

Hard red spring wheat tolerance to postemergence herbicides at Crookston, MN -

2017. Durgan, Beverly R., Jochum J. Wiersma, James Cameron, and Douglas Miller. This experiment was designed to evaluate the tolerance of selected hard red spring wheat (HRSW) varieties to several postemergence herbicides. The experiment was conducted at Crookston, MN on a Donaldson and Wheaton loam. Following soybeans, the experimental area was chisel plowed in the fall of 2016. In the spring of 2017, 103 lbs/A N and 52 lbs/A P were applied and the experimental area was tilled with a field cultivator with rolling baskets to prepare the seedbed. The HRSW varieties 'Bolles', 'Linkert', 'Shelly' and 'Valda' were seeded on May 2 at 1.8 bu/a. All treatments were applied on June 5 with a CO₂ pressured backpack type sprayer delivering 10 gpa at 30 psi using 80015 flat-fan nozzles. 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 8' wide by 16' long. Environmental conditions are listed below. Crop injury was rated visually. Plant heights and grain yield were measured. Data is summarized by variety and presented in Tables 1 and 2.

Treatment Date	June 5
Target Wild oat stage	5-6 leaf
Air temperature (°F)	80
Soil temperature (°F)	60
Relative humidity (%)	45
Wind	calm
Sky	clear
Rainfall before Application	
Week 1 (inch)	0.52
Rainfall after Application	
Week 1 (inch)	0.40
Week 2 (inch)	0.97

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Table 1.

Treatment	Rate (Product/A)	Bolles					Linkert				
		Injury			Height (inch)	Yield (Bu/A)	Injury			Height (inch)	Yield (Bu/A)
		6/16 (%)	6/30 (%)	7/11 (%)			6/16 (%)	6/30 (%)	7/11 (%)		
Everest 2.0 + Preference + AMS	0.75 oz + 3.2 oz + 2.35 pt	10	3	3	35	73	10	3	3	32	74
Everest 2.0 + Preference + AMS	1 oz + 3.2 oz + 2.35 pt	10	6	5	33	76	10	3	3	31	70
AL-X1581ac + Preference + AMS	2 oz + 3.2 oz + 2.35 pt	11	4	4	34	69	9	1	1	30	71
AL-X1581af + Preference + AMS	2 oz + 3.2 oz + 2.35 pt	10	3	3	35	70	10	4	4	31	71
AL-X1581ag + Preference + AMS	2 oz + 3.2 oz + 2.35 pt	11	5	5	34	71	11	3	3	31	74
Varro + Preference + AMS	6.85 oz + 3.2 oz + 2.35 pt	10	6	6	34	67	9	5	5	31	71
Varro + Preference + AMS	10.27 oz + 3.2 oz + 2.35 pt	10	6	6	34	72	10	5	5	31	73
PerfectMatch + Preference + AMS	1 pt + 3.2 oz + 2.35 pt	14	10	9	33	67	14	6	6	30	69
PerfectMatch + Preference + AMS	1.5 pt + 3.2 oz + 2.35 pt	21	10	9	33	65	21	8	8	30	68
TeamMate + Preference + AMS	1 oz + 3.2 oz + 2.35 pt	15	6	6	33	69	14	3	3	31	73
TeamMate + Preference + AMS	1.5 oz + 3.2 oz + 2.35 pt	11	5	5	34	74	11	4	4	31	72
Huskie Complete	13.7 oz	5	0	0	35	70	5	0	0	31	74
Untreated Check	--	--	--	--	35	73	--	--	--	30	67
LSD (0.05)		5	3	3	1	ns	5	4	4	ns	ns

Table 2.

Treatment	Rate (Product/A)	Shelly					Valda				
		Injury			Height (inch)	Yield (Bu/A)	Injury			Height (inch)	Yield (Bu/A)
		6/16 (%)	6/30 (%)	7/11 (%)			6/16 (%)	6/30 (%)	7/11 (%)		
Everest 2.0 + Preference + AMS	0.75 oz + 3.2 oz + 2.35 pt	10	1	1	33	76	10	3	3	34	81
Everest 2.0 + Preference + AMS	1 oz + 3.2 oz + 2.35 pt	10	4	4	33	72	10	3	3	34	78
AL-X1581ac + Preference + AMS	2 oz + 3.2 oz + 2.35 pt	13	5	5	34	77	11	3	3	34	80
AL-X1581af + Preference + AMS	2 oz + 3.2 oz + 2.35 pt	10	3	3	32	74	10	1	1	34	82
AL-X1581ag + Preference + AMS	2 oz + 3.2 oz + 2.35 pt	11	4	4	33	78	11	4	4	34	79
Varro + Preference + AMS	6.85 oz + 3.2 oz + 2.35 pt	10	6	6	33	71	9	5	5	33	77
Varro + Preference + AMS	10.27 oz + 3.2 oz + 2.35 pt	11	4	4	33	77	10	5	5	33	83
PerfectMatch + Preference + AMS	1 pt + 3.2 oz + 2.35 pt	14	9	9	32	74	14	6	6	33	81
PerfectMatch + Preference + AMS	1.5 pt + 3.2 oz + 2.35 pt	25	10	10	32	72	20	8	8	33	84
TeamMate + Preference + AMS	1 oz + 3.2 oz + 2.35 pt	19	6	6	33	71	15	3	3	33	77
TeamMate + Preference + AMS	1.5 oz + 3.2 oz + 2.35 pt	14	4	4	33	75	11	3	3	33	81
Huskie Complete	13.7 oz	5	0	0	33	72	5	1	1	34	83
Untreated Check	--	--	--	--	33	82	--	--	--	34	82
LSD (0.05)		6	4	4	ns	ns	5	4	4	1	ns

Everest 2.0 3.5SC = flucarbazone-sodium & cloquintacet (safener).

Preference = nonionic surfactant.

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

AL-X1581ac 1.75SC = experimental from Arysta.

AL-X1581af 1.75SC = experimental from Arysta.

AL-X1581ag 1.75SC = experimental from Arysta.

Varro 0.083L = thiencazobone-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 = thiencazobone-methyl (0.042 lb ai/gal) & pyrasulfotole (0.26 lb ai/gal) & bromoxynil phenol equivalent (1.46 lb ai/gal).