

Hard red spring wheat tolerance to postemergence herbicides at Crookston, MN - 2012. Durgan, Beverly R., Jochum J. Wiersma, James H. Cameron and Douglas W. 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/Wheaton loam. Following soybeans, the experimental area was chisel plowed in the fall of 2010. In the spring of 2012, 110 lbs/A N was applied and the experimental area was tilled with a field cultivator to prepare the seedbed. The HRSW varieties 'Albany', 'Faller', 'Jenna', 'RB-07', 'Sabin' and 'Tom' were seeded on April 9 at 105 lbs/A. All treatments were applied on May 21 with a CO₂ pressured backpack type sprayer delivering 10 gpa at 30 psi using 80015 flat-fan nozzles. Wheat was in the 5 to 5.5 leaf stage. 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 the tables 1 through 3.

Treatment Date	May 21
Air temperature (°F)	58
Soil temperature (°F)	58
Relative humidity (%)	20
Wind	S 3mph
Rainfall before Application	
Week 1 (inch)	0.02
Rainfall after Application	
Week 1 (inch)	0.81
Week 2 (inch)	0.06

Early injury symptoms were yellowing and stunting. Injury symptoms at the later rating dates were delayed heading and crop shortening.

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Table 1.

Treatment	Rate (Product/A)	Albany							Faller						
		Injury					Height (cm)	Yield (Bu/A)	Injury					Height (cm)	Yield (Bu/A)
		6/1 (%)	6/8 (%)	6/14 (%)	6/21 (%)	7/18 (%)			6/1 (%)	6/8 (%)	6/14 (%)	6/21 (%)	7/18 (%)		
Everest 2.0 + Newton	0.69 oz + 12.8 oz	3	4	3	0	0	67	60	3	4	1	1	0	74	64
Everest 2.0 + Newton	1.04 oz + 12.8 oz	0	5	1	0	0	68	61	1	6	0	0	0	70	61
Everest 2.0 + Newton	1.38 oz + 12.8 oz	0	5	0	0	0	71	69	1	5	1	1	1	74	63
GoldSky + Preference	1 pt + 3.2 oz	1	3	1	1	1	67	62	3	3	3	1	1	73	57
GoldSky + Preference	1.5 pt + 3.2 oz	2	8	3	3	3	69	65	3	8	1	1	1	72	66
GoldSky + Preference	2 pt + 3.2 oz	0	6	0	0	0	74	67	6	6	1	1	1	74	63
Rimfire Max + Destiny HC	3 oz + 0.75 pt	0	5	0	0	0	68	65	0	6	0	0	0	73	66
Rimfire Max + Destiny HC	4.5 oz + 0.75 pt	1	5	0	0	0	72	64	1	6	0	0	0	73	69
Rimfire Max + Destiny HC	6 oz + 0.75 pt	1	5	0	0	0	72	66	1	5	1	1	0	73	66
Huskie Complete	13.7 oz	4	8	3	3	3	71	66	5	9	1	1	1	74	66
Huskie Complete	20.5 oz	3	15	5	5	5	67	66	9	15	4	4	4	73	67
Huskie Complete	27.4 oz	8	19	8	8	8	73	68	14	20	8	8	8	71	63
Untreated Check	--	0	0	0	0	0	73	68	0	0	0	0	0	71	65
LSD (0.05)		3	4	2	2	2	ns	ns	4	4	3	3	3	ns	ns

Table 2.

