

Different glyphosate salts for weed control in soybean. Urbana, Illinois, 2002. Maxwell, Douglas J., Christy L. Sprague, and Ryan F. Hasty. The objective of this research was to evaluate different glyphosate salts for weed control in soybean. The study was established at the University of Illinois Crop Sciences Research and Education Center, Urbana. The soil was an Elburn silt loam with a pH of 6.6 and 4.7% organic matter. FS 3616 soybean was planted 1.5 inches deep on May 23 in 30 inch rows. Treatments were arranged in randomized complete blocks with three replications of plots 7.5 by 30 feet. Herbicides were applied with a CO₂ backpack sprayer delivering 20 gpa and equipped with 8003 flat fan nozzles. Application information is listed below:

Date	June 21
Application	post
Temperature (F)	
Air	88
Soil	78
Soil Moisture	Moist
Wind (mph)	3SW
Sky Cover (%)	0
Precip. after application	
Week 1 (inch)	0.01
Week 2 (inch)	0.02
Relative humidity (%)	60
Soybean	
Leaf no.	3
Height (inch)	5
Giant Foxtail	
Leaf no.	3
Height (inch)	5
Pennsylvania Smartweed	
Leaf no.	8
Height (inch)	4
Velvetleaf	
Leaf no.	4
Height (inch)	3
Common Waterhemp	
Leaf no.	8
Height (inch)	3
Common Lambsquarters	
Leaf no.	9
Height (inch)	3
Tall Morningglory	
Leaf no.	5
Height (inch)	2

Crop tolerance was excellent to all glyphosate formulations. Lower rates of glyphosate without NpakAMS had very good to excellent weed control early, but slipped considerably by 4 weeks after treatment for all broadleaf weeds except common lambsquarters. Glyphosate rates of 0.75 lb/A without NpakAMS controlled all weeds well, with the exception of tall morningglory and velvetleaf. The addition of NpakAMS did increase overall weed control activity, especially for velvetleaf. No significant differences between various glyphosate salt formulations were observed. (Dept. of Crop Sciences, University of Illinois, Urbana).

Table 1. Different glyphosate salts for weed control in soybean. Urbana, Illinois, 2002. (Maxwell, Sprague, and Hasty).

Treatment	Appl Rate (lb/A)	Time	Glxma	Setfa	Polpy	Abuth	Amata	Cheal	Phbpu
			6-29 %inj	6-29	6-29	6-29	6-29	6-29	6-29
Glyphosate ¹	0.38	post	0	99	91	83	98	98	85
Glyphosate ¹	0.56	post	0	99	94	86	99	98	90
Glyphosate ¹	0.75	post	0	99	94	88	99	99	94
Glyphosate ²	0.38	post	0	98	89	84	98	97	84
Glyphosate ²	0.56	post	0	99	95	87	99	99	91
Glyphosate ²	0.75	post	0	99	95	87	99	99	92
Glyphosate ³	0.38	post	0	98	88	78	94	95	78
Glyphosate ³	0.56	post	0	99	93	86	99	99	89
Glyphosate ³	0.75	post	0	99	94	89	99	99	92
Check	-	-	0	0	0	0	0	0	0
Glyphosate ¹ +NpakAMS	0.75+5.0%	post	0	99	98	99	99	99	97
Glyphosate ² +NpakAMS	0.75+5.0%	post	0	99	98	99	99	99	96
Glyphosate ⁴ +NpakAMS	0.75+5.0%	post	0	99	97	99	99	99	97
Glyphosate ⁵ +NpakAMS	0.75+5.0%	post	0	99	97	99	99	99	97
LSD (0.05)			0	1	2	3	1	3	4

¹ Roundup Ultra Max ² WeatherMax ³ MON 78460 ⁴ Touchdown ⁵ ClearOut 41Plus

Table 2. Different glyphosate salts for weed control in soybean. Urbana, Illinois, 2002. (Maxwell, Sprague, and Hasty).

Treatment	Appl Rate (lb/A)	Time	Glxma	Setfa	Polpy	Abuth	Amata	Cheal	Phbpu
			7-18 %inj	7-18	7-18	7-18	7-18	7-18	7-18
Glyphosate ¹	0.38	post	0	98	83	65	88	92	68
Glyphosate ¹	0.56	post	0	98	91	75	98	98	73
Glyphosate ¹	0.75	post	0	99	95	88	98	99	89
Glyphosate ²	0.38	post	0	97	78	85	87	87	70
Glyphosate ²	0.56	post	0	98	82	73	93	92	81
Glyphosate ²	0.75	post	0	99	95	80	99	99	91
Glyphosate ³	0.38	post	0	96	79	57	85	82	72
Glyphosate ³	0.56	post	0	97	84	65	88	92	81
Glyphosate ³	0.75	post	0	99	91	75	98	99	85
Check	-	-	0	0	0	0	0	0	0
Glyphosate ¹ +NpakAMS	0.75+5.0%	post	0	99	96	88	99	99	90
Glyphosate ² +NpakAMS	0.75+5.0%	post	0	99	97	87	99	99	86
Glyphosate ⁴ +NpakAMS	0.75+5.0%	post	0	99	96	93	99	99	96
Glyphosate ⁵ +NpakAMS	0.75+5.0%	post	0	99	97	94	99	99	96
LSD (0.05)			0	2	4	5	4	4	4

¹ Roundup Ultra Max ² WeatherMax ³ MON 78460 ⁴ Touchdown ⁵ ClearOut 41Plus