FEATURES

Some Issues in The Economics of Peasant Farming in the New Settlements: A Study of Two Villages in the Galnewa Area.

Upali Vidanapathirana

The economics of farm production in new settlements within the Mahaweli Area changed considerably since they were worked out in the early 1970's. In this paper Upali Vidanapathirana of People's Bank Research Department presents his findings of a continuous study of two villages in the Galnewa area where he shows that the net income derived by farmer families from their paddy in the Maha season does not cover expenses. The high costs of production shrink net incomes which in turn lead to a chain reaction starting with low investment for farm inputs – low production – low incomes and leading to still lower net incomes.

"In the face of rising production costs the natural tendency of the small farmer is to cut down on some proportion or a portion of his management inputs as he best perceives within the context of his own production goals and aspirations".

(Panabokke)

The farm allotment which is the prime unit of production in the new settlements falling within the Mahaweli Development Programme was made two and a half acres of low land meant for paddy/subsidiary food crops and half an acre of home garden. Although the latter half an acre may serve a useful purpose, it is the former 2.5 acre that accounts for much of the potential income generation. There is no doubt, that the experiences of Minneriya and Gal Oya, and the results of controlled experiements carried out at various research centres in the NCP have advocated a small farm of 2.5 acres to be economically viable. So much so that the time of project appraisal in 1972, a standard gross income of Rs. 3,600/– per family per year was considered to be quite promising as the estimated cost of production per annum was within a limit of only 28 percent of this income (Ekanayake). However, the conditions under which these estimates were made have undergone a series of changes over the last decade resulting from the variations of the cost structure of farm inputs and response of settler farmers towards these changes. The changes were so drastic that the applicability of the technological package advocated along with these small farms also became highly questionable.

The objective of this study is to explore the economies of peasant farming in this context and to surface the subtle and complex mechanisms that effected the viability of these small holdings.

Fifty one settler farmers in two villages namely Halmillwea (Village 1) and Helabodagama (Village 11) were interviewed using a structured questionnaire. The reference period was Maha 1981/82, and the coverage of the survey basically includes, agricultural practices related to paddy farming, production and productivity income pattern of paddy, cost of production and net farm income. Maha is the principal crop for the majority of settlers in both villages, and quite naturally most, if not all, settler farmers cultivate paddy during Maha. Of course, there is an inherent difficulty in obtaining accurate data from farmers based on 'recall" due to lapses in memory (Ranatunge). However, price lists of various inputs maintained by agro-chemical dealers and marketing officers of the Mahaweli Development Board (MDB) were used to cross-check the responses of the settler farmers.

Of the two villages selected Halmillawa (Village 1) was one of the few "Purana" villages, as settlers

Table 1 **Production, Productivity & Income Standards of the Two Villages**

		Village 1 (Hamillawa)	Village 11 (Helabodagama)
1.	Total paddy output	153.8 (Bushels)	181 (Bushels)
2.	Output Acre	59.2 (Bushels)	65 (Bushels)
3.	Amount sold	103 (Bushels)	120 (Bushels)
4.	Average Price	Rs. 2/60 (per kg)	Rs.2/90 (per kg)
4.	Gross Income T.Output x price	Rs. 8,294/–	Rs.10,944
5.	Cash income Avg.marketed x price	Rs. 5,583	Rs. 7,255

Source: (Survey Data)

Table 11 **Cost of Production of Paddy**

	1980* Cost (Rs)	%	1981/82 Maha ** Cost (Rs)	%	Cost (Rs)	%	Increase over the period
			Village 1		Village 11		
1. Land Preparation	455	40	527	31	530	29	16%
2. Broadcasting Transplanting	98.4	9	232	13	227	13	134%
3. Crop Protection & weed control	73	6	178	11	149	9	125%
4. Fertilizer	82	7	259	15	313	17	249%
5. Harvesting	199	18	206	12	233	13	10%
6. Treshing	148	13	171	10	178	10	17%
7. Processing	51	4	54	4	104	6	54%
8. Transportation	33	3	60	4	61	3	83%
Total Cost	1134	100	1687	100	1795	100	53%

Source: * MDB Data on Galnewa Region (Ekanayake)
** Survey data

have lived in the area for centuries. The second village, Helabodugama (Village 11), was settled in 1976 and these settlers were drawn from Kandy, Matale and Anuradhapura districts. These two villages therefore present a considerable socio-cultural and economic diversity arising out of the differences in settlement typology. These differences can even be seen in the areas of family size, dependency in this family level of education (measured in terms of years of schooling), general standard of living and more explicitly in terms of the degree of social cohesiveness.

On the whole the average productivity per acre and the total output therein appears to have been higher at Village II, resulting in an increased marketable surplus. This along with the favourable price conditions prevailing at Village 11, give rise to an increased cash income and gross income. A point worth noting is that in both these villages the entire marketable surplus is sold to the private sector. The prices offered by the private sector, particularly in the case of village 11 appeared to have been superior to the GPS prices. In both villages settler farmers have retained an adequate stock of paddy partly to fulfil the domestic consumption needs and partly as a hedge against possible risks of future crop failures. Perhaps two important questions that remain unanswered at this level are:

1. Whether aggregate gross income or cash income given in Table 1 is adequate to compensate the costs involved in producing this income.
2. Whether the net income (after meeting costs) is sufficient to meet the family expenses of settler households.

