

I. FARM HOUSEHOLD ECONOMY SURVEY

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I FARM HOUSEHOLD ECONOMY SURVEY

I.1 Objectives for Field Surveys / Investigations

On the aspect of agro-economy, in order to grasp the present situation of living and agricultural production at farm level in the Pilot Tank Areas as well as the inquiries of local farmers, particularly on the impacts of tank rehabilitation as well as their intentions in participation in O&M works and sharing water-fees for reflecting in the directives for project formulation, a Farm Household Economy Survey was basically carried out for all farm categories subjected to these areas (10 questionnaires for one tank area).

The main purpose of this Farm Household Economy Survey is firstly to obtain the specific information on agricultural production and living conditions as well as related intentions from each farm category in each subjected Tank Area in order to compare their disparities, and local specific problems and inquiries in each tank area at the moment.

Along with this Farm Household Economy Survey, a General Reconnaissance Survey was carried out at each village for hearing the ensembling voices of villagers to a certain number of questions on their socio-economic conditions and activities. This was done one time at each village by gathering a number of villagers including the village head in the common ground of the village for the hearing session. This was followed by visiting the concerned premises such as tank facilities, fields and housing conditions in order to feedback to the inquiries. Besides, the interviews by visiting local officials concerned on the aspects of agricultural production were performed from time to time for confirming certain local problems and issues related to the basic socio-economic conditions, and obtaining their ideas for proper solutions.

From these collected data and information, the cross-examination and analysis were performed for properly planning the agricultural production activities and the formulation of the related project components.

I.2 Questionnaire for Farm Household Economy Survey

For this survey, the questionnaire prepared by the JICA Team was made into 7 parts of concerned aspects as follows:

- Household Characteristics
- Living and Production Situation
- Land Ownership
- Irrigation Situation
- Agriculture
- Other Economic Activities

- Farmers' Attitudes towards the Project

A sample of the survey-questionnaire for this Farm Household Economy Survey is attached in Table I.2.1 for reference purpose.

I.3 Proceedings for Farm Household Economy Survey

The Farm Household Economy Survey was conducted during the Feasibility Study. The criteria for this Farm Household Economy Survey were made as follows:

- (1) Ten (10) farms to be surveyed in each Pilot Tank Area (or 50 samples in the Northern region and 50 samples in the Southern region).
- (2) Composition of farms for sampling in each area was recommended as follows:

- One (1) Big Farm
- Two (2) Medium Farms
- Four (4) Small Farms
- Two (2) Marginal Farms
- One (1) Landless Farm

The reason for making this breakdown of sampling is to focus on the 3 categories of medium, small and marginal farmers which make the major share of farm holders in the Project, where the category of small farms is considered as the middle of all 5 categories. The category of small farms, therefore, is subjected to a higher number of samples for an intensive elaboration.

- (3) After gathering all the concerned data by the field surveys, the collected data are used for compiling the reports related to the aspects of agro-economy and agriculture of the Project. For tabulating the tables and compiling the report related to the Survey on Farm Household Economy of the 10 Pilot Tank Areas, the directives for proceeding these works were made by the concerned members of the JICA Team,

I.4 Cross-examination of Results from Field Surveys/Investigations

Through the cross-examination of results from the aforementioned field surveys/investigations, some collected data and information showing discrepancies were evaluated for making the reliable figures. From the enquete surveys, individual farmers had intentions to express their low farm revenues and a high consumption and expenditure which required some basic adjustments for the proper figures.

I.5 Results from Farm Household Economy Survey

The analysis of data collected from the Farm Household Economy Survey showed the

results as follows;

I.5.1 Farmers' Characteristics

The data in the Farm Household Economy Survey collected for this part showed that all the surveyed farms have been living upon agriculture in the same place (tank area) for more than 10 years. Subjected farmers have been depending mostly on tank irrigation for their crop cultivation, considering the irrigation tanks as their basic living properties. (Table I.5.1)

Since their agriculture has been based on irrigation by rainfed tank which is unstable during the rainfall scarcity years (more than 5 years in a 10-year cycle in most parts of the Southern Region), the phenomena of migration to neighboring areas basically for agricultural employment during the drought years and returning back to their villages for cultivation on their own lands in normal years has been occurred up to now. Their assets in terms of houses, farm equipment and facilities, therefore, are observed comparatively less.

The average family size was varying from 4 for landless family to 5 for other farm categories in Northern Study areas, and 5 for landless family, 6 for marginal farm and 7 for other farm categories in the Southern region. (Table I.4.2)

Regarding the agricultural production, the constraints cited in descending order were i) irrigation water, ii) agricultural inputs, iii) finance, iv) labour insufficiency, v) marketing facilities and vi) rural infrastructures. 32 % in the North and 39 % in the South were reported as having irrigation water as a top constraint. Another 32 % expressed agricultural inputs as a with 16 % in the North and 16 % in the South. For lack of finance, 11 % in the North and 33 % in the South expressed this as a constraint. Regarding marketing, 2 % in the North and 12 % in the South expressed this as a constraint. (Table I.5.3)

Apart from the constraints in agricultural production, the constraints in living conditions are notified as i) climate, ii) social infrastructures, iii) social environment, iv) administration and v) lack of income. Among these constraints, 23 % in the North and 10 % in the South expressed their constraint is lack of income. Lack of social infrastructures is reported by 17 % in the North and 2 % in the South. Constraint in climatic factor is reported by 5 % in the North and 7 % in the South. Constraint in social environment is reported as 3 % in the North and 4 % in the South. (Table I.5.4)

The survey data showed that more than 50 % of the surveyed farmers expressed their present living conditions as at medium level (Table I.5.5) and all surveyed farms expressed their willingness to continue living in the same area. They cited various reasons but the most popular reasons were the native land and agriculture as their substantial job (Table I.5.6).

1.5.2 Life and Production in the Area

More than 65 % of surveyed farms considered their houses were constructed with good materials; meanwhile, about 35 % of farms were reported of bad materials. Generally thatch huts inhabited by landless people are made of bad materials.

Regarding the space and equipment in their houses, about 75 % of surveyed farms expressed "sufficient space" but only 32% for "well equipped".

		Farmers' Problems	
		Wet Season	Dry Season
Regarding the access condition to their houses, about 60 % of surveyed farms expressed as having good access. (Table 1.5.7)	Category		
	Big Farms	) Far distances to their farms	1) Erratic electric supply 2) Scanty water supply
Regarding seasonal problems, about 40 % of surveyed farms expressed as having problems in the wet season, but more than 65 % for the dry season. These problems are different for each farm categories as tabulated.	Medium Farms	) Labour insufficiency) Transportation means) Lack of credits	1) Monsoon 2) Scarcity of water 3) No job
	Small Farms	) Flooding) Lack of drainage) Poor road) Lack of finance	1) Lack of drinking water 2) No water tank 3) Poor health condition 4) Lack of electricity
	Marginal Farms	) Poor road) Transportation means) Lack of finance	1) Lack of water 2) Lack of credit
	Landless Farmers	) Lack of water) No job) Lack of finance) Transport means	1) No job 2) Lack of drinking water 3) Lack of finance

Regarding the annual farm incomes, 15 % of surveyed farms were reported as less than Rs.10,000, and also 15 % for the income range of Rs. 10,000 - 15,000, making a total percentage of 30% for an annual farm income of less than Rs.15,000 per annum.

