



ADDITIONAL MANAGEMENT OPTIONS FOR DELAYED WEED CONTROL IN CORN AND SOYBEAN

What You'll Learn...

- Burndown applications may be delayed due to wet soils or environmental conditions, but are still important even if the typical application window is missed.
- When making a burndown application, be sure to check all herbicide plant-back restrictions.
- Residual herbicides are an important component of delayed planting weed control programs.
- Scout for the tallest weed heights and consult labeled use rates and tank mix partners for proper control.

Burndown Application Timing

Ideally, weeds in future corn and soybean fields should be managed 4 to 6 weeks prior to planting with a burndown tankmix application consisting of a Roundup® brand glyphosate-only agricultural herbicide such as Roundup PowerMAX® or Roundup PowerMAX® II plus dicamba or 2,4-D, and a residual herbicide to allow time for decomposition of plant material. In the event environmental conditions delay an early burndown, an application prior to planting is still important. However, late applications may prevent the use of dicamba or 2,4-D on future soybean acres due to plant-back restrictions.

Refer to the individual herbicide labels for all instructions, including plant-back restrictions.

Herbicide Approach for Late-Planted Corn

Residual herbicides such as Degree Xtra®, Harness® Xtra,

Table 1. Potential tank mix partners for Degree Xtra®, Harness® Xtra, and Harness® Xtra 5.6L.

Tank Mix Herbicide	Application Timing	
	PRE	POST
Roundup® brand glyphosate-only agricultural herbicides	YES	YES*
Accent		YES
Atrazine	YES	YES
Balance® PRO	YES	
Callisto®	YES	YES
Clarity®	YES	YES
Gramoxone® Brand Herbicides	YES	
Princep®	YES	
Prowl® H2O**	YES	
2,4-D	YES	

* Roundup PowerMAX® should only be applied POST on corn with Roundup Ready® 2 Corn technology.
** Prowl® H2O is not identified as a tank mix partner on the Harness® Xtra label.

Harness® Xtra 5.6L, and TripleFLEX® II Herbicide provide control of grasses and small-seeded broadleaves prior to weed emergence. These herbicides can be applied preemergence (PRE) or postemergence (POST) in corn up to 11 inches in height. Warrant® Herbicide also provides control of grasses and small-seeded broadleaves prior to emergence and can be applied POST in corn up to 30 inches in height. Other tank mix active ingredients with these herbicides are generally added for reasons such as issues with large-seeded broadleaves, triazine-resistant weeds, or emerged weeds, especially those that are tough to control or are resistant to glyphosate.

TripleFLEX II Herbicide and Warrant Herbicide may be tank mixed with any other herbicide labeled for use on corn at the appropriate application timing, provided the compatibility of the tank mix is verified by a jar test and tank mixing with them is not prohibited by the label of the tank mix partner. Degree Xtra, Harness Xtra, and Harness Xtra 5.6L can be tank mixed with the tank mix partners listed on the respective labels (Table 1). Always read the label carefully and follow the label instructions.

Carrier Options in Corn

Water or a fluid fertilizer, such as 28% urea ammonium nitrate (UAN), are common carriers. Both carriers are labeled for PRE applications with Degree Xtra, Harness Xtra, and Harness Xtra 5.6L. For POST applications, Harness and Harness Xtra 5.6L must be applied with a water carrier to help minimize the risk of crop injury. Degree Xtra is one of the few residual herbicides that is labeled for POST applications with UAN as a carrier. While this is not the preferred situation, the flexibility of being able to apply nitrogen and weed control POST in corn in one pass can be beneficial. There are restrictions to help minimize crop injury when applying Degree Xtra POST with UAN as a carrier (Table 2). Application rates of Roundup® brand glyphosate-only agricultural herbicides may need to be increased if the carrier is 28% UAN. Do not use 28% UAN as a carrier when making applications of Roundup PowerMAX or Roundup WeatherMAX® for tough-to-control weeds or perennial weeds. Do not mix AMS in fluid fertilizer solutions.

Application requirements and information about tank mix applications for XtendiMax® herbicide with VaporGrip® Technology can be found at the following website:

<http://www.xtendimaxapplicationrequirements.com/>

Please refer to Table 3 for burndown and preplant options for late planted corn and soybean fields.

Table 2. Guidelines for POST application of Degree Xtra herbicide with 28% UAN as a carrier.

- Temperature should not exceed 85 °F within 24 hours of application.
- Some leaf burn may occur.
- See label for specific tank mix restrictions.
- Surfactants, crop oil, or other additives are not recommended unless specified in the tank mix



ADDITIONAL MANAGEMENT OPTIONS FOR DELAYED WEED CONTROL IN CORN AND SOYBEAN

Table 3. Recommendations for late burndown and preplant options for soybean and corn.

