

Grass and broadleaf weed control in spring wheat, Carrington, 2018.

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The field experiment was conducted at the NDSU Carrington Research Extension Center in cooperation with Bayer CropScience to examine weed efficacy and crop tolerance with Varro and broadleaf herbicide tank mixtures. Experimental design was a randomized complete block with three replicates. 'Glenn' HRS wheat was seeded on May 4 in conventionally tilled soil with corn as previous crop in 2017. 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. Treatments were applied on May 29 with 74 F, 55% RH and 5 mph wind to 3-leaf wheat, 3- to 4-leaf yellow and green foxtail, and 1- to 2-inch tall common lambsquarters.

No visual wheat plant response (foliage chlorosis/necrosis or biomass reduction) was noted on June 6 [eight days after treatment (DAT)]. Visual evaluation 24 DAT (June 22) indicated excellent (91-93%) foxtail control with Varro plus Carnivore or Carnivore plus Olympus, with other treatments providing 81-87% control (table). Foxtail control evaluated 55 DAT (July 23; wheat maturity) reached 88% with Varro plus Carnivore, with other treatments providing 73-80% control. All treatments provided excellent (98-99%) common lambsquarters control 24 and 55 DAT except Wolverine Advanced (87-88%).

			Weed control ¹				
Herbicide			6-Jun	22-Jun		23-Jul	
Number	Treatment ²	Rate	fota	fota	colq	fota	colq
		fl oz product/A	%				
1	Untreated check	x	0	0	0	0	0
2	Varro + Bromac	6.9 + 16	75	85	98	78	99
3	Varro + Weld	6.9 + 18	77	84	98	74	99
4	Varro + Carnivore	6.9 + 16	77	93	98	88	99
5	Varro + WideMatch + MCPA amine	6.9 + 16 + 8	76	87	99	79	99
6	Varro + WideMatch + Affinity TM	6.9 + 16 + 0.6 oz wt	80	81	99	73	99
7	Varro + Carnivore + Olympus	6.9 + 16 + 0.2 oz wt	72	91	98	79	98
8	Huskie Complete + AMS	13.7 + 8 oz wt	76	86	99	80	99
9	Wolverine Advanced	27.4	78	82	87	77	88
C.V. (%)			4	8	5	9	5
LSD (0.05)			5	11	7	11	7

¹fota=yellow and green foxtail; colq=common lambsquarters.