

# Plan Ahead To Combat Weed Resistance



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**T**he best time to start combating herbicide resistant weeds is before the crop seed ever goes into the ground. This is especially true for soybeans, where the number of effective alternative herbicides is more limited than what is available for use in

corn.

The introduction of glyphosate resistant soybeans 15 years ago led to revolutionary changes in the ways weeds are controlled in that crop. Prior to that introduction, multiple herbicide chemistries and sites of action were applied to soybean, using both pre-emergence and post-emergence application timings. Today, however, more than 80 percent of the total soybean acres are planted to glyphosate resistant varieties, with growers often relying on only that single post-emergence herbicide to control both broadleaf and grass weed species.

Illinois currently has two broadleaf weeds species with documented resistance to glyphosate: horseweed (often called marestail) and waterhemp. Waterhemp is likely to become the more serious issue, since it germinates later in the growing season and is less apt to be controlled by tillage before planting. If waterhemp has developed a glyphosate resistant biotype in

your field, and you rely solely on a glyphosate herbicide program, by the time you discover it your rescue alternatives are extremely limited. Even worse, you may find out that the weed has developed resistance to your rescue herbicide as well, leaving you with no control options at that point.

Advance planning, the use of certain soil applied herbicides in addition to glyphosate, and proper post-emergence application timing can greatly reduce your risk of suffering major yield losses caused by lack of weed control due to herbicide resistance. Soil applied herbicides won't give season-long weed control, but they do allow the crop to become established without early weed competition. Application of glyphosate before waterhemp reaches 6 inches in height should effectively control susceptible biotypes. Careful field scouting after the glyphosate application will tell you if resistant biotypes may be present, allowing time to apply a rescue application of a different herbicide site of action if needed.

A detailed fact sheet, *Management of Glyphosate-Resistant Waterhemp in Soybean*, can be downloaded from the U of I Weed Science website at <http://weeds.cropsci.illinois.edu/>.

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