare-oriented activity executed with a team spirit. The main points of contact of these block officers would be through visits to the villages and discussions with the villagers concerning their problems.

Table 71 gives information about the visits of block development officer to the selected villages during 1961 and 1962.

Table 71 : Visits by Block Development Officer to the Selected Villages

Name of the village	1961	1962
Amla	6	1
Dabka	12	8
Karakhadi	4	6
Latipura	5	1
Masar	16	5
Mobha	6	3
Vanachhara	8	1

The data do not support the widely held feeling that villages situated away from the block headquarters are not properly attended to, and that villages around the headquarters are visited often by the block development officer and hence benefited relatively more from his personal attention and guidance. Direct contacts help him to understand the problems of the villages relating to development. It will be useful to know the categories of farmers he meets (Table 72).

Table 72 : Frequency of Meetings of Farmers with the Block Development Officer, 1961

	Meetings of B.D.O.				
	At headquarters		In the villages		Total of farmers in the group
	Number of farmers	Percentage to the group	Number of farmers	Percentage to the group	
1-10	16	12.5	15	11.7	128
10-25	26	38	27	39.7	68
25-50	15	65	14	60.9	23
50 & above	8	61.5	8	61.6	13
Total	65	28	64	27.6	232

Both at the headquarters and in the villages only 28 per cent of the farmers contacted the block development officer. Amongst those who met him, the cultivators in the large-size groups predominated. We were not able to collect information about the purpose of the meetings, the nature of guidance available and the ultimate efficacy of the guidance. The general experience is that the farmers see the B. D. O. about administrative matters and to clear difficulties about the programme activities relating to their villages. In view of the nature of such work it is natural that the bigger farmers who take the lead will meet him. The meetings, in general, are hardly on technical matters relating to the programmes.

Assistant agricultural officer

The duties of this officer are more technical and, therefore, germane to farm problems and production needs. That is all the reason why he should be stable at the job over a period of time to lend reality to his technical guidance in the field of production. The turnover of the assistant agricultural officer is about the same

as that of the B. D. O. Records show that in the initial five years of the programme four assistant agricultural officers have been posted here and transferred subsequently. The data collected from the tour register brings out the following picture (Table 73).

Table 73 : Visits by Assistant Agricultural Officer to the Selected Villages, 1961

Name of the village	1959	1960	1961	1962
Amla	2	7	6	9
Dabka	14	21	23	22
Karakhadi	3	10	17	10
Latipura	11	8	5	8
Masar	6	12	2	22
Mobha	19	18	11	22
Vanachhara	4	6	1	5

As shown in Table 73, like the B. D. O., in the case of assistant agricultural officer also, the distance of the village from block headquarter, did not affect his visits. Even the high degree of public response did not appear to be a factor attracting these officers. This is so because Amla had the most enthusiastic group of youth actively looking after the developmental works in the village and yet the visits to Amla were comparatively less frequent. Vanachhara was quite inaccessible during monsoon and fewer visits to it could be explained on that account. Dabka has no redeeming features of agriculture or activities to attract the largest number of visits except its other attractions as an educational centre and a place for change. Similarly, Mobha is a big trading junction. The concentration of effort on the substantial farmers is understandable in the case of a technical officer like this. Table 74 gives his coverage of cultivators in 1961.

Table 74: Frequency of Meetings of Farmers with the Assistant Agricultural Officer, 1961

Size group	Meetings by farmers				Total number of farmers in the group
	At the headquarter		In the village		
	Number of farmers	Percentage to the group	Number of farmers	Percentage to the group	
1-10	8	6.0	8	6.25	128
10-25	13	9.1	15	22.0	68
25-50	12	52.2	12	52.2	23
50 & above	8	61.5	8	61.5	13
Total	41	17.7	43	17.6	232

The figures give a still more positive relation than that of B. D. O. between the frequency of contacts of the officer and the resource base of farmers. Compared to the B. D. O., A. A. O. however, was less known to cultivators in the region and fewer farmers contacted him. It is difficult to comprehend why such an important extension officer has not been able to attract the attention of the farmers. The probable reasons might be four different personality or the operational usefulness of the guidance he could render. In the absence of data about the motives of contact, the nature of discussions and advice tendered and the practical value of guidance, it is difficult to clearly suggest the absence of live contacts at this level.

