

Overall benefits - Cooperative versus Control Villages7.1 INTRODUCTION

The previous chapters indicated results of the field survey village-wise for each of the three selected milksheds and comparisons were made between the cooperative & control villages in the same milkshed. At the end of this study, it may be useful to present the results in a consolidated form comparing the three cooperative villages with the 4 control villages.

The comparison was made in the parameters of distribution of land and milch animals, Milk Animals & Milk Production, Milk disposal, price realized & gross cash income, household income, employment, calorie & protein intake and Asset Accumulation. The findings are briefly described below :-

7.2 DISTRIBUTION OF LAND AND MILCH ANIMALS

As can be seen from Table 7.1 the lower size groups i.e. the landless & marginal farmers in the cooperative village own a considerably greater proportion of animals (42.7%) than their counterparts in the control village (23.3%). Though the land distribution was also uneven the ownership pattern was slightly better in the cooperative villages. This means that the rural poor in the cooperative villages have benefitted more from dairy development than from agriculture.

7.3 MILK PRODUCTION & PRICE REALIZED

Table 7.2 indicates the average milk production per household in the cooperative & control villages in the 3 districts. It can be seen that the average milk production of the land owners in the cooperative

TABLE 7.1

Distribution of land and milch animals according to size of land holding classes in all the 3 cooperative & 4 control villages.

Land holding size classes	Cooperative villages			Control villages		
	Krishnayapalam % of house- hold	Anawal % of land	Khaikheda % of milch animals	Abbarajupalam % of house- holds	Dondapady % of land	Sunnvalla, Charan % of milch animals
Landless	24.67	0.00	17.4	19.1	0.00	10.8
0-2.5 acres	19.59	9.3	25.3	12.17	5.1	12.5
2.5-5 acres	19.51	12.11	21.8	13.0	9.6	22.2
5-10 acres	17.54	22.53	19.8	25.3	26.2	26.5
Above 10 acres	18.69	56.06	15.7	30.5	59.1	28.0

TABLE 7.2

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PARTICULARS	Cooperative villages (KRISHNAYAPALAM, ANAWAL & KHAIKHEDA)			Control villages (ABBARAJUPALEM, DONDAPADU, SUNVALLA & CHARNAL)		
	Owners	Landless	Total	Land owners	Landless	Total
1. Total No. of households	919	301	1220	769	182	951
2. % households with milch animals	79.49	42.19	70.27	46.77	18.69	49.94
3. No. of milch animals	2646	138	2784	805	50	855
4. Av. number of milch animals per hh.	2.85	1.68	3.84	1.96	1.44	1.90
5. Av. milk production last month (L/hh)	241.41	107.8	218.16	96.41	68.98	94.02
6. Average milk production last month (L/hh) milch animal in milk	155.18	167.00	155.64	91.72	89.68	97.15
7. Average liquid milk sold to (L/hh)						
- Cooperatives	185.58	73.28	165.31	0	0	0
- Others	10.17	8.79	9.97	64.92	37.82	62.58
- Total	195.75	82.07	175.28	64.92	37.82	62.58
8. Liquid milk retained (L/hh)	45.65	25.7	42.87	63.58	54.17	62.75
9. % liquid milk sold to produced	81.09	76.16	80.34	34.05	21.47	33.26
10. Value of liquid milk sold to (R/hh)						
- Cooperative	627.64	237.15	556.98	0	0	0
- Others	33.98	29.84	33.41	121.73	70.83	117.32
- Total	661.62	266.99	590.39	121.73	70.83	117.32
11. Average price realized (Rs./L)	3.16	3.16	3.16	1.87	1.87	1.87
12. Sale value of milk products (Rs/hh)	24.49	14.20	22.80	9.74	2.13	9.30
13. Gross cash income from milk & milk products (Rs/hh)	686.11	281.19	613.19	131.47	72.96	126.62

villages was 69% higher and that of the landless 86% higher as compared to that in the control villages. It is also significant to note that the average price realized for milk by the land owners as well as the landless groups was 70% higher when compared to control villages. The gross income from milk & Milk products in case of the land owners in the cooperative villages was 422% higher and in case of the landless 285% higher when compared to their counterparts in the control villages. The remarkable performance in the cooperative villages could be attributed to the higher milk yield and higher milk price.

