https://doi.org/10.29321/MAJ.10.A03042

Madras agric. J. 65 (1): 36—41. Jan., 1978

A Study on the Viability of Small Paddy Farms

S. KOMBAIRAJU[1] and V.S. NARASIMHAN[2]

Out of 120 small paddy farms, 45 per cent of the farms were viable when disposable crop income alone was considered and percentage of viable farms increased to 52.50, when crop and livestock income togther was considered. When crop, livestock and off-farm income were all considered 59 per cent of the farms became viable. The average family expenditure of Rs. 3,814 was considered as the base to determine the viability status of the small farms.

According to the Agricultural census, 1971, seventy per cent of the operational holdings in India are below two ha whereas in Tamil Nadu farm holdings below two ha constitute 80 per cent. Income generated from thees small holdings is not sufficient to meet the farm and family expenditure and make these small farms non-viable. The various developmental programmes implimented during the first three Five Year Plan periods have not benefited the small farmers. Hence some special attention was paid by the Government to improve the condition of the small farmers by making the small farms into viable units. In this study an attempt has been made to identify the viability status of small farms based on some economic yardsticks. The findings of the study may be useful to policy makers and others who are interested in the welfare of the small farmers.

The objectives of the study are :

i) to estimate the disposable farm income, off-farm income and family expenditure of the small farmers;

ii) to determine the viability status of the small farms and

iii) to study the basic characteristics of the viable and non-viable farms.

MATERIALS AND METHODS

The study covered 20 randomly selected villages of Madurai West and Madurai East Panchayat Unions of Madurai district. One hundred and twenty small farmers having an area of 0.81 to 2.02 ha (2 to 5 acres) were selected at random at the rate of 6 farmers per village. The farmers were post-stratified as owners, owner-cum-tenants and tenants. There were 56 owner-operated farms, 39 owner-cum-tenant-operated farms and 25 tenant-operated farmers. It is a monocrop area and the selected farms grow only paddy with the help of Periyar water. Water is available from Periyar project for about nine months i.e. from June to February for double crop wetlands and for about 6 months i.e. from September

1 & 2. Department of Agricultural Economics, Agricultural College & Research Institute, Tamil Nadu Agricultural University, Madurai.

to February for single crop wetlands. In double crop wetlands mostly Karuna was grown in the first season followed by IR 20 in the second season. where as in the single crop wetlands mostly long duration varieties like CO 25, and CO 19 were grown and high yielding varieties were grown to a limited exent. The annual disposable farm income, off-farm income and family expenditure were worked out separately for the three categories of the farms. The data collected related to the period 1973-74.

Income : Disposable farm income consists of disposable crop and livestock income. Disposable crop income refers to the net income from the crops after meeting the cultivation experses of the crop whereas the livestock income refers to the net income received from the livestock after meeting the maintenance cost of livestocks. Off-farm income refers to the income received by the family from off-farm activities such as agricultural and non-agricultural labour, services, business etc.

Family expenditure : The main items of family expenditure were classified into four groups viz., (i) food, (ii) clothing, (iii) rent, fuel and lighting, (iv) other items (education, health, social and religious expenditure etc.).

Viability status : The concept of viability is subjected to frequent variation. In the Integrated Area Development Scheme a viable farm was defined as one whose farm income exceeded Rs. 1800. The scheme was launched in 1965 and since then the value of money has fallen due to inflation. Hence at the present condition this cannot be adopted to determine the viability status. The National sample Survey observed that the net income of the rural family should not be less than Rs. 2000 per annum if it is to be a viable unit. In a study conducted by the Department of Agricultural Economics of Tamil Nadu Agricultural University on small farmers the concept of viability was defined to mean that the farmer's agricultural income is sufficient enough to support self and his family at a reasonable levels of living and the average family expenditure was considered as the base to determine the viability status. In this study also the average family expenditure was considered as the base to determine the viability status of the small farms taking into account the following income.

The average size of the sample farms varied from 1.33 ha in case of tenant operated farms to 1.54 ha in the case of owner-cum-tenant operated farms. The average size of owner operated farms was 1.43 ha. Irrigation intensity, cropping intensity, percentage area under high yielding varieties were found to be higher i.e. the case of owner operated farms when compared to owner-cum-tenant and tenant operated farms (Table).

i) disposable crop income,

ii) disposable crop plus livestock income, and

iii) disposable crop plus livestock plus off-farm income.

