

**EVALUATION OF SMALL FARMERS' DEVELOPMENT AGENCY
MYSORE DISTRICT, KARNATAKA STATE, (1972-73—1973-74)**

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PREFACE

This study on evaluation of Small Farmers' Development Agency, Mysore district, Karnataka, was carried out as a common study for Agro-Economic Research Centre at the instance of the Ministry of Food and Agriculture, Government of India. The field work for the collection of the primary data was carried on for two years viz. 1972-73 and 1973-74. The questionnaire canvassed during the year 1972-73 was so designed that we could collect relevant information on some aspects of the economy of the selected households for the year 1971-72 also. In short, we have the information on some important issues for three years from 1971-72 to 1973-74.

The major part of the field work was supervised by Dr. C.S. Gajarajan and Dr. V.S. Satyapriya and the author is grateful to both of them. The author received valuable suggestions and co-operation in collection of the secondary data from the office of the SFDA at Mysore and for which he is thankful to all the concerned officials of the Agency.

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15th January, 1975.)

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WEAKER-SECTION-ORIENTED DEVELOPMENT STRATEGY IN AGRICULTURE

1.1 Need for Weaker-Section-Oriented Development Strategy in Agriculture

It is believed by a major section of the academic circle and there are sufficient evidences also to prove that the introduction of new technology in Indian agriculture during the recent years has distorted the traditional land-relation pattern. Big farmers have accepted the new technology while the small and tenant farmers have remained laggards. The new trends in land-relations and the suggested remedies reflected in various policies and programmes of the Government have become the centre of attraction for the research workers.

The earlier studies (mainly based on the country-wide Farm Management Studies conducted during the middle of the 'sixties) relating the size of holding and productivity had established inverse relationship between scale of operation and agricultural productivity. After the introduction of new technology in agriculture, this relationship appears to have changed and reversed. N. Bhattacharya and G.R. Saini (1972), after examining the two sets of Farm Management studies data referring to the middle 'sixties and the late 'seventies, have arrived at the conclusion that the changes in the size-productivity relationship were brought about as a result of the new technology. As suggested by M. Schalter and John W. Mellor (1972), this change appears to have taken place due to high cost of cultivation or uncertainty connected with the new technology causing differential rates of adoption between farm-size-groups.

There are however numerous contradictory evidences produced by various research studies to support or reject the changing size-productivity-relation hypothesis. One obvious impact of this unending controversial debate was that the policy-makers were prompted to reorient their agricultural development strategy so that the weaker section of the farming class would not lag behind in adoption of the new technology in agriculture. Among the various programmes envisaged, the Small Farmers' Development Agency (SFDA) is a prominent one with an outlay of Rs. 675 million in 46 selected districts throughout the country during the period of the Fourth Five-Year Plan. Another equally important programme envisaged during the same period is that of the Marginal Farmers and Agricultural Labour (MFAL).

1.2 Framework of the Strategy

The non-viable units of farmers are subject to a continuous process of disinvestment. Such farmers may be classified into two categories, namely those who are at subsistence level and those who are not at subsistence level so that specific programmes could be framed for their economic development.

Those who are at subsistence level have comparatively better land-base, but they have negative savings and investment, the process of disinvestment being relatively slow. They can improve their economy if they are helped to improve their land-base by extending long-term credit for digging irrigation wells and installing electric pumpsets etc. and/or medium-term credit for pursuing supplementary livestock enterprises. They may also be helped to adopt improved crop technology by extending short-term credit. These measures would lead them to a situation above subsistence level with positive savings and investment and economic viability. The SFDA programme was envisaged for this

category of the farmers with the objective to bring them above subsistence level and make them viable units through credit assistance. This category is broadly defined in an arbitrary way as consisting of those farmers who own land between 2.5 and 5 acres.

The same cannot be said about the second category of the farmers who have comparatively poorer land-base and are below subsistence level with negative savings and investments, the process of disinvestment being relatively very rapid. Such farmers, along with the landless agricultural labourers should be provided employment in a massive programme of rural development work so that their incomes will rise and they will reach the subsistence level. They will not be assisted with credit to improve their land-base, because, in a sense, they are not creditworthy. The MFAL programme was envisaged for this second category of the farmers with the sole objective of bringing them upto the subsistence level through providing employment. This second category is broadly defined in the same arbitrary way as consisting of those farmers who own land less than 2.5 acres and also the landless agricultural labourers. In short, the SFDA programme is envisaged on the basis of a credit-oriented strategy, and the MFAL on the basis of an employment-oriented strategy. A framework of these strategies is presented in the Chart on the next page.

1.3 Role of the Co-operatives in the SFDA Programme and the Risk Elements

As the SFDA is a credit-oriented development programme, its success mainly depends upon the presence of sound credit institutions in the area. Credit co-operatives, including the land development banks, are expected to play the crucial role of extending the long-term, medium-term and short-term credits to the small farmers. The availability of funds with these co-operatives determines the scale of overall programme to be undertaken in an area. If the available funds are in short supply and the number of small farmers applying for the credit-assistance is relatively large, the cooperative institutions are forced to ration the credit supply which results in slower implementation of the programme. It is true that the commercial banks in the area are expected to channel their credit-assistance through the co-operatives to reduce their burden, but in practice, such assistance is not coming forward in a big way. It has resulted into a situation where the most of the targets of the SFDA programme have remained underachieved. The shortage of credit supply with the co-operatives further results in under-utilization of the assistance provided by the SFDA to the co-operatives in the form of managerial subsidy and so forth.

In this connection, it would be useful to know the experiences of the SFDA's organized in different districts all over India. The experience in Mysore district in Karnataka shows that the various development programmes envisaged by the SFDA in that district during the Fourth Plan period could not be implemented due to shortage of funds. The financial targets of the SFDA in Mysore district was to the level of Rs. 63.5 million during the Fourth Plan whereas the achievement was only to the extent of Rs. 15.4 million, which is less than 25 per cent of the target. Similar experiences are reported by the preliminary reports prepared by the Agro-Economic Research Units on the working of the SFDA's in different parts of the country. If the minimum programmes envisaged by the SFDA's could not be implemented because of the shortage of funds, there is little hope of achieving the goals of improving the land-base of the bulk of the non-viable units of farm-holdings. In short, the co-operative credit institutions should be provided with necessary financial resources to meet the envisaged targets of the programme to make it successful.

Non-viable Holdings

Small farmers

Comparatively better land-base (2.5 to 5 acres) at subsistence level, negative savings and investment, process of disinvestment relatively slow

Credit-oriented programme as a development strategy (SFDA)

Credit-extension

Long-term credit for improving land-base

Medium-term credit for supplementary livestock enterprises

Short-term credit for adoption of improved crop technology

Increase in incomes, above subsistence level, positive savings and investment, economic viability

Marginal farmers

Comparatively poor land-base (less than 2.5 acres), below subsistence level, negative savings and investment, process of disinvestment relatively rapid

Employment-oriented programme as a development strategy (MFAL)

Employment in massive rural work

Increase in incomes, at subsistence level farm business still non-viable

There are some who argue that the targets are not fulfilled not because of the shortage of the funds, but because a majority of the small farmers who apply for credit-assistance for improving their land-base, or for undertaking a supplementary enterprise do not fit into the technical feasibility concept prescribed and strictly implemented by some SFDA's. For instance, it is rather risky on the part of any credit institution to venture to advance credit for digging irrigation wells to farmers, big or small, in the areas where underground water resource is uncertain. It is also risky to advance credit for livestock enterprises in the areas where fodder resource is scarce and is not within the technical possibility of development. The enterprises like poultry farming and piggery are risky under certain geo-climatic conditions and sometimes their economic feasibility depends upon the locational factor also. The credit institutions making advances to technically and economically non-feasible enterprises would face the problem of recovery and they are therefore inclined to resort to credit rationing.

On the part of the beneficiaries of credit assistance, technically and economically non-feasible conditions induce them to reject the assistance totally or resort to internal credit rationing for the genuine fear of failure of their development schemes. The SFDA's substantial subsidy (to the tune of 25 per cent in many cases) however induces such farmers to accept the assistance and face certain risks. The case for illustration is the credit-assistance accepted by the Mysore farmers to buy cross-bred milch cows which were geo-climatically unsuitable and the fodder-resource position of the farmers was weak. Some cows died and many became skeletal and ceased to yield milk.

There is provision, on the part of the SFDA's, to face such risks and protect the interests of the borrower through subsidy-inducement and those of the credit institutions through risk-funds. There is however a limit to it. At certain level, the SFDA may reduce the subsidies and the risk-fund contribution, the credit institutions may become reluctant to advance loans and the farmers may not borrow, if the risks seem to be very high. The programmes will be successful under the conditions of technical and economic feasibilities. In the absence of those conditions, the schemes may cease to work. One, therefore, hesitates to recommend to increase the supply of credit without confirming oneself the conditions of technical and economic feasibilities of the scheme.

It would be appropriate to further classify the small farmers into two categories: (i) those in whose case it is technically and economically feasible to improve the land-base and/or to provide for a supplementary enterprise; and (ii) those in whose case it is not possible to do so. Ultimately the SFDA should concentrate its effort on the first category and the MFAL should take care of the second category.

1.4 The MFAL Programme for Rural Reconstruction and Removal of Poverty

The role of the co-operatives in the MFAL programme is limited to the organisation of the rural labour co-operatives consisting of the landless agricultural labourers, marginal farmers and category (ii) of the small farmers mentioned above. Its success depends upon guarantee of continuous employment and minimum basic wage-rate to its members. A deliberate attempt to create the necessary quantum of public work in rural areas also determines the success of this programme.

For this purpose, the development plans are to be reoriented to undertake the massive rural reconstruction programmes. The

details of such programmes are to be worked out. The programmes may include improvement and development of agricultural land, construction of roads interlinking all the villages to the market places, construction of roads from the village site to approach the farm land, construction of public and private buildings, public work to improve the rural hygienic conditions etc. To achieve all this in a systematic way, one must have a village development plan on the model of modern town plans.

The success of weaker-section-oriented development strategy thus depends upon (i) redefining the SFDA beneficiaries on the basis of technically and economically feasible schemes passed on to them; and (ii) making the MFAL group more broad-based including the non-beneficiaries of the SFDA and providing continuous employment to them in the village development plans.

II

THE SFDA IN MYSORE DISTRICT

2.1 The Extent of the Problem

If one strictly follows the definition of small farmers as those who cultivate land between 2.5 and 5 acres according to the Census of India, 1961, 22.64 per cent of the total number of cultivating households in Karnataka, belonged to the category of small farmers. The proportion of small farmers to total number of cultivating households in different districts of Karnataka varied widely. Two categories of districts with high and low proportions of small farmers could be distinguished as in Table 2.1.

Table 2.1: Two Categories of Districts with High and Low Proportions of Small Farmers in Karnataka

Category I		Category II	
Districts with high proportion of small farmers		Districts with low proportion of small farmers	
District	Percentage of small farmers to total number of cultivating households	District	Percentage of small farmers to total number of cultivating households
Bangalore	30.21	Belgaum	19.71
Chikmaglur	25.44	Bellary	14.74
Coorg	39.09	Bidar	14.04
Hassan	32.19	Bijapur	12.62
Kolar	31.79	Chitradurga	15.31
Mandya	31.97	Dharwar	14.07
Mysore	28.61	Gulbarga	11.23
North Kanara	25.09	Raichur	12.24
Shimoga	25.26		
South Kanara	31.46		
Tumkur	29.76		

The districts in Category I display high proportion of small farmers. They are located in the western and southern parts of the state where the rainfall is assured and the irrigation system is relatively better developed. Rice and Ragi are the important food crops grown. Besides, some of the districts in this Category, namely, Chikmaglur, Hassan, Shimoga, Coorg, South Kanara and North Kanara are known for their plantation crops like arecanut, coffee and coconut and these districts also possess rich forest resources. The proportion of the small farmers to total cultivating households in the case of the districts in Category I is quite high and varies from 25.09 per cent in North Kanara to 39.09 per cent in Coorg.

On the other hand, the districts in Category II display low proportion of small farmers. They are located in the northern and eastern parts of the state, where the rainfall is low and less assured, and the irrigation system is relatively less developed except in the case of Raichur district. Jowar is an important food crop grown. The proportion of the small farmers to total cultivating households in the case of districts in Category II is quite low and varies from 11.23 per cent in Gulbarga to 19.71 per cent in Belgaum.

The main objective of the SFDA is to improve the land-base of the small farmers through irrigation programmes and to assist them to increase their incomes by subsidiary livestock enterprises. The implementation of the programmes aimed at this objective should be started materially in those areas where the concentration of small farmers is high and the development potentialities are available so that the risk and uncertainty of ultimate failure of the programme will get reduced. The districts in Category I have both the concentration of the small farmers and the development potentialities in the form of underground water availability for irrigation development and of fodder and grass resources for livestock development whereas the districts in Category II do not possess either. Naturally, out of the four districts selected for the SFDA programmes in Karnataka, the choice fell on three districts in Category I, namely, Mysore, Bangalore and North Kanara, and only one district in Category II, namely, Bidar.

2.2 The Scheme of the Study

The present study is an exercise evaluating the progress of the SFDA in Mysore district since its inception in 1970-71. The nature of the programmes effecting the economic well-being of the small farmers who are the beneficiaries under those programmes is studied in detail at the field-level. For that purpose, 148 small farmers, benefited under the three main programmes of the SFDA, namely, individual irrigation wells, dairy development and sheep rearing, were selected from Kollegal Taluka of Mysore district, where all the three programmes mentioned above, were supposed to have been implemented successfully. (For the method of selection of the sample farmers, see Appendix I). The selected farmers were interviewed concurrently for two successive years, i.e. 1972-73 and 1973-74, and the data were collected in respect of loan assistance and asset formation, development of resources and employment, agricultural and livestock production and income. Chapters III to V will present information on the above-mentioned topics in their logical sequence and the present chapter will evaluate the progress of the SFDA in Mysore district since its inception, presenting a background frame-work of the area-level information so that the understanding of the micro-level information in the subsequent chapters will be easy. Chapter VI which is the concluding chapter, will summarise the information-content of the preceding chapters and makes suggestions for the future expansion.

