Late-Season 2,4-D Treatments in Corn

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

Follow this and additional works at: http://lib.dr.iastate.edu/cropnews

Part of the Agricultural Science Commons, Agriculture Commons, and the Agronomy and Crop Sciences Commons

Recommended Citation
http://lib.dr.iastate.edu/cropnews/842

The Iowa State University Digital Repository provides access to Integrated Crop Management News for historical purposes only. Users are hereby notified that the content may be inaccurate, out of date, incomplete and/or may not meet the needs and requirements of the user. Users should make their own assessment of the information and whether it is suitable for their intended purpose. For current information on integrated crop management from Iowa State University Extension and Outreach, please visit https://crops.extension.iastate.edu/.
Late-Season 2,4-D Treatments in Corn

Abstract
Weeds that escape control not only impact crop yields but also produce seeds that contribute to future problems. While it is too late to protect crop yields from weed-related losses, in some situations the quantity of weed seed that is produced can be reduced. Historically, 2,4-D applications in corn have been the most popular late-season treatments. The effectiveness of these applications is dependent upon the sensitivity of the weed to the herbicide and the maturity of the weed seed at the time of application.

Keywords
Agronomy

Disciplines
Agricultural Science | Agriculture | Agronomy and Crop Sciences

This article is available at Iowa State University Digital Repository: http://lib.dr.iastate.edu/cropnews/842
Late-Season 2,4-D Treatments in Corn

August 17, 2015

Weeds that escape control not only impact crop yields but also produce seeds that contribute to future problems. While it is too late to protect crop yields from weed-related losses, in some situations the quantity of weed seed that is produced can be reduced. Historically, 2,4-D applications in corn have been been the most popular late-season treatments. The effectiveness of these applications is dependent upon the sensitivity of the weed to the herbicide and the maturity of the weed seed at the time of application.
Photo. Label recommendations vary on corn stage for late-season 2,4-D treatments.

Both 2,4-D esters and amines are labeled for late-season applications in corn. Labels vary in the recommended timing - some products state to apply after all silks have turned brown, whereas other state to apply after the hard dough stage (dent). Application rates also vary among products. There is a 7-day pre-harvest interval for 2,4-D in corn.

The effectiveness of these treatments in reducing seed production varies among species based on the timing of weed seed maturation. Iowa State research conducted in the 1980s showed that 2,4-D was much more effective at reducing cocklebur seed production than velvetleaf because cocklebur initiated seed production at a later date than velvetleaf. If seed has been initiated at the time of application the benefit of this type of treatment in preventing seed production will be reduced. Similar results have been reported for late-season applications of glyphosate.

The relative stages of maturity of crops and weed is likely to vary from field to field. The only way to determine the potential benefit of late-season herbicide applications is to examine the inflorescences of the weeds for the presence of seeds. Research has shown that the majority of seeds that have filled at the time of application will remain viable even if the mother plant is killed prematurely by the herbicide.
Bob Hartzler

Bob Hartzler is a Professor of Agronomy and an Extension Weed Specialist. Hartzler conducts research on weed biology and how it impacts the efficacy of weed management programs in corn and soybean. He also teaches undergraduate classes in weed science and weed iden...