

Control of Medusahead and Cheatgrass on Central Oregon Rangelands Using Outrider[®] and Roundup[®] Pro Alone and in Combination, 2006

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Abstract

Annual grassy weeds medusahead (*Taeniatherum caput-medusae*) and cheatgrass (*Bromus tectorum*) are capable of crowding out bunchgrasses, leaving rangelands with little feed for cattle and more prone to devastating fires and soil erosion. The herbicides Outrider[®] and Roundup[®] Pro, applied alone and in combination, were evaluated for control of these weeds compared to Plateau[®] and an untreated check. Combinations of Outrider plus Roundup Pro provided greater control than either product alone, but did not outperform Plateau. Increasing rates of Outrider appeared to increase efficacy.

Introduction

Medusahead (*Taeniatherum caput-medusae*) is a Category B noxious weed on the Jefferson County Weed Control List for containment. It is predominant on millions of acres of semi-arid rangeland in the Pacific Northwest. It is extremely competitive, crowding out all other vegetation on infested rangeland, including such undesirable species as cheatgrass or downy brome (*Bromus tectorum*). Medusahead and cheatgrass often out compete bunch grasses that stabilize the soil and provide feed for cattle and other grass feeders. In addition, medusahead and cheatgrass dramatically increase the fuel load, creating hotter, more destructive range and forest fires.

Methods and Materials

Outrider[®] (Monsanto) herbicide at three rates and Roundup[®] Pro (Monsanto) herbicide at two rates were evaluated alone and in combination. These treatments were compared to the industry standard Plateau[®] (BASF Ag Products) and an untreated check. Treatments were applied across four replications in randomized complete blocks on November 11, 2005 and January 24, 2006 with a CO₂-pressurized hand-held boom sprayer outfitted with TeeJet 8002 nozzles on a 9-ft boom operated at 40 psi and applying 20 gal/acre water. Plots were evaluated for percent control of the annual grassy weeds medusahead and cheatgrass on May 5 and June 23, 2006.

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Results and Discussion

Treatments applied January 24 generally outperformed those applied November 11 (Table 1). None of the Outrider and Roundup Pro treatments provided greater control of the annual grasses medusahead and cheatgrass than Plateau, while all treatments suppressed the annual grasses compared to the untreated plots. Outrider and Roundup Pro in combination provided better control than either product alone, with a trend for greater control with increased rates of Outrider.

Table 1. Percent control of medusahead and cheatgrass near South Junction, Oregon, 2005-2006.

Treatment ¹	Rate	-----Application date-----			
		November 11, 2005		January 24, 2006	
		-----Evaluation date-----		-----Evaluation date-----	
		May 5, 2006	June 23, 2006	May 5, 2006	June 23, 2006
Plateau ²	8 fl oz	88.8 a ³	96 a	98.3 a	98 a
Outrider	1.60 oz				
Roundup Pro	12 fl oz	78.8 ab	88.8 ab	97.5 ab	95.8 a
Outrider	1.33 oz				
Roundup Pro	12 fl oz	70 abc	81.3 abc	97.3 ab	96.8 a
Outrider	1.07 oz				
Roundup Pro	12 fl oz	67.5 abc	76.3 bcd	96.5 ab	97.3 a
Outrider ²	1.33 oz	57.5 bcd	66.3 cd	87.5 bc	76.3 b
Outrider ²	1.07 oz	50 cd	27.5 d	82.5 c	76.3 b
Outrider ²	1.60 oz	50 cd	63.8 cd	52.5 d	40 c
Roundup Pro	12 fl oz	40 de	32.5 e	35 e	28.8 d
Roundup Pro	16 fl oz	25 e	26.3 e	32.5 e	15 e
Untreated	----	0 f	0 f	0 f	0 f

¹Plateau = imazapic 2 lb ae/gal, Outrider = sulfosulfuron 75 DG, Roundup Pro = glyphosate 3 lb ae/gal.

²Treatment included a non-ionic surfactant at 0.25 percent V/V.

³Mean separation with LSD at $P \leq 0.05$.