2.3 Development Potentialities for Small Farmers in Mysore District

The Mysore district lies at the southwestern part of the Karnataka State between 12.9° and 11.6° north latitude and between 75.9° and 77.7° east latitude, covering an area of 11.9 thousand sq. kilometers. Some relevant socio-economic features of the district are presented in Table 2.2. The density of population was 177 persons per sq. kilometer of total geographical area in 1971. The corresponding density in Kollegal taluka from which our sample farmers are selected was only 72 persons. This difference was due to the larger proportion of the forest area in Kollegal taluka than in Mysore district. The forest area as percentage of total geographical area was 26.02 per cent in Mysore district whereas it was as high as 65.51 per cent in Kollegal taluka. On the other hand, the density of population per sq. kilometer of gross cropped area was 369 persons in Mysore district, which corresponded with 357 persons per sq. kilometer in Kollegal taluka. Relatively lower densities of population per sq. kilometer of total geographical area, both in Mysore district and Kollegal taluka, in a way suggest the potentiality for the development of the land resource.

The land resource can be developed in two ways: (i) extensively, by increasing the cultivated area, and (ii) intensively, by increasing the productivity of land through the development of irrigation. The scope for increasing the cultivated area, both in Mysore district and Kollegal taluka, is limited as the cultivable waste, fallow land and permanent pastureland form very small proportion to the total geographical area. The cultivable waste as percentage of total geographical area formed only 3.07 per cent in Mysore district and 0.62 per cent in Kollegal taluka. The corresponding figures for fallow land and permanent pastures were 5.74 per cent and 4.71 per cent respectively and 13.82 per cent and 0.16 per cent respectively for Mysore district and Kollegal taluka. Therefore, unless the forest areas are encroached upon, there is very little scope for increasing the total cultivated area. There is however sufficient scope for increasing the productivity of land by developing the irrigation system. This can be done by exploiting the surface water resource as well as the underground water resource. Presently, the proportion of net irrigated area to net cropped area forms 18.39 per cent in Mysore district and 12.85 per cent in Kollegal taluka. The well-irrigated area forms a very small proportion (11.87 per cent) of the net irrigated area in Mysore district, whereas it is quite large (60.94 per cent) in Kollegal taluka. With Cauvery and its perennial tributaries Kabini and Laxmanathirtha which drain the district, there is still some scope for further exploitation of the surface water resource. There is however much scope for the exploitation of the underground water resource in many parts of the district as suggested by the recent hydrological surveys conducted by the geological department of the state government.

The scope for the development of the livestock can be assessed on the basis of the density of different types of livestock. The density of cattle and buffalo population per sq. kilometer of geographical area was 79 animals in Mysore district and 42 animals in Kollegal taluka, in 1966. The cattle and buffalo in India, however, survive mainly on the crop residuals and sometimes the total geographical area as the base for working out the density may appear meaningless. If, therefore, these densities are worked out on the basis of per sq. kilometer of gross cropped area, Mysore district had 173 animals and Kollegal taluka 209 animals per sq. kilometer of gross cropped area. As sheep and goats do not normally graze mainly on crop residuals, it will be relevant to measure their densities per sq. kilometer of total geographical area. The densities of sheep and goat population measured thus were 22 animals and 17 animals for Mysore district for the respective animals. In the case of Kollegal taluka, the corresponding densities were only 10 and 7 respectively.

The proportions of marginal farmers and small farmers, as defined already, to the total cultivating households were significantly high in both Mysore district and Kollegal taluka. These high proportions, namely, the small farmers forming 28.61 per cent and 28 per cent and the marginal farmers forming 24.38 per cent and 25.22 per cent respectively for Mysore district and Kollegal taluka, provided human resource potentials. Besides, the high proportions of scheduled caste and scheduled tribe population (18.10 per cent and 28.30 per cent for Mysore district and Kollegal taluka), who are mainly identified with the landless agricultural labourers and marginal farmers, gave an opportunity for the improvement of the economic conditions of the down-trodden sections of the rural society through the development schemes envisaged by the SFDA.

Table 2.2 : Certain Socio-economic Features of Mysore District and Kollegal Taluka

	Mysore District	Kollegal Taluka
1. Density of population per sq.km. of total geographical area (1971)	177	72
2. Density of population per sq.km. of gross cropped area (1971)	369	357
3. Percentage of Scheduled Caste and Scheduled Tribe population to total population (1971)	18.10	21.30
4. Land not available for cultivation as percentage of total geographical area (1971-72)	11.47	5.66
5. Forest area as percentage of total geographical area (1971-72)	26.02	65.51
6. Cultivable waste as percentage of total geographical area (1971-72)	3.07	0.62
7. Fallow land as percentage of total geographical area (1971-72)	5.74	4.71
8. Permanent pasture as percentage of total geographical area (1971-72)	13.82	0.16
9. Net cropped area as percentage of total geographical area (1971-72)	38.47	19.40
10. Gross cropped area as percentage of total geographical area (1971-72)	45.64	20.11
11. Net irrigated area as percentage of net cropped area (1971-72)	18.39	12.85
12. Well-irrigated area as percentage of net irrigated area (1971-72)	11.87	60.94
13. Canal-irrigated area as percentage of net irrigated area (1971-72)	60.71	18.57
14. Tank-irrigated area as percentage of net irrigated area (1971-72)	24.77	15.33
15. Density of cattle and buffalo population per sq.km. of total geographical area (1966)	79	42
16. Density of cattle and buffalo population per sq.km. of gross cropped area (1966)	173	209
17. Density of sheep population per sq.km. of total geographical area (1966)	22	10
18. Density of goat population per sq.km. of total geographical area (1966)	17	7
19. Percentage of small cultivator-households to total cultivator-households (1961)	28.61	28.23
20. Percentage of Marginal cultivator-households to total cultivator-households (1961)	24.38	25.22
21. Percentage of the estimated area cultivated by small farmers to total cultivated area (1961)	14.83	-
22. Percentage of the estimated area cultivated by Marginal farmers to total cultivated area (1961)	2.21	-
23. Average cultivated area per cultivator household (1961) (in acres)	10.32	8.30

2.4 Organization and Functioning of the SFDA in Mysore District

The Small Farmers' Development Agency in Mysore District was organised with a view to implementing some special schemes financed by the Government of India to assist the small farmers. This organisation has been registered under the Mysore Societies Registration Act of 1960. The Agency was inaugurated on 28th August, 1970, and the first Annual General Body meeting was held on 1st March 1971.

The SFDA in Mysore district started its functioning with the enumeration of the small farmers in the district by census method. This work was carried on with the cooperation of the Revenue Department, and when the enumeration was complete, the list of the small farmers contained 53,219 households. On the basis of the 1961 Census of India, the number of cultivating households with cultivated land between 2.5 acres and 4.9 acres was 50,805. There appears to be about 5 per cent increase in the number of small farmers during the course of ten years from 1961 to 1971.

The SFDA further envisaged the development plans for the identified small farmers. These schemes mainly contained individual irrigation wells, community irrigation wells and the installation of the electric pumps with a view to improving the land-base. The schemes which were envisaged to provide supplementary livestock enterprises included dairy development, sheep rearing and poultry farming. The physical targets of these schemes during the Fourth Plan period and their achievement upto 1st March 1974 are given in Table 2.3. These physical targets and their achievements are for only selected schemes which directly benefited the small farmers covered by those schemes.

The schemes envisaged for improving the land base were (i) individual wells, where the beneficiaries were advanced long-term financial assistance to dig wells on their own farms for individual benefit, and (ii) community wells, where the groups of small farmers were provided with long-term financial assistance and technical guidance to dig wells for community use. Both the categories of the farmers mentioned above were given financial assistance to buy electric pumps to lift water. In practice, only those farmers who were assisted under the 'individual wells' scheme lifted loan for buying electric pump-sets when there was need, and the farmers under the 'community wells' scheme had managed to install pump-sets out of the financial assistance allotted for digging wells. The physical target for 'individual wells' scheme was 4,500 wells during the Fourth Plan period whereas the achievement was only 1,893 as on 1st March 1974, a date quite close to the end of the Fourth Plan. The achievement was only 42 per cent of the target. In the case of the 'community wells' scheme, the physical target was 160 wells whereas the achievement was only 35 wells, i.e. 21.8 per cent of the target. For the installation of pumps, the target was 4,500 and the achievement was 817, i.e. 18.1 per cent of the target.

The schemes envisaged for providing supplementary livestock enterprises to the small farmers were (i) dairy development, where the cross-bred Jersey cows were made available under medium-term financial assistance, (ii) sheep rearing where Bannur variety of sheep, an improved high meat-yielder, was given, and (iii) poultry farming, where a small unit of improved poultry birds was handed over to the small farmers. The achievements of the targets for both dairy development and sheep rearing schemes were relatively high. The target for dairy development

for the Fourth Plan period was 600 whereas the achievement was 531, i.e. 88.5 per cent, and the target for sheep rearing was 1000 and the achievement was 894, i.e. 89.4 per cent. On the other hand, the target for poultry farming was 200, whereas the achievement was only 47, i.e. only 23.5 per cent of the target.

Table 2.3: Physical Targets and Achievements of some Important Schemes of the SFDA, Mysore District, as on 1st March, 1974.

Schemes	Targets	Achievements	(3) as % of (2)	Number of SFS benefited
Individual wells	4,500	1,893	42.0	1,893
Community wells	160	35	21.8	397
Installation of Pumpsets	4,500	817	18.1	*
Dairy Development	600	531	88.5	531
Sheep Rearing	1,000	894	89.4	894
Poultry Farming	200	47	23.5	47
Total	10,960	4,217	38.4	3,762

* Included in 'Individual wells'

The number of small farmers directly benefited by the above schemes as on 1st March 1974 was 3,762 only. This means that the proportion of the beneficiaries so far to the total number of identified small farmers was as low as 7 per cent. This happened because both institutional finance and the SFDA funds were in short supply to implement the schemes of the programme, as seen from Table 2.4.

The total financial target for the Fourth Plan period was Rs. 63,511 thousand whereas the achievement through the institutional finance was only Rs. 15,403 thousand, i.e. about 24 per cent of the target. Of this amount, the SFDA contributed Rs. 6,060 thousand mainly in the form of subsidies and grants both being deposited with the financial institutions providing assistance to the small farmers. The financial assistance extended by the SFDA was more than 39 per cent of the assistance provided by the financial institutions to the small farmers.

The list of financial outlay on different schemes and other items is deceptively long. As a matter of fact, the schemes from 1 to 7, namely, individual wells, community wells, installation of pumpsets, dairy development, sheep rearing, poultry farming and pigger development were envisaged to directly benefit the small farmers either to (i) improve the land-base, or to (ii) provide supplementary livestock enterprises. The other schemes and items of expenditure do not appear to benefit the individual small farmers in achieving either of the two goals mentioned above. The seven schemes directly benefiting the individual small farmers had a financial target of Rs. 44,378 thousand, which was 69.8 per cent of the total financial target. The column under 'Achievements' shows that the 'piggery development' scheme was not implemented at all. It means that there were only six schemes which were implemented to directly benefit the individual small farmers. The financial achievement for these six schemes was Rs. 14,798 thousand, which was 96 per cent of the total financial achievement. The financial achievement as proportion of the financial target for these six schemes was 33.6 per cent. If the targets were wholly achieved, the number of small farmers directly benefited would have been roughly three times, namely, 11,286 which itself would have been about 21 per cent of the identified

Table 2.4 : Financial Targets and Achievements of the SFDA, Mysore District, as on 1st March 1974

Schemes and other items	(Rs. in thousands)				
	Targets	Achievements	SFDA A/c	(3) as % of (2)	(4) as % of (3)
(1)	(2)	(3)	(4)	(5)	(6)
1. Individual wells	22,500	9,123	1,872	40.5	20.5
2. Community wells	4,320	1,163	527	26.9	45.3
3. Installation of pump sets	13,500	2,304	617	17.1	26.7
4. Dairy development	2,160	1,255	195	58.1	15.5
5. Sheep rearing	1,000	855	152	85.5	17.7
6. Poultry farming	553	98	13	17.7	13.2
7. Piggery development	345	-	-	-	-
8. Kitchen gardens	987	-	12	-	-
9. Perennial fruit-trees	1,800	-	-	-	-
10. Coconut cultivation	840	-	10	-	-
11. Rearing houses	2,200	18	3	0.8	16.6
12. Rearing equipments	1,200	17	3	1.4	17.6
13. Planting mulberry cuttings	150	-	9	-	-
14. Managerial subsidy to co-operatives	1,290	-	391	-	-
15. Construction of godowns	1,760	85	85	4.8	100.0
16. Purchase of tractors	1,400	280	219	20.0	78.2
17. Demonstration plots	100	-	76	-	-
18. Risk fund	1,936	-	702	-	-
19. Agricultural implements	1,100	-	1	-	-
20. Rural artisans	557	-	25	-	-
21. Share capital	500	-	101	-	-
22. Training publicity	20	-	-	-	-
23. Market centres	500	-	-	-	-
24. Tobacco barns	2,450	205	47	8.3	22.9
25. Tobacco equipments	343	-	-	-	-
26. Medium term loan to M.D.C.C.B.	-	-	1,000	-	-
Total	63,511	15,403	6,060	24.2	39.3

small farmers in the district. In short, the programme was aimed at helping a small proportion of the small farmers during the prescribed time limit, and as the achievement was just 33 per cent of the target, a very small proportion of 7 per cent of the identified small farmers were directly assisted.

