

Broadleaf weed control in 2 to 4 leaf spring wheat at Rosemount, MN - 2010. 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. 'RB-07' hard red spring wheat was seeded on April 27 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 0.66 pt/A (0.082 lb ai/A) was applied on May 28 to control grassy weeds. Visual weed control, wheat injury and yield data are presented in the table below. Environmental conditions and plant sizes are listed below.

Treatment Date	May 25
Air Temperature (°F)	87
Soil Temperature (°F)	85
Soil Moisture	moist at 1"
Relative humidity (%)	29
Dewpoint (°F)	52
Sky	clear
Wind	SW 0-5
Rainfall before application	
Week 1 (inch)	0.19
Rainfall after application	
Week 1 (inch)	1.34
Week 2 (inch)	1.29
Common Lambsquarters	
height (inch)	1 - 4 (mostly 1 - 1.5)
leaf number	2 - 4
density (#/ft ²)	10
Common Ragweed	
height (inch)	0.5 - 2
leaf number	cot - 4
density (#/ft ²)	2.8
Pennsylvania Smartweed	
height (inch)	1 - 2
leaf number	1
density (#/ft ²)	5.8
Pigweed	
height (inch)	0.75 - 1
leaf number	2 - 4 (mostly 2 lf)
density (#/ft ²)	5.8
Wild Buckwheat	
height (inch)	1.5 - 4 (mostly 2 - 3)
leaf number	1 - 4 (mostly 2 - 3)
density (#/ft ²)	6.4
Wheat	
height (inch)	5 - 7
leaf stage	3.75 - 4 (Zadoks Z14, 21-23)
Tiller #	1 - 3

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Durgan and Miller.

Treatment	Rate	Weed Control												Wheat Injury	Wheat Yield
		Common Lambsquarters		Common Ragweed		Pennsylvania Smartweed		Pigweed species		Wild Buckwheat		Wheat Injury			
		6/18	7/18	6/18	7/18	6/18	7/18	6/18	7/18	6/18	7/18	6/18	7/18		
	Product/A	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(Bu/A)
Huskie + N-Pak AMS	11 oz + 1.18 pt	100	98	100	99	99	96	100	99	99	98	0	0	36	
Huskie + N-Pak AMS	13 oz + 1.18 pt	100	99	100	99	99	99	100	99	99	99	0	0	34	
Huskie + N-Pak AMS + Preference	11 oz + 1.18 pt + 3.2 oz	100	99	100	99	99	98	100	99	99	96	0	0	36	
Huskie + N-Pak AMS + Preference	13 oz + 1.18 pt + 3.2 oz	99	98	99	95	98	93	99	96	98	90	0	0	33	
Widematch + MCPA Ester	1 pt + 0.5 pt	96	96	99	98	91	88	96	96	93	93	0	0	42	
Affinity Tankmix + Starane + Preference	0.6 oz + 0.5 pt + 3.2 oz	99	96	99	95	96	92	99	95	96	88	0	0	32	
Affinity Tankmix + MCPA-Ester + Preference	0.6 oz + 0.5 pt + 3.2 oz	99	95	99	98	98	95	99	98	98	96	0	0	38	
Wolverine	27.4 oz	99	99	99	96	98	92	99	98	98	96	0	0	36	
Orion	17 oz	77	75	90	88	85	67	87	92	88	87	0	0	36	
GoldSky + Preference	16 oz + 3.2 oz	93	92	93	88	90	88	93	93	90	90	0	0	36	
Pulsar + Preference	8.3 oz + 3.2 oz	80	83	80	83	40	40	80	82	47	43	0	0	29	
Pulsar + MCPA-Ester + Preference	8.3 oz + 0.5 pt + 3.2 oz	87	80	85	87	58	58	87	83	62	57	0	0	39	
Pulsar + Affinity Tankmix + Preference	8.3 oz + 0.6 oz + 3.2 oz	93	93	93	93	91	88	93	93	93	90	0	0	35	
Orion + Starane	17 oz + 0.33 pt	83	85	87	87	87	83	85	83	88	90	0	0	34	
Orion + Buctril	17 oz + 1 pt	93	93	93	96	93	94	95	93	93	92	0	0	35	
Pulsar + Widematch + Affinity Tankmix + Preference	8.3 oz + 1 pt + 0.2 oz + 3.2 oz	95	92	95	90	88	87	92	90	88	90	0	0	39	
Supremacy + Preference	4 oz + 6.4 oz	90	91	90	94	88	93	92	92	88	88	0	0	36	
Supremacy + Preference	5 oz + 6.4 oz	88	87	87	87	90	89	92	90	90	90	0	0	36	
Supremacy + Preference	6 oz + 6.4 oz	94	98	96	96	96	95	96	96	94	96	0	0	28	
Supremacy + MCPA-Ester	5 oz + 0.5 pt	93	93	93	92	90	85	93	92	90	88	0	0	35	
Supremacy + 2,4-D Ester LV4	5 oz + 0.75 pt	95	95	95	95	91	83	95	95	91	95	0	0	38	
Supremacy + Bronate Advanced	5 oz + 0.8 pt	99	98	99	99	99	95	99	98	99	93	0	0	36	
ARY-0548-019 + Audit + Preference	7 oz + 0.4 oz + 6.4 oz	93	92	91	90	93	94	93	92	93	92	0	0	37	
Audit + ARY-0548-003 + Preference	0.4 oz + 4.6 oz + 6.4 oz	96	93	98	98	95	88	94	91	93	90	0	0	39	
Bronate Advanced	0.8 pt	98	96	98	96	96	92	98	96	96	95	0	0	36	
Weedy Check	--	--	--	--	--	--	--	--	--	--	--	--	--	32	
LSD (0.05)		10	11	6	7	11	14	6	6	10	10	ns	ns	ns	

Huskie 2.08 EC = pyrasulfotole & bromoxynil & safener.

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

Preference = nonionic surfactant.

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

MCPA Ester 4E.

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

Starane 1.5 E = 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).

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).

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

Buctril 2E = bromoxynil.

Supremacy = thifensulfuron & tribenuron & fluroxypyr.

2,4-D LV4 Ester 4E.

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

ARY-0548-019 = flucarbazone-sodium & cloquintacet-mexl (safener) & fluroxypyr.

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

ARY-0548-003 = experimental fluroxypyr formulation.