

**Broadleaf weed control in spring wheat with new broadleaf herbicides at Crookston,**

**MN - 2008.** Durgan, Beverly R., Jochum Wiersma, Jim Cameron, and Douglas Miller. This experiment was designed to evaluate broadleaf weed control and wheat injury with several new broadleaf herbicides. The experiment was conducted at Crookston, MN on a Donaldson and Wheaton loam soil. Following weedy fallow, the experimental area received 100 lb/A of N and was fall plowed. In the spring the experimental area was disked and harrowed. 'Freyr' hard red spring wheat was seeded on April 15 at 1.5 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 tables below.

<b>Treatment Date</b>	<b>June 4</b>
Target weed stage	2 to 4 inches
Air temperature (°F)	66
Relative humidity (%)	56
Wind	S 1.5 mph
Rainfall before Application	
Week 1 (inch)	0.93
Rainfall after Application	
Week 1 (inch)	1.72
Week 2 (inch)	0.87

Wet conditions at planting caused poor stands in areas of the experiment, resulting in a large variation in yield between replicates of various treatments. Because this variation was not consistent among all treatments, yield differences observed in the data may not totally represent the effect of the herbicide treatment applied.

**Table 1. Broadleaf weed control in spring wheat with new herbicides at Crookston, MN - 2008.**

**Durgan, Wiersma, Cameron, and Miller.**

Treatment	Rate Product/A	Wheat Injury			Weed Control		
		6/20	7/1	7/17	Redroot Pigweed		
		(%)	(%)	(%)	6/20 (%)	7/1 (%)	7/17 (%)
NUP-08002 + Preference	1 pt + 3.2 oz	0	0	0	98	99	100
NUP-08004 + Preference	1 pt + 3.2 oz	0	0	0	98	100	100
NUP-08035 + Preference	1 pt + 3.2 oz	0	0	0	85	93	100
NUP-06107 + Preference	1.33 pt + 3.2 oz	0	0	0	80	91	100
NUP-08006 + Preference	0.435 pt + 3.2 oz	0	0	0	80	85	100
Rapport BroadSpec + Preference	0.4 oz + 3.2 oz	0	0	0	100	100	100
Rapport Tank Mix + Preference	0.6 oz + 3.2 oz	0	0	0	100	100	100
ARY-0546-101 + ARY-0547-101 + Starane	0.3 oz + 0.1 oz + 7.7 oz	0	0	0	100	100	100
ARY-0546-101 + ARY-0547-101 + ARY-0548-003 + Preference	0.3 oz + 0.1 oz + 3.6 oz + 3.2 oz	0	0	0	100	100	100
ARY-0546-101 + ARY-0547-101 + Widematch	0.3 oz + 0.1 oz + 1 pt				100	100	100
ARY-0546-101 + ARY-0547-101 + Widematch	0.1 oz + 0.033 oz + 1 pt	0	0	0	100	100	100
ARY-0548-003 + Preference	3.75 oz + 3.2 oz	0	0	0	80	83	100
Widematch + MCPA-Ester	1 pt + 0.5 pt	0	0	0	98	100	100
Huskie + N-Pak AMS	11 oz + 1.18 pt				99	99	100
Starane	0.33 pt	0	0	0	77	83	100
Bronate Advanced	0.8 pt	0	0	0	100	100	100
Affinity Tankmix + Preference	0.6 oz + 0.33 pt + 3.2 oz	0	0	0	100	100	100
Affinity Tankmix + Bronate Advanced + Preference	0.6 oz + 0.8 pt + 3.2 oz	0	0	0	100	100	100
Nuance + Preference	0.33 oz + 3.2 oz	0	0	0	97	100	100
Nimble + Preference	0.6 oz + 3.2 oz	0	0	0	97	100	100
Harass + Preference	0.6 oz + 3.2 oz	0	0	0	100	100	100
INC115 + Preference	0.8 oz + 3.2 oz	0	0	0	100	100	100
INC115 + MCPA-Ester + Preference	0.8 oz + 0.5 pt + 3.2 oz				100	100	100
INC116 + Preference	1 oz + 3.2 oz	0	0	0	100	100	100
Weedy Check	--	0	0	0	--	--	--
LSD (0.05)		ns	ns	ns	5	5	ns

NUP-08002 = experimental from Nufarm Americas, Inc.

Preference = nonionic surfactant.

NUP-08004 = experimental from Nufarm Americas, Inc.