III

ASSET FORMATION THROUGH AID

3.1 Transformation of liabilities into assets

The SFDA programme, as seen in Chapter I, is a credit-oriented strategy. With the credit assistance provided through the financial institutions, the liabilities of the beneficiaries to those financial institutions increase. Over a period, these liabilities would be equal to the principal borrowed plus the interest charged by the financial institution and minus the repayments done during the period. At the end of a period, therefore,

$$L = (O + P + I) - R, \text{ where}$$

L = liabilities at the end of the period,
O = Principal and interest outstanding at the beginning of the period,
P = Principal borrowed during the period,
I = Interest on outstanding loan and on the principal borrowed during the period, and
R = Repayment of principal and interest during the period.

These liabilities are the result of extension of credit for development purpose. Logically, they should get themselves transformed into assets which are productive. The types of assets formed through these liabilities depend upon the purpose for which the credit is extended. In the case of the small farmers, the development strategy is aimed at (i) improving the land-base, and (ii) providing supplementary livestock enterprise. Asset-formation, therefore, should take place mainly in those two fields. One can visualise the major groups of assets with the small farmers and can see in which group major changes take place. The broader groups of assets with the small farmers so visualized are (i) land and building, (ii) agricultural machinery and implements, (iii) livestock, (iv) non-agricultural machinery and equipments, and (v) financial assets. The total value of the assets with the small farmers at a point of time would be therefore,

$$A = L + I + S + N + F. \text{ where,}$$

A = Total assets
L = Value of land with the expenses incurred on its improvement, and the value of buildings,
I = Value of agricultural machinery and implements,
S = Value of livestock,
N = Value of non-agricultural machinery and equipments,
and F = Value of financial assets.

This list excludes two important groups of assets, namely, the durable household consumer goods and the stock of agricultural produce with the household, on the ground that both of them are not productive.

Any change in the liabilities over a period could be calculated as

$$\delta L = Lt_1 - Lt_0, \text{ where } t_0 \text{ refers to the starting point of the period and } t_1 \text{ refers to the end-point of the period.}$$

Similarly, any change in the assets over a period could be calculated as

$$\delta A = At_1 - At_0$$

The rate of change in assets is defined as the ratio of change in assets and change in liabilities, as

$$\text{Rate of change in assets} = \frac{\delta A}{\delta L}$$

This ratio is equal to unity if all the additional liabilities get themselves transformed into additional assets. In other words, the credit borrowed is fully utilised for asset-formation. If $\delta A/\delta L$ is less than unity, part of the credit borrowed is diverted to consumption purpose. Under such situation, in a sense, the credit is misutilised. The ratio $\delta A/\delta L$ is more than unity when (i) besides the full utilisation of credit for asset-formation, there are some positive savings with the household which get themselves transformed into assets, (ii) assets get multiplied, as it is the case with livestock, and/or (iii) the value of the asset is more than the cost incurred in its formation due to certain market phenomena. The ratio being more than unity provides a situation which is economically sound for both the borrower and the lender.

Any positive savings that gets directly transformed into assets should be regarded as visible savings. In case the assets get multiplied or its value is more than the cost incurred on its formation, increments in the assets should be again regarded as due to savings, which are invisible. Multiplication of assets is the direct and automatic use of the income from the asset for further asset-formation, and hence it is savings. If the value of the asset is more than the cost incurred on its formation, the difference is net capital gain and therefore is income. When this income is allowed to increase the value of assets, it should also be regarded as invisible savings. The visible and invisible savings would therefore be equal to increase in assets minus increase in liabilities, as,

$$S_v + S_i = \delta A - \delta L$$

The ultimate aim of any credit programme is to see that the borrower would get himself cleaved off from all the liabilities by repaying the loans. If the rate of repayment is less than the rate of interest, the liabilities would go on increasing. If both the rates are equal, the liabilities remain the same. It would be possible for the borrower to clear off the debt only when the rate of repayment is higher than the rate of interest. How much time the borrower would take to clear off the debt depends upon the rate of repayment.

In the following sections, the information on liabilities, assets, rate of change in assets, visible and invisible savings and rate of repayment for the selected households of the small farmers is presented.

3.2 Change in Liabilities

The information in respect of change in liabilities from the beginning of 1972-73 to beginning of 1974-75 for the selected households under the three major schemes of individual wells (including installation of electric pump sets), dairy development and sheep rearing is presented in Tables 3.1, 3.2 and 3.3 respectively. In the case of households under 'individual wells' scheme, the liabilities are of three types: (i) long-term cooperative loan, (ii) short-term cooperative loan, and (iii) private loan. In respect of the other two categories, namely, dairy development and sheep rearing, besides the three types of liabilities mentioned above, there is one more type i.e. medium-term loan. The classification of the cooperative loan into long-term

Table 3.1 : Average per household indebtedness of the selected beneficiaries under the "Individual Wells" Scheme (1972-73 to 1973-74)

Items	(Amount in Rs.)				Total
	Long-term co-operative loan	Short-term co-operative loan	Private loan		
Outstanding at the beginning of 1972-73	-	24	264		288
Borrowed during 1972-73	5,258	106	222		5,586
Repaid during 1972-73 - Principal	92	54	110		256
Interest	378	5	42		425
Total	470	59	152		681
Outstanding at the beginning of 1973-74 - Principal	5,166	76	376		5,618
Interest	253	7	16		276
Total	5,419	83	392		5,894
Borrowed during 1973-74	-	138	320		458
Repaid during 1973-74 - Principal	195	140	164		499
Interest	289	17	15		321
Total	484	157	179		820
Outstanding at the beginning of 1974-75 - Principal	4,971	74	532		5,577
Interest	399	8	68		475
Total	5,370	82	600		6,052

Table 3.3 : Average per household indebtedness of the selected beneficiaries under the "Sheep Rearing" Scheme (1972-73 to 1973-74)

Items	(Amount in Rs.)				Total
	Long-term co-operative loan	Medium-term co-operative loan	Short-term co-operative loan	Private loan	
Outstanding at the beginning of 1972-73	149	-	40	436	625
Borrowed during 1972-73	98	1,000	205	184	1,487
Repaid during 1972-73 - Principal	29	208	226	144	607
Interest	5	87	20	33	145
Total	34	295	246	177	752
Outstanding at the beginning of 1973-74 - Principal	218	792	19	476	1,505
Interest	25	3	-	-	28
Total	243	795	19	476	1,533
Borrowed during 1973-74	307	-	326	59	692
Repaid during 1973-74 - Principal	21	122	229	122	494
Interest	22	37	26	35	120
Total	43	159	255	157	614
Outstanding at the beginning of 1974-75 - Principal	504	670	116	413	1,703
Interest	41	37	-	-	78
Total	545	700	116	413	1,774

medium-term and short-term is based on the period of repayment. The long-term loan is advanced for digging individual wells and installation of electric pump sets, and the period for its repayment is ten years. The medium-term loan, advanced for procuring livestock enterprises, is to be repaid within three years. The short-term loan, meant for buying current inputs required by the farm business, is to be repaid during the same year after the harvest. There is no hard and fast rule about the period of repayment in respect of private loans. The rate of interest charged on cooperative loans varies from 9 per cent to 12 per cent whereas, in the case of private loans, it varies from 12 per cent to 18 per cent.

The amount of long-term cooperative loan advanced to a household for digging individual well is Rs. 5000 and for installation of electric pumpset, it varies from Rs. 2000 to Rs. 3000. The amount of medium-term cooperative loan advanced for buying a cross-bred cow is Rs. 2000 and for buying a unit consisting of ten Bannur variety of sheep is Rs. 1000.

Among the sample households under the "individual wells" scheme, all the 53 households borrowed long-term loan of Rs.5000 each for digging irrigation wells whereas only 18 households borrowed long-term loan varying from Rs. 2000 to Rs. 3000 per household for installation of pump sets. The sample households under the "dairy development" scheme, who numbered 44, borrowed medium-term loan of Rs. 2000 per household for buying cross-bred cows. Out of these, two households borrowed long-term loan of Rs. 5000 for digging irrigation wells. One of these two had borrowed an additional long-term loan of Rs. 3000 for installation of pump sets. All the 51 sample households under the "sheep rearing" scheme had borrowed medium-term loan of Rs.1000 each for buying sheep. Out of these, one household had borrowed long-term loan of Rs. 5000 for digging well.

The number of households borrowing from private money lenders was quite large in respect of all the three categories of the households. It was 25 in respect of the households under the "individual wells" scheme and 23 and 29 in the case of the households under the "dairy development" and "sheep rearing" respectively.

The amount of loans outstanding per household at the beginning of 1972-73 was Rs. 288 for the households under the "individual wells" scheme. This amount increased to Rs.5,894 at the beginning of 1973-74 and further increased to Rs.6,052 at the beginning of 1974-75. In the case of the selected households under the "dairy development" scheme, the amount of loans outstanding per household at the beginning of 1972-73 was Rs. 1,257 which increased to Rs. 1,426 at the beginning of 1973-74 and to Rs. 3,764 at the beginning of 1974-75. Similarly, the amount of loans outstanding per household for the families selected under the "sheep rearing" scheme was Rs. 625 at the beginning of 1972-73 and this amount rose to Rs. 1,533 at the beginning of 1973-74 and to Rs. 1,774 at the beginning of 1974-75. The liabilities of the households under all the three schemes of assistance have increased over the period, and this increase, in all the cases, is due to the borrowings from the cooperatives.

3.3 Change in Assets

Tables 3.4, 3.5 and 3.6 present information about the change in assets of the sample households under the "individual wells", "dairy development" and "sheep rearing" schemes respectively. The asset-values per household as on 30th June 1972, 30th June, 1973 and 30th June 1974 are given in the first three columns

of each table and in the last column is given the net change in the value of the assets from 30th June 1972 to 30th June 1974. The assets are divided into five major groups, namely, (i) land and building, (ii) agricultural machinery and implements, (iii) livestock, (iv) non-agricultural machinery and equipments, and (v) financial assets. The group "land and building" consists of the sub-items of assets (a) land, its value and the expenses incurred on its improvement in the form of construction of irrigation wells, bunds, etc., (b) building, value of the residential buildings and farm houses excluding cattle-sheds, and (c) cattle-shed, value of the buildings where cattle and other livestock shelter. The group "agricultural machinery and implements" consists of (a) value of ploughs and other related minor implements, (b) value of bullock carts, (c) value of pump-sets, and (d) value of other agricultural machinery and equipments. The group "livestock" has sub-items of assets like (a) value of draught cattle, including the male calves of cattle, (b) value of draught cum milch cattle, including all the local breeds of cows which are used for both draught and milch purposes and also the female calves of the local breed, (c) value of cross-bred cows and their male and female calves, (d) value of she-buffaloes and their calves, (e) value of sheep and their young ones, and (f) value of other livestock like goats and poultry birds. The group "non-agricultural machinery and equipments" has no sub-items to mention and it consists of value of all the non-agricultural machinery and equipments. The group "financial assets" consists of (a) value of shares, (b) value of deposits, (c) insurance premium paid currently, and (d) value of gold and silver ornaments. All these values are real values, worked out on the basis of prices prevailing as on 30th June 1972.

In the case of the sample households under the "individual wells" scheme, the total value of assets per household was Rs. 14,703 as on 30th June 1972. It increased to Rs. 19,236 on 30th June 1973 and to Rs. 24,728 on 30th June 1974. The net change in the value of assets from 30th June 1972 to 30th June 1974 was Rs. 10,025. The farmers under this category were given credit-assistance to (i) dig individual wells, and (ii) install pump sets. Total value of assets was therefore mainly influenced by the increase in the asset-values of land and pump sets. Per household value of land as on 30th June 1972 was Rs. 10,468, which increased to Rs. 14,295 on 30th June 1973 and to Rs. 18,828 on 30th June 1974. The net increase of the asset-value between 30th June 1972 and 30th June 1974 was Rs. 8,360. Similarly, per household value of pumpsets was Rs. 253 only on 30th June 1972, and it increased to Rs. 862 on 30th June 1973 and to Rs. 1,379 on 30th June 1974. The increase in the value of pump set per household between 30th June 1972 to 30th June 1974 was Rs. 1,126.

The total per household value of assets in respect of the households under the "dairy development" scheme was Rs. 11,713 on 30th June 1972, and it increased to Rs. 17,108 on 30th June 1973 and to Rs. 17,699 on 30th June 1974. The net increase in the value of total assets per household was Rs. 5,986 between 30th June 1972 to 30th June 1974. The farmers in this category had borrowed loans for buying cross-bred cows, and naturally the increase in the value of total assets was influenced by the new addition of Rs. 1,750 per household under the asset item "cross-bred cows". As a matter of fact, there was a reduction in the assets of the cross-bred cows between 30th June 1973 and 30th June 1974, as 9 cows died and 2 were sold out.

