

Problems of Agriculture in the Gal-Oya (left bank) Peasant Colony*

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The Gal-Oya (left bank) Colony, the foremost of the peasant colonies in the Dry Zone, covers an area of 24,884 acres under cultivation with a total colonist population of 4,897 in 1963. The allottees have been settled in 40 village units, each comprising approximately 150 families. Each allottee has received approximately three acres of lowland (irrigable land) and two acres of highland (unirrigable land). Paddy is the dominant crop cultivated on the irrigated lowland during both the *Maha* and *Yala* seasons. The River Valleys Development Board has encouraged the allottees to take up to the cultivation of subsidiary crops, especially tobacco, on the lowland during *Yala* in order to conserve irrigation water, but this has not been a success. The crops cultivated on the unirrigable highland fall into four main groups: (a) tree crops (b) rainfed paddy (c) dry grains and (d) vegetables. Allottees' animals are reared in the highland.

This paper is an attempt to analyse five problems in the system of agriculture practised by the allottees, in the light of the physical, economic and social factors responsible. It emerged from field investigations in six representative villages of the colony carried out in 1966-1967. The villages studied: one, four, seven, nine, 26 and 27, represent the three principal categories of allottees settled in this colony: (1) compensation, *purana* (old) villagers displaced from the area submerged by the Senanayake Samudra; (2) local, landless Tamil and Muslim villagers and those with little land in the densely populated East coast strip of the Batticaloa district and (3) immigrant, the colonists proper, consisting of people from the land-hungry villages of the Wet Zone. The principal method of investigation followed in this study was questioning the allottees. 204 allottees comprising 48 from village one representing the compensation category, 41 from village seven and 30 from village four, representing the local category, and 41 from village nine, 18 from village 27 and 26 from village 26 representing the immigrant category, selected on the basis of a random sample, were questioned.

The problems are now discussed.

1. Non-Cultivation of some lowland allotments during Maha and Yala

Parts or the whole of lowland allotments in the colony were not cultivated during *Maha* and *Yala*. 43 allottees out of the 204 interviewed reported non-cultivation during *Maha* and 101 during *Yala*. The more impor-

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tant reasons for non-cultivation arranged in order of descending importance are: lack of water, unsuitable soil, lateness for the season, lack of funds, illness, lack of labour, co-operative decision taken by allottees not to cultivate and stray cattle.

Lack of water was generally felt in the colony as a whole during *Yala*. It was also experienced during *Maha* over areas situated at the further end of the main irrigation channels.

Lack of water was due to two sets of factors: (1) defective field channels or situation of fields above the level of channels and (2) lack of adequate control regarding the distribution of water. The former has resulted in the unirrigability of entire lowland allotments, or parts thereof. The latter has two adverse effects. Firstly, irregular tapping of water by some allottees has created difficulties for others particularly to those at the tail end of channels. This may be due to the practice of using ponded water to control weeds and to the fact that the quantum of water received by the allottees is not dependent on a payment. Secondly, irrigation water is used to extend the areas of cultivation unofficially. Large extents of reservations and unirrigable highlands have been brought under paddy cultivation.

Disproportionate use of water by the Tamil allottees of village seven has reduced the Muslims of this village, who are in a minority here, to a helpless position. Being unable to cultivate due to lack of water many Muslims have leased their lands to the *podiyars*, the rich Tamil middle class land-owners, and have become agricultural labourers.

Lack of water was felt in *Yala*, particularly in villages further away from the reservoir. Thus in village seven, 33 out of 41 interviewed did not cultivate, in village four, 29 out of 30 and in village 26, 22 out of 26.

Soil has an important bearing on water requirements. Paddy soils in the Gal-Oya Valley are too light in texture and hence low in water retention capacity. Thus the gravelly and sandy soils in villages 26 and four have aggravated the shortages of water.

Lateness for the season was operative in village 26, where the allottees were too late for the *Yala* due to a delayed *Maha* harvest consequent on heavy rain interfering with cultivation operations. It was considered that commencement of a late *Yala* would expose the crop to a high degree of pest and disease attack.

Lack of funds, illness and lack of labour led some people to lease out their lands. Where land is leased, allottees get a lower income than when they cultivate the same land.