Table I. Characters of the selected farms

Type of Tenure	No. of farms	Average size of the farm in ha	Irrigation Intensity	Cropping intensity	Percentage area under High Yielding Varieties to gross cropped area
Owner	56	1.43	152	152	61.8
Owner cum Tenant	39	1.54	146	146	50.1
Tenant	25	1.33	140	140	42.0

RESULTS AND DISCUSSION

Disposable crop income : Table II shows the frequency distribution of selected farms according to the crop income. Paddy crop forms the major source of farm income to the small farmers. The disposable crop income varied from Rs. 364 in the case of tenants to Rs. 12,825 in the case of owners. Regarding the distribution of disposable crop income about 57 per cent of owner farms came under the income range of Rs. 2001-6000 whereas in the case of owner-cum-tenants concentration is more (68 per cent) in the range of Rs. 2001-5000. In the case of the tenants about 76 per cent of the farms came under the income range of Rs. 100 to Rs. 2,000. Out of 120 farms 78 farms (65 per cent) came under the income range of Rs. 1001 to Rs. 5000. Since 40 to 50 per cent of the produce paddy was paid as rent by the tenant they had very low disposable crop income after meeting the cultivation expenses.

TABLE II. Frequency distribution of farms according to disposable crop income.

Sl. No.	Class interval	Owner		Owner-cum-tenant		Tenants		Total	
		No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
1.	1 — 1000	—	—	—	—	7	28.0	7	5.83
2.	1000 — 2000	3	5.36	6	15.38	12	48.0	21	17.50
3.	2001 — 3000	5	8.92	10	25.64	4	16.0	19	15.83
4.	3001 — 4000	9	16.07	10	25.64	1	4.0	20	16.67
5.	4001 — 5000	10	17.86	7	17.95	1	4.0	18	15.00
6.	5001 — 6000	8	14.28	2	5.13	—	—	10	8.33
7.	6001 — 7000	4	7.14	4	10.26	—	—	8	6.67
8.	7001 — 8000	3	5.36	—	—	—	—	3	2.50
9.	8001 — 9000	3	5.36	—	—	—	—	3	2.50
10.	9001 — 10000	2	3.57	—	—	—	—	2	1.67
11.	10001 — 11000	3	5.36	—	—	—	—	3	2.50
12.	11001 — 12000	3	5.36	—	—	—	—	3	2.50
13.	12001 — 13000	3	5.36	—	—	—	—	3	2.50
	Total	56	100.00	39	100.00	25	100.00	120	100.00
	Average disposable crop income/farm	Rs. 5943		Rs. 3523		Rs. 1567		Rs. 4245	

Family expenditure: The Table III gives the datails of family expenditure for different categories of farmers. The average expenditure for owners, owner-cum-tenants worked out Rs. 4028, Rs. 3932 and Rs. 3151 respectively. The overall average for all the three categories worked out to Rs.3814. It is also found that expenditure, "other items" (education, health, social and religious expenditure, etc.) progressively decreases from 12.28 per cent in the case of owner-operators to 7.78 per cent in the case of tenants. About seventy five per cent of the family expenditure of the small farmers was allotted for food. Though there was not much variation in the size of the family among the three categories of farmers the annual average family expenditure was comparatively lower in the case of tenants due to their low income.

TABLE III. Pattern of family expenditure (in rupees)

Type of tenancy	Food	Clothing	Rent, fuel and light	Others (education, health, social and religious etc)	Total
Owners	2908 (72.18)	431 (10.69)	195 (4.85)	494 (12.28)	4028 (100.00)
Owner-cum-tenant	2987 (75.95)	405 (10.30)	130 (3.33)	410 (10.42)	3932 (100.00)
Tenant	2502 (79.40)	292 (9.27)	112 (3.55)	245 (7.78)	3151 (100.00)
Overall average	2849 (74.70)	393 (10.32)	157 (4.10)	415 (10.88)	3814 (100.00)

(Figures in the parenthesis denote the percentage to total expenditure).

