

Weed Control and Crop Response in Roundup Ready Canola

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The study was conducted at the NDSU Carrington Research Extension Center on a loam soil with a 7 pH and 3.3% organic matter. Roundup Ready canola 'DKL223' was seeded April 23, 2003 into 6-inch rows at 5 lb/A. Individual plots were 10 ft by 25 ft and arranged in a randomized complete block design with four replications. Herbicide treatments were applied with a CO₂ pressurized hand-held plot sprayer at 10 gal/A and 22 psi through XR80015 flat fan nozzles. EPOST herbicides were applied on May 21 with 49° F, 61% RH, 100% cloud cover, 9 mph wind, and 49° F soil temperature to 2-leaf canola, cotyledon redroot pigweed, cotyledon common lambsquarters, and 1-leaf green and yellow foxtail. MPOST herbicides were applied on May 26 with 61° F, 49% RH, 0% cloud cover, 8 mph wind, and 55° F soil temperature to 3- to 4-leaf canola, cotyledon to 1.5-inch redroot pigweed, cotyledon to 1.5-inch common lambsquarters, and 2-leaf green and yellow foxtail. LPOST herbicides were applied on May 31 with 58° F, 46% RH, 0% cloud cover, 8 mph wind, and 58° F soil temperature to 5- to 6-leaf canola, 1.5- to 2.5-inch redroot pigweed, 1.5- to 2.5-inch common lambsquarters, and 2- to 3-leaf green and yellow foxtail. The canola was harvested on August 11.

All herbicide applications provided greater than 97% redroot pigweed and common lambsquarters control when evaluated June 30 (Table). Green and Yellow foxtail control ranged from 75-88% at the EPOST timing, 92-99% at the MPOST timing, and 98-100% at the LPOST timing when evaluated June 30. None of the herbicides tested caused any visible crop injury (data not shown). Canola seed yield was similar among treatments, likely due to low weed densities.