

Evaluation of Syngenta A14972A in soybean at Potsdam, MN in 2005. Behnken, Lisa M., Fritz R. Breitenbach, Kristal L. Schaufler, and Corey W. Stever. The objective of this trial was to evaluate Syngenta A14972A for weed control in soybean in southeastern Minnesota. The research site was a Port Byron silt loam containing 3.2% organic matter with a pH of 6.7 and soil test P and K levels of 65 ppm and 410 ppm, respectively. The previous crop was corn. The field was field cultivated twice prior to planting. The soybean variety, Garst 1827RR/STS, was planted on May 24, 2005 at a depth of 1.5 inches in 30-inch rows at 150,000 seeds/A. A randomized complete block design with four replications was used. Preemergence (PRE) and postemergence (POST I, II and III) treatments were applied with a tractor-mounted sprayer, delivering 20 gpa at 32 psi using Turbo Tee 11002 nozzles. Evaluations of the plots were taken on June 20, July 8, July 14, July 29, and September 30, 2005. Application dates, environmental conditions, and crop and weed stages are listed below.

Date	May 24	JUNE 27	JULY 1	July 18
Treatment	PRE	POST I	POST II	POST III
Temperature (F)				
air	70	77	68	78
soil	63	71	80	na
Relative humidity (%)	43	73	58	60
Wind (mph)	0	18	9	8
Soybean				
stage	--	V4	V5	R2
height (inch)	--	9.2	10	24
Common lambsquarters				
weed density (ft ²)	--	5.1	5.1	5.1
height (inch)	--	2.0	2.5	3.7
Wild proso millet				
weed density (ft ²)	--	10.1	10.1	10.1
height (inch)	--	8.9	8.0	5.0
Velvetleaf				
weed density (ft ²)	--	0.6	0.6	0.6
height (inch)	--	4.8	6.8	2.5
Rainfall after application (inch)				
week 1	0.31	0.16	0.07	4.82
week 2	1.82	0	0	0
week 3	0.54	0.2	0.2	0

No crop response was detected during the trial. Preemergence applications of A14972A at 0.67, 1.0, and 1.33 lb/A provided the same level of velvetleaf and common lambsquarters control. However, velvetleaf and common lambsquarters control with A14972A was significantly lower than the s-metolachlor & metribuzin treatments.

A rate response was apparent for wild proso millet, with control increasing as the A14972A rate increased, 75% control for 0.67 lb/A compared to 88% and 92% control for 1.0 and 1.33 lb/A, respectively. Similar levels of wild proso millet control were achieved with the two higher rates of A14972A and the s-metolachlor & metribuzin treatments. Sequential applications of glyphosate provided excellent control for all weed species evaluated in the trial. Early season weed control differences did not result in differences in soybean yield. (University of Minnesota Extension Service, Regional Center, Rochester, MN)

Table. Evaluation of Syngenta A14972A for weed control in soybean on June 20, July 8, and July 29 at Potsdam, MN in 2005. (Behnken, Breitenbach, Schaufler, and Stever).

Treatment ^a	Rate	Injury	ABUTH control			CHEAL control			PANMI control			Soybean yield ^b
			6/20	7/8	7/29	6/20	7/8	7/29	6/20	7/8	7/29	
	(lb/A)	(%)	(%)			(%)			(%)			(bu/A)
PRE/ POST II												
A14972A / glyphosate ¹ + AMS	0.67 / 0.78 + 3	0	45	98	99	79	97	97	75	99	94	52
A14972A / glyphosate ¹ + AMS	1.0 / 0.78 + 3	0	45	97	99	78	99	99	88	99	98	56
A14972A / glyphosate ¹ + AMS	1.33 / 0.78 + 3	0	49	97	99	80	99	99	92	99	99	49
S-metolachlor & metribuzin / glyphosate ¹ + AMS	0.824 & 0.196 / 0.78 + 3	0	82	99	99	92	99	99	88	99	98	55
S-metolachlor & metribuzin / glyphosate ¹ + AMS	0.986 & 0.234 / 0.78 + 3	0	87	99	99	96	99	99	93	99	99	51
POST I												
Glyphosate ^{2l} + AMS	0.77 + 3	0	0	99	99	0	95	95	0	96	97	56
POST II/POST III												
Glyphosate ² + AMS / glyphosate ² + AMS	0.77 + 3 / 0.77 + 3	0	0	99	98	0	97	99	0	97	94	53
Untreated Check		0	0	0	0	0	0	0	0	0	0	25
LSD (P = 0.10)		0	5	2	1	3	2	2	8	2	3	8

- a. Glyphosate¹ = Touchdown Total, glyphosate² = Roundup WeatherMax. AMS = spray grade ammonium sulfate.
 b. Yield at 13% moisture.