Broadleaf weed control in spring wheat with Batalium II at Crookston, MN - 2021.

Durgan, Beverly R., Jochum Wiersma, Jim Cameron, and Houston Lindell. This experiment was designed to evaluate broadleaf weed control and wheat injury with Batallium II alone and in several tank mixes. 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 2020. In the spring of 2021, a seedbed was prepared using a field cultivator with rolling baskets. 'Linkert' hard red spring wheat was seeded on May 13 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	June 7								
Air temperature (°F) Soil temperature (under sod) (°F) Relative humidity (%) Wind	81 63 44 NE 6.5 mph								
Rainfall before Application Week 1 (inch) Rainfall after Application	0.08								
Week 1 (inch)	0.41								
Week 2 (inch)	0.58								
Broadleaf weed height (inches)	3-5								
Weed Densities	(#/ft ²⁾								
Common Lambquarters	15								
Common Mollow	17								

Common Lambquarters	15
Common Mallow	17
Redroot Pigweed	10
Wild Buckwheat	29
Wild Mustard	21

Results

Control of common lambsquarters, common mallow, redroot pigweed, wild buckwheat, and wild mustard was excellent with all herbicide treatments.

Slight injury symptoms (stunting and delayed heading) were observed with all herbicide treatments. Injury

There were no significant yield differences between the herbicide treatments or the untreated check.

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		Weed Control																		
	Rate	Common Lambsquarters			Common		n	Redroot		t	Wild			Wild			٧			
Treatment					Mallow			Pigweed		d	Buckwheat			Mustard			Injury			Wheat
		6/18	8 6/24 7/		7/2 6/18		7/2	6/18	6/18 6/24 7/2		6/18	6/24	7/2	6/18	6/24	7/2	6/18	6/24	7/2	Yield
	(Product/A)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(Bu/A)
Batalium II + NIS + AMS	13.7 oz + 3.2 oz + 2 pt	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	8	5	2	32
Batalium II + Audit 1:1 + NIS + AMS	13.7 oz + 0.4 oz + 3.2 oz + 2 pt	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	8	5	2	34
Batalium II + Stinger + NIS + AMS	13.7 oz + 4 oz + 3.2 oz + 2 pt	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	8	5	2	34
Batalium II + Starane Ultra + NIS + AMS	13.7 oz + 5.75 oz + 3.2 oz + 2 pt	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	8	5	2	32
Batalium II + 2,4-D ester LV6 + NIS + AMS	13.7 oz + 5.4 oz + 3.2 oz + 2 pt	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	5	3	2	27
Batalium II + MCPA ester + NIS + AMS	13.7 oz + 8 oz + 3.2 oz + 2 pt	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	3	3	0	32
Huskie Complete + NIS + AMS	13.7 oz + 3.2 oz + 2 pt	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	2	2	0	32
PerfectMatch + NIS + AMS	1 pt + 3.2 oz + 2 pt	99	99	99	99	99	99	99	99	98	99	99	99	99	99	99	5	5	0	34
WideARMatch + NIS + AMS	14 oz + 3.2 oz + 2 pt	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	2	2	0	38
Untreated Check																	0	0	0	31
LSD (0.05)		ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	5.0	2.8	ns	ns

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%).

Stinger 3SL = clopyralid.

Starane Ultra 2.8 E = fluroxypyr.

2,4-D ester LV6 5.8E.

MCPA Ester 4E.

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).

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