

Herbicides Effect Cover Crop Establishment

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Iowa farmers planted an estimated 500,000 cover crop acres last year, and although that record number is expected to increase in 2016, many of those farmers struggle to find a foolproof way to get consistent cover crop establishment.

Lack of rainfall and cool temperatures are cover crop growth obstacles which can't be controlled, but one thing that can be controlled is choosing the right herbicide this spring to reduce potentially injuring cover crops in the fall.

"What herbicide you choose this spring will definitely have an effect on success with cover crops in the fall," said Barb Stewart, state agronomist with USDA's Natural Resources Conservation Service in Des Moines. "In most cases there is a short time period between cover crop planting date and the onset of cooler fall temperatures, which increases the risk that herbicides pose to cover crops."

According to Iowa State University's "Effect of Residual Herbicides on Cover Crop Establishment" (Hartzler and Anderson, Feb. 20, 2015), the threat posed by herbicide to cover crop establishment is determined by:

- the chemical's half-life and availability in the soil,
- sensitivity of cover crop species,
- herbicide application rate and date, and
- environmental conditions throughout the growing season.

Hartzler and Anderson conducted greenhouse experiments of five cover crop species evaluating several herbicides commonly used in Iowa corn and soybean production. Radishes tended to be the most sensitive cover crop evaluated, while cereal rye was the most tolerant to herbicides.

Stewart says livestock producers who use cover crops for livestock forage should also consider restrictions on labels of herbicides used earlier in the growing season.

Iowa State University's "Herbicide Use May Restrict Grazing Options for Cover Crops" (CROP 3082, December 2015) includes tables that list herbicide products that allow the establishment of cover crops for grazing or forage harvest during the same cropping season as application.

For more information about herbicide use and cover crops, refer to:

- ["Effect of Residual Herbicides on Cover Crop Establishment,"](#) Iowa State University Extension
- ["Herbicide Use May Restrict Grazing Options for Cover Crops,"](#) Iowa State University Extension
- ["Herbicide Rotation Restrictions in Forage and Cover Crop Cropping Systems,"](#) University of Wisconsin Extension