

Italian Ryegrass Control in Spring Wheat with Everest 2.0 Applied at Various Times

A field study was conducted at the Cook Agronomy Farm near Pullman, WA to evaluate Italian ryegrass control in spring wheat with Everest 2.0 herbicide (flucarbazone) applied at various times. The soil was a silt loam with a pH of 5.0 and 3.5% organic matter. The experimental design was a randomized complete block with four replications. Spring wheat 'Diva' was planted at a rate of 100 pounds/acre on April 11, 2013 using a Horsch drill with 12-inch row spacing. The first postemergence (EPOST) herbicide application was made on May 10, 2013 when the wheat had 4-5 leaves and was 6-7 inches tall. The Italian ryegrass had 1-2 leaves and was 1.5 inches tall, prickly lettuce had 4 leaves, and mayweed chamomile was 1 inch tall. Herbicides were applied using a CO₂ backpack sprayer set to deliver 10 gpa at 35 psi and 3 mph. The second herbicide application (POST) was made on May 17. The third and final herbicide application (LPOST) was made on May 31 when the wheat was jointed and 9-10 inches tall. The Italian ryegrass was 3-4 inches tall, prickly lettuce and mayweed chamomile were both about 3 inches tall. The plots were not harvested for yield due to heavy mayweed infestations in all plots except those containing Goldsky (florasulam + fluroxypyr + pyroxsulam).

Weed densities varied across the field, which resulted in large LSD values and an inability to detect true treatment differences unless they were very large. Everest 2.0 did appear to provide better control of Italian ryegrass than Goldsky at all application times; however, there did seem to be a reduction in Everest 2.0 activity on Italian ryegrass when it was tank mixed with Affinity BroadSpec (thifensulfuron + tribenuron). Goldsky provided good to excellent control of prickly lettuce and mayweed chamomile.

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Treatment	Rate ¹ oz/a	Timing	28-Jun-13		
			Prickly lettuce control	Italian ryegrass control	Mayweed chamomile control
			-----	% -----	-----
Everest 2.0	1	EPOST	8	85	8
Everest 2.0	1	EPOST	10	40	68
Affinity BroadSpec	0.4	EPOST			
Goldsky	16	EPOST	73	18	91
Everest 2.0	1	POST	64	30	20
Everest 2.0	1	POST	38	33	81
Affinity BroadSpec	0.4	POST			
Goldsky	16	POST	90	10	75
Everest 2.0	1	LPOST	55	75	18
Everest 2.0	1	LPOST	55	25	44
Affinity BroadSpec	0.4	LPOST			
Goldsky	16	LPOST	95	20	90
Nontreated check			0	0	0
LSD (5%)*			35	47	28

¹ NIS applied to all treatments at 0.25% v/v, and AMS applied to all treatments at 1 lb/a.

*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.