Village level worker

There were 15 village level workers in Padra taluk. In addition, there were three women village level workers. The headquarters of the women village level workers change every year. The main duties of the woman village level worker were to contact the women in the villages, explain development programmes organize mahila mandals and balmandirs, arrange picnics, develop cottage industries and also organize competitions amongst women in preparing recipes, etc. Male workers, on the other hand, concentrate on agricultural change and contribute in all possible ways towards quickening it. All of them are trained at the various training centres. A close look at the distribution of male village level workers' headquarters would show that they have been more concentrated in the southern part of this taluk. V.L.Ws being the extension agents at the primary level, constitute the fulcrum of traffic both ways. It would be quite essential, therefore, to ensure continuity of their extension work. From this point of view, it will be useful to examine changes in their placement (Table 75).

Table 75: Turnover of V. L. Ws in the Selected Villages

Village	Turnover of V.L.W. over the period 1956-1961
Amla	No Information
Dabka	3
Karakhadi	3
Latipura	No Information
Masar	4
Mobha	4
Vanachhara	2

On an average, a V.L.W. settles in one village for less than two years. From the personal discussion with V.L.Ws it was found that most of them were not happy about their latest placement. Those who came from the revenue department were very keen to return to their parent department. Practically all of them complained that they were overburdened. Some of them felt that they had no power and that their word did not carry much weight with the village people. Their contact with people and the people's knowledge and understanding of them and their functions are shown in Table 76.

Table 76: Farmers' Knowledge of the V.L.W.

	Yes	Per cent	No.	Per cent	Total
Whether knowing V.L.W.	165	71.12	67	28.88	232
Whether visited by V.L.W.	125	53.88	107	48.12	232
Whether knowing how many villages were in his charge	75	32.33	157	67.67	232

Only 165, or 71 per cent, of the total number of families examined, reported that they knew the V.L.W. of which only 125, or 54 per cent, reported that they were visited some time or other by the V.L.W during the year. Even among these, only 75 or 32 per cent, of the total had an idea about the villages to be covered by the village level worker. A break-up of his visits with reference to the farmers would give an idea of the geographical compactness of his coverage and the scope for a systematic approach (Table 77).

Table 77: Frequency of Visits of V.L.W.

Frequency of visits in a year	Number of families	Percentage to total
Once	73	31.46
Twice	3	1.29
Thrice	8	3.46
More often	41	17.67
Not visited	107	46.12
Total:	232	100.00

Only 73, or about 32 per cent, reported that they were visited once a year; 52 families were visited more than once; 41, or 18 per cent, reported that they were visited more often during the

year while 107, or 46 per cent, reported that he did not visit them at all. More detailed enquiries disclosed that the V.L.W. was more attracted towards the farmers with substantial resources and belonging to upper castes. One of the reasons for this might be relatively greater willingness of such cultivators to experiment and absorb superior techniques and implement them. An added factor is that these persons will ensure comfortable stay of the V.L.Ws in the villages in his charge and facilities for contact with other farmers and thus help make him more effective operationally.

It would be interesting to ascertain to what extent the V.L.W. has impressed the farmers with his educational, technical and practical background and knowledge. The farmers who were generally sympathetic towards V.L.W. were inclined to ascribe to him the qualities probably more on humane grounds. This view appears to be a fair assessment when the same farmers precisely expressed that the village level worker was most unsuited to give advice to improve agriculture. An analysis of the relevant data (Table 78) would clearly highlight the position on this point.