Some of the sample households in this category were benefited by the introduction of canal irrigation during the course of the reference period, the asset value of land also increased. Per household value of land on 30th June 1972 was Rs. 6,886,

Table 3.4 : Average per household assets of the selected beneficiaries under "Individual Wells" Scheme (June 1972 to June 1974)

Assets	(Amount in Rs.)			
	30th June 1972	30th June 1973	30th June 1974	Net change from 30th June 1972 to 30th June 1974
I. <u>Land and building</u>	12,506	16,459	21,272	8,766
Land	10,468	14,295	18,828	8,360
Building	1,894	2,011	2,186	292
Cattle shed	144	153	258	114
II. <u>Agricultural Machinery and Implements</u>	523	1,150	1,678	1,155
Ploughs	19	19	21	2
Bullock-carts	98	108	115	17
Pump sets	253	862	1,379	1,126
Other agricultural machinery and equipments	153	161	163	10
III. <u>Livestock</u>	1,156	1,103	1,158	2
Draught cattle	640	582	555	-85
Draught-cum-milch cattle	292	338	374	82
Cross-bred cows	-	-	-	-
She-buffaloes	135	141	153	18
Sheep	66	26	36	-30
Others	23	16	40	17
IV. <u>Non-agricultural Machinery & Equipments</u>	11	10	71	60
V. <u>Financial Assets</u>	507	514	549	42
Shares	408	409	409	1
Deposits	14	51	81	67
Insurance premium	8	8	8	-
Gold-Silver ornaments	77	46	51	-26
Total	14,703	19,236	24,728	10,025

Table 3.5 : Average per household assets of the selected beneficiaries under "Dairy Development" Scheme (June 1972 to June 1974)

(Amount in Rs.)				
Assets	30th June 1972	30th June 1973	30th June 1974	Net change from 30th June 1972 to 30th June 1974
I. <u>Land and Building</u>	9,800	13,034	13,382	3,582 (1,459)*
Land	6,886	9,258	9,665	2,779 (656)*
Building	2,792	3,672	3,590	798
Cattle shed	122	104	127	5
II. <u>Agricultural Machinery and Implements</u>	286	277	551	265
Ploughs	15	14	15	-
Bullock-carts	145	140	148	3
Pump sets	61	61	327	266
Other agricultural machinery and equipments	65	62	61	-4
III. <u>Livestock</u>	1,268	3,315	3,214	1,946
Draught cattle	388	365	351	-37
Draught-cum-milch cattle	702	723	944	242
Cross-bred cows	-	2,000	1,750	1,750
She-buffaloes	86	84	95	9
Sheep	68	89	14	-54
Others	24	54	60	36
IV. <u>Non-agricultural Machinery and Equipments</u>	115	116	154	39
V. <u>Financial Assets</u>	224	366	398	154
Shares	84	204	204	120
Deposits	3	3	15	12
Insurance premium	14	14	18	4
Gold-Silver ornaments	143	145	161	17
Total	11,713	17,108	17,699	5,986 (4,141)*

*Adjusted for the effect of exterior phenomenon.

Table 3.6 : Average per household assets of the selected beneficiaries under "Sheep Rearing" Scheme (June 1972 to June 1974)

(Amount in Rs.)				
Assets	30th June 1972	30th June 1973	30th June 1974	Net change from 30th June 1972 to 30th June 1974
I. <u>Land and Building</u>	9,747	11,271	12,751	3,004 (628)*
Land	7,408	8,755	10,235	2,827 (451)*
Building	2,054	2,231	2,231	177
Cattle shed	285	285	285	-
II. <u>Agricultural Machinery and Implements</u>	359	338	458	99
Ploughs	23	19	22	-1
Bullock-carts	161	144	147	-14
Pump sets	103	103	216	113
Other agricultural machinery and equipments	72	72	73	1
III. <u>Livestock</u>	966	2,429	3,385	2,419
Draught cattle	314	299	346	32
Draught-cum-milch cattle	588	656	851	263
Cross-bred cows	-	-	-	-
She-buffaloes	20	24	47	27
Sheep	19	1,447	2,047	2,028
Others	25	3	94	69
IV. <u>Non-agricultural Machinery and Equipments</u>	56	48	61	5
V. <u>Financial Assets</u>	236	241	273	37
Shares	181	184	213	32
Deposits	-	-	3	3
Insurance premium	6	8	8	2
Gold-Silver ornaments	49	49	49	-
Total	11,364	14,327	16,928	5,564 (3,188)*

* Adjusted for the effect of exterior phenomenon.

which increased to Rs. 9,258 on 30th June 1973 and to Rs.9,665 on 30th June 1974. The net increase in the asset-value of land was Rs. 2,779 per household between 30th June 1972 and 30th June 1974. It should be remembered that the increase in the value of land-asset in this case was not due to any credit-oriented development programme envisaged by the SFDA. It came about as a result of the construction of a small dam over the river Kabini, a tributary to the river Kaveri when adjusted for the effect of this exterior phenomenon, net change in the total asset-value would be Rs. 4,141 per household.

In respect of the sample households under the "sheep rearing" scheme, the value of total assets per household on 30th June 1972 was Rs. 11,364, which increased to Rs. 14,327 on 30th June 1973 and to Rs. 16,928 on 30th June 1974. As the farmers in this category had borrowed loans to buy sheep, naturally the increase in the total assets is influenced by the increase in the value of sheep. Per household value of sheep on 30th June 1972 was only Rs. 19. It increased to Rs. 1,447 on 30th June 1973 and to Rs. 2,047 on 30th June 1974. As some of these farmers were also benefited by canal water from Kabini, the increase in the land value is very high. When adjusted for this effect, net change in the total asset value, is Rs. 3,188.

3.4 Rate of change in Assets

In Table 3.7, figures in respect of change in assets and liabilities between 1972-73 and 1974-75, and their ratios are presented. In the case of the "dairy development" category, the change in the total assets is adjusted as indicated in the foregoing section. The ratio $\delta A/\delta L$, which indicates the rate of change in assets when there is an unit-increase in liabilities is 1.739 for the "individual wells" category, 1.651 for the "dairy development" category and 2.774 for the "sheep rearing" category. In all the three cases, the ratio is more than unity suggesting that (a) credit was used for asset-formation and there was no mis-utilisation of credit, and (b) along with the credit, some positive savings, both visible and invisible, were used for asset-formation. The higher ratio of 2.774 in respect of the "sheep rearing" category may be explained as due to the effect of multiplication of the assets, in this particular case, the sheep. The situation, in all the three cases, may be described as economically sound for both the borrower and the lender.

3.5 Transformation of Visible and Invisible Savings into Assets

The fact that the ratio $\delta A/\delta L$ for all the three categories was more than unity, as observed in the foregoing section, shows that visible and invisible savings got themselves transformed into assets. It is not possible to distinguish clearly invisible savings from the visible and it is also not possible here to present such savings itemwise. These concepts, as explained in Section 3.1 have notional value. An attempt is made in Table 3.8 to estimate the size of savings, visible and invisible together, for the three categories of the sample households. Per household savings for the period 1972-73 to 1974-75 derived on the basis of the formula $S_v + S_i = \delta A - \delta L$ was Rs. 4,261 for "individual well" category, Rs. 1,634 for "dairy development" category, and Rs. 2,039 for "sheep rearing" category. Average savings per household per annum was Rs. 2,130 for "individual well" category, Rs. 817 for "dairy development" category and Rs. 1,019 for "sheep rearing" category.

3.6 Repayment of Loans

The rate of repayment of loans, as observed in Section 3.1,

determines the extent of the period through which the burden of debt would be carried on by the borrower. Table 3.9 presents the repayment performance as per cent of the amount outstanding at the beginning of the year plus the amount borrowed during the year in respect of the financial years 1972-73 and 1973-74. For the "individual well" category, the rate of repayment was 11.59 per cent for 1972-73 and 12.90 per cent for 1973-74. These rates are either just equal to or smaller than the rate of interest charged by the cooperative institutions on long-term loans. If the households under the "individual well" category continue with these rates of repayment performance, there is no likelihood that they would get rid of the loan forever. The rates of repayment for the "dairy development" category were 31.71 per cent for 1972-73 and 22.86 per cent for 1973-74 and those for the "sheep rearing" category were 35.60 per cent for 1972-73 and 27.59 per cent for 1973-74. These rates are obviously higher than the rate of interest charged for medium-term cooperative loans. It could be hoped that the households under these two categories would get rid of their loans within less than five years if they continue with these rates of repayment performance.

Table 3.7: Change in Assets and Liabilities (1972-73 to 1974-75) and their Ratios

Categories of the beneficiaries	δ in assets (Rs.)	δ in liabilities (Rs.)	$\frac{\delta A}{\delta L}$
Individual wells	10,025	5,764	1.739
Dairy Development	4,141	2,507	1.651
Sheep Rearing	3,188	1,149	2.774

Table 3.8: Average Savings per household per annum (Figures in Rs.)

Categories of the beneficiaries	δ in assets (1972-73-1974-75)	δ in liabilities (1972-73-1974-75)	$\delta A - \delta L$ (1972-73-1974-75)	Average savings per annum
Individual Wells	10,025	5,764	4,261	2,130
Dairy Development	4,141	2,507	1,634	817
Sheep Rearing	3,188	1,149	2,039	1,019

Table 3.9: Repayment as per cent of the amount outstanding at the beginning of the year plus the amount borrowed during the year

	Individual Wells	Dairy Development	Sheep Rearing
1. Amount outstanding plus amount borrowed (1972-73)	5,874	1,791	2,112
2. Repayment (1972-73)	681	568	752
3. (2) as % of (1)	11.59	31.71	35.60
4. Amount outstanding plus amount borrowed (1973-74)	6,352	4,351	2,225
5. Repayment (1973-74)	820	995	614
6. (5) as % of (4)	12.90	22.86	27.59

IV

DEVELOPMENT OF RESOURCES AND EMPLOYMENT

4.1 Effect of Increase in Assets on Development of Productive Resources and Employment

Increase in productive assets leads to development of the resource concerned. Any increase in the real value of land-asset for instance may come about as a result of (a) increase in the area of land, and/or (b) improvement of the land-base by introducing irrigation and undertaking other programmes of land-improvement. In the case of the small farmers as pointed out in Chapter I, the scope for increasing the area of land is limited. There is however sufficient scope for the improvement of the land-base by digging irrigation wells. The 'individual wells' scheme envisaged by the SFDA is aimed at improving the land-base of the small farmers by introducing irrigation. Any increase in the real value of the land-asset of the small farmers is therefore due to improvement of their land-base. Introduction of irrigation further leads to increase in the gross-cropped area, change in the cropping pattern and so in the production pattern also, increase in gross value of production, and finally increase in employment and income as the important components of this process of change.

Similarly, any increase in the real value of the livestock-asset held by the small farmers is due to addition of some new livestock enterprise or expansion of the existing ones. When such development takes place in the livestock holdings, it provides supplementary employment and income. When a cross-bred cow or a unit of improved variety of sheep are introduced as new livestock enterprises, at least a female member or one or two non-adult members of the family would get themselves employed in attending to the respective animals. The value of the livestock products - milk, meat and wool in the particular cases mentioned above - is the additional income to be derived by these new livestock enterprises. In the following sections, information on the development of productive resources and the resultant employment generation is discussed in respect of the three categories of the beneficiaries.

4.2 Changes in Land-ownership, Tenancy and Land-use

Table 4.1 gives information about the land ownership, tenancy and land-use for the three categories of the beneficiaries from 1971-72 through 1973-74. Land owned includes the land held by the family under the title of ownership as well as the Government waste land which is allotted to those households for cultivation but for which the title of ownership is not yet given to the family. The owned area plus the net leased-in area is regarded as the cultivated area. When the area under permanent fallow is deducted from the cultivated area, one gets the operated area. The area not sown during the current agricultural year is regarded as current fallow. When the area under the current fallow is deducted from the operated area, one gets the net cropped area. The net cropped area plus the double cropped area is regarded as the gross cropped area.

In the case of the beneficiaries under the 'industrial wells' category, the per household owned area increased from 4.09 acres in 1971-72 to 4.11 acres in 1973-74. The corresponding figures for the 'dairy development' category and the 'sheep rearing' category were 3.76 acres to 3.94 acres, and 3.55 acres to 3.68 acres respectively. In other words, the per household owned area increased by 2 cents, 18 cents and 13 cents for the three categories of the beneficiaries respectively. Though the

Table 4.1: Land ownership/tenancy/use for the Three Categories of the Beneficiary Farmers (1971-72 through 1973-74)

Categories of the beneficiary farmers	Year	Per house- hold owned area (acres)	Per cent- tage of net leased- in area to owned area	Per house- hold culti- vated area (acres)	Per cent- tage of perma- nent fallow to cul- tivated area	Per house- hold opera- ted area (acres)	Per cent- tage of current fallow to ope- rated area	Per house- hold net cropped area (acres)	Per cent- tage of double cropped area to net cropped area	Per house- hold gross cropped area (acres)
Individual wells	1971-72	4.09	10.96	4.60	2.21	4.49	2.44	4.30	6.44	4.58
	1972-73	4.09	8.72	4.48	3.36	4.33	3.46	4.23	31.22	5.55
	1973-74	4.11	10.57	4.55	3.87	4.37	4.11	3.92	43.53	5.63
Dairy Develop- ment	1971-72	3.76	10.63	4.22	3.14	4.08	3.43	4.02	7.78	4.34
	1972-73	3.84	11.03	4.32	3.06	4.19	3.10	4.16	4.16	4.34
	1973-74	3.94	11.46	4.46	3.16	4.31	3.48	4.02	12.54	4.52
Sheep rearing	1971-72	3.55	23.13	4.62	1.77	4.54	1.76	4.54	2.50	4.65
	1972-73	3.62	22.79	4.69	1.00	4.65	0.86	4.58	12.25	5.14
	1973-74	3.68	20.62	4.64	1.61	4.56	1.75	4.56	16.41	5.31

increases are small in absolute terms, they are important in two respects: (i) proportionate increases, at least in respect of the latter two categories are quite high, and (ii) they prove that there is no disinvestment in land-asset, as suspected by some students of Indian agricultural economics.

The proportion of the net leased-in land to owned area changed from 10.96 per cent in 1971-72 to 10.57 per cent in 1973-74 for the 'individual wells' category, 10.63 per cent to 11.46 per cent for the 'dairy development' category, and 23.13 per cent to 20.62 per cent for the 'sheep rearing' category. The per household cultivated area, which is worked out as owned area plus net leased-in area, changed from 4.60 acres in 1971-72 to 4.55 acres in 1973-74 for the 'individual wells' category and 4.22 acres to 4.46 acres, and 4.62 acres to 4.64 acres respectively for the latter two categories. In other words, the net-leased-in area declined by 3 cents for the 'individual wells' category, increased by 6 cents for the 'dairy development' category and declined by 11 cents for the 'sheep rearing' category. The decline in the net leased-in area appears to be due to withdrawal of that land by the landowners for self cultivation. This trend, if continued indefinitely, would result in the reduction of cultivated area of the small farmers in whose case the net leased-in area forms 10 to 20 per cent of the cultivated area.

