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'Early' Early-spring Weed Management

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Abstract
The unusually warm weather may create additional weed challenges this spring. Winter annuals in no-till fields will likely accumulate much more biomass prior to planting than normal and therefore use more soil moisture, tie up more nutrients and potentially interfere with planting and crop establishment. In addition, weeds such as horseweed (mares-tail) will grow more rapidly and reach growth stages that are difficult to control much sooner than in a “normal” spring.

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Early Early-spring Weed Management

by Bob Hartzler and Mike Owen, Department of Agronomy

The unusually warm weather may create additional weed challenges this spring. Winter annuals in no-till fields will likely accumulate much more biomass prior to planting than normal and therefore use more soil moisture, tie up more nutrients and potentially interfere with planting and crop establishment. In addition, weeds such as horseweed (marestail) will grow more rapidly and reach growth stages that are difficult to control much sooner than in a “normal” spring.

Due to these potential problems, applications of burndown herbicides in early April may be beneficial and improve the control of winter annual and early spring annual weeds. An additional benefit of earlier application dates for the burndown is minimizing the risk of including 2,4-D at the higher rates (i.e. 2 pts/A of LV-4) in the program. Of course, there is the important assumption that planting dates are not moved proportionally earlier.

Many farmers will want to include preemergence herbicides with these early spring burndown treatments. While this may provide a clean seedbed at planting and crop emergence, the longevity of weed control is likely to be shortened significantly. The magnitude of this reduction will depend on the time period and weather encountered between application and planting, and the herbicide rate. The rates of many preemergence products have been reduced due to the reliance on postemergence products, primarily glyphosate. If applications are going to be made a few weeks earlier than normal, carefully evaluate the product rates in order to maximize the contribution of the preemergence herbicide(s) to residual weed control after crop emergence.

Preemergence herbicides are a key component of herbicide resistance management. But to be effective, they need to be used in a manner that results in significant control of the target species. Very early applications of preemergence herbicides or reduced rates will greatly reduce their effectiveness on late-emerging weeds such as waterhemp, or large-seeded species such as giant ragweed. Many products specify split applications where a portion of the product is applied early and a remainder is applied at, or shortly after planting. This approach could be beneficial this year where an extended period of weed control may be needed due to early applications resulting from prevailing weather conditions.
Winter annuals are likely to be a greater problem in no-till fields this spring.

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