

Rattail Fescue Control in Winter Wheat with Anthem[®] Herbicide

Field studies were conducted at the Palouse Conservation Field Station near Pullman, WA to evaluate rattail fescue control in winter wheat with Anthem herbicide (pyroxasulfone + fluthiacet). One of the study sites had heavy rattail fescue populations, but the wheat stand was very inconsistent. The other site had a nice, uniform stand of winter wheat, but very light rattail fescue populations. Both sites received the same treatments on the same day. Rattail fescue control was evaluated at the site with heavy rattail fescue populations and winter wheat response to the treatments was evaluated at the site with a uniform wheat stand. On October 22, 2012 the pre-plant incorporated (PPI) treatment was applied with a CO₂ backpack sprayer set to deliver 10 gpa at 35 psi and 3 mph. The treatment was immediately incorporated using a spike-tooth harrow run in two directions. 'AP-700' winter wheat was planted at a rate of 117 pound per acre on October 23, 2012 using a Horsch drill with 12-inch row spacing. The following day, the preemergence (PRE) treatments were applied with the previously used CO₂ backpack sprayer. Fall postemergence (fallPOST) treatments were applied on November 16, 2012 and spring postemergence (spPOST) treatments were applied on May 3, 2013 using the same equipment and rates. The soil at both sites was a silt loam with 4.2% organic matter and a pH of 5.0. The experimental design at both sites was a randomized complete block with four replications. The trial was harvested for grain yield on August 20, 2013.

Anthem herbicide provided excellent control of rattail fescue at all rates and application times used in the study. PowerFlex (pyroxsulam), which served as the competitive standard, provided poor control of rattail fescue. The only crop injury observed in the study was necrotic leaf spotting caused by the spring POST application of Cadet herbicide (fluthiacet). Wheat plants quickly recovered from this injury. Grain yields, however, did appear to be negatively affected by all but one of the Anthem treatments. This suggests that further work is needed to refine rates and applications times with Anthem to reduce the risk of grain yield loss in winter wheat. The level of rattail fescue control provided by Anthem herbicide is encouraging.

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.

Rattail fescue control in winter wheat with Anthem[®] herbicide.

Treatment	Rate oz/a	Timing	13-May-13		10-Jun-13	20-Aug-13
			Crop injury	Rattail fescue control	Rattail fescue control	Grain yield
			-----%-----			bu/a
Anthem	5	PRE	0	100	98	92.1
Anthem	6.5	PRE	0	98	97	93.0
Anthem	8	PRE	0	100	100	97.5
Anthem	6.5	PPI	0	90	93	97.4
Anthem	5	PRE	0	95	97	100.2
PowerFlex	2.5	fallPOST				
NIS	0.25% v/v	fallPOST				
AMS	17 lb/100 gal	fallPOST				
Anthem	6.5	PRE	10	100	100	90.1
Cadet	0.75	spPOST				
2,4-D Amine	12	spPOST				
Clarity	2	spPOST				
NIS	0.25% v/v	spPOST				
AMS	17 lb/100 gal	spPOST				
PowerFlex	3.5	fallPOST	0	60	48	106.4
NIS	0.25% v/v	fallPOST				
AMS	17 lb/100 gal	fallPOST				
Nontreated check			0	0	0	107.4
LSD (5%)*			0	23	27	9.3

*Treatment differences less than the LSD value are not considered significant because we do not feel confident that the difference is due to the treatment rather than to experimental error or random variation associated with the experiment.