A co-operative decision not to cultivate during *Yala* was taken by the majority of allottees in villages seven and four which are settled by the East coast Tamils. This was based on an anticipated shortage of water based on past experience. These two villages are situated at the furthest points of the channel system. Cultivation in isolation brought about threats from trespass by stray cattle, since the common fences around the *yaya* would not be erected. It was found too expensive for individuals to erect fences around their fields.

Limited cultivation of rotational crops on lowland during Yala

Allottees have been encouraged to cultivate tobacco as a rotational crop on the lowland during *Yala* for two reasons: (1) to conserve irrigation water and (2) to obtain a higher income. It has been estimated that an acre of tobacco would give a gross return of Rs. 1300/-. Average gross return from an acre of paddy would be about half this.

Only 29 allottees out of the 204 interviewed cultivated tobacco, on extents varying from $\frac{1}{4}$ to $1\frac{1}{2}$ acres, during *Yala*. The reasons for non-cultivation by the greater majority of the allottees were (a) sandy, sandy loamy, gravelly and saline soils of their allotments not being favourable; (b) lack of sufficient knowledge regarding the cultivation practices pertaining to this crop; (c) absence of a proper organisation to market the produce; (d) cultivation of tobacco on paddy land is a risky venture whereas paddy is a safe crop assured of a definite profit; (e) tobacco needed more attention than paddy.

Inadequate utilisation of the highland

Development of the cultivation of tree crops were in different stages in the areas under study.

All areas were favourably placed for development of coconut cultivation to the high underground water table, conditioned by situation in proximity to tanks, irrigation channels and the lagoon.

Many allotments in villages one, four and 26 had between eight to 20 trees per allotment while several in villagers nine, seven and 27 had over 20 trees. There were a few single allotments containing 100-150 trees.

Murunga, though suited to the Dry Zone because of its drought resistant character, is not widely grown in the colony because of the poor market for its product. Most allottees did not have more than about 10 trees in their allotments.

Citrus cultivation was of significance in village one. The number of orange plants per allotment varied between ten and 30, while there were two allotments with nearly 100 plants in each. Lime was relatively less important than orange. Citrus cultivation was of little importance in the

other villages. Its greater importance in village one could be attributed to the fact that the allottees have grown citrus on an extensive scale in their villages of origin in the tank-bed area.

Paddy cultivation based on the north-east monsoon rains was practised in all villages, though in varying degrees of importance. The extents cultivated varied from a quarter to one acre. It was most important in village seven where several allottees cultivated the entire extent of the highland. It was least important in village 27 where only four out of the 18 interviewed cultivated paddy on quarter acre plots. The reasons for limited cultivation were (a) the unsuitability of lands due to their rocky nature and (b) the difficulty of cultivating seasonal crops along with tree crops.

The cultivation of dry grains was of some importance in villages one, 26 and 27. Several allottees have cultivated a *Yala* crop of maize on quarter to three quarter acre plots. These allottees had a background of *chena* cultivation in their home villages in the tank bed area, Badulla and Hambantota. The others had no tradition of cultivating dry rains.

Cultivation of vegetables was of some significances in the four Sinhalese villages. Many allottees cultivated small plots varying in size from small extents to about quarter to half an acre during *Maha*. The limited cultivation was due to unsuitable sandy soils, surfeit of water during *Maha*, consequent on the north-coast monsoon rains invariably augmented by depressions, shortages of family labour and the problem of eradicating the weed, *illuk*. Vegetable cultivation was hardly of any significance in the two Tamil/Muslim villages. These people had hardly any experience of cultivating subsidiary crops in their villages of origin.

Several problems confronted the allottees in the development of the highland. Infertile sandy and gravelly soils and lack of water during *Yala* were problems in general. The menace of the weed, *illuk*, was particular to village one, and salinity consequent on proximity to the lagoon to village seven. Everywhere lack of labour was a problem, in view of the limited availability of family labour. The average size of the family labour force is three. The allottees considered it uneconomic to hire labour for highland cultivation.

Lack of any significant development of animal husbandry

The allottees' animals consisted of buffaloes and neat cattle. There were more neat cattle than buffaloes. The allottees found it easier to rear neat cattle than buffaloes. Buffaloes need proper grazing ground whereas neat cattle can be reared on any open space. Neat cattle were reared primarily to do field work, since there was no prospect of development of dairying in view of the highly limited local demand for fresh milk.

Several problems confronted the allottees in rearing animals.

