

**Broadleaf weed control in 2 to 4 leaf spring wheat at Crookston, MN - 2009.** 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. 'Freyr' hard red spring wheat was seeded on May 18 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 tables below.

<b>Treatment Date</b>	<b>June 12</b>
Target wheat stage	2 to 4 leaf
Air temperature (°F)	75
Soil temperature (°F)	62
Relative humidity (%)	37
Wind	W 2 mph
Rainfall before Application	
Week 1 (inch)	0.42
Rainfall after Application	
Week 1 (inch)	0.50
Week 2 (inch)	3.10

**Table 1. Broadleaf weed control in 2 to 4 leaf spring wheat at Crookston, MN - 2009.  
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Treatment	Rate Product/A	Weed Control					
		Wheat Injury			Common Lambsquarters		
		6/26 (%)	7/9 (%)	7/23 (%)	6/26 (%)	7/9 (%)	7/23 (%)
Axial TBC + Adigor Adjuvant	8.85 oz + 9.6 oz	0	0	0	40	27	17
Axial TBC + Adigor Adjuvant + Starane	8.85 oz + 9.6 oz + 5.3 oz	0	0	0	40	40	17
Axial TBC + Adigor Adjuvant + Widematch	8.85 oz + 9.6 oz + 10 oz	0	0	0	93	90	90
Bronate Advanced	0.8 pt	0	0	0	95	96	93
Huskie + N-Pak AMS	11 oz + 1.18 pt	0	0	0	95	99	96
Huskie + MCPA Ester	11 oz + 0.5 pt	0	0	0	99	99	92
Widematch + MCPA Ester	1 pt + 0.5 pt	0	0	0	93	99	95
Wolverine	27.4 oz	0	0	0	96	98	93
Orion	17 oz	0	0	0	98	96	95
Orion + MCPA Ester	17 oz + 0.25 pt	0	0	0	96	99	95
GoldSky + Preference	16 oz + 3.2 oz	7	0	0	93	99	93
Edition Tank Mix + Preference	0.8 oz + 3.2 oz	2	0	0	93	98	95
Edition BroadSpec + Preference	1.0 oz + 3.2 oz	0	0	0	96	98	96
Affinity Tankmix + Preference	0.8 oz + 3.2 oz	0	0	0	98	93	96
Affinity BroadSpec + Preference	1.0 oz + 3.2 oz	0	0	0	99	98	96
Accurate + Preference	0.1 oz + 3.2 oz	3	0	0	93	99	98
Audit + Preference	0.4 oz + 3.2 oz	2	0	0	96	99	98
Affinity Tankmix + Widematch	0.6 oz + 0.75 pt	0	0	0	99	99	99
Affinity Tankmix + Starane + 2,4-D Amine	0.6 oz + 0.5 pt + 0.5 pt	0	0	0	98	99	96
Weedy Check	--	0	0	0	--	--	--
LSD (0.05)		3	ns	ns	7	7	6

Axial TBC 0.838 EC = pinoxaden (0.774 lb ai/gal) & florasulam (0.0645 lb ai/gal) & safener.

Adigor Adjuvant = emulsifiable oil adjuvant.

Starane 1.5 E = fluroxypyr.

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

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

Huskie 2.08 EC = pyrasulfotole & bromoxynil & safener.

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

MCPA Ester 4E.

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/g).

Orion 2.37 SE = florasulam (0.033 lb ai/gal) & MCPA (2.34 lb ae/gal).

GoldSky 1.53L = pyroxsulam (0.11 lb ai/gal) & fluroxypyr (0.71 lb ae/gal) & florasulam (0.018 lb ai/gal).

Preference = nonionic surfactant.

Edition Tank Mix 50WDG = thifensulfuron (40%) & tribenuron (10%).

Edition BroadSpec 50WDG = thifensulfuron (25%) & tribenuron (25%).

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

Affinity BroadSpec 50SG = thifensulfuron (25%) & tribenuron (25%).

Accurate 60WDG= metsulfuron.

Audit 75WDG = thifensulfuron (56.25%) & tribenuron (18.75%).

2,4-D Amine 4L.

**Table 2. Broadleaf weed control in 2 to 4 leaf spring wheat at Crookston, MN - 2009.  
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Treatment	Rate Product/A	Weed Control						Wheat Yield (Bu/A)
		Wild Buckwheat			Wild Mustard			
		6/26 (%)	7/9 (%)	7/23 (%)	6/26 (%)	7/9 (%)	7/23 (%)	
Axial TBC + Adigor Adjuvant	8.85 oz + 9.6 oz	87	88	77	95	96	93	66
Axial TBC + Adigor Adjuvant + Starane	8.85 oz + 9.6 oz + 5.3 oz	98	88	82	99	95	92	66
Axial TBC + Adigor Adjuvant + Widematch	8.85 oz + 9.6 oz + 10 oz	90	95	93	95	98	96	70
Bronate Advanced	0.8 pt	90	93	93	95	97	95	64
Huskie + N-Pak AMS	11 oz + 1.18 pt	94	95	93	95	98	99	61
Huskie + MCPA Ester	11 oz + 0.5 pt	98	91	88	99	96	95	62
Widematch + MCPA Ester	1 pt + 0.5 pt	90	99	95	93	99	95	67
Wolverine	27.4 oz	93	96	96	96	99	95	65
Orion	17 oz	93	98	92	99	99	97	69
Orion + MCPA Ester	17 oz + 0.25 pt	93	98	93	96	99	96	65
GoldSky + Preference	16 oz + 3.2 oz	95	93	92	95	99	95	64
Edition Tank Mix + Preference	0.8 oz + 3.2 oz	93	95	92	93	99	95	67
Edition BroadSpec + Preference	1.0 oz + 3.2 oz	96	96	95	96	99	96	62
Affinity Tankmix + Preference	0.8 oz + 3.2 oz	96	93	93	96	95	95	63
Affinity BroadSpec + Preference	1.0 oz + 3.2 oz	98	97	95	99	99	98	61
Accurate + Preference	0.1 oz + 3.2 oz	90	94	95	96	99	98	65
Audit + Preference	0.4 oz + 3.2 oz	95	96	96	99	96	95	67
Affinity Tankmix + Widematch	0.6 oz + 0.75 pt	99	98	96	99	99	98	61
Affinity Tankmix + Starane + 2,4-D Amine	0.6 oz + 0.5 pt + 0.5 pt	98	97	95	99	98	96	65
Weedy Check	--	--	--	--	--	--	--	38
LSD (0.05)		6	ns	8	ns	ns	ns	9

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