

YIELD [+]¹ control



WEED CONTROL KEY TO PROTECTING SOYBEAN YIELDS



EACH GROWING SEASON, SOYBEAN GROWERS ARE FACED WITH A MULTITUDE OF DECISIONS THAT WILL AFFECT THE YIELD OPPORTUNITY FOR THEIR CROPS. ONE OF THE MOST IMPORTANT DECISIONS IS WEED MANAGEMENT. WEEDS NOT ONLY STEAL MOISTURE, NUTRIENTS AND SUNLIGHT FROM CROPS, BUT THEY CAN ALSO HARBOR INSECTS AND DISEASES AND UNDERMINE CROP QUALITY.



Choosing the right herbicide program is a key component to weed control in soybeans. These days, Stine's most popular soybeans feature built-in resistance to glyphosate and glufosinate. However, in areas of the United States, some weed species are showing resistance to glyphosate. Herbicide-resistant weeds can be present in a field for up to two years before being discovered. If not addressed quickly, the weeds spread seed and establish themselves, making it much more difficult to control them.

What can growers do to ensure that herbicide-resistant weeds don't harm yield?

For best results, growers should observe their fields to identify specific weed pressures and vary their herbicide treatments based on weed species and pressures to establish a sound weed management program. This program can include a broad-spectrum soil treatment in addition to an over-the-top glyphosate or glufosinate application, and documenting any known weed issues.

The most effective way to manage herbicide-resistant weeds is to use two or more effective sites of action and to alternate herbicide systems, such as glyphosate and glufosinate. Wise crop husbandry and crop rotations can help producers reduce the risk of developing herbicide-resistant weeds.

THE ROOTS OF GLYPHOSATE AND GLUFOSINATE

GLYPHOSATE, better known as Roundup[®], first came into commercial use in 1974 as a broad-spectrum herbicide. In 1996, it was introduced as the herbicide component in the Roundup Ready[®] seed-herbicide system and is still widely used today. Absorbed by plant tissue and dispersed to the root system, glyphosate is most effective in controlling perennial, grass and broadleaf weeds. Because glyphosate has no soil-residual activity, crops can be planted soon after application. And while glyphosate is still one of the most popular weed control methods, glyphosate-resistant weeds are becoming more problematic in fields across the Corn Belt.

GLUFOSINATE, better known as Liberty[®] herbicide and a key component of the LibertyLink[®] soybean system, was introduced in the United States in 1993 and currently has no known weed resistance. Glufosinate hinders the plant enzyme involved in the early stages of nitrogen metabolism. As a post-emergence herbicide, it's similar to glyphosate in terms of weed species control, application processes and no soil-residual activity.



NEW TECHNOLOGIES

Over the past few years, revolutionary new soybean technologies have come to market, allowing growers to rotate systems, thereby preserving the utility of glyphosate and glufosinate. They include:



ENLIST E3® SOYBEANS — A collaboration between MS Technologies and Dow AgroSciences, Enlist E3 soybeans offer growers an advanced herbicide-tolerant trait technology with maximum flexibility and convenience, along with the ability to use three unique modes of action for exceptional weed control. Enlist E3 soybeans confer tolerance to a new 2,4-D choline, glyphosate and glufosinate in a three-gene stack, setting a new standard for weed control and yield performance in soybeans.

Because of its unique trait stack, the Enlist E3 system allows soybean growers to use Enlist Duo® or Enlist One® herbicides for outstanding weed control. Enlist Duo herbicide with Colex-D® technology contains a proprietary blend of glyphosate and Corteva Agriscience's new 2,4-D choline, resulting in unrivaled weed control designed to land and stay on target. Enlist One herbicide can be safely combined with growers' preferred glyphosate or glufosinate (Liberty) to control glyphosate-resistant weeds.

The Enlist E3 soybean system also provides ease of use with maximum application flexibility, low drift and 96 percent less volatility than traditional 2,4-D. Growers will also find peace of mind with the Enlist™ Ahead management resource, which provides them the tools they need to plan their herbicide applications and prevent weed resistance.

SOYBEAN YIELDS

One of the most effective ways to manage the risks of herbicide-resistant weeds is to alternate herbicide chemistries with different modes of action.



LIBERTYLINK® GT27® SOYBEANS — Developed by MS Technologies™ and BASF, the LibertyLink GT27 Soybean System combines high-yielding, elite genetics with the first commercially available soybean trait package featuring built-in tolerance to glyphosate, glufosinate (Liberty®) and a new HPPDi/Group 27 herbicide (Alite™ 27). This powerful trait stack provides ultimate control of glyphosate-, PPO- and ALS-resistant weeds with multiple pre- and post-options, plus built-in residual control, for different growing environments.

LibertyLink GT27 soybeans are built upon the LibertyLink technology. Liberty herbicide and the LibertyLink trait provide an excellent means for growers to rotate nonselective herbicides to effectively manage weed resistance and preserve the utility of herbicide-tolerant technologies.

LibertyLink GT27 soybeans also have built-in tolerance to HPPDi/Group 27-based herbicides, providing soybean growers with an additional measure of protection against potential HPPDi/Group 27 carryover.



ROUNDUP READY 2 XTEND™ SOYBEANS — Built upon Genuity® Roundup Ready 2 Yield® technology, Roundup Ready 2 Xtend soybeans provide tolerance to both dicamba and Roundup® (glyphosate) agricultural herbicides, giving growers consistent, flexible weed control on tough-to-manage glyphosate-resistant broadleaf weeds.



XTENDFLEX® SOYBEANS — The latest soybean trait to receive commercial approval, XtendFlex® soybeans are the next innovation from Bayer. XtendFlex soybeans feature elite, high-yielding genetics coupled with three sites of herbicide action for ultimate weed control. XtendFlex soybeans are built upon the proven Roundup Ready 2 Xtend® technology but with added tolerance to glufosinate. With tolerance to dicamba, glyphosate and now glufosinate, growers will have another option in their toolbox to manage tough weeds, from waterhemp to palmer amaranth to marestalk.

To learn more about these systems, visit www.stinseed.com.