

### BENEFITS

- Offers a convenient and effective pre-emergence and early post-emergence option for controlling difficult weeds in soybean
- Utilizes two modes of action to control glyphosate- and ALS-resistant weeds such as Palmer amaranth (Palmer pigweed), waterhemp and common ragweed
- Protects yield with up to five weeks of residual control of highly competitive broadleaf weeds and grasses
- Provides excellent crop safety
- Controls problem weeds in soybean, allowing for:
- a properly timed application of Touchdown Total® herbicide for full-season weed control
- protection of soybean yield against weed competition
- effective management of weed resistance

#### **USE RECOMMENDATIONS**

### Application:

Apply Prefix at 2-3 pt/A – Check product label for your region.

Prefix should be applied as a pre-emergence application on all soils to control or suppress certain weeds for a period of up to five weeks when followed by a planned post-emergence weed control treatment in soybeans.

Recommended post-emergence treatments include any product or combination of products labeled to control specific weeds that may remain in the field. Post-emergence treatments would include glyphosate products (such as Touchdown brands) for use on glyphosate-tolerant soybean varieties. For the post-emergence herbicide application, consult the manufacturer's label for weeds controlled, weed size, application rate, additional use directions, precautions and limitations before use.





Keep up-to-date with all your soybean news from Syngenta by registering for the Soybean Insider E-newsletter. Registration is easy at www.farmassist.com/soyinsider

For more information, visit www.FarmAssist.com, www.Prefix-Herbicide.com or call the Syngenta Customer Center at 1-866-SYNGENT(A) (796-4368).

Data summarized by M. Loux & J. Stachler from The Ohio State University and B. Johnson & G. Nice from Purdue University. Eight studies, west central OH, 2000-2001. Produced and prepared by Purdue University or Ohio State University Extension Weed Science.

<sup>2</sup>Data summarized by Mike Owen, Department of Agronomy at Iowa State University. Article originally appeared on page 73 of the IC-498 (3) - March 26, 2007 issue.

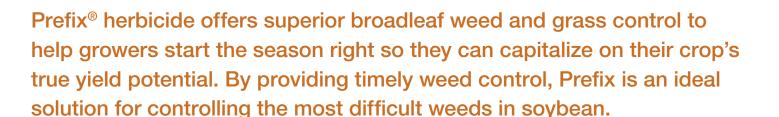
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### The Answer to Troublesome Weeds

As a premix formulation, Prefix saves growers time during application. The formulation consists of two proven chemistries, *S*-metolachor and fomesafen. This combination offers a non-glyphosate, non-ALS herbicide option for controlling troublesome weeds like common ragweed and waterhemp, which are known to be resistant to multiple herbicide modes of action.

## **Problem Weeds Controlled By Prefix**

- Common ragweed
- Waterhemp
- Lambsquarters
- Foxtail spp.
- Pigweed spp.Smartweed spp.
- Nightshade spp.
- Palmer amaranth (palmer pigweed)
- Barnyardgrass



## It's About Weed Management

Often you can achieve weed control with a post herbicide application, but protecting yield is about weed management throughout the season. Young soybean plants are particularly vulnerable to a variety of pests while they are emerging, and weeds are no exception. Early-season weeds compete for soil moisture, light and nutrients that are vital to soybeans during the critical cropestablishment stages. This competition can severely reduce yield potential, making the early season a particularly critical stage for protecting soybean plants. A grower's best defense against early-season weed competition is a pre-emergence residual herbicide, such as Prefix.

According to Purdue University and The Ohio State University research, weeds that reach nine and 12 inches in height can cause 6 and 10 percent yield losses, respectively. If soybeans were priced at \$10 per bushel and a field had a 50 bushel-per-acre yield potential, a grower could lose \$50 per acre if weeds were allowed to reach 12 inches in height – a price much higher than the investment in a residual herbicide, such as Prefix.



As seen in the chart below, applying a residual pre-emergence herbicide followed by glyphosate will lead to better soybean yields as well as nice return on investment.

