

Management Of Glyphosate-Resistant Weeds In A Corn Rotation

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There are no less than 8 glyphosate-resistant (GR) weeds in the Mid-South. They include horseweed, Italian ryegrass, goosegrass, Johnsongrass, giant ragweed, common ragweed, common waterhemp and Palmer amaranth. One way some growers choose to manage fields infested with GR weeds is to rotate the field from cotton and soybean to corn. This can be a very effective way to reduce the population of GR weeds. Unfortunately, this rotation often does not work to reduce the overall GR weed population. There are a number of reasons for this which includes enhanced atrazine soil degradation, poor corn stands that do not shade the ground effectively and a long growing season in the Mid-South that allows weed seed production after corn harvest.

Recent research in Mississippi and Tennessee has shown that atrazine no longer provides reliable residual weed control due to enhanced soil degradation. In part due to this development, effective corn weed control is best obtained in a planned sequential program. In our research a

Pre followed by an early Post application has provided more consistent weed control than relying on a single application.

There are many herbicides that can be used in corn that are quite effective on GR weeds, particularly Palmer amaranth. However, none of them can provide good residual control in thin corn stands. Light able to reach the soil after herbicide residual has played out will promote germination of many GR weeds, especially Palmer amaranth. These late emerging weeds will often begin to grow as the corn begins to dry down in late July and early August. As a result, weeds can mature and produce a large weed seed load that will have to be managed in the following year's soybean and cotton crop. Growers must consider initiating weed control after harvest to help reduce seed production of late emerging weeds. In the era of GR weeds, just rotating to corn is not enough without considering the total weed management in the corn crop and continuing after harvest. Δ

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