

Fair results were obtained from the use of *Alfalfa hay* sweetened with molasses; 1½ gallons of crude molasses, dissolved in about an equal quantity of water, is mixed into 50 pounds of hay, to which as much water is now added as it will soak up. Two pounds of Paris green are then stirred into the mixture, which should be applied in the evening in as wet a condition as possible, since it loses its attractiveness when dry. On account of its bulk, 10 pounds of hay will cover more than 100 rods.

A bait can be made also from fresh *horse droppings*, of which much are sweetened with a gallon of crude molasses and poisoned with a pound of Paris green, but this is a poor substitute.

*Effect of cannibalism upon poisoning in furrows.*—The quantities of Paris green recommended in the above mixtures are considerably in excess of the actual amounts necessary to kill the individual larvæ which feed at all extensively upon the bait. The reason for this is that larvæ feeding upon such heavily poisoned bait are killed quickly and very few of them leave the furrow.

We have stated already that larvæ feed readily upon each other, especially upon dead specimens. No exception is made with poisoned larvæ, and subsequent arrivals feed almost as freely upon these as they do upon green vegetation. These dead larvæ thus become, themselves, poisoned bait, and when a large number are migrating, the killed specimens soon cover the bottom of the furrow. We have not tested the length to which this secondary poisoning can be carried, though we find that two larvæ are killed readily with a single dead specimen which has been poisoned by the bait in a furrow. In any case, the majority of living larvæ apparently prefer to stay in the furrow and continue to feed upon the dead bodies of those which have been poisoned, till sooner or later they themselves succumb.

The post holes we made in treated furrows for estimating the relative value of baits continued to yield up to an 80 per cent mortality a week after the bait had been applied.

*Comparative value of poisoning in furrows and broadcasting.*—When larvæ are migrating, we have seen them pass rapidly over dry bait, without appearing to be aware of its presence. In a prepared furrow, however, their progress is impeded, and after one or more unsuccessful attempts to escape, nearly all of them will stop and feed upon the bait with which it keeps them in contact.

Experiments were made in which similar amounts of bait were placed upon the open soil and in prepared furrows. An average of about three times as many dead larvæ were taken from under the bait in the furrows as from that on the level ground, and in all cases much more of the former bait had been eaten.

In order to estimate the value of a dusty sided furrow treated with the short mixture we have described, we made counts of the dead larvæ to the foot of our experimental furrow at Welling eight days after the bait had been applied. The average number of dead larvæ was 537 to the foot of trench, which is equivalent to nearly 3,000,000 to the mile. At this time there was no sign of the bait left, and since the larvæ had been continuously feeding freely on dead specimens the total number already killed must have greatly exceeded this figure.

*Number and location of furrows.*—When a field is considered to be in danger of attack by larvæ, which are known to be in the vicinity, a single furrow should be made around it. By watching this furrow the farmer will be able to see whether larvæ are attempting to enter his fields. If in the evenings numbers are present in the furrow, it should be treated with bait immediately.

If the larvæ are migrating on to a field in large numbers it may be advisable to make two parallel furrows, about a rod apart, along the side or sides from which they are entering. The inner one need not be treated unless it is seen to contain many larvæ which have escaped from the first.

This should effectively prevent further invasion in large numbers.