

Control of Winter Annual Weeds in the First Cutting of Established Roundup-Ready Alfalfa.

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A field study was conducted near Scottsbluff, Nebraska during the 2008 and 2009 growing seasons to compare different herbicides applied in the fall of 2008 for weed control in 2009. 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 1.3% organic matter and a pH of 8. Roundup-Ready alfalfa was established in the spring of 2006. Herbicides were applied on October 21, 2008 after alfalfa had been exposed to freezing temperatures. Herbicides were applied with a tractor-mounted sprayer calibrated to deliver 20 gallons per acre at 32-psi pressure with Spraying Systems 11002 VS nozzles. Environmental conditions at the time of treatment were as follows: air temperature 55 F, humidity 67%, and wind at 2 mph out of the SE. Downy brome and tansy mustard were emerged at the time of herbicide treatment.

Alfalfa injury was evaluated on November 4, 14 days after treatment, combinations of Chateau plus Roundup Weather Max, Chateau plus Sencor, Velpar, and Sencor caused moderate alfalfa injury (Table 1). The following spring only Velpar was still causing alfalfa injury. Excellent downy brome and tansy mustard control was achieved with Chateau plus Roundup Weather Max, Chateau plus Sencor, Velpar, and Sencor. First cutting forage yield was not influenced by herbicide treatments.

Table 1. Control of Winter Annual Weeds in the First Cutting of Roundup-Ready Alfalfa.

Treatment ¹	Alfalfa					Weed control 4/29/09	
	Rate	Visual injury ²		Stand/93 sq ft 7/1/09	First cutting yield at 12% moisture 7/1/09 ³	Downy brome	Tansy mustard
		11/4/08	4/29/09				
	(lb/acre)	----- (%) -----				----- (%) -----	
Nontreated	--	0	0	38	3.4	0	0
Chateau WDG	0.125	4	0	41	3.7	70	75
Chateau + Roundup Weather Max + AMS	0.125 + 0.75	25	0	40	3.4	96	99
Chateau + Sensor	0.125 + 0.25	28	0	35	3.2	96	99
Treflan	4.0	9	0	38	3.6	86	99
Prowl H ₂ O	3.8	0	0	35	3.9	73	96
Velpar	0.5	30	8	38	3.3	99	99
Sencor	0.5	24	0	38	3.8	99	99
Pursuit + X77	0.094	0	0	37	3.5	86	99
LSD at 5%	--	7	2	5	NS	17	13

¹Herbicide treatments applied on October 21, 2008, alfalfa had suffered moderate frost damage at the time of treatment, ammonium sulfate (AMS) added at 17 lb/100 gallons of water and nonionic surfactant (X77) at 0.25% v/v.

²Visual alfalfa injury evaluated on a scale from 0 to 100 with 0 equal to no injury and 100 equal to death of the plant.

³Alfalfa was harvested from a 45 inch wide by 25 foot long strip through the center of each plot on July 1.