Table 78 : Competence of the Village Level Worker

	Farmers conceding	Percentage	Farmers not conceding	Percentage	Total
Technical qualification	38	16,38	194	83.62	232
Adequate agricultural background	24	10.34	208	89 66	232
Ability to understand practical problems	21	9.05	211	90.95	232

Only 38, or 16 per cent, of the farmers approached, suggested that the V.L W. was technically qualified. Of these, 24 stated in affirmative about his agricultural background also. But only 21, or 9 per cent, in the group expressed their faith in his ability to understand practical problems of farming and extend solutions. The rest were not quite happy about his ability to understand practical problems of farming, agricultural background and experience. It is difficult to say how many farmers reacted on the basis of their actual experience. It is even more difficult to ascertain whether they had occasions to test those qualities personally before coming

to the judgment. The analysis would leave a lingering feeling that the replies were the reflection of general feeling rather than judgment based on objective evaluation. Some information on the concrete benefits farmers derived from the village level worker will be relevant at this point (Table 79).

Table 79 : Acceptance of V.L.W's Guidance by Land-holding Categories

Size group (in acres)	Accepted	Total in the group
1–10	6	128
10–25	6	68
25–50	3	23
50 & above	4	13

Only 8 per cent of the farmers accepted the advice of the village level workers. Various reasons were assigned for non-adoption of V.L.W's guidance. The most frequent reason given was lack of faith in him and his advice. About 5 per cent of the total farmers reported lack of resources for non-adoption. Very few farmers acknowledged the contribution of the V.L.W. in the adoption of improved agricultural practices like rotation of crops, crop combination, adoption of improved seeds, improved fertilizers deep ploughing, improved implements and green manuring, etc. Even the large farmers did not have faith in the V.L.W's knowledge, and thought that he knew less than they did. According to some, the V.L.W. worked like a third bullock destroying the furrows drawn by the pair. He was inexperienced, ill-equipped and ill-suited for agricultural extension work. Quite a large number of farmers agreed that the good offices of the village level worker were very useful in securing agricultural requisites like fertilizers, cement, zine sheets, etc. The point that emerges from the analysis is that the agency of village level worker has rendered useful service in the flow of information of needs and requirements and in ensuring supplies. He was not much effective in technical change.

Other extension officers

Another extension agency at work is the male social education organiser. He has been stable at his post since inception. But there were three lady SEOs in about five years. It was generally the experience that ladies in the village do not receive the programme of community development with much enthusiasm.

People, by and large, were conservative in sending girls away on visits or activities. The personality of the lady officer and her background and the way of life in that extremely small circle determine her effectiveness more than her education and experience. Entertainments were, however, well received in the villages. The officers visited distant villages also, but their activities were not well received in remoter parts. Additional duties in the shape of spreading knowledge, education and enlightenment were assigned to them to show their work-load on paper. Table 80 gives data on the visits of SEO to the seven villages investigated.

Table 80 : Social Education Organizer's Tour Register

Name of the village	1959	1960	1961	1962
Amla	4	9	5	9
Dabka	9	16	15	10
Karakbadi	3	8	6	12
Latipura	2	8	3	9
Masar	14	5	6	14
Mobha	19	20	24	23
Vanachhara	1	1	3	6

Here also, it would be seen that the distance from the headquarter does not seem to be a discouraging factor in the visits to the villages and the proximity does not seem to be an important factor weighing in favour of frequent visits to nearby villages. The pattern of visits in which the two villages predominate compare with the pattern set by other officers to these villages. One would not agree that the pattern of all the functions and problems would be identical and hence concentrated visits to some villages as against others. There is, therefore, some attraction other than the programme duties towards some villages as compared to others.

