

**Broadleaf weed control in tillering spring wheat at Rosemount, MN - 2009.** Durgan, Beverly R. and Douglas W. Miller. This experiment was designed to evaluate broadleaf weed control and wheat injury with broadleaf herbicides applied to tillering wheat. 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 75 lbs K.. The field was disked once and field cultivated twice. 'Freyr' hard red spring wheat was seeded on May 4 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. A broadcast application of Puma (fenoxaprop & safener) at 0.5 pt/A (0.063 lb ai/A) was applied on May 29 to control grassy weeds. 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.

<b>Treatment Date</b>	<b>June 11</b>
Temperature (degrees F)	
air	70
Soil Moisture	moist
Relative humidity	30
Sky	50% clouds
Wind	N 0-5
Rainfall before	
Application	
Week 1 (inch)	2.11
Rainfall after	
Application	0.63
Week 2 (inch)	0.59
<b>Common Lambsquarters</b>	
height (inch)	2-8
density (#/ft <sup>2</sup> )	5.75
<b>Pennsylvania Smartweed</b>	
height (inch)	1-5
density (#/ft <sup>2</sup> )	4
<b>Redroot Pigweed</b>	
height (inch)	1-5
density (#/ft <sup>2</sup> )	10.25
<b>Wild Buckwheat</b>	
height (inch)	4-6
density (#/ft <sup>2</sup> )	15.5
<b>Wild Mustard</b>	
height (inch)	4-12 (bud to flower)
density (#/ft <sup>2</sup> )	scattered
<b>Wheat</b>	
height (inch)	10-12
leaf stage	6.75 to 7, jointing (Zadoks Z17, 22-23, 31)
tiller #	2-3

**Table 1. Broadleaf weed control in tillering spring wheat at Rosemount, MN - 2009.  
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Treatment	Rate Product/A	Weed Control																					
		Common Lambsquarters			Pennsylvania Smartweed			Redroot Pigweed			Wild Buckwheat												
		6/24	7/5	7/26	6/24	7/5	7/26	6/24	7/5	7/26	6/24	7/5	7/26										
													(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
AGH 02007	5 oz	96	93	95	63	77	68	96	90	93	70	80	80										
AGH 02007 + AG 06011	5 oz + 6 oz	99	90	98	58	78	82	99	90	96	63	82	93										
2,4-D LV6	0.33 pt	99	90	96	65	63	82	99	90	93	68	60	83										
AGH 08009	0.5 pt	99	88	95	60	58	72	99	88	93	63	60	90										
AGH 08009 + Preference	0.5 pt + 3.2 oz	99	90	94	62	57	83	99	90	94	65	67	87										
AGH 08009 + AG 06011	0.5 pt + 6 oz	99	90	92	68	60	70	99	90	92	67	68	83										
2,4-D Amine	8 oz	99	90	90	68	60	75	99	90	90	73	63	82										
AGH 02007	10 oz	99	96	95	77	68	86	99	96	95	80	93	93										
AGH 02007 + AG 06011	10 oz + 6 oz	99	92	98	75	70	85	94	92	92	83	88	92										
2,4-D LV6	0.67 pt	99	90	95	63	60	82	96	85	95	80	67	88										
AGH 08009	1 pt	99	93	98	83	68	85	99	90	93	83	88	92										
AGH 08009 + Preference	1 pt + 3.2 oz	96	90	93	75	60	60	93	90	93	82	78	90										
AGH 08009 + AG 06011	1 pt + 6 oz	99	90	93	75	50	63	99	90	93	78	77	92										
2,4-D Amine	10 oz	96	89	93	62	40	68	96	90	90	68	70	87										
Axial TBC + Adigor Adjuvant	8.85 oz + 9.6 oz	67	37	43	85	80	90	70	60	50	92	85	90										
Axial TBC + Adigor Adjuvant + Starane	8.85 oz + 9.6 oz + 5.3 oz	75	52	67	83	82	90	78	60	63	88	87	81										
Axial TBC + Adigor Adjuvant + Widematch	8.85 oz + 9.6 oz + 10 oz	78	77	75	88	85	90	70	82	68	93	88	93										
Bronate Advanced	0.8 pt	90	85	93	83	80	83	82	80	83	83	85	88										
Huskie + N-Pak AMS	11 oz + 1.18 pt	95	99	99	93	90	98	88	90	99	95	93	98										
Widematch + MCPA Ester	1 pt + 0.5 pt	90	90	96	88	82	92	87	80	88	88	90	95										
Weedy Check	--	--	--	--	--	--	--	--	--	--	--	--	--										
LSD (0.05)		5	9	17	13	9	21	9	9	15	10	7	ns										