Thus the whole issue of viability of the 2.5 acre family farm under the given socio-economic and technological conditions revolves around these two questions.

The cost of production of paddy is broken down into 8 sub-groups in accordance with the sequences in the production process. As given in the table 11 these sub-groups include land preparation, planting, application of agro-chemicals, manuring, harvesting, threshing, processing and transporting. In the order of importance, land preparation comes first, followed by manuring, transplanting and harvesting. Although the aggregate figures of cost of production of two of the villages differ substantially, there is a similar pattern of variation particularly in relation to the 8 expenditure sub-groups, given in table 11.

The same items are re-classified into three broad categories, according to their nature of uses. As given in table 111, mechanical inputs refer to tractors, threshers, drillers, mechanical pumps, and spraying machiines etc., while bio-chemical inputs refer to high yielding seeds (the HYVS) chemical fertilizer, pesticides, etc. (Byres).

Table 111 shows that a considerable proportion of total cost of production of paddy is shared by mechanical inputs, and in the context of Galnewa area tractor costs cover the bulk of the mechanical input costs. Tractors are widely used

Table 111 **Cost of Production of Paddy**

Cost Items	Village 1 Cost in (Rs)	Village 1 % of total Cost	Village 11 Cost in (Rs)	Village 11 % of total Cost
Mechanical Inputs	1,597	38	1,974	43
Bio-chemical Inputs	1,442	34	1,519	34
Labour	1,186	28	994	23
Total	4,225	100	4,487	100

Source: Survey data.

at the stages of land preparation, threshing and transportation, while there are instances where winowing also is done using tractors.

This wider acceptance of tractors for a variety of uses does not mean that mechanization is comparatively a cheap way of doing it. For instance the tractor cost of ploughing a 2.5 acre plot amounts to Rs.1,250/– making it a most expensive mode of land preparation (compared with the use of draught power or labour). However, the paucity of wage labourers and draught power during the peak periods of cultivation necessitates a very high depen dence on tractors. This is particularly imperative because of the time bound nature of operations arising out of the strict adherence to cultivation calendars. But the question is whether an unconditional mechanization effort of 2.5 acres holding even under Mahaweli environment is worthwhile.

The share of costs incurred by biochemical inputs like high yielding varieties, chemical fertilizers, pesticides, weedicides, etc. are second to only the share of costs of mechanical inputs. Comparative data for 1980 and 1982 suggests that both absolute cost and relative share of cost of fertilizer and agro-chemicals have substantially increased. The expenditure on fertilizer had increased by 249 percent which is partly attributable to the increased use of fertilizer. Similarly the expenditure on weedicides and pesticides have gone up by 125 percent. The expenditure on labour wages range from 23 to 28 percent of the total cost.

Although the wage rates of labourers in the Mahaweli area have increased considerably the expenditure on wages (for hired labour) have not shown a proportionate increase. The increased adoption of mechanical power along with the maximization of the use of family labour had contributed to this situation. One effect of the increasing use of family labour (in order to keep down labour costs) is that their process of cultivation gets dragged on, which upsets the water management schedules of the authorities. These factors effect the productivity level.

Table 1V **Gross Income Cost of Production and Net Income of a settler family (Rs.)**

		Galnewa Region		1981/82 Maha	
		1972	1980	Village 1	Village 11
1.	Gross Income	1,750	7,290	8,415	10,316
2.	Cost of Production	495	2,835	4,225	4,487
	Net Income	1,255	4,455	4,190	5,829
	(2) as a % of (1)	28%	38%	50%	43%

Table 1V presents some information as regards the viability of 2.5 acre holdings in the Mahaweli Development Programme, particularly in the light of the recent changes in the cost structure of inputs. The aggregate costs of production at the time of project appraisal constituted only 28 percent of the total income. This share increased to 38 percent by 1980, and to approximately 46 percent by Maha 1981/82 In otherwords, the net income share obtainable from paddy is gradually shrinking. On the other hand the cost of living even in the Mahaweli area has escalated at a steady pace. The question that remains is whether this net income of Rs 4,190 and Rs 5,829 which amounts to a net income of Rs 130 to 150 approximately per person per month for a period of six months at village 1 and village 11 respectively is sufficient to maintain basic living standards. There is little doubt that the family expenditure of these farmer families exceeds the net income they derive from their paddy, in the Maha season, which is their main source of income. Our most recent findings have revealed that monthly household expenditure per family is now in the range of Rs 160–Rs 170. The fact that their monthly household expenditure exceeds their Rs 130–Rs 159 level of income is also borne out by the 1978/79 Consumer Finance and Socio-Economic Survey data, which found the expenditure on consumption of food and non-food items to be Rs 156 per person in the Zone 2. (Zone 2 consists of households in the districts of Hambantota, Moneragala, Amparai, Polonnaruwa, Anuradhapura and Puttalam). Hence the contraction of net income poses a severe strain on the household budgets of settler families leading to total destitution, poverty and indebtedness. What is distressing in this set up is that the majority of settlers tend to cut down on some of their farm inputs. This widens the gap between the potential yield of their fields and what they actually harvest. Hence the high costs that shrink net income lead to a chain reaction that starts with low investment on farm inputs, and thereby low production, low incomes, leading to still lower net incomes.

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