

THE FORAGER

Agronomics with livestock in mind!

PROBLEM WEEDS ~ busted!

Glyphosate, once considered weed control's "silver bullet", is now under attack by glyphosate-resistant weeds that are spreading rapidly – likely to a field near you. In the USA, nine glyphosate-resistant weeds have been confirmed in more than 20 states. An estimated 8.8 million US acres were infested with these resistant weeds in 2009, and by 2013, as many as one-in-four row crop acres planted to glyphosate-tolerant (GT) crops could be infested.

Researcher Dr. Ken Smith (U of AR Extension Specialist) indicates that the 2009 crop year showed a greater problem with glyphosate-resistant weeds than previously expected. Among the weeds [he] noted that "appear to be highly resistant was Palmer pigweed, which seemed to "explode" its growth and expansion." Additionally, in Iowa, Iowa State University professor Mike Owen confirmed glyphosate-resistant common waterhemp and giant ragweed. Anecdotal evidence in that area further suggests that the occurrence of resistance in these weeds is increasing rapidly, and additional research is needed to validate these findings. This scenario has been noted in other states as well, such as Florida and California, with glyphosate-resistant weeds first noted in California almost 12 years ago.

Whether or not glyphosate resistance is scientifically confirmed for a specific weed or region, evidence does show that glyphosate is not controlling weeds as effectively as it once did. With the advent of GT crops, selection pressure for weeds that could survive glyphosate applications increased dramatically. Repeated applications of glyphosate allowed the few weeds that naturally survived these applications to produce seed and pass genes on to the next generation that were able to survive even higher rates of glyphosate.

In 2009, horseweed/marestail was noted as the biggest problem weed in 2009 (in certain geographic areas) due to glyphosate resistance. However, researchers studying the impact of this particular agronomic concern are forecasting that Palmer pigweed will be a primary glyphosate-resistant problem by 2011. The impact these weeds have on productive acres can have both agronomic and financial implications on today's farms.

Regardless of crop systems, herbicide resistance costs producers in both time and money. And with the onslaught of more and more resistant weed species, the gains made in conservation tillage and weed control may [now] be in danger, with some producers having to consider a return to more traditional tillage methods in an attempt to deal with herbicide-resistant weeds. The costs come in both herbicide applications and yield losses.

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Although it might not be possible to restore the effectiveness of glyphosate on acres infested with glyphosate-resistant weeds, there are ways to minimize the impact. Producers need to implement proactive resistance management practices to help combat this problem. Good management choices now can have a positive impact for the future. Suggested management practices include the following:

1. Never plant anything without a residual herbicide application... then scout to stay ahead of weeds such as Palmer pigweed and others.
2. Time herbicide applications to control weeds before they germinate (pre-emergent). If they should happen to break through, spray when they are very small.
3. Spray early and often. Any weed over four inches is too big to control.
4. Field perimeter management is very important, such as weedy ditches and fencerows, since these areas can be the cause of many problems within the field itself.
5. Consider a field-by-field treatment program, depending on what crops are being raised and the specific weed problems within any given field.
6. Seed traits can also be a part of the solution, planting stacks (multiple traits) that offer the option of using either glyphosate or glufosinate herbicides that provide producers with an opportunity to rotate herbicides with varying modes of action.
7. Application timing is critical! (As indicated above, smaller weeds are easier to control!)

Agronomists across the country agree that the threat of spreading glyphosate resistance is real and that acting now can make a difference. Proactive strategies today can help with weed control tomorrow!

(Edited from an article by L. Temple, in a recent edition of "thrive" – a Syngenta publication)

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