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UAN and Herbicides on Emerged Corn

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

John E. Sawyer
Iowa State University, jsawyer@iastate.edu

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Abstract
Prolonged wet periods often disrupt the normal sequence of field operations. Some fields may be planted before nitrogen and/or pre-emergence herbicides are applied. While UAN (urea-ammonium nitrate) and many pre-emergence products can be applied to emerged corn, using UAN as a herbicide carrier enhances the foliar activity of products and may result in foliar damage. Check herbicide labels for restrictions on use of UAN as a carrier.

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UAN and Herbicides on Emerged Corn

By Bob Hartzler and John Sawyer, Department of Agronomy

Prolonged wet periods often disrupt the normal sequence of field operations. Some fields may be planted before nitrogen and/or pre-emergence herbicides are applied. While UAN (urea-ammonium nitrate) and many pre-emergence products can be applied to emerged corn, using UAN as a herbicide carrier enhances the foliar activity of products and may result in foliar damage. Check herbicide labels for restrictions on use of UAN as a carrier.

UAN alone can be applied to emerged corn, and the risk of injury to the corn is dependent upon UAN rate, corn stage and weather conditions. Conservative suggestions are to limit postemergence applications of UAN to 90 lb N/acre when corn is at the V3 to V4 stage and to 60 lb N/acre at the V7 stage. Applications beyond the V7 stage are not recommended, and the risk of injury increases during hot, dry conditions.

The combination of herbicides with UAN greatly enhances the foliar activity of these products and poses a real threat of killing all emerged tissue contacted by the spray.

Some might try to rationalize this combination if the corn is at the VE-V1 stage since the growing point is still underground. While corn often can recover quickly from loss of the shoot at this growth stage, the herbicide may influence the plant's ability to recover and therefore result in uneven plant size and yield loss.

Bob Hartzler is a professor of agronomy with extension, teaching and research responsibilities. John Sawyer is professor with research and extension responsibilities in soil fertility and nutrient management.