

## COCONUT CATERPILLAR PEST: NEW PROJECT FOR ITS CONTROL

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During the dry spell of 1959, the Coconut Caterpillar pest was causing serious damage to coconut palms in some estates, in the Kurunegala district, particularly in the Ganewatte — Nikadalupota area.

All available methods of control were employed to check this outbreak with the co-operation of Dr. H.E. Fernando, Entomologist of the Department of Agriculture.

We are pleased to record that the pest was reduced to a non-significant level. A careful watch has, however, been kept for re-infestations. Since then up to now (July 1960) the areas originally infested have not shown signs of re-infestation.

This unusual outbreak provided the C.R.I. with opportunities of studying various aspects of the bionomics of the pest in considerable detail and some useful information was obtained, regarding the pest population fluctuations in relation to the methods of application of insecticides and the liberation of parasites to control the pest.

The pest appears from time to time in some districts when the balance of nature is upset. In these areas, the pest lies dormant until favourable climatic and biological conditions occur. When favourable conditions prevail, their numbers increase and serious outbreaks occur. The natural control in force is the combined effect of climate, parasites and predators.

In the control of this pest, it is now considered that the most scientific approach towards a balanced control of this pest should be the use of parasites and predators. This method of *biological control* should also be cheaper than other methods of control such as the use of insecticides, which involves the use of expensive equipment such as power sprayers, the manipulation and operation of which on the terrain of coconut estates involve practical difficulties. Further, the indiscriminate use of insecticides can destroy useful predators and parasites, not only of coconut pests, but of other crops as well.

### **Parasite Breeding — A Specialist's Job**

Biological control projects involve several techniques that should be handled by a team of trained personnel. A very competent authority on

biological control work is the Commonwealth Institute of Biological Control, whose headquarters are in Canada. Fortunately, Dr. F.J. Simmonds, the Director of this Institute visited Ceylon when the caterpillar pest was causing us some anxiety and he suggested a project for supplying parasites from other countries, which the Coconut Research Institute gladly accepted.

In connection with this project, Dr. V.P. Rao, Head of the Indian Station of the Commonwealth Institute of Biological Control at Bangalore, visited Ceylon, inspected coconut caterpillar infested plantations and rendered us valuable advice.

### **Exotic Parasites**

Following his visit, a number of parasites viz: *Tetrastichus israeli*, *Microbracon brevicornis*, *Perisierola nephantidis*, *Elasmus nephantidis*, *Trichogramma minutum*, have been sent to the Coconut Research Institute from Bangalore, India, for multiplication and liberation. These parasites are already being liberated in Batticaloa, where the pest has been a permanent feature for a long time.

One of the salient features in this project will be the importation of exotic parasites. It is an accepted principle in biological control that most successful results could be obtained from non-indigenous parasites. The expert services of the Commonwealth Institute of Biological Control will be utilised to collect and send parasites from countries such as Hawaii.

These parasites will be received here by AIR MAIL, kept in quarantine if necessary, multiplied in an insectary and liberated in the field. Along with these imported parasites, the useful indigenous parasites will also be bred on a mass scale in the insectary and liberated in the field at crucial periods.

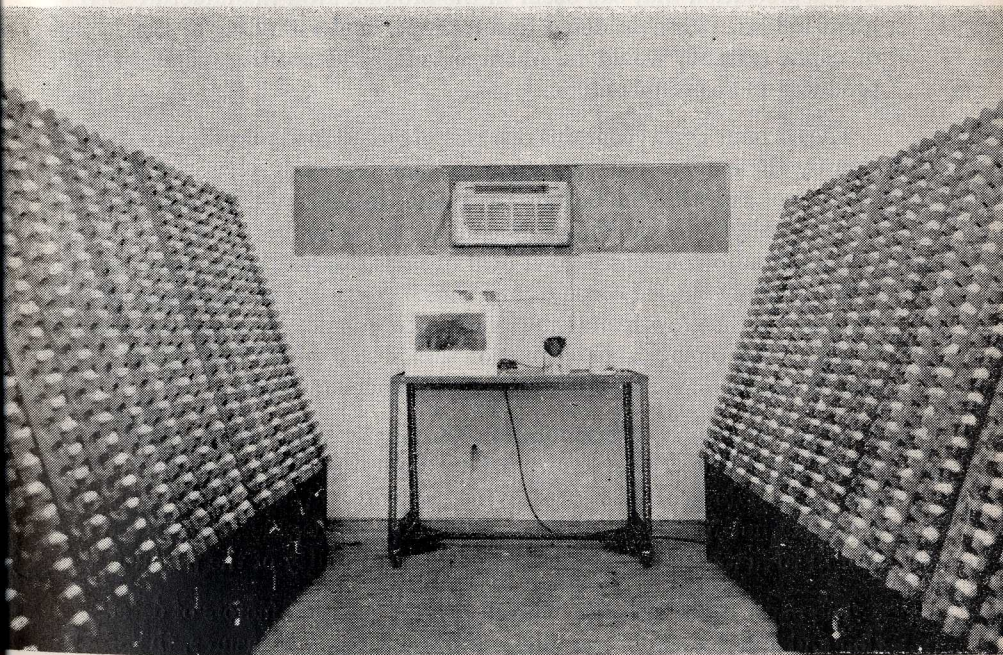
The breeding of parasites in an insectary for periodical release, for an unlimited time, is not the fundamental approach in this project. Mass breeding of parasites will be done only at the initial stage. After a heavy liberation these parasites should get colonized and be able to bring down pest population if they are to be successful. Hence they should multiply in great numbers than the pest insect in the field, parasitize the pest at various stages and successfully eliminate the pest.

### **Colombo Plan Aid**

Arrangements have been made through the good offices of the Colombo Plan Authorities to obtain the services of an Entomologist from India, with experience in the mass breeding of these parasites. The Officer in Charge of the Crop Protection Division of the C.R.I. has recently returned after an intensive course of training in parasite breeding under Dr. Rao,

at Bangalore, and we are hopeful that our combined efforts will meet with success and should be grateful if coconut planters will also co-operate in helping us to liberate these parasites on their estates.

If all the stages of this programme are worked out according to schedule, the project should be over in about three years time or earlier. By then, the parasites should bring the pest population down to a non-economic level and keep it in check thereafter.



Inside View of the Insectary