

## Corn Integrated Pest Management

- Integrated Pest Management (IPM) assesses the pest situation, evaluates management options, and implements a system of complementary actions to minimize crop losses.
- Above- and below-ground corn insects require IPM in each field every year.
- Best Management Practices (BMP) for corn insects include crop rotation, dual mode of action Genuity® SmartStax® RIB Complete® corn blend, regular scouting, and diverse agronomic practices.

### What is IPM?

Integrated Pest Management is a holistic approach to monitoring pest lifecycles and prevalence in farmer's fields to determine the best pest control methods to protect crop yield potential in the current and following growing seasons. IPM is a continuum of pest management evaluations, decisions, and controls that encompass pest lifecycles and prevalence, agronomic practices such as crop rotation, seed selection, soil management, and timely use of pesticides to minimize pest damage and protect environmental resources.

### IPM is Essential for Corn Productivity

Above- and below-ground insects require management every year across the Corn Belt. A comprehensive IPM plan is a key factor for sustaining maximum corn yield potential, particularly in continuous corn rotations. Gathering information on insect infestations helps growers develop integrated plans to make informed seed choices and decisions to use appropriate agronomic practices to minimize the risk of lost yield potential throughout a crop rotation.

### Implementing IPM Practices

Corn insect pests vary in each field based on cropping history and management practices. Intensive corn rotations provide a favorable environment for corn insects to develop significantly higher pest pressure than in fields consistently rotated to different crops. A comprehensive understanding of the potential for various corn insects to develop high levels of infestation is necessary to make informed seed and trait protection choices and agronomic management practices to address corn insect pests.

#### *An effective IPM plan should include:*

- Develop a monitoring plan that considers the rotation system and management practices that affect insect behavior in each field.
- Assess the insect infestation levels during the crop season using the appropriate scouting techniques for specific insects. Early detection and accurate assessment of insect numbers and distribution in a field help to formulate effective tactics.
- Once action thresholds are reached, pest control options can be implemented.

### Scouting for Corn Rootworm

Monitoring adult corn rootworm (CRW) infestation levels in corn is the cornerstone of any CRW management plan. If a high population of CRW was not present in a field that was planted to a single trait corn product, regular scouting should still be conducted throughout the growing

season. Remember that environmental conditions can affect the length of time the insects are present and adjust the scouting regimen accordingly. If high numbers of CRW beetles are found, a foliar-applied insecticide can be used to reduce egg deposition, thus reducing CRW pressure the following season. An excellent tool to help determine when damaging insects may be affecting corn fields is the online resource [www.insectforecast.com](http://www.insectforecast.com). Farmers can log onto the site to learn about when and where CRW larvae are hatching and track the migration of WBC or CEW throughout the growing season.

### CRW Best Management Practices

- Rotate to Genuity® Roundup Ready 2 Yield® soybean or another suitable crop.
- Switch to a dual mode of action (MOA) Genuity® SmartStax® RIB Complete® corn blend to help manage above- and below-ground insects in each field.
- If rotation or a dual MOA product is not an option, utilize a SAI on fields planted to a single MOA technology such as Genuity® VT Triple PRO® RIB Complete® corn blend.
- Scout and stay ahead. Implement appropriate strategies to minimize CRW risk such as rotating traits and chemistry.

**Monsanto Company is a member of Excellence Through Stewardship® (ETS).** Monsanto products are commercialized in accordance with ETS Product Launch Stewardship Guidance, and in compliance with Monsanto's Policy for Commercialization of Biotechnology-Derived Plant Products in Commodity Crops. This product has been approved for import into key export markets with functioning regulatory systems. Any crop or material produced from this product can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. Growers should talk to their grain handler or product purchaser to confirm their buying position for this product. Excellence Through Stewardship® is a registered trademark of Biotechnology Industry Organization. **B.t. products** may not yet be registered in all states. Check with your Monsanto representative for the registration status in your state. **IMPORTANT IRM INFORMATION:** Genuity® RIB Complete® corn blend products do not require the planting of a structured refuge except in the Cotton-Growing Area where corn earworm is a significant pest. Genuity® VT Triple PRO® RIB Complete® corn is a blended seed corn product. See the IRM/Grower Guide for additional information. Always read and follow IRM requirements. Individual results may vary, and performance may vary from location to location and from year to year. This result may not be an indicator of results you may obtain as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible. **ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.** Roundup Ready® crops contain genes that confer tolerance to glyphosate, the active ingredient in Roundup® brand agricultural herbicides. Roundup® brand agricultural herbicides will kill crops that are not tolerant to glyphosate. Genuity Design®, Genuity®, RIB Complete®, Roundup Ready 2 Technology and Design®, Roundup Ready 2 Yield®, Roundup Ready®, Roundup®, SmartStax®, VT Triple PRO® are registered trademarks of Monsanto Technology LLC. LibertyLink and the Water Droplet Design® is a registered trademark of Bayer. Herculex® is a registered trademark of Dow AgroSciences LLC. Respect the Refuge and Corn Design® and Respect the Refuge® are registered trademarks of National Corn Growers Association. All other trademarks are the property of their respective owners. ©2013 Monsanto Company. 11132013JSC.



Before opening a bag of seed, be sure to read, understand and accept the stewardship requirements, including applicable refuge requirements for insect resistance management, for the biotechnology traits expressed in the seed as set forth in the Monsanto Technology/Stewardship Agreement that you sign. By opening and using a bag of seed, you are reaffirming your obligation to comply with the most recent stewardship requirements.

