

Canada Thistle Control with Combinations of Milestone Plus Overdrive at Scottsbluff during the 2006 and 2007 Growing Season.

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A field study was initiated near Scottsbluff, Nebraska to compare Milestone in combination with Overdrive for Canada thistle control. Overdrive is composed of a combination of dicamba (55%) plus diflufenzopyr (21.4%). The experimental design was a randomized complete block with three replications. Plots were 11 feet wide by 25 feet long and were located on a sandy loam soil with pH of 7.8 and organic matter of 4.3%. Treatments were applied to Canada thistle that was actively growing and was in the early bud growth stage. Herbicides were applied with a backpack sprayer calibrated to deliver 20 gallons of water per acre at 36-psi pressure with Spraying Systems 11002 VS nozzles. Environmental conditions at the time of herbicide application are given in Table 1.

One of the objectives of this experiment was to determine if Overdrive or diflufenzopyr would act as a synergist and improve the effectiveness of Milestone or Tordon for Canada thistle control. Milestone alone at 0.046 lb/acre provided 99% Canada thistle control 515 days after treatment (Table 2). The addition of Overdrive or diflufenzopyr to Milestone at 0.046 lb/acre or Tordon at 0.25 lb/acre did not significantly increase Canada thistle control.

Table 1. Environmental Conditions at the Time of Herbicide Application.

Date	Air temperature (F)	Humidity (%)	Wind speed & direction (mph)	Time of day	Canada thistle growth stage
May 18, 2006	45	25	calm	9:00 am	early bud

Rainfall before and after herbicide application

Date	Amount - (inches) -	Date	Amount - (inches) -	Date	Amount - (inches) -
April 1 to 30	0.71	May 23	0.20	May 30	0.52
May 1 to 9	0.50	May 28	0.10		

Table 2. Canada Thistle Control with Combinations of Milestone Plus Overdrive at Scottsbluff during the 2006 Growing Season.

Herbicide treatment ¹	Rate	Nebraska sedge injury	Canada thistle control			
			2006		2007	
			6/15	9/21	5/17	10/15
	lb/acre		----- (%) -----			
Nontreated	—	0	0	0	0	0
Milestone + Activator 90	0.046	5	80	96	99	99
Milestone + Overdrive + Activator 90	0.046 + 0.0468	10	78	93	96	91
Milestone + Overdrive + Activator 90	0.046 + 0.1170	8	77	97	99	99
Milestone + Overdrive + Activator 90	0.046 + 0.2925	12	80	96	99	99
Milestone + Diflufenzopyr + Activator 90	0.046 + 0.0094	8	82	96	99	99
Milestone + Diflufenzopyr + Activator 90	0.046 + 0.0188	12	77	99	99	99
Milestone + Diflufenzopyr + Activator 90	0.046 + 0.0781	12	87	98	99	99
Milestone + Diflufenzopyr + Activator 90	0.046 + 0.1170	5	77	98	99	99
Milestone + 2,4-D amine + Activator 90	0.046 + 0.4690	3	75	98	99	99
Overdrive + Activator 90	0.262	5	40	17	46	69
Milestone + Activator 90	0.1094	3	93	97	99	99
Tordon 22K + Activator 90	0.25	5	92	96	99	99
Tordon 22K + Diflufenzopyr + Activator 90	0.25 + 0.10	22	88	95	99	99
Tordon 22K + Activator 90	0.5	0	93	98	99	99
Transline + Activator 90	0.375	0	88	83	97	99
Curtail + Activator 90	2.470	17	88	88	93	99
LSd at 5%		13	20	6	17	20