For the annual farm income of Rs.15,000 - 25,000, 42 % of surveyed farms were belonged to this group. This means 72 % of surveyed farms have annual farm income of less than Rs. 25,000. This group is found with all landless farmers and marginal farmers and partly small farmers. Only 20 % of all surveyed farms, belong to the annual income group of Rs.40,000.

For annual off-farm incomes, 42 % of surveyed farms were reported as having less than Rs.5,000, and 10 % for the income range of Rs.5,000 - 10,000, making more than half of surveyed farms having the annual off-farm income of less than Rs.10,000. Only 16 % of the surveyed farms were reported for the annual off-farm income of Rs.10,000 - 20,000, and 14 % for the off-farm income of more than Rs.20,000.

The average total annual incomes of the surveyed farms, are about Rs.12,000 for the landless category, about Rs.18,000 for the marginal farm, about Rs.32,000 for the small farm category, about Rs.60,000 for the medium farm category and about Rs.130,000 for

the big farm category. These figures were considered as proportional with their possessing farm sizes. (Table I.5.8)

The living expenditure of the surveyed farms, are Rs.14,000 for the landless category, about Rs.18,000 for the marginal farm, about Rs.33,000 for the small farm, about Rs.50,000 for the medium farm and about Rs.85,000 for the big farm. (Table I.5.9)

Considering the agricultural production costs to be incurred to their expenses, except for the two categories of medium and big farms, the farm budgets for other farm categories are considered in general deficit.

For agricultural expenses in the wet season, about 20 % of the surveyed farmers spend less than Rs.5,000, about 30 % spend Rs.5,000 - 10,000 and about 25 % spend Rs.10,000 - 20,000, making a total of 75 % spending Rs.20,000. Besides, there were about 10 % of the interviewed farmers spend Rs.20,000 - 40,000, and about 5 % spend Rs.40,000.

This situation was endorsed by a large percentage of surveyed farms (85 %) having no money saving. Only 15 % of the surveyed farms could do money saving with 5 % for less than Rs.5,000/year, 6 % for Rs.10,000 -25,000/year and 4 % for more than Rs.25,000/year. (Table I.5.11)

However, except for landless families, all other farm categories have carried out the storage of their agricultural produces, mainly rice. The quantities of stored rice were found in proportion with the farm sizes and production quantities. (Table I.5.12) This stored rice would be partly sold for cash in emergency case.

For selling their agricultural produces, 30 % of the surveyed farms including all landless families have no sale at all. Only 12 % with sale of less than Rs.5,000/ year, about 10 % for Rs.5,000 - 10,000, and about 30 % for 10,000 - 25,000. This showed only 22 % of surveyed farms, mostly medium and big farms, could annually sell more than Rs.25,000 of their agricultural produces. (Table I.5.13)

Regarding the aspect of borrowing money, more than 40 % of surveyed farms, could not borrow money at all, due to various reasons. 5 % of them have borrows of less than Rs.1,500, 20 % have borrows of Rs.1,500 - 5,000, and 10 % for borrowing Rs.5,000 - 10,000. Only about 5 % have borrows of more than Rs. 10,000. (Table I.5.14)

I.5.3 Land ownership

In the wet season, all farmlands are under crop cultivation. For the total use of farmland (100 %) in the wet season, only 83 % of surveyed farms expressed their full cropping. Only 2 % expressed the cultivation at the level of 50 %; and only 1 % expressed the cultivation of less than 50 %. (Table I.5.15)

About 80 % of farmers do not cultivate their farmlands during the dry season. For the farms having full cropping in the dry season, 14 % of the total farms expressed a full cultivation in the dry season. (Table I.5.16)

For the cropping in the dry season as the second crop, 20 %, of the surveyed farms reported as "cropping" with 16 % in the North and 4 % in the South. A large proportion of surveyed farmers expressed the needs for improvement works in their tank areas of 47 % of farms expressed the need for farmland improvement and 20 % expressed the need for improvements of irrigation facilities. (Table I.5.17)

1.5.4 Irrigation

For the desire to have more irrigation application, about 85 % of the respondents expressed their willingness to have more irrigation in wet season, but only about 40 % for more irrigation in the the dry season. For their willing to pay the water fee for this supplementary irrigation, only about 30 % of the respondents want to fully pay this additional fee; 82 % of surveyed farms expressed their willing to pay the water fee for additional irrigation in the wet season. For the dry season, however, 37 % of surveyed farms willing to pay this additional water fee for irrigation. (Table I.5.18)

The farmers participation in Water Use Association and O&M works was found very minimal. At present, only about 1 % of surveyed farms were reported as belonged to some organization like WUA, and only 6 % were working for the O&M works. (Table I.5.19)

90 % of the surveyed farms were reported presently paying for some tank irrigation fee. (Table I.5.20) For well water supply, the supplementation is based on per hour basis which is Rs.10 - 20 per hour depending on the supply capacity of well water.

69 % of surveyed farms expressed the tank rehabilitation works are "very helpful", 14 % expressed "helpful" and 14 % expressed "some helpful". For items for improvement works, 98 % expressed the needs in structural improvements and also 98 % expressing the needs for managerial improvements. (Table I.5.21) This showed the willingness of local farmers on the implementation of the Project at an early stage.

For the participation of farmers in the Project implementation, about 85 % of the respondents expressed their willingness to participate in project-works with about 70 % for rehabilitation-works and about 50 % for O&M works. However, they expressed to be paid for these works, at least at *coolies*-fares or by rations as for the "Food for Work Program". (Table I.5.22)

1.5.5 Agricultural Production

The data on the agricultural production showed the situation in the last year (1995 - 1996) which was a rainfall scarcity year. First, for the farming system in general, the

raising of livestock was applied to some extent (35 % of total farmers) in all the tank areas.

On the basis of farm categories, the raising of livestock was applied by about 50 % of medium and big farms, and about 30 % for small and marginal farms in the tank areas.

Paddy was the main first crop for all tank areas. The tank water was mainly used for paddy irrigation in all tank areas. The well water used for paddy cultivation was reported in some parts of tank areas. Also well water was used for irrigation of chilly, cotton, groundnut, vegetables and orchards. (Table I.5.23)

In average, the annual production cost per ha calculated on agricultural inputs was Rs.10,000 to 20,000. These figures were mainly varied with the application of fertilizers and pesticides plus *coolies*-costs. For small and marginal farms, they have a tendency of limiting the application of fertilizers, pesticides and coolies due to their financial constraint.

For the paddy production, the unit yield was found largely varying from 1.5 to 4.5 ton per ha in the last year which is the year of rainfall scarcity.