There are, besides those mentioned above, other extension officers for co-operation, veterinary service, overseers, trained midwives and gram sevikas. They more or less create a maze of effort at development in varied directions. The farmers constitute the common field for the work of all of them. It is not surprising that the farmers will feel confused and exhausted in trying to decide who does what. It is not suggested here that these activities could be discharged by a single agency. These facts only highlight the need for better coordination. These could be further emphasized

by the experience of the farmers. They conveyed that most of these agencies pay routine visits to the villages, but are not available either locally or at headquarters for consultation when needs arise. About 45 per cent of the families reported that the veterinary assistant was not available at the headquarter whenever an attempt was made to contact him. The proportion of families reporting non-availability of co-operative officer and overseer was 85, while in case of gram sevika and midwife the proportion was 93 and 70, respectively. A perusal of Table 81 will give an idea of the movements of the other extension officers.

Out of 36 families, or 16 per cent, who reported visits of the co-operative officer, 18, or 8 per cent, reported that they were visited irregularly; the remaining reported monthly, quarterly, six-monthly or annual visits. As compared to this, the veterinary assistant visited them more frequently. One hundred and twenty-six, or 54 per cent of the families reported his visits. Of these, about 50 per cent reported weekly, fortnightly or monthly visits. Similarly, the visits of the midwife were reported by a good number of families though 71 per cent of the families did not use her services. Among those who did, 45, or 19 per cent, reported that she paid weekly visits. The overseer or the gram sevika were not reported paying any visits to the families. Of the total families investigated, only 68 families or 29 per cent reported that the frequency of the visits of these extension agencies had increased after 1956. Regarding the usefulness of these officers, only 47 families or 20 per cent, reported in the affirmative. It was difficult to talk on the usefulness of these agencies with these families. Their expressions did not appear to be considered opinions. They reflected either the overall general impression or casual reaction at the moment.

Agricultural development

Certain indicators were used to measure popular interest in the programme. These were crop-cutting competitions and visits to demonstration centres and agricultural exhibitions. The data presented in Table 82 attempt to present these facts. Out of 232 families, only eight farmers participated in the competition, whereas the demonstration centres and exhibitions interested only 4 and 15 farmers, respectively. Most of these farmers were Patidars and were mainly big farmers with primary or secondary education.

Table 81: Frequency of Visits of other Extension Agents to the Selected Villages

Frequency of visits	Agency											
	Co-op. Officer		Veterinary Assistant		Technical Overseer		S.E.O. Male/female		Gram Sevika		Trained midwife	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Weekly	...	...	20	8.62	...	...	2	0.86	4	1.72	45	19.40
Fortnightly	...	...	8	3.45	...	...	3	1.29	2	0 86	2	0.86
Monthly	8	3.45	22	9.48	3	1.29	5	2.16	...	...	5	2.16
Bimonthly	...	...	2	0.86	...	...	2	0.86	...	...	...	...
Quarterly	3	1.29	8	3.45	...	...	1	0.43	...	...	...	...
Six-monthly	5	2.16	12	5.17	2	0.86	2	0.86	...	...	1	0.43
Annually	2	0.86	10	4.31	...	...	3	1.29	2	0.86	...	...
Irregularly	18	7.76	44	18.97	28	12.07	19	8.19	3	1.29	15	6.47
Rest	196	84.48	106	45.69	199	85.78	195	84.05	221	65.26	164	70.69
Total:	232	100.00	232	100.00	232	100 00	232	100.00	232	100.00	232	100.00

Table 82 : Extent of Involvement in Programme Activities by Caste, Education and Land Ownership

	Holding					Caste							Education							
	1–10	10–25	25–50	50 & above		Patidar	Rajput	Baria	Brahmin	Harijan	Muslims	Others	Primary IV	V.F.	Secondary	SSC	Undergraduates	Graduates	Nil	Total
Crop competition	...	4	1	3	7			1				1	2	4		1			8
Visits to demonstration centres	...	2	1	1	4								1	3					4
Visits to agricultural exhibitions	1	4	5	5	10		4	1				2	3	8	1			1	15
Others			1	1	1	1						1	1						2
Progressive farmers	...	1	1		1	1						1	1						2
Total taking part	1	11	9	10	23	2	4	2	...	..	...	5	8	15	1	1	...	1	31
Total :	128	68	23	13	112	42	20	13	11	9	25	136	36	25	7	1	2	15	232

About certain other items it would be possible to go into greater details. The data in Table 83 relate to an assessment of felt needs of people as understood by farmers and whether they are consistently reflected in the programmes.

