EDITORIAL.

SHOT-HOLE BORER

In the last issue of *The Tea Quarterly* (pages 28-34) a report was given of the discussion on Shot-hole borer which took place at the Sub-Conference held at St. Coombs in March.

It is apparent that there is some divergence of opinion between different districts in regard to the seriousness of this pest and the extent of the loss in crop resulting from attack. Representatives from Uva, Kotmale, Kalutara and the Southern Province, particularly those from Uva, considered that the pest was on the increase and Uva delegates attributed a steady increase in wood rot and deterioration of bushes to its presence. Opinion in Dimbula was on the whole that attacks are now less severe and representatives from the Ratnapura area evidently regarded the pest much less seriously and were inclined to support the view taken in the Annual Report of the Planters' Association of Ceylon for 1939, page 74, where it is stated: "Shot-hole borer would not appear to be an economic factor under the present standard of cultivation." This comment of course was made in reference to the low-country. One or two speakers also confirmed the impression gained by the Institute that, speaking generally, shot-hole borer is not very greatly in evidence on small-holdings.

It is not easy to reconcile the above conflicting opinions. Varying climatic factors cannot be the sole explanation, for while one might expect the effects of infestation to be more evident in a district such as Uva with considerable dry periods, than in, say, Ratnapura, this would not account for the difference between the latter area and, say, Kalutara. It might be suggested that the position would be influenced by variations in the general level of cultivation in different districts. Whether wide fluctuations of this type, after

making allowances for the general level of cropping, really exist or not is a matter for enquiry, but the position on small-holdings indicates that a relatively low incidence of shot-hole borer can exist side by side with a very low level of cultivation.

In regard to the question of spread of shot-hole borer to new areas, one can only say that the number of estates previously free and now reporting infestation is exceedingly small. This does not, of course, mean that the *intensity* of attack may not be greater than formerly on estates already infected. Should, however, this be the case, the position should be reflected in crop yields and a careful analysis of a sufficient number of estate records would throw light on this point. It must be remarked, however, that considerable care will have to be taken in compiling such statistics to allow for variations in cultivation programmes during the depression and the effect of restriction in recent years, and it may not, in fact, be at all easy to obtain figures by which present yields can be accurately compared with those of previous years.

Crop figures alone will not, however, suffice in estimating the economic results of infestation. Even if the intensity of infection be increasing, former yields may have been maintained by a higher level of manuring leading to a higher cost of production. Again, if it indeed be the fact that wood rot is increasing on infested estates, the potential loss in capital value must be taken into account.

From the above considerations it is clear that there is considerable need for more reliable data on the whole question so that the status of the pest at the present time can be more accurately assessed. It is hoped, therefore, to make arrangements for the collection of such information.

With regard to practical measures against shot-hole borer, the position is one of much difficulty. The earlier work of Iepson and others, which is fully confirmed by investigations on similar lines carried out by the Institute, show clearly that while a liberal manurial programme accelerates the healing of shot-hole galleries, thereby reducing breakage of branches and loss of crop, such treatment does nothing to reduce the incidence of attack. Measures directed against the beetle are difficult to devise since the latter spends its active life *inside* the wood of the infected bush. It is thereby largely protected against sprays or dusts or from attack by predators or parasites. In regard to the latter it was suggested at the Sub-Conference that the relative freedom of Java tea from attack by shot-hole borer was due to biological control of the pest, and the Institute was urged to send immediately an officer to Java to search for the parasite responsible. If there were reason to think that this opinion represented the true facts, measures on the lines proposed would already

have been taken by the Institute. Unfortunately, as was pointed out at the Conference, there is no evidence to show that such biological control exists and this view of the position in Java has been confirmed by later information received from the Director of the Proefstation, West Java. It does not appear, therefore, that any very useful purpose would at present be served by sending an officer to that country. Enquiries are proceeding in regard to the position in South India where shot-hole borer also causes little damage, and information concerning the relationship of certain mites to *Xyleborus* is being sought from America. The outlook is not promising, however; of the very large number of different species of *Xyleborus*, very few indeed are known to have parasites and the prospect of finding anything that will successfully deal with our own species is somewhat remote.

The Institute will of course do everything in its power to obtain further information on this aspect of the question as, outside biological control, there would appear to be little hope of elminating the pest.

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