Insect pests and their control - Apple Curculio - Preliminary report of an experiment

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APPLE CURCULIO
Preliminary Report Of An Experiment

The damage caused by the apple weevil or apple curculio (Otiorrhynchus cribri-collis Gylh) takes several forms, the most apparent being marginal leaf damage. However, the bark chewing habit probably has a more direct effect on yield for it may cause ring-barking of the main leaders and growing shoots with their consequent die-back and the prevention of full development of immature fruit. The larvae or grub forms may also cause some root injury.

In conjunction with experiments being carried out to test the efficiency of various insecticides for the control of the beetle, careful studies of its habits and life history are being made.

Two methods of insecticide application were employed in the 1955-56 experiment at Donnybrook. Dieldrin and B.H.C. (Gammaxane) were applied as butt sprays, and dieldrin, lindane, methoxychlor, arsenate of lead and malathion were used as foliage sprays. Four hundred and eighty trees were included in the main experiment besides a number of trees in small areas which were used for trials. The two butt treatments (0.5 per cent. dieldrin and 0.5 per cent. B.H.C. gamma isomer) and the dieldrin foliage spray (0.05 per cent.) gave the best control. Of the additional insecticides used in the trials aldrin showed the most promise.

The effect of the treatments on other pests (bryobia mite, apple leafhopper, San Jose' scale, etc.) is being carefully observed, as application of insecticides for one pest have, on some occasions allowed others to increase. This is due to the toxicity of the material to some natural parasites and predators.

Although no evidence has been obtained on the experimental site, dieldrin cover sprays on other orchards have apparently resulted in a build-up of bryobia mite numbers. For this reason it is anticipated that further work will concentrate mainly on butt applications of insecticides.

For the orchardist wishing to control apple weevil, results of this experiment indicate that 1/4 per cent. dieldrin or 1/8 per cent. gamma isomer B.H.C. (1 part of 15 per cent. or two parts of 7 per cent. to 30 parts of water) should prove very effective when applied to the butts of trees in early December using about 1 quart per tree.

Experiments will be continued in the coming season to determine the most economical rates of application and to test other new insecticides.
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