PEST CONTROL FOR COCONUT

' A Blue Print '

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This is a description of yet another service that may lead to the streamlining of the coconut plantations and smallholdings of the island. This service provided by the Coconut Research Institute is necessary for the following reasons :—

Firstly, the greater percentage of growers have only smallholdings ; secondly, pests and diseases of coconuts are bound to increase with the replanting of coconut lands and the ' bringing-in ' to coconut of virgin land that is going on, according to recent Government Policy.

The purchase of expensive equipment for controlling these pests and diseases on modern lines are beyond the means of the smallholder.

Thirdly, even if the grower is financially well off so as to be able to purchase the necessary equipment he may be wanting in the necessary knowledge for using chemicals in the control of pests and diseases of coconuts to advantage.

Pest Control by Chemicals

The effectiveness of chemical control will depend on two factors. Firstly, it will depend on the active ingredient contained in the particular preparation.

Chemicals are sold under *trade names* and these chemicals are usually recommended by the manufacturers for specific purposes. Unfortunately for us only a few of the large range of chemicals available to us have been tested out fully under tropical conditions on tropical crops. This is particularly so in the case of the coconut palm. Knowledge in this field is wanting and therefore it is not surprising to see some growers baffled when making a choice of a chemical amidst a mass of salesmanship by local trade agents and also in assessing the results obtained with the chemical.

However, there is some comfort to the grower when he realises that there are scientists as well as manufacturers of chemicals who find themselves in this very same situation when it comes to assessing the value of a particular chemical used for a particular problem.

Secondly, the chemical will have to be applied in the correct dosage. The dosage is worked out on the basis of maximum kill of the pest concerned and the degree of toxicity to the host on which the particular control programme has to be carried out. If the host happens to be a plant for example then it is necessary to assess the effect of the chemical on the plant as well as on the pest. It is essential that both these factors be taken into consideration.

Chemical Control

We can summarise therefore by saying that effective chemical control of a pest or disease can only be obtained if the right chemical in the right dosage at the right time is used in the particular problem. 'Abuse' of chemicals has taken place and will take place, e.g. stomach poisons may not give the same effect as a contact poison. Now if an insect is to be killed by a contact poison then it will be of little value to apply a stomach poison. Further, if the effect desired is to be got by a contact poison then this poison should be applied in the correct dosage. Therefore by 'abuse' it is meant that the wrong chemical has been used in the wrong concentration giving a result that was not expected, i.e. like an over dose of medicine. 'Abuse' of chemicals could also lead to the development of resistance of the pest and this would mean that the particular chemical would be now ineffective against the particular pest.

Handling of Chemicals

Danger and Precaution.—Handling of chemicals carry along with it a certain degree of danger. The degree of danger varies with the type of chemicals. For example, systemic insecticides are very poisonous to both man and animal, so are arsenic based formulations. Fumes from chemicals could also cause irritation, e.g. Ethylene Dichloride, excessive quantities of Chlordane.

There are fundamental precautions that have to be taken to eliminate the undesirable effects of chemicals and the grower must acquire this knowledge as well as a knowledge of antidotes should a case of poisoning occur.

The Grower and Chemical Control

From what has been said above, it will be seen that two major requirements will be demanded of the grower if chemicals are to be used effectively in any control prog[illegible]ne. The requirements

will be financial as well as technical ' know-how '. It is too much to expect the grower to know all the details of chemicals used for pest and disease control as most of his time is occupied with the everyday organisation and working of the holding.

This task of management leaves little leisure at the grower's disposal for him to make a detailed study and consequently become proficient in the procedures of chemical control and use of chemicals. It is at this point the *scientist, trained th ine aspects of disease, pest and chemical control* fits into the overall plan of the coconut industry. The scientist can do little if the equipment he has to work is wanting, and out of date, hence it is then when a *CROP PROTECTION SERVICE* comes into being, it will have its trained personnel and equipment to do a job or work, efficiently, safely and with scientific guarantees.

Equipment

It is not necessary at this juncture to discuss the type of equipment that is necessary for such a service. It will merely suffice to say that cost of the equipment, plus maintenance, and repairs plus the wages of the personnel will be in the vicinity of Rs. 25,000/- for each such unit. When this *Blue Print* becomes a reality, then the financial aspects of the service will no doubt be looked into. As we see this problem, now, it is obvious that certain charges that are required for carrying out this service such as cost of chemicals used, the wages of the personnel who carry out the control measures, etc., will have to be met by the growers who use this service.

WE WANT THE HELP OF ALL GROWERS—(BIG LANDLORDS—SMALL-HOLDERS AND EVEN THE PEASANTS IN VILLAGE GARDENS) TO AVAIL THEMSELVES OF THIS SERVICE SHOULD THIS BLUE PRINT BECOME A REALITY.

' OF THE EARLIEST AGE AT WHICH THE COCONUT PALM CAN BE BROUGHT INTO BEARING UNDER FAVOURABLE CIRCUMSTANCES IN CEYLON, WE HAVE THE FOLLOWING EVIDENCE FROM A PRACTICAL PLANTER :—" OF 200 PLANTS I PUT DOWN IN MAY 1879, TEN PER CENT ARE NOW (JUNE, 1886) IN FLOWER, AND I HAVE ALREADY GATHERED NUTS FROM THE MOST FORWARD TREE. IT APPEARS THEN, THAT, THOUGH COCONUTS ARE NOT SUITED TO THE VIEWS OF THOSE WHO THINK TO MAKE RAPID FORTUNES, THERE IS NO UNDERTAKING IN THE COLONY, WHERE SO MUCH CAN BE GOT FOR SO LITTLE OUTLAY, BY THOSE WHO HAVE PATIENCE TO WAIT, AND THERE IS NOTHING SO SUITABLE FOR SUCH OF THE PEOPLE OF THE COUNTRY AS HAVE A LITTLE CAPITAL TO INVEST IF THEY WILL ONLY DO IT JUSTICE DURING ITS EARLY YEARS " '.

Extract from *All about the Coconut Palm*, 1885 edition.