For the sale of their agricultural produces, rice is the main transaction commodity. The average annual quantities of rice for sale were about 7,000 kg for big farm, 6,500 kg for medium farm and 4,600 kg for small farm. The average sale unit price is Rs.4.5 - 5.0 per kg. From the survey results, farmers in the Southern regions sold more than 50 % of their agricultural produces, mainly rice, in nearby markets; meanwhile, farmers in the Northern region sold most of their rice production at farms.

For groundnut, the average amounts were 3,000 kg for big farm and 1,000 kg for small farm, or 2,000 kg per average farm. The unit farm price was Rs.12 per kg. For pulse, the average sale unit per farm was 850 kg, with averages of 1,500 kg for big farm and 200 kg for small farm. The average unit farm price was Rs.12.5 per kg. For other crops such as cotton, sugarcane, coconut etc., the cultivation was carried out for specific farms only.

I.5.6 Other Economic Activities

Due to the lack of irrigation water in the dry season and the lack of mutual (*kudimaramath*) activities in the villages subjected to the tank areas, most farmers were found as unemployed during this period. This situation causes a serious local socio-economic inefficiency as expressed by surveyed farmers. On the other hand, the availability of off-farm income sources was found limited to only a few tank areas, and the high off-farm income sources were come from leases of bullocks and farm equipment from medium and big farms, and labour forces (*coolies* for agricultural and construction works) from small, marginal and landless farm categories.

From the survey results, 45 % of surveyed farms (39 % from the Northern tank areas and 6 % from the Southern tank areas) have off-farm incomes of less than Rs.5,000 per annum from labour works (coolies), making this the highest group of off-farm income for the subjected farmers. For the annual off-farm incomes of Rs. 5,000 - 10,000, 10 % of surveyed farms (5 % for both tank areas) were belonged to this group. For the annual off-farm incomes of Rs.10,000 - 20,000, there were 16 % of surveyed farms (4 % from the Northern tank areas and 12 % from the Southern tank areas) subjected to this group. And for the annual off-farm incomes of more than Rs.20,000, 14 % of surveyed farms (2 % from the Northern tank areas and 12 % from the Southern tank areas) were belonged to this group.

1.5.7 Farmers' Attitudes

All the surveyed farmers expressed the necessity of the Project with 60 % as "very necessary " and 40 % as "necessary". Regarding the items needed for the Project, 86 % expressed the need for improving irrigation works; meanwhile, 88 % expressed the need for rural improvement works. (Table 1.5.24)

For the Project components, askings from surveyed farms were desiltation, canal lining, sluice modification/repairment and well construction. For tank bed desiltation, 52 % of the surveyed farms agreed with this work item, 45 % expressed the item of canal lining, 14 % for sluice modification/repairment, and 23 % for well construction. (Table 1.5.25)

For items related to rural improvement works, 59 % of surveyed farms inquired the rehabilitation of rural road network, 30 % for drinking water facilities, 21 % for housing improvement and 12 % for sewerage. (Table 1.5.26)

Table I.5.1 Periods of Living and Production up to Now

Period (Year) Region	More than 10 years			Between 5 - 10			Less than 5			Sub-total		
	North	South	Total	North	South	Total	North	South	Total	North	South	Total
Big Farm	5	10	15									
Medium F.	10	20	30									
Small F.	20	40	60									
Marginal F.	10	20	30									
Landless	5	10	15									
TOTAL	50	100	150									
(%)	(50%)	(50%)	100%									

Table I.5.2 Basic Family Data of surveyed Farms

Family Category	Family Size (Members)			Annual Incomes (Rs/year)			Annual Family Expenditures (Rs/year)		
	North	South	Average	North	South	Average	North	South	Average
1. Big Farm	4.0	6.0	5.0	80,000-120,000	12,000-180,000	100,000-160,000	60.0	132.0	80.0
2. Medium F.	5.0	6.5	5.8	30,000-50,000	60,000-80,000	50,000-70,000	35.0	84.0	45.0
3. Small F.	4.5	5.5	5.0	20,000-30,000	35,000-55,000	25,000-45,000	27.0	40.0	30.0
4. Marginal F.	4.5	5.5	5.0	15,000	18,000	15,000-18,000	15.0	18.0	17.0
5. Landless	5.0	6.0	5.5	12,000	12,500	12,000-12,500	12.0	12.0	12.0
TOTAL									

Table I.5.3 Description of Production Constraints by Farmers

Constraints	Irrigation			Agr. Inputs			Labour			Finance			Marketing			Infra. Facilities		
	North	South	Total	North	South	Total	North	South	Total	North	South	Total	North	South	Total	North	South	Total
Big Farm	4	4	8	0	2	2	3	1	4	0	2	2	0	1	1	1	1	2
Medium F.	8	9	17	6	3	9	6	1	7	0	4	4	0	4	1	1	1	2
Small F.	12	17	29	8	6	14	8	5	13	6	16	22	1	5	6	6	2	8
Marginal F.	7	8	15	2	5	7	5	2	7	2	9	11	1	2	3	2	1	3
Landless	1	1	2	0	0	0	0	0	0	3	2	5	0	0	0	0	0	0
TOTAL	32	39	71	16	16	32	22	9	31	11	33	44	2	12	14	10	5	15
(%)	(32%)	(39%)	71%	(16%)	(16%)	32%	(22%)	(9%)	31%	(11%)	(33%)	44%	(2%)	(12%)	14%	(10%)	(5%)	15%

Table I.5.4 Description of Living Constraints in Tank Area

Constraints	Climate			Infra-facilities			Social Envir			Administration			Income		
	North	South	Total	North	South	Total	North	South	Total	North	South	Total	North	South	Total
	Big Farm	0	3	3	2	0	2	0	0	0	2	0	2	2	3	5
Medium F.	1	4	5	4	2	6	2	2	4	0	2	2	5	7	12
Small F.	4	0	4	11	0	11	1	0	1	0	0	0	16	0	16
Marginal F.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Landless	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	5	7	12	17	2	19	3	4	7	0	2	2	23	10	33
															73

Table I.5.5 Present Living Conditions by Farmers in Each Region

Farm Categ.	VERY POOR			POOR			MEDIUM			WELL			VERY WELL		
	North	South	Total	North	South	Total	North	South	Total	North	South	Total	North	South	Total
	Big Farm	0	0	0	0	0	0	4	4	4	3	1	4	0	0	0
Medium F.	0	0	0	0	0	0	7	10	10	3	2	5	0	0	0
Small F.	0	0	0	1	1	2	14	24	24	1	3	4	0	0	0
Marginal F.	0	0	0	0	3	3	7	13	13	0	0	0	0	0	0
Landless	0	1	1	1	3	4	1	3	3	0	0	0	0	0	0
TOTAL	0	1	1	2	7	9	33	54	54	7	6	13	0	0	0
(%)		(1%)	1%	(2%)	(7%)	9%	(21%)	(33%)	54%	(7%)	(6%)	13%			

