

Control of Canada Thistle in Corn

Steve D. Ruhl, Agriculture and Natural Resources Extension Agent
Jeff Stachler, Horticulture and Crop Sciences Extension Associate

Objective

To evaluate the effect of several different herbicides on the control of Canada thistle in corn.

Background

| | | | |
|----------------|--|----------------|------------------------------|
| Cooperator: | Tom Weiler | Fertilizer: | 211-52-162 at planting |
| County: | Morrow | Herbicides: | PRE: Dual II Magnum 1.3 pt/A |
| Nearest town: | Chesterville | | Aatrex 2.0 lb/A |
| Soil Type: | Centerburg silt loam | Hybrid: | Superior 109A |
| Previous Crop: | Soybeans | Row Width: | 30 inches |
| Drainage: | Systematically tiled | Planting Date: | April 28, 2001 |
| Soil Test: | pH 6.0, P 11 ppm, K 113 ppm, CEC 11 | Planting Rate: | 30,200 seeds/A |
| | | Harvest Date: | October 22, 2001 |

Methods

The Canada thistle pressure in the study was moderate. Five herbicide treatments and an untreated check were replicated four times in a randomized complete block design. Plot size was 10 feet wide by 40 feet in length. The treatments were applied postemergence on June 8, 2001, with a carbon-dioxide-pressurized backpack sprayer. The sprayer had an output of 20 gallons per acre at 30 pounds of pressure. The corn was 10 inches tall and at the five-collar stage at time of application. The Canada thistle plants were 10 to 12 inches tall and mostly in the early bud stage. Canada thistle control was visually evaluated on June 26, 2001, (18 days after treatment) on a scale of 0 (no control) to 100% (complete plant death).

Results

Table 1. Visual Evaluation of Control of Canada Thistle in Corn

| Herbicide Treatments ^a | Rate | Canada Thistle Control ^{bc} (%) | Cost ^d (\$ /A) | Total Cost (\$/A) |
|-----------------------------------|------------|--|---------------------------|-------------------|
| Distinct 76.4DF | 4.0 oz/A | | 8.96 | |
| NIS | 0.25 % v/v | 77 ab | 0.8 | 10.05 |
| UAN | 1.25 % v/v | | 0.29 | |
| Distinct 76.4 DF | 6.0 oz/A | | 13.44 | |
| NIS | 0.25 % v/v | 82 ab | 0.8 | 14.53 |
| UAN | 1.25 % v/v | | 0.29 | |
| Hornet 78.5 DF | 5.0 oz/A | | 20.88 | |
| NIS | 0.25 % v/v | 83 ab | 0.8 | 22.26 |
| UAN | 2.5 % v/v | | 0.58 | |

| | | | | |
|----------------|------------|--------|-------|-------|
| Hornet 78.5 DF | 5.0 oz/A | | 20.88 | |
| Stinger 3L | 4.0 oz/A | 90 a | 16.25 | 38.51 |
| NIS | 0.25 % v/v | | 0.8 | |
| UAN | 2.5 % v/v | | 0.58 | |
| Laddok S-12 5L | 2.33 pt/A | | 13.77 | |
| COC | 1.0 % v/v | 69 b | 1.52 | 16.21 |
| UAN | 4.0 % v/v | | 0.92 | |
| LSD (0.05) | | 14.4 | | |
| F-test | | 2.75 | | |
| CV | | 11.70% | | |

^a All treatments applied at 20 gallons per acre and 30 pounds per square inch.

^b Treatments means followed by the same letter are not significantly different.

^c Weed control was visually evaluated on June 26.

^d All herbicide and adjuvant costs listed in the table were the 2001 in-season retail prices.

Summary and Notes

Hornet (5.0 oz/A) plus Stinger (4.0 oz/A) provided significantly greater Canada thistle control compared to Laddock S-12 (2.33 pt/A). All other treatments provided similar control. The Laddock S-12 burned off most of the thistle tissues shortly after application, but regrowth had occurred before rating. Distinct (4.0 oz/A) was the cheapest herbicide program to control Canada thistle at \$10.05/A. Each of these treatments will be evaluated in the spring of 2002 for root control to determine their long-term effectiveness.

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For additional information, contact:

Steve Ruhl
The Ohio State University Extension
ruhl.1@osu.edu