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Horseweed -- A weed on the rise

Robert G. Hartzler
Iowa State University, hartzler@iastate.edu

Micheal D. Owen
Iowa State University, mdowen@iastate.edu

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Abstract
Horseweed is one of many winter annuals that has increased across Iowa with the adoption of no-till and a string of mild winters. Horseweed (Conyza canadensis) is a member of the Composite (sunflower) family and is also referred to as marestail. Recently, horseweed has gained considerable notoriety as being the first weed to develop resistance to glyphosate in Roundup Ready® cropping systems, and glyphosate resistance has been reported throughout the eastern United States.

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Horseweed is one of many winter annuals that has increased across Iowa with the adoption of no-till and a string of mild winters. Horseweed (*Conyza canadensis*) is a member of the Composite (sunflower) family and is also referred to as marestail. Recently, horseweed has gained considerable notoriety as being the first weed to develop resistance to glyphosate in Roundup Ready® cropping systems, and glyphosate resistance has been reported throughout the eastern United States. While glyphosate resistance in horseweed in Iowa hasn’t been confirmed, we would not be surprised if there are horseweed populations in the state where glyphosate will not provide effective control. Resistance to ALS herbicides is also fairly common with horseweed in the Corn Belt.

Horseweed is generally considered a winter annual, but like most successful weeds, there is considerable diversity within the population. Research at Iowa State University in the mid-’90s found that 5 to 32 percent of total emergence occurred in the spring, with the remainder occurring in late summer or early fall. Winter survival ranged from 59 to 91 percent. The extended emergence of horseweed is a primary factor contributing to its weediness. Plants that emerge in the fall may begin to bolt (elaboration of stem) prior to planting and application of burndown herbicides. Once bolting initiates, horseweeds’ tolerance to glyphosate and other herbicides greatly increases. The addition of 2,4-D to glyphosate will improve the consistency of control in fields where stem elongation has occurred at the time of herbicide application.

Fall (top) and spring (bottom) germinating horseweed plants in mid-April. (Bob Hartzler)

Detailed information on the biology and management of horseweed is provided in a regional extension bulletin available on the Internet at [http://www.btmy.purdue.edu/weedscience/marestail/ID-323%20HorseWeed.pdf](http://www.btmy.purdue.edu/weedscience/marestail/ID-323%20HorseWeed.pdf).

Bob Hartzler and Mike Owen are professors of agronomy and weed science extension specialists with responsibilities in weed management.