

Dealing with Delayed Burndown and Soybean Planting – MO and Eastern KS

Many soybean fields will be getting a burndown later than desired. In several of those fields, marestail is getting larger and summer annuals, such as waterhemp, are emerging. Across Missouri and Eastern Kansas there are some populations of glyphosate resistant marestail and waterhemp. Good weed control from a burndown prior to crop emergence, as well as the use of a residual herbicide are both keys to help protect yield potential by adequately controlling marestail, waterhemp, and other species.

Ideally, the burndown would be applied as soon as possible, followed by an application of a residual herbicide within 7 days prior or 2 to 3 days after planting. This approach helps provide the best timing for weed control and helps minimize potential antagonism issues that may occur on some species between glyphosate and PPO soil-applied residual herbicides.

This article discusses herbicide recommendations, but you still need to read the herbicide labels. Several herbicides have geographical, soil pH, and rate restrictions that are not covered in this article. So please:

ALWAYS READ AND FOLLOW LABEL DIRECTIONS.

Figure 1. Burndown Recommendations

GENERAL RECOMMENDATIONS:

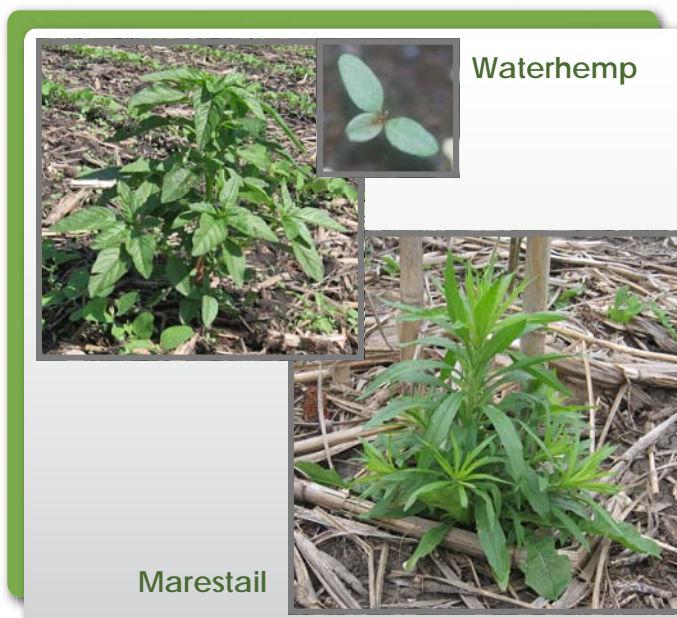
- Burndown should be applied as soon as possible.
- If marestail is bolting, only suppression should be expected.
- The Roundup WeatherMAX® herbicide rate should be determined by the largest annual weed size:
 - < 6 inches = 22 oz./acre
 - 6 to 12 inches = 32 oz./acre
 - >12 inches = 44 oz./acre
- These Roundup WeatherMAX® rates apply when water carrier volumes are 16 to 40 gallons/acre. Carrier volumes of 16 to 20 gallons/acre can help maximize marestail control.

POTENTIAL HERBICIDE PROGRAMS:

- 1) Roundup WeatherMAX® + 2,4-D* (1 to 2 pts./acre) + FirstRate®** (0.3 oz./acre)
— OR —
- 2) Roundup WeatherMAX® + 2,4-D* (1 to 2 pts./acre)

*Refer to the respective product labels of 2,4-D ester for applicable replant interval.

** If FirstRate is not available, consider substituting with Classic® herbicide at 3/4 oz/ acre or Canopy® herbicide (prior to soybean emergence only) at 3 to 4 oz/acre.



Burndown Applications

A good burndown is essential for control of marestail as in-crop control methods are limited. Burndown applications of Roundup® brand agricultural herbicides and 2,4-D can be very effective in controlling marestail (Figure 1). A burndown should be done as soon as possible for a few reasons. First, marestail becomes very difficult to control when it starts to bolt, which is generally between 6 and 12 inches in height. Second, 2,4-D applied at a pint per acre often has a plant back restriction for soybeans of 7 days. Third, a good burndown soon may allow time for breakdown of the weeds, which may provide a better seedbed and more uniform application of the residual herbicide.

If 2,4-D will not be included in the burndown, an alternate burndown herbicide programs such as paraquat plus Valor® herbicide may be an option. Keep in mind that as marestail gets larger, paraquat might suppress, not control, the marestail leaving it to deal with in-crop. Also, one of the use restrictions

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Although soybean planting is delayed in many areas, using a burndown as soon as possible and following it with a separate residual application close to planting can greatly help protect yield potential by helping manage waterhemp and marestail populations.

Figure 2. Residual Recommendations

- 1) Apply up to 7 days prior or 2 to 3 days after planting.
- 2) Consider your weed spectrum in each field when selecting a soil-applied residual herbicide.
- 3) Evaluate each field to determine if a full rate or Roundup Ready RATE™ recommendation is appropriate (Figure 3).
- 4) If a full rate is appropriate, consider the herbicides and rates listed in Figure 4 based on their activity on waterhemp.
- 5) Apply the residual herbicide no more than 7 days prior or 2 to 3 days after planting or until soybeans emerge.
- 6) Scout the field regularly to help ensure timely application of the in-crop herbicide treatments.

Figure 3. Factors that influence soil-applied residual herbicide rate recommendation.

FULL RATE

- Heavy weed pressure
- History of difficult to control waterhemp
- Glyphosate resistant waterhemp
- Continuous soybeans

Roundup Ready RATE™

- Low weed pressure
- Fields where waterhemp control has not been an issue
- Soybean fields that are rotated to crops that use additional modes of action for weed management.

on the Valor® XLT label states “Do not apply additional chlorimuron-ethyl-containing herbicides to fields treated with Valor XLT.” Chlorimuron-ethyl-containing herbicides include Classic®, Synchrony®, and Canopy®. Given the label restriction, limited supplies of FirstRate, and marestail that might be suppressed instead of controlled, it might be beneficial to consider using a residual such as Valor or Authority® First, instead of Valor XLT, as a tank mix partner with paraquat. This would allow for an in-crop application of a chlorimuron-ethyl-containing herbicide if needed.

On occasion, marestail can attain excessive plant height before a burndown application can be made. In some of those fields, tillage can be an effective control measure.

Residual Applications

Soil-applied residual herbicides are essential to waterhemp management. They represent the only chemical option for control of waterhemp biotypes resistant to glyphosate and PPO herbicides. Please refer to Figures 2-4 for recommended actions to help maximize the performance of soil-applied residual herbicides.

Figure 4. Examples of full labeled rates for soil-applied residual herbicides for waterhemp control.

Herbicide	Rate (oz/acre)	Soil OM (%)
Valor® XLT	4	0.5 to 3
	5*	3 to 5
Authority® Assist	10*	1 to 4
Authority® First	6.45	<3
	8	>3

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.

* These rates are for medium soil textures. For other soil textures, refer to the herbicide labels for appropriate rates.

Tools to Help Reduce Risk for Weed Resistance

- Crop rotation
- Multiple modes of action
- Labeled rates
- Scouting

Please Visit:

www.weedtool.com

www.weedresistancemanagement.com

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. Roundup WeatherMAX®, Roundup Ready RATE and Design™, and Technology Development by Monsanto and Design(SM) are trademarks of Monsanto Technology LLC. Valor® is a registered trademark of Valent U.S.A. Corporation. All other trademarks are the property of their respective owners. ©2010 Monsanto Company. 20100614EJP