

Quick Comparison of Weed Management Systems in Soybeans

Glyphosate and Glufosinate are NOT the Same. Important Differences to Consider Include:

- Mode of Action
- Uptake and Translocation
- Labeled Weed Heights
- Control of Perennial Weeds
- Carrier Volume
- In-Crop Application Window
- Effects of Environmental Conditions
- Rainfastness

Soybean **variety selection** is also a critical component to consider when selecting a weed management system.

Regardless of Weed Management System: Residual herbicides should be used PRE and/or POST to help manage weed resistance and protect yield potential.

	Roundup® Brand Agricultural Herbicides in a Genuity® Roundup Ready 2 Yield® System	Roundup® Agricultural Herbicides + POST tank mix of Flexstar® or Cobra® in a Genuity® Roundup Ready 2 Yield® System	Ignite® Herbicide in LibertyLink® Soybean System
Active Ingredient	glyphosate	Flexstar®: fomesafen Cobra®: lactofen	glufosinate
Amount of Translocation ¹	Readily translocated	Glyphosate is translocated. Flexstar® and Cobra® are contact herbicides.	Limited translocation
Weed Spectrum	~240	~240 + glyphosate-resistant broadleaves	~140
Carrier Volume (gal./a)	3 to 40	Flexstar®: 15 to 20 Cobra®: 20 to 30	Minimum: 15 Dense Canopies: 20 to 40
In-crop Application	Cracking through R2	Cracking through R2	Emergence to (not through) bloom.
Maximum Rate/ In-crop Application	44 oz./a	Flexstar®: see label Cobra®: see label	36 oz./a
Maximum Rate/ Year	<ul style="list-style-type: none"> • 64 oz./a In-crop • 5.3 qt./a Total for burndown, in-crop, preharvest 	Flexstar®: see label Cobra®: 25 oz./a	65 oz./a from burndown to bloom
Pre-harvest Interval	14 days	Flexstar®: 45 days Cobra®: 45 days	70 days
Rainfast	Roundup WeatherMAX® Herbicide: 30 minutes	Flexstar®: 1 hour Cobra®: 30 minutes	4 hours

Sources: ¹ Peterson, D.E. et. al. 2010. Herbicide mode of action. Kansas State University Extension. C-715.

Labeled weed heights for potential in-crop applications of various herbicide systems in geographies with glyphosate-resistance.

	Roundup PowerMAX® Herbicide (32 oz./a) +		Ignite® (oz./a)	
	Flexstar® (1.25 pt./a)	Cobra® (12.5 oz./a)	22	29
Fall panicum	4-12"	4-12"	3"	5"
Velvetleaf	4-12"	4-12"	3"	4"
Kochia	4-12"	4-12"	4"	6"
Glyphosate-resistant Biotypes				
Palmer amaranth	6 leaf	6 leaf	3"	4"
Waterhemp	4 leaf	6 leaf	4"	5"

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. Commercial product(s) 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 Biotechnology Industry Organization. Roundup Technology® includes Monsanto's glyphosate-based herbicide technologies. 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® crops contain genes that confer tolerance to glyphosate, the active ingredient in Roundup® brand agricultural herbicides. Roundup® brand agricultural herbicides will kill crops that are not tolerant to glyphosate. Tank mixtures: The applicable labeling for each product must be in the possession of the user at the time of application. Follow applicable use instructions, including application rates, precautions and restrictions of each product used in the tank mixture. Monsanto has not tested all tank mix product formulations for compatibility or performance other than specifically listed by brand name. Always predetermine the compatibility of tank mixtures by mixing small proportional quantities in advance. Genuity®, Roundup PowerMAX®, Roundup Ready 2 Yield®, Roundup Ready PLUS™, Roundup Ready®, Roundup Technology®, Roundup WeatherMAX®, Roundup®, and Technology Development by Monsanto and Design® are trademarks of Monsanto Technology LLC. Ignite® and LibertyLink® are registered trademarks of Bayer. All other trademarks are the property of their respective owners. ©2011 Monsanto Company. 09.22.2011.EJP