

# MANAGEMENT GUIDE FOR MARESTAIL

**This document is intended to provide information about this weed and guidelines for control. As a tough-to-control weed, knowledge about the biology and weed control programs will help in management.**

## Marestail Biology

- ▶ Marestail, also known as horseweed, is found in every state, and is one of the most common weeds in the eastern and central parts of the U.S.
- ▶ Over the past 10 years, marestail has become a more economically important weed problem with the widespread adoption of reduced and conservation tillage systems.
- ▶ Marestail is a winter annual weed that germinates in the fall, but will also emerge in the spring and complete its life cycle in the late spring and summer.
- ▶ Marestail emerges to form a basal rosette, but quickly produces a stem with numerous pubescent leaves that are arranged alternately.
- ▶ Plants produce up to 200,000 tiny seeds that are wind-dispersed over great distances. Up to 80 percent of seeds can germinate immediately after dispersal.<sup>1</sup>
- ▶ Marestail can grow to more than six feet tall.

<sup>1</sup> [www.weeds.cropsci.uiuc.edu](http://www.weeds.cropsci.uiuc.edu)

<sup>2</sup> Heap, I. The International Survey of Herbicide Resistant Weeds. Online. Internet. May 15, 2008. Available [www.weedscience.com](http://www.weedscience.com)



## Weed Environment

- ▶ Marestail is well adapted to no-till crop production, and can quickly spread to many habitats. Marestail is also found along field edges and roadsides and in natural settings like prairies and glades.
- ▶ Marestail is relatively easy to control in the rosette stage and when it is small.
- ▶ Marestail is difficult to control when plants grow beyond the rosette stage of development. As such, marestail has developed resistance to several different herbicide chemistries.
- ▶ Marestail is competitive and can interfere with harvest and reduce crop yield potential.
- ▶ Glyphosate-resistant marestail has been confirmed in several states.<sup>2</sup>

## Treatment Recommendations<sup>1</sup>

Scout fields and control weeds throughout the season. Proper application timing protects yields, ensures correct use rate for weed size and considers the impact of environmental conditions on performance.

### Roundup Ready<sup>®</sup> Soybeans

- ▶ Scout fields before and after each burndown and in-crop application.
- ▶ Start clean with a burndown herbicide or tillage. Tank mix Roundup<sup>®</sup> agricultural herbicides with 2,4-D to control glyphosate resistant marestail.
- ▶ If you have dense stands of marestail or are in a continuous Roundup Ready Soybean rotation, use a residual herbicide such as metribuzin preemergence (Sencor<sup>®</sup>) or flumioxazin (Valor<sup>®</sup>, Valor XLT, Gangster<sup>®</sup>), and where marestail is sensitive to ALS herbicides, add cloransulam (FirstRate<sup>®</sup>).
- ▶ In-crop, apply Roundup WeatherMAX<sup>®</sup> at a minimum of 22 oz/A before marestail exceeds 6 inches in height.
- ▶ Cloransulam (FirstRate) should be tank mixed (in ALS sensitive areas) with Roundup WeatherMAX if applying postemergence to a known glyphosate-resistant marestail population.

### Roundup Ready Corn 2\*

- ▶ Start clean with a burndown herbicide or tillage. Tank mix Roundup agricultural herbicides with 2,4-D to control marestail and other tough-to-control broadleaves.
- ▶ Apply a preemergence residual herbicide such as Harness<sup>®</sup> Xtra, Degree Xtra<sup>®</sup>, or other residual herbicides at the recommended rate.
- ▶ Or apply a preemergence residual herbicide at the recommended rate tank mixed with Roundup WeatherMAX at a minimum of 22 oz/A in-crop before marestail exceeds 4 inches in height.

- ▶ Follow both programs with a postemergence in-crop application of Roundup WeatherMAX at a minimum of 22 oz/A for additional marestail flushes before they exceed 4 inches in height.
- ▶ Tank mix other herbicides such as 2,4-D, dicamba (Clarity<sup>®</sup>, Banvel<sup>®</sup>, Distinct<sup>®</sup> or Status<sup>®</sup>) or Impact<sup>®</sup> with Roundup WeatherMAX if necessary for enhanced postemergence marestail control.

\*Includes corn with Roundup Ready 2 Technology.

### Roundup Ready Flex Cotton and Roundup Ready Cotton

- ▶ Start clean with a burndown herbicide or tillage. Tank mix Roundup WeatherMAX with dicamba (Clarity) or 2,4-D (consult label for plant back timing).
- ▶ Apply preemergence residual herbicide at the recommended rate such as fluometuron (Cotoran<sup>®</sup>), flumioxazin (Valor) or diuron (Direx<sup>®</sup>).
- ▶ In-crop, apply Roundup WeatherMAX at a minimum of 22 oz/A for additional weed flushes.
- ▶ Roundup WeatherMAX may be tank mixed with other herbicides, including fluometuron (Cotoran), diuron (Direx), prometryn (Caparol<sup>®</sup>) or flumioxazin (Valor) and post-directed to control marestail. Observe maximum annual application rates for additional flushes.

## Minimize the Risk of Weed Resistance

- ▶ Start clean and control weeds early.
- ▶ Use Roundup Ready Technology as your foundation.
- ▶ Add other herbicides and cultural practices where appropriate as part of the Roundup Ready Cropping System.
- ▶ Use the right rate at the right time.
- ▶ Control weeds throughout the season and reduce the weed seed bank.

## Rate Your Risk, Know Your Options. [www.weedtool.com](http://www.weedtool.com)

- ▶ Answer 10 field-related questions
- ▶ Get your risk rating score
- ▶ Discover how to lower your risk
- ▶ Learn best practices for reducing general weed resistance risks

## Report incidences of repeated non-performance of any Monsanto branded herbicide to your local Monsanto retailer or call 1-800-ROUNDUP.

<sup>1</sup>This fact sheet is issued to clearly describe use recommendations permitted under FIFRA Section 2(ee) as not being inconsistent with product labeling, or is issued to highlight an approved use from the product labeling. It is a violation of the federal law to use any registered pesticide product in a manner inconsistent with its labeling. Read and follow all precautions and use instructions contained within the labeling. The applicable labeling for all products must be in the possession of the user at the time of application. Some recommended pesticide products are not registered in all states. Check with the product manufacturer or your dealer for products registered in your state. The distribution, sale or use of an unregistered pesticide is a violation of federal and/or state law and is strictly prohibited.

**These recommendations are for all states except Texas.**

ALWAYS READ AND FOLLOW LABEL DIRECTIONS: Roundup Ready<sup>®</sup> crops contain genes that confer tolerance to glyphosate, the active ingredient in Roundup<sup>®</sup> agricultural herbicides. Roundup agricultural herbicides will kill crops that are not tolerant to glyphosate. Harness<sup>®</sup> brands and Degree Xtra<sup>®</sup> 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 Monsanto representative for the product registration in your state. Harness<sup>®</sup>, Degree Xtra<sup>®</sup>, Roundup<sup>®</sup>, Roundup Ready<sup>®</sup> and Roundup WeatherMAX<sup>®</sup> are registered trademarks of Monsanto Technology LLC. All other trademarks are the property of their respective owners.