Table I.5.6 Willing to continue Living in Same Place by Farmers in Each Region

Farm Cat.	YES			No. PS Samples (Percentage)	Reasons
	North	South	Total		
1. Big Farm	5	5	10	10 (100%)	1. Lack of water, electricity 2. No work 3. Lack of transportation
2. Medium F.	10	10	20	20 (100%)	1. Lack of water 2. Lack of work 3. Lack of drinking water
3. Small F.	20	20	40	40 (100%)	1. Lack of water 2. Lack of drinking water 3. No work
4. Marginal	10	10	20	20 (100%)	1. No work 2. Lack of credit 3. Lack of drinking water
5. Landless	5	5	10	10 (100%)	1. No job 2. Lack of transport 3. Lack of drinking water
TOTAL	50	50	100	100 (100%)	

Table 1.5.7 Housing and Living Conditions of Surveyed Farm

Conditions	Housing Conditions						Living Conditions											
	Good materials			Bad materials			Enough space			Well equipped			Good access					
	North	South	Total	North %	South %	Total %	North	South	Total	North	South	Total	North	South	Total	North %	South %	Total %
Big Farm	5	10	15	100	0	0	4	4	8	80	4	3	7	70	4	5	9	90
Medium F.	9	10	19	95	1	5	10	10	20	100	9	5	14	70	8	8	16	80
Small F.	11	16	27	92.5	4	32.5	16	18	34	85	3	2	5	12.5	10	11	21	52.5
Marginal F.	3	6	9	45	7	55	3	9	12	60	2	2	4	20	5	10	15	75
Landless	1	1	2	20	4	80	2	0	2	20	1	1	2	20	1	0	1	10
TOTAL	29	38	67	65	21	33	35	41	76	76	19	13	32	32	28	34	62	52

Table 1.5.8 Average Annual Incomes of Surveyed Farms

Farm Category	Average Size	Farm Income	Off-farm Income	Total Annual Income
North Region				
1. Big Farm	16 ha	Rp.60.000	Rp.40.000	Rp.100.000
2. Medium Farm	2.95 ha	Rp.35.000	Rp.2.000	Rp.37.000
3. Small Farm	1.25 ha	Rp.17.400	Rp.2.100	Rp.19.500
4. Marginal Farm	0.45 ha	Rp.8.200	Rp.4.200	Rp.12.400
5. Landless	0	Rp.0.000	Rp.10.200	Rp.10.200
South Region				
1. Big Farm	14.8 ha	Rp.80.000	Rp.120.000	Rp.200.000
2. Medium Farm	3.0 ha	Rp.53.500	Rp.15.500	Rp.69.000
3. Small Farm	1.26 ha	Rp.28.200	Rp.26.800	Rp.55.000
4. Marginal Farm	0.66 ha	Rp.7.800	Rp.10.000	Rp.17.800
5. Landless	0	Rp.0.000	Rp.12.500	Rp.12.500

Table I.5.9 Annual Living Expenditures of Surveyed Farms

	Farm Category	Family Size	Total Expenditure (%)	Food (%)	Clothes (%)	Ceremonies (%)	Others (Medicine, Housing etc.)
North Region	1. Big Farm	4.0	65.500 (100%)	40.000 (61%)	10.000 (15%)	5.000 (8%)	10.500 (16%)
	2. Medium Farm	5.0	25.800 (100%)	18.800 (73%)	5.500 (21%)	3.000 (12%)	8.800 (34%)
	3. Small Farm	4.5	18.500 (100%)	11.000 (59%)	2.500 (14%)	2.000 (11%)	3.000 (16%)
	4. Marginal Farm	4.5	15.000 (100%)	9.500 (63%)	2.000 (13%)	1.500 (10%)	2.000 (13%)
	5. Landless	5.0	12.500 (100%)	8.000 (64%)	1.500 (12%)	1.000 (8%)	2.000 (16%)
South Region	1. Big Farm	6.0	125.000 (100%)	60.000 (48%)	25.000 (20%)	11.500 (9%)	28.500 (23%)
	2. Medium Farm	6.0	54.500 (100%)	30.500 (56%)	10.500 (19%)	4.500 (8%)	9.000 (17%)
	3. Small Farm	5.5	30.000 (100%)	18.500 (62%)	4.500 (15%)	3.000 (10%)	3.500 (12%)
	4. Marginal Farm	5.5	16.000 (100%)	8.500 (53%)	2.000 (13%)	2.000 (13%)	4.000 (25%)
	5. Landless	6.0	13.000 (100%)	9.000 (69%)	1.500 (12%)	1.000 (8%)	1.500 (12%)

Table I.5.10 Average Costs for Agricultural Inputs

Average amount (Rs/Season)	Less than Rs.5000			Rs.5000 - Rs.10,000			Rs.10,000 - Rs.20,000			Rs.20,000 - Rs.40,000			More than Rs.40,000		
	North	South	Total	North	South	Total	North	South	Total	North	South	Total	North	South	Total
Wet Season															
Big Farm	0	1	10	2	0	20	1	2	3	1	0	10	1	2	30
Medium F.	0	1	5	3	1	20	5	3	8	1	5	30	1	0	5
Small F.	6	4	25	10	6	40	4	7	11	0	3	7.5	0	0	0
Marginal F.	5	4	45	5	2	35	0	1	1	0	1	5	0	0	0
Landless	0	0		0	0		0	0	0	0	0		0	0	
TOTAL	11	10	21	20	9	29	10	13	23	2	9	11	2	2	4
Dry Season															
Big Farm	4	3	70				1	1	2	0	1	10			
Medium F.	0	0					1	1	2	0	0				
Small F.	0	1	2.5				0	0	0	0	0				
Marginal F.	0	2	10				0	0	0	0	0				
Landless	0	0					0	0	0	0	0				
TOTAL	4	6	10				2	2	4	0	1	1			

Table I.5.11 Annual Money Savings by Farmers

Saving amount (Rs/year)	Saving			Rs.1,500 - Rs.5,000			Rs.5,000 - Rs.10,000			Rs.10,000 - Rs.25,000			More than Rs.25,000		
	North	South	Total	North	South	Total	North	South	Total	North	South	Total	North	South	Total
Big Farm	4	2	6	1	1	2	0	0	0	0	0	2	0	0	2
Medium F.	10	6	16	0	1	1	0	1	1	0	2	2	0	0	2
Small F.	18	18	36	0	0	0	0	0	0	2	0	2	0	0	2
Marginal F.	10	7	17	0	2	2	0	1	1	0	0	0	0	0	0
Landless	5	5	10	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	47	38	85	1	4	5	0	2	2	2	2	4	2	4	6
(%)	(47%)	(38%)	85%	(1%)	(4%)	5%	(2%)	(2%)	2%	(2%)	(4%)	6%			

Table I.5.12 Quantities of Rice Stored by surveyed Farms

Unit: kg

Farm Category	North (Average Range)	South (Average Range)	Average in Total (Average Range)	Remarks
1. Big Farm	1,000-3,000	3,000-5,000	2,000-4,000	1. Stored quantities of Rice were proportional with Farm Sizes (Categories) 2. Farms in Southern Region, in general, have higher stored quantities. 3. Almost Landless Families have no Stored Rice.
2. Medium F.	750-1,500	1,500-2,000	1,000-2,000	
3. Small F.	500- 750	750-1,000	600-850	
4. Marginal F.	100-300	500-750	300-500	
5. Landless	0	0	0	

Note: Rice is stored generally in 75 kg - bags.

