

Broadleaf weed control in 2 to 4 leaf spring wheat at Crookston, MN - 2013. 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 May 7 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.

Treatment Date	June 3
<u>Weed Density (#/ft²)</u>	
- Nightflowering Catchfly	24
- Redroot Pigweed	31
- Wild buckwheat	8
- Wild Mustard	5
Wheat Stage	2-4 leaf
Air temperature (°F)	62
Soil temperature (°F)	52
Relative humidity (%)	38
Wind	SE 4 mph
Sky	overcast
Rainfall before Application	
Week 1 (inch)	1.66
Rainfall after Application	
Week 1 (inch)	0.87
Week 2 (inch)	0.03

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Treatment	Rate	Weed Control																Wheat Injury				Wheat Yield				
		Nightflowering Catchfly				Redroot Pigweed				Wild Buckwheat				Wild Mustard				6/21	6/24	7/8	7/17					
		6/21	6/24	7/8	7/17	6/21	6/24	7/8	7/17	6/21	6/24	7/8	7/17	6/21	6/24	7/8	7/17									
	(Product/A)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(Bu/A)	
Huskie Complete	13.7 oz	100	99	99	96	100	99	99	99	98	99	96	96	100	99	99	99	0	0	0	0					91
Huskie Complete + N-Pak AMS	13.7 oz + 1.18 pt	97	99	99	99	100	99	99	99	100	99	99	99	100	99	99	99	0	0	0	0					87
Huskie + N-Pak AMS	13.5 oz + 1.18 pt	83	99	99	96	100	99	99	99	100	99	99	96	100	99	96	99	0	0	0	0					94
Huskie + N-Pak AMS + Preference	13 oz + 1.18 pt + 3.2 oz	100	99	99	94	100	99	99	99	98	99	99	94	100	99	99	99	0	0	0	0					99
Varro + Bronate Advanced	6.84 oz + 0.8 pt	90	93	90	94	100	99	99	99	100	96	93	94	100	99	99	99	0	0	0	0					91
Bronate Advanced	0.8 pt	87	67	66	90	97	93	93	99	93	88	86	90	97	96	93	99	0	0	0	0					96
Widematch + MCPA Ester	1 pt + 0.5 pt	78	77	77	87	96	90	92	99	90	87	83	90	98	92	90	99	0	0	0	0					90
Widematch + Affinity Tankmix	1 pt + 0.6 oz	60	86	83	99	96	96	95	99	83	93	91	99	100	96	95	99	0	0	0	0					95
Affinity Tankmix + Starane Ultra + Preference	0.6 oz + 4.3 oz + 3.2 oz	90	77	67	93	99	93	96	99	93	82	83	91	99	96	96	99	0	0	0	0					88
Affinity Tankmix + MCPA-Ester + Preference	0.6 oz + 0.5 pt + 3.2 oz	92	88	87	93	97	96	95	99	85	88	87	91	100	96	96	99	0	0	0	0					93
Affinity Tankmix + Preference	0.6 oz + 3.2 oz	80	83	80	90	95	98	92	99	88	83	78	87	93	93	93	99	0	0	0	0					93
Wolverine	27.4 oz	100	93	93	96	99	99	99	99	99	99	99	96	100	99	99	99	0	0	0	0					92
GoldSky + Preference	1 pt + 3.2 oz	53	75	67	93	90	92	90	99	73	88	80	93	93	96	93	99	0	0	0	0					82
GoldSky + Affinity Tankmix + Preference	1 pt + 0.6 oz + 3.2 oz	96	90	83	93	96	96	96	99	90	88	87	90	100	99	98	99	0	0	0	0					85
GoldSky + Huskie + Preference	1 pt + 11 oz + 3.2 oz	100	93	96	99	100	99	98	99	97	96	96	99	100	99	99	99	0	0	0	0					90
GoldSky + MCPA ester	1 pt + 0.75 pt	73	90	80	93	96	93	93	99	82	90	80	93	96	99	95	99	0	0	0	0					90
Pulsar + Preference	8.3 oz + 3.2 oz	40	43	57	85	73	72	68	90	58	68	72	83	70	70	70	88	0	0	3	0					86
Pulsar + MCPA-Ester + Preference	8.3 oz + 0.5 pt + 3.2 oz	67	67	77	90	93	92	90	98	80	82	83	90	93	93	90	99	0	0	2	0					92
Pulsar + Affinity Tankmix + Preference	8.3 oz + 0.6 oz + 3.2 oz	67	90	83	90	92	98	96	99	82	91	93	88	95	98	96	99	0	0	5	0					86
Everest 2.0 + Destiny HC	0.75 oz + 0.8 pt	23	20	57	86	83	83	80	96	63	78	68	82	95	90	90	96	0	0	0	0					81
AGH 09035	1.5 pt	80	78	77	90	92	90	92	96	85	88	87	91	96	90	92	98	0	0	0	0					86
AGH 09035 + Interlock	1.5 pt + 4 oz	88	87	83	93	93	96	95	98	85	90	90	93	93	99	96	98	0	0	0	0					94
AGH 09035 + AGH 8050	1.5 pt + 6.4 oz	80	82	75	91	93	96	93	96	83	87	87	91	93	96	93	98	0	0	0	0					91
AGH 08032	1.5 pt	80	77	73	91	93	99	90	95	92	90	90	92	99	99	90	98	0	0	0	0					84
AGH 08032 + Interlock	1.5 pt + 4 oz	60	80	80	93	89	98	93	99	85	93	93	93	99	99	99	99	0	0	0	0					91
AGH 08032 + AGH 8050	1.5 pt + 6.4 oz	77	75	72	87	97	99	96	98	93	90	90	90	98	99	98	99	0	0	0	0					89
Weedy Check	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	44
LSD (0.05)		33	18	19	ns	11	7	7	4	13	7	10	9	7	5	6	4	ns	ns	1	ns					13

Huskie Complete 1.76L = thiencazabone-methyl (0.042 lb ai/gal) & pyrasulfotole (0.26 lb ai/gal) & bromoxynil phenol equivalent (1.46 lb ai/gal).

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

Huskie 2.08 EC = pyrasulfotole (0.23 lb ai/gal) & bromoxynil 1.85 lb ai/gal) & safener.

Preference = nonionic surfactant.

Varro = thiencazabone-methyl & safener.

Bronate Advanced 5E = bromoxynil (2.5 lb ai/gal) & MCPA (2.5 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 Ultra 2.8E = 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).

GoldSky 0.84L = pyroxulam (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).

Destiny HC = methylated soybean oil, high fructose corn syrup, sorbitan fatty acid esters.

AGH 09035 = experimental from Agrilience.

Interlock = depositeoin aid and drift control agent.

AGH 8050 = experimental from Agrilience.

AGH 08032 = experimental from Agrilience.