The chief of these was the lack of sufficient pasture within the colony. Animals were usually maintained in the highland allotments, in nearby forests or in uncultivated stretches in and around the villages. Forest areas are fast being cleared up for expansion of colonisation and are being occupied by squatters.

Friction among allottees were quite frequent due to cattle trespass on one another's allotments and the resulting damage to highland and lowland crops. This resulted from the animals wandering astray due to frequent thefts of ropes and chains used to tie them and the absence of perimeter fences around most allotments.

During the dry season it was a problem to find sufficient feed for the animals within the colony as all vegetation got parched up. Feed has got to be brought from neighbouring purana villages several miles away. Even drinking water for the animals was a problem. Irrigation channels could not be used to sustain animals as it was contrary to the rules of cultivation committees.

Cattle diseases such as mastitis and foot and mouth disease were prevalent and tended to destroy the animals. The veterinary services available were inadequate.

These problems acted against any significant development of animal husbandry in the colony.

The demand for animals to plough and thresh was itself dwindling due to the increasing supply of tractors and the speed with which work could be done with their use.

Limited practice of improved methods of paddy cultivation

Improved varieties of seed paddy propagated by the Department of Agriculture were used by the allottees. During Yala 1967, the most popular varieties used were H₄ and H₅. However the allottees did not use fresh stocks of seed paddy, as advised, in order to maintain the purity of seed. They used paddy from each year's harvest as seed or obtained a stock from a fellow farmer.

The Government distributes seed paddy to the allottees through the net work of Co-operative Societies at subsidised prices. Stocks of seed paddy were not available at the Co-operative Societies at times when the allottees needed them. The Wavinna Co-operative Society distributed seed paddy last in 1963.

Even when available, the allottees considered the quality of seed paddy questionable. Some people were not aware of the benefits that would result if seed paddy is changed according to advice given. Many could not afford buying seed at unsubsidised prices from outside.

Of the 133 allottees interviewed in the four Sinhalese villages, 53 allottees transplanted paddy during *Maha* and 26 allottees during *Yala*. This practice was hardly of any significance in the two villages falling within the local category since Tamil and Muslim women folk did not participate in transplanting. The extents transplanted varied from a half acre to two acres. It was exceptional to transplant the full extent of the allotment.

Factors which restricted the practice of this method were:

- (1) shortage of family labour;
- (2) expenditure of hiring labour from outside. Cost of a female labourer was Rs. 3/- per day plus free food. Ten labourers are needed to transplant one acre in a day;
- (3) sandy soils which lack water retention;
- (4) undulating nature of allotments encouraging an outflow of water. transplanting has to be carried out in standing water;
- (5) opinion that transplanting results in a better growth of the paddy plant, hence there is a greater chance of attack by pests and disease especially the stem borer, this could result in a greater expenditure on pesticides;
- (6) transplanting will pay only if the crop is well maintained and fertilised;
- (7) there is no incentive to transplant during *Yala* as the crop itself is not very successful due to shortages of water.

All the allottees interviewed in village nine weeded their fields using both weedicides and manual labour during *Maha* and *Yala*. Shortages of family labour hindered more intensive manual weeding. In village seven, 26 out of 41 interviewed weeded fields using weedicides during *Maha* and seven weeded the *Yala* crop. Hand weeding was of very little significance in this village. Weeding was least practised in village one where only seven allottees used weedicides during the two seasons. The reasons for the limited practice of weeding in villages seven and one were (a) lack of facilities in Co-operative Societies to obtain weedicides and the lack of funds to buy these from outside at unsubsidised and higher prices; (b) shortages of sprayers and (c) shortages of family labour, the daily wage rate for weeding involving much as rupees five per day and free food. Certain types of weeds *berala* and *katugedara* could not be eradicated by any means known to them.

The majority of the allottees in villages nine and seven used artificial fertiliser during both seasons. Only two allottees manured fields in village

one. The quantum used was about 2 cwt. per acre which the recommended dosage is 3 cwt. Reasons for restricted use were

- (1) Inability to obtain credit from co-operatives due to unsettled debts
- (2) Co-operatives had no fertiliser for sale. It was available in the open market but at a much higher price than the Government subsidised price and the allottees could not afford to buy it.
- (3) Some allottees considered that the sandy soil in their lands did not absorb fertiliser and when applied it was blown away by the wind.