

Wild oat control in spring wheat with three application times at Crookston, MN - 2014.

Durgan, Beverly R., Jochum Wiersma, Jim Cameron, Matthew Green, and Douglas Miller. This experiment was designed to evaluate wild oat control with several herbicides applied at three different wild oat stages. The experiment was conducted at Crookston, MN on a Donaldson and Wheaton loam soil. Following weedy fallow, the experimental area was burned to remove the standing straw and, after receiving 100 lb/A of N as urea, was chisel plowed in the fall. In the spring of the following year, a seedbed was prepared using a field cultivator with rolling baskets. 'RB07' hard red spring wheat was seeded on May 17 at 1.8 bu/a. The experimental design was a randomized complete block with three replications. Plot size was 10 by 16 ft. Target application stages were 1 leaf, 3-4 leaf and 5-6 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 28	June 3	June 13
Wild oat stage	1 leaf	3-4 leaf	5-6 leaf
Air temperature (°F)	87	72	71
Soil temperature (°F)	80	68	60
Relative humidity (%)	38	55	39
Wind	2 mph	2 mph	3 mph
Sky	clear	partly cloudy	overcast
Rainfall before Application			
Week 1 (inch)	0.42	1.48	0.80
Rainfall after Application			
Week 1 (inch)	1.48	0.70	3.71
Week 2 (inch)	1.50	2.69	0.09

All treatments applied at the 3-4 leaf wild oat stage provided good to excellent season-long wild oat control. Of the treatments applied at the 1 leaf stage, Everest 2.0 and Goldsky provided excellent season-long control followed by Axial XL with good control. Varro, Rimfire Max, and Wolverine Advanced provided fair control. Wheat yields with the early and mid-application timings were good and did not significantly differ. At the 5-6 leaf wild oat timing, Rimfire Max, Axial XL, and Wolverine Advanced resulted in excellent control with the ARY-0454-124 compound providing good control. Control with the other products was fair with Huskie Complete showing the poorest wild oat control at the July 30 rating date. Wheat yields were generally lower for the late treatment applications. Those treatments that resulted in the lower wild oat control in the late application group also had significantly lower yields than the top yielding treatments in the two earlier application groups. No significant injury symptoms were observed for any of the treatments.

**Wild oat control in spring wheat with three application times at Crookston, MN – 2014.
Durgan, Wiersma, Cameron, Green, and Miller.**

Treatment	Rate (Product/A)	Wild Oat Control					Wheat Injury			Wheat Yield (Bu/A)	
		6/13	6/27	7/10	7/16	7/30	6/13	6/27	7/10		
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)		
Application #1 (May 28)											
Everest 2.0 + Widematch + MCPA ester + Preference + AMS	1 oz + 1 pt + 0.5 pt + 3.2 oz + 2.35 pt	90	93	96	96	96	0	0	0	73	
Everest 2.0 + Widematch + Audit 1:1 + Preference + AMS	0.75 oz + 1 pt + 0.4 oz + 3.2 oz + 2.35 pt	95	95	98	99	98	0	0	0	81	
Everest 2.0 + Widematch + Audit 1:1 + Preference + AMS	1 oz + 1 pt + 0.4 oz + 3.2 oz + 2.35 pt	95	95	96	99	98	0	0	0	83	
GoldSky + Preference + AMS	1 pt + 3.2 oz + 2.35 pt	95	95	96	99	98	0	0	0	80	
Varro + Widematch + MCPA ester + Preference + AMS	6.85 oz + 1 pt + 0.5 pt + 3.2 oz + 2.35 pt	95	95	95	87	85	0	0	2	81	
Rimfire Max + Destiny HC	3 oz + 0.75 pt	95	95	93	85	83	0	0	0	81	
Axial XL	16.4 oz	95	95	95	88	94	0	0	0	82	
Wolverive Advanced	27.4 oz	92	93	93	82	82	0	0	0	81	
Application #2 (June 3)											
Everest 2.0 + Widematch + MCPA ester + Preference + AMS	1 oz + 1 pt + 0.5 pt + 3.2 oz + 2.35 pt		95	99	99	99		0	0	83	
Everest 2.0 + Widematch + Audit 1:1 + Preference + AMS	0.75 oz + 1 pt + 0.4 oz + 3.2 oz + 2.35 pt		95	99	99	99		0	0	80	
Everest 2.0 + Widematch + Audit 1:1 + Preference + AMS	1 oz + 1 pt + 0.4 oz + 3.2 oz + 2.35 pt		95	99	99	99		0	2	76	
GoldSky + Preference + AMS	1 pt + 3.2 oz + 2.35 pt		93	99	99	99		0	0	85	
Varro + Widematch + MCPA ester + Preference + AMS	6.85 oz + 1 pt + 0.5 pt + 3.2 oz + 2.35 pt		93	95	99	95		0	2	82	
Rimfire Max + Destiny HC	3 oz + 0.75 pt		93	99	99	98		0	2	81	
Axial XL	16.4 oz		95	99	99	99		0	0	84	
Wolverive Advanced	27.4 oz		95	99	95	92		0	0	79	
ARY-0454-124 + Widematch + Audit 1:1 + Preference + AMS	1 oz + 1 pt + 0.4 oz + 3.2 oz + 2.35 pt		93	98	96	99		0	0	81	
Huskie Complete	13.7 oz		95	99	93	98		0	0	76	
Application #3 (June 13)											
Everest 2.0 + Widematch + MCPA ester + Preference + AMS	1 oz + 1 pt + 0.5 pt + 3.2 oz + 2.35 pt				88	91	78		0	0	63
Everest 2.0 + Widematch + Audit 1:1 + Preference + AMS	0.75 oz + 1 pt + 0.4 oz + 3.2 oz + 2.35 pt				90	90	82		0	0	63
Everest 2.0 + Widematch + Audit 1:1 + Preference + AMS	1 oz + 1 pt + 0.4 oz + 3.2 oz + 2.35 pt				96	94	82		0	0	59
GoldSky + Preference + AMS	1 pt + 3.2 oz + 2.35 pt				87	90	83		0	0	59
Varro + Widematch + MCPA ester + Preference + AMS	6.85 oz + 1 pt + 0.5 pt + 3.2 oz + 2.35 pt				90	83	73		0	0	61
Rimfire Max + Destiny HC	3 oz + 0.75 pt				88	94	96		2	2	69
Axial XL	16.4 oz				95	98	99		0	0	69
Wolverive Advanced	27.4 oz				98	95	99		0	0	69
ARY-0454-124 + Widematch + Audit 1:1 + Preference + AMS	1 oz + 1 pt + 0.4 oz + 3.2 oz + 2.35 pt				87	88	93		0	0	61
Huskie Complete	13.7 oz				85	83	62		0	0	50
Weedy Check	--	--	--	--	--	--	--	--	--	--	22
LSD (0.05)		2	ns	7	11	12	ns	ns	ns	14	

