

Feature Story



Herbicide-resistant weeds have a tougher opponent this growing season

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Over the past several years, the task of managing herbicide-resistant weeds has intensified as weeds have grown bigger, faster and stronger, with glyphosate-resistant weeds identified on more than two-thirds of U.S. crop fields. If not controlled, these weeds can result in total crop loss in severe cases.

According to the International Survey of Herbicide Resistant Weeds, there are currently 16 species of glyphosate-resistant weeds spread across 38 states. In order to address the weed resistance issue, farmers need to have a variety of herbicide options to build effective weed control programs.

Following application best practices makes perfect

This year marks a new age in managing weed resistance, as cotton and soybean growers in the United States have been able to apply a new generation of low volatility dicamba products over-the-top of dicamba-tolerant seed. This provides farmers with an additional site of action, which is part of a sound strategy to prevent weed resistance and is a foundational element of application stewardship.

One of the new dicamba products is Engenia® herbicide, which features a completely new molecule designed specifically for dicamba-tolerant crops. The formulation utilizes a BAPMA salt, which produces a heavier molecular weight and stronger bond to help reduce volatility.

In addition to taking advantage of new approved dicamba herbicide technology, it is important for farmers to embrace proper stewardship practices such as scouting early and often to target weeds before they produce seed and rotating multiple effective sites of action. Using a comprehensive weed management program that includes residual herbicides and rotating crops will allow the use of different modes of action and help to maximize the herbicide technology that is crucial to keeping resistant weeds at bay.

Additionally, following application best practices and label directions — including proper nozzle selection, boom height settings, wind speeds and direction, buffer zone management and sprayer calibrations — will help promote on-target success in herbicide applications. The label and its online extensions explain the application requirements, including key information about sensitive areas, buffer zones and tank-mixes. Proper and effective applications are contingent on following these details — each and every one of them.

Keep a close watch on temperature inversion

Recognizing when a temperature inversion exists is critical to understanding when NOT to apply pesticides. Temperature inversions can negatively impact applications by trapping small droplets in the cool air of the inversion layer. These small droplets can then travel long distances, either downslope to low-lying areas or in an unpredictable manner with the light and variable winds.

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Temperature inversions usually occur in the early morning or evening. Conditions most likely to favor an inversion include:

- >> Clear skies during late afternoon and during the night
- >> Dry soil surface
- >> Wind speeds less than 3 miles per hour that result in no air mixing
- >> Low areas, valleys or basins where cool air will sink and collect

Doing things right means an on-target application

With new technology comes new responsibility, and in the case of the new generation of registered dicambas for dicamba-tolerant crops, that means strictly following the labels and supplemental information to keep applications on target. It is important to know that one misstep in the process can erase the positive impacts of otherwise fine attention to detail.

If you have any questions about using the new dicamba formulation, make sure you ask questions of the local reps in your area who can help you ensure you are successfully managing weed resistance issues.

There are several classroom and online training opportunities available as well. For example, BASF offers On Target Application Academy, an online training module that shares best practices for herbicide applications. I would encourage you to participate in one of these trainings to assist you in your quest to keep your fields clean.

Always read and follow label directions.

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