

CropWatch

Nebraska crop production & pest management information

April 17, 2013

Weeds are Emerging: Recommendations for Pre-plant and Pre-emergence Weed Control

Precipitation in the last few weeks has provided enough moisture for weed seeds to germinate. Several summer annual weed species in Nebraska emerge early in the season prior to planting corn and soybean and need to be controlled before they become too large.

Of particular concern are kochia and giant ragweed, as we believe there are numerous populations in Nebraska that glyphosate will not control. We have observed significant kochia and giant ragweed emergence in the past two weeks in some of our research plots, and have heard reports of emergence from multiple areas of the state. If growers have had difficulty with kochia or giant ragweed in the last few years, every effort should be made to control these populations with an effective burndown application or tillage prior to planting. Based on observations in our giant ragweed research studies the previous two years, we have not had success controlling glyphosate-resistant giant ragweed with any herbicide program not containing 2,4-D as a component of a burndown application. If you apply 2,4-D prior to planting, be sure to adhere to the planting interval specified on the label.

Some other common weed species that emerge early in the season in Nebraska fields are common chickweed, dandelion, field pennycress, henbit, marestail, tansy mustard, and Virginia pepperweed.

Developing a Successful Early Season Weed Management Program

Profitable crop production starts with a weed control program that includes pre-plant and/or pre-emergence herbicides to deliver long-lasting, residual weed control. A spring burndown program in corn and soybean provides effective weed control to prepare for planting and helps to decrease the seedbank during the season.



Figure 1. Kochia seedling (*Photo by Amit Jhala*)



Figure 2. Emerging giant ragweed in a field near Clay Center. (**Photo by Irvin Schleufer**)

Early season weed competition can greatly reduce yields and profits.

Burndown

Several studies have shown that if weeds grow to 9 inches, soybean yield can be reduced by as much as 6%; 12-inch weeds can result in up to a 10% yield loss. In corn, 12-inch weeds could cause 22% yield loss when left uncontrolled. Among the herbicides registered for spring burndown weed control are:

- **Corn:** 2,4-D, atrazine, Balance Flexx, Corvus, dicamba, glyphosate, Landmaster II, Lexar, and Sharpen
- **Soybean:** registered spring burndown herbicides include 2,4-D, Authority First, glyphosate, Gramoxone, Pursuit, and Sharpen.

Pre-emergence

The pre-emergence (residual) herbicide protects the crop with early, effective, and lasting weed control to help maximize yields, regardless of the production system. In addition, including pre-emergence herbicides can minimize the post-emergence herbicide applications and protect against early-season weed competition when weather or busy schedules prohibit a timely post-emergence application. Among the herbicides registered for pre-emergence weed control are:

- **Corn:** Aatrex, Balance Flexx, Corvus, Degree Extra, Fierce, Lumax, Outlook, Surestart, Tripleflex, Warrant, and Zemax
- **Soybeans:** Authority MTZ, Boundry, Command, Dual II Magnum, Envive, Optill, Pursuit, Prowl H2O, Valor XLT, and Warrant.

Always read and follow herbicide label directions.

For More Information

For a list of all registered burndown and residual herbicides see the [2013 Guide for Weed Management \(EC130\)](#) published by University of Nebraska-Lincoln.

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