

Broadleaf weed control in spring wheat with Quelex and PerfectMatch with various adjuvants at Crookston, MN - 2017. Durgan, Beverly R., Jochum J. Wiersma, Jim Cameron, and Douglas Miller. This experiment was designed to evaluate broadleaf weed control and wheat injury with Quelex and PerfectMatch with various adjuvants. The experiment was conducted at Crookston, MN on a Donaldson and Wheaton loam soil. Following weedy fallow, the standing residue was shredded and, after receiving 115 lbs/A N and 52 lbs/A P, was chisel plowed in the fall of 2016. In the spring of 2017, a seed bed was prepared using a field cultivar with rolling baskets. 'Linkert' hard red spring wheat was seeded on May 2 at 1.8 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.

Treatment Date	May 26
Air temperature (°F)	68
Soil temperature (°F)	70
Relative humidity (%)	40
Wind	SW 8 mph
Sky	partly cloudy
Rainfall before Application	
Week 1 (inch)	0.50
Rainfall after Application	
Week 1 (inch)	0.75
Week 2 (inch)	0.40

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Treatment	Rate (Product/A)	Weed Control												Wheat Yield (Bu/A)
		Common			Wild			Wild			Wheat Injury			
		Lambsquarters			Buckwheat			Mustard						
		6/16	6/30	8/4	6/16	6/30	8/4	6/16	6/30	8/4	6/16	6/30	8/4	
Quelex	0.75 oz	60	46	40	72	86	55	100	93	99	0	2	0	76
Quelex	0.56 oz	53	13	40	77	78	40	100	93	99	0	0	0	77
Quelex + Preference	0.56 oz + 3.2 oz	60	53	40	72	83	40	100	95	96	0	3	0	77
Quelex + Preference + AG02013	0.56 oz + 3.2 oz + 4 oz	93	63	79	90	88	93	100	93	99	0	5	0	75
Quelex + AG13064	0.56 oz + 3 oz	92	96	76	82	96	76	100	96	99	0	2	0	79
Quelex + AG8050	0.56 oz + 6.4 oz	63	76	79	73	90	79	100	96	99	0	3	0	74
Quelex + AG14039	0.56 oz + 8 oz	83	99	99	90	96	96	100	99	99	0	0	0	76
Quelex + AG14039	0.56 oz + 12 oz	87	63	91	92	90	88	100	96	99	0	3	0	75
LSD (0.05)		ns	ns	36	15	ns	36	ns	ns	ns	ns	ns	ns	ns
PerfectMatch	16 oz	95	96	99	93	93	99	100	96	99	5	12	0	77
PerfectMatch	12 oz	92	98	99	90	96	99	100	99	99	2	2	0	74
PerfectMatch + Preference	12 oz + 3.2 oz	98	99	99	91	96	96	100	99	99	2	10	0	78
PerfectMatch+ Preference + AG02013	12 oz + 3.2 oz + 4 oz	96	99	99	93	96	99	100	99	99	10	10	0	78
PerfectMatch + AG13064	12 oz + 3 oz	96	99	99	95	99	96	100	99	99	3	13	0	72
PerfectMatch + AG8050	12 oz + 6.4 oz	90	98	99	90	96	99	100	98	99	2	12	0	76
PerfectMatch+ AG14039	12 oz + 8 oz	100	90	99	93	93	99	100	99	99	3	13	0	75
PerfectMatch+ AG14039	12 oz + 12 oz	98	93	99	93	95	96	100	99	99	5	15	0	73
LSD (0.05)		ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns

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

Preference = nonionic surfactant.

AG02013 = experimental from Winfield Solutions.

AG13064 = experimental from Winfield Solutions.

AG8050 = experimental from Winfield Solutions.

AG14039 = experimental from Winfield Solutions.

PerfectMatch 1.61SE = clopyralid (0.75 lb ae/gal) & fluroxypyr (0.75 lb ae/gal) & pyroxsulam (0.11 lb ai/gal).