Should I Be Concerned About Corn Rootworms Now?

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Abstract
It is March already, the tillage equipment is being readied, and we are thinking eagerly about planting the 2008 crop of corn. Yet it seems a long time until we have to worry about corn rootworm larval feeding on the corn roots. However, there is something that you should be thinking about now, before you plant the corn.

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Should I Be Concerned About Corn Rootworms Now?

March 12, 2008

By Jon Tollefson, Department of Entomology

It is March already, the tillage equipment is being readied, and we are thinking eagerly about planting the 2008 crop of corn. Yet it seems a long time until we have to worry about corn rootworm larval feeding on the corn roots. However, there is something that you should be thinking about now, before you plant the corn.

If you have a threat of corn rootworm infestation(s) in one or more of your fields, you may have bought and are intending to plant a genetically-modified, corn rootworm-resistant variety. If you are planting a Bt corn rootworm variety (YieldGard, Herculex, or Agrisure) remember that the contract you probably signed with the purchase of the genetically-engineered variety commits you to planting a 20 percent, non-Bt refuge.

The refuge planting is intended to slow or prevent the development of resistance of the
corn rootworm to the Bt produced by the resistant corn. For the corn rootworm, the refuge is to be planted within the same field or immediately adjacent to the Bt field.

The non-Bt corn planting will produce rootworms that have not been exposed to the Bt. Planting the refuge within, or close to the Bt field, is intended to increase the likelihood that the beetles from the refuge will disperse into the planting of Bt corn, increasing the likelihood that they will mate with those that survived the genetically-engineered rootworm corn. The intermating will result in progeny that are heterozygous for resistance and they will continue to be susceptible to the Bt produced by the resistant corn.

With this understanding, you will agree to plant a 20 percent refuge for every field of Bt corn rootworm corn that you plant. So what are the decisions that must be made now? By now you should have purchased the seed for the refuge planting and you should be making the decision on where the refuge will be planted. The refuge must by grown the same way the Bt rootworm corn is; that is if the rootworm corn is corn on corn, then the refuge must also be continuous corn. If the rootworm corn is rotated corn, the refuge should also be corn grown in rotation.

It is likely that you will want to and it is permissible to protect the refuge corn from rootworm larval attack. If you will use granular or liquid insecticides applied over the seed row, you may choose to plant the refuge as a block and treat the block.

If there are no insecticide applicators, seed may be purchased that has insecticide on it. The seed treated with insecticide may be planted as a block or as rows within the Bt corn, producing a strip refuge throughout the field.

Most importantly, remember that when genetically-engineered, insect resistant corn is planted, you must also plant a refuge to delay the development of resistance!

*Jon Tollefson is a professor of entomology with responsibilities in field crop pest management.*

**Category:** Crop Production  Insects and Mites

**Crop:** Corn

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