

## **Broadleaf and grass weed control with spring applications of Quelex™ plus PowerFlex® HL in winter wheat**

Derek Appel, Henry Wetzel and Drew Lyon

A field study was conducted at the Wilke Farm near Davenport, WA to evaluate broadleaf and grass weed control with spring applications of Quelex plus PowerFlex HL in winter wheat. Quelex is a recently registered product of Dow/DuPont that contains halauxifen-methyl (Group 4) and florasulam (Group 2) herbicide active ingredients. PowerFlex HL contains pyroxsulam which is also a Group 2 herbicide. While florasulam and pyroxsulam have the same mode of action, florasulam only provides activity on broadleaf weeds whereas pyroxsulam is active on both broadleaf and grassy weeds.



The soil for this site is a Broadax silt loam with 2.9% organic matter and a pH of 5.4. On September 20, 2016, 'Jasper' winter wheat was planted into chemical fallowed ground using a no-till drill with 7.5-inch row spacing. Seeding rate was 65 lb/acre and seed was planted to a 1.5-inch depth. Starter fertilizer was applied below the seed at planting at a rate of 100 lb N, 8 lb P and 10 lb S per acre. Spring treatments were applied on May 3<sup>rd</sup> using a CO<sub>2</sub> backpack sprayer set to deliver 10 gpa at 30 psi. Downy brome was 4 inches tall and tumble mustard rosettes had an average diameter of 4 inches at the time of application. Conditions were an air temperature of 65°F, relative humidity of 52% and the wind out of the southwest at 8 mph. The plots were harvested on August 9<sup>th</sup> using a Kincaid 8XP plot combine.

No significant crop injury was observed in this study (data not shown). All treatments provided fair to good control of downy brome. The addition of Quelex did not improve the level of downy brome control that PowerFlex HL was providing on its own. PowerFlex HL alone provided good control of tumble mustard whereas all other treatments provided excellent control. Adding Quelex to PowerFlex HL resulted in improved tumble mustard control. Overall yield and test weight means were 98 bu/A and 55.6 lb/bu, respectively. There were no significant differences among treatments on yield and test weight.

		5/24	6/6
		Downy brome	Tumble mustard
Treatment	Rate	control	
	fl oz/A	-----0-100%-----	
Nontreated Check	--	--	--
PowerFlex HL <sup>1</sup>	2.0 oz	81 a <sup>2</sup>	83 c
PowerFlex HL + Quelex <sup>1</sup>	2.0 oz + 0.75 oz	80 a	91 b
PowerFlex HL + Quelex + WideMatch <sup>1</sup>	2.0 oz + 0.75 oz + 16	86 a	96 ab
PowerFlex HL + Quelex + 2,4-D Ester LV <sup>1</sup>	2.0 oz + 0.75 oz + 8	76 a	100 a
PowerFlex HL + Talinor + CoAct+ + NIS	2.0 oz + 13.7 + 2.75 + 0.5% v/v	75 a	100 a
PowerFlex HL + Huskie <sup>1</sup>	2.0 oz + 13.5	85 a	100 a
Olympus + 2,4-D Ester LV <sup>1</sup>	0.6 oz + 8	83 a	100 a
Osprey <sup>1</sup>	4.75 oz	74 a	91 b
Osprey + WideMatch <sup>1</sup>	4.75 oz + 16	68 a	100 a
PerfectMatch <sup>1</sup>	20	86 a	99 a
PowerFlex + WideMatch <sup>1</sup>	2.0 oz + 16	80 a	98 a

<sup>1</sup> Treatments were tank mixed with AMS 1.52 lb/A and NIS 0.5% v/v

<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 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.