

## **Evaluation of Everest® 2.0 for the control of rattail fescue in direct-seeded winter wheat**

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A field study was conducted at Wolf Farms near Uniontown, WA to generate rattail fescue control data with Everest 2.0 in winter wheat. Rattail fescue is a significant problem in direct-seed systems.

The soil at this site is a Athena silt loam with 4.8% organic matter and a pH of 4.4. WB1529 was seeded at a rate of 98 lb seed/A on September 25, 2015 with a direct-seed Cross Slot® drill with row openers on 12-inch centers. Fall fertility consisted of 60:30:20 lb/A of nitrogen:phosphorus:sulfur. Spring fertility consisted of 30 lb nitrogen and 1 lb phosphorus per acre. An early spring post emergence application took place on March 21<sup>th</sup> with a CO<sub>2</sub>-powered backpack sprayer set to deliver 10 gpa at 42 psi at 2.3 mph. Conditions were an air temperature of 55°F, relative humidity of 43% and the wind out of the SE at 5 mph. Wheat growth stage was variable, anywhere from 3-leaf to fully tillered. Rattail fescue distribution was not uniform across the trial area. Rattail fescue ranged anywhere from four leaves to four tillers. A typical spring post-emergence application took place on April 18<sup>th</sup> with a CO<sub>2</sub>-powered backpack sprayer set to deliver 10 gpa at 42 psi at 2.3 mph. Conditions were an air temperature of 73°F, relative humidity of 30% and the wind out of the NE at 5 mph. Wheat growth stage was anywhere from fully tillered to first joint detected and plant height was 4 to 17 inches. The high variability in wheat size and development was due to incomplete fall emergence resulting from dry soil conditions in the fall of 2015. Rattail fescue ranged anywhere from two to eight tillers.

No crop injury was observed among all treatments evaluated. Eleven hours after the treatments were applied on March 21<sup>th</sup>, rain began to fall and the trial received 1.26 inches of precipitation through the 22<sup>nd</sup>. The initial rating on May 5<sup>th</sup> suggested that Everest 2.0 + PowerFlex® HL (0.98 fl oz + 1.0 oz/A) and Everest 2.0 + ARY-0922-001 (0.98 fl oz + 0.31 oz/A) that were applied on March 21<sup>st</sup> were providing the best control. However, on the final rating of June 27<sup>th</sup>, there were no significant differences among treatments, but these two treatments were the only ones that provided commercial acceptable, although only fair, control of rattail fescue. Yield data was not collected within the trial area.

Treatment	Rate	Application Date	Rattail fescue control		
			5/5	5/24	6/27
	fl oz/A		-----%		
Nontreated Check	--	--	--	--	--
Everest 2.0 <sup>1</sup>	0.98	3/21	57 b-d <sup>2</sup>	49 a	46 a
Everest 2.0	0.98	4/18	57 b-d	59 a	40 a
Everest 2.0 + Audit <sup>®</sup> 1:1	0.98 + 0.6 oz	3/21	50 cd	15 a	27 a
Everest 2.0 + Audit 1:1	0.98 + 0.6 oz	4/18	57 b-d	62 a	42 a
Everest 2.0 + PowerFlex HL	0.98 + 1 oz	3/21	74 ab	59 a	66 a
Everest 2.0 + PowerFlex HL	0.98 + 1 oz	4/18	62 b-d	65 a	40 a
Everest 2.0 + PowerFlex HL	0.98 + 0.5 oz	3/21	65 bc	37 a	45 a
Everest 2.0 + PowerFlex HL	0.98 + 0.5 oz	4/18	66 bc	54 a	45 a
Everest 2.0 + ARY-0922-001	0.98 + 0.31 oz	3/21	85 a	77 a	77 a
Everest 2.0 + ARY-0922-001	0.98 + 0.31 oz	4/18	55 cd	70 a	52 a
Everest 2.0 + ARY-0922-001	0.98 + 0.15 oz	3/21	62 b-d	44 a	49 a
Everest 2.0 + ARY-0922-001	0.98 + 0.15 oz	4/18	59 b-d	72 a	56 a
PowerFlex HL	2 oz	3/21	45 d	45 a	46 a
PowerFlex HL	2 oz	4/18	60 b-d	56 a	32 a

<sup>1</sup> All treatments were tank mixed with 0.25% v/v NIS and 1.0 lb AMS/A

<sup>2</sup> Means, based on four replicates, within a column, followed by the same letter are not significantly different at P = 0.05 as determined by LSMEANS test, which means that we are not confident that the difference is the result of treatment rather than experimental error or random variation associated with the experiment.

**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.**