

Canada thistle control at Rosemount MN - 1996 to 1997. Becker, Roger L. The objective of this study was to determine the effect of various 2,4-D formulations alone and tank-mixed with other herbicides on Canada thistle control. The experiment was conducted in a low lying, established pasture at Rosemount, MN. The area was mowed during the summer of 1996. The experimental design was a randomized complete block with three replications. Plot size was 8 ft x 20 ft. Herbicide treatments were applied on September 18, 1996 to the center 6 ft of each plot with a backpack type sprayer delivering 20 gpa at 35 psi with 11002 nozzles. Air temperature was 69 degrees and soil temperature was 51 degrees. Soil moisture conditions were dry. Two to three days prior to application, a heavy frost occurred, causing frost damage to varying degrees. Rep I was damaged the most with 50% to 90% of the thistle foliage damaged with occasional plants totally damaged. Injury in Reps II (5% to 15%) and III (10% to 25%) was considerably less and was localized to the upper parts of the thistle plants. Control was rated on July 29, 1997. Ratings are presented on a per Rep basis and as the average over Reps.

Control the year following application showed considerable variability related to frost damage before application the preceding fall. This resulted in a relatively large LSD ($p=0.05$) of 36. Picloram or clopyralid showed the best control of Canada thistle. Significant differences between 2,4-D treatments were not apparent owing to this large LSD. Trends showed the addition of clopyralid to 2,4-D increased control Canada thistle. The addition of picloram to 2,4-D did increase Canada thistle control.

Table. Canada thistle control at Rosemount, MN - 1996 to 1997. (Becker).

Treatment	Rate (lb/A)	% Control			
		Rep I	Rep II	Rep III	Average
Hi-Dep 2,4-D	1.0	30	45	5	27
Hi-Dep 2,4-D	2.0	40	35	50	42
Weedar 64 2,4-D	1.0	25	35	5	22
Weedar 64 2,4-D	2.0	35	55	5	32
Hi-Dep 2,4-D + clopyralid	1.0 + 0.12	35	60	55	50
Weedar 64 2,4-D + clopyralid	1.0 + 0.12	20	95	55	57
Hi-Dep 2,4-D + dicamba	1.0 + 0.125	40	50	40	43
Weedar 64 2,4-D 2,4-D + dicamba	1.0 + 0.125	35	50	35	40
Dicamba	0.125	40	5	80	42
2,4-D & clopyralid ¹	1.0 & 0.19	35	40	95	57
2,4-D & clopyralid	1.5 & 0.27	60	95	50	68
Metsulfuron	0.0075	40	40	20	33
Weedone LV4 2,4-D	1.0	35	35	25	32
Weedone 638 2,4-D	1.0	45	20	5	23
Picloram + Hi-Dep 2,4-D	0.125 + 1.0	90	75	95	87
Picloram + Hi-Dep 2,4-D	0.25 + 1.0	95	95	30	73
Clopyralid	0.25	85	95	45	75
LSD (0.05)					36

¹ Premix = Curtail 2.38.