

Broadleaf weed control in 2 to 4 leaf spring wheat at Rosemount, MN - 2009. Durgan, Beverly R. and Douglas W. 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 Rosemount, MN on a Waukegon silt loam soil. Following soybeans, the experimental area was fall chisel plowed. In the spring, the area was fertilized with 50 lbs/A N and 75 lbs K.. The field was disked once and field cultivated twice. 'Freyr' hard red spring wheat was seeded on May 4 at 85 lbs/A. The experimental design was a randomized complete block with three replications and plot size was 10 by 24 ft. All herbicide treatments were applied to a 6 ft strip with a backpack type sprayer delivering 10 gpa at 35 psi using 11001 flat-fan nozzles. A broadcast application of Puma (fenoxaprop & safener) at 0.5 pt/A (0.063 lb ai/A) was applied on May 29 to control grassy weeds. Visual weed control and yield data are presented in the table below. Environmental conditions and plant sizes are listed below.

Treatment Date	June 1
Air Temperature (°F)	68
Soil Moisture	dry
Relative humidity	22
Sky	10% clouds
Wind	NNE 1-7
Rainfall before Application	
Week 1 (inch)	0.51
Rainfall after Application	2.00
Week 2 (inch)	0.11
Common Lambsquarters	
height (inch)	1-2
density (#/ft ²)	5.25
Pennsylvania Smartweed	
height (inch)	1-2.5
density (#/ft ²)	2.5
Redroot Pigweed	
height (inch)	0.5-1.5
density (#/ft ²)	7.25
Wild Buckwheat	
height (inch)	1-3
density (#/ft ²)	16.25
Wild Mustard	
diameter (inch)	4-6
density (#/ft ²)	0.5
Wheat	
height (inch)	6-8
leaf stage	4.75 (Zadoks Z15, 21-23)
Tiller #	1-3

**Table 1. Broadleaf weed control in 2 to 4 leaf spring wheat at Rosemount, MN - 2009.
Durgan and Miller.**

Treatment	Rate Product/A	Weed Control											
		Common Lambsquarters			Pennsylvania Smartweed			Redroot Pigweed			Wild Buckwheat		
		6/24	7/5	7/26	6/24	7/5	7/26	6/24	7/5	7/26	6/24	7/5	7/26
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
Axial TBC + Adigor Adjuvant	8.85 oz + 9.6 oz	53	27	13	90	88	90	62	53	57	90	88	90
Axial TBC + Adigor Adjuvant + Starane	8.85 oz + 9.6 oz + 5.3 oz	42	30	27	90	90	90	85	83	63	87	93	91
Axial TBC + Adigor Adjuvant + Widematch	8.85 oz + 9.6 oz + 10 oz	72	63	52	87	87	87	82	67	73	90	92	90
Bronate Advanced	0.8 pt	70	93	90	57	67	82	67	90	85	57	50	73
Huskie + N-Pak AMS	11 oz + 1.18 pt	93	96	99	83	90	91	93	98	99	80	92	92
Huskie + MCPA Ester	11 oz + 0.5 pt	99	99	99	75	96	92	99	99	99	88	96	92
Widematch + MCPA Ester	1 pt + 0.5 pt	88	86	96	82	93	94	80	85	90	92	92	95
Wolverine	27.4 oz	99	96	95	90	93	92	96	96	94	87	92	92
Orion	17 oz	85	88	90	85	90	92	78	80	83	88	90	93
Orion + MCPA Ester	17 oz + 0.25 pt	85	88	91	83	88	90	85	88	85	87	88	98
GoldSky + Preference	16 oz + 3.2 oz	87	80	70	90	90	83	88	80	78	90	90	95
Edition Tank Mix + Preference	0.8 oz + 3.2 oz	93	99	98	87	87	96	93	96	98	90	92	99
Edition BroadSpec + Preference	1.0 oz + 3.2 oz	96	95	99	91	93	99	96	93	99	93	93	99
Affinity Tankmix + Preference	0.8 oz + 3.2 oz	93	93	99	91	93	99	93	93	99	95	93	99
Affinity BroadSpec + Preference	1.0 oz + 3.2 oz	96	99	99	93	98	99	96	99	99	91	93	99
Accurate + Preference	0.1 oz + 3.2 oz	95	95	99	87	90	99	93	95	99	88	90	99
Audit + Preference	0.4 oz + 3.2 oz	96	96	99	93	95	99	96	96	99	95	95	99
Affinity Tankmix + Widematch	0.6 oz + 0.75 pt	99	99	99	95	98	99	99	99	99	96	98	99
Affinity Tankmix + Starane + 2,4-D Amine	0.6 oz + 0.5 pt + 0.5 pt	96	99	99	90	96	99	96	99	99	88	95	99
Weedy Check	--	--	--	--	--	--	--	--	--	--	--	--	--
LSD (0.05)		17	13	19	13	9	8	12	19	16	11	6	5

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/gal).

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 Rosemount, MN - 2009.
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Treatment	Rate Product/A	Weed Control			Wheat Injury				Wheat Yield (Bu/A)
		Wild Mustard							
		6/24 (%)	7/5 (%)	7/26 (%)	6/15 (%)	6/24 (%)	7/5 (%)	7/26 (%)	
Axial TBC + Adigor Adjuvant	8.85 oz + 9.6 oz	98	99	99	0	0	0	0	57
Axial TBC + Adigor Adjuvant + Starane	8.85 oz + 9.6 oz + 5.3 oz	96	96	99	0	0	0	0	59
Axial TBC + Adigor Adjuvant + Widematch	8.85 oz + 9.6 oz + 10 oz	99	99	99	0	0	0	0	62
Bronate Advanced	0.8 pt	91	96	99	0	0	0	0	61
Huskie + N-Pak AMS	11 oz + 1.18 pt	99	99	99	0	0	0	0	58
Huskie + MCPA Ester	11 oz + 0.5 pt	99	99	99	0	0	0	0	61
Widematch + MCPA Ester	1 pt + 0.5 pt	99	99	99	0	0	0	0	60
Wolverine	27.4 oz	99	99	99	2	0	0	0	59
Orion	17 oz	96	96	99	2	0	0	0	64
Orion + MCPA Ester	17 oz + 0.25 pt	96	96	99	0	0	0	0	61
GoldSky + Preference	16 oz + 3.2 oz	99	99	99	0	0	0	0	57
Edition Tank Mix + Preference	0.8 oz + 3.2 oz	98	99	99	0	0	0	0	62
Edition BroadSpec + Preference	1.0 oz + 3.2 oz	99	99	99	0	0	0	0	61
Affinity Tankmix + Preference	0.8 oz + 3.2 oz	98	98	99	0	0	0	0	61
Affinity BroadSpec + Preference	1.0 oz + 3.2 oz	96	99	99	0	0	0	0	62
Accurate + Preference	0.1 oz + 3.2 oz	99	99	99	0	0	0	0	62
Audit + Preference	0.4 oz + 3.2 oz	99	99	99	0	0	0	0	61
Affinity Tankmix + Widematch	0.6 oz + 0.75 pt	99	99	99	0	0	0	0	63
Affinity Tankmix + Starane + 2,4-D Amine	0.6 oz + 0.5 pt + 0.5 pt	99	99	99	0	0	0	0	64
Weedy Check	--	--	--	--	0	0	0	0	51
LSD (0.05)		ns	ns	ns	ns	ns	ns	ns	ns

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

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