7.4 HOUSEHOLD INCOME OF VARIOUS CATEGORIES OF HOUSEHOLDS IN THE COOPERATIVE & CONTROL VILLAGES

Table 7.3 presents data on the level and sources of household income in the cooperative & control villages in the 3 districts. The household income from all sources in the cooperative villages was 6% higher as compared to the control villages. In the case of the landless group it was 19.5% and landed 8.2% higher than their counterparts in the control villages. It is significant to note that in the cooperative villages the average income from milk for the landless households was 1665% higher than in the control villages. This is because the households in the control villages scarcely derived any income from milk. Thus dairying is one of the most important sources of income in the cooperative villages particularly for the lower groups. Income from other sources of the landless group in the cooperative villages was 31% lesser when compared to the control villages. This indicates that the landless group concentrates more on other sources in the absence of a regular market for milk. Similarly the status of crop farming was better in the control villages for the same reason.

TABLE 7.3

HOUSEHOLD INCOME OF VARIOUS CATEGORIES OF HOUSEHOLDS IN ALL THE COOPERATIVE AND CONTROL VILLAGES (GUNTUR, SURAT & BHOPAL)

Category of household (acres)	Cooperative villages (Krishnayapaleem, Anawal, Khaikheda)					Control villages (Abbarajupalem, Dandapadu, Sunvalla, Charnal)				
	Share in Total No. of house-holds	Milk	Crops	from Other Sources	Average Annual Income (Rs./hh)	Share in Total No. of house-holds	Milk	Crops	Other sources	Average annual income (Rs./hh) from
Landless	24.7	1986.32	-	3266.00	5252.32	19.1	112.5	-	4279.56	4392.06
upto 2.49	19.5	2469.27	1710.30	2460.88	6640.47	12.0	385.4	1944.10	2283.18	4612.68
2.5 to 4.99	19.5	2629.22	2358.05	2565.29	7732.56	13.0	519.38	2958.78	2976.23	6454.39
5 to 9.99	17.5	2751.44	5603.43	3384.59	11739.46	25.3	868.76	4436.91	3741.04	9046.71
10 & above	18.8	3028.25	6810.90	2754.40	12593.55	30.6	993.42	6606.73	3804.77	11404.92
Landed house-hold	75.3	2715.60	4101.62	2776.05	9593.27	Landed house-holds	787.60	4645.96	3424.73	8858.30
All categories	1220	2535.67	3089.66	2896.93	8522.26	951	658.40	3756.83	3588.32	8003.56

* Other sources include self employment in non-farm activities & wage paid employment.

** Figures in parenthesis represent percentages of the aggregate income.

7.5 LEVEL & SOURCES OF EMPLOYMENT OF FAMILY LABOUR

The total employment of family labour in all activities for all the households in the cooperative villages was 22% higher than in the control villages (Table 7.4). Employment of family labour in dairying for the landless group was about 90% higher when compared to the control villages. This is significant in as much as it indicates the importance the landless groups attach to Dairying as 'other sources' was only 3% higher in the control villages in respect of the landless groups. Employment in crop cultivation was 7% higher in the cooperative villages.

7.6 NUTRITIONAL VALUE IN TERMS OF CALORIES & PROTEINS

The consumption of all food items in general was significantly higher and more balanced in the cooperative village (Tables 7.5 & 7.6). This could be the result of the regular flow of income from milk sales. The food intake of the landless groups in the cooperative villages was higher (i.e. 2096.2 calories of various food items and 57.7 gms per day of proteins as compared to 2025.3 calories and 42.7 gms per day in the control villages. This group has been able to maximize the total calorie intake from food.

Consumption of proteins by all categories of people in the cooperative village was significantly higher in the cooperative villages when compared to the consumption in the control villages. Protein intake increased with the increase of land holdings.

7.7. GROWTH IN RURAL ASSETS

Tables 7.7 and 7.8 indicate that in the cooperative villages about 52% of the members have bought assets for their houses. This is very

TABLE 7.4

Level & sources of employment of family labour by categories of households in all the Cooperative & Control villages of GUNTUR, SURAT & BHOPAL

Category of households	Cooperative Villages (Guntur, Surat & Bhopal)				Control Villages (Abbarajupalam, Dondapadu, Sunvalla & Charnal)			
	Dairying	Crops	Other Sources	Total	Dairying	Crops	other sources	Total
Landless	87.39	-	502.7	590.1	46.1	-	516.8	562.9
Landed	190.24	228.7	156.6	575.54	122.0	213.5	125.5	335.5
All	165.6	228.7	242.0	636.3	107.5	213.5	200.4	521.4

* Figures in parenthesis represent percentages of employment.

