Broadleaf weed control in 2 to 4 leaf spring wheat at Rosemount, MN - 2014. Durgan, Beverly R., Douglas W. Miller, and Brad Kinkaid. This experiment was designed to evaluate broadleaf weed control and wheat injury with broadleaf herbicides applied at the 2 to 4 leaf wheat stage. The experiment was conducted at Rosemount, MN on a Waukegon silt loam soil with pH 6.7 and 4.1% organic matter. Soil test for P and K were 22 lbs/A and 286 lbs/A, respectively. Following soybeans, the experimental area was fall chisel plowed. On May 5, the area was fertilized with 70 lbs/A N, 25 lbs/A P, and 50 lbs/A K and field cultivated twice. 'RB-07' hard red spring wheat was seeded with a 12 foot wide drill at 115 lbs/A on May 6. The experimental design was a randomized complete block with three replications. Plot size was 10 by 24 ft. All herbicide treatments were applied to a 6 foot strip with a backpack type CO_2 powered sprayer delivering 10 gpa at 35 psi using 11001 flat fan nozzles with 18 inch spacing. Puma (fenoxaprop & safener) at 0.66 pt/A was broadcast on May 30 to control grass species. Application data and environmental conditions are listed below. Weed control and wheat injury were visually rated. Yields were determined by harvesting a 5 X 24 foot strip in the treated area with a small plot combine. Data is summarized in the Table below.

Treatment Date	**June 4**
Air Temperature (°F)	73
Relative humidity (%)	51
Dewpoint (°F)	54
Soil Temperature (°F)	69
Soil Moisture	moist at 0.25”
Sky	10% clouds
Wind	E 1-5 mph
Rainfall before application	
Week 1 (inch)	2.44
Rainfall after application	
Week 1 (inch)	1.22
Week 2 (inch)	3.10
Common Ragweed (Corw)	
height (inch)	0.5-2
density (#/ft^2)	9
Pennsylvania Smartweed (Pesw)	
height (inch)	0.5-1.5
density (#/ft^2)	5
Wheat	
height (inch)	5-6
leaf stage	3.75 – 4.5 (Zadoks Z14-15, 21-22)
tiller #	0-2

All treatments controlled the broadleaf species present at application. Yields were variable and there was no significant differences between treatments and the weedy check. Early injury symptoms were slight and no symptoms existed by early August.

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		Weed Control						
		Common Ragweed		Pennsylvania Smartweed		Wheat Injury		Wheat
Treatment	Rate	7/3	8/3	7/3	8/3	7/3	8/3	Yield
	(Product/A)	(%)	(%)	(%)	(%)	(%)	(%)	(Bu/A)
Huskie + N-Pak AMS	11 oz + 1.18 pt	99	99	99	99	0	0	34
Huskie + N-Pak AMS	13.5 oz + 1.18 pt	99	99	99	99	0	0	40
Huskie + N-Pak AMS	15 oz + 1.18 pt	99	99	99	99	0	0	34
Huskie + N-Pak AMS + Preference	13.5 oz + 1.18 pt + 3.2 oz	99	99	99	99	0	0	40
Huskie + N-Pak AMS + Induce	11 oz + 2.35 pt + 6.4 oz	99	99	99	98	0	0	29
Huskie Complete + N-Pak AMS	13.7 oz + 1.18 pt	99	99	99	99	5	0	28
Widematch + MCPA Ester	1 pt + 0.5 pt	99	99	99	99	2	0	30
Affinity Tankmix + Starane Ultra + Preference	0.6 oz + 4.2 oz + 3.2 oz	96	99	96	99	5	0	30
Wolverine Advanced	27.4 oz	99	99	99	99	0	0	32
A20916 + A19278 + Agri-Dex	2.52 oz + 13.7 oz + 12.8 oz	99	99	99	99	3	0	27
A20916 + A19278 + Agri-Dex	2.52 oz + 16 oz + 12.8 oz	99	99	99	99	2	0	34
A20916 + A19278 + Agri-Dex	2.52 oz + 18.2 oz + 12.8 oz	99	99	99	99	2	0	27
Starane Flex	13.5 oz	98	99	98	98	0	0	32
Weedy Check	--	--	--	--	--	--	--	25
LSD (0.05)		ns	ns	ns	ns	4	ns	ns

Huskie 2.08 EC = pryrasulfotole (0.23 lb ai/gal) & bromoxynil 1.85 lb ai/gal) & safener.
N-Pak AMS = 34% ammonium sulfate solution (3.4 lbs ammonium sulfate/gal).
Preference = nonionic surfactant.
Induce = nonionic surfactant.
Huskie Complete 1.76L = thiencarbazone-methyl (0.042 lb ai/gal) & pyrasulfotole (0.26 lb ai/gal) & bromoxynil phenol equivalent (1.46 lb ai/gal).
Widematch 1.5E = clopyralid (0.75 lb ae/gal) & fluroxypyr (0.75 lb ae/gal).
MCPA Ester 4E.
Affinity Tankmix 50SG = thifensulfuron (40%) & tribenuron (10%).
Starane Ultra 2.8E = fluroxypyr.
Wolverine Advanced = fenoxaprop-p-ethyl & pyrasulfotole & bromoxynil .
A20916 = experimental from Syngenta.
A19278 = experimental from Syngenta.
Agri-Dex = crop oil concentrate.
Starane Flex 0.875E = fluroxypyr (0.833 lbs ae/gal) & florasulam (0.042 lbs/gal).