

**Hard red spring wheat and barley tolerance to postemergence herbicides at Rosemount, MN - 2010.** Durgan, Beverly R. and Douglas W. Miller. This experiment was designed to evaluate the tolerance of selected Hard Red Spring Wheat (HRSW) and barley 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 2009. In the spring of 2010, the area received 50 lbs/A N and 75 lbs K. The field was then field cultivated twice. The HRSW varieties 'Albany', 'Breaker', 'Brick', 'Faller', 'Jenna', 'Knudson', 'RB-07', 'Sabin', 'Samson', 'Tom', and 'Vantage', and the spring barley varieties "M122" and 'Rasmusson' were seeded on April 19 at 85 lb/A and 90 lbs/A for HRSW and spring barley, respectively. 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 three 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 May 18 to control broadleaf weeds. Herbicide treatments were applied May 25. 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 7.

**Treatment Date** **May 25**

Temperature (°F)	
Air	80 - 85
Relative Humidity (%)	22
Soil Moisture	moist at 1"
Wind (mph)	0-5 SE
Sky	clear
Rainfall before application	
Week 1 (inch)	0.19
Rainfall after application	
Week 1 (inch)	1.34
Week 2 (inch)	1.29

	<u>Height (inch)</u>	<u>Leaf #</u>	<u>Tillers</u>	<u>Zadoks Code</u>
<b><u>Barley</u></b>				
M122	7-9	4.6 – 5.7	1-2	Z15-16 , Z21-22
Rasmusson	6-8	4.4 – 5.1	0-1	Z14-15 , Z20-21
<b><u>Wheat</u></b>				
Albany	6-8	5 - 5.5	2-3	Z15-16 , Z22-23
Breaker	6-8	5	2-3	Z15 , Z22-23
Brick	7-9	5.1 – 5.7	2	Z15-16 , Z22
Faller	6-8	4.8 – 5.3	2	Z15 , Z22
Jenna	7-9	4.6 – 4.9	2-3	Z15 , Z22-23
Knudson	7-10	4.9	2	Z15 , Z22
RB-07	6-8	4.6 – 4.9	3	Z15 , Z23
Sabin	7-10	5 – 5.8	3	Z15-16 , Z23
Samson	5-7	4.3 – 4.7	1-2	Z14-15 , Z21-22
Tom	7-9	4.9 – 5.5	2	Z15-16 , Z22
Vantage	6-8	5.1 – 5.5	2	Z15-16 , Z22

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**Table 1.**

Treatment	Rate Product/A	Albany					Breaker				
		Injury			Height (inch)	Yield (Bu/A)	Injury			Height (inch)	Yield (Bu/A)
		6/7 (%)	6/18 (%)	7/18 (%)			6/7 (%)	6/18 (%)	7/18 (%)		
Everest + Preference	0.62 oz + 3.2 oz	10	3	5	28	60	8	10	5	31	41
Everest + Preference	1.23 oz + 3.2 oz	13	8	7	29	61	15	13	7	30	42
GoldSky + Preference	1 pt + 3.2 oz	8	7	3	28	64	8	10	3	31	44
GoldSky + Preference	2 pt + 3.2 oz	12	10	5	28	60	15	12	5	30	43
Everest 2.0 + Newtone	0.69 oz + 0.8 pt	7	8	3	28	65	7	8	3	30	44
Everest 2.0 + Newtone	1.38 oz + 0.8 pt	10	12	7	28	60	12	10	7	30	46
Rimfire Max + Destiny HC	3 oz + 1.5 pt	15	10	3	27	63	15	10	3	31	45
Rimfire Max + Destiny HC	6 oz + 1.5 pt	12	13	12	28	66	22	18	#	30	42
Wolverine	27.4 oz	3	5	3	28	68	3	8	3	31	46
Wolverine	54.8 oz	5	8	3	28	62	5	10	3	30	41
Axial TBC + Adigor Adjuvant	8.85 oz + 9.6 oz	5	0	0	29	71	5	0	0	31	45
Axial TBC + Adigor Adjuvant	17.7 oz + 9.6 oz	5	0	0	28	67	5	0	0	31	46
Untreated Check	--	0	0	0	29	64	0	0	0	31	44
LSD (0.05)		7	6	5	ns	ns	7	6	6	ns	ns