Cooperative villages (Krishnayapalam, Anawal, Khaikheda) (Calories/day)

FOOD ITEMS

Category	Cereals	Pulses	Milk & Milk products	Fruits & Vegetables	Meat/Fish	Fats & Oils	Sugar & Jaggery	Total
Landless	1694.8 (81.0)	55.9 (2.7)	104.9 (5.0)	22.9 (1.0)	22.8 (1.0)	98.5 (4.7)	96.4 (4.6)	2096.2 (100)
0-2.5 acres								
0-2.5 acres	2171.6 (78.0)	106.5 (3.8)	122.4 (4.4)	37.3 (1.3)	60.5 (2.2)	121.3 (4.4)	163.1 (5.9)	2782.5 (100)
2.5 to 5 acre								
2.5 to 5 acre	2357.1 (78.0)	118.1 (3.9)	172.2 (5.7)	34.3 (1.1)	32.7 (1.0)	137.4 (4.5)	169.8 (5.6)	3021.6 (100)
5-10 acres								
5-10 acres	2343.4 (73.0)	164.4 (5.1)	282.4 (8.9)	44.7 (1.4)	33.2 (1.0)	162.1 (5.0)	181.3 (5.6)	3211.5 (100)
Above 10								
Above 10	2365.1 (71.8)	152.3 (4.6)	273.3 (8.3)	46.6 (1.4)	72.3 (2.2)	170.8 (5.2)	213.2 (6.5)	3293.6 (100)
<u>PROTEIN INTAKE IN (GMS)</u>								
Landless	43.7 (75.7)	4.1 (7.1)	4.8 (8.3)	1.9 (3.3)	3.2 (5.5)	-	-	57.7 (100)
0-2.5 acres								
0-2.5 acres	60.7 (71.1)	8.3 (9.7)	6.2 (7.3)	1.8 (2.1)	8.4 (9.8)	-	-	85.4 (100)
2.5-5 acres								
2.5-5 acres	71.6 (76.4)	7.2 (7.7)	6.5 (6.9)	2.6 (2.8)	5.8 (6.2)	-	-	93.7 (100)
5-10 acres								
5-10 acres	68.4 (71.8)	11.4 (12.0)	8.3 (8.7)	2.7 (2.8)	4.5 (4.7)	-	-	95.3 (100)
Above 10 "								
Above 10 "	74.3 (68.9)	12.1 (11.2)	8.4 (7.8)	2.3 (2.1)	10.8 (10.0)	-	-	107.9 (100)

* Figures in parenthesis indicate percentages.

TABLE 7.6

Calorie & Protein Intake from different food items in the four
control villages (Abbarajupalam, Dondapadu, Sunvalla, Charnal)

FOOD ITEMS

Category	Cereals	Pulses	Milk & Milk pro- ducts	Fruits & Vege- tables	Meat/ Fish	Fats & Oils	Sugar & Jaggary	Total
Landless	1672.3 (32.5)	39.7 (2.0)	40 (2.0)	11.7 (0.5)	59.1 (3.0)	105.7 (5.0)	96.8 (5.0)	2025.3 (100)
0-2.5 acres	1717.2 (32.0)	42.3 (2.0)	87 (4.0)	14.8 (0.5)	13.3 (0.5)	96.7 (5.0)	123.5 (6.0)	2094.8 (100)
2.5 to 5 "	1837.4 (34.0)	57.0 (2.0)	135 (6.0)	21.8 (1.0)	6.8 (-)	116.6 (5.0)	160.6 (7.0)	2352.2 (100)
5-10 acres	2177.3 (39.0)	59.0 (2.0)	193.6 (7.0)	28.6 (1.0)	7.5 (-)	123.6 (5.0)	172.9 (6.0)	2762.5 (100)
Above 10 "	2179.5 (36.5)	78.3 (3.0)	216.0 (7.5)	32.7 (1.0)	12.9 (-)	146.2 (5.0)	181.3 (6.5)	2846.9 (100)
PROTEIN INTAKE (IN GMS)								
Landless	32.4 (76.0)	3.6 (8.5)	1.9 (5.0)	.7 (-)	4.5 (10.5)	-	-	42.7 (100)
0-2.5 acres	41.2 (78.0)	4.2 (8.0)	3.5 (6.5)	1 (2.0)	2.8 (5.5)	-	-	52.7 (100)
2.5-5 acres	49.8 (77.0)	5.8 (9.0)	5.7 (9.0)	1.5 (2.0)	2.0 (3.0)	-	-	64.8 (100)
5-10 acres	57.1 (79.0)	4.8 (6.5)	7.1 (10.0)	1.6 (2.0)	1.8 (2.5)	-	-	72.4 (100)
Above 10	60.3 (78.0)	5.8 (8.0)	7.3 (9.0)	2.6 (3.0)	1.8 (2.0)	-	-	77.8 (100)

