

Effect of Adjuvant and Timing on Roundup Custom Performance in Roundup Ready Soybean.

00-51W-N170

OBJECTIVE: Evaluate any difference in performance between Roundup Ultra and Roundup Custom, determine the effect of application timing on soybean injury from glyphosate, as well as the effect of nitrogen source and drift retardant on weed control and soybean injury.

SUMMARY: No soybean injury was observed from any treatment applied at the V4 soybean stage. Slight soybean injury (1 to 3%) was observed 7 days after treatment from some Roundup Custom treatments applied at the R2 soybean stage. This injury was minor and no longer visible by 14 days after treatment.

Giant foxtail control was excellent with Roundup Ultra and Roundup Custom regardless of adjuvant or herbicide rate. Yellow nutsedge control was similar (70%) for treatments that included a single application of Roundup Ultra or Roundup Custom. Roundup Ultra at 0.5 lb ae/A controlled 88% of common waterhemp at 28 days after treatment. Similar waterhemp control was observed with Roundup Custom at 0.5 lb ae/A plus Aquagene 90. All treatments of Roundup Custom at 0.5 lb ae provided significantly less waterhemp control than Roundup Ultra at the equivalent rate. Furthermore, the majority of Roundup Custom treatments at 1.13 lb ae/A controlled less waterhemp than Roundup Ultra at 0.5 lb ae, which emphasizes the importance of the adjuvant system with glyphosate.

Soybean yield ranged from 23 bu/A in nontreated plots to 42 bu/A. In general, soybean yield was similar in all herbicide treated plots.

HERBICIDES/ADJUVANTS

ROUNDUP CUSTOM 4 SL
 ROUNDUP ULTRA 3 SL
 ACTIVATOR 90 100 LIQ
 AMS 100 DRY
 AMS COMPLETE 100 LIQ
 AQUAGENE 90 100 LIQ
 ARRAY 100 DRY
 CHOICE 100 LIQ
 DOWNRIGHT 100 LIQ
 PLACEMENT 100 LIQ
 POINT 100 DRY
 SOLIS 100 DRY

WEEDS

FOXTAIL, GIANT
 NUTSEDGE, YELLOW
 WATERHEMP, COMMON

CROP

SOYBEAN

Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

Effect of Adjuvant and Timing on Roundup Custom Performance in Roundup Ready Soybean.

Project Code: 00-51W-N170 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

Weed Code	Common Name	Scientific Name
1. SETFA	FOXTAIL, GIANT	SETARIA FABERI HERRM.
2. CYPES	NUTSEDGE, YELLOW	CYPERUS ESCULENTUS L.
3. AMATA	WATERHEMP, COMMON	AMARANTHUS RUDIS SAUER

Crop 1:	GLXMA SOYBEAN	Variety:	B-T 369CR
Planting Method:	SEEDED	Planting Date:	May-11-00
Rate:	75 LB/A	Depth:	1.0 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	20 FT	Reps:	3
Tillage Type:	REDUCED-TILL	Study Design:	RCB		
Previous Crop, Year:	ZEAMX, 1999	Fertilizer applied:	N 0 LB/A,	P ₂ O ₅ 50 LB/A,	K ₂ O 150 LB/A

Soil Name:	WEIR	% OM:	2.6	pH:	7	CEC:	11
Texture:	SILT LOAM	P ₁ :	69 LB/A,	K:	373 LB/A		

APPLICATION DESCRIPTION

	A	B
Application Date:	Jun-19-00	Jul-10-00
Time of Day:	15:30	12:00
Application Method:	SPRAY	SPRAY
Application Timing:	V4	R2
Applic. Placement:	BROFOL	BROFOL
Air Temp., Unit:	82 F	86 F
% Relative Humidity:	96	90
Wind Velocity, Unit:	2-4 MPH	1-3 MPH
Soil Moisture:	WET	NORMAL
% Cloud Cover:	95	

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	GLXMA V4	GLXMA R2
Height, Unit:	9-11 IN	18-20 IN

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code:	SETFA	
Stage(leaves):	5-6	
Height(inches):	6-10	
Density:	HIGH	
Weed 2 Code:	CYPES	CYPES
Stage(leaves):	9-11	4-6
Height(inches):	8-10	4-6
Density:	MEDIUM	LOW
Weed 3 Code:	AMATA	AMATA
Stage(leaves):	5-10+	4-8
Height(inches):	4-10	2-8
Density:	HIGH	MEDIUM

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	CO ₂ SPRAY	CO ₂ SPRAY
Operating Pressure:	40 PSI	40 PSI
Nozzle Type:	FLAT FAN	FLAT FAN
Nozzle Size:	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA

NOTES:

Harvested Sep-19-00, (2) 30 inch row by 17 ft.