**Table 2.**

Treatment	Rate Product/A	Brick					Faller				
		Injury			Height (inch)	Yield (Bu/A)	Injury			Height (inch)	Yield (Bu/A)
		6/7 (%)	6/18 (%)	7/18 (%)			6/7 (%)	6/18 (%)	7/18 (%)		
Everest + Preference	0.62 oz + 3.2 oz	8	7	5	31	35	13	8	5	30	46
Everest + Preference	1.23 oz + 3.2 oz	15	12	7	30	40	17	12	7	30	49
GoldSky + Preference	1 pt + 3.2 oz	10	7	3	31	34	10	12	3	29	51
GoldSky + Preference	2 pt + 3.2 oz	17	8	5	30	36	17	12	5	30	46
Everest 2.0 + Newtone	0.69 oz + 0.8 pt	8	7	3	31	37	7	7	3	29	55
Everest 2.0 + Newtone	1.38 oz + 0.8 pt	12	8	7	31	41	13	12	7	28	55
Rimfire Max + Destiny HC	3 oz + 1.5 pt	13	7	3	31	32	22	12	3	30	45
Rimfire Max + Destiny HC	6 oz + 1.5 pt	25	13	10	31	35	25	17	12	30	49
Wolverine	27.4 oz	5	5	3	31	35	3	3	3	31	49
Wolverine	54.8 oz	7	7	3	30	38	7	8	3	30	47
Axial TBC + Adigor Adjuvant	8.85 oz + 9.6 oz	5	0	0	31	40	5	0	0	30	54
Axial TBC + Adigor Adjuvant	17.7 oz + 9.6 oz	5	0	0	31	41	5	0	0	29	52
Untreated Check	--	0	0	0	31	39	0	0	0	31	52
LSD (0.05)		7	5	5	ns	ns	7	6	5	ns	ns

Everest 70 WG = flucarbazone.

Preference = nonionic surfactant.

GoldSky 1.53L = pyroxsulam (0.11 lb ai/gal) & fluroxypyr (0.71 lb ae/gal) & florasulam (0.018 lb ai/gal).

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

Newtone = surfactant blend and ammoniated salts.

Rimfire Max 6.67 WDG = propoxycarbazone-sodium (4.76%) & mesosulfuron-methyl (1.91%).

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

Wolverine 1.38E = fenoxaprop-p-ethyl (0.38 lb ai/gal) & pyrasulfotole (0.17 lb ai/gal) & bromoxynil octanoate (0.41 lb ai/gal) & bromoxynil heptanoate (0.42 lb ai/gal)

Axial TBC 0.838 EC = pinoxaden (0.774 lb ai/gal) & florasulam (0.0645 lb ai/gal) & safener.

Adigor Adjuvant = emulsifiable oil adjuvant.

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**Table 3.**

Treatment	Rate Product/A	Jenna					Knudson				
		Injury			Height (inch)	Yield (Bu/A)	Injury			Height (inch)	Yield (Bu/A)
		6/7 (%)	6/18 (%)	7/18 (%)			6/7 (%)	6/18 (%)	7/18 (%)		
Everest + Preference	0.62 oz + 3.2 oz	8	7	5	28	59	10	8	5	28	48
Everest + Preference	1.23 oz + 3.2 oz	13	10	7	27	59	15	12	7	29	50
GoldSky + Preference	1 pt + 3.2 oz	10	8	3	28	56	10	12	3	30	52
GoldSky + Preference	2 pt + 3.2 oz	12	10	5	29	58	15	10	5	28	46
Everest 2.0 + Newtone	0.69 oz + 0.8 pt	7	5	3	28	66	8	5	3	30	54
Everest 2.0 + Newtone	1.38 oz + 0.8 pt	8	8	7	28	61	13	10	7	30	52
Rimfire Max + Destiny HC	3 oz + 1.5 pt	22	12	5	26	56	22	12	5	29	42
Rimfire Max + Destiny HC	6 oz + 1.5 pt	28	20	15	26	56	28	27	17	26	42
Wolverine	27.4 oz	3	5	3	28	64	3	5	3	29	51
Wolverine	54.8 oz	5	8	5	29	59	7	10	3	30	53
Axial TBC + Adigor Adjuvant	8.85 oz + 9.6 oz	5	0	0	28	65	5	0	0	30	56
Axial TBC + Adigor Adjuvant	17.7 oz + 9.6 oz	5	0	0	28	63	5	0	0	30	55
Untreated Check	--	0	0	0	29	61	0	0	0	31	51
LSD (0.05)		7	5	6	2	ns	8	7	6	2	9