The permanent fallow area formed 2.21 per cent of the cultivated area in 1971-72 and 3.87 per cent in 1973-74, for the 'individual wells' category. This sudden increase in the proportion of the permanent fallow was due to digging of irrigation wells and some wastage of land round about. In the case of the other two categories, the proportion of the permanent fallow area did not change significantly. The per household operated area, which is defined as the cultivated area minus the area under permanent fallow declined from 4.45 acres in 1971-72 to 4.37 acres in 1973-74 for the 'individual wells' category, and it increased from 4.08 acres to 4.31 acres for the 'dairy development' category and from 4.54 acres to 4.56 acres for the 'sheep rearing' category.

It is surprising to note that the proportion of the area under current fallow to the operated area increased from 2.44 per cent in 1971-72 to 4.11 per cent in 1973-74 for the 'individual wells' category. This happened probably due to the fact that the other resources available with the household were insufficient to cope up with the additional work on farm created by the introduction of irrigation. In the case of the other two categories, the proportion of the current fallow to operated area did not change significantly. The per household net cropped area, which is the operated area minus the area under current fallow, declined from 4.30 acres in 1971-72 to 3.92 acres in 1973-74 for the 'individual wells' category, and remained the same 4.02 acres for the 'dairy development' category, and slightly increased from 4.54 acres to 4.56 acres for the 'sheep rearing' category.

The decline in the net cropped area was more than compensated by very high proportionate increase in the double cropped area. The proportion of the double cropped area to net cropped area increased from 6.44 per cent in 1971-72 to 48.53 per cent in 1973-74 for the 'individual wells' category, from 7.78 per cent to 12.54 per cent for the 'dairy development' category and from 2.50 per cent to 16.41 per cent for the 'sheep rearing' category. The gross cropped area, which is the net cropped area plus the double cropped area, therefore increased for all the three categories. The per household gross cropped area for the 'individual wells' category increased from 4.58 acres to 5.63 acres for the period 1971-72 to 1973-74. The corresponding figures

for the latter two categories were 4.34 acres and 4.52 acres for the 'dairy development' category and 4.65 acres and 5.31 acres for the 'sheep rearing' category. The increase in the double cropped area and hence the gross cropped area in the case of the 'individual wells' category was due to digging of irrigation wells, and it was mainly due to the introduction of canal irrigation in the latter two cases.

The proportionate change in percentage form is given in Table 4.2 in respect of owned, cultivated, operated, net cropped and gross cropped area in 1973-74 over 1971-72. The owned area increased by only 0.48 per cent for the 'individual wells' category whereas the increase was 4.78 per cent for the 'dairy development' category and 3.66 per cent for the 'sheep rearing' category. The cultivated area declined by 1.09 per cent for the 'individual wells' category mainly due to decline in net leased-in area. It increased by 5.68 per cent for the 'dairy development' category. For the 'sheep rearing' category, there was a very small increase of 0.43 per cent again due to decline in net leased-in area. The operated area declined by 2.68 per cent for the 'individual wells' category due to increase in the permanent fallow land effected through digging of irrigation wells and wastage of some surrounding area. It however increased by 5.63 per cent for the 'dairy development' category and increased slightly by 0.44 per cent for the 'sheep rearing' category. The net cropped area declined by 8.84 per cent for the 'individual wells' category. This came about, as suggested above, due to the insufficient resources with the household to cope up with the additional farm work created by the introduction of irrigation. The net cropped area remained the same for the 'dairy development' category whereas it slightly increased by 0.44 per cent for the 'sheep rearing' category. The gross cropped area increased significantly by 22.92 per cent for the 'individual wells' category and it increased by 4.14 per cent and 14.19 per cent respectively for the latter two categories. These increases were effected by the introduction of the well-irrigation in the first case and the canal irrigation in the latter two cases.

4.3 Increase in Wet-area Component of Land

The introduction of well-irrigation in the case of the first category and canal irrigation in the case of the latter two categories increased the wet-area component of land. By wet-area component is meant the proportion, in percentage form, of the irrigated land to total land. It should be seen whether this wet-area component has any relationship with the owned and leased-in areas. The households under the 'individual wells' category borrowed loans to dig irrigation on owned area, which means that in that case, the area under irrigation increased in owned land. The other two categories were mainly benefited by the introduction of canal irrigation which effected both owned and leased-in land. In Table 4.3, the figures in respect of the wet-area components of owned, cultivated, operated and net cropped area for the three categories of the households are presented for the years 1971-72 through 1973-74. It should be reminded here that the cultivated area is equal to the owned area plus the leased-in area, and the effect of the wet-area component of the leased-in area could be seen when such components for owned area and cultivated area are compared. It should also be noted that the wet-area components of operated area and net cropped area are influenced by that of the cultivated area.

The wet area component of the owned area increased from 7.79 per cent in 1971-72 to 54.95 per cent in 1973-74 for the 'individual wells' category. This change was expected because the farmers belonging to this category dug wells on their owned land.

Table 4.2 : Change in Owned, Cultivated, Operated, Net Cropped and Gross Cropped area in 1973-74 over 1971-72.

Categories of the beneficiary farmers	Percentage change in 1973-74 over 1971-72				
	Owned area	Cultivated area	Operated area	Net Cropped area	Gross Cropped area
Individual Wells	0.48	-1.09	-2.68	-8.84	22.92
Dairy Development	4.78	5.68	5.63	-	4.14
Sheep Rearing	3.66	0.43	0.44	0.44	14.19

Table 4.3 : Net-area Component of Owned, Cultivated, Operated and Net Cropped Area (Figures in percentages)

Categories of the beneficiary farmers	Year	Proportion of wet-area component			
		Owned area	Cultivated area	Operated area	Net cropped area
Individual wells	1971-72	7.79	11.03	11.28	11.79
	1972-73	37.15	35.59	36.83	37.76
	1973-74	54.95	51.80	53.89	59.39
Dairy Development	1971-72	12.79	18.65	19.26	19.53
	1972-73	12.54	18.86	19.45	19.57
	1973-74	15.10	19.95	20.60	22.10
Sheep Rearing	1971-72	7.89	17.07	17.38	17.41
	1972-73	22.35	28.88	29.18	29.62
	1973-74	27.82	32.21	32.74	32.74

On the other hand, the wet-area component of cultivated area increased from 11.03 per cent to 51.80 per cent during the same period. This shows that the wet-area component of the cultivated area was highly influenced by that of the owned area. In the case of the 'dairy development' and 'sheep rearing' categories also, it could be seen that the increases, though on smaller scale, in the wet-area components of the owned land influenced the wet-area components of the cultivated land. In other words, it was mainly the owned area of the small farmers belonging to all the three categories which was influenced by the introduction of irrigation, and not the leased-in area.

The wet-area components of the operated area and the net cropped area were proportionately larger, because the area under permanent fallow, which is not likely to be under irrigation, was excluded from the operative area. Similarly, the net cropped area, according to definition, did not include not only the permanent fallow, but also the current fallow, which is again not likely to be under irrigation.

4.4 Change in Cropping Pattern

The increase in the gross cropped area as well as the increase in the wet-area component of the operated area brought about certain important changes in the cropping pattern. Table 4.4 gives the area under each crop as percentage of the gross cropped area for the three categories of the sample households from 1971-72 through 1973-74.

In the case of the 'individual wells' category, the proportion of the area under rice increased from 0.49 per cent in 1971-72 to 4.18 per cent in 1973-74. The area under Ragi increased from 19.30 per cent to 26.70 per cent during this period. Before the introduction of irrigation, Ragi was mainly a dry crop for the farmers belonging to this category. After the introduction of irrigation, they started giving one or two irrigations to Ragi and in many cases, they adopted the improved variety of seeds. A remarkable change was observed in respect of the hybrid varieties of jowar, bajra and maize. As a matter of fact, there was no significant change in the area under hybrid jowar which increased from 1.03 per cent in 1971-72 to 2.67 per cent in 1972-73, and again declined to 0.82 per cent. On the other hand, the area under hybrid bajra increased from 5.23 per cent in 1971-72 to 15.12 per cent in 1973-74. Similarly, the area under hybrid maize increased from 1.54 per cent in 1971-72 to 11.68 per cent in 1973-74. There was some increase in the area under mulberry, from 8.71 per cent in 1971-72 to 10.32 per cent in 1973-74. The area under vegetables increased from 3.64 per cent in 1971-72 to 13.73 per cent in 1972-73 and further declined to 7.14 per cent in 1973-74. The crops which lost the area proportionately were horsegram and groundnut, both being the dry crops. The area under horsegram declined from 31.37 per cent in 1971-72 to only 9.05 per cent in 1973-74. Similarly, the area under groundnut declined from 19.89 per cent in 1971-72 to 7.48 per cent in 1973-74. In short, the change in cropping pattern resulted in loss in area for the dry crops like horsegram and groundnut and gain in area for the semi-irrigated crops like hybrid millets and Ragi.

In the case of the 'dairy development' category, there was no significant change in the cropping pattern except that the proportions of areas under rice, Ragi and horsegram increased slightly whereas those under groundnut and mulberry slightly declined. Similarly, in the case of the 'sheep rearing' category, proportions of areas under rice, groundnut and mulberry slightly increased and those under Ragi and horsegram slightly declined. The introduction of the hybrid millets was made in 1973-74 on a

Table 4.4 : Change in Cropping Pattern for the Three Categories of the Beneficiary Farmers (1971-72 through 1973-74).

Categories of the beneficiary farmers	Year	Area under each crop as percentage of the gross cropped area									
		Rice	Ragi	Hybrid Jowar	Hybrid Bajra	Hybrid Maize	Hybrid Horse gram	Groundnut	Mulberry	Vegetables	Other crops
Individual wells	1971-72	0.49	19.30	1.03	5.23	1.54	31.37	19.89	8.71	3.64	8.80
	1972-73	1.60	18.22	2.67	5.79	12.30	21.77	11.40	7.53	13.73	4.99
	1973-74	4.18	26.70	0.82	15.12	11.68	9.05	7.48	10.32	7.14	7.51
Dairy Development	1971-72	16.81	40.70	-	-	-	11.10	3.66	13.42	-	14.31
	1972-73	18.49	42.64	-	-	-	15.08	2.09	12.62	-	9.08
	1973-74	18.52	43.04	0.38	-	0.38	14.78	2.51	10.61	-	9.78
Sheep Rearing	1971-72	19.89	35.46	-	-	-	10.69	6.83	18.79	-	8.34
	1972-73	25.34	25.80	-	-	-	14.66	3.62	17.52	-	13.06
	1973-74	24.70	28.44	0.37	0.37	0.18	6.79	9.82	19.33	-	10.00

very small scale. For both these categories, the Rice-Ragi-Horsegram-Mulberry pattern continued to prevail throughout the period.

4.5 Change in Livestock Holding:

The households under the 'dairy development' and 'sheep rearing' categories were extended credit assistance to buy cross-bred cows and improved variety of sheep. It is natural to expect some change in the livestock holding of these two categories. In the case of the 'individual wells', as there was a large-scale introduction of irrigation and increase in the farm work, it is important to know whether the draught cattle holding of this category was effected by the introduction of irrigation.

Table 4.5 gives the number of some important types of livestock, namely, draught cattle, draught cum milch cattle, cross-bred cows, she-buffaloes and sheep held per household from 1971-72 to 1973-74. Draught cattle include all the male cattle used for draught purpose, the male calves and other old and unfit animals being excluded. It should be noted that while calculating the assets draught cattle included the value of male calves and other old and unfit animals also. Draught cum milch cattle include all the female cattle of the local breed used for both draught and milch purpose as the local practice prevails. They however exclude the female calves, though they were included while calculating the assets. Cross-bred cows include all the Jersey breed of cows supplied by the SFDA and exclude their calves. She-buffaloes also include only the adult ones, calves being excluded. In the case of the sheep, however, males, females, adults and young ones are included.

It is surprising to note that the number of draught cattle per household declined from 2.01 in 1971-72 to 1.60 in 1973-74, for the 'individual wells' category. The number of draught cum milch cattle increased marginally from 1.07 in 1971-72 to 1.09 in 1973-74. The hypothesis that introduction of irrigation promotes additional investment in draught animals does not hold ground in this case. Probably, in the initial stage of introduction of irrigation when the households were mobilising financial resources for the digging of wells, they resorted to disinvestment in the draught cattle for the purpose. It is worth noting that the number of both draught cattle and draught cum milch cattle increased over the period in the cases of the 'dairy development' category and the 'sheep rearing' category.

The households under the 'dairy development' category were given credit assistance to buy the Jersey breed of cows. Each household bought one Jersey cow in the beginning of 1973-74. There were thus 44 Jersey cows bought by the sample households in this category. Out of these 44 cows, 9 cows died and 2 were sold out during the next twelve months. The cause of death, though exactly not known, appeared to be due to malnutrition and non-acclimatization of the animals. The cows were allowed to graze on the grassland by the hill side along with the local breed of cattle. Most of the cows became skeletal and ceased to yield milk. Proper medical aid and technical advice was not available. The number of these cows, by the end of the year, got reduced by 25 per cent.

The households under the 'sheep rearing' category were advanced loans to buy improved variety of sheep. The sheep were bought before the beginning of 1971-72, and their number in 1971-72 was 9.68 per household. It increased to 15.78 in 1972-73 and to 22.35 in 1973-74.

4.6 Effect of Development of Productive Resources on Employment

It should be expected that the development of productive

Table 4.5 : Number of some important types of livestock held per household from 1971-72 through 1973-74

Types of livestock	Individual wells		Dairy Development				Sheep Hearing		
	1971-72	1972-73	1973-74	1971-72	1972-73	1973-74	1971-72	1972-73	1973-74
Draught cattle	2.01	1.81	1.60	1.06	0.97	1.09	0.96	0.92	1.01
Draught-cum-milch cattle	1.07	1.01	1.09	2.52	2.45	2.88	2.27	2.31	2.41
Cross-bred cows	-	-	-	-	1.00	0.75	-	-	-
She-buffaloes	0.26	0.26	0.26	0.18	0.15	0.15	0.08	0.08	0.10
Sheep	0.94	0.37	1.28	0.68	0.93	1.56	9.68	15.78	22.35

resources mentioned above, namely, increase in the irrigated area resulting in increase in gross cropped area and change in cropping pattern, introduction of supplementary livestock enterprises like cross-bred cows and improved variety of sheep, effected the employment of family labour. Increase in employment could be gauged in two ways: (1) by measuring the number of labour units, i.e. the workers, at two points of time, and (2) by measuring the number of labour-days employed per labour-unit at two points of time.

