

Hard red spring wheat tolerance to postemergence herbicides at Rosemount, MN - 2012.

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 6.1 and 4.0% organic matter. Soil test for P and K were 30 lbs/A and 190 lbs/A, respectively. Following soybeans, the experimental area was fall chisel plowed. In the spring, the area was fertilized with 65 lbs/A N, 25 lbs/A P, and 30 lbs/A K and field cultivated. On April 11, the area was field cultivated and the HRSW varieties 'Albany', 'Faller', 'Jenna', 'RB-07', 'Sabin' and 'Tom' 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 11001 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. Buctril (bromoxynil) at 1.0 pt/A (0.25 lb ai/A) was broadcast on May 25 to control broadleaf weeds. Herbicide treatments were applied May 21. 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	May 21
Temperature (°F)	
Air	70-74
Soil	79
Relative Humidity (%)	25
Dewpoint (°F)	36
Soil Moisture	moist at 1.25"
Wind (mph)	4-5 NW
Sky	20% clouds
Rainfall before Application	
Week 1 (inch)	0.14
Rainfall after Application	1.16
Week 2 (inch)	0.82

<u>Wheat</u>	<u>Height (inch)</u>	<u>Leaf #</u>	<u>Tillers</u>	<u>Zadoks Code</u>
Albany	4-6	4.5 – 5.1	1-2	Z15 , Z21-22
Faller	6-8	4.8 – 5.1	2	Z15 , Z22
Jenna	7-9	4.9 – 5.5	1-3	Z15-16 , Z21-23
RB-07	7-9	4.7 – 5.3	1-2	Z15 , Z21-22
Sabin	3-5	4.3 – 4.9	2-3	Z14-15 , Z22-23
Tom	7-9	4.9 – 5.3	1	Z15 , Z21

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Table 1.

Treatment	Rate (Product/A)	Albany					Faller				
		Injury			Height (inch)	Yield (Bu/A)	Injury			Height (inch)	Yield (Bu/A)
		6/6 (%)	6/13 (%)	7/15 (%)			6/6 (%)	6/13 (%)	7/15 (%)		
Everest 2.0 + Newtone	0.69 oz + 12.8 oz	3	3	0	24	53	3	3	0	26	46
Everest 2.0 + Newtone	1.04 oz + 12.8 oz	8	8	3	25	57	8	8	3	27	47
Everest 2.0 + Newtone	1.38 oz + 12.8 oz	5	5	1	23	55	5	5	1	26	48
GoldSky + Preference	1 pt + 3.2 oz	6	6	1	25	56	6	6	1	27	50
GoldSky + Preference	1.5 pt + 3.2 oz	8	8	1	25	53	8	8	1	26	45
GoldSky + Preference	2 pt + 3.2 oz	8	8	3	25	58	8	8	3	26	47
Rimfire Max + Destiny HC	3 oz + 0.75 pt	4	4	1	25	59	4	4	1	27	50
Rimfire Max + Destiny HC	4.5 oz + 0.75 pt	5	5	1	24	58	6	5	1	27	51
Rimfire Max + Destiny HC	6 oz + 0.75 pt	10	9	4	24	56	10	9	4	27	49
Huskie Complete	13.7 oz	5	5	0	26	58	5	5	0	27	49
Huskie Complete	20.5 oz	6	6	1	23	54	6	6	1	25	47
Huskie Complete	27.4 oz	8	6	1	23	53	6	6	1	26	48
Axial XL	16.4 oz	5	4	0	24	52	5	4	0	26	49
Untreated Check	--	0	0	0	26	55	0	0	0	27	51
LSD (0.05)		5	4	ns	2	4	5	4	ns	ns	ns

Table 2.

Treatment	Rate (Product/A)	Jenna					RB07				
		Injury			Height (inch)	Yield (Bu/A)	Injury			Height (inch)	Yield (Bu/A)
		6/6 (%)	6/13 (%)	7/15 (%)			6/6 (%)	6/13 (%)	7/15 (%)		
Everest 2.0 + Newtone	0.69 oz + 12.8 oz	3	3	0	26	56	3	3	0	24	43
Everest 2.0 + Newtone	1.04 oz + 12.8 oz	8	8	3	26	58	6	9	3	25	43
Everest 2.0 + Newtone	1.38 oz + 12.8 oz	5	5	1	26	55	5	5	1	25	44
GoldSky + Preference	1 pt + 3.2 oz	6	6	1	24	55	6	6	1	25	42
GoldSky + Preference	1.5 pt + 3.2 oz	8	8	1	24	54	8	8	1	24	41
GoldSky + Preference	2 pt + 3.2 oz	8	8	3	25	55	8	8	3	24	40
Rimfire Max + Destiny HC	3 oz + 0.75 pt	4	4	1	26	57	4	4	1	26	42
Rimfire Max + Destiny HC	4.5 oz + 0.75 pt	5	5	1	25	57	5	5	1	26	41
Rimfire Max + Destiny HC	6 oz + 0.75 pt	10	9	4	24	56	10	9	4	25	41
Huskie Complete	13.7 oz	5	5	0	25	58	5	5	0	25	42
Huskie Complete	20.5 oz	6	6	1	25	54	6	6	1	25	40
Huskie Complete	27.4 oz	6	6	1	25	53	8	6	1	25	41
Axial XL	16.4 oz	5	4	0	25	55	5	4	0	26	45
Untreated Check	--	0	0	0	26	55	0	0	0	26	46
LSD (0.05)		5	4	ns	ns	ns	5	4	ns	ns	ns

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

Newtone = surfactant blend and ammoniated salts.

GoldSky 0.84L = pyroxulam (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)
		6/6 (%)	6/13 (%)	7/15 (%)			6/6 (%)	6/13 (%)	7/15 (%)		
Everest 2.0 + Newtone	0.69 oz + 12.8 oz	3	3	0	21	36	3	3	0	25	47
Everest 2.0 + Newtone	1.04 oz + 12.8 oz	8	8	3	22	36	8	8	3	26	48
Everest 2.0 + Newtone	1.38 oz + 12.8 oz	5	5	1	21	36	5	5	1	26	48
GoldSky + Preference	1 pt + 3.2 oz	5	6	1	21	39	6	6	1	26	48
GoldSky + Preference	1.5 pt + 3.2 oz	8	8	1	21	39	8	8	1	25	47
GoldSky + Preference	2 pt + 3.2 oz	8	8	3	21	37	8	8	3	24	47
Rimfire Max + Destiny HC	3 oz + 0.75 pt	4	4	1	22	39	4	4	1	26	50
Rimfire Max + Destiny HC	4.5 oz + 0.75 pt	6	5	1	23	39	5	5	1	26	51
Rimfire Max + Destiny HC	6 oz + 0.75 pt	10	9	4	22	37	10	9	4	25	50
Huskie Complete	13.7 oz	5	5	0	22	39	5	5	0	26	51
Huskie Complete	20.5 oz	8	6	1	21	37	6	6	1	24	45
Huskie Complete	27.4 oz	6	6	1	20	33	6	6	1	26	46
Axial XL	16.4 oz	5	4	0	22	38	5	4	0	26	49
Untreated Check	--	0	0	0	22	41	0	0	0	27	49
LSD (0.05)		5	4	ns	1	ns	5	4	ns	2	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).

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