NUP-08035 = experimental from Nufarm Americas, Inc.

NUP-06107 = experimental from Nufarm Americas, Inc.

NUP-08006 = experimental from Nufarm Americas, Inc.

Rapport BroadSpec 50WDG = thifensulfuron (25%) & tribenuron (25%).

Rapport Tank Mix 50WDG = thifensulfuron (40%) & tribenuron (10%).

ARY-0546-101 75EG = thifensulfuron.

ARY-0547-101 75 EG = tribenuron.

Starane 1.5 E = fluroxypyr.

ARY-0548-003 40WG = fluroxypyr.

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

MCPA Ester 4E.

Huskie 2.08 EC = pyrasulfotole & bromoxynil & safener.

N-Pak AMS = ammonium sulfate solution.

Bronate Advanced 5E = bromoxynil (2.5 lb ai/gal) & MCPA (2.5 lb ae/gal).

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

Nuance 75DF = tribenuron.

Nimble 75DF = thifensulfuron (50%) & tribenuron (25%).

Harass 75DF = thifensulfuron.

INC-115 50DF = thifensulfuron (40%) & tribenuron (10%).

INC-116 50DF = thifensulfuron (25%) & tribenuron (25%).

**Table 2. Broadleaf weed control in spring wheat with new herbicides at Crookston, MN - 2008.**

**Durgan, Wiersma, Cameron, and Miller.**

Treatment	Rate Product/A	Weed Control						Wheat Yield (Bu/A)
		Wild Buckwheat			Wild Mustard			
		6/20 (%)	7/1 (%)	7/17 (%)	6/20 (%)	7/1 (%)	7/17 (%)	
NUP-08002 + Preference	1 pt + 3.2 oz	87	80	90	96	96	100	70
NUP-08004 + Preference	1 pt + 3.2 oz	87	82	91	98	99	100	71
NUP-08035 + Preference	1 pt + 3.2 oz	67	85	98	85	93	100	72
NUP-06107 + Preference	1.33 pt + 3.2 oz	57	83	97	78	87	100	74
NUP-08006 + Preference	0.435 pt + 3.2 oz	65	75	99	75	83	100	77
Rapport BroadSpec + Preference	0.4 oz + 3.2 oz	98	94	96	99	100	100	76
Rapport Tank Mix + Preference	0.6 oz + 3.2 oz	98	94	96	98	99	100	75
ARY-0546-101 + ARY-0547-101 + Starane	0.3 oz + 0.1 oz + 7.7 oz	98	95	97	99	100	100	73
ARY-0546-101 + ARY-0547-101 + ARY-0548-003 + Preference	0.3 oz + 0.1 oz + 3.6 oz + 3.2 oz	99	96	98	99	100	100	73
ARY-0546-101 + ARY-0547-101 + Widematch	0.3 oz + 0.1 oz + 1 pt	98	99	98	99	100	100	78
ARY-0546-101 + ARY-0547-101 + Widematch	0.1 oz + 0.033 oz + 1 pt	98	96	98	99	100	100	74
ARY-0548-003 + Preference	3.75 oz + 3.2 oz	57	70	91	77	80	98	74
Widematch + MCPA-Ester	1 pt + 0.5 pt	91	94	96	95	100	100	77
Huskie + N-Pak AMS	11 oz + 1.18 pt	87	85	91	98	99	100	75
Starane	0.33 pt	55	73	92	77	82	100	75
Bronate Advanced	0.8 pt	87	87	87	99	98	100	83
Affinity Tankmix + Preference	0.6 oz + 0.33 pt + 3.2 oz	99	97	99	98	100	100	79
Affinity Tankmix + Bronate Advanced + Preference	0.6 oz + 0.8 pt + 3.2 oz	99	94	94	100	100	100	82
Nuance + Preference	0.33 oz + 3.2 oz	88	92	95	96	100	100	77
Nimble + Preference	0.6 oz + 3.2 oz	93	96	98	96	100	100	78
Harass + Preference	0.6 oz + 3.2 oz	91	96	96	98	99	100	70
INC115 + Preference	0.8 oz + 3.2 oz	98	96	98	99	100	100	71
INC115 + MCPA-Ester + Preference	0.8 oz + 0.5 pt + 3.2 oz	99	96	98	99	100	100	70
INC116 + Preference	1 oz + 3.2 oz	99	96	99	99	100	100	75
Weedy Check	--	--	--	--	--	--	--	44
LSD (0.05)		9	11	5	6	3	ns	9

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