

Broadleaf weed control in spring wheat with new broadleaf herbicides at Rosemount, MN - 2008. Durgan, Beverly R., Krishona Martinson, 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 Rosemount, MN on a Waukegon silt loam soil. Following soybeans, the experimental area was fall chisel plowed. In the spring, the area was fertilized with 50 lbs/A N and 70 lbs K. The field was disked once and field cultivated twice. 'Freyr' hard red spring wheat was seeded on May 1 at 85 lbs/A. The experimental design was a randomized complete block with three replications and plot size was 10 by 24 ft. All herbicide treatments were applied to a 6 ft strip with a backpack type sprayer delivering 10 gpa at 35 psi using 11001 flat-fan nozzles. Visual weed control and yield data are presented in the table below. No visible wheat injury symptoms were noted. Environmental conditions and plant sizes are listed below.

Treatment Date	June 9
Temperature (degrees F)	
air	73
soil	73
Soil Moisture	moist
Relative humidity	47
Sky	5% clouds
Wind	WSW 8-12
Rainfall before	
Application	
Week 1 (inch)	2.19
Rainfall after	
Application	1.53
Week 2 (inch)	0.06
Common Lambsquarters	
height (inch)	2-4
density (#/ft ²)	3
Common Ragweed	
height (inch)	2-3
density (#/ft ²)	1
Pennsylvania Smartweed	
height (inch)	2-4
density (#/ft ²)	2
Redroot Pigweed	
height (inch)	0.5-2
density (#/ft ²)	1.3
Wild Mustard	
height (inch)	2-6
density (#/ft ²)	15
Wheat	
height (inch)	6-8
leaf stage	5
Tiller #	1-2

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

Durgan, Martinson, and Miller.

Treatment	Rate Product/A	Weed Control									
		Common Lambsquarters		Common Ragweed		Pennsylvania Smartweed		Redroot Pigweed		Wild Buckwheat	
		6/30	7/25	6/30	7/25	6/30	7/25	6/30	7/25	6/30	7/25
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
NUP-08002 + Preference	1 pt + 3.2 oz	99	96	99	96	99	96	99	96	99	96
NUP-08004 + Preference	1 pt + 3.2 oz	99	99	99	93	99	99	99	99	99	99
NUP-08035 + Preference	1 pt + 3.2 oz	99	99	99	99	99	99	99	99	99	99
NUP-06107 + Preference	1.33 pt + 3.2 oz	99	99	99	99	99	99	99	99	99	99
NUP-08006 + Preference	0.435 pt + 3.2 oz	94	73	99	70	98	73	99	96	99	96
Rapport BroadSpec + Preference	0.4 oz + 3.2 oz	99	98	91	79	99	98	99	98	99	95
Rapport Tank Mix + Preference	0.6 oz + 3.2 oz	99	83	91	60	99	89	99	96	99	96
ARY-0546-101 + ARY-0547-101 + Starane	0.3 oz + 0.1 oz + 7.7 oz	99	98	99	75	99	98	99	98	99	98
ARY-0546-101 + ARY-0547-101 + ARY-0548-003 + Preference	0.3 oz + 0.1 oz + 3.6 oz + 3.2 oz	99	96	93	79	99	96	99	96	99	96
ARY-0546-101 + ARY-0547-101 + Widematch	0.3 oz + 0.1 oz + 1 pt	99	99	99	99	99	99	99	99	99	99
ARY-0546-101 + ARY-0547-101 + Widematch	0.1 oz + 0.033 oz + 1 pt	99	99	99	99	99	99	99	99	99	99
ARY-0548-003 + Preference	3.75 oz + 3.2 oz	91	50	91	50	99	50	99	90	99	90
Widematch + MCPA-Ester	1 pt + 0.5 pt	99	99	99	99	99	99	99	99	99	99
Huskie + N-Pak AMS	11 oz + 1.18 pt	99	99	99	99	99	99	99	99	99	99
Starane	0.33 pt	99	90	99	93	99	78	99	78	99	78
Bronate Advanced	0.8 pt	99	99	99	93	99	99	99	99	99	99
Affinity Tankmix + Preference	0.6 oz + 0.33 pt + 3.2 oz	99	99	99	99	99	99	99	99	99	99
Affinity Tankmix + Bronate Advanced + Preference	0.6 oz + 0.8 pt + 3.2 oz	99	79	99	76	99	98	99	98	99	98
Nuance + Preference	0.33 oz + 3.2 oz	99	99	99	66	99	99	99	99	99	99
Nimble + Preference	0.6 oz + 3.2 oz	99	99	99	86	99	99	99	99	99	99
Harass + Preference	0.6 oz + 3.2 oz	99	99	99	96	99	99	99	99	99	99
INC115 + Preference	0.8 oz + 3.2 oz	99	99	99	53	99	99	99	99	99	99
INC115 + MCPA-Ester + Preference	0.8 oz + 0.5 pt + 3.2 oz	99	99	99	89	99	99	99	99	99	99
INC116 + Preference	1 oz + 3.2 oz	99	99	99	93	99	99	99	99	99	99
Weedy Check	--	--	--	--	--	--	--	--	--	--	--
LSD (0.05)		ns	23	ns	ns	ns	20	ns	7	ns	8

