

## **Ventenata and downy brome control in winter wheat**

Drew Lyon, Steven Van Vleet, Brianna Cowan, Rod Rood and Henry Wetzel

A field study was conducted on the Bob Goldsworthy Farm near Thornton, WA to evaluate ventenata and downy brome control in winter wheat. The field was rod-weeded twice prior to planting and seeded with 90 lb/acre of 'Madsen' winter wheat on September 30, 2013 using a conventional John Deere 455 drill with 7.5-inch row spacing. Seeding depth was 1.5 to 2 inches. Liquid fertilizer was applied prior to seeding at a rate of 90, 20 and 15 lb/acre of N:P:S. The soil at this site is a Palouse silt loam with a pH of 5.4 and 2.7% organic matter. Post-plant, pre-emerge (PRE) herbicide applications were applied on October 2, 2013 using a CO<sub>2</sub> backpack sprayer set to deliver 15 gpa at 26 psi and 3 mph. Conditions were an air temperature of 55°F, relative humidity of 51% and the wind out of the east at 1 mph. At the time of application, only about half of the wheat had emerged and was at the 1-leaf stage. No weeds were present. A late fall application (fallPOST) of PowerFlex<sup>®</sup> HL was made using the same sprayer specifications mentioned above on November 1, 2013 when wheat was at the 3-leaf stage and about 4 inches tall. Conditions were an air temperature of 45°F, relative humidity of 71% and the wind out of the south at 3 mph. Ventenata and downy brome were 1 to 1.5 inches tall and had 2 to 3 leaves. On April 7, the spring applications (spPOST) were applied using the same sprayer specifications. The wheat was tillered and 8 inches tall. The air temperature was 55°F, relative humidity was 53% and the wind was out of the southeast at 6 mph. Plots were harvested on August 18 using a Kincaid 8XP combine.

Downy brome and ventenata control ratings were made when each species was heading, which is usually the best time to evaluate control. All herbicide treatments provided excellent control of ventenata. It does not appear that ventenata will be difficult to control in winter wheat. However, ventenata often grows in association with downy brome and not all treatments provided good control of downy brome. The best control of downy brome was achieved with fall or spring applications of PowerFlex HL and spring-applied Osprey<sup>®</sup>. These same treatments also resulted in some of the best grain yields, which suggests that downy brome may have been more competitive with the wheat crop than ventenata.

Ventenata and downy brome control in winter wheat.

			May 23	June 29	August 18
			Downy brome	Ventenata	
Treatment	Rate <sup>a</sup>	Timing <sup>b</sup>	control	control	Yield
	oz pr/a		-----%-----		bu/a
Axiom <sup>®</sup>	10	PRE	55	100	36
Zidua <sup>®</sup>	1.25	PRE	53	97	39
Zidua	1.25	PRE	70	93	34
Sencor <sup>®</sup>	1.8	PRE			
Axiom	10	PRE	47	100	44
Axial <sup>®</sup> XL	16.4	spPOST			
Axiom	10	PRE	78	100	37
Discover <sup>®</sup> NG	16	spPOST			
MSO	*	spPOST			
Zidua	1.25	PRE	53	100	54
Axial XL	16.4	spPOST			
Zidua	1.25	PRE	82	100	37
Discover NG	16	spPOST			
MSO	*	spPOST			
Axial XL	16.4	spPOST	55	100	53
Discover NG	16	spPOST	53	100	44
MSO	*	spPOST			
PowerFlex HL	3.5	spPOST	100	100	62
NIS	**	spPOST			
UAN	***	spPOST			
Osprey	4.75	spPOST	100	100	54
NIS	**	spPOST			
UAN	***	spPOST			
PowerFlex HL	3.5	fallPOST	97	100	58
NIS	**	fallPOST			
UAN	***	fallPOST			
Nontreated Check	--	--	--	--	24
LSD (5%)			ns	ns	ns

<sup>a</sup> MSO, NIS and 32% UAN applied at 0.25% v/v, 0.5% v/v and 3.33% v/v, respectively

<sup>b</sup> Treatments were applied PRE, fallPOST and spPOST on October 2 and November 1, 2013 and April 7.

Some of the pesticides discussed in this presentation were tested under an experimental use permit granted by WSDA. Application of a pesticide to a crop or site that is not on the label is a violation of pesticide law and may subject the applicator to civil penalties up to \$7,500. In addition, such an application may also result in illegal residues that could subject the crop to seizure or embargo action by WSDA and/or the U.S. Food and Drug Administration. It is your responsibility to check the label before using the product to ensure lawful use and obtain all necessary permits in advance.