**Table 4.**

Treatment	Rate Product/A	RB07					Sabin				
		Injury			Height (inch)	Yield (Bu/A)	Injury			Height (inch)	Yield (Bu/A)
		6/7 (%)	6/18 (%)	7/18 (%)			6/7 (%)	6/18 (%)	7/18 (%)		
Everest + Preference	0.62 oz + 3.2 oz	8	8	5	27	38	12	12	5	27	47
Everest + Preference	1.23 oz + 3.2 oz	18	12	7	28	40	18	17	10	27	49
GoldSky + Preference	1 pt + 3.2 oz	13	8	3	28	44	8	12	3	28	43
GoldSky + Preference	2 pt + 3.2 oz	12	12	5	27	35	12	12	5	27	43
Everest 2.0 + Newtone	0.69 oz + 0.8 pt	7	7	3	29	38	7	7	3	28	48
Everest 2.0 + Newtone	1.38 oz + 0.8 pt	8	8	7	27	42	12	10	7	27	46
Rimfire Max + Destiny HC	3 oz + 1.5 pt	18	12	5	27	35	15	12	3	26	42
Rimfire Max + Destiny HC	6 oz + 1.5 pt	28	20	15	26	43	27	20	17	26	47
Wolverine	27.4 oz	3	5	3	29	36	3	7	3	28	46
Wolverine	54.8 oz	8	8	5	29	41	8	7	3	29	51
Axial TBC + Adigor Adjuvant	8.85 oz + 9.6 oz	5	0	0	28	38	5	0	0	29	49
Axial TBC + Adigor Adjuvant	17.7 oz + 9.6 oz	5	0	0	30	46	5	0	0	28	49
Untreated Check	--	0	0	0	31	37	0	0	0	29	47
LSD (0.05)		7	6	6	1	ns	8	5	6	2	ns

Everest 70 WG = flucarbazone.

Preference = nonionic surfactant.

GoldSky 1.53L = pyroxsulam (0.11 lb ai/gal) & fluroxypyr (0.71 lb ae/gal) & florasulam (0.018 lb ai/gal).

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

Newtone = surfactant blend and ammoniated salts.

Rimfire Max 6.67 WDG = propoxycarbazono-sodium (4.76%) & mesosulfuron-methyl (1.91%).

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

Wolverine 1.38E = fenoxaprop-p-ethyl (0.38 lb ai/gal) & pyrasulfotole (0.17 lb ai/gal) & bromoxynil octanoate (0.41 lb ai/gal) & bromoxynil heptanoate (0.42 lb ai/gal)

Axial TBC 0.838 EC = pinoxaden (0.774 lb ai/gal) & florasulam (0.0645 lb ai/gal) & safener.

Adigor Adjuvant = emulsifiable oil adjuvant.

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**Table 5.**

Treatment	Rate Product/A	Samson					Tom				
		Injury			Height (inch)	Yield (Bu/A)	Injury			Height (inch)	Yield (Bu/A)
		6/7 (%)	6/18 (%)	7/18 (%)			6/7 (%)	6/18 (%)	7/18 (%)		
Everest + Preference	0.62 oz + 3.2 oz	8	8	5	26	53	8	7	5	28	36
Everest + Preference	1.23 oz + 3.2 oz	13	13	7	29	56	18	12	7	28	40
GoldSky + Preference	1 pt + 3.2 oz	10	8	3	29	57	13	10	3	29	42
GoldSky + Preference	2 pt + 3.2 oz	13	10	5	28	54	15	12	5	28	37
Everest 2.0 + Newtone	0.69 oz + 0.8 pt	7	7	3	28	59	7	7	3	29	47
Everest 2.0 + Newtone	1.38 oz + 0.8 pt	12	12	7	29	59	10	10	7	28	41
Rimfire Max + Destiny HC	3 oz + 1.5 pt	20	8	3	27	56	20	13	5	28	37
Rimfire Max + Destiny HC	6 oz + 1.5 pt	25	17	10	26	52	30	27	17	27	37
Wolverine	27.4 oz	3	8	3	28	61	3	7	3	30	39
Wolverine	54.8 oz	5	10	3	29	60	10	8	3	30	42
Axial TBC + Adigor Adjuvant	8.85 oz + 9.6 oz	5	0	0	28	54	5	0	0	28	42
Axial TBC + Adigor Adjuvant	17.7 oz + 9.6 oz	5	0	0	28	59	5	0	0	29	41
Untreated Check	--	0	0	0	29	61	0	0	0	30	42
LSD (0.05)		7	4	5	2	ns	7	6	6	2	5

