

FORAGER



Agronomics with livestock in mind!



Abundant Yields Create Options for Next Year

This year's abundant moisture created high yields of hay and corn silage. Extra forage is creating opportunities for next year's forage season. Excess feed enables farmers to adjust their management plan for an upcoming year without taking as much risk. Options include using brown-midrib corn, switching field rotations, growing more grain on farm, and adding cows. Consider current inventories and future feeding needs when making plans for the upcoming season, to determine if a desired change is feasible in an operation. Avoid being fearful of trying new things. Adequate inventories increase an operations ability to handle risk.

Rootworm Corn Offers Benefits to Producers

Corn growers have another option for controlling rootworm damage. The YieldGard[®] Rootworm trait is currently available in many corn hybrids for the 2004 planting season in most areas of the United States, except New York, Maine, Oregon, and Alaska which have not approved it yet. Corn hybrids with this trait express an insecticidal protein from the bacterium *Bacillus thuringiensis* (Bt). Different sub-species of Bt produce different proteins that bind to specific receptors in the gut of insects. All Bt proteins kill insects as a stomach poison after the insect feeds on the plant. The Bt proteins are very specific to particular insects. Thus hybrids, containing the Bt trait for rootworm control, will not control other insects, or harm beneficial insects.

YieldGard[®] Rootworm will control northern, western, southern, and Mexican corn rootworm. Northern and western corn rootworm are the most common, costing growers an estimated one billion dollars annually in increased insecticide costs and yield loss. Corn rootworm larvae feed roots destroying the growing points and stopping root elongation (picture shown from Iowa State University, 1998). Corn rootworm beetles (adult stage) feed on silks, resulting in poor pollination and barren ears.



Currently, the most common controls are crop rotation and using insecticides. Crop rotation has been an effective management tool for many years; however, in some areas corn rootworms have adapted to this strategy. In Iowa, Minnesota, South Dakota, and northeast Nebraska northern corn rootworm have started producing eggs that survive two or more winters before hatching. In Illinois and Indiana western corn rootworm females lay their eggs in soybean fields to overcome crop rotations. Using a banded or in-furrow insecticide at planting is also a control practice for rootworms and other soil insects, when planting in previous corn stands.

YieldGard[®] Rootworm provides some advantages over using an insecticide. YieldGard[®] Rootworm will provide better root protection and be less dependent on moisture needed to activate insecticides. YieldGard[®] Rootworm will also provide longer season control of root feeding, but will not provide control of adult silk feeding. Reduce root damage will improve a plants ability to absorb water improving drought tolerance. Monsanto's Yield Trials 2001-2002 have shown a yield advantage of 12.2 bushels over the leading insecticide.

Management is the key to taking advantage of the benefits of YieldGard[®] Rootworm hybrids. Controlling weeds is very important, as some grasses and volunteer corn are a suitable alternate host for corn rootworms. Rootworm larvae can develop to the 2nd or 3rd larval stage on these alternate hosts. Then the large larvae can attack the YieldGard[®] Rootworm corn. These large larvae are more difficult to control. YieldGard[®] Rootworm corn seed does use a seed treatment to help protect against secondary pests like wireworm, early flea beetle, seedcorn maggot, and white grub, but will not control many of the other insects that insecticides control.

When using YieldGard[®] Rootworm corn hybrids it is important to follow the resistance management guidelines and plant a minimum of 20% of corn acres in non-YieldGard[®] Rootworm corn refuge. This refuge must be in the same field or in an adjacent field to the YieldGard[®] Rootworm field. The refuge can be treated with insecticide for rootworm larvae or other soil pests. Although YieldGard[®] Rootworm is approved in the United States and other markets, approval is pending in the European Union. Therefore, local grain elevators must be informed of the corn before delivery.