

COCONUT CULTIVATION.*

FIGURES available on the coconut industry in the Colony show that a considerable expansion is taking place in this crop. Unfortunately, after seeing a number of the coconut areas, one is led to the general conclusion that the trees in most instances are not thriving. Many of these have been established on unsuitable soil with inadequate drainage and with scarcely any attention to cultivation. On light soils, it is true, the trees are growing under conditions that enable them to resist cultural neglect remarkably well. Now it is a recognised fact that, while the palm, generally speaking, is of a robust nature, it should be borne in mind that, in unfavourable environment the trees will come into bearing late and are relatively short-lived. For such trees to remain healthy and vigorous, considerable expense is necessary for maintenance and cultivation, whereas, normally, on soils and under conditions suited to their growth the palms fruit early and maintain productivity for a long period of years at a minimum expenditure for care and management.

Thus, in view of what has been stated, it seems clear that a note of warning is necessary at the present time in order to prevent any setbacks to a promising industry and that its permanency may not be in any way jeopardised, through haphazard methods or, still worse, no method at all.

A rough calculation obtained by equating copra and oil to nuts on the basis of the 1928 figures indicates, after making necessary allowances, that the average yield per tree was hardly more than fifteen nuts. This is extremely low and supports the contention that all is not well with the industry agriculturally. Growers should not be satisfied until the average production per tree can be brought up to at least fifty nuts. This means that care will have to be exercised in the development of new areas and in the improvement of those already established. In the first place, I would urge greater attention to the question of selection of seed nuts, the main points concerning which are fairly well-known, but often not acted upon. Further selection is necessary in the nursery, young palms showing any signs of feebleness being rigidly rejected for transplanting.

Then there is the question of giving the young trees a good start. Apparently no one in this Colony ever thinks that a coconut palm needs manure. In this connection, the proper time to commence to apply fertiliser is when the seedlings are transferred from the nursery to the field. This is a critical period, as by this time the plant has ceased to get nourishment from the reserves in the nut and, moreover, the severing of young roots and the actual operation of transplanting constitutes a check which can best be remedied by the application of a little quick-acting fertiliser when the plants are set in the field. A mixture which has been recommended with success in other countries is as follows:—

150 lb. superphosphate
150 lb. nitrate of soda
50 lb. muriate of potash.

This should be well mixed and 2 lb. of the mixture thoroughly incorporated with the surface soil in each hole. That it pays to manure coconuts has been repeatedly demonstrated.

* By Professor J. Sydney Dash, R.S.A., in *The Agricultural Journal of British Guiana*, vol. II, no. 1, March 1929.

After the palms have been established it may be necessary to give another application, but the essential point is that the transplanted palms be given a good start. As soon as fruiting commences the question of replacing soil losses due to cropping should be carefully considered. In this connection the writer published the following in *Tropical Agriculture*, July 1926, p.143 :—

“The drain of plant food from the soil as a result of coconut cropping is not often sufficiently realised. In the West Indies, calculating on a basis of seven thousand nuts per ton of copra, seventy trees per acre, and fifty nuts per tree per annum, it will be found that one ton of copra should be produced from about two acres. This means an annual loss per acre, expressed in pounds approximately, of potash 37.73, phosphoric acid 6.11, and nitrogen 52.78. These figures take into account the constituents in husk, shell, meat and water. The losses mentioned may be considerably diminished according to the methods of harvesting and disposal adopted. For example, if the nuts are split where they are collected, the water, rich in potash, would be returned to the soil. In the case of husk, shell and fallen leaves, it not infrequently happens that these are burnt away from the fields with the consequent loss of all fertilising ingredients. Where the ashes are collected and returned to the plantation, the potash and phosphoric acid are recovered, but the nitrogen is lost. There is also the fact to be mentioned that burning such material inside the groves may do considerable harm to the root system of the palms and to the young spathes, resulting in the shedding of flowers and immature nuts from the latter. Losses are reduced to a minimum when all plantation refuse is left to decay in the fields producing it. This refers to general estate practice and obviously will not apply to cases of specific disease where it may be essential to destroy infectious materials *in situ*.”

Space does not permit any lengthy treatment of the question of tillage and cultivation. The amount required will depend largely on the environment, the policy adopted in respect to management and the usual economic considerations; but, under any circumstances, an effort should be made to free the soil periodically of weeds and grass for some distance around the growing palms, especially if the full effect of manuring is to be obtained. The practice of grazing in young coconut cultivations is to be deprecated.

At present the Department is handicapped by lack of suitable land for studying agronomic problems in relation to this crop, but it is hoped that before very long this situation will be remedied and sufficient area obtained for definite work to be planned with a view to throwing light on the cultural requirements of the palm under local conditions.