

Broadleaf weed control in spring wheat with X2682aa tank mixes 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 X2682aa alone and in tank mixes with other 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 21
Broadleaf Weeds	2-3"
Air temperature (°F)	79
Soil temperature (°F)	70
Relative humidity (%)	14
Wind	S 2-3 mph
Sky	clear
Rainfall before Application	
Week 1 (inch)	0.40
Rainfall after Application	
Week 1 (inch)	0.23
Week 2 (inch)	1.72
Weed Densities	(#/ft²)
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	6/22	7/6	7/18	
X2682aa + Preference + AMS	13.7 oz + 3.2 oz + 2 pt	70	83	83	93	90	90	93	99	99	92	85	83	99	99	99	2	0	0	56
X2682aa + Axial XL + Preference + AMS	13.7 oz + 12.3 oz + 3.2 oz + 2 pt	77	82	78	93	90	90	93	99	99	87	87	83	99	99	99	5	0	0	56
X2682aa + Varro + Preference + AMS	13.7 oz + 3 oz + 3.2 oz + 2 pt	80	85	82	93	93	88	95	99	99	92	88	87	99	99	99	0	0	0	51
X2682aa + PowerFlex HL + Preference + AMS	13.7 oz + 2 oz + 3.2 oz + 2 pt	83	92	90	92	95	90	90	99	99	92	90	87	99	99	99	3	0	0	49
X2682aa + Audit 1:1 + Preference + AMS	13.7 oz + 0.4 oz + 3.2 oz + 2 pt	95	93	92	99	96	92	99	99	99	95	93	92	99	99	99	0	0	0	56
X2682aa + Huskie + Preference + AMS	13.7 oz + 11 oz + 3.2 oz + 2 pt	93	92	92	98	96	93	98	99	99	96	93	90	99	99	99	0	0	0	48
X2682aa + Sword + Preference + AMS	13.7 oz + 6.14 oz + 3.2 oz + 2 pt	88	93	92	93	93	90	96	99	99	90	93	90	99	99	99	0	0	0	48
X2682aa + Salvo + Preference + AMS	13.7 oz + 6.4 oz + 3.2 oz + 2 pt	93	93	92	96	95	90	99	99	99	98	93	90	99	99	99	0	0	0	48
X2682aa + Stinger + Preference + AMS	13.7 oz + 5 oz + 3.2 oz + 2 pt	88	82	78	95	90	88	95	99	99	95	90	88	99	99	99	3	0	0	49
X2682aa + Starane Ultra + Preference + AMS	13.7 oz + 6.4 oz + 3.2 oz + 2 pt	77	80	77	90	92	87	93	99	99	92	90	87	99	99	99	0	0	0	47
X2682aa + Moxy + Preference + AMS	13.7 oz + 16 oz + 3.2 oz + 2 pt	87	90	87	93	93	92	93	99	99	90	93	92	99	99	99	0	0	0	51
X2682aa + Talinor + CoAct+ + Preference	13.7 oz + 13.7 oz + 2.75 oz + 3.2 oz	85	87	87	93	91	90	93	99	99	88	88	87	98	99	99	0	0	0	45
Huskie Complete + Preference + AMS	13.7 oz + 3.2 oz + 2 pt	90	92	90	96	93	90	96	99	99	92	92	90	99	99	99	0	2	0	51
PerfectMatch + Preference+ AMS	1 pt + 3.2 oz + 2 pt	82	88	87	96	95	90	95	99	99	90	92	90	99	99	99	0	0	0	46
Axial XL + Talinor + CoAct+ + Preference	16.4 oz + 13.7 oz + 2.75 oz + 3.2 oz	77	87	80	93	90	85	93	99	99	85	70	68	99	99	99	0	0	0	52
Quelex + Preference	0.75 oz + 3.2 oz	50	63	62	92	92	83	92	99	99	85	85	80	96	99	99	0	2	0	47
Affinity Tankmix + Preference	0.6 oz + 3.2 oz	90	87	82	96	91	90	98	99	99	90	83	82	99	99	99	0	0	0	53
Hat Trick	1.5 pt	96	96	90	99	93	92	99	99	99	96	96	90	99	99	99	2	2	0	56
OpenSky + Preference+ AMS	1 pt + 3.2 oz + 3.5 pt	88	89	90	93	96	93	93	99	99	93	92	88	99	99	99	3	0	0	52
LSD (0.05)		16.5	7.7	7.8	ns	ns	ns	5.4	ns	ns	ns	6.7	7.6	ns	ns	ns	ns	ns	ns	ns

X2682aa 3.46 OD = experimental from Arysta

Preference = nonionic surfactant.

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

Axial XL 0.42EC = pinoxaden and adigor adjuvant.

Varro 0.083L = thiencazone-methyl.

PowerFlex HL 13.13 WG = pyroxsulam.

Audit 1:1x 50WG = thifensulfuron (25%) & tribenuron (25%).

Huskie 2.06EC = pyrasulfotole (0.31 lb ai/gal) & bromoxynil (1.75 lb ai/gal).

Sword 5.2E = MCPA ester.

Salvo 5E = 2,4-D ester.

Stinger 3SL = clopyralid.

Starane 2.8 E = fluroxypyr.

Moxy 2E = bromoxynil .

Talinor = bicyclopyrone & bromoxynil.

CoAct+ = adjuvant.

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

PerfectMatch 1.61SE = clopyralid (0.75 lb ae/gal) & fluroxypyr (0.75 lb ae/gal) & pyroxsulam (0.11 lb ai/gal).

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

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

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

OpenSky 1.057SE = fluroxypye (0.95 lb/gal) + pyroxsulam (0.107 lb/gal).