

Proactive Weed Management Approach Recommended for Soybean Producers

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For adequate weed control in soybean, a proactive approach is needed in which growers utilize an appropriate pre-emerge herbicide program. Preemergence programs have increased in importance within the past several years as the number of glyphosate-resistant weed species has increased. Currently, there are five species that have been confirmed to be glyphosate-resistant in Missouri; these include common ragweed, giant ragweed, horseweed (marestail), waterhemp and Palmer amaranth.

Glyphosate-resistant waterhemp populations are becoming more of a common occurrence in Missouri. For example, the University of Missouri weed science team conducted a survey in 2008 and 2009, in which they invited individuals to submit waterhemp samples suspected to be glyphosate-resistant. Of the 144 waterhemp samples submitted, 58% were confirmed glyphosate-resistant. 39 counties in Missouri are now known to have glyphosate-resistant waterhemp present, although the actual number of counties is likely higher than 39.

From 2007 through 2010, University of Missouri research has investigated the influence of preemergence herbicide treatments on waterhemp control. Dr. Kevin Bradley's research has shown that there are numerous preemerge herbicide options available that will provide excellent waterhemp control. For example, *Valor* (2 oz/ac), *Valor XLT* (3 oz/ac), *Prefix* (2 pts/ac), *Boundary* (1.5 pts/ac), *Gangster* (1.8 oz/ac), *Fierce* (3 oz/ac), *Enlite* (2.8 oz/ac), *Envive* (3.5 oz/ac), and the *Authority* line of products which include *Authority First* (3.2 oz/ac), *Authority MTZ* (10 oz/ac), and *Authority Assist* (5 oz/ac) all provided excellent control in the three-year study. Other preemerge options such as *Intrro*, *Dual*, *Outlook*, and *Prowl* provide some early season waterhemp control but are not as effective as those mentioned.

For those growers struggling with giant ragweed control, a proactive approach is very important. 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 4 weeks, a 25% yield loss can occur. From the two-year weed survey, 44% of the 27 giant ragweed samples submitted to the University of Missouri were confirmed glyphosate-resistant.

Proactive weed management strategies are important in achieving the soybean crop's yield potential. In addition to controlling glyphosate-resistant weed populations, the residual control offered from a preemerge herbicide will also provide growers with greater flexibility with their postemergence applications.

Lastly, the University of Missouri has recently made the 2011 Pest Management Guide (M171) available for sale (\$20) and download. The guide provides weed, insect, and disease control recommendations for corn, cotton, soybean, grain sorghum, rice, and winter wheat. Contact your local county extension office to order your copy! Download the guide at:
<http://extension.missouri.edu/publications/DisplayPub.aspx?P=M171>

*The trade names within this article are given with the understanding that no discrimination is intended and no endorsement by the University of Missouri is implied.

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