

Weed control with soil applied A14972A and Boundary in soybeans at Lamberton, MN in 2005. Getting, Jodie K. The objective of this study was to evaluate A14972A, [fomesafen & s-metolachlor] applied preemergence for annual grass and annual broadleaf weed control in soybean. This study was conducted on a Normania loam soil containing 4.7% organic matter, pH 6.3 and soil test P and K levels of 34 and 370 lb/A, respectively. A randomized complete block design with four replications and a plot size of 10 by 30 ft was used. The site was planted to oats in 2004 and was fall chiseled. On May 24, 2005, Asgrow 'AG2107' glyphosate resistant soybean was planted in 30-inch rows at a seeding rate of 160,000 seeds/A. On July 29, all plots were treated with lambda-cyhalothrin (Warrior) for soybean aphid control. All treatments were applied with a tractor-mounted sprayer delivering 20 gpa at a pressure of 40 psi. The sprayer was equipped with 8002 flat-fan nozzles spaced 15 inches apart on the boom. Application dates, environmental conditions, plant sizes and rainfall data are listed below:

Date	May 24	June 17	June 21	July 18
Treatment	PRE	POST I	POST II	POST III
Temperature (F)				
air	64	75	70	72
soil (4 inch)	64	70	70	74
Relative humidity (%)	68	44	87	53
Wind (mph)	S 8	SE 5	NNE 5	W 10
Sky	cloudy	clear	p. cloudy	clear
Soil moisture	moist	dry	dry	dry
Soybean				
leaf no.	-	V2	V3	V9
height (inch)	-	5	6	24
Yellow foxtail				
leaf no.	-	2 to 4	2 to 4	2 to 4
height (inch)	-	2 to 4	4 to 6	4 to 6
no./ft ²	-	38	36	<1
Common lambsquarters				
leaf no.	-	2 to 5	3 to 5	-
height (inch)	-	1 to 3	3 to 5	-
no./ft ²	-	<1	1	-
Redroot pigweed				
leaf no.	-	2 to 4	2 to 4	3 to 5
height (inch)	-	1 to 3	2 to 4	4 to 6
no./ft ²	-	11	12	<1
Rainfall after application (inch)				
1 week	0.27	0.26	0.22	0.36
2 week	1.02	0.62	0.81	1.34
3 week	1.93	0.23	1.13	0.39

None of the herbicide treatments caused visible crop injury. The trial area received 3.22 inches of precipitation within the first three weeks after preemergence herbicide application. As a result, A14972A and Boundary provided good weed control regardless of rate. On June 21, prior to POST II application, A14972A applied at 1 pint/A gave 91, 90, and 92% control of yellow foxtail, common lambsquarters, and redroot pigweed, respectively. All other herbicide treatments provided 94% or greater control of these species. On September 16, Boundary applied at 1.25 pt followed by Touchdown Total gave 91% yellow foxtail control. All other herbicide treatments gave 93% or greater control. All herbicide treatments had excellent common lambsquarters and redroot pigweed control. (Southwest Research and Outreach Center, University of Minnesota, Lamberton).

Table. Weed control with soil applied A14972A and Boundary in soybeans at Lamberton, MN in 2005. (Getting).

Treatment ^a	Rate (oz/A, pt/A, or lb/A)	Yellow foxtail				Common lambsquarters				Redroot pigweed				Yield (bu/A) ^b
		6/21	6/29	7/6	9/16	6/21	6/29	7/6	9/16	6/21	6/29	7/6	9/16	
		-----(% control)-----												
<u>Preemergence/POST II (6-inch weeds)</u>														
A14972A / Touchdown Total + AMS	1 pt / 24 oz + 3 lb	91	99	96	93	90	99	98	98	92	99	97	97	65.9
A14972A / Touchdown Total + AMS	1.5 pt / 24 oz + 3 lb	94	99	97	93	97	99	98	98	98	99	98	96	62.5
A14972A / Touchdown Total + AMS	2 pt / 24 oz + 3 lb	95	99	97	94	97	99	98	98	98	99	98	98	64.7
Boundary / Touchdown Total + AMS	1.25 pt / 24 oz + 3 lb	95	99	96	91	95	99	98	98	94	99	98	98	63.9
Boundary / Touchdown Total + AMS	1.5 pt / 24 oz + 3 lb	97	99	97	95	98	99	98	98	98	99	97	98	62.8
<u>POST II (6-inch weeds)</u>														
Roundup Weathermax + AMS	22 oz + 3 lb	-	99	98	94	-	99	98	98	-	99	98	97	61.2
<u>POST I (4-inch weeds)/POST III (soybean canopy)</u>														
Roundup Weathermax + AMS / Roundup Weathermax + AMS	22 oz + 3 lb / 22 oz + 3 lb	98	99	94	97	98	99	98	98	98	99	94	98	64.5
Weedy Check	-	0	0	0	0	0	0	0	0	0	0	0	0	13.7
	LSD (0.10)	2.6	ns	1.4	2.7	1.8	ns	ns	ns	2.4	ns	2.2	1.1	2.85

^a AMS = spray grade ammonium sulfate.

^b Yield adjusted to 13% moisture.