



NEWS COLUMN

UNIVERSITY OF ILLINOIS EXTENSION
Fayette County
118 North Sixth Street
Vandalia, IL 62471
618/283-2753

News source: Aaron Hager, 217-333-4424, hager@illinois.edu

News writer: Jennifer Shike, 217-244-0888, jshike@illinois.edu

Delays in Weed Control Prior to Planting Pose Challenges

URBANA – Wet field conditions are doing more than delaying corn planting across much of Illinois; they are creating substantial growth of various weed species. Aaron Hager, University of Illinois Extension weed specialist, offers suggestions for improving the performance of preplant weed control tactics.

“Preplant tillage operations can effectively control existing vegetation while preparing a seedbed,” Hager said. “However, as weeds become larger, the effectiveness of tillage to control weeds before planting can be reduced.”

Dense stands of certain winter annual weeds, such as common chickweed, can “ball up” in a field cultivator. Stems of larger common lambsquarters plants bent over but not completely severed from the roots during tillage may spring back upright in a c-shaped or s-shaped configuration.

“While the winter annual weeds not completely controlled by preplant tillage eventually will complete their life cycles, summer annual weeds that survive preplant tillage are often much more difficult to control with herbicides applied after crop emergence,” he added. “Reduced weed control may also occur when fields are slightly wet during the preplant tillage operation. Soil disturbance may not be as extensive when soils are retaining moisture, and clods are more likely to be formed. Weeds sometimes take root again after tillage when soil disturbance is inadequate and soil moisture is abundant.”

As winter annual weed species approach maturity, they can become increasingly difficult to control with herbicides. Hager recommends adjusting the rate of burndown herbicides upward to account for the large and dense vegetation.

Glyphosate application rates (alone or tankmixed with other herbicides) should be in the 1–1.5 lb ae/A range to control the large vegetation. Include AMS at 8.5–17 lb/100 gallons of spray solution and apply in sufficient carrier to ensure good coverage of the dense vegetation. It is advisable to add the full recommended rate of AMS under these challenging conditions, he said.

2,4-D is frequently used in burndown tankmixes prior to corn or soybean planting. Both the amine and ester formulations are labeled for applications prior to planting, but the ester formulation is usually preferred over the amine formulation, he said.

“The low water solubility of an ester reduces the potential for it to be moved into the soil by precipitation, where it could cause severe injury to seedlings,” Hager said. “Also, the ability of esters to better penetrate the waxy leaf surfaces of weeds often results in better control of large weeds and better overall weed control during periods of cool air temperatures.”

The labels of many 2,4-D ester formulations (3.8 lb acid equivalent per gallon) allow applications of 1–2 pints per acre 7 to 14 days prior to planting corn. In addition to waiting intervals, labels sometimes indicate that tillage operations should not be performed for at least 7 days after application, and that the seed furrow must be completely closed during the planting operation or severe crop injury may result, he said.

“Factors that increase the likelihood of the growth regulator herbicide coming in direct contact with the crop seed increase the probability of severe crop injury,” Hager said. “If you intend to plant before the labeled interval will elapse, leave out the growth regulator from the burndown application and replace it with another herbicide and/or increase the rate of the non-selective herbicide, if possible.”

Hager warns producers to be cautious about which herbicide alternative they include with glyphosate. Contact herbicides can sometimes antagonize glyphosate, especially on large weeds. Alternatively, improved performance of nonselective contact herbicides used for burndown, such as paraquat or glufosinate, can be realized when other contact herbicides, such as metribuzin or atrazine, are tankmixed with them.

Glyphosate-resistant populations of horseweed (marestail) and waterhemp occur across many areas of Illinois and can be present prior to corn or soybean planting. Failure to adequately control these glyphosate-resistant populations before planting could lead to significant challenges after the crop has emerged, especially in soybean where very few alternative postemergence herbicide options exist, he said.

“Tankmix partners with glyphosate or alternative herbicides will be needed to control glyphosate-resistant weeds prior to crop planting,” Hager said. “More tankmix partners or alternative herbicide options are possible before planting than after planting.”

Products containing the active ingredient saflufenacil (Sharpen, OpTill, Verdict) have demonstrated good burndown control of horseweed. Saflufenacil-containing products should be tankmixed with another broad-spectrum herbicide such as glyphosate, and MSO should be included, he said.

For more information about weeds and other crop-related information, read *The Bulletin* at <http://bulletin.ipm.illinois.edu/>.