

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

2011. 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 2011, 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 May 17 at 105 lbs/A. All treatments were applied on June 16 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	June 16
Air temperature (°F)	68
Soil temperature (°F)	68
Relative humidity (%)	67
Wind	NNE 2 mph
Sky	cloudy
Rainfall before Application	
Week 1 (inch)	0.22
Rainfall after Application	
Week 1 (inch)	1.28
Week 2 (inch)	0.87

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Table 1.

Treatment	Rate Product/A	Albany					Faller				
		Injury			Height (cm)	Yield (Bu/A)	Injury			Height (cm)	Yield (Bu/A)
		6/24 (%)	7/8 (%)	7/29 (%)			6/24 (%)	7/8 (%)	7/29 (%)		
Everest 2.0 + Newtone	0.69 oz + 12.8 oz	0	0	0	92	59	1	0	0	89	70
Everest 2.0 + Newtone	1.04 oz + 12.8 oz	0	0	0	88	61	1	0	0	87	69
Everest 2.0 + Newtone	1.38 oz + 12.8 oz	0	0	0	87	61	1	1	0	90	69
GoldSky + Preference	1 pt + 3.2 oz	6	1	1	89	58	8	3	1	86	65
GoldSky + Preference	1.5 pt + 3.2 oz	4	1	4	88	54	13	4	5	81	62
GoldSky + Preference	2 pt + 3.2 oz	7	2	4	88	54	14	6	5	86	62
Rimfire Max + Destiny HC	3 oz + 1.5 pt	6	1	2	89	55	11	6	6	84	62
Rimfire Max + Destiny HC	4.5 oz + 1.5 pt	9	3	4	85	54	15	6	6	82	59
Rimfire Max + Destiny HC	6 oz + 1.5 pt	9	3	4	84	53	16	8	8	82	59
Axial XL	16.4 oz	1	0	0	91	64	3	1	1	85	61
Axial XL	24.6 oz	2	0	0	89	60	8	1	0	86	66
Axial XL	32.8 oz	2	0	0	90	58	9	1	0	89	68
Untreated Check	--	0	0	0	91	62	0	0	0	88	68
LSD (0.05)		3	2	2	5	ns	5	2	2	ns	8

Table 2.

Treatment	Rate Product/A	Jenna					RB07				
		Injury			Height (cm)	Yield (Bu/A)	Injury			Height (cm)	Yield (Bu/A)
		6/24 (%)	7/8 (%)	7/29 (%)			6/24 (%)	7/8 (%)	7/29 (%)		
Everest 2.0 + Newtone	0.69 oz + 12.8 oz	0	0	0	89	59	1	0	0	85	62
Everest 2.0 + Newtone	1.04 oz + 12.8 oz	0	0	0	92	61	1	0	0	82	63
Everest 2.0 + Newtone	1.38 oz + 12.8 oz	0	0	0	88	63	1	1	0	83	63
GoldSky + Preference	1 pt + 3.2 oz	6	2	1	90	57	8	2	1	83	60
GoldSky + Preference	1.5 pt + 3.2 oz	10	4	5	84	60	8	4	5	80	57
GoldSky + Preference	2 pt + 3.2 oz	13	6	5	85	54	11	6	5	79	55
Rimfire Max + Destiny HC	3 oz + 1.5 pt	8	6	6	80	54	10	6	6	78	55
Rimfire Max + Destiny HC	4.5 oz + 1.5 pt	15	6	6	82	51	15	9	9	81	56
Rimfire Max + Destiny HC	6 oz + 1.5 pt	18	8	8	76	52	18	9	10	81	55
Axial XL	16.4 oz	1	0	0	88	63	3	0	0	86	65
Axial XL	24.6 oz	5	0	0	89	62	4	0	0	85	67
Axial XL	32.8 oz	4	0	0	90	61	5	0	0	83	64
Untreated Check	--	0	0	0	92	62	0	0	0	89	65
LSD (0.05)		3	2	2	5	5	3	3	4	5	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 (cm)	Yield (Bu/A)	Injury			Height (cm)	Yield (Bu/A)
		6/24 (%)	7/8 (%)	7/29 (%)			6/24 (%)	7/8 (%)	7/29 (%)		
Everest 2.0 + Newtone	0.69 oz + 12.8 oz	0	1	0	83	61	0	1	0	85	64
Everest 2.0 + Newtone	1.04 oz + 12.8 oz	0	1	0	86	62	0	1	0	86	62
Everest 2.0 + Newtone	1.38 oz + 12.8 oz	0	1	0	84	62	0	1	0	87	61
GoldSky + Preference	1 pt + 3.2 oz	6	3	1	80	61	5	4	3	81	60
GoldSky + Preference	1.5 pt + 3.2 oz	8	4	5	75	57	10	5	6	83	56
GoldSky + Preference	2 pt + 3.2 oz	5	6	6	78	56	13	8	8	82	60
Rimfire Max + Destiny HC	3 oz + 1.5 pt	6	4	4	80	57	13	8	8	78	54
Rimfire Max + Destiny HC	4.5 oz + 1.5 pt	9	5	5	76	56	16	9	9	81	56
Rimfire Max + Destiny HC	6 oz + 1.5 pt	11	6	6	79	57	18	10	11	77	51
Axial XL	16.4 oz	2	0	0	87	63	1	0	0	90	64
Axial XL	24.6 oz	1	0	0	84	63	3	0	0	88	63
Axial XL	32.8 oz	3	0	0	82	59	5	0	0	86	64
Untreated Check	--	0	0	0	83	64	0	0	0	88	62
LSD (0.05)		3	2	2	5	5	3	3	4	4	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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