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 broadleaf herbicides at Rosemount, MN - 2008. Durgan, Martinson, and Miller.

Treatment	Rate Product/A	Weed Control				Wheat Injury				Wheat Yield (Bu/A)
		Wild Mustard								
		6/16	6/23	6/30	7/25	6/16	6/23	6/30	7/25	
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
NUP-08002 + Preference	1 pt + 3.2 oz	37	60	58	96	0	0	0	2	32
NUP-08004 + Preference	1 pt + 3.2 oz	52	86	99	99	3	2	0	5	33
NUP-08035 + Preference	1 pt + 3.2 oz	37	63	93	99	0	0	0	0	31
NUP-06107 + Preference	1.33 pt + 3.2 oz	27	63	83	99	2	0	2	0	34
NUP-08006 + Preference	0.435 pt + 3.2 oz	37	58	77	96	2	0	0	0	30
Rapport BroadSpec + Preference	0.4 oz + 3.2 oz	38	72	93	98	2	0	0	0	37
Rapport Tank Mix + Preference	0.6 oz + 3.2 oz	37	60	96	98	2	2	0	3	36
ARY-0546-101 + ARY-0547-101 + Starane	0.3 oz + 0.1 oz + 7.7 oz	37	93	99	98	0	0	0	3	36
ARY-0546-101 + ARY-0547-101 + ARY-0548-003 + Preference	0.3 oz + 0.1 oz + 3.6 oz + 3.2 oz	33	67	98	96	0	0	0	2	33
ARY-0546-101 + ARY-0547-101 + Widematch	0.3 oz + 0.1 oz + 1 pt	43	67	98	99	0	0	0	2	34
ARY-0546-101 + ARY-0547-101 + Widematch	0.1 oz + 0.033 oz + 1 pt	43	88	99	99	0	0	0	3	33
ARY-0548-003 + Preference	3.75 oz + 3.2 oz	23	50	55	90	2	0	0	0	37
Widematch + MCPA-Ester	1 pt + 0.5 pt	28	68	99	99	0	0	0	2	33
Huskie + N-Pak AMS	11 oz + 1.18 pt	73	96	99	99	0	0	0	3	30
Starane	0.33 pt	43	43	80	93	0	0	0	0	32
Bronate Advanced	0.8 pt	62	88	99	99	0	0	0	0	34
Affinity Tankmix + Preference	0.6 oz + 0.33 pt + 3.2 oz	50	83	98	99	3	0	0	3	31
Affinity Tankmix + Bronate Advanced + Preference	0.6 oz + 0.8 pt + 3.2 oz	67	80	99	98	0	0	0	0	35
Nuance + Preference	0.33 oz + 3.2 oz	40	93	99	99	2	0	2	3	34
Nimble + Preference	0.6 oz + 3.2 oz	40	85	99	99	3	2	0	5	29
Harass + Preference	0.6 oz + 3.2 oz	42	93	99	99	0	0	0	0	35
INC115 + Preference	0.8 oz + 3.2 oz	37	77	99	99	0	0	0	3	31
INC115 + MCPA-Ester + Preference	0.8 oz + 0.5 pt + 3.2 oz	43	88	99	99	2	0	0	0	35
INC116 + Preference	1 oz + 3.2 oz	50	96	96	99	3	2	2	7	31
Weedy Check	--	--	--	--	--	0	0	0	0	33
LSD (0.05)		21	28	16	3	ns	ns	ns	ns	ns

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