

Broadleaf weed control in spring wheat at Crookston, MN - 2018. Durgan, Beverly R., Jochum Wiersma, Jim Cameron, Houston Lindell, and Douglas Miller. This experiment was designed to evaluate broadleaf weed control and wheat injury with broadleaf herbicides. The experiment was conducted at Crookston, MN on a Donaldson and Wheaton loam soil. Following weedy fallow, 149 lbs/A N and 52 lbs/A P was applied and the area was chisel plowed in the fall of 2017. In the spring of 2018, a seedbed was prepared using a field cultivator with rolling baskets. 'Linkert' hard red spring wheat was seeded on April 30 at 1.75 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	May 31
Broadleaf weeds	3-4"
Air temperature (°F)	65
Soil temperature (°F)	65
Relative humidity (%)	82
Wind	NW 5 mph
Sky	cloudy
Rainfall before Application	
Week 1 (inch)	0.28
Rainfall after Application	
Week 1 (inch)	1.75
Week 2 (inch)	2.75

<u>Weed Densities</u>	<u>(#/ft²)</u>
Common Lambquarters	140
Common Mallow	7
Redroot Pigweed	6
Wild Buckwheat	75
Wild Mustard	56

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Treatment	Rate (Product/A)	Weed Control															Wheat Injury			Wheat Yield (Bu/A)
		Common Lambsquarters			Common Mallow			Redroot Pigweed			Wild Buckwheat			Wild Mustard			6/22	7/6	7/18	
		6/22	7/6	7/18	6/22	7/6	7/18	6/22	7/6	7/18	6/22	7/6	7/18	6/22	7/6	7/18				
Talinor + CoAct+ + COC	13.7 oz + 2.74 oz + 12.8 oz	80	85	85	80	93	92	87	98	99	70	77	73	88	99	99	3	0	0	45
Talinor + CoAct+ + COC	16 oz + 3.2 oz + 12.8 oz	87	87	82	83	90	88	88	96	99	78	77	70	92	99	99	3	0	0	43
Talinor + CoAct+ + COC	18.2 oz + 3.6 oz + 12.8 oz	91	88	83	90	91	83	93	99	99	77	73	73	88	99	99	8	0	0	42
Huskie + Preference	11 oz + 3.2 oz	90	87	83	93	85	83	93	96	99	80	83	83	98	99	99	0	0	0	40
Widematch	1 pt	72	67	63	83	91	87	88	99	99	85	88	87	90	99	99	0	0	0	40
Affinity Tankmix + WideMatch + Preference	0.6 oz + 1 pt + 3.2 oz	99	98	90	99	96	93	99	99	99	99	98	90	99	99	99	3	0	0	44
Affinity Tankmix + MCPA ester	0.6 oz + 0.75 pt	99	90	90	99	90	90	99	99	99	90	83	86	99	99	99	2	0	0	45
WideMatch + Quelex + Activator 90 + AMS	1 pt + 0.75 oz + 3.2 oz + 3.5 pt	91	98	96	96	98	96	98	99	99	93	96	96	99	99	99	2	0	0	45
Affinity Tankmix + WideMatch + Activator 90 + AMS	0.2 oz + 1 pt + 3.2 oz + 3.5 pt	99	92	92	99	93	93	99	99	99	95	93	92	99	96	99	2	0	0	39
Affinity BroadSpecx + WideMatch + Activator 90 + AMS	0.2 oz + 1 pt + 3.2 oz + 3.5 pt	99	96	93	99	99	96	99	99	99	99	96	93	99	99	99	0	0	0	44
Starane Flex	13.5 oz	50	43	40	63	73	87	85	96	99	75	85	83	95	99	99	0	2	0	41
Huskie + N-Pak AMS	13.5 oz + 3.5 pt	98	90	90	96	93	90	98	99	99	88	80	77	99	99	99	0	0	0	42
Hat Trick	1.5 pt	98	96	93	96	93	92	93	99	99	87	95	92	98	99	99	0	0	0	37
LSD (0.05)		18.7	9.9	9.5	18.7	ns	8.2	6.2	ns	ns	17.1	13.0	16.0	6.1	ns	ns	3.3	ns	ns	ns

Talinor = bicyclopyrone & bromoxynil.

CoAct+ = adjuvant.

COC = crop oil concentrate.

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

Preference = nonionic surfactant.

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

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

MCPA Ester 4E.

Quelex 20SG = halauxifen-methyl (10%) & flurasulam (10%).

Activator 90 = nonionic surfactant.

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

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

Starane Flex 0.875EC = florasulam (0.042 lb ai/gal) & fluroxypyr (0.833 lb ae/gal).

Hat Trick 2.82SE= clopyralid (0.51 lb ae/gal) & fluroxypyr (0.51 lb ae/gal) & MCPA ester (1.8 lb ae/gal).

AGH 15004 = experimental from Winfield Solutions.

AGH 13064 = experimental from Winfield Solutions.

Interlock = drift control agent.

AGH 8050 = experimental from Winfield Solutions.

AGH 14039 = experimental from Winfield Solutions.