Treatment	Rate (Product/A)	Jenna							RB07						
		Injury					Height (cm)	Yield (Bu/A)	Injury					Height (cm)	Yield (Bu/A)
		6/1 (%)	6/8 (%)	6/14 (%)	6/21 (%)	7/18 (%)			6/1 (%)	6/8 (%)	6/14 (%)	6/21 (%)	7/18 (%)		
Everest 2.0 + Newton	0.69 oz + 12.8 oz	4	4	1	1	1	71	66	3	3	0	0	0	65	60
Everest 2.0 + Newton	1.04 oz + 12.8 oz	4	4	1	1	1	73	66	3	5	0	0	0	62	56
Everest 2.0 + Newton	1.38 oz + 12.8 oz	0	5	0	0	0	74	70	1	4	0	0	0	66	63
GoldSky + Preference	1 pt + 3.2 oz	1	3	1	1	1	75	70	3	3	1	1	1	62	62
GoldSky + Preference	1.5 pt + 3.2 oz	4	6	1	1	1	70	69	5	6	0	0	0	64	58
GoldSky + Preference	2 pt + 3.2 oz	8	6	4	3	3	73	68	6	6	1	1	1	67	60
Rimfire Max + Destiny HC	3 oz + 0.75 pt	1	5	0	0	0	71	73	0	5	0	0	0	64	59
Rimfire Max + Destiny HC	4.5 oz + 0.75 pt	1	5	0	0	0	69	69	1	5	0	0	0	63	64
Rimfire Max + Destiny HC	6 oz + 0.75 pt	0	5	0	0	0	71	70	1	8	0	0	0	69	65
Huskie Complete	13.7 oz	4	8	3	3	3	72	69	6	9	1	1	1	65	60
Huskie Complete	20.5 oz	5	14	4	4	4	71	68	10	16	3	3	3	61	58
Huskie Complete	27.4 oz	8	19	8	8	8	70	66	14	20	8	8	8	68	61
Untreated Check	--	0	0	0	0	0	74	69	0	0	0	0	0	66	63
LSD (0.05)		4	3	3	3	3	ns	ns	3	4	2	2	2	ns	ns

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

Newton = 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 = thiencazone-methyl (0.042 lb ai/gal) & pyrasulfotole (0.26 lb ai/gal) & bromoxynil phenol equivalent (1.46 lb ai/gal).

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Table 3.

Treatment	Rate (Product/A)	Sabin							Tom						
		Injury					Height (cm)	Yield (Bu/A)	Injury					Height (cm)	Yield (Bu/A)
		6/1 (%)	6/8 (%)	6/14 (%)	6/21 (%)	7/18 (%)			6/1 (%)	6/8 (%)	6/14 (%)	6/21 (%)	7/18 (%)		
Everest 2.0 + Newtone	0.69 oz + 12.8 oz	3	4	3	3	1	63	59	3	4	0	0	0	70	56
Everest 2.0 + Newtone	1.04 oz + 12.8 oz	3	4	1	1	1	60	61	1	5	0	0	0	69	58
Everest 2.0 + Newtone	1.38 oz + 12.8 oz	0	5	0	0	0	62	64	0	6	0	0	0	70	62
GoldSky + Preference	1 pt + 3.2 oz	1	3	3	1	1	60	63	3	3	1	1	1	71	61
GoldSky + Preference	1.5 pt + 3.2 oz	2	6	1	1	1	64	67	5	6	0	0	0	66	62
GoldSky + Preference	2 pt + 3.2 oz	8	6	4	5	5	64	60	8	6	0	0	0	67	63
Rimfire Max + Destiny HC	3 oz + 0.75 pt	1	5	0	0	0	62	66	0	5	0	0	0	67	64
Rimfire Max + Destiny HC	4.5 oz + 0.75 pt	0	5	0	0	0	60	67	1	5	0	0	0	73	68
Rimfire Max + Destiny HC	6 oz + 0.75 pt	0	5	0	0	0	64	64	1	5	0	0	0	72	65
Huskie Complete	13.7 oz	6	6	1	1	1	65	65	6	9	1	1	1	66	62
Huskie Complete	20.5 oz	6	14	5	5	5	62	64	10	16	3	3	3	69	61
Huskie Complete	27.4 oz	10	19	8	9	9	60	64	15	21	8	8	8	69	61
Untreated Check	--	0	0	0	0	0	63	64	0	0	0	0	0	69	66
LSD (0.05)		3	3	3	3	3	ns	ns	3	4	2	2	2	ns	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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