TABLE. EFFECT OF ADJUVANT AND TIMING ON ROUNDUP CUSTOM PERFORMANCE IN ROUNDUP READY SOYBEAN. PROJECT CODE:00-51W-N170

TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	YIELD BU/A	GLYMA INJURY, DAT			CONTROL, DAYS AFTER TREATMENT					
								7	14	28	SETFA		CYPES		AMATA	
								%	%	%	14	28	14	28	14	28
1 ROUNDUP ULTRA	3 SL	0.38 LB AE/A	1.0 PT/A	V4	A	42	0	0	0	99	99	63	70	83	88	
1 AMS	100 DRY	2.0 % W/W	2.0 %W/W	V4	A											
2 ROUNDUP CUSTOM	4 SL	0.5 LB AE/A	1.0 PT/A	V4	A	38	0	0	0	99	99	63	70	70	65	
2 ACTIVATOR 90	100 LIQ	0.5 % V/V	0.5 %V/V	V4	A											
2 AMS	100 DRY	2.0 % W/W	2.0 %W/W	V4	A											
3 ROUNDUP CUSTOM	4 SL	0.5 LB AE/A	1.0 PT/A	V4	A	38	0	0	0	99	99	67	70	68	65	
3 ACTIVATOR 90	100 LIQ	0.5 % V/V	0.5 %V/V	V4	A											
3 CHOICE	100 LIQ	0.5 PT/A	0.5 PT/A	V4	A											
4 ROUNDUP CUSTOM	4 SL	0.5 LB AE/A	1.0 PT/A	V4	A	40	0	0	0	99	99	60	70	83	78	
4 SOLIS	100 DRY	2.7 % W/W	2.7 %W/W	V4	A											
5 ROUNDUP CUSTOM	4 SL	0.5 LB AE/A	1.0 PT/A	V4	A	39	0	0	0	99	99	68	70	82	77	
5 ACTIVATOR 90	100 LIQ	0.5 % V/V	0.5 %V/V	V4	A											
5 AMS	100 DRY	2.0 % W/W	2.0 %W/W	V4	A											
5 PLACEMENT	100 LIQ	4.0 OZ/A	4.0 OZ/A	V4	A											
6 ROUNDUP CUSTOM	4 SL	0.5 LB AE/A	1.0 PT/A	V4	A	31	0	0	0	99	99	80	70	80	82	
6 AQUAGENE 90	100 LIQ	0.5 % V/V	0.5 %V/V	V4	A											
6 AMS	100 DRY	2.0 % W/W	2.0 %W/W	V4	A											
6 POINT	100 DRY	0.086 % W/W	11.5 OZ/100 GAL	V4	A											
7 ROUNDUP CUSTOM	4 SL	0.5 LB AE/A	1.0 PT/A	V4	A	42	0	0	0	99	99	77	70	90	80	
7 AQUAGENE 90	100 LIQ	0.5 % V/V	0.5 %V/V	V4	A											
7 AMS	100 DRY	2.0 % W/W	2.0 %W/W	V4	A											
7 DOWNRIGHT	100 LIQ	0.5 % V/V	0.5 %V/V	V4	A											
8 ROUNDUP CUSTOM	4 SL	0.5 LB AE/A	1.0 PT/A	V4	A	35	0	0	0	99	99	70	70	82	86	
8 AQUAGENE 90	100 LIQ	0.5 % V/V	0.5 %V/V	V4	A											
8 AMS COMPLETE	100 LIQ	2.5 % V/V	2.5 %V/V	V4	A											
9 ROUNDUP CUSTOM	4 SL	0.5 LB AE/A	1.0 PT/A	V4	A	37	0	0	0	99	99	70	70	70	67	
9 ACTIVATOR 90	100 LIQ	0.5 % V/V	0.5 % V/V	V4	A											
9 ARRAY	100 DRY	1.08 % W/W	9.0 LB/100 GAL	V4	A											
10 ROUNDUP CUSTOM	4 SL	0.5 LB AE/A	1.0 PT/A	V4	A	40	0	0	0	99	99	70	70	75	70	
10 ACTIVATOR 90	100 LIQ	0.5 % V/V	0.5 %V/V	V4	A											
10 ARRAY	100 DRY	1.68 % W/W	14.0 LB/100 GAL	V4	A											

(CONTINUED)