Viability of small farms: Table IV shows the viability status of the farms when the category wise average family expenditures were considered as the base. Out of 120 farms only 55 farms (45.83 per cent) were viable

TABLE IV. Viability based on the average family expenditure of owner, owner-cum-tanants and tenants separately

Type of tenancy	No. of farms	Family expenditure	No. of viable farms					
			Based on disposable crop income alone		Based on disposable crop + livestock income		Based on disposable crop + livestock + off-farm income	
			No.	Percentage	No.	Percentade	No.	Percentage
Owner	56	4028	39	69.64	41	73.21	45	80.35
Owner-cum-tenant	39	3932	14	35.90	19	48.71	22	56.41
Tenant	25	3151	2	8.00	4	16.00	8	32.00
Total	120	—	55	45.83	64	53.33	75	62.50

when disposable crop income alone was considered and the number of viable farms increased to 64 (53.33 per cent) when crop and livestock income together was considered and 75 farms (62.5) became viable when crop, livestock and off-farm income were all considered.

When the overall average family expenditure of Rs.3,814 was taken as the base out of 120 farms (45.0 per cent) were viable when the disposable crop income alone was considered, 63 farms (52.50 per cent) became viable when the disposable crop and livestock income was considered. Seventy one farms (59 per cent) became viable when crop, livestock and off-farm income were all considered.

TABLE V. Viability based on the overall average family expenditure of 120 farms.

Type of tenancy	No. of farms	Family expenditure	No. of viable farms: Based on disposal crop income alone		Based on disposal crop + livestock income		Based on disposal crop + livestock + off-farm income	
			No.	Percentage	No.	Percentage	No.	Percentage
Owner	56	3814	39	69.64	41	73.21	43	80.75
Owner-cum-tenants	39	3814	14	35.90	19	48.71	22	56.41
Tenants	25	3814	1	4.00	3	12.00	4	16.00
Total	120	—	54	54.00	63	52.50	71	59.16

There was no difference in the viability status of owner-operated farms and owner-cum-tenant farms when overall average family expenditure and tenancywise average family expenditure were considered separately. Only in the case of tenants when the average family expenditure for tenants was considered as the base, number of viable farms was eight when compared to four when the overall average was considered as the base.

Characteristics of viable and non-viable farms : In all the categories of farms viz., owner, owner-cum-

TABLE VI. Characteristics of viable and non-viable farm

Particulars	Owners: Viable	Owners: Non-viable	Owner-cum-tenants: Viable	Owner-cum-tenants: Non-viable	Tenants: Viable	Tenants: Non-viable
Average size of the farm (in hectares)	1.54	1.18	1.78	1.40	2.23	1.29
Irrigation intensity (Percentage)	166	108	161	136	200	136
Cropping intensity (Percentage)	166	108	161	136	200	136
Percentage area covered under high yielding varieties	71.0	19.5	66.7	36.1	80.0	38.8

tenant and tenant, the average size of the farm, the irrigation intensity, cropping intensity and the percentage area under High Yielding Varieties of paddy was more in the case of viable farms than the non-viable farms.

Conclusions : About 76 per cent of the tenants get a low annual income below Rs. 2000.00 and this category needs assistance. Non-viable small farms can be made viable by increasing the intensity of irrigation, cropping intensity and growing High Yielding Varieties. In the case of single crop wet lands if wells are sunk a second crop can be grown after paddy but this is detered by high degree of fragmentation of wet land holdings. Only after consolidation of these fragmented holdings sinking of wells could be thought of. Besides crop production dairying can also be taken by the small farmers as subsidiary enterprise to increase the farm income. Since agricultural operations are only seasonal in paddy farms other agro-based cottage industries may be established to use the excessive labour providing them with employment opportunities to increase their income. The straw available from the first crop of paddy which is mostly damaged by rains at the time of harvest may be used for manufacturing straw beard and this will provide some employment. Rice based cottage industries such as production of popped rice, beaten rice may be encouraged. There is also a case for an elevent of differential subsidies in favour of non-viable farms to enable them to take advantage of modern technology and became viable.

REFERENCE

ANONYMOUS. 1974. Economic appraisal of potentially viable small farmers in Tirunelveli in Tamil Nadu.