Rootworm Can Be a Serious Problem for Corn Producers

Editor's Note The northern corn rootworm was reported by many corn producers and others knowledgeable about corn as more of a problem locally in 1970 than the blight

Since more and more Southeastern Pennsylvania crop land is being turned to continuous corn, we can probably expect the rootworm problem to continue or be worse in 1971 This is true because the rootworm needs corn to survive in significant numbers and it generally needs corn in the same location for three years or more to become a really serious pest.

So, except for the few fields where chemical control measures were taken last year to reduce the rootworm populations or where corn is being planted in a field that did not have corn last year, we can expect the rootworm this year will be a more serious pest than last year.

These and other facts about the rootworm are explained in the accompanying bulletin by Penn State Extension Service. Further details on control measures can be obtained from the local Extension office or from local farm supply firms.

Populations of the northern corn rootworm continued to increase rapidly throughout the Commonwealth in 1970 and can be considered pests of economic importance in practically all of the corn producing areas of Pennsylvania.

Growing corn in the same field for three or more consecutive years permits rootworm populations to reach injurious levels

The presence of the small, pale green beetles on the silks in August, and later along fence rows and fields where asters, golden rod, and other flowers are present, is usually your first indication of an infestation in the area

The northern corn rootworm damages corn in two ways (1) The small, pale green beetles chew off the silks in late July and August, and if they arrive during the early stages of silking, they can seriously interfere with pollination

(2) The larvae feed on the roots, weakening the root system. Growing plants are often blown down by wind, and a curved stalk or "gooseneck" results when the plant attempts to right itself Mature plants with damaged roots usually lodge or fall to the ground, making harvest difficult and resulting in considerable grain being left in the field

The beetles deposit the majority of their eggs during September and October in the soil around the corn roots The eggs remain dormant during winter and spring

Then during the latter half of June they hatch, and the small, slender, white larvae work their way through the soil until they find corn roots to feed upon Most of the larvae will die if corn is not planted in the field where the eggs are laid.

The larvae mature in July and pupate in the soil The beetles start emerging during the third week of July and reach a peak by mid-August. They usually congregate on corn silks, feeding on the silks and pollen

The beetles are rather active and readily fly or tumble off the plants when disturbed They readily fly out of the fields to other sources of pollen Few beetles are noticed in the fields after September 1.

Rotating corn for one year or more with any other crop provides a very effective method of control

Control on Silks

Chemical control measures against the adult beetles are not suggested unless there is an average of five or more beetles per ear and only if less than 50 per cent of the plants have silked

Fortunately, most of the corn in the Commonwealth is pollinated by the time the beetles reach damaging numbers

Once the ears are pollinated, no damage will result if the silks are cut off

If necessary, beetles can be killed with a spray of one pound actual per acre of either malathion, diazinon, or carbaryl

Control in the Soil

The actual damage to the plant by the larval feeding on the roots will vary considerably with moisture, fertility, variety, etc.

Therefore, the number of rootworm larvae per plant necessary to initiate control measures is uncertain.

Some rootworm loss figures indicate a population of four to five corn rootworm larvae per plant is the minimum number necessary before it pays to initiate control measures.

At the present time, there is no satisfactory way to predict a population for a particular field You will have to rely on the history of the field and your own judgment

Ask these questions of yourself Did you see a great number of beetles in the field last August? Was there root damage as evidenced by gooseknecking and lodging? Will this be the third year or longer for corn in the same field?

If the answer is yes to more than one of these questions, you should consider using control measures for corn rootworms.

If crop rotation is not feasible for your particular program, an insecticide applied to the soil either at planting time or about mid-June should be considered.

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