

# Proactive Weed Management Approach Important For Soybean Producers

## BLUE SPRINGS, MO.

For adequate weed control in soybean, growers need to take a proactive approach using an appropriate pre-emergence herbicide program, said a University of Missouri Extension agronomist.

"Pre-emergence programs have increased in importance within the past several years as the number of glyphosate-resistant weed species has increased," said Julie Abendroth.

Currently, there are five species confirmed to be glyphosate-resistant in Missouri: common ragweed, giant ragweed, horseweed (marestalk), waterhemp and Palmer amaranth.

Glyphosate-resistant waterhemp populations are becoming more common in Missouri, Abendroth said. An MU weed science team conducted a survey in 2008 and 2009 inviting people to submit waterhemp samples suspected to be glyphosate-resistant. Of the 144 waterhemp samples submitted, 58 percent were confirmed glyphosate-resistant. Thirty-nine counties in Missouri are now known to have glyphosate-resistant waterhemp, although the actual number of counties is likely higher.

From 2007 through 2010, MU has investigated the influence of pre-emergence herbicide treatments on waterhemp control. MU plant pathologist Kevin Bradley's research has shown that there are numerous pre-emerge herbicide options that will provide excellent waterhemp control.

These herbicides all provided excellent control in the three-year study: Valor (2 ozs./acre), Valor XLT (3 ozs./acre), Prefix (2 pints/acre), Boundary (1.5 pints/acre), Gangster (1.8

ozs./acre), Fierce (3 ozs./acre), Enlite (2.8 ozs./acre), Envive (3.5 ozs./acre), and the Authority line of products, which includes Authority First (3.2 ozs./acre), Authority MTZ (10 ozs./acre) and Authority Assist (5 ozs./acre). Other pre-emerge options, including INTRRO, Dual, Outlook and Prowl, were not as effective but did provide some early season waterhemp control. (Mention of trade names within this article does not imply endorsement by the University of Missouri.)

For those growers struggling with giant ragweed control, a proactive approach is very important, Abendroth said.

"It is difficult to achieve adequate control of giant ragweed once plants have emerged, and research data indicates that if ragweed is allowed to compete with the soybean crop for at least four weeks, a 25 percent yield loss can occur," she said.

From the two-year weed survey, 44 percent of the 27 giant ragweed samples submitted to MU were confirmed glyphosate-resistant.

"In addition to controlling glyphosate-resistant weed populations, the residual control offered from a pre-emerge herbicide will also provide growers with greater flexibility with their post-emergence applications," Abendroth said.

MU Extension's 2011 Missouri Pest Management Guide (M171) is available for purchase or free download at <http://extension.missouri.edu/publications/DisplayPub.aspx?P=M171>. The guide provides weed, insect and disease control recommendations for corn, cotton, soybean, grain sorghum, rice and winter wheat. Δ



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