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Controlling Large Weeds - Do You Feel Lucky?

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Controlling Large Weeds - Do You Feel Lucky?

Abstract

The heavy rains across the state have made timely postemergence weed control difficult, even in fields treated with preemergence herbicides. This leads to questions as to what can be done to insure control of weeds larger than specified on herbicide labels. Keep in mind that if there was a way to improve the consistency of a herbicide on large weeds, the manufacturer probably would have included that practice on the label. This article will focus on managing large waterhemp in soybean, but many of the principles are the same with other weeds.

Keywords

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ICM News

Controlling Large Weeds - Do You Feel Lucky?

July 7, 2014

By Bob Hartzler, Department of Agronomy

The heavy rains across the state have made timely postemergence weed control difficult, even in fields treated with preemergence herbicides. This leads to questions as to what can be done to insure control of weeds larger than specified on herbicide labels. Keep in mind that if there was a way to improve the consistency of a herbicide on large weeds, the manufacturer probably would have included that practice on the label. This article will focus on managing large waterhemp in soybean, but many of the principles are the same with other weeds.

The occurrence of waterhemp resistant to Group 2 (ALS inhibitors) and Group 9 (glyphosate) herbicides greatly complicates waterhemp management. The remaining effective postemergence options for waterhemp are the Group 14 herbicides aciflourfen, fomesafen and lactofen. These three herbicides are very similar in their performance on

waterhemp when applied at equivalent rates. They are contact herbicides that require application to small waterhemp (maximum of 6 leaves) for consistent control. While application to weeds beyond the size restriction is not a violation of the label, the manufacturer is not responsible for performance.

One approach to enhance performance is to add multiple herbicides (herbicide cocktails, witches' brews, etc.) to the spray tank in the hope an additive or synergistic response will improve performance. Unfortunately, products registered for use in soybean (e.g. Cadet, 2,4-DB, any Group 2 herbicide) that can be added to a Group 14 herbicide have minimal activity on waterhemp, thus little or no benefit exists in using these mixes in terms of improving waterhemp control. The addition of these products may, however, help control other weeds on which they have good activity, such as velvetleaf. Remember, a combination of multiple herbicides can increase the likelihood of significant crop injury compared to the products individually.

Improve coverage of the target

The tactic with the greatest likelihood of improving control of large weeds is to adjust the sprayer to improve coverage of the target. Steps to consider include

- 1) Higher spray volumes,
- 2) Slower tractor speeds,
- 3) Nozzles that produce a smaller range of droplet sizes, and
- 4) Lower boom height.

Another consideration is the impact late applications may have on the selection of new herbicide resistant biotypes. Large weeds that survive these applications have essentially been treated with a sub-lethal herbicide dose, the same process as when below-labeled rates are used. This has been shown to contribute to resistance evolution within weed populations.

Although many people have had success at killing weeds larger than specified on the label, the variability in herbicide performance increases rapidly with increasing weed size. Weigh the cost of the application and the potential for crop injury against the likelihood of successfully controlling the weeds. It is never easy to concede to weed control failures, but in certain situations it is necessary to recognize that an effective chemical control option is not available.



Bob Hartzler is a professor of agronomy and weed science extension specialist with responsibilities in weed management and herbicide use. He can be reached at hartzler@iastate.edu or 515-294-1164

Category: Weeds

Crops:

Corn

Soybean

Tags: Weeds waterhemp waterhemp resistant
herbicide application

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