

# Roundup Ready® Soybeans



## PRODUCT DESCRIPTION

Roundup Ready® Soybean varieties contain in-plant tolerance to Roundup® agricultural herbicides, enabling growers to spray labeled Roundup agricultural herbicides over the top from emergence (cracking) through flowering (R2 stage soybeans)

for unsurpassed weed control, proven crop safety and maximum yield potential. R2 stage soybeans end when a pod 5 millimeters (3/16") long at one of the four uppermost nodes appears on the main stem along with a fully developed leaf (R3 stage).

## ROUNDUP AGRICULTURAL OVER-THE-TOP HERBICIDE PRODUCTS

Herbicide products sold by Monsanto for use over the top of Roundup Ready Soybeans for the 2008 crop season are as follows:

- Roundup WeatherMAX®
- Roundup Original MAX®

Certain products referred to above may not be labeled for this application in your specific state. Please contact the manufacturer of this product, the local retailer, or the local extension agent for confirmation that this is an approved application.

For complete information about the use of Roundup agricultural herbicides over the top of Roundup Ready Soybeans, refer to the appropriate product's label booklet.

You may use another glyphosate herbicide, but only if it has federally approved label instructions for use over Roundup Ready Soybeans, and the product and the use label for Roundup Ready Soybeans have been approved by your specific state. Contact the product manufacturers, the local retailers, or the local extension agents for confirmation that the products carry EPA and state approved labeling for this use. MONSANTO DOES NOT MAKE ANY REPRESENTATIONS, WARRANTIES OR RECOMMENDATIONS CONCERNING THE USE OF GLYPHOSATE PRODUCTS SUPPLIED BY OTHER COMPANIES WHICH ARE LABELED FOR USE OVER ROUNDUP READY SOYBEANS. MONSANTO SPECIFICALLY DENIES ALL RESPONSIBILITY AND DISCLAIMS ANY LIABILITY FOR ANY DAMAGE FROM THE USE OF THESE PRODUCTS IN ROUNDUP READY SOYBEANS. ALL QUESTIONS AND COMPLAINTS CAUSED BY THE USE OF GLYPHOSATE PRODUCTS SUPPLIED BY OTHER COMPANIES SHOULD BE DIRECTED TO THE SUPPLIER OF THE PRODUCT IN QUESTION.



## WEED CONTROL RECOMMENDATIONS

### Agronomic Principles in Soybeans

Starting clean with a weed-free field and making timely post-emergence in-crop applications is critical to obtaining excellent weed control and maximum yield potential. The Roundup Ready Soybean system provides the flexibility to use the herbicide tool(s)

necessary to control weeds at planting and in-crop. Failure to control weeds with the right rate, at the right time, and with the right product, can lead to increased weed competition and the potential for decreased yield.