Practice	Product	Comments
Roundup Ready® soybeans, Genuity® Roundup Ready 2 Yield® soybeans, or Roundup Ready 2 Xtend® soybeans		
Late Burndown Option 1	Roundup® brand glyphosate-only agricultural herbicides	Start clean. Use full labeled rates of herbicide.
Late Burndown Option 2	Roundup® brand glyphosate-only agricultural herbicides + Sharpen® herbicide*	Apply Sharpen herbicide at 1 oz/acre on soils that are not coarse or have < 2% OM. Sandy soils will require a 30 day plant back restriction.
Preplant*	Roundup® brand glyphosate-only agricultural herbicides or Gramoxone® brand herbicide + Warrant® Herbicide, Warrant® Ultra Herbicide, Rowel® Herbicide, Rowel® FX Herbicide, Fierce®, Fierce® XLT, Valor® EZ, Valor® XLT, Authority® MAXX, Authority® MTZ DF, Authority® Assist, Authority® First DF, or Authority® XL	Use full labeled rates of residual herbicides. Rowel Herbicide, Rowel FX Herbicide, Valor EZ and Valor XLT can be applied immediately prior to planting soybean.
	XtendiMax® herbicide with VaporGrip® Technology	Roundup Ready 2 Xtend soybeans only
Roundup Ready® Corn 2 or Corn with Roundup Ready® 2 Technology		
Burndown	Roundup® brand glyphosate-only agricultural herbicides + dicamba or 2,4-D	Include tillage in some cases
At Planting	Roundup® brand glyphosate-only agricultural herbicides + Harness® brand herbicide, Degree Xtra®, TripleFLEX® II Herbicide, or Warrant Herbicide	Apply at planting. Add Roundup® brand agricultural herbicides to the tank mix if weeds are present.

REFER TO ALL PRODUCT LABELS FOR USE RATES, APPLICATION GUIDELINES, ROTATIONAL CROP, AND ADDITIONAL RESTRICTIONS THAT MAY APPLY. FOR MORE DETAILS ON WEED MANAGEMENT RECOMMENDATIONS AND PRODUCT USE INCENTIVES, CONSULT ROUNDUP READY PLUS® CROP MANAGEMENT SOLUTIONS AT WWW.ROUNDUPREADYPLUS.COM.
* PREPLANT, 5-7 DAYS AFTER BURNDOWN, WARRANT HERBICIDE SHOULD BE APPLIED AT PLANTING. NO MORE THAN TWO APPLICATIONS OF WARRANT HERBICIDE MAY BE APPLIED IN A SINGLE GROWING SEASON. IF USING WARRANT ULTRA HERBICIDE, NO MORE THAN ONE APPLICATION OF WARRANT HERBICIDE MAY BE APPLIED IN A SINGLE GROWING SEASON.

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. **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** technology contains genes that confer tolerance to glyphosate, an active ingredient in **Roundup® brand glyphosate - only agricultural herbicides.** Agricultural herbicides containing glyphosate will kill crops that are not tolerant to glyphosate. Harness® brand products, Rowel® Herbicide, Rowel® FX Herbicide, TripleFLEX® II Herbicide, TripleFLEX® Herbicide, Warrant® Ultra Herbicide, and Warrant® Herbicide are not registered in all states and may be subject to use restrictions. Degree Xtra® and Harness® are restricted use pesticides and are not registered in all states. The distribution, sale, or use of an unregistered pesticide is a violation of federal and/or state law and is strictly prohibited. Check with your local Monsanto dealer or representative for the product registration status in your state. **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. Degree Xtra®, Genuity®, Harness®, Roundup PowerMAX®, Roundup Ready 2 Yield®, Roundup Ready PLUS®, Roundup Ready®, Roundup Ready 2 Xtend®, Roundup Technology®, Roundup WeatherMAX®, Roundup®, Rowel®, TripleFLEX®, VaporGrip®, Warrant® and XtendiMax® are registered trademarks of Monsanto Technology LLC. Gramoxone® is a registered trademark of a Syngenta group company. Authority® is a trademark of FMC Corporation. Some of the product(s) discussed herein are restricted use pesticide(s) and may not be registered in all states. The distribution, sale, or use of an unregistered pesticide is a violation of federal and/or state law and is strictly prohibited. Check with your local dealer or product representative for the product registration status in your state. All other trademarks are the property of their respective owners. ©2017 Monsanto Company. 140507060612 053017LGM