

6-14-1999

Balance injury on corn

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Recommended Citation

Hartzler, Robert G.; Owen, Micheal D.; and Pringnitz, Brent A., "Balance injury on corn" (1999). *Integrated Crop Management News*. 2119.

<http://lib.dr.iastate.edu/cropnews/2119>

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Balance injury on corn

Abstract

We have received a number of telephone calls concerning Balance injury on corn. Most fields treated with Balance do not have problems; however, a small percentage of fields has experienced crop injury. The western and southwestern regions of Iowa have the most reports, but complaints have come from across the state. Symptoms range from minor yellowing or complete bleaching of plants to significant stand loss that requires replanting. Any impact on roots would be a secondary response due to inhibition of the photosynthetic capability of the plant.

Keywords

Agronomy

Disciplines

Agricultural Science | Agriculture | Agronomy and Crop Sciences | Weed Science

INTEGRATED CROP MANAGEMENT

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[1] **Balance herbicide injury to corn.**

Corn normally tolerates Balance by metabolizing the herbicide to nontoxic compounds before it accumulates to toxic concentrations. Any factor that increases the amount of Balance absorbed by the corn seedling or reduces the rate that corn metabolizes the herbicide will increase the potential for injury. The primary factor increasing the Balance injury was the prolonged wet and cloudy weather following corn planting. This weather placed the corn under a great deal of stress, thereby reducing its ability to metabolize the herbicide. During this period of relative metabolic inactivity, Balance was absorbed by the corn but there was limited expression of injury due to slow corn growth. When the weather improved, the corn resumed growth but did not have sufficient resources to effectively metabolize the Balance; thus, the injury appeared shortly after arrival of warm temperatures.

The injury has usually been patchy within fields, indicating the contribution of other stress factors. Areas of sprayer overlap are often easy to detect due to the presence of white corn in areas receiving a 2X rate. Injury may be more severe in low-organic-matter areas or coarse soils due to greater herbicide availability. Other factors that could contribute to injury include poor drainage, shallow planting, or failure to close the seed furrow. In many fields, the injury was only slight and corn has begun to recover. However, there are a few fields where recovery is unlikely.

The impact of Balance injury on yield potential will vary from field to field. If discoloration of foliage is short lived and no stand loss is observed, it is unlikely that there will be yield loss. If there is stand reduction and if corn remains white or discolored for an extended period, the greater the potential for yield loss. Unfortunately, there is no way to predict the exact corn response in these situations.

This article originally appeared on pages 99-100 of the IC-482(14) -- June 14, 1999 issue.

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