PROGRAM	INSTRUCTIONS AND USE RATES	ADDITIONAL INFORMATION
<b>Preplant Burndown</b>	<p>To start clean in no-till systems, apply a burndown application of Roundup WeatherMAX* at 22 to 44 oz/A before planting.</p> <p>See the label for appropriate rates by weed species. For control and management of glyphosate-resistant horseweed (marestalk, <i>Conyza sp.</i>) or other difficult-to-control weeds present at burndown, apply 22 oz/A of Roundup WeatherMAX in a tank-mix with 1 to 2 pt/A 2,4-D. Make applications 7 to 30 days before planting and before horseweed reaches 6" in height.</p>	<p>Always start with a weed-free field. In no-till and reduced-till systems, apply a Roundup WeatherMAX* burndown application to control existing weeds before planting.</p> <p>Read the 2,4-D product label for time intervals required between application and soybean planting.</p>
<b>Residual Herbicide Plus Roundup WeatherMAX</b>	<p>Use the recommended label rate of a soil-applied residual herbicide applied preemergence to soybeans as defined in the individual product's labeling. The residual product may be tank-mixed with Roundup WeatherMAX at burndown. Refer to individual product labels for list of residual herbicides that may be used.</p> <p>Follow with 22 oz/A Roundup WeatherMAX in-crop when weeds are 2" to 8" tall. Refer to the "Annual Weeds Rate Table" in the Roundup WeatherMAX label for rate recommendations for specific annual weeds.</p> <p>Apply a residual herbicide in a continuous Roundup Ready Soybean system.</p>	<p>A residual program may be used if agronomic conditions favor the practice.</p> <p>Reducing Roundup WeatherMAX rate when tank-mixing with a residual or use of premixes utilizing a reduced rate of glyphosate such as Extreme® is not recommended. If the in-crop application is delayed and weeds are larger, apply a higher rate of this product.</p>
<b>Roundup WeatherMAX</b>	<p>Apply a minimum of 22 oz/A of Roundup WeatherMAX* in-crop when weeds are 2" to 8" tall.</p> <p>Refer to the "Annual Weeds Rate Table" in the Roundup WeatherMAX label for rate recommendations for specific annual weeds. Choose the rate to control the most difficult-to-control weed in your field.</p> <p>A sequential application of this product may be required to control new flushes of weeds in the Roundup Ready Soybean crop.</p> <p>If a sequential application is necessary, apply 16 to 22 oz/A Roundup WeatherMAX* when weeds are 3" to 6" tall.</p>	<p>A single in-crop application of Roundup WeatherMAX provides control of labeled weeds.</p> <p>For best results, apply 3 to 4 weeks after planting or when weeds are 4" to 8" tall.</p> <p>If initial application is delayed and weeds are larger, apply a higher labeled rate of this product.</p>
<b>Glyphosate-Tolerant Volunteer Corn</b>	<p>Tank-mix Roundup WeatherMAX with 6 to 12 oz/A of Select Max™ and apply to 4" to 36" glyphosate-tolerant volunteer corn.</p>	<p>Choose your Roundup WeatherMAX rate based on the weed species and size listed in the "Annual Weeds Rate Table" of the Roundup WeatherMAX Label.</p>
<b>Maximum Use Rates for Roundup WeatherMAX</b>	<p><b>In-Crop:</b></p> <ul style="list-style-type: none"> <li>• 44 oz/A per single application</li> <li>• 44 oz/A during flowering</li> <li>• 64 oz/A emergence through flowering (R2 stage soybeans)</li> </ul> <p><b>Preharvest:</b></p> <ul style="list-style-type: none"> <li>• 22 oz/A application</li> </ul>	<p><b>Total Season:</b></p> <p>The combined total of preplant, in-crop and preharvest applications of Roundup WeatherMAX cannot exceed 5.3 qt/A. The combined total of in-crop and preharvest applications cannot exceed 64 oz/A .</p>

\*If using another Roundup agricultural herbicide, you must refer to the label booklet or Roundup Ready Soybean supplemental label for that brand to determine appropriate use rates. If using Roundup Original MAX, application rates are the same as for Roundup WeatherMAX.

# Roundup Ready® Soybeans

## WEED CONTROL RECOMMENDATIONS

KEY WEEDS	INSTRUCTIONS AND USE RATES	ADDITIONAL INFORMATION
<b>Weeds that Tend to Have Multiple Emergence Events</b>	<p>Where dense stands of weed species such as common lambsquarters, tall and common waterhemp, <i>Palmer amaranth</i>, redroot pigweed, common ragweed, and giant ragweed are expected, the following agronomic practices are suggested:</p> <ul style="list-style-type: none"> <li>• Start clean with tillage or burndown in no-till and reduced till systems.</li> <li>• Plant soybeans in narrow rows (&lt;20").</li> <li>• Use a pre-plant residual herbicide.</li> <li>• Use the right rate of Roundup WeatherMAX® at the right time (proper weed size).</li> </ul>	<p>Weeds such as lambsquarters, waterhemp, pigweed, and giant ragweed tend to emerge throughout the season. Sequential Roundup WeatherMAX applications or the addition of a soil residual herbicide may be required for control of subsequent weed flushes.</p>
<b>Difficult-to-Control Weeds</b>	<p>Black nightshade, velvetleaf, waterhemp, morningglory, Florida pusley, giant ragweed, Pennsylvania smartweed, groundcherry, hemp sesbania and spurred anoda are difficult-to-control weeds. Please refer to the Roundup agricultural herbicide label for specific rates and weed sizes for control of these weeds.</p>	<p>These weed species require special attention be paid to Roundup WeatherMAX rate and application timing (proper weed size) to obtain excellent weed control.</p> <p>A sequential application may be required if a new weed flush occurs, especially in soybeans planted in wide rows (&gt;20").</p>
<b>Perennial Weeds</b>	<p>An in-crop application of 22 to 44 oz/A of Roundup WeatherMAX* will provide suppression and/or control of nutsedge and perennial weeds like Canada thistle, field bindweed, hemp dogbane, horsenettle, johnsongrass, milkweed, quackgrass, etc.</p>	<p>For additional information on perennial weeds, see the "Perennial Weeds Rate Table" in the label booklet for Roundup WeatherMAX.</p> <p>For best control, allow perennials to achieve at least 6" or more of growth before spraying.</p>