Table 83 : Community Development and Felt Needs

Whether the community development programme reflects needs of the people	Number of families	Percentage to the total
Yes	68	29.31
No	18	7.76
Indifferent	146	62.93
Total :	232	100.00

The figures presented in Table 83 are quite revealing. About 63 per cent of the respondents had nothing to say on the matter reflecting that the community development programme does not affect them either way. A detailed break-up of the reactions of the 68 families who gave positive response is given in Table 84.

Table 84 : Benefits of Community Development as seen by Cultivators

Nature of benefit	Number of families
Increase in income	1
Availability of loan	1
Broadening the mental outlook	19
All the three	3
General benefits	44
Total :	68

The replies further corroborate our first impression of the content of the farmers' understanding and assessment. Most of the people reported general benefits. This means that the rural people are not precisely able to specify the objectives of community development. They are unable to distinguish between the benefits of the community development projects and those coming from other sources.

The logical question that was placed at the end of the schedule was regarding the future of the programme. In the case of those farmers who were found to be pessimistic about the utility of the community development agency and hence about its future were

also asked to suggest an effective alternative to the programme. The answers given have been analysed in Table 85.

Table 85: Negative Reactions of Farm Families to Community Development

Alternative suggested	Families	
	Number	Per cent
Scrap the programme	2	0.86
Change the approach	10	4.31
Change in the nature of activities	1	0.43
Change of personnel for better	1	0.43
No reply	218	93.97
Total ;	232	100.00

Only 14 cultivators suggested necessity of some changes in the programme. Of these, two categorically suggested its scrapping. According to them the programme has been started only to employ some educated unemployed. An overwhelming majority did not reply. They were either ignorant, indecisive or timid to offer radical views. Quite a few stated: "Now that we have started the programme and as it would be bringing some benefits, it may be continued".

Table 86 sets out relevant data about popular participation in creating social overheads under the programme.

Table 86 : People's Participation in Community Development Programmes

Nature of work	Families participating	
	Number	Per cent
Road construction	34	14.65
School building	19	8.19
Maternity home	49	21.12
Any other	63	27.16
Not participated in any	67	28.88
Total :	232	100.00

These activities related to construction of roads, school buildings, maternity homes, water supply, stone paving, retention wall and other programmes of general benefit. The important features of these are that a little less than a third did not associate in any of

the activities. The specific activities which could be clearly categorised are less significant than the general group of "any other" under which a host of things would pass as participation. Most of the families contributed in cash and rarely in terms of labour. This quantifies participation, but would hardly reflect close association or identification.

Another indication of identification and value of this participation is available from their attitude to social overheads. Perhaps most of the people did not realise the value that should be attached to a facility created through their participation. One of the fruits of participation, for instance, would be a library building. Only 185 of the respondents knew the existence of a library in the village, and only 39 made use of the facility. Even here, their interest was confined to newspapers These findings further present problems of utilization of social overheads created.

Summary

This chapter constitutes the core of our assessment of change and effectiveness of the community development programme. The pattern of change that is coming about is more evenly spread in these villages than is commonly believed. The generally held feeling that the total effort is too thin in the context of the size of the problem also appears to be not wholly true. But the major question the study poses to the reader is the way to judge the usefulness or success of the programme. Do we judge the achievements on the basis of spread or total impact? The former relates to the objective of social welfare, whereas the latter essentially relates to the measurement of economic consequences. The community development programme does not appear to have achieved a satisfactory spread. That it is bypassing the disadvantaged seems to be, by and large, true. There are distinct indications that economic conditions have improved in this area, although the rate of growth is not very high. The adoption of new programmes have been mainly limited to the wealthier and socially higher classes. A social welfare approach to increase economic efficiency may not always produce expected results. In this particular case, the under-privileged section has remained so and the wealthier sections have produced results which could have been better.

