

Marestail

WEED BIOLOGY

- Marestail, or horseweed, can be found in every state and is one of the most common weeds in the eastern and central regions of the U.S.
- Given the widespread adoption of reduced and conservation tillage systems, marestail has become an economically important weed problem in the past 10 years.
- Marestail produces up to 200,000 tiny seeds that can be spread by the wind over great distances.¹ The seed can easily move as much as one mile through wind dispersal, even traveling distances of 300 miles or more if the seed reaches the planetary boundary level.^{2,3}
- Up to 80% of marestail seed can germinate immediately after dispersal.⁴ As soon as the seed drops from a mature plant, it typically germinates in fall or spring. Under adequate growing conditions, however, it can germinate in mid-summer as well.
- When the marestail plant emerges in the fall, a rosette is formed before overwintering. The weed develops elongated flower stalks in late spring, blooms in mid-July, and produces seed in late summer. Marestail also has simple, alternating leaves, and its stems are erect and unbranched at the plant's base.
- In general, more prevalent marestail populations and problems can be attributed to three factors—reduced tillage, herbicide resistance, and inadequate crop rotation diversity.

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 their management.



Conyza canadensis

WEED ENVIRONMENT

- Marestail is well adapted to no-till crop production, and it can quickly spread to many habitats. Marestail is also found along field edges and roadsides, as well as in natural settings like prairies and glades.
- Consistent marestail control is typically achieved when the weed is small and in the rosette stage.
- Marestail is competitive. It can interfere with harvest and reduce crop yield potential.
- Glyphosate-resistant marestail has been confirmed in several states.⁵

¹ Bhowmik, P. C. and M. M. Bekech. 1993. Horseweed (*Conyza canadensis*) seed production, emergence, and distribution in no-tillage and conventional-tillage corn (*Zea mays*). *Trends Agric. Sci.* 1:67-71.

² Dauer, J. T., D. A. Mortensen, and M. J. VanGessel. 2007. Temporal and spatial dynamics of long-distance *Conyza canadensis* seed dispersal. *J. Appl. Ecol.* 44:105-114.

³ Shields, E. J., J. T. Dauer, M. J. VanGessel, and G. Neumann. 2006. Horseweed (*Conyza canadensis*) seed collected in the planetary boundary layer. *Weed Sci.* 54:1063-1067.

⁴ www.weeds.cropsci.uiuc.edu.

⁵ Heap, I. The International Survey of Herbicide Resistant Weeds. Online. Internet. April 15, 2011. Available www.weedscience.com

TREATMENT RECOMMENDATIONS

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® AND GENUITY® ROUNDUP READY 2 YIELD® SOYBEANS

- Scout fields before and after each burndown and in-crop application.
- Start clean with a burndown herbicide or tillage. Tank-mix Roundup® agricultural herbicides with dicamba to control glyphosate-resistant marestail. (Consult label for plant back timing.)
- Apply a preemergence residual herbicide containing flumioxazin (Valor®, Valor® XLT, Gangster®) or sulfentrazone (Authority® First, Authority® Assist, Authority® XL, Authority® MTZ). Where marestail is sensitive to ALS herbicides, add cloransulam (FirstRate®).
- In-crop, apply Roundup PowerMAX® at a minimum of 22 oz/A before marestail exceeds 4" in height.
- Cloransulam (FirstRate®) should be tank-mixed in ALS-sensitive areas with Roundup PowerMAX® 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 dicamba to control marestail and other tough-to-manage broadleaves.
- Apply a preemergence residual herbicide, such as TripleFLEX™ or other residual herbicides, at the recommended rate.
- Or, apply a preemergence residual herbicide containing atrazine (Harness® Xtra, Degree® Xtra) at the recommended rate, tank-mixed with Roundup PowerMAX® at a minimum of 22 oz/A in-crop before marestail exceeds 4" in height.
- Follow both programs with a postemergence in-crop application of Roundup PowerMAX® at a minimum of 22 oz/A for additional marestail flushes before they exceed 4" in height.
- Tank-mix other herbicides, such as 2,4-D, dicamba (Clarity®, Banvel®, Distinct®, Status®), or topramezone (Impact®) with Roundup PowerMAX® if necessary for enhanced postemergence marestail control.

† Includes corn with Roundup Ready® 2 Technology.

ROUNDUP READY® AND GENUITY® ROUNDUP READY® FLEX COTTON

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



MINIMIZE THE RISK OF WEED RESISTANCE

- *Apply integrated weed management principles. Use multiple modes-of-action with overlapping weed spectrums in rotation, sequences, or mixtures.*
- *Use the full recommended herbicide rate and proper application timing for the hardest-to-control weed species in the field.*
- *Scout fields after herbicide application to ensure control has been achieved. Avoid allowing weeds to reproduce by seed or to proliferate vegetatively.*
- *Monitor site and clean equipment between sites.*

RATE YOUR RISK, KNOW YOUR OPTIONS. WWW.WEEDTOOL.COM

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