

Wild oat control in spring wheat at Brookings, SD. 2000. Wrage, Leon J., Darrell L. Deneke, David A. Vos, Scott A. Wagner, and Brian T. Rook. The study was initiated to evaluate wild oat control and spring wheat response to postemergence herbicides. Plots were established near Brookings, South Dakota in 2002 in a Solomon clay soil. The seedbed was prepared using a field cultivator in previous soybean stubble residue. Oxen spring wheat was seeded April 17, 2002 at 85 lb/A using a press drill with 7 inch row spacing. The plot area was fertilized with 100-30-30 per acre.

Treatments were arranged in a randomized complete block design with four replications of plots 10 by 50 feet. Herbicides were applied with a bicycle plot sprayer using compressed air equipped with 8002 flat fan nozzles spaced 20 inches set at 45 psi to deliver 20 gpa. Plots were visually evaluated for wild oat control and crop response. Yields were determined by harvesting a 5 by 45 foot area from the center of each plot using a plot combine. Application dates, crop and weed growth stages and weather data are presented below.

Treatment	POST	POST1
Date Applied	May 29, 2002	June 2, 2002
Temperature (F.)		
air	85°	72°
Relative Humidity (%)	33	35
Wind Velocity (mph)		
and Direction	0-2 SW	Calm
Soil Surface	dry	dry
Sky % cloudy	5	0
Crop stage	4-5 lf	E Boot
Weed stage	4-5 lf	7 inch

Crop and wild oat emergence was uniform. Below normal precipitation. Limited early season precipitation reduced early crop growth and lowered yield potential. Comparisons included reduced and full rates of the wild oat herbicides and alone and compared tank combinations to evaluate antagonistic response. Reduced and full rates provided similar wild oat control. Antagonistic reactions were not apparent for most tank-mixes. All POST treatments increased yield compared to the check. Delayed application for POST1 treatments reduced yield to the check level. Results are summarized in the accompanying table.

Table . Wild oat control in spring wheat at Brookings, SD (Wrage, Deneke, Vos, Rook, and Wagner).

Treatment ^{1/}	Rate	Crop Stage	AVEFA Control 6/30/02 31 DAT	Spring Wheat Yield	Spring Wheat Test Wt.
	(lb/A)		(%)	(bu/A)	(lb/bu)
check	----	----	0	14	56
imazamethabenz+NIS	0.375+0.25%	POST	68	21	57
CGA-184927&CGA-185072 ^{2/} +NIS	0.0625+1%	POST	90	23	57
CGA-184927&CGA-185072 ^{2/} +SCORE	0.0375+1%	POST	89	20	57
fenoxaprop-P	0.106	POST	84	20	57
fenoxaprop-P	0.0635	POST	82	22	57
MKH6562+NIS	0.0262+0.25%	POST	76	20	57
MKH6562+NIS	0.0157+0.25%	POST	69	20	57
fenoxaprop-P+dicamba	0.106+0.125	POST	72	23	57
fenoxaprop-P+bromoxynil+MCPA ^{3/}	0.106+0.5	POST	78	23	57
fenoxaprop-P+thifensulfuron	0.106+0.187	POST	93	24	57
fenoxaprop-P+fluroxypyr	0.106+0.126	POST	91	25	57
fenoxaprop-P+carfentrazone	0.106+0.0078	POST	89	24	57
fenoxaprop-P+2,4-D amine	0.106+0.375	POST	79	21	57
fenoxaprop-P+fluroxypyr+ thifensulfuron+MCPA ester	0.106+0.126+ 0.0187+0.25	POST	86	20	57
CGA-184927&CGA-185072 ^{2/} + bromoxynil+MCPA ^{3/}	0.0625+ 0.5+1%	POST	92	25	57
CGA-184927&CGA-185072 ^{3/} + thifensulfuron+SCORE	0.0625+ 0.0187+1%	POST	91	25	57
MKH6562+bromoxynil&MCPA ^{3/} +NIS	0.0262+0.5+0.25%	POST	63	21	57
MKH6562+thifensulfuron+NIS	0.0262+0.0187+0.25%	POST	71	19	57
CGA-184927&CGA-185072 ^{2/} +SCORE	0.0625+1%	POST1	49	11	57
fenoxaprop-P	0.106	POST1	47	11	57
LSD (P=0.05)			10	6	1

^{1/} Additives. NIS is X-77 nonionic surfactant by Loveland Industries; SCORE is petroleum oil by Syngenta.

^{2/} Premix = Discover.

^{3/} Premix = Bronate.