

**Broadleaf weed control in spring wheat with Quelex plus various adjuvants at Crookston, MN - 2018.** Durgan, Beverly R., Jochum Wiersma, Jim Cameron, Houston Lindell, and Douglas Miller. This experiment was designed to evaluate broadleaf weed control and wheat injury with Quelex alone and in combination with various adjuvants. The experiment was conducted at Crookston, MN on a Donaldson and Wheaton loam soil. Following weedy fallow, 149 lbs/A N and 52 lbs/A P was applied and the area was chisel plowed in the fall of 2017. In the spring of 2018, a seedbed was prepared using a field cultivator with rolling baskets. 'Linkert' hard red spring wheat was seeded on April 30 at 1.75 bu/a. All herbicide treatments were applied with a backpack type sprayer delivering 10 gpa at 30 psi using 80015 flat fan nozzles. The experimental design was a randomized complete block with three replications and plot size was 10 by 24 ft. Application date and environmental conditions are listed below. Crop injury and weed control were visually rated and yields were measured. Data presented in the table below.

<b>Treatment Date</b>	<b>May 31</b>
Broadleaf weeds	3-4"
Air temperature (°F)	68
Soil temperature (°F)	64
Relative humidity (%)	75
Wind	NW 6 mph
Sky	cloudy
Rainfall before Application	
Week 1 (inch)	0.28
Rainfall after Application	
Week 1 (inch)	1.75
Week 2 (inch)	2.75

<b>Weed Densities</b>	<b>(#/ft<sup>2</sup>)</b>
Common Lambquarters	140
Common Mallow	7
Redroot Pigweed	6
Wild Buckwheat	75
Wild Mustard	56

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Treatment	Rate	Weed Control																		Wheat Yield (Bu/A)
		Common Lambsquarters			Common Mallow			Redroot Pigweed			Wild Buckwheat			Wild Mustard			Wheat Injury			
		6/22	7/6	7/18	6/22	7/6	7/18	6/22	7/6	7/18	6/22	7/6	7/18	6/22	7/6	7/18	6/22	7/6	7/18	
	(Product/A)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
Quelex	0.75 oz	52	63	63	85	90	83	85	99	99	87	85	85	96	96	99	0	0	0	45
Quelex + Preference	0.75 oz + 3.2 oz	70	80	90	90	96	90	90	99	99	92	90	90	99	99	99	0	0	0	52
Quelex + AG16134	0.75 oz + 3.2 oz	77	82	77	93	93	90	93	99	99	92	83	78	99	99	99	0	0	0	50
Quelex + AG17047	0.75 oz + 3.2 oz	77	80	80	95	96	87	95	99	99	93	83	83	99	99	99	0	0	0	49
Quelex + AG13064	0.75 oz + 3 oz	67	77	73	93	90	83	93	99	99	93	70	67	99	96	96	2	0	0	45
Quelex + AG16134 + AG13064	0.75 oz + 3.2 oz + 3 oz	77	70	68	93	93	90	93	99	99	92	77	77	99	99	99	3	0	0	52
Quelex + Preference + AG13064	0.75 oz + 3.2 oz + 3 oz	78	85	83	93	96	90	93	99	99	92	83	83	99	99	99	2	0	0	53
Quelex + AG8050	0.75 oz + 6.4 oz	77	83	80	93	96	90	93	99	99	92	80	77	99	99	99	0	0	0	50
Quelex + AG14039	0.75 oz + 6.4 oz	88	92	87	93	96	88	93	99	99	92	90	87	99	99	99	0	0	0	54
Quelex + AG14039	0.75 oz + 12 oz	85	85	83	93	95	90	93	99	99	92	87	85	99	96	96	0	0	0	51
LSD (0.05)		ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns

Quelex 20SG = halauxifen-methyl (10%) & florasulam (10%).

Preference = nonionic surfactant.

AG16134 = experimental from Winfield Solutions.

AG17047 = experimental from Winfield Solutions.

AG13064 = experimental from Winfield Solutions.

AG8050 = experimental from Winfield Solutions.

AG14039 = experimental from Winfield Solutions.