

Broadleaf weed control in 2 to 4 leaf spring wheat at Rosemount, MN - 2011. 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. The area was fertilized with 50 lbs/A N and field cultivated on April 15. On April 25, the area was field cultivated and 'RB-07' hard red spring wheat was seeded at 90 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 June 9 to control grassy weeds. Visual weed control, wheat injury and yield data are presented in the table. Environmental conditions and plant sizes are listed below.

Treatment Date	June 1
Air Temperature (°F)	74
Soil Temperature (°F)	65
Soil Moisture	moist at 1"
Relative humidity (%)	32
Dewpoint (°F)	43
Sky	90% clouds
Wind	NW 3-6
Rainfall before application	
Week 1 (inch)	0.98
Rainfall after application	
Week 1 (inch)	0.19
Week 2 (inch)	1.60
Common Lambsquarters	
height (inch)	1 – 4
leaf number	2 - 6
density (#/ft ²)	7.7
Common Ragweed	
height (inch)	2-4
leaf number	2-4
density (#/ft ²)	8.7
Pennsylvania Smartweed	
height (inch)	1-2
leaf number	2-3
density (#/ft ²)	3.3
Pigweed	
height (inch)	0.75 - 1
leaf number	2-3
density (#/ft ²)	3.7
Wild Buckwheat	
height (inch)	1-3
leaf number	1-3
density (#/ft ²)	2
Wild Mustard	
height (inch)	2-8
stage	bud
density (#/ft ²)	38
Wheat	
height (inch)	6-8
leaf stage	4.5-4.75 (Zadoks Z15, 21-22)
Tiller #	1 - 2

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Durgan and Miller.

Treatment	Rate	Weed Control																					Wheat Yield (Bu/A)
		Common Lambsquarters			Common Ragweed			Pennsylvania Smartweed			Pigweed		Wild Buckwheat			Wild Mustard			Wheat Injury				
		6/25	7/12	7/30	6/25	7/12	7/30	6/25	7/12	7/30	6/25	7/12	6/25	7/12	7/30	6/25	7/12	7/30	6/25	7/12	7/30		
	Product/A	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)		
Huskie + N-Pak AMS	11 oz + 1.18 pt	99	99	99	99	96	96	99	99	99	99	99	99	99	99	99	99	99	0	0	0	19	
Huskie + N-Pak AMS	13 oz + 1.18 pt	99	99	99	99	99	95	99	99	95	99	99	99	99	95	99	99	99	0	0	0	22	
Huskie + N-Pak AMS	15 oz + 1.18 pt	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	96	99	0	0	0	22	
Huskie + N-Pak AMS + Preference	13 oz + 1.18 pt + 3.2 oz	99	99	99	99	93	99	99	99	99	99	99	99	99	99	99	96	99	0	0	0	23	
Huskie + N-Pak AMS + Axial Star	11 oz + 1.18 pt + 3.2 oz	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	93	99	0	0	0	23	
Widematch + MCPA Ester	1 pt + 0.5 pt	99	99	99	93	94	99	90	96	98	99	99	91	96	98	96	96	99	0	0	0	25	
Affinity Tankmix + Starane + Preference	0.6 oz + 0.33 pt + 3.2 oz	96	96	99	80	81	71	87	86	88	98	99	87	86	88	96	96	99	0	0	0	22	
Affinity Tankmix + MCPA-Ester + Preference	0.6 oz + 0.5 pt + 3.2 oz	99	99	99	87	90	82	85	86	93	96	93	85	86	94	99	99	99	0	0	0	25	
Wolverine	27.4 oz	99	99	96	99	98	95	99	99	96	99	99	99	99	96	99	99	99	0	0	0	23	
636 4-Way	13.69 oz	99	99	99	99	98	98	99	99	98	99	96	99	99	98	99	96	99	0	0	0	22	
Harmony SG + Express SG + Axial Star	0.48 oz + 0.12 oz + 1.03 pt	96	99	99	85	87	91	87	86	91	96	96	87	86	91	96	96	99	0	0	0	23	
Harmony SG + Express SG + Axial Star	0.2 oz + 0.2 oz + 1.03 pt	96	96	98	83	85	66	83	86	90	96	96	83	86	90	96	96	99	0	0	0	21	
Orion	17 oz	53	70	93	62	40	67	67	73	43	83	77	67	73	43	90	93	99	0	0	0	23	
Orion + Starane	17 oz + 0.33 pt	92	90	99	90	90	87	92	80	53	90	90	92	87	63	95	93	99	0	0	0	25	
Orion + Buctril	17 oz + 1 pt	91	93	99	90	93	93	90	83	70	95	93	90	90	70	96	96	99	0	0	0	26	
Orion + Axial Star	17 oz + 1.03 pt	91	87	98	82	90	86	83	77	47	93	93	83	83	63	93	93	99	0	0	0	22	
GoldSky + Preference	16 oz + 3.2 oz	70	90	99	70	83	90	73	80	83	78	92	73	80	83	88	90	99	0	0	0	23	
Pulsar + Preference	8.3 oz + 3.2 oz	87	90	99	83	83	92	83	76	75	87	88	83	82	75	87	99	99	3	2	5	22	
Pulsar + MCPA-Ester + Preference	8.3 oz + 0.5 pt + 3.2 oz	96	94	99	88	88	93	87	85	82	93	93	87	87	85	96	96	99	5	0	5	23	
Pulsar + Affinity Tankmix + Preference	8.3 oz + 0.6 oz + 3.2 oz	98	98	99	90	90	98	90	88	96	98	90	90	90	96	96	96	99	2	0	5	23	
Everest 2.0 + Newton	0.75 oz + 0.8 pt	73	77	93	27	27	7	53	63	80	77	80	57	62	80	88	87	99	0	0	0	21	
Bronate Advanced	0.6 pt	86	83	90	60	40	33	67	60	53	83	77	67	60	60	90	92	90	0	0	0	25	
Bronate Advanced	0.8 pt	99	98	96	87	76	68	85	83	78	98	96	87	89	78	99	99	99	0	0	0	26	
Bronate Advanced + Axial Star	0.6 pt + 1.03 pt	99	98	96	88	83	70	93	86	68	98	99	93	90	68	99	99	99	2	0	0	21	
Weedy Check	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0	0	14	
LSD (0.05)		15	13	4	18	21	24	11	19	22	10	11	12	14	20	7	ns	3	2	ns	ns	4	

Huskie 2.08EC = pyrasulfotole & bromoxynil & safener.

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

Preference = nonionic surfactant.

Axial Star 1.15EC = Pinoxaden (0.42 lb ai/gal) & fluroxypyr ester (0.73 lb ae/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 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).

636 4-Way = premix from Bayer CropScience.

Harmony 50SG = thifensulfuron.

Express 50SG = tribenuron.

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

Buctril 2E = bromoxynil.

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).