

CROP PROTECTION

A PLEA FOR THE STUDY OF CROP PROTECTION PROBLEMS

By A. V. COOMBS,

Colombo.

CROP protection or to be more precise plant protection is almost as old as the hills and protection of sorts has probably been in vogue ever since the evolution of man. The placing of guards around trees and the fencing of fields to protect them from the ravages of wild or domesticated animals, the use of scarecrows to drive away birds, and the lighting of smoky fires to keep away insects, are among the earlier and more simple forms of crop protection which are still in evidence to-day.

Modern crop protection is however a much more complex problem of comparatively recent origin. It has advanced considerably during the last few years as a result of the very rapid progress that has been made in the production of agricultural chemicals, so much so that crop protection is now a very important applied science embracing a wide range of other sciences such as Botany, Chemistry, Entomology, Mycology, Toxicology, Plant Pathology and Engineering. A narrow specialization in any one of these sciences is not sufficient. A knowledge of each is required in order to deal successfully with the problems of crop protection and the leading world agricultural research institutes realizing the importance of this aspect of their activities to-day maintain separate plant protection departments to deal with this complex subject. In fact there is a movement afoot in the U.K. for a University Faculty of Crop Protection.

In order to conserve the wealth of the country, it is desirable that the production of coconuts should as far as possible keep pace with the rise in the population. Apart from opening up new lands, which are not always available, increased production can best be achieved by a combination of ways namely: the growing of high yielding palms, better cultural methods, the greater use of fertilizers and last but by no means least modern methods of crop protection which include the control of weeds, the arrest of immature nut-fall, the destruction of the coconut beetle and other insects, the protection of seedlings from termites, the combating of grey blight and other fungus diseases, and the extermination of rats, bats and squirrels.

Unfortunately no data is available to show the actual loss caused to the coconut grower by pests, diseases and weeds but placing it at the very low figure of 10 per cent.—similar losses for most other crops are reliably estimated at 20 per cent. or more of a healthy crop—this will amount to a loss of the order of Rs. 25,000,000 annually, calculated on the basis of an average annual yield of 1,750 nuts per acre from 1,000,000 acres of coconuts at 15 cents per nut. A figure worth pondering over and one which it is hoped will focus the need for the setting up of a Crop Protection Division of the Coconut Research Institute.

Manufacturers of crop protection products are seeing to it that there is no dearth of potentially effective chemicals on the market to tackle most of the pest, disease, weed and allied problems

which are likely to beset the coconut grower. Better machines for the application of crop protection chemicals are also constantly being invented. On the shoulders of Coconut Research Institute must however fall the important task of accurately assessing the damage done by pests, diseases and weeds and presenting the coconut grower with the most economical method of protection.

In conclusion, it will not be out of place to quote here the concluding remarks of that world renowned authority on Agriculture, Sir John Russell, in a paper entitled "Wastage of World Food Supplies through Pests and Diseases" which was read by him at the International Crop Protection Conference at Fernhurst, England in 1951 :

"The plant protector started as a priest armed with incantations, a sheep and a reddish sucking puppy for sacrifice : he has developed into a modern scientist equipped with well-founded knowledge and efficient appliances, both of which are constantly widening and improving. Close careful observation, clear thinking and a broadminded approach to his problems still remain his greatest assets in his work."

EDITORIAL FOOTNOTES

Under Ordinance No. 29 of 1928, para 2—it is laid down that :

"There shall be established in Ceylon, hereinafter call 'the Board,' for the purpose of managing, conducting, and furthering scientific research in respect of coconuts and problems connected with the coconut industry, and in particular the growth and cultivation of coconut palms, *the prevention and cure of diseases and pests*, and the utilization and marketing of the products of coconut palms, and for the purpose of exercising the powers and carrying out the duties conferred and imposed upon it by this Ordinance."

In the memorandum by the Board of Management on the future of the Coconut Research Scheme published in 1945, there appears the following paragraph :—

"*Senior Staff.* The staff originally contemplated by the 1924 memorandum was an Agriculturist, an *Entomologist*, a *Mycologist* and a Travelling Advisory Officer. It is thus clear that the Scheme originally contemplated was an entirely agricultural one."

In the Report of the Coconut Commission, 1949, it is clearly recommended that an *Assistant Mycologist* and an *Assistant Entomologist* should be appointed. This recommendation has never been implemented. It is clear from this that the need for research on pests and diseases have been recognised right from the initial inception of the Scheme.