Table 4.6 presents the data in respect of the number of labour units per household in 1972-73 and 1973-74 for the three categories of the sample households. The data are presented in respect of four major types of labour units, namely, male adults, male non-adults, female adults and female non-adults. The total labour units per household declined from 2.62 in 1972-73 to 2.57 in 1973-74 for the 'individual wells' category. This slight decline came about as a result of the decline in the number of labour units of female adults and female non-adults. On the other hand, the labour units of male adults slightly increased, and those of male non-adults remained the same.

In the case of the 'dairy development' category, the total labour units increased from 2.25 in 1972-73 to 2.48 in 1973-74. This increase took place because of the increase in the labour units of female adults. It is natural to infer that the introduction of a milch animal creates employment opportunities mainly, for the female adults. Some non-working female adults in 1972-73 reported as working in 1973-74.

In the case of the 'sheep rearing' category, the total number of labour units per household increased from 3.48 in 1972-73 to 3.67 in 1973-74. This increase was brought about mainly due to increase in the labour units of male non-adults and female non-adults. It may be expected that the introduction of sheep created employment opportunities for non-adults in attending to the work of grazing the sheep.

Though it appears to be a fact that, in the long run, the change in the number of labour units, i.e. the workers, mainly depends upon the change in the demographic phenomenon, in the short run at least, certain changes in the productive resources bring about remarkable changes in the number of labour units, as seen above. In that sense, the observations made above should be regarded as important.

It is however necessary to gauge the employment by the number of labour days employed per labour unit and then calculate the total number of labour days worked per household. Table 4.7 presents the data in respect of the number of labour days employed per worker according to the nature of employment for the four major types of labour units in 1972-73 and 1973-74. The nature of employment is classified into four categories, namely, (i) employment in agriculture, meaning thereby self employment in one's own farm business, (ii) employment in agricultural labour, i.e. wage employment in other's farm business, (iii) employment in rearing of livestock, and (iv) employment of labour days employed per male adult worker increased from 284 days in 1972-73 to 325 days in 1973-74 for the 'individual wells' category, and the corresponding figures for the 'dairy development' were 285 days and 311 days and those for the 'sheep rearing' category were 303 days and 317 days respectively. This increase in the number of labour days employed per adult male worker was influenced by the additional employment in agriculture due to irrigation. Similarly, in the case of the female adults, increase in the total number of labour days per worker was influenced by the additional / in non-agricultural work. The total number

Table 4.6 : Number of labour units per household in 1972-73 and 1973-74

Type of labour Unit	Individual Wells		Dairy Development		Sheep Rearing	
	1972-73	1973-74	1972-73	1973-74	1972-73	1973-74
Male Adults	1.79	1.81	1.47	1.47	1.98	2.05
Male Non-adults	0.18	0.18	0.13	0.11	0.37	0.51
Female Adults	0.52	0.47	0.56	0.81	0.86	0.76
Female Non-adults	0.13	0.11	0.09	0.09	0.27	0.35
Total	2.62	2.57	2.25	2.48	3.48	3.67

Table 4.7 : Number of labour days employed per worker according to nature of employment (1972-73 and 1973-74)

Type of labour Unit and Nature of Employment	Individual Wells		Dairy Development		Sheep Rearing	
	1972-73	1973-74	1972-73	1973-74	1972-73	1973-74
Male Adults						
Agriculture	157	212	171	189	160	182
Agricultural Labour	65	43	61	62	67	63
Rearing of Livestock	52	53	48	56	54	49
Non-agricultural work	10	17	5	4	22	23
Total	284	325	285	311	303	317
Male Non-adults						
Agriculture	5	11	4	9	6	5
Agricultural Labour	27	14	23	17	22	19
Rearing of Livestock	228	254	296	330	317	323
Non-agril.work	3	18	1	1	4	3
Total	263	297	324	357	349	350
Female Adults						
Agriculture	7	36	11	16	9	17
AgriL.Labour	32	28	29	27	25	21
Rearing of Livestock	2	3	5	9	-	-
Non-agril.work	72	123	51	79	150	153
Total	113	190	96	131	184	191
Female Non-adult						
Agriculture	-	-	-	-	-	-
AgriL.labour	-	-	-	-	-	-
Rearing of Livestock	275	291	282	340	282	321
Non-agril.work	2	2	3	5	45	22
Total	277	293	285	345	327	343

work in non-agricultural occupations, particularly in silk-worm rearing. In the case of both the male non-adults and the female non-adults, increase in the total number of labour days per person was influenced by the additional work in livestock rearing. The inference that female adult labour gets more work due to introduction of milch animal has thus no proof.

Table 4.8 gives the figures in respect of the number of labour days worked per household in 1972-73 and 1973-74 for the three categories of the sample households and the four types of labour units. Number of labour days per household is calculated by multiplying number of labour days per worker and number of labour units per household. These calculations are done separately for four types of labour units and then added up.

It is noted from the figures that the total number of labour days per household increased from 649 in 1972-73 to 762 in 1973-74 for the 'individual wells' category, from 539 in 1972-73 to 633 in 1973-74 for the 'dairy development' category, and from 974 in 1972-73 to 1,092 in 1973-74 for the 'sheep rearing' category. The number of labour days employed per household increased significantly for male adult workers in the cases of all the three categories. The labour days for male non-adults increased in the case of the 'individual wells' and 'sheep rearing' categories, and slightly declined in the case of the 'dairy development' category. The labour days for the female adults increased in the cases of the 'individual wells' and 'dairy development' categories and slightly declined in the case of the 'sheep rearing' category, and those for the female non-adults declined in the case of the 'individual wells' category and increased in the latter two cases.

Barring the slight declines in individual cases for female adults, and male and female non-adults, the number of labour days employed per household recorded major increases in most of the cases. An important observation to be made on the basis of these figures is that the number of labour days employed per household increased for all the four types of the labour units and for all the three categories of the sample households. It is natural to expect that this change was brought about as a result of the changes in the productive resources for those households in the form of introduction of irrigation and supplementary livestock enterprises.

Table 4.8 : Number of labour days worked per household in
1972-73 and 1973-74

Type of Labour Labour Unit	Individual Wells		Dairy Development		Sheep Rearing	
	1972-73	1973-74	1972-73	1973-74	1972-73	1973-74
Male Adults	508	588	419	457	599	649
Male Non-adults	47	53	42	39	129	178
Female Adults	58	89	53	106	158	145
Female Non- adults	36	32	25	31	88	120
Total	649	762	539	633	974	1092

CHANGES IN PRODUCTION AND INCOME5.1 Income-assets relationship

Changes in assets ultimately influence the value of production which further effects the income. Income from any enterprise is regarded here as equal to the net value of production from that enterprise, as indicated by

$$Pg - E = Pn = I \quad \text{where}$$

Pg = Gross value of production,
 E = Total expenditure,
 Pn = Net value of production, and
 I = Income

Incomes from all the productive enterprises plus direct incomes from some other sources like agricultural labour etc. form the total income. It should be expected that the change in the total income thus derived at would have direct relationship with the change in the assets over a period. This relationship would prevail for change in the income derived from a particular enterprise and the change in the productive assets respecting that enterprise also. The relationship can be established by the ratio between change in income and change in assets, which gives the rate of change in income as a result of unit-change in assets. Thus we have,

$$\delta I / \delta A = \text{Rate of change in total income, where}$$

δI refers to change in total income and δA refers to change in total assets. Similarly,

$\delta Ia / \delta Aa = \text{Rate of change in agricultural income, where}$
 δIa refers to change in agricultural income and δAa refers to change in agricultural assets. In the same way,

$\delta Is / \delta As = \text{Rate of change in livestock income, where}$
 δIs refers to change in livestock income and δAs refers to change in livestock assets.

The rate of change in income, either for total income or for the income from a particular enterprise, indicates the rate of profitability of the investment made in those assets. In the following sections, value of net production is calculated for the agricultural and livestock sectors, total income is derived, and finally, the rate of change in income is worked out for total income and incomes for agricultural and livestock sectors.

5.2 Agricultural production and expenditure

Tables 5.1, 5.2 and 5.3 present the data in respect of value of agricultural production and expenditure per household for the 'individual wells', 'dairy development' and 'sheep rearing' categories respectively from 1971-72 through 1973-74. The gross value of agricultural production is calculated by multiplying the physical production of different agricultural commodities for each year by respective prices prevailing during 1972-73, and adding all the values so derived for each year the total gross value of agricultural production for that year is arrived at. The total expenditure on agriculture includes (i) land revenue paid, (ii) value of inputs like seeds, fertilizers, manures and insecticide, either owned or purchased, (iii) wages paid to outside labour, (iv) value of fodder owned or purchased, fed to draught cattle, and that of half of fodder fed to draught cum

Table 5.1: Value of Agricultural Production and Expenditure per household for the 'individual wells' category (1971-72 through 1973-74)

(Figures in Rs.)

Items	1971-72	1972-73	1973-74	Change from 1971-72 to 1973-74
(I) Gross value of agricultural production	1,378	2,081	3,115	1,737
(II) Total expenditure on agriculture:	925	1,352	1,652	727
(i) Land revenue	6	6	6	6
(ii) Seeds	73	78	115	42
(iii) Manure and fertilizers	170	295	325	155
(iv) Wages paid	309	575	704	395
(v) Fodder for draught cattle	215*	215	247	32
(vi) 1/2 of fodder for draught cum milch cattle	57*	57	72	15
(vii) Charges on machinery	-	7	2	2
(viii) Electricity	12	49	83	71
(ix) Rent on leased-in land	82	54	76	-6
(x) Marketing expenses	1	2	3	2
(xi) Other expenses	-	14	19	19
(III) Net value of agricultural production	453	729	1,463	1,010

* Data on fodder consumption were not collected for 1971-72.

The corresponding figures for 1972-73 are used for 1971-72 also.

Table 5.2: Value of Agricultural Production and Expenditure:
Per Household for the 'Dairy Development' Category
(1971-72 through 1973-74).

(Figures in Rs.)

Items	1971-72	1972-73	1973-74	Change from 1971-72 to 1973-74
(I) Gross value of agricultural production	1,651	1,664	2,335	684
(II) Total expenditure on agriculture:	956	1,086	1,326	370
(i) Land revenue	6	6	6	
(ii) Seeds	51	52	75	24
(iii) Manure and Fertilizers	207	236	232	25
(iv) Wages paid	392	463	539	147
(v) Fodder for draught cattle	21*	21	162	141
(vi) 1/2 of fodder for draught cum milch cattle	128*	128	140	12
(vii) Charges on machinery	17	46	14	-3
(viii) Electricity	4	4	10	6
(ix) Rent on leased-in land	119	119	138	19
(x) Marketing expenses	5	5	5	-
(xi) Other expenses	6	6	5	-1
(III) Net value of agricultural production	695	578	1,009	314

* The figures for 1972-73 are repeated.

Table 5.3: Value of Agricultural Production and Expenditure Per Household for the 'Sheep Rearing' Category (1971-72 through 1973-74).

(Figures in Rs.)

Items	1971-72	1972-73	1973-74	Change from 1971-72 to 1973-74
(I) Gross value of agricultural production	1,682	2,162	3,488	1,806
(II) Total expenditure on agriculture:	999	1,176	1,586	587
(i) Land revenue	7	7	7	-
(ii) Seeds	47	55	104	57
(iii) Manure and Fertilizers	223	262	316	93
(iv) Wages paid	275	381	574	299
(v) Fodder for draught cattle	87*	87	136	49
(vi) 1/2 of fodder for draught cum milch cattle	97*	97	107	10
(vii) Charges on machinery	2	10	4	2
(viii) Electricity	4	13	8	4
(ix) Rent on leased-in land	253	260	322	69
(x) Marketing expenses	3	3	3	-
(xi) Other expenses	1	1	5	4
(III) Net value of agricultural production	683	986	1,902	1,219

* The figures for 1972-73 are reported.

milch cattle, (v) charges on machinery hired and expenses on electricity used for agricultural purposes, (vi) rent on leased-in land, and (vii) marketing and other expenses. The gross value of agricultural production minus the total expenditure as derived above gives the net value of agricultural production. The net value of agricultural production itself is regarded as the income from the agricultural sector.

In the case of the 'Individual wells' category, the net value of agricultural production per household was Rs. 453 in 1971-72 which increased to Rs. 729 in 1972-73 and to Rs. 1,463 in 1973-74. The increase in the net value of agricultural production from 1971-72 to 1973-74 was Rs. 1,010. In absolute term as well as in terms of proportion, this increase was significant and very high. For the 'dairy development' category, the net value of agricultural production per household was Rs. 695 in 1971-72 which declined to Rs. 578 in 1972-73 and sharply increased to Rs. 1,009 in 1973-74. The change in the net value of agricultural production from 1971-72 to 1973-74 was Rs. 314. In the case of the 'sheep rearing' category, the net value of the agricultural production per household changed from Rs. 638 in 1971-72 to Rs. 986 in 1972-73 and further to Rs. 1,902 in 1973-74. The change from 1971-72 to 1973-74 was Rs. 1,219. The gross value of agricultural production per household has increased remarkably, especially with the 'individual wells' and 'sheep breeding' categories. This has happened due to the introduction of well-irrigation in the case of the first category and canal irrigation in the case of the latter two categories. Besides irrigation, the increase in the inputs have also added to this change. Ultimately, the net value of agricultural production has increased remarkably in the case of all the three categories.