Table I.5.13 Annual sales of Farm Produces by farmers in Tank Areas

Selling Amount (Rs/Season)	No Sale			Less than Rs.5,000			Rs.5,000 - Rs.10,000			Rs.10,000 - Rs.25,000			More than Rs.25,000		
	North	South	Total	North	South	Total	North	South	Total	North	South	Total	North	South	Total
	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %
Big Farm	1	1	2	0	2	2	1	1	2	0	0	0	4	1	5
Medium F.	4	5	9	0	0	0	0	0	0	3	0	3	7	6	13
Small F.	9	11	20	1	5	6	3	3	6	14	1	15	0	2	2
Marginal F.	4	4	8	0	4	4	1	0	1	5	0	9	0	2	2
Landless	5	10	15	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	23	31	54	1	11	12	5	4	9	9	1	27	11	11	22

Table I.5.14 Annual Money Borrows by Farmers in Tank Areas

Farm Cat.	No borrow at all			Less than Rs.5,000			Rs.5,000 - Rs.10,000			Rs.10,000 - Rs.25,000			More than Rs.25,000		
	North	South	Total	North	South	Total	North	South	Total	North	South	Total	North	South	Total
	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %
Big Farm	5	2	7	0	0	0	1	1	2	0	0	0	0	0	0
Medium F.	8	6	14	0	0	0	2	0	2	5	0	2	0	0	0
Small F.	5	6	11	3	0	3	7	2	9	5	0	2	0	1	1
Marginal F.	4	3	7	2	0	2	2	2	4	1	0	0	0	0	0
Landless	1	1	2	0	0	0	4	0	4	0	0	0	0	0	0
TOTAL	23	18	41	5	0	5	15	5	20	6	7	13	0	4	4

Table I.5.15 Utilization of Farmland for Cultivation in Wet Season

Cultivation	100% cultivation			More 50% cultivation			Less 50% cultivation			None (0%)		
	North	South	Total	North	South	Total	North	South	Total	North	South	Total
	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %
Big Farm	4	4	8	1	1	2	0	0	0	0	0	0
Medium F.	10	9	19	0	0	0	1	1	2	0	0	0
Small F.	20	16	36	0	0	0	0	0	0	5	0	0
Marginal F.	10	10	20	0	0	0	0	0	0	0	0	0
Landless	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	44	39	83	1	1	2	1	1	2	5	0	0

Note: 4 farms no answer

Table I.5.16 Utilization of Farmland for Cultivation in Dry Season

Cultivation	100% cultivation			More 50% cultivation			Less 50% cultivation			None (0%)		
	North	South	Total	North	South	Total	North	South	Total	North	South	Total
	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %
Big Farm	2	0	2	2	0	2	0	1	1	1	4	5
Medium F.	2	2	4	0	0	0	6	0	6	2	8	10
Small F.	3	0	3	0	0	0	3	0	3	14	20	34
Marginal F.	4	1	5	0	0	0	0	0	0	6	9	15
Landless	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	11	3	14	2	0	2	9	1	10	23	41	64

Table I.5.17 Needs for Improvements in Tank Areas

Farm land	Improv.			Irrigation			Soil Improv.			Others		
	North	South	Total	North	South	Total	North	South	Total	North	South	Total
	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %
Big Farm	0	5	5	0	2	2	0	0	0	0	3	3
Medium F.	2	6	8	0	3	3	0	0	0	2	3	5
Small F.	8	15	23	1	9	10	0	0	0	7	6	13
Marginal F.	3	8	11	0	5	5	0	1	1	3	2	5
Landless	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	13	34	47	1	19	20	0	1	1	12	14	26

Table I.5.18 Willings for Irrigation Situation in Tank Areas

Farm Category	WET SEASON			DRY SEASON			No Willing to Pay			Willing to Pay		
	North	South	Total	North	South	Total	North	South	Total	North	South	Total
	(42%)	(41%)	83%	(18%)	(19%)	37%	(30%)	(31%)	61%	(15%)	(14%)	29%
Big Farm	3	4	7	1	1	2	4	2	6	1	3	4
Medium F.	9	9	18	4	5	9	5	6	11	5	4	9
Small F.	20	20	40	12	11	23	15	14	29	5	6	11
Marginal F.	10	8	18	1	2	3	6	9	15	4	1	5
Landless	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	42	41	83	18	19	37	30	31	61	15	14	29
(%)	(42%)	(41%)	83%	(18%)	(19%)	37%	(30%)	(31%)	61%	(15%)	(14%)	29%

Table I.5.19 Farmer Participation in Water Users' Association and O&M Works

Participation in	W.U.A			O.M		
	North	South	Total	North	South	Total
Big Farm					1	1
Medium F.		1	1		2	2
Small F.			5			
Marginal F.					2	2
Landless				1		1
TOTAL		1	1	1	5	6
(%)		(1%)	1%	(1%)	(5%)	6%

Table I.5.20 Present Situation of Water Payment

	Having Payment			Rs Less 100		
	North	South	Total	North	South	Total
Big Farm	5	5	10	5	5	10
Medium F.	10	10	20	10	10	20
Small F.	20	20	40	20	20	40
Marginal F.	10	10	20	10	10	20
TOTAL	45	45	90	45	45	90

Table I.5.21 Helpfulness of Tank Irrigation and Necessities for Improvement

Farm Cat.	VERY HELPFUL			HELPFUL			SOME HELPFUL			Need for Structure			Need for Management		
	North	South	Total	North	South	Total	North	South	Total	North	South	Total	North	South	Total
Big Farm	5	4	9	0	0	0	0	1	1	5	5	10	5	5	10
Medium F.	10	4	14	0	2	2	0	3	3	10	10	20	10	10	20
Small F.	16	9	25	4	5	9	0	6	6	20	20	40	20	20	40
Marginal F.	10	5	15	0	1	1	0	4	4	10	10	20	10	10	20
Landless	4	2	6	1	1	2	0	0	0	5	3	8	5	3	8
TOTAL	45	24	69	5	9	14	0	14	14	50	48	98	50	48	98
(%)	(45%)	(41%)	69%	(5%)	(9%)	14%		(14%)	14%	(50%)	(48%)	98%	(50%)	(48%)	98%