FIGURES IN PARENTHESES INDICATE PERCENTAGES

TABLE 7.7

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Moveable & Immoveably Assets acquired by members
in the cooperative villages in GUNTUR, SURAT & BHOPAL

ITEMS	Categories of Farmers		
	Landless	Landed	Total
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<u>IMMOVEABLE ASSETS</u>			
HOUSE BUILDING	-	21.5	12.8
Repairs & Improvement of housing facilities	34.4	19.3	21.3
Agricultural land	-	9.6	5.7
Others			
<u>FARMING MACHINERY/IMPLEMENTS & TOOLS</u>			
Bullock cart	6.7	7.4	7.6
Tractor	-	5.9	3.5
Diesel Pumpset	-	8.1	4.9
Electric Motor	-	11.1	6.7
Others			
<u>NON FARMING ASSETS(MACHINERY)</u>			
Sewing Machines	-	2.2	1.3
Bicycle	6.7	11.5	6.7
Moped/Motor cycle/Scooter	0	2.2	1.3
Others	2.2	3.6	3.1
NOTHING/CAN'T SAY/NO ANSWER			
<u>NON FARMING ASSETS(HOUSEHOLD)</u>			
Wrist watch/clock	16.7	19.3	17.8
Transistor	17.8	19.2	18.7
Refrigerator	-	6.6	3.9
Electric Fan	-	14.0	8.4
Tape Recorder	-	8.9	1.3
Kitchen appliances	-	2.2	1.3
Gobar gas Plants	-	3.7	2.2
Kitchen utensils	49.9	25.9	35.6
Furniture	7-8	11-8	10.2
Others			
NOTHING/CAN'T SAY/NO ANSWER	47.76	48.14	48.0
TOTAL NUMBER OF RESPONDENTS	90	135	225

TABLE 7.8

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IMMOVEABLE & IMMOVEABLE ASSETS ACQUIRED BY MEMBERS
IN THE CONTROL VILLAGES IN GURNTUR SURAT & BHOPAL

ITEMS	CATEGORIES OF FARMERS		
	Landless	Landed	TOTAL
<u>IMMOVEABLE ASSETS</u>	-	5.9	5.9
House Building	-	5.9	5.9
Repairs & Improvement of housing facilities	3	11.9	8.3
Agricultural land	-	7.3	4.4
Others	-	-	-
<u>FARMING MACHINERY/IMPLEMENTS & TOOLS</u>			
Bullock cart	-	4.6	3.6
Tractor	-	3.3	1.9
Diesel Pumpset	-	6.7	3.9
Electric Motor	-	7.9	4.8
Others	-	8.0	4.8
<u>NON FARMING ASSETS (MACHINERY)</u>			
Sewing Machines	-	2.6	1.6
Bicycle	-	2.6	1.6
Moped/Motor cycle/Scooter	-	2.0	1.2
Others	-	2.7	1.6
NOTHING /CAN'T SAY/NO ANSWER			
<u>NON FARMING ASSETS (HOUSEHOLD)</u>			
Wrist watch/clock	1.0	8.6	5.6
Transistor	2.0	12.0	8.4
Refrigerator	-	-	-
Electric fan	-	3.3	2.0
Tape Recorder	-	.5	.3
Kitchen appliances	-	-	-
Gobar gas plants	-	-	-
Kitchen utensils	6.7	9.1	8.1
Furniture	-	5.5	3.3
Others	-	5.9	3.6
NOTHING/CAN'T SAY/NO ANSWER	82	65.9	72.4
TOTAL NUMBER OF RESPONDENTS	100	150	250

significant compared to the 27.6% of households in the control village. Singularly noticeable are moveable assets such as wrist watches/clocks Transistors, Kitchen utensils and furniture which are 17.8%, 18.7%, 35.6% and 10% respectively compared to 5.6%, 8.4%, 8.1% and 3.3% respectively in the control villages. Growth in immoveable assets was distinctly discernable in the cooperative villages than in the control villages as can be seen in Table 7.7 and 7.8.

It is obvious that members in the dairy villages received more economic gains from the sale of milk when compared to their counterparts in the control village.