

Hard red spring wheat tolerance to postemergence herbicides at Rosemount, MN - 2011.

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. Following soybeans, the experimental area was chisel plowed in the fall of 2010. The area was fertilized with 50 lbs/A N and field cultivated on April 15. On April 25, the area was field cultivated and the HRSW varieties 'Albany', 'Faller', 'Jenna', 'RB-07', 'Sabin' and 'Tom' seeded at 90 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 1.25 pt/A (0.38 lb ai/A) was broadcast on June 9 to control broadleaf weeds. Herbicide treatments were applied June 6. 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 6
Temperature (°F)	
Air	94
Soil	84
Relative Humidity (%)	22
Dewpoint (°F)	66
Soil Moisture	moist at 1.5"
Wind (mph)	0-3 NE
Sky	10% clouds
Rainfall before application	
Week 1 (inch)	1.16
Rainfall after application	
Week 1 (inch)	1.46
Week 2 (inch)	2.74

<u>Wheat</u>	<u>Height (inch)</u>	<u>Leaf #</u>	<u>Tillers</u>	<u>Zadoks Code</u>
Albany	8-11	5 - 5.9	1-3	Z16 , Z21-23
Faller	7-10	5.9-6.3	2-3	Z16 , Z22-23
Jenna	9-12	5.5-5.8	1-2	Z16 , Z21-22
RB-07	8-11	5.5-5.9	2-3	Z16 , Z22-23
Sabin	9-12	5.5-5.7	2	Z16 , Z22
Tom	9-12	6.1-6.2	2	Z16 , Z22

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Table 1.

Treatment	Rate Product/A	Albany						Faller					
		Injury				Height (inch)	Yield (Bu/A)	Injury				Height (inch)	Yield (Bu/A)
		6/17 (%)	6/25 (%)	7/12 (%)	7/30 (%)			6/17 (%)	6/25 (%)	7/12 (%)	7/30 (%)		
Everest 2.0 + Newtone	0.69 oz + 12.8 oz	5	1	0	0	29	36	5	6	0	0	30	23
Everest 2.0 + Newtone	1.04 oz + 12.8 oz	5	3	0	0	28	35	6	8	0	0	30	27
Everest 2.0 + Newtone	1.38 oz + 12.8 oz	6	3	1	1	29	38	6	8	1	1	30	24
GoldSky + Preference	1 pt + 3.2 oz	10	5	4	4	29	38	10	5	5	5	30	27
GoldSky + Preference	1.5 pt + 3.2 oz	14	6	3	4	29	42	15	8	3	4	30	25
GoldSky + Preference	2 pt + 3.2 oz	18	4	5	5	29	37	18	10	6	5	30	24
Rimfire Max + Destiny HC	3 oz + 1.5 pt	10	9	6	6	29	42	10	10	6	6	30	27
Rimfire Max + Destiny HC	4.5 oz + 1.5 pt	23	8	8	9	28	37	21	13	9	9	29	21
Rimfire Max + Destiny HC	6 oz + 1.5 pt	28	9	9	9	27	36	26	21	18	15	30	19
Axial XL	16.4 oz	5	1	0	0	30	35	5	6	0	0	30	28
Axial XL	24.6 oz	5	3	0	0	30	36	5	5	0	0	30	27
Axial XL	32.8 oz	8	3	0	0	28	33	8	5	0	0	30	26
Untreated Check	--	0	0	0	0	29	36	0	0	0	0	30	25
LSD (0.05)		5	4	3	3	ns	ns	4	5	4	3	ns	ns

Table 2.

Treatment	Rate Product/A	Jenna						RB07					
		Injury				Height (inch)	Yield (Bu/A)	Injury				Height (inch)	Yield (Bu/A)
		6/17 (%)	6/25 (%)	7/12 (%)	7/30 (%)			6/17 (%)	6/25 (%)	7/12 (%)	7/30 (%)		
Everest 2.0 + Newtone	0.69 oz + 12.8 oz	5	4	0	0	29	33	5	5	0	0	30	22
Everest 2.0 + Newtone	1.04 oz + 12.8 oz	6	5	0	0	30	31	6	6	0	0	31	18
Everest 2.0 + Newtone	1.38 oz + 12.8 oz	6	5	1	1	29	35	6	8	1	1	31	22
GoldSky + Preference	1 pt + 3.2 oz	10	4	6	5	29	34	10	8	5	5	30	15
GoldSky + Preference	1.5 pt + 3.2 oz	15	5	3	4	30	34	15	8	3	4	30	26
GoldSky + Preference	2 pt + 3.2 oz	18	5	5	5	30	31	18	10	5	5	31	16
Rimfire Max + Destiny HC	3 oz + 1.5 pt	10	10	5	5	30	34	10	11	5	6	31	19
Rimfire Max + Destiny HC	4.5 oz + 1.5 pt	21	9	10	10	30	31	20	14	9	9	30	14
Rimfire Max + Destiny HC	6 oz + 1.5 pt	29	16	19	16	30	28	28	18	14	14	28	15
Axial XL	16.4 oz	5	4	0	0	31	35	5	5	0	0	30	25
Axial XL	24.6 oz	5	3	0	0	31	36	5	5	0	0	31	22
Axial XL	32.8 oz	8	3	0	0	30	35	8	5	0	0	30	25
Untreated Check	--	0	0	0	0	31	40	0	0	0	0	31	21
LSD (0.05)		4	5	5	4	ns	ns	4	5	3	3	ns	7

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.

Axial XL 0.42EC = 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)
		6/17 (%)	6/25 (%)	7/12 (%)	7/30 (%)			6/17 (%)	6/25 (%)	7/12 (%)	7/30 (%)		
Everest 2.0 + Newtone	0.69 oz + 12.8 oz	5	5	0	0	28	25	5	9	0	0	29	25
Everest 2.0 + Newtone	1.04 oz + 12.8 oz	6	5	0	0	28	24	6	6	0	0	29	27
Everest 2.0 + Newtone	1.38 oz + 12.8 oz	6	5	1	1	28	26	6	8	1	1	28	25
GoldSky + Preference	1 pt + 3.2 oz	10	5	4	4	28	27	10	8	6	5	29	24
GoldSky + Preference	1.5 pt + 3.2 oz	15	6	4	4	29	28	15	8	4	4	30	28
GoldSky + Preference	2 pt + 3.2 oz	18	6	5	5	28	25	18	10	6	5	29	20
Rimfire Max + Destiny HC	3 oz + 1.5 pt	10	9	5	5	29	29	10	15	6	8	29	25
Rimfire Max + Destiny HC	4.5 oz + 1.5 pt	21	9	8	9	28	27	23	16	14	13	28	19
Rimfire Max + Destiny HC	6 oz + 1.5 pt	25	14	8	8	27	25	28	24	16	14	28	19
Axial XL	16.4 oz	5	1	0	0	29	28	5	4	0	0	30	28
Axial XL	24.6 oz	5	4	0	0	29	29	5	4	0	0	29	30
Axial XL	32.8 oz	8	4	0	0	29	28	8	4	0	0	30	27
Untreated Check	--	0	0	0	0	29	28	0	0	0	0	29	28
LSD (0.05)		4	3	3	3	ns	ns	3	5	5	4	ns	7

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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