VI

Summary and Conclusions

The region

A few broad agro-economic characteristics of the region of our study may be recapitu'ated here. Both the district as well as the taluk have a fertile stretch of land with a fair spread of rainfall. The rains have seldom failed and the region has hardly ever experienced acute scarcity conditions.

The pattern of land use does not leave any great possibility for extension of cultivation over new lands. The use of land has been over-extended. This has cut down the area under current fallows and the size of holdings has also been reduced. In some areas, a high degree of systematic land utilization has been attained; in others, (which constitute the bulk of the land) erratic exploitation is more prevalent.

The crops range from cash crops and the highly irrigated fruit and vegetables to the combinations of medium cereals and pulses of lower grade quality and productivity, grown unsystematically. Poverty in some of the villages is acute and unemployment and underemployment are considerable. It is difficult to measure these quantitatively, but they are visible even to a casual observer.

Factors that largely contribute to this state of affairs are: (1) The agricultural scene is dominated by progressive communities of Patidars and Rajputs, but an extensive assimilation of change programmes is handicapped by the sizeable numbers of intermediate and backward agricultural classes. (2) The district and the taluk are outside of the main stream of events. Two reasons can be suggested for this isolation. First, the area has unsatisfactory and inadequate communication. This is partly due to its topography and partly on account of the high cost of road construction. Secondly, at the urban centres of trade non-agricultural economic activities are few. Ancillary industries in the villages which would ensure regular and sustained urban-rural communications are

practically non-existent. (3) There is a strong feeling of frustration among the people arising largely on account of the change in the administration. The rapidly changing land laws that came in quick succession, the administration of the comprehensive developmental effort in the area, and the sudden infusion of the relatively advanced administrative pattern and approach contrasted very pointedly with the relatively informal relations of the past and methods of tackling the problems of the rural population. The atmosphere further deteriorated when the essentially untrained farming communities tried to emulate the example of their counterparts in the Gujarat region before the merger of the States who have become adepts at the game of circumventing and finding loopholes in the agrarian legislation. The elections to the village institutions such as the panchayats, further worsened the conditions and the villages (especially where the progressive communities dominate) are openly feuding with each other and among themselves. Thus, with the passage of time, the area has almost grown impervious to development ideas. An objective analysis of conditions is also very often resented by the people.

The selected villages

The selected villages have certain communal amenities which are not commonly found in other average villages in the country. Most of them have all the basic institutions necessary for developmental work.

Literacy is high and female literacy is striking. This is due to the long enlightened rule in the past. Except for a few, most of the villages are not easily accessible and are far away from urban centres. This explains the high utilization of traditional trade channels for sales and purchases. Most of the villages offer a pattern of caste structure which is representative of the area. The dominant groups which have taken initiative in the new set-up are also the traditionally progressive castes. This would indicate the potential for leadership as well as for conflicts in these villages. There is no apparent difference between various groups, but an under-current of suspicion and fear exists between the progressive and the backward classes. This should explain both the facilitating and inhibiting forces that influence the initiation and execution of developmental programmes.

Irrigation in these villages is limited, and is mainly used for raising cash crops. Food crops still dominate the scene, although the area under cash crops is quite substantial and is increasing. There is some positive relationship between size of the holding, the work force per family, the cropping pattern, and the extent of irrigation and adoption of improved implements. This corroborates the fact that technical change is consistent with improved cropping pattern and larger volume of employment. Underemployment and unemployment in these villages are high. Some of the villages showed a sizeable number of families with little work in agriculture who take up whatever non-farm work is available. The non-farm employment produces poor wages. The raw materials used in home industries are brought from long distances involving additional expenses. The markets for the crude products are also seasonal and distant.