Table I.5.22 Willing to Participate in Project Operation Management

Farm Cat.	YES for Participation			For Project Operation Management			For O.M. Works		
	North	South	Total	North	South	Total	North	South	Total
	Big Farm	4	4	8	4	5	9	1	4	5
Medium F.	9	8	17	9	9	18	2	8	10
Small F.	19	15	34	13	17	30	8	14	22
Marginal F.	8	10	18	8	10	18	1	7	8
Landless	4	3	7	2	2	4	1	2	3
TOTAL	44	40	84	36	43	79	13	35	48
(%)	(44%)	(40%)	84%	(36%)	(43%)	79%	(13%)	(35%)	48%

Table I.5.23 Irrigation Application by Season

Farm Cat.	Wet Season			Dry Season			Total in %
	North	South	Total	North	South	Total	
	Big Farm	5	5	10	4	2		6	60%
Medium F.	9	10	19	8	3	11	55%
Small F.	20	20	40	10	2	12	30%
Marginal F.	8	9	17	5	2	7	35%
Landless	42	44	86	27	9	36	
TOTAL	(44%)	(40%)	84%	(36%)	(43%)	79%	
(%)							

Table I.5.24 Necessity of the Project and Improvement Items

Farm Cat.	VERY NECESSARY			NECESSARY			NOT NECESSARY			For Irrigation Comp.			For Rural Comp.		
	North	South	Total	North	South	Total	North	South	Total	North	South	Total	North	South	Total
	Big Farm	0	3	3	4	2	6			0	5	4	9	5	4	9
Medium F.	7	4	11	3	6	9			0	9	8	17	10	7	17
Small F.	14	11	25	6	9	15			0	19	17	36	20	17	37
Marginal F.	9	6	15	1	4	5			0	9	10	19	10	8	18
Landless	4	2	6	1	2	3	1	1	2	3	2	5	5	2	7
TOTAL	34	26	60	15	23	38	1	1	2	45	41	86	50	38	88
(%)	(34%)	(26%)	60%	(15%)	(23%)	38%	(1%)	(1%)	2%	(43%)	(41%)	86%	(50%)	(38%)	88%

Table I.5.25 Project Components on Tank Rehabilitation Works Inquired by Farmers

Project component	Big Farm			Medium			Small			Marginal			Landless			Total					
	North	South	Total	North	South	Total	North	South	Total	North	South	Total	North	South	Total	North	South				
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%				
1. Canal	2	2	20	5	4	9	45	12	9	21	52.5	4	6	10	100	2	1	3	25	20	45
2. Desilting	1	3	30	7	3	10	50	15	12	27	62.5	7	2	9	90	3	3	30	33	19	52
3. Sluice	3	1	40	3	3	6	15	4	2	6	15	1	1	2	10	1	1	0	11	3	14
4. Deepening					1	1	5	5	7	12	30	4	5	9	90	4	1	1	9	14	23
TOTAL	6	3	9	15	8	23	23	36	30	66	66	16	13	29	29	5	2	7	78	56	134

Table I.5.26 Project Components on Rural Development Works Inquired by Farmers

Farm Cat.	Big Farm			Medium			Small			Marginal			Landless			Total						
	North	South	Total	North	South	Total	North	South	Total	North	South	Total	North	South	Total	North	South					
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%					
1. Road	1	1	10	2	2	4	10	9	4	13	32.5	2		2	20	1		1	15	5	20	
2. Light	1	1	10		0	0	20	4	5	9	22.5	3		3	30	1	1	2	10	10	20	
3. Drinking water	1	1	20	3	3	6	15	5	5	10	12.5	3		3	30	1	0	0	9	1	10	
4. Employment	1	1	20	3	3	6	15	3	2	5	12.5	3		3	30	1	1	1	10	11	3	
5. Sanitation	3	3	30	1	1	2	5	5	5	10	12.5	5		5	50	4	4	4	20	20	20	
6. Housing	2	2	20	4	4	8	20	5	3	8	16	1	2	3	30	1	1	1	10	1	9	
7. New Industry					2	2	10	4	3	7	17.5	1		1	10	1	1	1	10	10	7	
8. Livestock					3	3	15	5	3	8	16	3		3	30	1	1	1	6	7	6	
9. Hospital					2	2	10	4	3	7	17.5	3		3	30	1	1	1	10	2	2	
10. Basic Amenities					3	3	15	5	3	8	16	1	3	4	40	1	1	1	10	3	3	
11. Credits					2	2	10	5	3	8	16	6		6	60	8	4	12	73	39	112	
TOTAL	9	2	11	13	8	21	21	26	17	43	43	17	6	23	23	8	4	12	12	73	39	112

Table I.5.27 Form of Questionnaire Applied for Farm Household Economy Survey (1/6)

QUESTIONNAIRE FOR FARM HOUSEHOLD ECONOMY SURVEY

"The Study on The Rehabilitation of Minor Irrigation Tanks for Rural Development in Tamil Nadu"

by Japan International Cooperation Agency (JICA)

QUESTIONNAIRE - CONTENTS

1. Household Characteristics
2. Life and Production in the Area
3. Land Ownership
4. Irrigation Situation
5. Agricultural Production
6. Other Economic Activities
7. Farmers' Attitudes

SAMPLE No _____ CODE: _____ Survey Date: _____, 1997
 Surveyor _____ Group-Chief: _____
 District _____ Village: _____ Family-Level: H. M. L.

1. HOUSEHOLD CHARACTERISTICS:

- 1.1 Respondent's relationship to Head of Household: Age:
 Head of Household: Man / Woman
 Category of Farmer: Large / Medium / Small / Marginal / Agricultural labor
 Caste: Other caste / Backward Caste / Most Backward Caste / Scheduled Caste
 Religion: Hindu / Muslim / Buddhist / Christian / Other (.....)

1.2 Family Structure:

No.	Family-Position	Age	Health	Education	Profession	Special Remarks
1						
2						
3						
4						
5						
6						
7						
8						

1.3 How long have you lived in this place? What main professions during this period?

1. Years
2. Years
3. Years

1.4 How your living conditions?

Previously: Very well / Well / Medium / Poor / Very Poor
 Recently: Very well / Well / Medium / Poor / Very Poor

- 1.5 What are the main constraints in living conditions?
 1. Insufficient income 2. Severe climatic conditions 3. Bad social environment
 4. Unequal administration treatments 5. Improper infrastructure

- 1.6 What are the main constraints in farming?
 1. Insufficient finance 2. Lack of agricultural inputs 3. Lack of Labor
 4. Lack of irrigation 5. Improper marketing 6. Improper infrastructure

- 1.7 Does your family continue to live in this place? Yes / No
 Reasons: 1.
 2.
 3.

