

# **Control of Medusahead and Cheatgrass on Central Oregon Rangelands with Landmark, Matrix, Plateau and Journey, 2006-2007**

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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. Four herbicides considered to have the best potential for use in this situation include Landmark, Matrix, Plateau and Journey. These products were evaluated at 3 locations. First year results indicate excellent control for all four herbicides at 2 locations, with more moderate control for Matrix and Plateau at the third.

## **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, also known as downy brome (*Bromus tectorum*). Medusahead and cheatgrass often out-compete bunchgrasses that stabilize the soil and provide feed for cattle and other grass feeders. In addition, medusahead and cheatgrass dramatically increase the fuel load, which can result in hotter, more destructive range and forest fires.

## **Methods and Materials**

The four herbicides, Landmark, Matrix, Plateau and Journey were evaluated at 3 locations in central Oregon. Plots were 10 ft by 25 ft replicated 4 times in a randomized complete block design. Treatments were applied at South Junction and near Antelope on November 17 and west of Madras on Belmont Lane December 1, 2006. The weed mix at South Junction and near Antelope was predominantly medusahead, with cheatgrass dominant west of Madras. Application equipment was a CO<sub>2</sub>-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 medusahead or cheatgrass on May 23 at South Junction, May 30 west of Madras and June 22, 2007 near Antelope.

## **Results and Discussion**

All herbicide treatments provided near 100% control of medusahead at South Junction and cheatgrass west of Madras, with more modest control of medusahead at the site near

Antelope. Visual evaluations will be conducted during the spring of 2008 to determine longevity of herbicidal activity.

Notes were taken concerning the broadleaf weed spectrum missed by each of the herbicides. At South Junction and west of Madras Landmark and Matrix did not appear to control prickly lettuce (*Lactuca serriola*), but appeared to control some Western Salsify (*Tragopogon dubius*) near Antelope. Plateau and Journey seemed to control prickly lettuce at South Junction, but along with Matrix did not control Western Salsify at South Junction and Antelope.

Table 1. Percent control of medusahead and cheatgrass near South Junction, Antelope and west of Madras, Oregon 2006-2007.

Treatment <sup>1</sup>	Rate of product	3 Locations		
		South Junction	Antelope	West of Madras
		Applied November 17	Applied November 17	Applied December 1
Landmark <sup>2</sup>	0.75 oz	100 <sup>3</sup>	96.25	100
Landmark <sup>2</sup>	1.0 oz	100	100	100
Landmark <sup>2</sup>	1.5 oz	100	100	100
Matrix <sup>2</sup>	4.0 oz	100	78.75	100
Plateau <sup>2</sup>	6.0 fl oz	99.75	56.25	100
Journey	2.0 pt	100	100	100
Untreated	---	0	0	0

<sup>1</sup>Landmark = sulfometuron 50% + chlorsulfuron 25%, Matrix = rimsulfuron 25%,

Plateau = imazapic 2 lb ae/gal, Journey = imazapic 0.75 lb ae/gal + glyphosate 1.5 lb ae/gal

<sup>2</sup>Treatment included a silicon surfactant at 0.25% v/v

<sup>3</sup>Mean separation with LSD at  $P \leq 0.05$ .