5.3 Livestock production and expenditure

Tables 5.4, 5.5 and 5.6 present information about the per household total gross value of livestock production, total expenditure on livestock and the net value of livestock production for the three categories of the households respectively. The total gross value of livestock production contains value of milk and milk products, dung manure, eggs and the earnings from the sale of livestock. In the case of the 'dairy development' category, value of milk and milk products is given separately for the local variety of cows and buffaloes and the cross-bred variety of cows. For the 'sheep rearing' category, this item contains, besides the value of milk and milk products of the local cows and buffaloes, that of the sheep also. The item 'dung manure', in the case of the 'sheep rearing' category, contains the value of manure prepared from sheep-penning also. The item 'sale of livestock' contains the value of cattle, sheep and poultry birds sold during the year. It should be noted that the farmers in the region are well-known breeders of quality bullocks and the sale of male calves and bullocks is quite common with them. A new enterprise like 'sheep rearing' has also influenced the sale of sheep in the case of the 'sheep rearing' category. The total expenditure on livestock includes the value of half of the fodder fed to draught and milch cattle, that fed to the she-buffaloes, poultry feeds and other expenditure on livestock. The net value is derived by subtracting the total expenditure from the gross value of production.

The net value of livestock production per household increased from Rs. 314 in 1971-72 to Rs. 390 in 1972-73. It however declined to Rs. 315 in 1973-74. The change from 1971-72 to 1973-74 was quite small. In the case of the 'dairy development' category, the net value was Rs. 271 in 1971-72 which increased to Rs. 346 in 1972-73 and further to Rs. 1,398 in 1973-74. The change from

Table 5.4: Value of Livestock Production and Expenditure Per Household for the 'Individual Wells' category (1971-72 through 1973-74).

(Figures in Rs.)

Items	1971-72	1972-73	1973-74	Change from 1971-72 to 1973-74
(I) Total gross value of livestock production:	402	478	431	29
(i) Milk and Milk Products	129	144	186	57
(ii) Dung manure	145	169	189	44
(iii) Eggs	16	22	20	4
(iv) Sale of live-stock	112	143	185	73
(II) Total expenditure on livestock:	88	88	116	28
(i) 1/2 of fodder for draught cum milch cattle	57	57	72	15
(ii) Fodder for She-buffaloes	28	28	41	13
(iii) Food for poultry	2	2	2	-
(iv) Other expenses	1	1	1	-
(III) Net value of livestock production	314	390	315	1

1971-72 to 1973-74 was Rs. 1,127. This change though significantly high, should be noted with caution. It is to be reminded that during the course of 1973-74, 9 cross-bred cows died and 2 were sold out and there was a decline in the asset position. It indicates that the net value of livestock production is going to decline drastically during the coming years. In the case of the 'sheep rearing' category, the net value of livestock production per household was only Rs. 83 in 1971-72 which increased to Rs. 406 in 1972-73 and further to Rs. 541 in 1973-74. The change from 1971-72 to 1973-74 was Rs. 458. This change, in absolute terms, appears to be small. It should be however noted that the increase in the livestock assets of this category was due to the multiplication of sheep.

5.4 Change in total income

Tables 5.7, 5.8 and 5.9 present total income per household for the 'individual wells', 'dairy development' and 'sheep rearing' categories respectively. The sources of income consists of agriculture, livestock, sericulture, agricultural labour and other sources. In the case of agriculture and livestock, as indicated earlier, the net value of production is regarded as income. Sericulture is a household industry closely related to agriculture and in that case the net value of the production as reported by the families is used to arrive at the income. In the case of agricultural labour, wages received by the members of the family from agricultural labour is regarded as income. Other sources include non-agricultural labour of various description.

In the case of the 'individual wells' category, the total income per household was Rs. 1,456 in 1971-72. It increased to Rs. 2,239 in 1972-73 and to Rs. 2,945 in 1973-74. The change in total income from 1971-72 to 1973-74 was Rs. 1,489. As expected, the increase in the total income was mainly influenced by that in the agricultural sector. The total income per household for the dairy development sector was Rs. 1,537 in 1971-72. It increased to Rs. 1,961 in 1972-73 and further to 3,585 in 1973-74. The change from 1971-72 to 1973-74 was Rs. 2,048. It was mainly influenced by the increase in the livestock income. As indicated earlier, it is quite likely that because of the decline in the livestock assets, the income from livestock may decline during the coming years and hence the total income may also decline. The total income per household for the 'sheep rearing' category was Rs. 1,514 in 1971-72 which increased to Rs. 2,428 in 1972-73 and to Rs. 3,712 in 1973-74. The change in the total income from 1971-72 to 1973-74 was Rs. 2,198. It was mainly influenced by the increase in the incomes from the agricultural and livestock sectors. It is quite likely to expect that during the coming years, when the farmers stop increasing the livestock asset by not adding the animals to the stock but start selling them, the income from the livestock sector may increase.

5.5 Rate of change in total income

The ratio $\delta I/\delta A$ indicates the profitability of the new assets added. Table 5.10 gives the $\delta I/\delta A$ ratios for the three categories of the households. The rate of change in income defined as change in income as a result of unit-change in assets is indicated by the ratio $\delta I/\delta A$. The rates expressed in percentage form were 15 per cent for the 'individual wells' category, 34 per cent for the 'dairy development' category and 39 per cent for the 'sheep rearing' category. The high rate of change in total income in the case of the 'dairy development' category may be deceptive for the reason mentioned earlier.

Table 5.7: Total income per household for the 'Individual Wells' category (1971-72 through 1973-74).

(Figures in Rs.)

Sources of Income	1971-72	1972-73	1973-74	Change from 1971-72 to 1973-74
Agriculture	453	729	1,463	1,010
Livestock	314	390	315	1
Sericulture	320	630	639	319
Agricultural labour	332	380	325	- 7
Other sources	37	110	203	166
Total income	1,456	2,239	2,945	1,489

Table 5.8: Total income per household for the 'Dairy Development' Category (1971-72 through 1973-74)

(Figures in Rs.)

Sources of income	1971-72	1972-73	1973-74	Change from 1971-72 to 1973-74
Agriculture	695	578	1,009	314
Livestock	271	346	1,398	1,127
Sericulture	390	783	798	408
Agricultural labour	100	156	225	125
Other sources	81	98	155	74
Total income	1,537	1,961	3,585	2,048

Table 5.9: Total income per household for the 'sheep rearing' category (1971-72 through 1973-74)

(Figures in Rs.)

Source of income	1971-72	1972-73	1973-74	Change from 1971-72 to 1973-74
Agriculture	683	986	1,902	1,219
Livestock	83	406	541	458
Sericulture	395	411	731	336
Agricultural labour	328	555	474	146
Other sources	25	70	64	39
Total income	1,514	2,428	3,712	2,198

Along with the rate of change in total income it is worthwhile seeing the rates of change in the sectoral incomes also. Table 5.11 gives the rate of change in the agricultural sector and Table 5.12 gives that in the livestock sector. The rates are quite low for the 'dairy development' and 'individual wells' category in respect of the agricultural sector, indicating that the households have not yet made full use of the resources newly developed to increase their incomes. In the case of the livestock sector, the high rates for the 'individual wells' and 'dairy development' are deceptive. The rate for the 'sheep rearing' category, though low, has potentiality of generating higher rate in future.

SUMMARY AND CONCLUSION

The Small Farmers' Development Agency (SFDA) is aimed at transforming certain specific groups of small holders from non-viable units of production to viable units of production. Such holdings are helped to (i) improve their land-base by extending long-term cooperative credit for digging irrigation wells and installing electric pumpsets, etc., and (ii) increase their incomes by supplementary livestock enterprises like dairy development and sheep breeding with medium-term credit assistance. In short, the SFDA is a specific type of weaker-section-oriented development strategy. It is basically a credit-oriented strategy. The credit advanced to the small farmers for specific purpose gets itself transformed into productive assets, the changes in assets bring about transformation of productive resources, and with the help of these additional productive resources, the total production increases and with that the total household income also goes up. With this frame-work in mind, the present study was undertaken to evaluate the working of the SFDA in Mysore district, Karnataka State, and its economic impact on the beneficiaries of different schemes envisaged by the Agency.

There is sufficient scope for the development of surface irrigation as well as for the exploitation of the underground water resources in Mysore district. There is also sufficient scope for the development of some specific types of livestock enterprises as plenty of grazing land is available roundabout the forest areas. The SFDA in Mysore district envisaged development schemes mainly for digging irrigation wells on small farmers' individual holdings as well as for introduction of cross-bred cows and improved variety of sheep, besides other important related schemes.

To start with, the SFDA undertook a detailed census of the small farmers in the district on the criteria laid down by the Government of India, and identified as many as 53,210 households belonging to that category. The number of small farmers directly benefited by some important schemes as on 1st March 1974 was 3,762 only. This means that the proportion of the beneficiaries so far to the total number of small farmers was as low as 7 per cent. This happened because both institutional finance and the SFDA funds were in short supply to implement the schemes of the programme. The financial achievement as proportion of the financial target for those schemes was 33.6 per cent only. If the targets were wholly achieved, the number of small farmers directly benefited would have been roughly three times, namely, 11,286 which itself would have been 21 per cent of the identified small farmers in the district. In short, the programme was aimed at helping a small proportion of the small farmers during the prescribed time limit, and as the financial achievement was just 33 per cent of the target, a very small proportion of 7 per cent of the identified small farmers were directly assisted.

The nature of the programmes effecting the economic well-being of the small farmers who are the beneficiaries under those programmes is studied in detail at the field level. For that purpose, 148 small farmers, benefited under the three main programmes of the SFDA, namely, individual irrigation wells, dairy development and sheep rearing, were selected from Kollegal taluka of Mysore district, where all the three programmes mentioned above were supposed to have been successfully implemented.

The amount of loans outstanding per household at the beginning of 1972-73 was Rs. 288 for the households under the 'individual wells' scheme. This amount increased to Rs. 5,894 at the

beginning of 1973-74, and further increased to Rs. 6,052 at the beginning of 1974-75. Similarly, the liabilities of the other two categories of the households also increased very high over the period. This increase in liabilities, in all the cases, was mainly due to the borrowings from the cooperatives for implementing the respective development schemes. These liabilities got themselves transformed into productive assets in all the cases. In the case of the 'individual wells' category, the value of land-asset increased very high because of improvement of the land-base by digging irrigation wells. For the other two categories the value of the livestock-asset increased very high because the households under those two categories added one of the two livestock enterprises, namely, cross-bred cows and improved breed of sheep. The rate of change in assets which is expressed by the ratio $\delta A/\delta L$, indicating the change in assets when there is an unit-increase in liabilities, was more than unity in all the three cases. This suggests that (a) credit was used for asset-formation and there was no misutilisation of credit, and (b) along with the credit, some positive savings, both visible and invisible, were used for asset-formation. The rate of repayment, expressed as the per cent of repayment to amount outstanding during a year, was equal to the rate of interest in the case of the 'individual wells' category, suggesting that, if these rates of repayment continue, there would be no likelihood that those households would get rid of their liabilities for ever. In the case of the other two categories, the repayment rate is more than the rate of interest and it may be hoped that the households would get rid of their liabilities within five years.

Increase in productive assets leads to development of the resource concerned. The gross cropped area increased significantly by 22.92 per cent for the 'individual wells' category and increased by 4.14 per cent and 14.19 per cent respectively for the latter two categories. These increases were effected by the introduction of the well-irrigation in the first case and the canal irrigation in the latter two cases. The wet-area component of the owned area increased from 7.79 per cent in 1971-72 to 54.95 per cent in 1973-74 for the 'individual wells' category. It was mainly the owned area of the small farmers belonging to all the three categories which was influenced by the introduction of irrigation, and not the leased in area. The increase in the gross cropped area as well as the increase in the wet-area component of the operated area brought about certain important changes in the cropping pattern, especially of the 'individual wells' category. The change in cropping pattern resulted in loss in area for the dry crops like horse gram and groundnut and gain in area for the semi-irrigated crops like hybrid millets and Ragi. For the latter two categories, the change in the cropping pattern was not remarkable, and the Rice-Ragi-Horsegram-Mulberry pattern continued to prevail throughout the period.

Surprisingly, there was disinvestment in draught cattle for the 'individual wells' category. Probably, in the initial stage of introduction of irrigation when the households were mobilising resources for the digging of wells, they resorted to disinvestment in the draught cattle for the purpose. It is worth noting that the number of both draught cattle and draught cum milch cattle increased over the period in the cases of the 'dairy development' category and the 'sheep rearing' category.

The households under the 'dairy development' category were given credit assistance to buy the Jersey breed of cows. As the animals were geo-climatically not suitable and there was malnutrition, deaths occurred on large scale, and the number of animals declined. The households under the 'sheep rearing' category were advanced loans to buy improved variety of sheep. The number of sheep increased significantly high over the period.

It should be expected that the development of the productive resources effected the employment of family labour. The number of labour days employed per household increased significantly for male adult workers in the case of all the three categories. Barring the slight decline in the individual cases for female adults, and male and female non-adults, the number of labour days employed per household recorded major increases in most of the cases. It is natural to expect that this change was brought about as a result of introduction of irrigation and supplementary livestock enterprises.

The development of the new resources has brought about change in the production, both agricultural and livestock, which influenced the income. The rate of change in total income with reference to change in assets was high for all the three categories. It is worthwhile therefore to suggest the continuation of the SFDA programme and its expansion to other regions also. While doing so, the technical feasibility of the schemes included in the programme should be taken into account.

Appendix I. Method of selection of Sample and Design of the
Field Investigation

The sample of households for the field investigation was selected from Kollegal taluka where three major schemes of the SFDA, namely, (i) individual wells and installation of electric pumpsets, (ii) dairy development, and (iii) sheep rearing were supposed to have been successfully implemented. The number of households which were given credit assistance under the 'individual wells' scheme was 750, out of which 53 households from five villages were selected for the study. The sample so selected formed about 7 per cent of the total beneficiaries under the scheme. There were in all 63 beneficiaries under the 'dairy development' scheme out of whom 44, or 69 per cent, were selected for the study from two villages. The number of beneficiaries under the 'sheep rearing scheme were 211, out of whom 51, or 24 per cent, were selected for the study from two villages. The villages were selected on the basis of the concentration of the households benefited by the respective scheme.

