

Broadleaf Weed Control in Spring Wheat with Orion, 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 CO₂-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 9 with 57° F, 85% RH, 95% cloudy sky, and 14 mph wind to 4-leaf wheat, 0.5- to 3-inch tall common lambsquarters, and 1- to 2-inch tall wild buckwheat. Average plant density in untreated plots during early June: wheat, 36 plants/ft²; common lambsquarters, 11 plants/ft²; and wild buckwheat, 1 plant/ft². Axial XL was applied at 16.4 fl oz on June 14 for foxtail control to treatments 2-5 and 7-10. The trial was harvested by a plot combine on August 19.

Minor wheat height reduction was noted 12 days after application with several treatments (Table).

Grain yield tended to be lowest with the untreated check and highest with Orion plus Buctril and Affinity TM plus MCPA. Common lambsquarters control generally was excellent with all herbicide treatments. Wild buckwheat control was 90% or greater on July 11 and August 14 with Orion plus Stinger and WideMatch plus MCPA.

Table. Broadleaf weed control in spring wheat with Orion.									
Herbicide		Wheat response ¹				Weed control (%) ²			
Treatment		Rate	6/26	Yield	TW	7/11		8/14	
No.		fl oz product/A	injury (%)	bu/A	lb/bu	colq	wibw	colq	wibw
1	Untreated check	0	0	36.7	62.4	0	0	0	0
2	A13551A	8.85	0	40.3	62.5	0	0	0	0
	Adigor	9.6							
3	Orion	17	0	42.1	62.5	99	73	96	44
4	Orion	17	2	41.8	62.6	97	76	99	54
	Starane	5.3							
5	Orion	17	2	46.9	63.2	98	83	90	62
	Buctril	16							
6	Orion	17	2	45.4	63.2	99	90	99	98
	Stinger	5.3							
7	Orion	17	0	43.4	62.7	98	62	95	62
	Axial XL	16.4							
8	Bronate Advanced	12.8	3	40.2	62.1	99	66	90	57
9	Huskie	11	2	41.1	62.3	96	73	82	48
10	WideMatch	12.8	0	43.3	62.5	99	97	99	91
	MCPAe	8							
11	Affinity TM	0.6 oz	2	48.8	63.5	99	88	98	62
	MCPAe	8							
C.V. (%)			206.7	9.7	1.1	2.3	21.6	7.0	23.8
LSD (0.05)			NS	NS	NS	3	25	9	22
¹ injury=height reduction.									
² colq=common lambsquarters; wibw=wild buckwheat.									