YieldGard® Rootworm corn requires a refuge

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Abstract
The EPA is requiring Monsanto to ensure that 20 percent of the planted acreage of YieldGard® Rootworm be set aside where non-Bt corn will be grown to serve as a refuge. These refuge acres will support populations of corn rootworm not exposed to the Bt protein and reduce the possibility of corn rootworm developing resistance to Bt corn.

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The following information on refuge requirements was modified from a Monsanto publication, "YieldGard Rootworm Insect Resistance Management-2003 IRM Guide." Anyone planting YieldGard Rootworm in 2003 must follow these refuge requirements.

Refuge requirements for the Corn Belt

Refuges must be established as follows:

- On each farm, up to 80 percent of corn acres may be planted with YieldGard Rootworm corn. Plant at least 20 percent of the corn acres to a corn refuge that does not contain a Bt technology for control of western or northern corn rootworm. The corn refuge can be treated for corn rootworm larvae and other soil pests with soil-applied, seed-applied, or foliar-applied insecticides. The corn refuge can be treated with a non-Bt insecticide to control late-season pests such as European corn borer; however, the YieldGard Rootworm corn also must be treated. Corn refuge options include YieldGard Corn Borer, RoundupReady corn, and conventional corn, but no other Bt product for corn rootworm management.
- Plant the refuge within or adjacent to YieldGard Rootworm cornfields. The corn refuge can be separated by a ditch or a road but not by another field. Adjacent refuge fields must be owned by or managed by the grower.

Refuge planting requirements

Any corn hybrid that does not contain a Bt technology for control of western or northern corn rootworm and is planted within or adjacent to the YieldGard Rootworm field corn can serve as a refuge.

- Plant a refuge on every farm where YieldGard Rootworm corn hybrids are planted.
- Plant the refuge at the same time as YieldGard Rootworm corn.
• Effectiveness of the refuge can be reduced because plant stands and plant vigor may be decreased. With fewer plants and decreased health, you would get fewer susceptible insects in the refuge.
• Mixing non-Bt seed with YieldGard Rootworm seed for use in the refuge is not permitted.
• Plant the refuge and the YieldGard Rootworm corn to fields with similar crop history. For example, if the field planted to YieldGard Rootworm was corn the previous year, then the refuge also must be planted in a field that was planted to corn the previous year.

Refuge configuration options.

The refuge on each farm may be arranged in a number of configurations. These options offer the flexibility to easily incorporate an effective corn refuge into farm operations. Options include the following:

• Plant a corn refuge adjacent to each YieldGard® Rootworm cornfield.
• Plant a corn refuge as large strips or blocks within a YieldGard Rootworm field.
• Split the planter to alternate at least six and preferably 12 consecutive rows of corn refuge with YieldGard Rootworm corn.
• Plant field perimeters or end rows to a corn refuge.

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