

Post-Harvest Weed Control

Post-harvest weed management can increase long-term control of challenging weed species. After harvest, weeds can continue to germinate and grow, causing management problems the following season. Roundup® brand agricultural herbicides may be applied in the fall as a postharvest stubble treatment for control of perennial and winter annual weeds.

Why spray perennials in the fall?

Cooler temperatures in the fall trigger the movement of nutrient reserves down to the root or storage structures of perennial plants to build up reserves for growth in the following season. A fall herbicide application takes advantage of this increased nutrient flow to the roots, increasing the amount of active ingredient that reaches the plants growing points.



Target Weeds and Application Rates

The following are application and staging recommendations based on the weeds being targeted for a post-harvest application of Roundup WeatherMAX® or Roundup Transorb® HC herbicides:

Target weed	Regrowth required	Rate (L/ac)	Tillage interval	Comments
Canada Thistle	3-4 new green leaves	0.67 – 1.33	Min. 5 days	Use higher rates for larger plants. Ensure adequate regrowth and good environmental conditions.
Dandelion	<6" diameter	0.67 – 1.0	Min. 5 days	Use higher rates for larger plants. Apply pre-bloom to full-flower for best results. Dandelions covered in straw will likely not be controlled.
	>6" diameter	1.0 – 1.33		
Foxtail barley	Look for new growth (new tillers)	0.67 – 1.33	Min. 3 days	Use higher rates for heavy infestations. Control measures may be needed next spring to control seedlings.
Quackgrass	3-4 new green leaves and 6-8" high	0.67 – 1.33	Min. 3 days	Use higher rate on heavy or sod-bound infestations. Best to cut stubble high to ensure enough leaf surface for proper herbicide uptake.
Winter annuals	60% leaf tissue green and actively growing	0.33 – 1.0	Min. 3 days	Fall applications can be more cost effective than spring applications.
Winter annuals include Canada fleabane, flixweed, narrow-leaved hawk's beard, night-flowering catchfly, prickly lettuce, round-leaved mallow, shepherd's purse, stinkweed, storksbill and wild mustard.				
Alfalfa	Min. 8-12" height	1.0 – 1.33	Min. 7 days	Optimum translocation of herbicide to growing points is essential for long-term control. Early fall applications are much better than spring applications.

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Tips for a successful post-harvest application

Here are some tips to help achieve great post-harvest weed control:

Harvest management: Consider cutting stubble high to maximize weed leaf area and to minimize the time it will take for plants to grow to the recommended stage. Also ensure straw and chaff are spread evenly so that proper coverage is obtained on low-growing and smaller weeds.

Ensure adequate regrowth: After harvest, spraying should be delayed until weeds grow back and develop new leaves. For effective control, any weed that is being sprayed post-harvest should be actively growing and have a minimum of 60% green leaf tissue.

Tillage Interval: Under good growing conditions, allow a minimum of 3 days after application before tillage for the herbicide to translocate in the plant as much as possible. Under cool and cloudy conditions plant growth may slow down, so it is recommended to allow more time for translocation of the product to the roots of the weed (up to 10 days).

Water volume: Since there is minimal canopy covering the target weeds, lower water volumes may be used. Roundup brand herbicides are registered for use in 5 to 30 gallons per acre.

Tank Mixing: Perennial weeds are at low risk to develop glyphosate resistance, therefore applying glyphosate alone at post-harvest can be an economical and effective way to control perennial weeds. When targeting heavy populations of winter annuals or late flushing annual weeds that may reach seed-set, consider adding a tank-mix partner like Distinct® or 2,4-D. When selecting a tank-mix partner, verify the product's label for any re-cropping restrictions.

Spraying after a frost

The impact of frost on weed control depends on the length and severity of the freezing temperatures, preceding weather, and the weed species. Generally, from most frost tolerant to least frost tolerant are dandelions, winter annuals, quackgrass, foxtail barley and Canada thistle.

When possible, spray late in the morning or early afternoon when it's warm and plants are most actively growing. Ideally, spray on sunny days. With cool temperatures, stop spraying 2 hours before sunset.

Light frost (0 to -4°C): shouldn't negatively affect perennial or winter annual weed control. Spray if the daytime forecast is a minimum of 8°C for at least 2-4 hours after the application and there is no risk of overnight frost.

Heavy frost (-5°C or colder): wait 1-2 days to assess injury severity; treat only if the majority of target weeds are more than 60% green and show signs of active growth. Spray if the daytime forecast is a minimum of 8°C for at least 2-4 hours after the application and there is no risk of overnight frost.

Summary

A post-harvest Roundup brand agricultural herbicide application is a great strategy for cost effective, long-term perennial and winter annual weed control. So when the window for pre-harvest application has passed, and winter annual and perennial weeds are in your fields, consider a post-harvest application for a head start in the spring.

For technical support, contact Monsanto's CustomCare® line at 1-800-667-4944.

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