



# MANAGING CORN ROOTWORMS STARTS TODAY.



Dow AgroSciences

Solutions for the Growing World

# ASSESS THE PEST RISK.

In-plant insect protection traits are the most convenient, effective way to manage corn rootworms (CRWs) and other yield-robbing insects in cornfields today. If insects develop resistance to *Bacillus thuringiensis* (*Bt*) traits, insect control will become more difficult and yields will suffer. With good stewardship and Insect Resistance Management (IRM) — including the right refuge — you protect the future profitability of your farm.

## SCOUT TO ESTABLISH CRW LARVAE PRESSURE NEXT YEAR.

### WHAT TO DO

- Scout for adult beetles in fields with continuous corn. Count the number of beetles on each plant. In areas where the variant of western corn rootworm (WCRW) occurs, scout for adult beetles in soybeans by using yellow sticky traps if corn will be planted the following year.

### BENEFITS

- The number of adult beetles this year will help determine the potential CRW larval pressure in cornfields next year. Comparing CRW counts with local university thresholds helps determine the risk of larval damage.

## SCOUT ADULT POPULATION TO PREVENT EGG LAYING.

### WHAT TO DO

- Scout weekly to understand population trends. Compare with local threshold levels to determine if foliar sprays should be applied to control adult beetles.

### BENEFITS

- Understanding fluctuations in populations helps in making decisions about insecticide applications. Foliar sprays should be applied to reduce adult beetle populations to prevent egg laying. Timing is critical with these applications.

## SCOUT TO PROTECT PLANTS AT POLLINATION.

### WHAT TO DO

- If adult beetles have reached the local threshold and are clipping silks during pollination, apply foliar spray.

### BENEFITS

- Adult beetles are attracted to pollen and fresh silk. They interfere with corn pollination by clipping silks during pollination, resulting in poorly filled ears. Foliar spray protects pollination.

## DIG ROOTS TO LOOK FOR LARVAL DAMAGE.

### WHAT TO DO

- Examining roots helps determine the extent of larval damage. Dig roots after pollination. Refer to the node-injury scale to understand the level of pressure.

### BENEFITS

- Root digs show whether the management tactics implemented in the past year were successful. Based on level of larval damage, a change in management practices may be needed to further control CRWs.

## BE AWARE OF *Bt* TRAIT PERFORMANCE.

### WHAT TO DO

- Watch for documented cases of WCRW resistance to *Bt* proteins in the area. In your fields, monitor for unexpected WCRW damage.

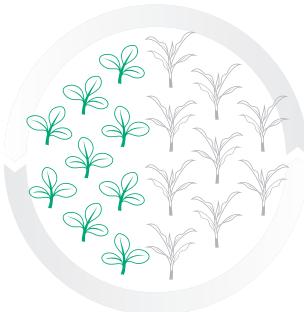
### BENEFITS

- When WCRW becomes resistant to *Bt* proteins, a change of management practices is required. Look to the next page on how to manage rootworm populations.

# MANAGE PEST POPULATIONS.

CRWs are the most destructive and costly insect pests in corn — responsible for up to \$2 billion in lost revenues each year.\* Dow AgroSciences understands the issues growers like you are facing to manage CRWs and has traits and technologies to address the immediate and long-term challenges. Using traits with multiple modes of action, such as SmartStax®, is the most effective way to control insects. Work with your Dow AgroSciences representative to determine if additional management practices are needed, such as seed treatments, chemigation and soil-applied insecticides.

## ROTATE CROPS.



- Rotating to another crop can reduce CRW populations by breaking the pest cycle.
- Continuous corn increases CRW populations and pressure.
- Don't use *Bt*-traited corn with the same single mode of action for more than two years in a row.

## CONTROL HOST PLANTS.



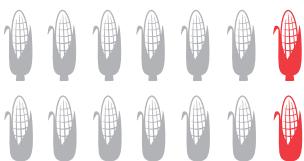
Use SureStart® herbicide, Durango® DMA® herbicide or Keystone® NXT herbicide to control a wide spectrum of grass and broadleaf weeds in corn. For more information, visit [SureStart.com](http://SureStart.com), [DurangoDMA.com](http://DurangoDMA.com) and [KeystoneNXT.com](http://KeystoneNXT.com) or ask your Dow AgroSciences representative about other weed control solutions.

## CONTROL PESTS.



Use Cobalt® Advanced insecticide or Lorsban® Advanced insecticide to control adult corn rootworm beetles. For more information, visit [CobaltAdvanced.com](http://CobaltAdvanced.com), [LorsbanAdvancedInsecticide.com](http://LorsbanAdvancedInsecticide.com) or ask your Dow AgroSciences representative about other insect control solutions.

## COMPLY WITH REFUGE REQUIREMENTS.



Refuge requirements can be met in a variety of ways — **some are more convenient than others**. The simplest of all is Refuge Advanced® where refuge seed is evenly distributed throughout the field during planting.”

\*USDA estimate.

# PROTECT THE YIELD.

Dow AgroSciences offers broad-spectrum insect control to protect your investments and yield potential. These traits and technologies are available in our latest genetics.



## SELECT THE RIGHT TRAITS AND TECHNOLOGIES.

This trait technology provides protection against a broad range of yield-robbing insects, including CRWs, through *multiple modes of action*. SmartStax offers higher yield potential and allows growers to protect more acres from damage caused by corn insects by enabling a 5 percent refuge in the Corn Belt and a 20 percent refuge in the Cotton Belt.

POWERCORE combines *three modes of action* for protection against above-ground pests (not CRWs). If planted in an area with CRWs, other CRW protection will be required. This new trait technology is scheduled for introduction in 2015.

This trait technology provides protection against above- and below-ground insects through a *single mode of action* for each.

## ENSURE REFUGE COMPLIANCE.

This convenient, single-bag solution for refuge compliance requires no separate refuge in the Corn Belt\*\* — because the refuge is in the bag. Just pour it into the planter, and Refuge Advanced meets the IRM corn refuge requirements on the acres where it is planted in the Corn Belt.

To help protect the durability of today's advanced traits and preserve the technology for future generations, it's critical that growers practice good trait stewardship and comply with IRM requirements outlined by the U.S. Environmental Protection Agency (EPA).

Planting a refuge is a basic practice of IRM and is required with all *Bt*-traited products. Hybrids in a refuge may be herbicide-tolerant but should not have *Bt* traits. Refuge requirements can vary by technology — the *Product Use Guide* for each technology shows acreage needed and configuration examples.

\*\*In cotton-growing regions, a separate 20 percent structured refuge is still required for Refuge Advanced.

Contact your Dow AgroSciences representative or seed dealer to determine the best combination of traits, technologies and management practices for your fields.



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