Corn Response to Postemergence Treatments

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Abstract
Much of the state has experienced below normal temperatures along with wet soils the past few weeks. These conditions not only slow the growth of corn, it also alters plant development. Corn is likely to be more responsive to herbicides under these conditions. We are seeing an increased response to postemergence herbicides. This is likely due to changes in the cuticle that allow greater movement of chemicals from the leaf surface into the leaf.

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Corn Response to Postemergence Treatments

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Much of the state has experienced below normal temperatures along with wet soils the past few weeks. These conditions not only slow the growth of corn, it also alters plant development.

Corn is likely to be more responsive to herbicides under these conditions. We are seeing an increased response to postemergence herbicides. This is likely due to changes in the cuticle that allow greater movement of chemicals from the leaf surface into the leaf.

In some situations, the response appears to be primarily due to the additives in the spray mix rather than actual herbicide. Symptoms associated with additives (surfactants, AMS, etc.) include chlorotic mottling or necrosis of leaves, and are likely to be short-lived with no negative impact on crop development. Herbicides with a lower margin of crop safety are more likely to induce a negative response under these weather conditions.

On the positive side, activity on weeds should be excellent. In nearly all situations the risk of crop injury is less than the benefits achieved with timely weed control.

An example of non-specific leaf burn.

Bob Hartzler is a professor of weed science with extension, teaching and research responsibilities. He can be contacted by email at hartzler@iastate.edu or phone (515) 294-1164.