

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

2014. Durgan, Beverly R., Jochum J. Wiersma, James Cameron, Matthew Green, and Douglas 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 and Wheaton loam. Following soybeans, the experimental area was chisel plowed in the fall. In the spring of 2014, 110 lbs/A N was applied and the experimental area was tilled with a field cultivator with rolling baskets to prepare the seedbed. The HRSW varieties 'Forefront', 'LCS Iguacu', 'Linkert', 'RB-07', 'Rollag' and 'SY-Soren' were seeded on May 17 at 1.8 bu/a Bu/A. All treatments were applied on June 18 with a CO₂ pressured backpack type sprayer delivering 10 gpa at 30 psi using 80015 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 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 Tables 1 through 3.

Treatment Date	June 18
Wheat stage	5-leaf
Air temperature (°F)	63
Soil temperature (°F)	62
Relative humidity (%)	71
Wind	5-7 mph
Rainfall before Application	
Week 1 (inch)	1.89
Rainfall after Application	
Week 1 (inch)	1.91
Week 2 (inch)	0.59

Little or no wheat injury was observed over herbicide treatments or varieties. Injury ratings of 3% to 5% were observed on June 27 and July 10 for the highest rates of GoldSky, Rimfire Max and Huskie complete. No significant height or yield differences were noted in any of the wheat varieties.

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Table 1.

Treatment	Rate (Product/A)	Forefront					LCS Iguacu				
		Injury			Height (cm)	Yield (Bu/A)	Injury			Height (cm)	Yield (Bu/A)
		6/27 (%)	7/10 (%)	7/30 (%)			6/27 (%)	7/10 (%)	7/30 (%)		
Everest 2.0 + Newtone	1.0 oz + 12.8 oz	0	0	0	103	73	0	0	0	85	81
Everest 2.0 + Newtone	1.5 oz + 12.8 oz	0	0	0	104	75	0	0	0	85	83
Everest 2.0 + Newtone	2.0 oz + 12.8 oz	0	0	0	98	77	0	0	0	84	85
GoldSky + Preference	1 pt + 3.2 oz	0	0	0	103	78	0	0	0	88	86
GoldSky + Preference	1.5 pt + 3.2 oz	0	0	0	104	79	0	0	0	85	84
GoldSky + Preference	2 pt + 3.2 oz	5	3	0	102	78	5	3	0	86	84
Rimfire Max + Destiny HC	3 oz + 0.75 pt	0	0	0	103	75	0	0	0	84	80
Rimfire Max + Destiny HC	4.5 oz + 0.75 pt	1	0	0	104	78	1	0	0	86	85
Rimfire Max + Destiny HC	6 oz + 0.75 pt	5	4	0	101	74	5	4	0	86	82
Huskie Complete	13.7 oz	0	0	0	102	76	0	0	0	84	81
Huskie Complete	20.5 oz	1	0	0	99	75	1	0	0	83	84
Huskie Complete	27.4 oz	4	4	0	101	77	4	4	0	85	81
Untreated Check	--	0	0	0	94	74	0	0	0	85	81
LSD (0.05)		2	1	ns	ns	ns	2	1	ns	ns	ns

Table 2.

Treatment	Rate (Product/A)	Linkert					RB07				
		Injury			Height (cm)	Yield (Bu/A)	Injury			Height (cm)	Yield (Bu/A)
		6/27 (%)	7/10 (%)	7/30 (%)			6/27 (%)	7/10 (%)	7/30 (%)		
Everest 2.0 + Newtone	1.0 oz + 12.8 oz	0	0	0	79	75	0	0	0	88	76
Everest 2.0 + Newtone	1.5 oz + 12.8 oz	0	0	0	81	75	0	0	0	86	76
Everest 2.0 + Newtone	2.0 oz + 12.8 oz	0	0	0	81	76	0	0	0	87	78
GoldSky + Preference	1 pt + 3.2 oz	0	0	0	79	73	0	0	0	82	76
GoldSky + Preference	1.5 pt + 3.2 oz	0	0	0	80	75	0	0	0	86	79
GoldSky + Preference	2 pt + 3.2 oz	5	3	0	79	80	5	3	0	89	80
Rimfire Max + Destiny HC	3 oz + 0.75 pt	0	0	0	77	74	0	0	0	85	77
Rimfire Max + Destiny HC	4.5 oz + 0.75 pt	1	0	0	76	76	1	0	0	87	75
Rimfire Max + Destiny HC	6 oz + 0.75 pt	5	5	0	77	74	5	4	0	88	73
Huskie Complete	13.7 oz	0	0	0	80	76	0	0	0	84	76
Huskie Complete	20.5 oz	1	0	0	76	77	1	0	0	85	77
Huskie Complete	27.4 oz	4	5	0	80	76	4	4	0	84	75
Untreated Check	--	0	0	0	75	72	0	0	0	86	73
LSD (0.05)		2	1	ns	ns	ns	2	1	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 = propoxycarbazono-sodium (4.76%) & mesosulfuron-methyl (1.91%).

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

Huskie Complete 1.76L = thiencazazono-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)	Rollag					SY-Soren				
		Injury			Height (cm)	Yield (Bu/A)	Injury			Height (cm)	Yield (Bu/A)
		6/27 (%)	7/10 (%)	7/30 (%)			6/27 (%)	7/10 (%)	7/30 (%)		
Everest 2.0 + Newtone	1.0 oz + 12.8 oz	0	0	0	83	78	0	0	0	81	78
Everest 2.0 + Newtone	1.5 oz + 12.8 oz	0	0	0	85	75	0	0	0	78	80
Everest 2.0 + Newtone	2.0 oz + 12.8 oz	0	0	0	85	76	0	0	0	78	81
GoldSky + Preference	1 pt + 3.2 oz	0	0	0	83	76	0	0	0	81	79
GoldSky + Preference	1.5 pt + 3.2 oz	0	0	0	81	80	0	0	0	80	83
GoldSky + Preference	2 pt + 3.2 oz	5	3	0	83	81	5	3	0	82	83
Rimfire Max + Destiny HC	3 oz + 0.75 pt	0	0	0	86	75	0	0	0	77	77
Rimfire Max + Destiny HC	4.5 oz + 0.75 pt	1	0	0	79	77	1	0	0	81	76
Rimfire Max + Destiny HC	6 oz + 0.75 pt	5	4	0	84	76	5	5	0	76	77
Huskie Complete	13.7 oz	0	0	0	83	76	0	0	0	78	79
Huskie Complete	20.5 oz	1	0	0	82	81	1	0	0	78	79
Huskie Complete	27.4 oz	4	4	0	79	79	5	5	0	77	80
Untreated Check	--	0	0	0	82	74	0	0	0	83	78
LSD (0.05)		2	1	ns	ns	ns	1	1	ns	ns	ns

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

Newtone = surfactant blend and ammoniated salts.

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