Broadleaf weed control in tillering spring wheat at Crookston, MN - 2016. Durgan, Beverly R., Jochum J. Wiersma, Jim Cameron, and Douglas Miller. This experiment was designed to evaluate broadleaf weed control and wheat injury with broadleaf herbicides applied to tillering wheat. 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 as urea, was chisel plowed in the fall of 2015. In the spring of 2016, a seed bed was prepared using a field cultivar with rolling baskets. 'Linkert' hard red spring wheat was seeded on April 12 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**
Target Wheat Stage	tillering
Air temperature (°F)	70
Soil temperature (°F)	68
Relative humidity (%)	70
Wind	W 6.5 mph
Sky	cloudy
Rainfall before Application	
Week 1 (inch)	1.97
Rainfall after Application	
Week 1 (inch)	5.20
Week 2 (inch)	0.21

Results

Control of common lambsquarters, redroot pigweed, and wild mustard was slightly less at the earlier two rating dates with the AGH 09008 and 2,4-D amine treatments. At the later two rating dates, control of these species were excellent and did not differ between treatments. Control of nightflowering catchfly and wild buckwheat were lower with the AGH 09008 and 2,4-D amine treatments at all rating dates compared to the other treatments. Injury was generally higher with the AGH 09008 and 2,4-D amine treatments, in particular the 2,4-D amine plus Preference and Interlock combination which also yielded the lowest of all treatments.

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		Weed Control																								
		Common Lambsquarters				Nightflowering Catchfly				Redroot Pigweed				Wild Buckwheat				Wild Mustard				Wheat Injury				Wheat
Treatment	Rate	6/09	6/16	6/30	7/20	6/09	6/16	6/30	7/20	6/09	6/16	6/30	7/20	6/09	6/16	6/30	7/20	6/09	6/16	6/30	7/20	6/09	6/16	6/30	7/20	Yield
	(Product/A)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(Bu/A)
AGH 09008	1 pt	90	92	99	96	50	62	83	85	90	92	99	96	53	68	85	82	92	92	96	96	3	7	2	2	84
AGH 09008 + Preference + Interlock	1 pt + 3.2 oz + 4 oz	90	90	99	96	43	50	83	80	90	90	99	96	53	53	87	82	90	90	99	96	7	3	2	2	80
2,4-D amine 4	1 pt	90	90	99	99	60	60	85	80	90	90	99	99	62	65	88	88	92	90	96	99	5	8	3	3	83
2,4-D amine 4 + Preference + Interlock	1 pt + 3.2 oz + 4 oz	93	90	96	93	50	57	80	78	90	90	96	93	47	58	83	80	90	90	96	95	10	10	5	5	72
Huskie + N-Pak AMS	13.5 oz + 1.18 pt	99	99	99	99	99	88	94	93	99	99	99	99	99	93	96	93	99	99	99	99	2	0	0	0	89
Widematch + MCPA Ester	1 pt + 0.5 pt	99	99	99	99	90	92	95	98	99	99	99	99	90	93	99	99	99	99	99	99	0	0	0	0	84
Affinity Tankmix + Preference	0.6 oz + 3.2 oz	99	99	99	99	90	93	98	98	99	99	99	99	93	96	96	95	99	99	99	99	5	0	0	0	86
Hat Trick	1.5 pt	99	99	99	99	88	90	99	98	99	99	99	99	90	92	99	98	99	99	99	99	2	2	0	0	86
Weedy Check	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0	0	0	79
LSD (0.05)		3	2	ns	ns	9	8	7	9	1	2	ns	ns	12	10	5	8	2	2	ns	ns	3	5	3	3	8

AGH 09008 = experimental from Winfield Solutions.

Preference = nonionic surfactant.

Interlock = drift control agent.

2,4-D amine 3.8L

Huskie 2.08 EC = pyrasulfotole (0.23 lb ai/gal) & bromoxynil 1.85 lb ai/gal) & safener.

N-Pak AMS = 34% ammonium sulfate solution (3.4 lbs ammonium sulfate/gal).

Widematch 1.5E = clopyralid (0.75 lb ae/gal) & fluroxypyr (0.75 lb ae/gal).

MCPA Ester 4E.

Affinity Tankmix 50SG = thifensulfuron (40%) & tribenuron (10%).

Hat Trick 2.82SE= clopyralid (0.51 lb ae/gal) & fluroxypyr (0.51 lb ae/gal) & MCPA ester (1.8 lb ae/gal).