

Broadleaf weed control with 2,4-D formulations in spring wheat at Crookston, MN - 2015. 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 100 lbs/A as urea, was chisel plowed. In the spring a seed bed was prepared using a field cultivar with rolling baskets. 'Linkert' hard red spring wheat was seeded on April 17 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 27
<u>Weed Density (#/ft²)</u>	
- Common Lambsquarters	86
- Wild buckwheat	15
- Wild Mustard	21
Wheat Stage	tillering
Air temperature (°F)	60
Soil temperature (°F)	60
Relative humidity (%)	58
Wind	8 mph
Rainfall before Application	
Week 1 (inch)	0.00
Rainfall after Application	
Week 1 (inch)	2.29
Week 2 (inch)	0.98

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Treatment	Rate	Weed Control																Wheat Yield
		Common				Wild				Wild				Wheat Injury				
		Lambsquarters				Buckwheat				Mustard								
	(Product/A)	6/27	7/10	7/10	7/30	6/27	7/10	7/10	7/30	6/27	7/10	7/10	7/30	6/27	7/10	7/10	7/30	(Bu/A)
AGH 08032	1.5 pt	100	93	99	99	99	88	93	88	100	96	99	99	2	0	0	0	76
AGH 15005	1.5 pt	100	98	99	99	99	93	93	92	100	99	99	99	2	0	0	0	76
AGH 08032 + Preference + Interlock	1.5 pt + 3.2 oz + 4 oz	100	95	99	99	99	90	93	92	100	99	99	99	0	0	0	0	74
AGH 15005 + Preference + Interlock	1.5 pt + 3.2 oz + 4 oz	100	98	99	99	99	90	98	93	100	99	99	99	0	0	0	0	76
AGH 08032 + AG 14039	1.5 pt + 0.5 pt	100	99	99	99	99	93	96	92	100	99	99	99	2	0	0	0	75
AGH 15005 + AG 14039	1.5 pt + 0.5 pt	100	96	99	99	99	96	96	92	100	99	99	99	2	0	2	2	74
AGH 15004	1.5 pt	100	99	99	99	99	95	95	92	100	100	99	99	2	0	7	5	73
Huskie + N-Pak AMS	13.5 oz + 1.18 pt	100	95	99	99	98	91	92	93	100	99	99	99	3	0	0	0	79
Widematch + MCPA Ester	1 pt + 0.5 pt	93	95	99	99	93	90	99	95	96	100	99	99	0	0	0	0	76
Affinity Tankmix + Preference	0.6 oz + 3.2 oz	97	99	99	99	92	93	99	95	98	99	99	99	2	0	0	0	78
Weedy Check	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	71
LSD (0.05)		4	ns	ns	ns	4	ns	3	ns	ns	ns	ns	ns	ns	ns	3	1	ns

AGH 08032 = experimental from Winfield Solutions.

AGH 1505 = experimental from Winfield Solutions.

Preference = nonionic surfactant.

Interlock = drift control agent.

AG 14039 = experimental adjuvant from Winfield Solutions.

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%).