



# Agronomic Spotlight

## Sulfonylurea Soybean Technology

- Soybean products with SR (Sulfonylurea Ready) in the product name contain a proprietary trait that enhances a soybean plant's natural tolerance to the sulfonylurea family of ALS inhibitor herbicides.
- Genuity® Roundup Ready 2 Yield® soybean products stacked with SR can provide broader weed control by utilizing herbicides with multiple sites of action.
- SR soybean products are a useful tool for double crop soybeans where the previous wheat crop was sprayed with a sulfonylurea herbicide.

### Sulfonylurea Tolerance

Soybean products with SR (Sulfonylurea Ready) in the product name contain a proprietary trait that enhances a soybean plant's natural tolerance to the sulfonylurea family of ALS inhibitor herbicides. Sulfonylurea herbicides work by inhibiting the ALS enzyme which plays an important role in forming necessary proteins for plant growth and development. Weeds treated with ALS herbicides essentially starve to death without the proteins necessary for new growth.

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

### Enhanced Weed Control

Soybean products containing the SR trait allow farmers to achieve enhanced weed control and crop safety in a variety of settings. SR soybean plants have a higher tolerance to sulfonylurea herbicides applied postemergence as well as to residual carryover that may remain from a previous crop. When SR is used in combination with another trait, such as Genuity® Roundup Ready 2 Yield®, weed control can be further enhanced by utilizing herbicides with multiple sites of action.

### Value in Double Crop Soybeans

SR technology can be particularly valuable in soybean products planted in double crop situations. Due to the shortened growing season for double crop soybeans, avoiding herbicide injury is essential as plants have less time to recover. Because SR products have tolerance to residuals leftover from sulfonylurea herbicides used in previous wheat crops, this technology can be especially important for growers who want to follow wheat with double crop soybeans. ALS herbicides remain active in the soil, where they are gradually degraded by microbial activity and uptake by plants. Cool, wet, or dry conditions may slow degradation and lead to potential injury to following crops. Planting a soybean crop capable of tolerating the residual effects of sulfonylurea wheat herbicides allows for a much shorter plant back time after wheat harvest.

Soybean products with the SR trait are available in a range of maturity groups. 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.

#### Sources

Armstrong, J. 2011. Making sense of herbicide-resistance traits in crops. Oklahoma State Department of Plant & Soil Sciences Extension News. <http://extensionnews.okstate.edu>.  
Double-cropping makes weeds less worrisome. 2000. AgAnswers. [www.agriculture.purdue.edu](http://www.agriculture.purdue.edu).  
Gianessi, L. and Carpenter, J. 2000. Agricultural biotechnology: Benefits of transgenic soybeans. National Center for Food and Agricultural Policy.  
Lee, C., Knott, C., and Ritchey, E. 2014. Soybean variety selection. University of Kentucky Extension publication AGR-129. <http://www.iatp-web.us>.  
Web sources verified 9/23/2016. 140522060630

**Developed in partnership with Technology Development & Agronomy by Monsanto. For additional agronomic information, please contact your local seed representative.**

**Monsanto Company is a member of Excellence Through Stewardship® (ETS).** Monsanto products are commercialized in accordance with ETS Product Launch Stewardship Guidance, and in compliance with Monsanto's Policy for Commercialization of Biotechnology-Derived Plant Products in Commodity Crops. This product has been approved for import into key export markets with functioning regulatory systems. Any crop or material produced from this product can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. Growers should talk to their grain handler or product purchaser to confirm their buying position for this product. Excellence Through Stewardship® is a registered trademark of Excellence Through Stewardship.

**Individual results may vary,** and performance may vary from location to location and from year to year. This result may not be an indicator of results you may obtain as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible.

**ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.** Roundup Ready technology contains genes that confer tolerance to glyphosate, an active ingredient in Roundup® brand agricultural herbicides. Agricultural herbicides containing glyphosate will kill crops that are not tolerant to glyphosate. Genuity®, Roundup Ready 2 Yield®, Roundup Ready® and Roundup® are registered trademarks of Monsanto Technology LLC. All other trademarks are the property of their respective owners. ©2016 Monsanto Company. 140522060630 92316JEH