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## WEED RESISTANCE MANAGEMENT GUIDELINES

Follow the guidelines below to minimize the risk of developing glyphosate-resistant weed populations in a Roundup Ready® Soybean system:

- Scout fields before and after each burndown and in-crop application.
- Start clean with a burndown herbicide or tillage.
  - Tank-mix with 2,4-D to control glyphosate-resistant marestail or other tough-to-control broadleaf weeds.
- If you have dense stands of weeds such as waterhemp, Palmer amaranth, common lambsquarters, or common ragweed, use a residual herbicide such as INTRRO®, Valor®, Valor XLT® or Gangster®.
- In-crop, apply Roundup WeatherMAX at a minimum of 22 oz/A before weeds exceed 8".
- If an additional flush of weeds occurs, a sequential application of Roundup WeatherMAX at 22 oz/A may be needed before weeds exceed 6".
- Refer to individual product label for list of recommended Tank-mix partners.
- Clean equipment before moving from field to field to minimize the spread of weed seed.
- Report repeated non-performance to Monsanto or your local retailer.

## RECOMMENDATIONS FOR MANAGING GLYPHOSATE-RESISTANT WEEDS IN ROUNDUP READY SOYBEANS

WEEDS	INSTRUCTIONS AND USE RATES
<b>Glyphosate-Resistant Horseweed (Marestail)</b>	<p><b>Preplant:</b> Apply a tank-mixture of 22 oz/A Roundup WeatherMAX with 1 pt/A 2,4-D before horseweed exceeds 6" in height. See the 2,4-D product label for time intervals required between application and planting.</p> <p><b>In-crop:</b> It is strongly encouraged that horseweed should be controlled prior to planting using recommended preplant burndown treatments. In-crop, apply a tank-mixture of 22 oz/A Roundup WeatherMAX with 0.3 oz/A FirstRate®. This treatment should be used as a salvage treatment only for a horseweed infestation that was not controlled preplant. Application should be made between full emergence of the first trifoliate leaf and 50 percent flowering stage of soybeans. At the time of treatment, horseweed should not exceed 6" in height.</p>
<b>Glyphosate-Resistant Palmer Amaranth</b>	<p><b>Preplant:</b> Apply a tank-mix of 22 oz/A Roundup WeatherMAX with a preemergence residual herbicide such as alachlor (INTRRO), flumioxazin (Valor) or another residual herbicide for preemergence control of <i>Palmer amaranth</i>. 2,4-D may be added to the tank-mix to help control emerged <i>Palmer amaranth</i> and other broadleaf weeds preplant only. Follow label instructions regarding application timing relative to soybean planting.</p> <p><b>In-crop:</b> It is strongly encouraged that a preemergence residual product be used to control <i>Palmer amaranth</i> prior to emergence. If there is emerged <i>Palmer amaranth</i> in-crop, apply a tank-mixture of 22 oz/A Roundup WeatherMAX with a postemergence product with activity on <i>Palmer amaranth</i> such as lactofen (Cobra®) or fomesafen (Flexstar®). Applications should be made on emerged <i>Palmer amaranth</i> that does not exceed 3" in height. Read and follow all product label instructions. It is likely that visual soybean injury will occur with these tank-mixtures.</p>

In certain areas populations of common ragweed, giant ragweed and waterhemp are known to be resistant to glyphosate. For control recommendations for resistant biotypes of these weeds, refer to [www.weedresistancemanagement.com](http://www.weedresistancemanagement.com) or call 1-800-ROUNDUP. When approved, supplemental labeling for specific herbicide products can also be viewed on [www.cdms.net](http://www.cdms.net) or [www.greenbook.net](http://www.greenbook.net).