

Broadleaf weed control 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 at two application times. 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 22	May 30
<u>Weed Density (#/ft²)</u>		
- Common Lambsquarters	92	--
- Wild buckwheat	22	--
- Wild Mustard	15	--
Wheat Stage	2-4 leaf	5-6 leaf
Air temperature (°F)	67	45
Soil temperature (°F)	60	55
Relative humidity (%)	30	51
Wind	4 mph	5-8 mph
Rainfall before Application		
Week 1 (inch)	0.68	0.31
Rainfall after Application		
Week 1 (inch)	0.31	2.16
Week 2 (inch)	1.98	0.80

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Treatment	Rate (Product/A)	Weed Control												Wheat Injury				Wheat Yield (Bu/A)
		Common Lambsquarters				Wild Buckwheat				Wild Mustard								
		6/5	6/16	6/30	7/10	6/5	6/16	6/30	7/10	6/5	6/16	6/30	7/10	6/5	6/16	6/30	7/10	
Application #1 (May 22)																		
Huskie + N-Pak AMS	11 oz + 1.18 pt	100	100	99	99	96	93	90	91	100	100	99	99	2	0	0	0	77
Huskie + N-Pak AMS	13.5 oz + 1.18 pt	99	100	99	99	95	87	87	88	100	100	99	99	0	0	0	0	82
Huskie + N-Pak AMS	15 oz + 1.18 pt	100	100	99	99	98	93	88	87	100	100	99	99	0	0	0	0	77
Huskie + N-Pak AMS + Preference	11 oz + 2.35 pt + 3.2 oz	99	100	99	99	95	87	90	85	100	100	99	99	0	0	0	0	81
Huskie + N-Pak AMS + Preference	13.5 oz + 1.18 pt + 3.2 oz	100	96	98	99	96	83	92	90	99	99	99	99	2	0	0	0	77
Huskie Complete + N-Pak AMS	13.7 oz + 1.18 pt	100	100	99	99	96	90	96	90	99	100	99	99	15	0	2	5	77
Widematch + MCPA Ester	1 pt + 0.5 pt	96	100	99	99	93	95	99	91	96	100	99	99	0	0	0	0	78
Affinity Tankmix + Starane Ultra + Preference	0.6 oz + 4.2 oz + 3.2 oz	97	100	99	99	93	90	93	91	100	100	99	99	0	0	0	0	79
Wolverine Advanced	27.4 oz	99	100	99	99	95	88	85	88	100	100	99	99	0	0	0	0	79
A20916 + A19278 + COC	2.52 oz + 13.7 oz + 12.8 oz	99	100	99	99	96	88	85	82	100	100	99	99	0	0	0	0	82
A20916 + A19278 + COC	2.52 oz + 16 oz + 12.8 oz	99	99	99	99	96	88	88	87	100	100	99	99	0	0	0	0	82
A20916 + A19278 + COC	2.52 oz + 18.2 oz + 12.8 oz	99	100	99	99	96	90	87	87	100	100	99	99	0	0	0	0	83
Application #2 (May 30)																		
Huskie + N-Pak AMS	11 oz + 1.18 pt	90	100	99	99	90	93	91	90	95	100	99	99	2	0	0	0	80
Huskie + N-Pak AMS	13.5 oz + 1.18 pt	90	100	99	99	90	100	95	95	95	100	99	99	3	0	0	0	80
Widematch + MCPA Ester	1 pt + 0.5 pt	90	100	99	99	90	95	96	95	93	100	99	99	0	0	0	0	78
Affinity Tankmix + Starane Ultra + Preference	0.6 oz + 4.2 oz + 3.2 oz	90	100	98	99	90	92	96	88	90	100	99	99	0	0	0	0	83
Weedy Check	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	72
LSD (0.05)		3	ns	ns	ns	3	ns	6	ns	5	ns	ns	ns	4	ns	ns	ns	5

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).

Preference = nonionic surfactant.

Huskie Complete 1.76L = thiencazone-methyl (0.042 lb ai/gal) & pyrasulfotole (0.26 lb ai/gal) & bromoxynil phenol equivalent (1.46 lb ai/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%).

Starane Ultra 2.8E = fluroxypyr.

Wolverine Advanced = fenoxaprop-p-ethyl & pyrasulfotole & bromoxynil .

A20916 = experimental from Syngenta.

A19278 = experimental from Syngenta.

COC = crop oil concentrate.