

Hard red spring wheat tolerance to postemergence herbicides at Rosemount, MN - 2013.

Durgan, Beverly R. and Douglas W. Miller. 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 with pH 6.4 and 4.4% organic matter. Soil test for P and K were 32 lbs/A and 232 lbs/A, respectively. Following soybeans, the experimental area was fall chisel plowed. On May 7, the area was fertilized with 83 lbs/A N, 16 lbs/A P, and 145 lbs/A K and field cultivated once. The HRSW varieties 'Albany', 'Faller', 'Jenna', 'RB-07', 'Sabin' and 'Tom' were seeded at 115 lbs/A. Herbicide treatments were applied to a 7.5 ft strip with a tractor mounted sprayer delivering 10 gpa at 35 psi using XR11001 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 12 feet wide by 12 feet long. Herbicide treatments were applied June 13. Buctril (bromoxynil) at 1.5 pt/A (0.375 lb ai/A) was broadcast on June 18 to control broadleaf weeds. Environmental conditions at application are listed below. Crop injury was visually rated. Crop height and yields were measured. Data is summarized by variety and is presented in Tables 1 to 3.

Treatment Date	June 13
Air Temperature (°F)	77
Relative humidity (%)	44
Dewpoint (°F)	54
Soil Temperature (°F)	72
Soil Moisture	moist
Sky	10% clouds
Wind	NE 5-12 mph
Rainfall before application	
Week 1 (inch)	1.36
Rainfall after application	
Week 1 (inch)	0.70
Week 2 (inch)	1.87

<u>Wheat Variety</u>	<u>Height (inch)</u>	<u>Leaf Stage</u>	<u>Tillers</u>	<u>Zadoks Code</u>
Albany	8-11	5.2-5.7	3-4	Z15-16 , Z23-24
Faller	10-12	5.8-6.0	2	Z16 , Z22
Jenna	10-13	5.6-5.8	2-3	Z16 , Z22-23
RB-07	12-15	5.7-6.1	2	Z16 , Z22
Sabin	11-14	5.6-5.9	2	Z16 , Z22
Tom	11-14	5.8-6.2	2-3	Z16 , Z22-23

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Table 1.

Treatment	Rate (Product/A)	Albany					Faller				
		Injury			Height (inch)	Yield (Bu/A)	Injury			Height (inch)	Yield (Bu/A)
		6/22 (%)	6/30 (%)	7/20 (%)			6/22 (%)	6/30 (%)	7/20 (%)		
Everest 2.0 + Newtone	0.69 oz + 12.8 oz	0	0	0	31	62	0	0	0	34	44
Everest 2.0 + Newtone	1.04 oz + 12.8 oz	3	0	0	31	63	3	0	0	33	49
Everest 2.0 + Newtone	1.38 oz + 12.8 oz	6	4	0	32	67	6	4	0	33	47
GoldSky + Preference	1 pt + 3.2 oz	1	0	0	31	66	1	0	0	33	47
GoldSky + Preference	1.5 pt + 3.2 oz	6	1	1	31	63	6	1	1	32	44
GoldSky + Preference	2 pt + 3.2 oz	8	6	3	31	66	8	6	3	33	44
Rimfire Max + Destiny HC	3 oz + 0.75 pt	0	0	0	30	65	0	0	0	33	44
Rimfire Max + Destiny HC	4.5 oz + 0.75 pt	5	0	0	31	62	5	0	0	33	44
Rimfire Max + Destiny HC	6 oz + 0.75 pt	9	8	3	31	60	9	8	3	34	49
Huskie Complete	13.7 oz	1	0	0	31	63	1	0	0	34	49
Huskie Complete	20.5 oz	6	5	0	30	65	6	5	0	34	49
Huskie Complete	27.4 oz	13	10	4	31	60	13	10	4	33	49
Axial XL	16.4 oz	0	0	0	31	59	0	0	0	34	50
Untreated Check	--	0	0	0	31	61	0	0	0	35	51
LSD (0.05)		3	3	2	ns	ns	3	3	2	1	ns

Table 2.

