Broadleaf Weed Control in HRS Wheat, Carrington, 2008

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The experiment was conducted at the NDSU Carrington Research Extension Center on a conventionally-tilled Heimdahl loam soil with 6.8 pH and 2.8% organic matter. The experimental design was a randomized complete block with three replicates. 'Glenn' HRS wheat was seeded April 30. Herbicide treatments were applied with a CO_2-hand-boom plot sprayer delivering 10 gal/A at 35 psi through 8001 flat-fan nozzles to the center 6.7 ft. of 10 by 25 ft. plots. POST treatments were applied on June 7 with 64° F, 68% RH, clear sky, and 15 mph wind to 4-leaf wheat, 0.5- to 2-inch tall common lambsquarters, and 1- to 4-inch tall wild buckwheat. Average plant density in untreated plots during early June: wheat, 41 plants/ft^2, common lambsquarters, 5 plants/ft^2, and wild buckwheat, 1 plant/ft^2. Axial XL at 16.4 fl oz was applied across the trial on June 14 for foxtail control.

Minor wheat chlorosis was noted three days after application (DAA) with treatments 2-5 (Table). Wheat height reduction, ranging from 2-10%, was noted 16 DAA with all treatments, but was not present on August 7. Common lambsquarters control was excellent with treatments 2-7. Wild buckwheat control ranged from 87-91% with treatments 2-7 when visually evaluated June 23. Wild buckwheat control was excellent, ranging from 93-99%, with treatments 4-6 when visually evaluated July 7 and August 7.

Table. Broadleaf weed control in HRS wheat.

Herbicide			Wheat response[1]		Weed control (%)[2]					
Treatment[3]		Rate	6/10	6/23	6/23		7/7		8/7	
No.		product/A	chlorosis	injury (%)	colq	wibw	colq	wibw	colq	wibw
1	Untreated check	0	0	0	0	0	0	0	0	0
2	ARY-0546-101/Baseline A	0.3 oz	1	10	93	87	99	84	96	75
	ARY-0547-101/Baseline B	0.1 oz								
	Starane	7.7 fl oz								
3	ARY-0546-101/Baseline A	03 oz	1	7	96	89	99	79	96	70
	ARY-0547-101/Baseline B	0.1 oz								
	ARY-0548-003/Sahara	3.6 oz								
	NIS	0.25% v/v								
4	ARY-0546-101/Baseline A	0.3 oz	2	7	95	91	99	96	96	93
	ARY-0547-101/Baseline B	0.1 oz								
	Widematch	8 fl oz								
5	ARY-0546-101/Baseline A	0.1 oz	2	5	94	90	97	96	94	93
	ARY-0547-101/Baseline B	0.033 oz								
	Widematch	16 fl oz								
6	Widematch	16 fl oz	0	2	90	90	99	99	95	95
	MCPA	8 fl oz								
7	Huskie	11 fl oz	0	4	99	88	99	76	93	63
8	ARY-0548-003/Sahara	3.75 oz	0	6	0	0	13	40	0	40
	NIS	0.25% v/v								
9	Starane	8 fl oz	0	2	27	65	27	63	13	63
C.V. (%)			49.3	75.1	11.7	5.5	14.9	4.0	12.6	9.2
LSD (0.05)			1	NS	13	6	18	5	14	11

[1]chlorosis:0=none and 9=yellow; injury=height reduction.

[2]colq=common lambsquarters; wibw=wild buckwheat.

[3]NIS=Preference (WinField).