



What is Sulfonyleurea (SR) Soybean Technology?

- Soybean products with SR (sulfonyleurea ready) in the product name contain a proprietary trait that enhances a soybean plant's natural tolerance to the sulfonyleurea family of acetolactate synthase (ALS) inhibitor herbicides.
- Roundup Ready 2 Xtend® or XtendFlex® soybean products combined with the SR trait can provide broad weed control by utilizing herbicides with multiple modes of action.
- SR soybean products are a useful tool for double crop soybeans in which the previous wheat crop was sprayed with a sulfonyleurea herbicide.

Sulfonyleurea Tolerance

Soybean products with the designation SR (sulfonyleurea ready) in the product name contain a proprietary trait that enhances a soybean plant's natural tolerance to the sulfonyleurea family of ALS inhibitor herbicides. ALS inhibitor herbicides work by inhibiting the ALS enzyme, which plays an important role in the production of several essential amino acids necessary to build proteins that are required for plant growth and development. Weeds that are susceptible to ALS herbicides essentially starve to death due to the lack of those proteins.

Sulfonyleurea herbicides degrade primarily through a chemical process called hydrolysis, which is the chemical breakdown of a compound due to reactions with water. Thus, because conditions may become drier later in the season, the later into the season this class of herbicides is applied the higher the potential for carry-over to the following crop. Cooler weather and higher pH soils also slow down degradation of these herbicides, which could increase the potential for residual amounts of the herbicide to remain in the soil.¹

Symptoms of plant injury from this class of herbicides include reduced growth, shortened internodes, purple coloration on the leaves, and shortened lateral roots sometime referred to as "bottle brush" roots.²

Soybean plants have some natural resistance to sulfonyleurea herbicides, but significant crop injury and stunting can still occur. Soybean products with the SR trait can withstand application of higher rates of sulfonyleureas without slowing down the crop growth and development.

Enhanced Weed Control

Soybean products containing the SR herbicide trait allow farmers to achieve weed control and crop safety in a variety of settings. SR soybean plants have a high tolerance to sulfonyleurea herbicides applied post-emergence as well as to potential residual amounts of these herbicides that may remain in the soil from an application to a previous crop. Products that combine SR with another trait, such as Roundup Ready 2 Xtend® or XtendFlex®, can further enhance weed control by utilizing herbicides with multiple modes of action.

What is Sulfonylurea (SR) Soybean Technology?

Value in Double Crop Soybeans

SR technology can be particularly valuable for growers who want to follow wheat with double crop soybean. Due to the shortened growing season for double crop soybean, avoiding herbicide injury is essential as plants have less time to recover. Planting a soybean product capable of tolerating the residual effect of ALS herbicides used in wheat may allow for a shorter plant back time after wheat harvest, depending on label restrictions.

Soybean products with the SR trait are available in the Asgrow® and Channel® brands in relative maturity groups ranging from late group 3 through group 5. For more information on SR products and specific sulfonylurea herbicides, please contact your local seed representative and refer to local extension publications as well as product labels. Always read and follow pesticide label directions.

Source:

¹Niver, R. 2020. What STS means and why you should care. ILSOY Advisor. <https://www.ilsoyadvisor.com/what-sts-means-and-why-you-should-care/>

²Take Action Herbicide Management. Herbicide classification guide. <https://iwilltakeaction.com/weeds/>

Web sources verified 9-19-2023.

Legal statements:

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ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. It is a violation of federal and state law to use any pesticide product other than in accordance with its labeling. NOT ALL formulations of dicamba or glyphosate are approved for in-crop use with Roundup Ready 2 Xtend® soybeans. NOT ALL formulations of dicamba, glyphosate or glufosinate are approved for in-crop use with products with XtendFlex® Technology. ONLY USE FORMULATIONS THAT ARE SPECIFICALLY LABELED FOR SUCH USES AND APPROVED FOR SUCH USE IN THE STATE OF APPLICATION. Contact the U.S. EPA and your state pesticide regulatory agency with any questions about the approval status of dicamba herbicide products for in-crop use with products with XtendFlex® Technology.

For more information regarding the intellectual property protection for the seed products identified in this publication, please see www.asgrowanddekalb.com. **Performance may vary**, from location to location and from year to year, as local growing, soil and environmental conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on their growing environment.

The recommendations in this material are based upon trial observations and feedback received from a limited number of growers and growing environments. These recommendations should be considered as one reference point and should not be substituted for the professional opinion of agronomists, entomologists or other relevant experts evaluating specific conditions.

Roundup Ready 2 Xtend® soybeans contain genes that confer tolerance to glyphosate and dicamba. Products with XtendFlex® Technology contains genes that confer tolerance to glyphosate, glufosinate and dicamba. Glyphosate will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to dicamba. Glufosinate will kill crops that are not tolerant to glufosinate. Contact your seed brand dealer or refer to the Bayer Technology Use Guide for recommended weed control programs.

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