Treatment	Rate (Product/A)	Jenna					RB07				
		Injury			Height (inch)	Yield (Bu/A)	Injury			Height (inch)	Yield (Bu/A)
		6/22 (%)	6/30 (%)	7/20 (%)			6/22 (%)	6/30 (%)	7/20 (%)		
Everest 2.0 + Newtone	0.69 oz + 12.8 oz	0	0	0	32	61	0	0	0	32	26
Everest 2.0 + Newtone	1.04 oz + 12.8 oz	3	0	0	31	59	3	0	0	32	28
Everest 2.0 + Newtone	1.38 oz + 12.8 oz	6	4	0	31	60	6	4	0	33	30
GoldSky + Preference	1 pt + 3.2 oz	1	0	0	30	61	1	0	0	32	31
GoldSky + Preference	1.5 pt + 3.2 oz	6	1	1	30	61	6	1	1	32	33
GoldSky + Preference	2 pt + 3.2 oz	8	6	3	29	58	8	6	3	31	25
Rimfire Max + Destiny HC	3 oz + 0.75 pt	0	0	0	29	53	0	0	0	32	26
Rimfire Max + Destiny HC	4.5 oz + 0.75 pt	5	0	0	30	58	5	0	0	31	25
Rimfire Max + Destiny HC	6 oz + 0.75 pt	9	8	3	30	56	9	8	3	31	27
Huskie Complete	13.7 oz	1	0	0	31	60	1	0	0	32	23
Huskie Complete	20.5 oz	6	5	0	31	62	6	5	0	32	25
Huskie Complete	27.4 oz	13	10	4	31	61	13	10	4	31	24
Axial XL	16.4 oz	0	0	0	32	59	0	0	0	33	34
Untreated Check	--	0	0	0	32	59	0	0	0	33	33
LSD (0.05)		3	3	2	1	ns	3	3	2	1	ns

Everest 2.0 3.27SC = flucarbazone-sodium & cloquintacet (safener).

Newtone = surfactant blend and ammoniated salts.

GoldSky 0.84L = pyroxsulam (0.11 lb ai/gal) & fluroxypyr (0.71 lb ae/gal) & florasulam (0.018 lb ai/gal).

Preference = nonionic surfactant.

Rimfire Max 6.67WDG = propoxycarbazone-sodium (4.76%) & mesosulfuron-methyl (1.91%).

Destiny HC = methylated soybean oil, high fructose corn syrup, sorbitan fatty acid esters.

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

Axial XL 0.42 EC = pinoxaden and adigor adjuvant.

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Table 3.

Treatment	Rate (Product/A)	Sabin					Tom				
		Injury			Height (inch)	Yield (Bu/A)	Injury			Height (inch)	Yield (Bu/A)
		6/22 (%)	6/30 (%)	7/20 (%)			6/22 (%)	6/30 (%)	7/20 (%)		
Everest 2.0 + Newtone	0.69 oz + 12.8 oz	0	0	0	33	53	0	0	0	33	46
Everest 2.0 + Newtone	1.04 oz + 12.8 oz	3	0	0	33	52	3	0	0	33	49
Everest 2.0 + Newtone	1.38 oz + 12.8 oz	6	4	0	32	52	6	4	0	33	47
GoldSky + Preference	1 pt + 3.2 oz	1	0	0	32	48	1	0	0	33	49
GoldSky + Preference	1.5 pt + 3.2 oz	6	1	1	31	50	6	1	1	32	48
GoldSky + Preference	2 pt + 3.2 oz	8	6	3	31	49	8	6	3	31	45
Rimfire Max + Destiny HC	3 oz + 0.75 pt	0	0	0	31	47	0	0	0	32	43
Rimfire Max + Destiny HC	4.5 oz + 0.75 pt	5	0	0	32	50	5	0	0	32	49
Rimfire Max + Destiny HC	6 oz + 0.75 pt	9	8	3	31	48	9	8	3	32	46
Huskie Complete	13.7 oz	1	0	0	32	52	1	0	0	33	53
Huskie Complete	20.5 oz	6	5	0	31	49	6	5	0	33	51
Huskie Complete	27.4 oz	13	10	4	31	49	13	10	4	32	49
Axial XL	16.4 oz	0	0	0	33	47	0	0	0	34	53
Untreated Check	--	0	0	0	32	47	0	0	0	35	52
LSD (0.05)		3	3	2	ns	ns	3	3	2	2	5

Everest 2.0 3.27SC = flucarbazone-sodium & cloquintacet (safener).

Newtone = surfactant blend and ammoniated salts.

GoldSky 0.84L = pyroxsulam (0.11 lb ai/gal) & fluroxypyr (0.71 lb ae/gal) & florasulam (0.018 lb ai/gal).

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