

A REPORT ON THE TEA SMALL-HOLDINGS IN THE UDA-NUWARA DIVISION OF THE CENTRAL PROVINCE

C. H. GADD

The Tea Research Institute offered three prizes for competition amongst small-holders in each of three Korales of the Uda-Nuwara Division of the Central Province, *viz.*, Kandupalata, Medapalata and Gangupalata, for the best improvement works done during 1936. This area is bounded roughly by the roads joining Gampola, Peradeniya and Kadugannawa.

There were 113 entrants in Kandupalata, 72 in Medapalata and 80 in Gangupalata Korales. The Small-Holdings Officer visited the competitors' lands regularly during the year to advise on the nature of the work to be undertaken, and to demonstrate the best methods of doing it. The 90 best holdings were selected for final examination and these were inspected by me during the week November 2nd to 7th inclusive. These holdings are situated in 28 different villages and in reaching them one saw, though, I did not examine in great detail, several hundred other holdings not entered for the competition.

The work done in the competitors' holdings is of a very high quality and has resulted in a very marked improvement in their agricultural condition. It can be said without exaggeration that in each of the 28 villages visited there is now at least one model holding. The existence of these improved holdings is not entirely without effect on neighbouring cultivators and, but for the depressed condition of the tea market, the effect would no doubt be greater.

Drains.—The most outstanding character common to all the holdings judged is the existence of good drains. These with few exceptions are of the reverse slope type and in excellent condition. Apart from other features the competitors' holdings would be recognised by the improved drainage, which is the first work in which the agriculturist's interest can be aroused. He is aware of the results of the loss of his soil, and if desirous of improving his holding will direct his efforts in this direction first.

It is not generally recognised that efficient drainage, a most important soil erosion prevention measure, is extremely difficult to attain on many small-holdings. The difficulty lies in finding a suitable outlet for excess water in the absence of a general drainage scheme. The holdings are usually situated on hillsides more or less steep, while the valleys are given up to paddy cultivation. The natural outlet for the drainage water of many holdings is directly on to paddy land, and there is grave risk of damage to the paddy by silt and of consequent prosecution. Other holdings, surrounded by privately-owned agricultural lands, have no adjacent natural ravine or nethikans into which they can lead their drainage water. The natural slope of yet other holdings is towards a gansabawa road, and an outlet in this direction is usually debarred. In such positions the owners have constructed extensive silt-pits which sometimes take the form of deep contour drains, often reverse sloped and extending from one side of the holding to the other, but without an outlet. In other cases the silt-pits are of more normal pattern arranged in echelon. Although the best has been made of a bad position it cannot be admitted that such works are entirely satisfactory. They are efficient during light rains but cannot cope with heavy tropical storms. Overflow from the pits scours down the hillside and although much of the moving soil is caught in the lower pits the damage caused is considerable.

Small-holdings afford excellent examples of the evils of soil erosion and the need for prevention works is very apparent. Of these, efficient drainage stands pre-eminently first. The draining of

small isolated areas, one or two acres in extent, as indicated above often presents insuperable difficulties in the absence of a general drainage scheme embracing larger areas. This aspect of the soil erosion problem in so far as it affects small-holders appears to have been overlooked, but in the writer's opinion it is of considerable importance.

Terraces.—Several instances were seen where available stone has been used for the construction of terraces. The work in all cases has been well done.

Green Manures.—Extended use is being made of *Gliricidia* and *Dadap* as green manure trees. Stumps have been planted in the majority of holdings and are growing well. These will ultimately provide useful green matter for incorporation in the soil. It was even more gratifying to see holdings making the best use of available green matter, including pruning leaf, by forking it into the soil, because the villager is apt to value his shade trees more as a source of firewood than as green manure.

Many small-holders are using their *Dadap* trees as supports for pepper vines. This practice might well be encouraged as the pepper provides a source of income, and the maintenance of the vines necessitates a periodic lopping of the *Dadap*. The presence of the vine appeared to have no detrimental effect on the tea.

In a few instances leguminous bush green manures were interplanted amongst the tea and along the upper edge of the drains. It appears unlikely that such plants will become popular amongst small-holders owing to the recurrent cost of seed. Wild sun flower grows freely in this district, and the possibilities of its use on holdings should be explored.

Pruning.—The majority of holdings inspected had been well pruned and the bushes were making excellent recovery. The quality of the new wood, in most cases, is very good and improved frames are being built. The type of pruning generally adopted was "Rim-lung" though a few instances of a "Clean-prune" were seen. Even

from the clean-prune no instances of delayed recovery were seen; no doubt the prolonged rest before pruning materially assisted their recovery. Normally, bushes on small-holdings are cut across with the object of cropping them again as soon as possible. At present there is very little plucking being done and the opportunity of thoroughly cleaning the frames has been seized, with beneficial results.

Plucking.—Only two holdings visited were being plucked. The owner of one obtained half a cent per pound and the other one cent per pound for the leaf. Obviously at present no material income can be obtained from the holdings apart from the sale of coupons. The coupons are invariably sold independently of the leaf.

Weeding.—All weeding is still done with a momoty.

Cultivation.—Some of the inspected holdings had recently been forked throughout, even when green stuff was not available for incorporation behind the fork. Such holdings have now been planted with green manure trees and in future green stuff will be available. In those holdings with established trees and with pruning leaf for burial, cultivation was a notable feature. No artificial manures are used, nor are they recommended at present.

Supplies.—The supplying of vacancies was noticed throughout the holdings. Many of those visited were fully supplied and as the planting season had been favourable the young plants were doing well.

Mixed Cultures.—The village agriculturist appears to be a great believer in mixed cultures except where paddy is concerned, and there is a tendency in some gardens to interplant palms, particularly the coconut, and plantains amongst the tea. As no harvest is being collected from the village tea lands one can sympathise with the view that the land should be made to produce something more than coupons, particularly when that something is food. But such trees as the coconut and plantain are of a permanent nature and will enter into keen competition with the tea for soil foods to the detriment of both crops.

The value of the silt removed from the drains is becoming generally recognised and in a few instances this spoil which had been spread on the lower side of the trench was being utilised for growing manioc. These secondary products are at the moment of more importance than the main crop but unfortunately they are all detrimental to tea.

The planting of subsidiary crops through the tea in the village gardens is by no means general, though it was observed in a few holdings in which the agricultural conditions had been improved. It is perhaps to be expected that a stimulation of agricultural interests leading to increased work in the holdings must also result in a demand for an increased harvest. The tea harvest which at present is reaped only as valuable coupons, remains constant whether the land is cultivated or neglected. The worker therefore is apt to turn in other directions and to plants intergrown with the tea for the fruit of his labour.

General.—I was very impressed with the great improvement which has been achieved in many holdings. The competition is not entirely responsible of this though undoubtedly it acted as a strong stimulus in many quarters. Some of the improvements were the results of steady work during the last few years. I saw holdings which a few years ago were similar to the surrounding tea but today are immeasurably superior. As stated earlier I visited 90 holdings in 28 different villages. Each of these holdings is a credit to its owner and a model worthy of copy by other village agriculturists. It is, however, regrettable that the industrious tea small-holder can reap no greater reward at present than do those who entirely neglect their lands. This report would be incomplete without some expression of appreciation of the work carried out by Mr. R. L. Illankoon, the Small-Holdings Officer of this district. He has with great patience and tact won the confidence of a large number of small-holders who now turn to him for advice and guidance. That such confidence has not been misplaced is demonstrated in the marked improvements which have been achieved.