

Control of Italian ryegrass in winter wheat with Valor[®] SX and V-10206 (pyroxasulfone)

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A field study was conducted at the WSU Cook Agronomy Farm near Pullman, WA to evaluate the control of Italian ryegrass in winter wheat using Valor SX herbicide and V-10206 (pyroxasulfone). Pyroxasulfone, an inhibitor of very-long-chain fatty acid synthesis (Group 15), is the active ingredient in Zidua and one of the active ingredients in Anthem Flex. Pyroxasulfone is a new tool in the fight to control Italian ryegrass. The herbicide rates and timings used in this study were intentionally not optimal for Italian ryegrass control. The purpose of the study was to see if Valor SX improved Italian ryegrass control when tank-mixed with pyroxasulfone.

The soil at this site is a Thatuna silt loam with a pH of 5.3 and 3.6% organic matter. The entire plot area was tilled with a field cultivator in September and sprayed with glyphosate on October 9, 2013 to control emerged weeds prior to planting. ‘ARS-Amber’ winter wheat was seeded at 90 lb/acre at a soil depth of 1.25 inches on October 11, 2013 using a Horsch air seed drill with 12-inch row spacing. Starter fertilizer was also applied at planting at a rate of 130, 10 and 15 lb/acre N:P:K. Herbicides were applied when wheat was at the spike stage on October 28, 2013 using a CO₂ backpack sprayer set to deliver 15 gpa at 30 psi and 3 mph. Conditions were an air temperature of 50°F, relative humidity of 28% and the wind out of the north at 2 mph. Italian ryegrass was 1 to 1.5 inches tall. The plots were harvested using a Kincaid 8XP combine on August 11.

No yield differences were observed in this study (data not shown). No differences in Italian ryegrass control were observed amongst treatments in late April, but by July, Valor SX alone provided significantly less control than any of the treatments containing V-10206. There were no significant differences in Italian ryegrass control amongst any of the treatments containing V-10206. This study failed to show any significant benefit of adding Valor to pyroxasulfone for the control of Italian ryegrass in winter wheat.

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		April 28	July 7
Treatment ^a	Rate	Italian ryegrass control	
	oz pr/a	-----%-----	
V-10206	1	70	76
Valor SX	1	74	56
Valor SX	1	80	84
V-10206	1		
Valor SX	1.5	88	85
V-10206	1		
Nontreated Check	--	--	--
LSD (5%)		ns	17

^a All treatments were applied POSPOS on October 28, 2013

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.