POSTEMERGENCE DOWNY BROME AND QUACKGRASS CONTROL IN ALFALFA

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Introduction

Downy brome and quackgrass compete with alfalfa, reducing alfalfa yield and quality. Postemergence grass herbicides are registered for use in alfalfa and may provide downy brome and quackgrass control. A trial was established to compare Select to Poast and evaluate Select plus Pursuit for crop tolerance and downy brome and quackgrass control.

Methods

The trial was conducted on a commercial field with a uniform infestation of downy brome and quackgrass near Nyssa, Oregon. General management practices were carried out by the cooperator. Plots were 10 ft wide by 30 ft long. Treatments included Select at 0.125 lb ai/acre applied with and without ammonium sulfate (AMS) at 2.5 lb/acre, Poast at 0.19 lb ai/acre with and without AMS, and Select (0.125 lb ai/acre) plus Pursuit (0.063 lb ai/acre). All treatments included a crop oil concentrate (COC) at 1.0 qt/acre. Treatments were replicated three times in a randomized complete block design. Applications were made when alfalfa and grasses were 5 - 6 inches tall on April 17. Herbicide treatments were applied with a CO_2-pressurized backpack sprayer delivering 20 gal/acre at 30 psi. Plots were evaluated 11 and 22 days after treatment (DAT). 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 both evaluation dates, Select plus AMS and COC controlled downy brome and quackgrass significantly better than any other treatment. On April 28, downy brome control was similar with Select and COC (20 percent), Select plus Pursuit and COC (24 percent), and Poast plus AMS and COC (23 percent). By May 9, downy brome control for these three treatments increased to 58, 68, and 59 percent, respectively. On May 9, Select plus AMS and COC provided 85 percent downy brome control and 79 percent quackgrass control. Poast and COC 22 DAT rated 0 percent for both downy brome and quackgrass.

Table 1. Alfalfa injury and downy brome and quackgrass control in established forage alfalfa, Malheur Experiment Station, Oregon State University, Ontario, OR, 2001.

		Alfalfa injury		Downy brome		Quackgrass	
Treatment*	Rate	4-28	5-9	4-28	5-9	4-28	5-9
	lb ai/acre	----------	----------	%----------	----------	----------	----------
Select	0.125	0	0	20	58	16	55
Select + AMS	0.125	0	0	35	85	31	79
Select + Pursuit	0.125 + 0.063	0	0	24	68	24	60
Poast	0.19	0	0	6	0	9	0
Poast + AMS	0.19	0	0	23	59	20	54
Untreated	--	0	0	0	0	0	0
LSD (0.05)		NS	NS	7	6	4	6

*COC (1.0 qt/acre) was added to all treatments. AMS was applied at 2.5 lb/acre.