

Pre/Post systems for mixed grass species control in winter wheat

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A field study was conducted at the Palouse Conservation Field Station near Pullman, WA to generate grassy weed control data in winter wheat. The objective was to evaluate fall, fall plus spring, or spring treatments and their effects on grassy weed control.

The soil at this site is a Thatuna silt loam with 3.9% organic matter and a pH of 4.6. Pre-plant herbicide applications were made on October 24, 2014 using a CO₂ backpack sprayer set to deliver 10 gpa at 2.3 mph and 40 psi. Conditions were an air temperature of 55°F, relative humidity of 70% and the wind out of the SE at 5 mph. 'ARS-Amber' winter wheat was seeded on October 27th at a rate of 62 lb/acre using a Monosem precision air seed drill with 10-inch row spacing at a depth of 1.5 inches. Soils were dry and hard at planting which resulted in a range of seeding depth from 0.5 to 1.5 inches. Starter fertilizer was applied at a rate of 100 lb N/acre from urea. Spring post-emerge herbicides were applied on March 30, 2015 under calm conditions, relative humidity at 52%, and air temperature at 61°F. Wheat was at the 1- to 4-tiller stage and was 6 inches tall.

Jointed goatgrass and wild oats were not uniformly distributed in the plot area, which resulted in a large variance and an inability to detect treatment differences. There were no significant differences among test weight or yield (data not shown) in relation to the herbicide treatments. The average test weight and yield were 48 lb/bu and 64 bu/a, respectively.

				June 12, 2015	
				Wild	Jointed
				Oat	Goatgrass
Treatment	Rate	Application	Application	Control	Control
	fl oz/A	Date	Description	(0 to 100)	(0 to 100)
Nontreated Check				--	--
Anthem [®] Flex	3	10/24/2014	Pre-plant	87 a ¹	17 a
Anthem Flex	3	10/24/2014	Pre-plant	97 a	23 a
Axial [®] XL	16.4	3/30/2015	Wheat 2-tillers detected		
Anthem Flex	3	10/24/2014	Pre-plant	97 a	48 a
Everest [®] 2.0	1	3/30/2015	Wheat 2-tillers detected		
Audit [®] 1:1	0.4 oz/a	3/30/2015	Wheat 2-tillers detected		
NIS	0.25% v/v	3/30/2015	Wheat 2-tillers detected		
AMS	1.0 lb/a	3/30/2015	Wheat 2-tillers detected		
Anthem Flex	3	10/24/2014	Pre-plant	95 a	35 a
PowerFlex [®] HL	2.0 oz/a	3/30/2015	Wheat 2-tillers detected		
NIS	0.25% v/v	3/30/2015	Wheat 2-tillers detected		
AMS	1.0 lb/a	3/30/2015	Wheat 2-tillers detected		
Everest 2.0	1	3/30/2015	Wheat 2-tillers detected	77 a	27 a
NIS	0.25% v/v	3/30/2015	Wheat 2-tillers detected		
AMS	1.0 lb/a	3/30/2015	Wheat 2-tillers detected		
Everest 2.0	1	3/30/2015	Wheat 2-tillers detected	50 a	37 a
Audit 1:1	0.4 oz/a	3/30/2015	Wheat 2-tillers detected		
NIS	0.25% v/v	3/30/2015	Wheat 2-tillers detected		
AMS	1.0 lb/a	3/30/2015	Wheat 2-tillers detected		
PowerFlex HL	2.0 oz/a	3/30/2015	Wheat 2-tillers detected	70 a	17 a
NIS	0.25% v/v	3/30/2015	Wheat 2-tillers detected		
AMS	1.0 lb/a	3/30/2015	Wheat 2-tillers detected		
Everest 2.0	1.0	3/30/2015	Wheat 2-tillers detected	82 a	27 a
PowerFlex HL	1.0 oz	3/30/2015	Wheat 2-tillers detected		
Audit 1:1	0.4 oz/a	3/30/2015	Wheat 2-tillers detected		
NIS	0.25% v/v	3/30/2015	Wheat 2-tillers detected		
AMS	1.0 lb/a	3/30/2015	Wheat 2-tillers detected		

¹ Means, based on three replicates, within a column, followed by the same letter are not significantly different at P = 0.05 as determined by Fisher's protected LSD 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.