Broadleaf weed control with 2,4-D formulations in spring wheat at Crookston, MN - 2014. Durgan, Beverly R., Jochum J. Wiersma, Jim Cameron, Matthew Green, and Douglas 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 Crookston, MN on a Donaldson and Wheaton loam soil. Following weedy fallow, the standing residue was shredded and, after receiving 100 lbs/A as urea, was chisel plowed. In the spring a seed bed was prepared using a field cultivar with rolling baskets. 'RB07' hard red spring wheat was seeded on May 17 at 1.8 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 17**
Weed Density (#/ft^2)	
- Common Lambsquarters	5
- Common Mallow	21
- Nightflowering Catchfly	2
- Redroot Pigweed	15
- Wild buckwheat	10
- Wild Mustard	10
Wheat Stage	tillering
Air temperature (°F)	65
Soil temperature (°F)	60
Relative humidity (%)	76
Wind	5 mph
Rainfall before Application	
Week 1 (inch)	2.69
Rainfall after Application	
Week 1 (inch)	1.91
Week 2 (inch)	0.59

There were no significant differences between treatments in weed control for any of the broadleaf species. Overall control averaged 70% on June 27 and ranged from 80% to 90% at the July 10 and July 30 rating dates. Wheat injury ratings of 5% to 10% were recorded at the first rating but no significant injury was observed at the later dates. Yields did not significantly differ.

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		Weed Control																					
		Common Lambsquarters			Common Mallow			Wild Mustard			Nightflowering Catchfly			Redroot Pigweed			Wild Buckwheat			Wheat Injury			Wheat
Treatment	Rate	6/27	7/10	7/30	6/27	7/10	7/30	6/27	7/10	7/30	6/27	7/10	7/30	6/27	7/10	7/30	6/27	7/10	7/30	6/27	7/10	7/30	Yield
	(Product/A)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(Bu/A)
WFS 2,4-D Amine 4	1 pt	70	90	90	70	88	88	70	90	90	70	90	88	70	90	88	73	88	88	5	0	0	82
AGH 14001	1 pt	70	90	88	70	88	87	70	90	88	70	88	87	70	90	88	70	87	85	5	0	0	79
AGH 14002	1 pt	70	90	87	70	90	87	70	90	87	70	83	83	70	90	87	70	83	83	7	0	0	82
AGH 09008	1 pt	73	90	90	73	90	90	73	90	90	73	90	90	73	90	90	73	90	90	5	0	0	82
AGH 09008 + AG 8050	1 pt + 6.4 oz	70	90	90	70	90	90	70	90	90	70	87	85	70	88	87	70	87	83	5	0	0	82
AGH 09008 + AG 13040	1 pt + 3.2 oz	70	90	85	70	90	85	70	90	85	70	85	82	70	90	85	70	88	82	8	2	0	81
AGH 09008 + AG 14012	1 pt + 6.4 oz	70	90	90	70	90	90	70	90	90	70	85	85	70	88	88	70	85	85	8	2	2	79
AGH 09008 + AG 14013	1 pt + 6.4 oz	70	88	87	70	88	87	70	88	87	70	82	80	70	88	87	70	82	80	10	2	2	81
AGH 09008 + AG 13064	1 pt + 4 oz	70	90	90	70	90	90	70	90	90	70	87	83	70	90	88	70	87	83	8	0	0	80
Weedy Check	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	75
LSD (0.05)		ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	3	ns	ns	ns

WFS 2,4-D Amine 4L.

AGH 14001 = experimental from Winfield Solutions.

AGH 14002 = experimental from Winfield Solutions.

AGH 09008 = experimental from Winfield Solutions.

AG 8050 = experimental adjuvant from Winfield Solutions.

AG 13040 = experimental adjuvant from Winfield Solutions.

AG 14012 = experimental adjuvant from Winfield Solutions.

AG 14013 = experimental adjuvant from Winfield Solutions.

AG 13064 = experimental adjuvant from Winfield Solutions.