



TAKE THESE SIMPLE STEPS TO PREVENT INSECT RESISTANCE:

SCOUT FIELDS to determine levels of infestation and damage.

- **2** CHOOSE PRODUCTS WITH HIGH EFFICACY RATINGS to properly target insect pests.
- **3 READ THE PRODUCT LABEL** to fully understand application requirements.
 - **APPLY** only after economic thresholds have been met.



5 ROTATE MODES OF ACTION to avoid repeated exposure of one generation to an insecticide.





PRINCIPLES OF RESISTANCE

Insecticide resistance, while not currently as prevalent in the United States as herbicide resistance, should concern soybean farmers. As new insecticide technology development slows, it is important to prevent the development of resistance to preserve the current tools and technologies for farmers in the future.

 Integrated pest management (IPM) strategies play an important role in insect resistance management. These management practices combine cultural and chemical approaches with the intention of diversifying the practices used to control insect pests and reduce insect pest exposure to chemical control. Although chemical control is a valuable strategy for managing insects, farmers should implement cultural and other nonchemical control methods to avoid the risk of developing insect resistance.

Here are some common strategies for managing pests to prevent insecticide resistance:

Cultural Practices

Implement cultural practices before relying on chemical control. Crop rotation, scouting and identifying insects and following economic thresholds for present insects are all examples of cultural practices. Cultural practices diversify insect

management practices, and often can eliminate pests without the use of insecticides.

Scouting and Identification

Scouting for infestation and damage levels from insects help farmers properly identify insects and determine the appropriate insecticide and timing for application. Proper identification allows farmers to choose the most effective insecticides and management strategies to target the pest. Farmers should scout throughout the season to follow the development of insect populations and continue to monitor the crop after application to assess the effectiveness of control.

Economic Thresholds

Economic thresholds indicate when the yield saved by making an application outweighs the cost of the application. Follow the established thresholds for common insect pests to determine when to apply insecticides. Scout for levels of infestation and damage to determine when the threshold has been met and choose the most effective insecticide.

Product Efficacy

Certain classes of insecticides are better are targeting certain insect pests. This is referred to as product efficacy. To maximize product efficacy, the proper formulations and methods must be used. Before application, consult recommendations for your area and read the product label to be certain of application parameters.

To preserve product efficacy, rotate multiple insecticide modes of action throughout each growing season to reduce the opportunity for resistance development. This preserves these modes of action by ensuring that the same generation of insect is not exposed to the same insecticide(s). Insects that survived the initial application can be removed with a follow-up application using a different mode of action.

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