The occupational structure of the villages is predominantly agricultural. The source of income is also mainly agriculture. This is not desirable for a stable and even flow of activity and income. It is difficult to understand the absence of ancillaries to agriculture. It is also difficult to understand why Dairy Farming did not develop in this district although neighbouring districts such as, Kaira and Charotar with similar conditions, have extensive dairy farming. The leadership and enterprise in the co-operative field are available in ample measure in the district. The nucleus of collection and distribution has already been organized and it would not take long to spread the network. Just as the dairy federation in the Kaira district has acted as a catalyst to the start of dairy farming and a host of related economic and social activities in the area, the Federation at Baroda may perform the same function in the future. The latter has the added advantage of a large potential urban market for its milk near at hand which would ensure rapid progress in the field.

Community development and change

It has been mentioned earlier that the coverage of the study is limited and the sample of families is small. The conclusions drawn from this will, therefore, also be limited in scope. They will apply mainly to the area studied and not to the nation or even to the State. It is hoped that similar studies will be replicated in other parts of the country which will enable one to generalize on the State or national level.

One of the important findings explodes the commonly held opinion that the location of the villages with reference to the block headquarters makes considerable difference in the benefits and impact. Our analysis shows that the frequency of visits of the various change agents and the adoption of improved practices have no relationship with the distance of the village from the block headquarters.

This study shows that in general, the small farmer has not been a beneficiary of the programmes as much as the big farmer. However, the small farmer has responded in greater measure than the big farmer where certain basic agricultural overheads were available. In many cases, where these overheads were available, the programme acted only as a catalytic agent and the small farmer used his own resources to adopt improved practices.

Although the village level worker does not come out favourably in terms of the impact made, he has performed a valuable function in disseminating information between the programme organization and the farmers. Several measures could be suggested to make him more effective. His training should be readjusted in the light of experience over the time. His work and living may also be made more attractive. The area under his jurisdiction should be reduced and a clear delineation of his developmental activities should be made.

In trying to answer the question "What is the most efficient and meaningful organizational unit for development." one might suggest that the present block system should continue. It is true that there is scope for streamlining and rationalizing the existing administration. This however, will be a more efficient way of increasing the efficiency of the programme organization than to change the layout basically. As has been found in this study, the block unit has been most functional in implementing the development programmes.

There has been a controversy over the limitation of the scope of development programmes. According to one school of thought, community development should be limited to agricultural production and relieved of the responsibility of creating social overheads. Even within agriculture, the emphasis should be on activities which have been tried and proved efficacious and there is certainty about

the outcome of their application. This approach makes development more manageable and the results more or less certain. It is even argued that if only an attempt is made to level up the lowest in productivity amongst the agriculturists in the villages with the few at the top through the medium of community development, our agriculture could be transformed within a measurable time. There is also a section of opinion which feels that the community development should not worry about the social motivation. Its task is to see that change takes place in agriculture, irrespective of its location This may mean that the more resourceful march ahead more rapidly and the gap between the marginal and the substantial would increase.

What is important from the point of view of the country is the aggregate and not the points of occurrence. The problems of spread and the social motivation will look after themselves in due course. We often do not attach importance to a phenomenon known as percolation by demonstration. What some achieve may spark others who are either less responsive or indifferent. Once this cycle begins, the much needed equity in the spread of the effort or the progress would automatically come. What is thus required is to determine the priority not on the basis of putting everything first or the wrong thing first but that which responds most to the change.

Priorities should be determined on the basis of what the people would decide or would enthusiastically receive. In these matters, it is argued, there is no consensus even among the most homogeneous groups. It is necessary, therefore, that the agencies charged with the responsibility of introducing change take it upon themselves to decide some of these priorities in the initial stage.

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