



Resistance to Multiple Herbicides a Growing Challenge

Remember when weed control required a cocktail of chemistries?
Remember when new products instantly solved tough problems?
Remember when those new products stopped working?

Weeds do.

As Paul Barchenger, Agronomy Division Manager at Hutchinson Coop, Hutchinson, Minn., explains, “We are dealing with glyphosate-resistant giant ragweed more and more every year.”



Glyphosate resistance first showed up in Barchenger’s area in 2004, but this isn’t the first time controlling giant ragweed has been an issue. More than 10 years ago, ALS-inhibiting herbicides lost their effectiveness as giant ragweed developed resistance to the much-used mode of action.

“We learned last season that our giant ragweed still has ALS resistance,” Barchenger says. “That technology hasn’t been used for years, but resistance doesn’t go away. Old products aren’t going to help us with the new problem of glyphosate resistance today.”

Dr. Ken Smith of the University of Arkansas explains that within a weed population, a few plants naturally have resistance to any herbicide. However, as a herbicide is used over and over, growers select for weeds that carry that resistance gene. “If the genes are there, Mother Nature will put them in the right place,” he says.

And once a large portion of a population carries that gene, it is passed down through generations, allowing weeds to “remember” that they are resistant to certain chemistries.

To manage this challenge, weed scientists recommend using multiple herbicide modes of action to avoid selecting for resistance to one commonly-used product. As part of the fight against resistance, Syngenta offers several products with multiple modes of action, including Halex[®] GT, Lexar[®], Lumax[®], Prefix[®] and Boundary[®] herbicides. Residual herbicides, both pre-emergence and post-emergence, can also improve weed control, protect yield and fight weed resistance.

Since 2001, Syngenta has fought on the front lines in the battle against glyphosate resistance, advising that over reliance on glyphosate herbicides would lead to resistance – and it clearly has. For a personalized management plan, visit the Resistance Fighter[™] Solutions Builder at www.resistancefighter.com.

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Weed	# of MOA Labeled	# of MOA Resistant
Ryegrass	9	9
Barnyardgrass	11	9
Horseweed (marestail)	7	6
Johnsongrass	6	4
Common ragweed	8	5
Palmer pigweed	9	4
Giant foxtail	9	3
Waterhemp	9	3
Common lambsquarters	10	3
Giant ragweed	7	2
Cocklebur	7	2
Morningglory	7	0

This chart shows how many modes of action (MOA) control some key problem weeds in corn and soybeans, and that weeds like barnyardgrass, horseweed, common ragweed and ryegrass, effectively develop resistance to multiple modes of action.

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