

**Broadleaf weed control in 2 to 4 leaf spring wheat at Crookston, MN - 2012.** Durgan, Beverly R., Jochum Wiersma, Jim Cameron, and Douglas Miller. This experiment was designed to evaluate broadleaf weed control and wheat injury with broadleaf herbicides applied at the 2 to 4 leaf wheat stage. The experiment was conducted at Crookston, MN on a Donaldson and Wheaton loam soil. Following weedy fallow, the experimental area received 100 lb/A of N and was fall plowed. In the spring the experimental area was disked and harrowed. 'RB07' hard red spring wheat was seeded on April 9 at 1.5 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 16</b>
<u>Weed Stage</u>	
- Common lambsquarters	1" / 3 leaf
- Wild buckwheat	1" / 3 leaf
- Wild Mustard	4 lf
Wheat Stage	4.5 leaf
Air temperature (°F)	71
Soil temperature (°F)	62
Relative humidity (%)	34
Wind	SE 6.5 mph
Rainfall before Application	
Week 1 (inch)	0.02
Rainfall after Application	
Week 1 (inch)	0.09
Week 2 (inch)	0.80

Early injury symptoms were yellowing and stunting. Injury symptoms at the later rating dates were delayed heading and crop shortening.

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Treatment	Rate	Weed Control												Wheat Injury					Wheat Yield (Bu/A)
		Common Lambsquarters			Wild Buckwheat			Wild Mustard											
		6/8	6/21	7/18	6/8	6/21	7/18	6/8	6/21	7/18	5/23	5/31	6/8	6/21	7/18				
	(Product/A)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)				
Huskie + N-Pak AMS	11 oz + 1.18 pt	98	97	93	87	91	88	98	99	96	0	0	0	0	0	63			
Huskie + N-Pak AMS	13.5 oz + 1.18 pt	99	99	99	98	99	99	99	99	99	0	2	0	0	0	64			
Huskie + N-Pak AMS	15 oz + 1.18 pt	99	98	96	99	88	85	99	98	96	0	2	0	0	0	62			
Huskie + N-Pak AMS + Preference	13 oz + 1.18 pt + 3.2 oz	99	99	99	99	99	99	99	99	99	0	0	3	0	0	64			
Supremacy + Preference	4 oz + 3.2 oz	67	90	90	67	85	83	67	92	90	0	2	2	0	0	66			
Supremacy + MCPA-Ester + Preference	4 oz + 0.5 pt + 3.2 oz	87	95	91	85	91	88	85	95	93	0	2	2	0	0	67			
Widematch + MCPA Ester	1 pt + 0.5 pt	88	99	98	83	93	90	88	99	99	0	0	0	0	0	61			
Widematch + Affinity Tankmix	1 pt + 0.6 oz	90	99	98	87	99	98	92	99	99	2	0	2	0	0	66			
Affinity Tankmix + Starane + Preference	0.6 oz + 0.33 pt + 3.2 oz	90	99	95	88	92	90	90	99	96	3	5	2	0	0	67			
Affinity Tankmix + MCPA-Ester + Preference	0.6 oz + 0.5 pt + 3.2 oz	83	95	92	78	91	90	86	99	98	5	2	2	0	0	65			
Affinity Tankmix + Preference	0.6 oz + 3.2 oz	83	99	99	82	94	90	83	99	99	3	0	2	0	0	66			
Wolverine	27.4 oz	98	99	99	95	98	95	99	99	99	0	0	2	0	0	70			
Huskie Complete	13.7 oz	96	99	98	96	91	90	99	99	99	5	8	8	0	0	70			
Huskie Complete + N-Pak AMS	13.7 oz + 1.18 pt	99	99	99	99	99	99	99	99	99	5	12	12	0	0	64			
GoldSky + Preference	1 pt + 3.2 oz	82	88	85	78	80	75	90	90	90	3	5	3	0	0	68			
GoldSky + Affinity Tankmix + Preference	1 pt + 0.6 oz + 3.2 oz	94	99	99	90	99	99	94	99	99	5	10	3	0	0	64			
GoldSky + Huskie + Preference	1 pt + 11 oz + 3.2 oz	99	99	99	98	95	93	99	99	99	5	10	7	0	0	61			
GoldSky + MCPA ester	1 pt + 0.75 pt	90	90	86	83	81	78	93	93	93	5	10	5	0	0	67			
Pulsar + Preference	8.3 oz + 3.2 oz	70	90	88	68	70	67	63	90	90	0	5	3	5	5	61			
Pulsar + MCPA-Ester	8.3 oz + 0.5 pt	89	88	87	83	72	70	87	90	90	0	5	3	5	5	56			
Pulsar + Affinity Tankmix + Preference	8.3 oz + 0.6 oz + 3.2 oz	90	91	90	85	88	83	87	92	92	5	5	5	5	5	61			
Everest 2.0 + Newton	0.75 oz + 0.8 pt	57	78	77	57	68	67	63	92	87	0	3	2	0	0	60			
Bronate Advanced	0.6 pt	73	80	78	73	68	67	81	85	83	0	0	2	0	0	61			
Bronate Advanced	0.8 pt	93	90	87	85	78	75	93	93	92	0	2	0	0	0	61			
Weedy Check	--	--	--	--	--	--	--	--	--	--	0	0	0	0	0	48			
LSD (0.05)		12	5	7	11	6	7	13	4	4	2	6	4	ns	ns	9			

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.

Supremacy 31WG = thifensulfuron (4.5%) & tribenuron 1.5%) & fluroxypyr (25% ae).

MCPA Ester 4E.

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

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

Starane 1.5E = fluroxypyr.

Wolverine 1.38E = fenoxaprop-p-ethyl (0.38 lb ai/gal) & pyrasulfotole (0.17 lb ai/gal) & bromoxynil octanoate (0.41 lb ai/gal) & bromoxynil heptanoate (0.42 lb ai/gal).

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).

GoldSky 0.84L = pyroxsulam (0.11 lb ai/gal) & fluroxypyr (0.71 lb ae/gal) & florasulam (0.018 lb ai/gal).

Pulsar 1.67L = dicamba (0.7275 lb ae/gal) + fluroxypyr (0.9455 lbs ae/gal).

Everest 2.0 3.5SC = flucarbazone-sodium & cloquintacet (safener).

Newton = ammonium salt, buffering agent, and surfactant blend.

Bronate Advanced 5E = bromoxynil (2.5 lb ai/gal) & MCPA (2.5 lb ae/gal).