

# Iowa State University

## Comparison of glyphosate formulations

Trial ID: KS-glyphosate-01      Study Dir.: Pringnitz  
 Location:                              Investigator: Owen/Hartzler/Pringnitz

### CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	AMBEL	RAGWEED, COMMON	AMBROSIA ELATIOR L.
2.	AMATU	WATERHEMP, TALL	AMARANTHUS TUBERCULATOS (MOQ.) J.SAUER
3.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
4.	SOLPT	NIGHTSHADE, EASTERN BLACK	SOLANUM PTYCANTHUM DUNAL
5.	SETFA	FOXTAIL, GIANT	SETARIA FABERI HERRM.

**Crop 1:** GLXMA SOYBEAN      **Variety:** Asgrow AG2101  
**Planting Date:** May-15-01  
**Rate:** 190000 S/A      **Depth:** 1.75 in  
**Row Spacing:** 30 in  
**Soil Temperature:** 67 F      **Soil Moisture:** moist

### SITE AND DESIGN

**Plot Width, Unit:** 10 FT      **Plot Length, Unit:** 30 FT      **Reps:** 3  
**Study Design:** RANDOMIZED COMPLETE BLOCK

### MAINTENANCE

**Field Prep./Maintenance:** 2 pass field cultivator, Spring 2001

### APPLICATION DESCRIPTION

	A
<b>Application Date:</b>	Jul-06-01
<b>Time of Day:</b>	9am
<b>Application Method:</b>	spray
<b>Application Timing:</b>	POST
<b>Applic. Placement:</b>	broadcast
<b>Air Temp., Unit:</b>	71 F
<b>% Relative Humidity:</b>	57
<b>Wind Velocity, Unit:</b>	10
<b>Dew Presence (Y/N):</b>	n
<b>Soil Temp., Unit:</b>	70 F
<b>Soil Moisture:</b>	dry
<b>% Cloud Cover:</b>	90

### CROP STAGE AT EACH APPLICATION

	A
<b>Crop 1 Code, Stage:</b>	GLXMA
<b>Height, Unit:</b>	16 inch

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## WEED STAGE AT EACH APPLICATION

	A
<b>Weed 1 Code, Stage:</b>	AMBEL 12-14
<b>Stage Scale:</b>	inches
<b>Density, Unit:</b>	3 FT2
<b>Weed 2 Code, Stage:</b>	AMATU 6-12
<b>Stage Scale:</b>	inches
<b>Density, Unit:</b>	7 FT2
<b>Weed 3 Code, Stage:</b>	CHEAL 4-6
<b>Stage Scale:</b>	inches
<b>Density, Unit:</b>	3 FT2
<b>Weed 4 Code, Stage:</b>	SOLPT 2
<b>Stage Scale:</b>	inches
<b>Density, Unit:</b>	1 FT2
<b>Weed 5 Code, Stage:</b>	SETFA 12
<b>Stage Scale:</b>	inches
<b>Density, Unit:</b>	34 FT2

## APPLICATION EQUIPMENT

	A
<b>Appl. Equipment:</b>	handboom
<b>Operating Pressure:</b>	37
<b>Nozzle Type:</b>	flat-fan
<b>Nozzle Size:</b>	TT11003
<b>Nozzle Spacing, Unit:</b>	20 in
<b>Boom Length, Unit:</b>	10 ft
<b>Boom Height, Unit:</b>	15 in
<b>Ground Speed, Unit:</b>	3 mph
<b>Carrier:</b>	water
<b>Spray Volume, Unit:</b>	20 gpa
<b>Propellant:</b>	CO2

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Weed Code				SETFA	AMBAR	POLPY	ABUTH	AMATU	CHEAL
Rating Data Type				control	control	control	control	control	control
Rating Unit				%	%	%	%	%	%
Rating Date				Aug-03-01	Aug-03-01	Aug-03-01	Aug-03-01	Aug-03-01	Aug-03-01
Trt No.	Treatment Name	Rate Rate Unit	Grow Stg Appl Code						
1	Glyphomax Plus AMS	24 FL OZ/A 8.5 LB/100 GAL	post post A	94.7 a	91.7 a	91.3 a	96.3 a	94.7 a	88.3 a
2	Glyphomax Plus AMS	16 FL OZ/A 8.5 LB/100 GAL	post post A	94.7 a	80.0 b	85.0 a	91.3 a	95.0 a	85.0 a
3	Roundup Ultra Max AMS	19 FL OZ/A 8.5 LB/100 GAL	post post A	97.7 a	83.3 ab	88.3 a	94.7 a	97.7 a	89.7 a
4	Roundup Ultra Max AMS	13 FL OZ/A 8.5 LB/100 GAL	post post A	99.0 a	86.7 ab	86.7 a	99.0 a	96.0 a	90.0 a
5	Touchdown IQ AMS	24 FL OZ/A 8.5 LB/100 GAL	post post A	99.0 a	86.7 ab	86.7 a	96.3 a	96.0 a	90.7 a
6	Touchdown IQ AMS	16 FL OZ/A 8.5 LB/100 GAL	post post A	96.0 a	87.2 ab	80.7 a	94.5 a	95.8 a	88.3 a
7	untreated check								
LSD (P=.05)				4.80	6.85	12.30	6.62	6.96	12.21
Standard Deviation				2.60	3.71	6.66	3.59	3.77	6.61
CV				2.68	4.32	7.7	3.76	3.93	7.46

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)