

Hard red spring wheat tolerance to postemergence herbicides at Rosemount, MN - 2018. Durgan, Beverly R., Douglas W. Miller, Bradley Kinkaid, Ryan Mentz and Aryane Batista. This experiment was designed to evaluate the tolerance of selected Hard Red Spring Wheat (HRSW) varieties to various postemergence herbicides. The experiment was conducted at Rosemount, MN on a Waukegon silt loam soil (5% sand, 51% silt, 44% clay) with pH 5.8 and 4.4% organic matter. Soil test for P and K were 116 lbs/A and 554 lbs/A, respectively. Following soybeans, the experimental area was fall chisel plowed. On April 30, the area was tilled with a soil finisher. On May 3, the area was fertilized with 70 lbs/A N, 60 lbs/A P, and 60 lbs/A K. The area was field cultivated on May 4 and HRSW varieties 'Bolles', 'Linkert', 'Shelly' and 'Valda' were seeded with a 12 foot wide drill at 115 lbs/A. The experimental design was a strip plot with four replications. Varieties were seeded in strips randomized within each replication. Herbicide treatments were applied across all varieties. Each herbicide x variety plot was 12 feet wide by 24 feet long. Herbicide treatments were applied to a 7.5 foot strip with a tractor mounted, air powered sprayer delivering 10 gpa at 35 psi using XR11001 flat-fan nozzles with 15 inch spacing. Herbicide treatments were applied June 1. A broadcast application of bromoxynil (0.31 lbs ai/A) + MCPA ester (0.31 lbs ae/A) was applied on May 23 to control broadleaf weeds. Environmental conditions at application data are listed below. Crop injury was visually rated. Crop height was measured at maturity. Yields were determined by harvesting a 5.74 X 24 foot strip in the treated area with a small plot combine. Data is summarized by variety and is presented in Tables 1 and 2.

Treatment Date	June 1
Air Temperature (°F)	72
Relative humidity (%)	73
Dewpoint (°F)	63
Soil Temperature (°F)	68
Soil Moisture	moist
Sky	100% clouds
Wind	E 3-6 mph
Rainfall before application	
Week 1 (inch)	1.61
Rainfall after application	
Week 1 (inch)	0.31
Week 2 (inch)	0.53

<u>Wheat Variety</u>	<u>Height (inch)</u>	<u>Leaf Stage (Haun)</u>	<u>Tillers</u>	<u>Zadoks Code</u>
Bolles	10-14	5.3-5.5	0-1	Z15-16, Z21
Linkert	9-12	5.7-5.9	1-3	Z16, Z21-23
Shelly	8-11	5.9-6.1	2-3	Z16, Z22-23
Valda	10-12	5.4-5.8	2-3	Z15-16, Z22-23

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Table 1.

Treatment	Rate (Product/A)	Bolles				Linkert			
		Injury		Height (inch)	Yield (Bu/A)	Injury		Height (inch)	Yield (Bu/A)
		6/11 (%)	6/22 (%)			6/11 (%)	6/22 (%)		
Everest 2.0 + Preference + AMS	0.75 oz + 3.2 oz + 2.35 pt	1	0	29	27	1	0	26	23
Everest 2.0 + Preference + AMS	1 oz + 3.2 oz + 2.35 pt	3	0	29	24	3	0	26	25
Everest 3.0 + Preference + AMS	2 oz + 3.2 oz + 2.35 pt	1	0	29	28	1	0	26	25
Everest 3.0 + Preference + AMS	3 oz + 3.2 oz + 2.35 pt	3	1	29	32	4	1	26	25
Varro + Preference + AMS	6.85 oz + 3.2 oz + 2.35 pt	4	1	30	24	4	1	25	25
Varro + Preference + AMS	10.27 oz + 3.2 oz + 2.35 pt	5	3	29	25	5	3	24	27
PerfectMatch + Preference + AMS	1 pt + 3.2 oz + 2.35 pt	6	3	29	25	6	3	26	23
PerfectMatch + Preference + AMS	1.5 pt + 3.2 oz + 2.35 pt	8	4	28	25	8	4	25	23
TeamMate + Preference + AMS	1 oz + 3.2 oz + 2.35 pt	5	3	28	25	5	3	26	24
TeamMate + Preference + AMS	1.5 oz + 3.2 oz + 2.35 pt	8	1	29	27	9	1	26	24
Huskie Complete	13.7 oz	1	0	30	25	1	0	26	22
Axial XL	16.4 oz	0	0	29	24	0	0	26	24
Untreated Check	--	0	0	31	23	0	0	26	24
LSD (0.05)		3.5	ns	ns	ns	3.7	ns	ns	1.8

Table 2.

Treatment	Rate (Product/A)	Shelly				Valda			
		Injury		Height (inch)	Yield (Bu/A)	Injury		Height (inch)	Yield (Bu/A)
		6/11 (%)	6/22 (%)			6/11 (%)	6/22 (%)		
Everest 2.0 + Preference + AMS	0.75 oz + 3.2 oz + 2.35 pt	1	0	28	34	1	0	30	33
Everest 2.0 + Preference + AMS	1 oz + 3.2 oz + 2.35 pt	3	0	27	37	3	0	28	36
Everest 3.0 + Preference + AMS	2 oz + 3.2 oz + 2.35 pt	1	0	27	34	1	0	28	36
Everest 3.0 + Preference + AMS	3 oz + 3.2 oz + 2.35 pt	3	1	28	33	3	1	28	34
Varro + Preference + AMS	6.85 oz + 3.2 oz + 2.35 pt	4	1	27	35	4	1	28	35
Varro + Preference + AMS	10.27 oz + 3.2 oz + 2.35 pt	6	3	28	37	5	3	28	34
PerfectMatch + Preference + AMS	1 pt + 3.2 oz + 2.35 pt	6	3	27	35	6	3	27	34
PerfectMatch + Preference + AMS	1.5 pt + 3.2 oz + 2.35 pt	8	4	26	35	8	4	27	32
TeamMate + Preference + AMS	1 oz + 3.2 oz + 2.35 pt	5	3	28	36	5	3	28	33
TeamMate + Preference + AMS	1.5 oz + 3.2 oz + 2.35 pt	8	1	27	37	8	1	27	33
Huskie Complete	13.7 oz	1	0	28	33	1	0	28	33
Axial XL	16.4 oz	0	0	28	36	0	0	28	34
Untreated Check	--	0	0	28	32	0	0	27	32
LSD (0.05)		3.7	ns	1.5	ns	3.5	ns	ns	2.4

Everest 2.0 3.5SC = flucarbazone-sodium.

Everest 3.0 1.75SC = flucarbazone-sodium.

Preference = nonionic surfactant.

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

Varro 0.083L = thiencazone-methyl.

PerfectMatch 1.61SE = clopyralid (0.75 lb ae/gal) & fluroxypyr (0.75 lb ae/gal) & pyroxsulam (0.11 lb ai/gal).

TeamMate 21.5WG = pyroxsulam.

Huskie Complete 1.76L = thiencazone-methyl (0.042 lb ai/gal) & pyrasulfotole (0.26 lb ai/gal) & bromoxynil phenol equivalent (1.46 lb ai/gal).

Axial XL 0.42EC = pinoxaden and adigor adjuvant.