2. LIFE AND PRODUCTION IN THE AREA

- 2.1 What kind of construction is your house? Brick / Wood/Mortar / Light Material / Thatch
 How long? Years Constructed (Owned) by:

- 2.2 Is the house space sufficient for all family members? Yes / No (.....m²)
 Comments:

- 2.3 In your house, do you have Electricity? Yes / No
 City Water? Yes / No
 Well? Yes / No
 Toilet? Yes / No
 Bathroom? Yes / No

- 2.4 Are there any problems to access from your house to Farm? No / Yes. Problem:
 Hospital? No / Yes. Problem:
 Market? No / Yes. Problem:
 School? No / Yes. Problem:
 City? No / Yes. Problem:

- 2.5 Problems in daily life according to seasons in a year.
 Problems in dry season: 1. 2. 3.
 Problems in wet season: 1. 2. 3.

2.6 How about your living expenditures in a year?

	Rs.	(%)
1 Food:		
2 Clothes:		
3 Education:		
4 Medicaments:		
5 Transports:		
6 Ceremonies:		
7 Housing Miscellaneous		
Total		(100 %)

Table I.4.27 Form of Questionnaire Applied for Farm Household Economy Survey (2/6)

3. LAND OWNERSHIP

- 3.1 The present status of your residential land (house and garden)? Total area: m²
 Private: m²; Rent: m²; Public: m²
- 3.2 The present status of your land? Total area: ha
 Private: ha; Tenant: ha; Rent: ha; Other: ha
- 3.3 If private, the obtaining procedure: How long, so far? Years
 If tenancy, the tenant conditions: How long, so far? Years
 If renting, the rental conditions: How long, so far? Years
 If other, utilization conditions: How long, so far? Years
- 3.4 What is your land utilization patterns in a year?
 Dry season: 1. ha 2. ha 3. ha
 Rainy season: 1. ha 2. ha 3. ha
- 3.5 Is your land suitable for farming? Yes / No Comments:
 1. 2. 3.
- 3.6 Improvement works for land to be good for farming:
 1. 2. 3.
- 3.7 Any land problems facing by you in future? Yes / No
 Residential land:
 Farm land:
- 3.8 The succession system of your present land;
 Residential land:
 Farm land:
4. IRRIGATION SITUATION
- 4.1 Do you have irrigation in Rainy Season: No/Yes (Source:)
 Dry Season: No/Yes (Source:)
- 4.2 Are you member of water user association? No / Yes (Group: Years:)
 Comments:
- 4.3 Is there any irrigation system in your area? No / Yes (Irrigation System:)
 Comments:
- 4.4 If yes, do you participate in the O.M. and pay for this irrigation system?
 Participation-items: Remarks:
 Payment: Comments:
- 4.5 If belonging to an irrigation association in your area, what are your obligations?
 Obligations:
 Comments:
- 4.6 How many ha of your land are subjected to irrigation? ha (.....%)
 Irrigation-type: Pump / Other
- 4.7 Crops subjected to irrigation: 1. ha 2. ha 3. ha
 Irrigation periods:

- 2.7 What are your financial sources for these expenditures?
 1. (...../year)
 2. (...../year)
 3. (...../year)
 4. (...../year)
 5. (...../year)
 Total (...../year)
- 2.8 Can you save some money in a year? No / Yes Amount: Rs./Year
- 2.9 Do you borrow money for living expenditures? No / Yes Amount: Rs./Year
 Borrowing Sources:
- 2.10 Do you sell some of your farm products? No / Yes
 1. Product: Rs./Year Unit Price:
 2. Product: Rs./Year Unit Price:
 3. Product: Rs./Year Unit Price:
- 2.11 Do you store farm products and foodstuffs for family consumption? No / Yes
 1. Product: Kg
 2. Product: Kg
 3. Product: Kg
- 2.12 Is the food situation sufficient in your family? Yes / No
 Insufficient items: 1. 2. 3.
 Reasons:
- 2.13 From your general view, how about the present living conditions in the area?
 Very well / Well / Medium / Bad / Very Bad
 Comments:
- 2.14 How about the present farming conditions in the area?
 Very well / Well / Medium / Bad / Very Bad
 Comments:
- 2.15 What crops are you planting in a year?
 1. (..... ha) 2. (..... ha) 3. (..... ha)
- 2.16 Do you practice double-crop in a year? No / Yes Crop: (..... ha)
 Comments:
- 2.17 Do you have sufficient labor force for agricultural production? Yes / No
 Comments:
- 2.18 How about the labor force distribution in your farm in a year?
 Dry season: persons (.....)
 Wet season: persons (.....)
- 2.19 Are some of your family members work as labor in other places? No / Yes
 If yes, persons in season (Wage: Rs. / day or season)
- 2.20 Do you continue to do farming in this place? Yes / No
 Comments:

Table I.4.27 Form of Questionnaire Applied for Farm Household Economy Survey (3/6)

4.8 Water-sources for irrigation: 1. 2. 3.

4.9 Are the water sources sufficient for irrigation in your farm land? Yes / No
 Wet season: ha (.....%) Crops:
 Dry season: ha (.....%) Crops:

4.10 How many ha of your land are under rainfed cultivation?
 Crops: 1. (..... ha) 2. (..... ha) 3. (..... ha)

4.11 What is your total cost for irrigation in a year? Total: Rs/Year
 Breakdown Items: 1. Rs/Year 2. Rs/Year 3. Rs/Year
 Comments:

4.12 Do you have problems for this payment? Yes / No
 Comments:

4.13 Do you want more irrigation water? Yes / No
 If yes, for what crops and what seasons? 1. Crop: Season: (..... ha)
 2. Crop: Season: (..... ha)
 3. Crop: Season: (..... ha)

4.14 For your additional irrigation, what kind of irrigation system do you expect?
 Irrigation System:

4.15 From your idea, do you want to pay for irrigation? No / Yes
 Reasons:

If yes, what amount of payment can you afford:

If no, what financial sources to cover this cost:

4.16 How do you think about tank irrigation?
 1. Very helpful:
 2. Helpful:
 3. Sometime helpful:

4.17 Necessities in improvement of structures in priority:
 1. Repairment of sluice gates
 2. Consolidation works of tank embankments
 3. Desilting of tank bed
 4. Lining of existing canal system
 5. Consolidation works for catchment area
 6. Construction of new canal system
 7. Others:

4.18 Necessities in improvement of management system in priority:
 1. Reorganization of water management system
 2. Making a new management organization
 3. Total participation of small, marginal and landless farmers in O.M. works

4.19 With these improvements, what changes in farming do you expect:
 1.
 2.
 3.

4.20 Items you can participate for these improvement works:
 1.
 2.
 3.

4.21 Your idea for the management of the irrigation tank:

4.22 Your idea for the O.M. works for tank irrigation:

5. AGRICULTURAL PRODUCTION (in 1995-96)

5.1 Your farming system: Crop only / Crop + Livestock / Crop + Livestock + Fisheries / Crop + Others (.....)

5.2 Your cropping application:
 Rainy season Crops: 1. (..... ha) 2. (..... ha) 3. (..... ha)
 Dry season Crops: 1. (..... ha) 2. (..... ha) 3. (..... ha)
 Perennial Crops: 1. (..... ha) 2. (..... ha) 3. (..... ha)

5.3 How many persons participate in cultivation works?
 (Man-days/ha/Annum)

Name of Crop	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
1 Land Preparation
2 Sowing
3 Planting
4 Irrigation
5 Weeding
6 Plant protection
7 Harvesting
8 Miscellaneous
Total

Table I.4.27 Form of Questionnaire Applied for Fam Household Economy Survey (4/6)

5.4 Your irrigation application:

Crops	Area (ha)		Date of Irrigation (from to)		No. of Days irrigated (days)	Cost of Irrigation (Rs./hour)	Method (Continue/Rotation)
	(a): Tank	(b): Well	(a)	(b)			
1.							
2.							
3.							
4.							
5.							
6.							
7.							

