POSTEMERGENCE DOWNY BROME CONTROL IN ALFALFA

Corey V. Ransom and Joey K. Ishida
Malheur Experiment Station
Oregon State University
Ontario, Oregon, 1999

Purpose

Downy brome is competitive with alfalfa, reducing alfalfa yield and quality. Postemergence grass herbicides are registered for use in alfalfa and may provide downy brome control. A trial was established to evaluate different rates of Select alone, combinations of Select plus Pursuit, and Poast plus Pursuit for downy brome control and crop tolerance.

Procedures

The trial was conducted on a commercial field with a uniform infestation of downy brome. General management practices were carried out by the cooperator. Plots were 10 ft wide by 30 ft long. Treatments included two rates of Select (0.125 lb ai/acre and 0.188 lb ai/acre) applied alone and in combination with pursuit, and Poast plus Pursuit. All treatments included a crop oil concentrate (COC). Treatments were replicated three times in a randomized complete block design. Applications were made when alfalfa and downy brome were about 5 in tall on April 16. Herbicide treatments were applied with a CO_2-pressurized backpack sprayer delivering 20 gpa at 30 psi. Plots were evaluated 14, 21, 28,and 42 days after treatment (DAT) for crop injury and weed control. Visual ratings included the percent of alfalfa plants injured and percent of weeds controlled. Hay yields were not taken.

Results

Alfalfa was not injured by any treatment (Table 1). For all evaluation dates, treatments with Select controlled downy brome significantly better than Poast plus Pursuit. On May 13, downy brome control with Poast plus Pursuit was 50 percent, but by May 28 control had dropped to 7 percent. Select at 0.188 lb ai/acre provided greater downy brome control than Select at 0.125 lb ai/acre on May 13 and 28. On May 28, Select (0.188 lb ai/acre) alone or in combination with Pursuit provided among the highest downy brome control with 83 and 77 percent, respectively.

Table 1. Alfalfa injury and downy brome control in established forage alfalfa, Malheur Experiment Station, Oregon State University, Ontario, Oregon, 1999.

		Alfalfa injury				Downy brome control			
Treatment†	Rate	4-30	5-7	5-13	5-28	4-30	5-7	5-13	5-28
	lb ai/acre	----------	----------	----------	----------	%	----------	----------	----------
Select	0.125	0	0	0	0	57	71	77	63
Select	0.188	0	0	0	0	60	78	87	83
Select + Pursuit	0.125 + 0.09	0	0	0	0	57	65	75	62
Select + Pursuit	0.188 + 0.09	0	0	0	0	58	73	82	77
Poast + Pursuit	0.280 + 0.09	0	0	0	0	27	32	50	7
Untreated	0	0	0	0	0	0	0	0	0
LSD (0.05)		NS	NS	NS	NS	7	12	9	20

†COC (1.0 qt/acre) was added to all treatments.