Wild oat control in spring wheat with Batalium II at Crookston, MN - 2021. Durgan, Beverly R., Jochum Wiersma, Jim Cameron, and Houston Lindell. The objective of this experiment was to evaluate wild oat control and wheat injury with Batalium II 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, the area was chisel plowed in the fall of 2020. In the spring of 2021, 149 lbs/A N and 52 lbs/A P was applied, and a seedbed was prepared using a field cultivator with rolling baskets. 'Linkert' hard red spring wheat was seeded on April 19 at 1.75 bu/a. The experimental design was a randomized complete block with three replications. Plot size was 10 by 16 ft. Target application stage was 3-4 leaf wild oat. All herbicide treatments were applied with a backpack type sprayer delivering 10 gpa at 30 psi using 80015 flat fan nozzles. Application data and environmental conditions are listed below. Crop injury and wild oat control were rated visually. Yields were measured. All data are presented in the table below.

Treatment Date	**May 21**
Target Wild Oat Stage	3-4 leaf
Wild Oat Density	270 / ft^2
Air temperature (°F)	74
Relative humidity (%)	84
Wind	S 6 mph
Soil temperature (under sod) (°F)	58
Rainfall before Application	
Week 1 (inch)	0.18
Rainfall after Application	
Week 1 (inch)	0.51
Week 2 (inch)	0.09

Results

There were few significant differences in wild oat control between herbicide treatments. Batalium II + MCPA Ester had the lowest control at the June 24 rating date. Everest 3.0 + WideARMatch had the lowest control at the July 2 and July 22 rating dates. PerfectMatch had the best wild oat control over all rating dates.

There was no significant differences in crop injury between herbicide treatments.

Crop yields were highly variable, most likely the result of low precipitation over the growing season. There were no significant yield differences between herbicide treatments and they all were significantly greater than the untreated check yield.

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		Wild Oat Control			Wheat Injury				Wheat
Treatment	Rate	6/24	7/2	7/22	5/28	6/4	6/12	6/18	Yield
	(Product/A)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(Bu/A)
Batalium II + NIS + AMS	13.7 oz + 3.2 oz + 2 pt	88	92	91	0	0	0	0	36
Batalium II + Audit 1:1 + NIS + AMS	13.7 oz + 0.4 oz + 3.2 oz + 2 pt	87	88	95	0	0	0	0	39
Batalium II + Puma + NIS + AMS	13.7 oz + 6.4 oz + 3.2 oz + 2.35 pt	85	88	96	7	0	0	0	40
Batalium II + Stinger + NIS + AMS	13.7 oz + 4 oz + 3.2 oz + 2 pt	85	90	95	0	0	2	0	35
Batalium II + 2,4-D ester LV6 + NIS + AMS	13.7 oz + 5.4 oz + 3.2 oz + 2 pt	88	91	93	2	0	0	0	37
Batalium II + MCPA ester + NIS + AMS	13.7 oz + 8 oz + 3.2 oz + 2 pt	77	85	92	0	0	0	0	36
Batalium II + Starane Ultra + NIS + AMS	13.7 oz + 5.75 oz + 3.2 oz + 2 pt	87	92	93	5	0	2	0	38
Huskie Complete + NIS + AMS	13.7 oz + 3.2 oz + 2 pt	88	90	96	2	0	0	0	39
PerfectMatch + NIS + AMS	1 pt + 3.2 oz + 2 pt	93	95	98	2	2	0	2	44
Everest 3.0 + WideARMatch + NIS + AMS	2 oz + 14 oz + 3.2 oz + 2 pt	85	83	85	0	0	3	2	37
Untreated Check	--	--	--	--	0	0	0	0	18
LSD (0.05)		ns	4.8	ns	ns	ns	ns	ns	8.9

Batalium II = flucarbazone (0.25 lb ai/gal & bromoxynil (2.34 lb ai/gal) & fluroxypyr (0.88 lb ae/gal).

NIS = Preference nonionic surfactant.

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

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

Puma 1EC = fenoxaprop.

Stinger 3SL = clopyralid.

2,4-D ester LV6 5.8E.

MCPA Ester 4E.

Starane Ultra 2.8 E = fluroxypyr.

Huskie Complete 1.76L = thiencarbazone-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).

Everest 3.0 1.75SC = flucarbazone-sodium & cloquintacet (safener).

WideARmatch 1.88E = clopyralid (0.82 lb ae/gal) & halauxifen (0.04 lb ai/gal) & fluroxypyr (1.02 lb ae/gal).