**Table 6.**

Treatment	Rate Product/A	Vantage				
		Injury			Height (inch)	Yield (Bu/A)
		6/7 (%)	6/18 (%)	7/18 (%)		
Everest + Preference	0.62 oz + 3.2 oz	8	7	5	30	55
Everest + Preference	1.23 oz + 3.2 oz	13	10	7	30	56
GoldSky + Preference	1 pt + 3.2 oz	8	8	3	29	53
GoldSky + Preference	2 pt + 3.2 oz	15	8	5	29	50
Everest 2.0 + Newtone	0.69 oz + 0.8 pt	7	7	3	29	55
Everest 2.0 + Newtone	1.38 oz + 0.8 pt	13	8	7	29	57
Rimfire Max + Destiny HC	3 oz + 1.5 pt	10	7	3	29	51
Rimfire Max + Destiny HC	6 oz + 1.5 pt	25	10	10	29	52
Wolverine	27.4 oz	3	5	3	29	58
Wolverine	54.8 oz	5	7	3	29	54
Axial TBC + Adigor Adjuvant	8.85 oz + 9.6 oz	5	0	0	29	54
Axial TBC + Adigor Adjuvant	17.7 oz + 9.6 oz	5	0	0	30	56
Untreated Check	--	0	0	0	30	57
LSD (0.05)		6	4	5	ns	ns

Everest 70 WG = flucarbazone.

Preference = nonionic surfactant.

GoldSky 1.53L = pyroxsulam (0.11 lb ai/gal) & fluroxypyr (0.71 lb ae/gal) & florasulam (0.018 lb ai/gal).

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

Newtone = surfactant blend and ammoniated salts.

Rimfire Max 6.67 WDG = propoxycarbazone-sodium (4.76%) & mesosulfuron-methyl (1.91%).

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

Wolverine 1.38E = fenoxaprop-p-ethyl (0.38 lb ai/gal) & pyrasulfotole (0.17 lb ai/gal) & bromoxynil octanoate (0.41 lb ai/gal) & bromoxynil heptanoate (0.42 lb ai/gal)

Axial TBC 0.838 EC = pinoxaden (0.774 lb ai/gal) & florasulam (0.0645 lb ai/gal) & safener.

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**Table 7.**

Treatment	Rate Product/A	M122					Rasmusson				
		Injury			Height (inch)	Yield (Bu/A)	Injury			Height (inch)	Yield (Bu/A)
		6/7 (%)	6/18 (%)	7/18 (%)			6/7 (%)	6/18 (%)	7/18 (%)		
Everest + Preference	0.62 oz + 3.2 oz	52	53	47	30	72	40	50	48	27	86
Everest + Preference	1.23 oz + 3.2 oz	60	58	55	30	75	63	57	55	26	79
GoldSky + Preference	1 pt + 3.2 oz	22	10	30	34	83	25	10	30	28	93
GoldSky + Preference	2 pt + 3.2 oz	33	13	25	33	75	30	13	25	29	88
Everest 2.0 + Newton	0.69 oz + 0.8 pt	50	43	35	30	72	42	37	32	26	88
Everest 2.0 + Newton	1.38 oz + 0.8 pt	52	48	45	30	77	48	48	45	28	88
Rimfire Max + Destiny HC	3 oz + 1.5 pt	30	18	30	32	79	22	13	28	27	84
Rimfire Max + Destiny HC	6 oz + 1.5 pt	40	20	32	34	73	30	18	38	28	99
Wolverine	27.4 oz	17	8	8	34	81	12	7	8	29	98
Wolverine	54.8 oz	20	8	10	33	79	17	12	8	29	88
Axial TBC + Adigor Adjuvant	8.85 oz + 9.6 oz	13	5	5	33	89	13	5	5	29	98
Axial TBC + Adigor Adjuvant	17.7 oz + 9.6 oz	15	7	7	32	85	17	7	7	29	93
Untreated Check	--	0	0	0	33.7	77	0	0	0	29	94
LSD (0.05)		11	9	14	2	ns	13	8	15	ns	ns

Everest 70 WG = flucarbazone.

Preference = nonionic surfactant.

GoldSky 1.53L = pyroxsulam (0.11 lb ai/gal) & fluroxypyr (0.71 lb ae/gal) & florasulam (0.018 lb ai/gal).

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

Newton = surfactant blend and ammoniated salts.

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Axial TBC 0.838 EC = pinoxaden (0.774 lb ai/gal) & florasulam (0.0645 lb ai/gal) & safener.

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