AGH 02007 = experimental ester formulation of 2,4-D from Agrilience.

AG 06011 = experimental adjuvant from Agrilience.

2,4-D LV6 Ester 6E.

AGH 08009 = experimental ester formulation of 2,4-D from Agrilience.

Preference = nonionic surfactant.

2,4-D Amine

Axial TBC 0.838 EC = pinoxaden (0.774 lb ai/gal) & florasulam (0.0645 lb ai/gal) & safener.

Adigor Adjuvant = emulsifiable oil adjuvant.

Starane 1.5 E = fluroxypyr.

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

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

Huskie 2.08 EC = pyrasulfotole & bromoxynil & safener.

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

MCPA Ester 4E.

**Table 2. Broadleaf weed control in tillering spring wheat at Rosemount, MN - 2009.  
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Treatment	Rate Product/A	Weed Control			Wheat Injury			Wheat Yield (Bu/A)
		Wild Mustard			Wheat Injury			
		6/24 (%)	7/5 (%)	7/26 (%)	6/24 (%)	7/5 (%)	7/26 (%)	
AGH 02007	5 oz	99	99	98	0	0	0	64
AGH 02007 + AG 06011	5 oz + 6 oz	99	99	99	0	0	0	63
2,4-D LV6	0.33 pt	99	98	98	0	0	0	64
AGH 08009	0.5 pt	99	99	99	0	0	0	63
AGH 08009 + Preference	0.5 pt + 3.2 oz	99	98	99	0	0	0	61
AGH 08009 + AG 06011	0.5 pt + 6 oz	99	99	95	0	0	0	62
2,4-D Amine	8 oz	99	99	92	0	0	0	62
AGH 02007	10 oz	99	99	99	0	0	0	64
AGH 02007 + AG 06011	10 oz + 6 oz	99	99	99	0	0	0	61
2,4-D LV6	0.67 pt	99	99	98	0	0	0	61
AGH 08009	1 pt	99	99	99	0	0	0	63
AGH 08009 + Preference	1 pt + 3.2 oz	96	96	99	0	0	0	62
AGH 08009 + AG 06011	1 pt + 6 oz	99	93	99	0	0	0	63
2,4-D Amine	10 oz	99	93	99	0	0	0	63
Axial TBC + Adigor Adjuvant	8.85 oz + 9.6 oz	98	93	99	0	0	0	62
Axial TBC + Adigor Adjuvant + Starane	8.85 oz + 9.6 oz + 5.3 oz	99	93	99	0	0	0	65
Axial TBC + Adigor Adjuvant + Widematch	8.85 oz + 9.6 oz + 10 oz	96	98	98	0	0	0	64
Bronate Advanced	0.8 pt	99	95	98	0	0	0	67
Huskie + N-Pak AMS	11 oz + 1.18 pt	99	99	99	0	0	0	64
Widematch + MCPA Ester	1 pt + 0.5 pt	96	99	99	0	0	0	64
Weedy Check	--	--	--	--	0	0	0	49
LSD (0.05)		ns	5	3	ns	ns	ns	5

AGH 02007 = experimental ester formulation of 2,4-D from Agrilience.

AG 06011 = experimental adjuvant from Agrilience.

2,4-D LV6 Ester 6E.

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