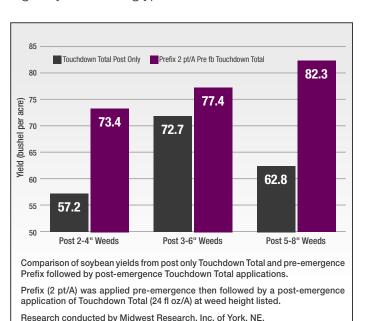
Economics of Soybean Weed Management Strategies			
Herbicide program	Weed height (inches) at application	Soybean yield (bu/A)	% Return on all variable input costs*
Residual herbicide followed by glyphosate	Preemergence fb 4-8	47	158
Glyphosate fb glyphosate	0-4 fb 0-4	44	152
Glyphosate fb glyphosate	4-8 fb 4-8	41	135
Glyphosate	8-12	39	139
Glyphosate	12-16	35	115
Glyphosate	16-20	33	103
Glyphosate	20-24	33	103
Glyphosate	24-28	31	91
Glyphosate	28-32	25	54
Glyphosate	32-36	21	30
No herbicide	_	16	_

**Table 1 Source:** Southern Illinois Univ., Bryan Young. Assumes a soybean commodity price of \$6.50/bu.

\*Represents average cost of fertilizer, seed, drying, storage and machinery-related for Illinois producers in 2006 (source: University of Illinois and Illinois Farm Business Farm Management Association). Also includes actual herbicide and application cost. Does not include farmland rent, depreciation, overhead, interest and labor.

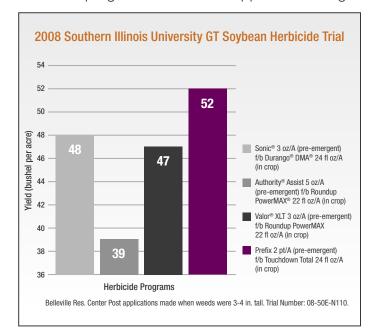
According to lowa State University, there are significant benefits from using a pre-emergence herbicide, including better time management in the spring, a wider window of opportunity to make post treatments, environmental stewardship and improved profitability. Pre-emergence herbicides reduce selection pressure on the weed community, delaying the development of glyphosate-resistant weeds in soybeans.<sup>2</sup>

As demonstrated in the graph below, growers can receive yield benefits from using Prefix as a pre-emergence foundation treatment, regardless of the glyphosate application timing. Prefix allows for a wider application window, thus reducing the risks associated with applying glyphosate too early or too late, and provides a profitable return per acre. Prefix followed by Touchdown Total provided higher yields than glyphosate treatments alone.

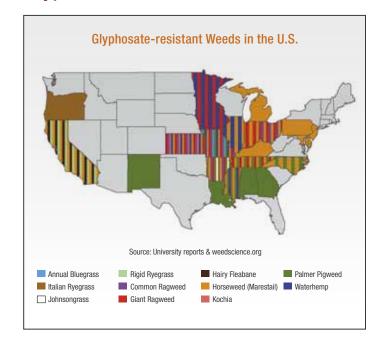


## **Choose Prefix for Better Weed Management**

An application of Prefix can prevent many weeds from emerging and provide several weeks of residual weed control, allowing young soybean plants to establish their full yield potential in a weed-free environment. As shown in the research below, Prefix followed by Touchdown Total out-yielded other treatment programs at the same application timings.



# The Challenge of ALS- and Glyphosate-Resistance



Since the 1970s, glyphosate has been an effective tool for soybean growers. Because of its popularity as well as convenience, its overuse has developed glyphosate-resistant biotypes in certain weed species. With 11 confirmed glyphosate-resistant weeds in 23 states, it is important that growers recognize the severity of this issue. The map above indicates which states have confirmed certain weed species to be glyphosate-resistant.

Rotating modes of action and limiting the number of glyphosate and ALS applications are both important to a successful management program in soybean fields. As a Resistance Fighter™ brand, Prefix offers two different modes of action to help combat glyphosate resistance and manage weeds more effectively. By incorporating different cultural techniques and a variety of plant protection tools, growers can both improve their weed management programs and prevent further development of glyphosate- and ALS-resistant weeds.

