



## Enhance Your Yield with Early-Season Weed Control

The ideal situation for a grower is to look at his fields in late spring and see that each row is clean, weed-free and on its way to producing high-quality soybeans. Unfortunately, this is not always the case. Many growers may not realize that early-season weeds can have a serious impact on yield, affecting the bottom line and decreasing crop quality.

It is important to control yield-robbing weeds early in the season because they compete for soil moisture, light and nutrients vital to soybean plants during the critical crop-establishment stages. Besides the benefit of early season weed control, a residual pre-emergence herbicide offers greater post application flexibility for glyphosate products such as Touchdown Total<sup>®</sup> herbicide for season-long weed control. As shown in the chart below, applying a residual pre-emergence herbicide followed by glyphosate can lead to a potential increase in soybean yields and higher return on investment.

Economics of Soybean Weed Management Strategies			
Herbicide program	Weed height at application	Soybean yield (bu/A)	Return on all variable input costs*
Residual herbicide followed by glyphosate	Pre-emergence followed by 4-8"	47	158%
Glyphosate followed by glyphosate	0-4" followed by 0-4"	44	152%
Glyphosate followed by glyphosate	4-8" followed by 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	---

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 expenses for Illinois producers in 2006 (source: University of Illinois and Illinois Farm Business Farm Management Association). Also includes actual herbicide and application costs. Does not include farmland rent, depreciation, overhead, interest or labor.

By ridding a field of tough-to-control weeds such as common ragweed and waterhemp early in the season, growers are able to capitalize on their crop's true yield potential. Pre-emergence herbicides delay weed development and give soybeans the opportunity to produce a better quality crop and higher yields.

According to Dr. Bill Johnson, associate professor of weed science at Purdue University, "In moderate- to heavy-density weed coverage, weeds can start reducing soybean yields as early as the V3 growth stage. Weather delays and increased application time due to larger fields can delay application, which can be costly to an operation. By the time weeds are 12 to 16 inches tall, crops have already suffered a 10-20 percent yield loss."

A pre-emergence herbicide that is helping soybean growers protect valuable yield potential early in the season is Prefix™ herbicide. Prefix helps combat yield-robbing broadleaf weeds and grasses. As a premix formulation, Prefix saves growers time during application. The formulation consists of two proven chemistries, S-metolachor and fomesafen. This combination provides a non-glyphosate, non-ALS herbicide option for controlling glyphosate-resistant weeds such as common ragweed, Palmer amaranth and waterhemp early in the season. Prefix should be applied pre-emergent and then followed by a planned post application of Touchdown® brand herbicides for a complete soybean weed management program.

With two modes of action, Prefix pre-emergence herbicide is a plant protection tool that takes control over tough-to-control weeds early in the season. Prefix helps growers achieve a weed-free field all season, maximizing the potential for higher soybean yields at harvest.

\*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 The Ohio State University Extension Weed Science.

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