Pre-Emergence Herbicides Compete In Price With Glyphosate

COLUMBIA, MO.

Rising input costs have crop farmers looking for price-competitive alternatives, said a University of Missouri weed scientist.

With a doubling in price for glyphosate, a post-emergence herbicide that is most popular with soybean producers, pre-emergence herbicides became price competitive, said Kevin Bradley, MU Extension specialist.

"In the past, the cost of two applications of glyphosate on a Roundup Ready soybean field has been unbeatable from an economic standpoint," Bradley said. "Now at chemical cost of $11 to $12 per acre for brand-name glyphosate treatment, many pre-emergence soybean herbicides will cost about the same or less than glyphosate.

"Although generic glyphosate products will likely remain slightly lower in cost than many pre-emergence treatments, I still think there is a strong case to be made for the use of pre-emergence soybean herbicides."

Pre-emergence herbicides control weeds before the seedlings come up, preventing yield loss from early weed competition.

"Our survey of Missouri producers last year revealed that a majority of first-pass glyphosate applications in soybeans were made when weeds are 7 to 10 inches tall," Bradley said. "At that point, yield loss will probably have already occurred."

"A pre-emergence herbicide will eliminate that early weed competition and yield loss." Although each weed species differs in its competitive ability, Bradley recommends that glyphosate be sprayed before the weeds in a field reach a height of 6 inches.

Bradley does recommend use of glyphosate for weeds that escape or for weeds that emerge later in the growing season.

The advantage of glyphosate, now sold under the trade name of Roundup PowerMax by Monsanto, is that it can be sprayed over the top of Roundup Ready soybeans to kill weeds without harming the beans. The ease of that treatment has made glyphosate the most popular weed control method in soybeans.

"However, an advantage of pre-emergence herbicides is to rotate herbicide modes of action and manage glyphosate-resistant weed species. Repeated exposure to glyphosate, generation after generation, has allowed herbicide-resistant weeds to develop.

"Surveys we conducted last year indicate glyphosate-resistant waterhemp now occurs on 4 percent of the soybean acres in Missouri," Bradley said.

Pre-emergence herbicides available this year include Authority First, Boundary, Canopy, Dual II Magnum, Envive, IntRRo, Prefix, Prowl H2O, Sonic, Valor and Valor XLT. "All are currently costing about the same or less than a brand-name glyphosate treatment," Bradley said.

Most of these also will provide good control of glyphosate-resistant waterhemp. Continued use of glyphosate on weeds showing resistance will only intensify the problem.

If producers decide to use glyphosate, they should not cut the application rate to save costs. "Reduced rates usually translate into reduced weed control and increased yield loss," Bradley said. "Cutting rates to save a few cents will likely lead to lower yields at the end of the season."

For years, soybean acreage has been the leading cash crop in the state. Δ