Everest 2.0 3.5SC = flucarbazone-sodium & cloquintacet (safener).

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

MCPA Ester 4E.

Preference = nonionic surfactant.

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

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

GoldSky 0.84L = pyroxusulam (0.11 lb ai/gal) & fluroxypyr (0.71 lb ae/gal) & florasulam (0.018 lb ai/gal).

Varro = thiencazabone-methyl & safener.

Rimfire Max 6.67WDG = propoxycarbazone-sodium (4.76%) & mesosulfuron-methyl (1.91%).

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

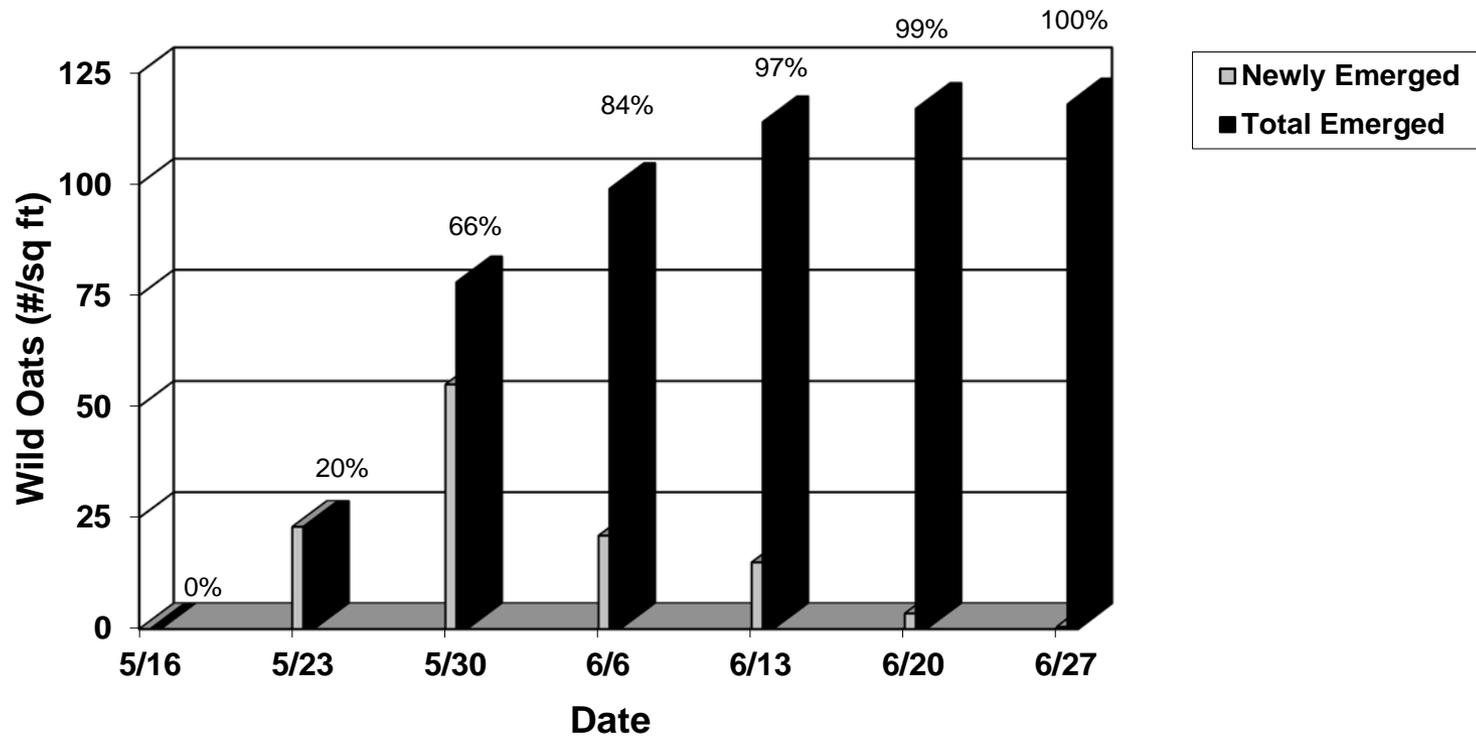
Axial XL 0.42EC = pinoxaden and adigor adjuvant.

Wolverine Advanced 1.58E = fenoxaprop-p-ethyl (0.40 lb ai/gal) & pyrasulfotole (0.13 lb ai/gal) & bromoxynil (1.05 lb ai/gal).

ARY-0454-124 3.5Sc = experimental from Arysta LifeScience.

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).

2014 Wild Oat Emergence at Crookston, MN



Average Total Population = 118/sq ft