EDITORIAL

SHOT-HOLE BORER CONTROL

The Shot-hole Borer, *Xyleborus fornicatus* Eichh. was first recorded in 1892 from Craighead estate, Nawalapitiya. Since then it has been reported from all tea growing districts in Ceylon except those at the highest elevations. The pest is responsible for the delapidation of weak bushes, and also causes loss of crop. The precise extent of this damage to the Industry as a whole, cannot be estimated with any degree of accuracy. In 1961 it was considered sufficiently serious to warrant chemical control measures, although experiments with dieldrin were still inconclusive. The question was posed " Should we go on with experiments until we were quite sure of reliable recommendations to make ? Or should the TRI depart from its usual practice and make provisional recommendations ? " It was eventually decided that although there was an element of gamble, with possible success on the one hand, and equally possible failure on the other, the TRI would take the bold step of accepting future uncertainty in making provisional recommendations. Dieldrin was widely used since, to control the borer.

A constant watch was kept on the development of side effects as a result of using such a persistent insecticide as dieldrin. As early as 1954 it was pointed out that side effects were to be anticipated. The Institute has always been aware of the potential damage which could accrue from secondary parasites. At present, this damage is considered to be sufficiently serious to warrant rethinking on the use of dieldrin on tea estates.

The Institute has now made a decision on the basis of its accumulated observations, experimental findings and knowledge of pesticide use after the fullest discussion and thorough scrutiny of the issues involved. *Our new recommendations which are given in detail in the article by Dr Danthanarayana cancel all our previous recommendations on Shot-hole Borer control.* **We recommend that the use of dieldrin in mature tea be abandoned altogether.**

Only on estates situated in areas where Shot-hole Borer damage is very severe, we suggest that dieldrin might be used to advantage in new clearings. Here again, dieldrin spraying should be done at reduced dosages, and the final application should be made after the young tea is pruned, having completed its first cycle. *Thereafter, no further spraying should be done.*

The use of aldrin as a mid-cycle spray was suggested provisionally (Advance information on research projects) in areas where the cover of tea permits it. **The Institute now advises all estates to stop forthwith the use of aldrin both in new clearings and in mature tea, either as post-pruning or mid-cycle sprays.**

After dieldrin spraying is abandoned, the side effects will disappear, but only very slowly. It would take as much time to disappear as it did to appear in the first place.

The TRI is investigating many other lines of research as alternatives. Even if no alternative is available the Institute still feels justified in recommending suspension of the use of both dieldrin and aldrin. The family of insects (Scolytidae) to which the Shot-hole Borer belongs is considered to be one of the most successful groups of insects because they have only a few natural parasites. Its control is, therefore, no easy task. The problem is being meticulously followed up with an intensive research programme. It is hoped that alternative methods of control will be developed before very long.

Outbreaks of Twig and Looper Caterpillars

Occurrences of both these pests, noted some years ago, have now reached the stage where the Institute has had to advise severe restrictions on the use of dieldrin, which appears to have played a part in allowing the moths to establish themselves in tea. Descriptions and illustrations should help planters to recognize the larvae, and to apply control measures at an early stage of development. We have here an example of the, often unpredictable, appearance of new pest species following adoption of chemical control measures against others.

The influence of withering on rotorvane manufacture

Investigations continue into the techniques of manufacturing with Rotorvanes. Traditional withering standards may not necessarily be suitable for a rotorvane programme, and the authors here present valuable information gained from experiments under specified conditions.

New fungicides for blister blight control

The accepted control measures are constantly under scientific scrutiny and in this paper the efficiency of new fungicides is reported. Conditions in the field may be expected to influence their efficiency. The use of a zinc-copper product for control of both Blister Blight and zinc deficiency seems now to be a practicable proposition and may help to simplify field operations.

Blister blight control

Dr de Silva has supplemented the preceding paper with a summary of the Institute's latest recommendations on blister blight control. This should provide a useful reference note for planters.

Analysis of 'cream' of tea

The phenomenon of 'creaming down' plays a part in judging the attraction of black tea and it is desirable that we should know more about the 'cream' itself. The authors report considerable detail of its chemical composition, and more meticulous analysis will no doubt be needed to supply the knowledge we require.

Terpines and sterols in black tea

The search for compounds which may be associated with identifiable properties of made tea continues, and this paper gives an idea, especially to the layman, of the intricacy of the problem.

Translocation of photosynthates

The precise function of different leaves on the tea bush has been too little studied, and the work reported in this paper is of particular interest. Further analyses are at present being done and will eventually be reported to supplement the present findings.

Breeding, selection and propagation of tea

This subject will, of course, always hold interest and Mr Richards' paper gives a highly readable summary of the position in Ceylon today. Progress in this field of work is often unspectacular, but nevertheless steady and of far-reaching importance to the Industry, particularly in view of our present assessment of the world's production potential of the crop.

Advance information on research projects

The purpose of this section is to encourage planters to carry out experiments and publicize their findings, so that other progressive planters who may like to try out experiments which have given useful results elsewhere, could do so under their own conditions. We invite planters to send in reports of their experiments to be included in this section. Whilst encouraging planters to try out new ideas, it must be clearly understood that the Institute will neither be responsible for their failures nor endorse succesful trials until they have been more formally investigated.

Methyl bromide as a nursery fumigant

Preliminary results of experiments have been so encouraging that we deem it wise to release the information at this stage. **Investigations show that the problem of infestation of new clearings with eelworm carried out by nursery plants, is a major one which needs to be brought forcibly to the Industry's attention.** Methyl bromide appears to have advantages in nursery fumigation which might encourage more effective measures to control eelworm at this stage.

Tat versus trough withering

A brief note on this important subject represents a considerable amount of painstaking work and should offer valuable guidance to planters. The economies resulting from trough withering, without loss of valuation of the black tea, appear to be very encouraging.