North Dakota State University * Dickinson Research Extension Center
1089 State Avenue, Dickinson, ND 58601-4642 Voice: (701) 483-2348 FAX: (701) 483-2005

PHENOXY HERBICIDE COMBINATIONS FOR WEED CONTROL IN WHEAT

John Nalewaja, NDSU Crop and Weed Sciences

'Stoa' hard red spring wheat was seeded April 13. Treatments were applied to 5- to 6-leaf wheat, 1- to 2-inch wild buckwheat, 2-inch redroot pigweed and Russian thistle, and 2- to 4-inch common lambsquarters on May 26 with 60 F, clear sky, and 0- to 5-mph wind. Treatments were applied with a bicycle wheel type plot sprayer delivering 8.5 gpa at 35 psi throught 8001 flat fan nozzles to a 7 ft wide area the length of 10 by 28 ft plots. The experiment was a randomized complete block design with four replicates. Weed densities were wild buckwheat 5 plants/m^2, redroot pigweed 11 small plants/ft^2, and common lambsquarters 1 plant/ft^2.

Treatment	Rate	7/14					8/22	
		Wht	Wibw	Rrpw	Colq	Ruth	Yield	Iswt
		%					bu/A	lb/bu
Bromoxynil	4	0	87	72	89	90	54	59
2.4-D-dma	6	0	87	75	97	94	57	59
MCPA-dma	6	0	38	76	99	20	55	59
MCPA-dma+Dica-dma	4+1.5	0	93	94	99	99	58	59
Dicamba-dma	2	0	81	87	94	88	55	59
F8426+X-77	0.37+0.25%	0	38	64	81	65	55	59
F8426+2.4-D-bee+X-77	0.37+4+0.25%	1	62	93	99	99	55	59

Brox&MCPA	8	1	75	98	99	86	54	59
Untreated	0	0	0	0	0	0	54	59
C.V.%		441	37	20	15	28	7	1
LSD 5%		NS	33	21	18	35	NS	NS
No. OF REPS		4	4	4	4	3	4	4

SUMMARY

The research was to determine the benefits from 2,4-D and MCPA applied alone or in combination with other herbicides. Common lambsquarters was controlled by both MCPA and 2,4-D. 2,4-D gave adequate (94%) Russian thistle control. MCPA in combination with dicamba generally gave greater wild buckwheat, redroot pigweed, and Russian thistle control than either herbicide applied alone. 2,4-D in combination with F8426 enhanced control of all weeds compared to F8426 alone and compared to 2,4-D alone for redroot pigweed and Russian thistle. Redroot pigweed, common lambsquarters, and Russian thistle control tended to be greater with bromoxynil in combination with MCPA than bromoxynil alone. Weed infestations were sparse and wheat grew vigorously so yields were not increased by herbicide treatments. These data indicate that 2,4-D and MCPA are important as economical treatments to control certain weeds and as components of mixtures with other herbicides for broadspectrum weed control.

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Email: drec@ndsuext.nodak.edu
