RESEARCH AND PLANTING PROGRESS

BEING A SUMMARY OF THE REPORTS OF DIVISIONAL HEADS FOR THE PERIOD ENDING MARCH 31st, 1953

Soil Chemistry Division

THE Soil Chemist officiated as Acting Director until the end of February.

Treatments and recordings of all field manurial experiments on mature palms were continued. On Bandirippuwa, nitrogen at the top level continues to have a depressing effect on yield while the response to potash is highly significant. On Ratmalagara, phosphate manuring alone still continues to give a marked response.

The manurial experiment on young palms at Ratmalagara is now in its 5th year. In this experiment there are 27 combinations of nitrogen, phosphoric acid and potash at three levels (nil, single and double) in 54 plots consisting of 18 palms each. The visual differences between the various treatments are now most marked. A grey leaf disease, *Helminthosporium incurvatum* is causing havoc in those plots where the manurial mixture applied is unbalanced due to excess of nitrogen and lack of phosphate.

Technological Chemistry

Studies of the rates of acetic and alcoholic fermentation of tall palm toddy under various conditions were commenced to obtain information on the optimum conditions necessary for the manufacture of high-grade vinegar by the continuous generation process. These experiments showed that under certain conditions it is possible to prepare a vinegar containing 6 per cent. of vinegar acids. Vinegar as produced at present was found to range in acidity from 0·78 per cent. to 7·58 per cent, the latter being adulterated with ordinary acetic acid to increase the acidity.

In connection with the export trade in fresh nuts, rate of dryage of nut water from husked and unhusked nuts is being determined. The results of this experiment will be reported after its conclusion. A systematic study of the nutrient status of the sweet toddy of healthy tall palms as regards major, minor and trace elements has been initiated to obtain fundamental information regarding the optimum nutrient requirement of healthy coconut palms.

Botanical Division

Recordings of the number and weight of nuts from individual palms in the Latin Square Experiment at Ratmalagara, the progeny testing trials at Marandawila and Walpita, the replanting experiments at Olaboduwa and Bandirippuwa and the hybrid blocks at Bandirippuwa and Ratmalagara are continuing.

Growth measurements of seedings produced from sliced and unsliced seednuts have been made. In appearance the seedlings produced from sliced nuts are generally better.

Manioc and green gram, grown as a food crop, interplanted in the rows between young coconuts at Ratmalagara, were a total failure owing to the prolonged drought. Pineapples continue to produce satisfactory crops.

Crop Protection

The use of aluminium sheets for banding palms as a protection against rats has been tried. It was found that nutfall, due to rats, was effectively controlled by this method providing the fronds of adjacent palms do not touch. This control is however costly.

Trials with various weedicides have been initiated to study their selective powers and whether they have any ill effects on young coconut plants. "Tecane" applied at the rate of ozs. per 100 sq. ft. destroyed 95 per cent. of the illuk after two treatments with an interval of two months.

Animal Husbandry

Farmyard manure, produced at six months intervals by using grass and weeds as a litter for cattle kept in the barn at night, is being analysed by the Chemist. The study is still in progress.

The grazing trials with indigenous cattle, now in progress show that there is a definite degradation of pasture with intensive grazing (four animals for four days every two weeks). Where there is undergrazing, the grass is tending to mature and become inedible (two animals for four days every month).

The grazing habits of Sinhala cattle have been studied and the results are reported in this issue of the Quarterly.

Yield records of the coconuts in the one acre demonstration poultry plot are being maintained and in 1952 the palms in this plot yielded over 5,000 nuts per acre. The deep litter, produced in the poultry sheds, is being used to manure these palms.

Planting and Advisory Division

A new nursery has been established at the Wilpotha Middle Class Colony at Battuluoya. An additional five acres has since been released and it is proposed to establish a Demonstration of Triangular Planting on this plot.

The demand for seedlings in the Kurunegala District is heavy but in the Southern Province it is poor. A total of 449,845 seednuts was obtained for replanting nurseries during the current season as follows :—

Name of Nursery	Capacity
Wilpotha	110,000
Walpita	30,450
Hettipola	32,900
Carmel	21,100
Kurunegala Co-op.	12,000
Ratmalagara	41,200
Kalawewa	29,000
Puttalam Co-op.	6,000
Tangalla	53,750
Palugaswewa	16,000
Killinochchi	40,000
Labuduwa	10,500
St. Anne's	46,945
	449,845

Advisory Officers have established liason with a large number of Rural Development Societies, are visiting small holdings and are now giving a follow-up service to the Replanting Project.

F. C. C.