The villagewise and schemewise information regarding the selection of the households is given below:

Village	Individual wells and pumpsets	Dairy Develop- ment	Sheep rear- ing
Hanur	11	-	-
Ajjipura	10	-	-
Bhandally	11	-	-
Maratally	10	-	-
Prakash Palya	11	-	-
Sathegal	-	41	43
Tagarpura	-	3	8
Total	53	44	51

The field-work was undertaken during the two agricultural years, 1972-73 and 1973-74. When the first visit was given to the selected households in the beginning of 1972-73, the relevant information for the previous agricultural year 1971-72 was also collected. The field-data so collected included the relevant information on changes in liabilities and assets, development of resources like land and livestock, agricultural and livestock production and expenditure and income from different sources.

Appendix Table I : SFDA, Mysore District -- Some Statical Particulars as on 1.3.74

Date of Inauguration	27.8.70		
No. of Small Farmers identified	53,210		
No. of Small Farmers enrolled	39,130		
No. of Credit Societies :			
M.D.C.C. Bank	337		
Commercial Banks	225		
Total	562		
No. of Primary Land Development Banks	11		
No. of Commercial Banks	14		
No. of Veterinary Institutions	64		
No. of Regulated Markets	6		
Total Area of the District	11,744 Sq., K.M.,		
Total Population of the District	17,21,529		
No. of inhabited villages	1,505		
Total Area Cropped	5,46,017 Hectares		
Loan Disbursed and the Small Farmers benefited:			
Sl.No.	Type loan	Amount in lakhs	No. of SFs.
1.	Short Term	73.76	18,575
2.	Medium Term	26.992	1,897
3.	Long Term	91.24	1,893(I.I.Well)
		0.94	122(C.I. ")
		23.85	817(I.P.Set)

Appendix Table II : Year-wise details of Short Term Loan issued to Small Farmers (for Crop Year)

Bank	(Amount in Rs.lakhs)							
	1970-71		1971-72		1972-73		1973-74	
	SFs.	Am- ount	SFs.	Am- ount	SFs.	Am- ount	SFs.	Am- ount
M.D.C.C.,	2,620	6.65	7,529	20.32	12,496	40.38	10,411	38.33
Commercial	2,795	8.78	5,716	17.62	8,137	30.52	8,164	35.42
Total	5,415	15.43	13,245	37.94	20,633	70.90	18,575	73.76

Appendix Table III : Budget Allotment and Expenditure 1973-74
as Approved by the Government of India as
on 1.3.1974

		(Rs. in lakhs)	
Sl. No.	Budget Head	Allotment	Expenditure
1.	Agriculture including Tobacco Development	4.50	1.48
2.	Minor Irrigation	29.60	10.78
3.	Animal Husbandary	4.00	1.09
4.	Subsidiary Occupation	1.00	0.035
5.	Strengthening of Co-operatives	3.00	0.54
6.	Marketing and Storage	3.00	-
7.	Custom Service	2.50	1.00
8.	Administrative Charges	1.00	1.28
9.	Rural Artisans	0.60	0.29
10.	Novolving Fund	-	0.45
	Total	50.00	17.745
 <u>Receipts and Expenditure :</u>			
	Total grant received from Government of India	Rs. 65.378 Lakhs	
	Total Expenditure up to	Rs. 65.370 "	
	Balance	Rs. 00.008	
	Percentage of Expenditure	99.87	

Appendix Table IV : Physical and Financial Targets and Achievements as on 1.3.1974

Sl. No.	Scheme	Physical		Financial		SFDA A/C
		Targets	Achievements	Targets	Achievements	
1	2	3	4	5	6	7
1.	Individual wells	4500	1893	225.00	91.23	18.72
2.	Community wells	160	35	43.20	11.63	5.27
3.	Installation of pump sets	4500	817	135.00	23.04	6.17
4.	Dairy Development	600	531	21.60	12.35	1.95
5.	Sheep Rearing	1000	894	10.00	8.59	1.52
6.	Poultry Farming	200	47	5.53	0.98	0.13
7.	Piggery Development	300	-	3.45	-	-
8.	Kitchen gardens	750	372	9.87	-	0.12
9.	Perinial Fruits	600	-	18.00	-	-
10.	Coconut cultivation	600	63	8.40	-	0.10
11.	Rearing Houses	400	5	22.00	0.12	0.03
12.	Rearing equipments	5000	72	12.00	0.17	0.05
13.	Planting Mulberry cuttings	1000	58	1.50	-	0.09
14.	Managerial subsidy to Co-ops	313	300	12.90	-	3.91
15.	Construction of godowns	64	22	17.60	0.85	0.85
16.	Purchase of Tractor	35	18	14.00	2.80	2.19
17.	Demonstration plots	500	500	1.00	-	0.76
18.	Risk Fund	-	399	19.36	-	7.023
19.	Agricultural Im-plements	1250	-	11.00	-	0.01
20.	Rural Artisans	2280	-	5.57	-	0.25
21.	Share Capital	12400	5040	5.00	-	1.011
22.	Training and Publicity	-	-	0.20	-	-
23.	Market centres	5	-	5.00	-	-
24.	Tobacco Barns	490	39	24.50	2.05	0.47
25.	Tobacco Equipments	490	-	3.43	-	-
26.	Medium Term loan to M.D.C.C.B.	-	-	-	-	10.00
Total				635.11	153.23	59.82

Appendix Table V : Particulars of Identification and Enrolment of Small Farmers

Sl. No.	Name of the Taluk	No. of SFs. Identified	No. of SFs. who are member before	No. of SFs. enrolled since inception	Total
1.	Mysore	3277	860	1804	2664
2.	T.N.Pura	6658	1012	3413	4425
3.	Kollegal	5050	1690	2065	3755
4.	Nanjangud	7009	988	4152	5140
5.	C.R. Nagar	6028	786	3678	4464
6.	Yelandur	1308	220	880	1100
7.	Gundlupet	5010	670	3142	3812
8.	Hunsur	5000	1019	3391	4410
9.	H.D.Kote	5435	450	2426	2876
10.	P.Patna	4297	383	2163	2546
11.	K.R.Nagar	4138	685	3253	3938
Total		53210	8763	30567	39130

Appendix Table VI : Particulars of Individual Irrigation Wells

Sl. No.	Name of the Taluk	Targets	Achievements	Loan (Rs.)	Subsidy (Rs.)
1.	Mysore	562	278	1358600	278460
2.	T.N.Pura	363	95	460175	96950
3.	Kollegal	750	322	1558600	310940
4.	Nanjangud	375	223	1069565	221806
5.	C.R.Nagar	650	283	1311715	285610
6.	Yelandur	87	51	227740	40540
7.	Gundlupet	500	209	1034415	208280
8.	Hunsur	288	121	585860	123800
9.	H.D.Kote	375	191	937160	184680
10.	P.Patna	275	48	236000	46900
11.	K.R.Nagar	275	72	343700	70937
12.	Direct Finance	-	4	18400	3520
Total		4500	1893	9123530	1872333

Appendix Table VII : Particulars of Community Irrigation Wells.

Sl. No.	Name of the Taluk	No. Sanctioned	Estimated cost	Loan sanctioned	Subsidy sanctioned	No. of SFs.
1.	Mysore	3	141720	-	59710	77
2.	T.N.Pura	2	63280	-	23392	-
3.	Kollegal	-	-	-	-	-
4.	Nanjangud	1	-	-	-	9
5.	C.R.Nagar	3	153350	37800	76425	23
6.	Yelandur	2	110850	-	53800	46
7.	Gundlupet	1	35000	-	17500	9
8.	Hunsur	5	132000	12500	61570	28
9.	H.D.Kote	4	124750	13300	62250	39
10.	P.Patna	8	244500	17000	105707	88
11.	K.R.Nagar	6	157800	13500	66450	78
Total		35	1163250	94100	526804	397

Appendix Table VIII : Particulars of Irrigation Pumpsets.

Sl. No.	Name of the Taluk	Targets	Achievements	Loan sanctioned	Subsidy sanctioned
1.	Mysore	562	106	3,11,950	82,231
2.	T.N.Pura	363	47	4,35,389	36,200
3.	Kollegal	750	127	3,80,980	92,505
4.	Nanjangud	375	145	4,21,745	1,14,513
5.	C.R.Nagar	650	148	4,25,855	1,08,995
6.	Yelandur	87	32	94,810	25,349
7.	Gundlupet	700	105	3,04,680	78,581
8.	Hunsur	288	66	2,10,500	51,938
9.	H.D.Kote	375	26	75,075	19,175
10.	P.Patna	275	-	-	-
11.	K.R.Nagar	275	15	44,030	11,125
12.	Direct Finance	-	4	10,937	2,661
Total		4500	817	27,15,951	6,23,274

Appendix Table IX : Particulars of assistance provided for Dairy Development

Sl. No.	Name of the Taluk	Land Sanctioned		Subsidy Sanctioned	
		SFs.	Amount (Rs.)	SFs.	Amount (Rs.)
1.	Mysore	181	4,38,900	129	84,585
2.	T.N.Pura	28	86,800	15	7,500
3.	Kollegal	63	1,28,000	61	28,150
4.	Nanjangud	18	34,000	6	3,000
5.	C.R.Nagar	66	1,30,000	39	17,250
6.	Yelandur	14	37,800	14	12,600
7.	Gundlupet	-	-	-	-
8.	Hunsur	61	1,17,550	44	19,441
9.	H.D.Kote	-	-	-	-
10.	P.Patna	90	2,44,440	39	22,849
11.	K.R.Nagar	10	20,000	-	-
Total		531	12,37,490	347	1,95,375

Appendix Table X : Particulars of assistance provided for Sheep Rearing

Sl. No.	Name of the Taluk	Land Sanctioned		Subsidy Sanctioned	
		SFs.	Amount	SFs.	Amount
1.	Mysore	164	112250	143	25182
2.	T.N.Pura	106	106000	96	24000
3.	Kollegal	211	211000	211	52750
4.	Nanjangud	88	120550	66	16137
5.	C.R. Nagar	39	40300	31	7375
6.	Yelandur	-	-	-	-
7.	Gundlupet	33	34000	16	4250
8.	Hunsur	39	32726	4	728
9.	H.D.Kote	15	15000	15	3750
10.	P.Patna	39	39000	-	-
11.	K.R.Nagar	126	105675	76	15293
Total		860	816501	658	149465

Appendix Table XI : Particulars of assistance provided for Poultry Development

Sl. No.	Name of the Taluk	Loan Sanctioned		Subsidy Sanctioned	
		SFs.	Amount	SFs.	Amount
1.	Mysore	1	2,000	-	-
2.	T.N.Pura	-	-	-	-
3.	Kollegal	1	2,000	-	-
4.	Nanjangud	-	-	-	-
5.	C.R.Nagar	-	-	-	-
6.	Yelandur	-	-	-	-
7.	Gundlupet	21	36,490	9	4,500
8.	Hunsur	8	16,000	-	-
9.	H.D.Kote	12	23,800	10	5,000
10.	P.Patna	-	-	-	-
11.	K.R.Nagar	4	8,000	4	2,000
Total		47	88,290	23	11,500

Appendix Table XII : Particulars of assistance provided for Sericulture Development

Sl. No.	Name of the Taluk	Planning Malberry		Rearing Equipment			Rearing House		
		SFs.	Subsidy	SFs.	Loan	Subsidy	SFs.	Loan	Subsidy
1.	Mysore	-	-	-	-	-	-	-	-
2.	T.N.Pura	3	1030	-	-	-	-	-	-
3.	Kollegal	2	450	28	5040	1680	1	2400	600
4.	Nanjangud	4	900	-	-	-	-	-	-
5.	C.R.Nagar	11	1175	19	3600	1200	-	-	-
6.	Yelandur	32	5111	25	6030	2010	4	9600	2400
7.	Gundlupet	-	-	-	-	-	-	-	-
8.	Hunsur	-	-	-	-	-	-	-	-
9.	H.D.Kote	-	-	-	-	-	-	-	-
10.	K.R.Nagar	-	-	-	-	-	-	-	-
11.	Periyapatna	-	-	-	-	-	-	-	-
Total		52	9066	72	14670	4890	5	12000	3000

Appendix Table XIII : Particulars of assistance provided for Horticulture Development

Sl. No.	Name of the Taluk	Kitchen garden		Coconut cultivation	
		SFs.	Subsidy	SFs.	Subsidy
1.	Mysore	-	-	1	1236
2.	T.N.Pura	18	288	-	-
3.	Kollegal	50	800	16	1200
4.	Nanjangud	1	16	14	1103
5.	C.R.Nagar	67	1072	20	1711
6.	Yelandur	-	-	8	636
7.	Gundlupet	146	2336	35	2844
8.	Hunsur	102	1632	15	390
9.	H.D.Kote	122	1952	1	90
10.	P.Patna	100	1600	7	556
11.	K.R.Nagar	44	704	4	330
Total		650	10400	128	10096

Appendix Table XIV : Particulars of assistance provided to Co-operatives

Sl. No.	Name of the Taluk	Managerial Subsidy		Risk Fund		Share Capital Assistance		
		SCS	Amount	SCS	Amount	SCS	SFs.	Amount
1.	Mysore	38	35200	26	11017	9	578	15605
2.	T.N.Pura	27	24900	44	51369	2	31	640
3.	Kollegal	33	30050	44	100643	14	560	23600
4.	Nanjangud	38	34125	63	86700	9	741	7410
5.	C.R.Nagar	14	12110	37	82583	3	42	510
6.	Yelandur	8	7200	15	22057	8	257	2570
7.	Gundlupet	25	22800	24	54412	4	68	1540
8.	Hunsur	24	21600	29	38290	10	295	6360
9.	H.D.Kote	13	13200	21	42916	11	477	6850
10.	P.Patna	28	30000	39	60206	7	345	3810
11.	K.R.Nagar	32	28350	34	34475	20	1646	31338
Total		281	259435	376	584668	99	5040	100233

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