5.5 Your cultivation cost:

Item	Name of Crop					(Rs./ha)
	1	2	3	4	5	
1 Land Preparation						
2 Raising of seedling						
3 Seeding						
4 Transplanting						
5 Fertilizers						
6 Pesticides						
7 Weeding						
8 Water management						
9 Harvesting						
10 Miscellaneous						
Total						

5.6 Your fertilizer utilization

Fertilizer	Name of crop				
	1	2	3	4	5
Basal					
N (kg/ha)					
P ₂ O ₅ (kg/ha)					
K ₂ O (kg/ha)					
Top-1					
Date (days a.s./a.t)					
N (kg/ha)					
P ₂ O ₅ (kg/ha)					
K ₂ O (kg/ha)					
Top-2					
Date (days a.s./a.t)					
N (kg/ha)					
P ₂ O ₅ (kg/ha)					
K ₂ O (kg/ha)					

days a.s./a.t.: Number of days after sowing / after transplanting

5.7 Your pesticide utilization :

Pesticide	Name of Crop					(kg/ha)
	1	2	3	4	5	

5.8 Your crop production:

Area sown (ha)	Name of Crop				
	1	2	3	4	5
Area sown (ha)					
Area harvest (ha)					
Production (kg)					
Yield (kg/ha)					
Date sown					
Date harvested					
Remarks					

5.9 Your annual consumption of agricultural products:

Consumption (kg)	Name of Crop						
	1	2	3	4	5	6	7
Consumption (kg)							
Remarks							

Table 1.4.27 Form of Questionnaire Applied for Farm Household Economy Survey (5/6)

5.14 Your livestock and poultry production (on 1.Jan. and on 31.Dec.1996):

Item	Cattle	Goat	Sheep	Poultry
1. Number of heads on 1.Jan. '96				
on 31.Dec.'96				
2. Number of heads Born in '96				
Dead in '96				
Sold in '96				
Purchased in '96				
3. Production in '96 Milk (liters)				
Eggs (pieces)				
4. Unit price sold Body (Rs/head)				
Milk (Rs/liter)				
Egg (Rs/piece)				
5. Breeding cost Feed cost				
Labor cost				
Other cost				

5.15 Your possession of draft animals, farm tools and farm machinery:

Draft animals (Units)	Farm tools (Units)				Farm machinery (Units)	
	Kind	Unit	Kind	Unit	Kind	Unit
1.	1.	1.	1.	1.		
2.	2.	2.	2.	2.		
3.	3.	3.	3.	3.		
4.	4.	4.	4.	4.		

5.16 Conditions of your draft animals, farm tools and farm machinery:

Item	Kind	Good	Not so good	Unusable
Draft Animal	1			
	2			
	3			
Farm tool	1			
	2			
	3			
Farm machinery	1			
	2			
	3			

5.17 Do you practice fisheries? No / Yes Reasons: _____ m²
 If yes, the scale of fisheries(Area of water surface): _____ m²
 Persons engaged in fisheries: _____ Annual period engaged: _____ Days
 Kind of fish breeding: _____

5.10 Your annual sales of agricultural products:

Name of Product	1	2	3	4	5	6	7
Amount(₹)							
Remarks							

5.11 Your selling channels, amounts and prices:

Item sold	Dealing at farm		Selling at local market	
	Amount (₹)	Unit Price (₹ / Kg)	Amount (₹)	Unit Price (₹ / kg)
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

5.12 Your labor utilization:

Name of Crop	(Man-day/ha/Annum)				
	1	2	3	4	5
Land Preparation	Man/Woman	Man/Woman	Man/Woman	Man/Woman	Man/Woman
Seeding					
Transplanting					
Irrigation					
Weeding					
Caring					
Harvesting					
Transport to storage					
Miscellaneous					

5.13 Market prices and supply sources of fertilizers and pesticides:

Name	Fertilizer				Disease & Pesticide			
	1	2	3	4	1	2	3	4
Market price								
Supply Source								
Unit								

Table 1.4.27 Form of Questionnaire Applied for Farm Household Economy Survey (6/6)

5.18 Annual Incomes from Fisheries:

Gross Income: Rs., Input Cost: Rs., Net Income: Rs.

5.19 Your problems in practicing Livestock and Fisheries (in priority)

Livestock	Fisheries
Breeding technology	Breeding technology
Feed stuff management	Feed stuff
Disease and Pest	Disease and Pest
Funds	Funds
Marketing	Marketing

5.20 Evaluation of your farm management: Very good / Good / Medium / Bad / Very bad

5.21 Improvements needed for your farm management (in priority)

- () New crops / Quality seeds, () Cultural technology, () Intensive land use
- () Irrigation system, () Efficient use of labor, () Marketing

6. OTHER ECONOMIC ACTIVITIES:

6.1 Do you (your family) have other off-farm economic activities? Yes / No
Reasons:.....

6.2 Your Annual Off-Farm Income Sources and Amounts:

Source	Amounts(Rs.)	Remarks
1	_____	_____
2	_____	_____
3	_____	_____

6.3 Your ideas for making higher Off-Farm Incomes:

1.
2.
3.

7. FARMER'S ATTITUDES

7.1 Do you know about The Project of Rehabilitation of Irrigation Tanks in the area?

Yes / No

If yes, by what means:

7.2 How do you think about this Project? Very necessary / Necessary / Not necessary

Reasons:.....

7.3 For this irrigation project, what works should be done in priority/

- 1 Reason:.....
- 2 Reason:.....
- 3 Reason:.....

7.4 For improving rural living conditions, what works should be done in priority?

- 1 Reason:.....
- 2 Reason:.....
- 3 Reason:.....

7.5 Your ideas / suggestions on the execution procedure for this project:

- 1 Reason:.....
- 2 Reason:.....
- 3 Reason:.....

7.6 What is the constraint factors for your farming in priority?

- 1 Reason:.....
- 2 Reason:.....
- 3 Reason:.....
- 4 Reason:.....
- 5 Reason:.....
- 6 Reason:.....

7.7 How the tank will be managed after rehabilitation(rank priorities)

1. Need turn over to farmers' association
2. Form association and will manage
3. Contribute labor / money for management
4. Need more-waterman (Neerbanis) for management
5. Rotation management of sluices
6. Desilting be allowed
7. Catchment management be done regularly
8. Need more O & M budget from Government