TABLE. EFFECT OF ADJUVANT AND TIMING ON ROUNDUP CUSTOM PERFORMANCE IN ROUNDUP READY SOYBEAN. PROJECT CODE:00-51W-N170 (CONTINUED)

TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	YIELD BU/A	GLYMA			CONTROL, DAYS AFTER TREATMENT					
								INJURY, DAT			SETFA		CYPES		AMATA	
								7	14	28	14	28	14	28	14	28
11 ROUNDUP ULTRA	3 SL	1.13	LB AE/A	3.0 PT/A	V4	A	41	0	0	0	99	99	75	70	95	90
11 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A										
12 ROUNDUP CUSTOM	4 SL	1.5	LB AE/A	3.0 PT/A	V4	A	39	0	0	0	99	99	75	70	88	81
12 ACTIVATOR 90	100 LIQ	0.5	% V/V	0.5 %V/V	V4	A										
12 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A										
13 ROUNDUP CUSTOM	4 SL	1.5	LB AE/A	3.0 PT/A	V4	A	38	0	0	0	99	99	75	70	86	88
13 ACTIVATOR 90	100 LIQ	0.5	% V/V	0.5 %V/V	V4	A										
13 CHOICE	100 LIQ	0.5	PT/A	0.5 PT/A	V4	A										
14 ROUNDUP CUSTOM	4 SL	1.5	LB AE/A	3.0 PT/A	V4	A	38	0	0	0	99	99	70	70	93	91
14 SOLIS	100 DRY	2.7	% W/W	2.7 %W/W	V4	A										
15 ROUNDUP CUSTOM	4 SL	1.5	LB AE/A	3.0 PT/A	V4	A	37	0	0	0	99	99	75	70	92	86
15 ACTIVATOR 90	100 LIQ	0.5	% V/V	0.5 %V/V	V4	A										
15 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A										
15 PLACEMENT	100 LIQ	12.0	OZ/A	12.0 OZ/A	V4	A										
16 ROUNDUP CUSTOM	4 SL	1.5	LB AE/A	3.0 PT/A	V4	A	38	0	0	0	99	99	70	70	89	90
16 AQUAGENE 90	100 LIQ	0.5	% V/V	0.5 %V/V	V4	A										
16 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A										
16 POINT	100 DRY	0.086	% W/W	11.5 OZ/100 GAL	V4	A										
17 ROUNDUP CUSTOM	4 SL	1.5	LB AE/A	3.0 PT/A	V4	A	39	0	0	0	99	99	73	70	96	87
17 AQUAGENE 90	100 LIQ	0.5	% V/V	0.5 %V/V	V4	A										
17 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A										
17 DOWNRIGHT	100 LIQ	0.5	% V/V	0.5 %V/V	V4	A										
18 ROUNDUP CUSTOM	4 SL	1.5	LB AE/A	3.0 PT/A	V4	A	37	0	0	0	99	99	75	70	95	91
18 AQUAGENE 90	100 LIQ	0.5	% V/V	0.5 %V/V	V4	A										
18 AMS COMPLETE	100 LIQ	2.5	% V/V	2.5 %V/V	V4	A										
19 ROUNDUP CUSTOM	4 SL	1.5	LB AE/A	3.0 PT/A	V4	A	39	0	0	0	99	99	70	70	85	81
19 ACTIVATOR 90	100 LIQ	0.5	% V/V	0.5 %V/V	V4	A										
19 ARRAY	100 DRY	1.08	% W/W	9.0 LB/100 GAL	V4	A										
20 ROUNDUP CUSTOM	4 SL	1.5	LB AE/A	3.0 PT/A	V4	A	39	0	0	0	99	99	73	70	85	86
20 ACTIVATOR 90	100 LIQ	0.5	% V/V	0.5 %V/V	V4	A										
20 ARRAY	100 DRY	1.68	% W/W	14.0 LB/100 GAL	V4	A										

(CONTINUED)

TABLE. EFFECT OF ADJUVANT AND TIMING ON ROUNDUP CUSTOM PERFORMANCE IN ROUNDUP READY SOYBEAN. PROJECT CODE:00-51W-N170 (CONTINUED)

TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	YIELD	GLYMA			CONTROL, DAYS AFTER TREATMENT					
								INJURY, DAT			SETFA		CYPES		AMATA	
								7	14	28	14	28	14	28	14	28
							BU/A	%	%	%	%	%	%	%	%	
21 ROUNDUP ULTRA	3 SL	0.75	LB AE/A	2.0 PT/A	V4	A	39	0	0	0	99	99	95	95	99	99
21 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A										
21 ROUNDUP ULTRA	3 SL	0.38	LB AE/A	1.0 PT/A	R2	B										
21 AMS	100 DRY	2.0	% W/W	2.0 %W/W	R2	B										
22 ROUNDUP ULTRA	3 SL	0.75	LB AE/A	2.0 PT/A	V4	A	39	1	0	0	99	99	95	95	99	99
22 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A										
22 ROUNDUP CUSTOM	4 SL	0.5	LB AE/A	1.0 PT/A	R2	B										
22 ACTIVATOR 90	100 LIQ	0.5	% V/V	0.5 %V/V	R2	B										
22 AMS	100 DRY	2.0	% W/W	2.0 %W/W	R2	B										
23 ROUNDUP ULTRA	3 SL	0.75	LB AE/A	2.0 PT/A	V4	A	38	0	0	0	99	99	95	95	97	99
23 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A										
23 ROUNDUP CUSTOM	4 SL	0.5	LB AE/A	1.0 PT/A	R2	B										
23 ACTIVATOR 90	100 LIQ	0.5	% V/V	0.5 %V/V	R2	B										
23 CHOICE	100 LIQ	0.5	PT/A	0.5 PT/A	R2	B										
24 ROUNDUP ULTRA	3 SL	0.75	LB AE/A	2.0 PT/A	V4	A	36	3	0	0	99	99	95	95	99	99
24 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A										
24 ROUNDUP CUSTOM	4 SL	0.5	LB AE/A	1.0 PT/A	R2	B										
24 SOLIS	100 DRY	2.7	% W/W	2.7 %W/W	R2	B										
25 ROUNDUP ULTRA	3 SL	0.75	LB AE/A	2.0 PT/A	V4	A	33	1	0	0	99	99	95	95	97	99
25 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A										
25 ROUNDUP CUSTOM	4 SL	0.5	LB AE/A	1.0 PT/A	R2	B										
25 ACTIVATOR 90	100 LIQ	0.5	% V/V	0.5 %V/V	R2	B										
25 AMS	100 DRY	2.0	% W/W	2.0 %W/W	R2	B										
25 PLACEMENT	100 LIQ	4.0	OZ/A	4.0 OZ/A	R2	B										
26 ROUNDUP ULTRA	3 SL	0.75	LB AE/A	2.0 PT/A	V4	A	39	2	0	0	99	99	95	95	99	99
26 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A										
26 ROUNDUP CUSTOM	4 SL	0.5	LB AE/A	1.0 PT/A	R2	B										
26 AQUAGENE 90	100 LIQ	0.5	% V/V	0.5 %V/V	R2	B										
26 AMS	100 DRY	2.0	% W/W	2.0 %W/W	R2	B										
26 POINT	100 DRY	0.086	% W/W	11.5 OZ/100 GAL	R2	B										

(CONTINUED)

TABLE. EFFECT OF ADJUVANT AND TIMING ON ROUNDUP CUSTOM PERFORMANCE IN ROUNDUP READY SOYBEAN. PROJECT CODE:00-51W-N170 (CONTINUED)

TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	YIELD	GLYMA INJURY, DAT			CONTROL, DAYS AFTER TREATMENT					
								7	14	28	SETFA		CYPES		AMATA	
											14	28	14	28	14	28
BU/A	%	%	%	%	%	%	%	%	%	%	%	%				
27 ROUNDUP ULTRA	3 SL	0.75 LB AE/A	2.0 PT/A	V4 A	41	0	0	0	99	99	95	95	99	99		
27 AMS	100 DRY	2.0 % W/W	2.0 %W/W	V4 A												
27 ROUNDUP CUSTOM	4 SL	0.5 LB AE/A	1.0 PT/A	R2 B												
27 AQUAGENE 90	100 LIQ	0.5 % V/V	0.5 %V/V	R2 B												
27 AMS	100 DRY	2.0 % W/W	2.0 %W/W	R2 B												
27 DOWNRIGHT	100 LIQ	0.5 % V/V	0.5 %V/V	R2 B												
28 ROUNDUP ULTRA	3 SL	0.75 LB AE/A	2.0 PT/A	V4 A	43	0	0	0	99	99	95	95	99	99		
28 AMS	100 DRY	2.0 % W/W	2.0 %W/W	V4 A												
28 ROUNDUP CUSTOM	4 SL	0.5 LB AE/A	1.0 PT/A	R2 B												
28 AQUAGENE 90	100 LIQ	0.5 % V/V	0.5 %V/V	R2 B												
28 AMS COMPLETE	100 LIQ	2.5 % V/V	2.5 %V/V	R2 B												
29 ROUNDUP ULTRA	3 SL	0.75 LB AE/A	2.0 PT/A	V4 A	40	0	0	0	99	99	95	95	99	99		
29 AMS	100 DRY	2.0 % W/W	2.0 %W/W	V4 A												
29 ROUNDUP CUSTOM	4 SL	0.5 LB AE/A	1.0 PT/A	R2 B												
29 ACTIVATOR 90	100 LIQ	0.5 % V/V	0.5 %V/V	R2 B												
29 ARRAY	100 DRY	1.08 % W/W	9.0 LB/100 GAL	R2 B												
30 ROUNDUP ULTRA	3 SL	0.75 LB AE/A	2.0 PT/A	V4 A	39	0	0	0	99	99	95	95	99	99		
30 AMS	100 DRY	2.0 % W/W	2.0 %W/W	V4 A												
30 ROUNDUP CUSTOM	4 SL	0.5 LB AE/A	1.0 PT/A	R2 B												
30 ACTIVATOR 90	100 LIQ	0.5 % V/V	0.5 %V/V	R2 B												
30 ARRAY	100 DRY	1.68 % W/W	14.0 LB/100 GAL	R2 B												
31 ROUNDUP ULTRA	3 SL	0.75 LB AE/A	2.0 PT/A	V4 A	36	1	0	0	99	99	95	95	99	99		
31 AMS	100 DRY	2.0 % W/W	2.0 %W/W	V4 A												
31 ROUNDUP ULTRA	3 SL	1.13 LB AE/A	3.0 PT/A	R2 B												
31 AMS	100 DRY	2.0 % W/W	2.0 %W/W	R2 B												
32 ROUNDUP ULTRA	3 SL	0.75 LB AE/A	2.0 PT/A	V4 A	38	1	0	0	99	99	95	95	99	99		
32 AMS	100 DRY	2.0 % W/W	2.0 %W/W	V4 A												
32 ROUNDUP CUSTOM	4 SL	1.5 LB AE/A	3.0 PT/A	R2 B												
32 ACTIVATOR 90	100 LIQ	0.5 % V/V	0.5 %V/V	R2 B												
32 AMS	100 DRY	2.0 % W/W	2.0 %W/W	R2 B												
33 ROUNDUP ULTRA	3 SL	0.75 LB AE/A	2.0 PT/A	V4 A	38	0	0	0	99	99	95	95	99	99		
33 AMS	100 DRY	2.0 % W/W	2.0 %W/W	V4 A												
33 ROUNDUP CUSTOM	4 SL	1.5 LB AE/A	3.0 PT/A	R2 B												
33 ACTIVATOR 90	100 LIQ	0.5 % V/V	0.5 %V/V	R2 B												
33 CHOICE	100 LIQ	0.5 PT/A	0.5 PT/A	R2 B												

(CONTINUED)

TABLE. EFFECT OF ADJUVANT AND TIMING ON ROUNDUP CUSTOM PERFORMANCE IN ROUNDUP READY SOYBEAN. PROJECT CODE:00-51W-N170 (CONTINUED)

TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	YIELD	GLYMA			CONTROL, DAYS AFTER TREATMENT					
								INJURY, DAT			SETFA		CYPES		AMATA	
								7	14	28	14	28	14	28	14	28
			BU/A	%	%	%	%	%	%	%	%	%	%			
34 ROUNDUP ULTRA	3 SL	0.75	LB AE/A	2.0 PT/A	V4	A	42	2	0	0	99	99	95	95	99	99
34 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A										
34 ROUNDUP CUSTOM	4 SL	1.5	LB AE/A	3.0 PT/A	R2	B										
34 SOLIS	100 DRY	2.7	% W/W	2.7 %W/W	R2	B										
35 ROUNDUP ULTRA	3 SL	0.75	LB AE/A	2.0 PT/A	V4	A	29	0	0	0	99	99	95	95	99	99
35 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A										
35 ROUNDUP CUSTOM	4 SL	1.5	LB AE/A	3.0 PT/A	R2	B										
35 ACTIVATOR 90	100 LIQ	0.5	% V/V	0.5 %V/V	R2	B										
35 AMS	100 DRY	2.0	% W/W	2.0 %W/W	R2	B										
35 PLACEMENT	100 LIQ	12.0	OZ/A	12.0 OZ/A	R2	B										
36 ROUNDUP ULTRA	3 SL	0.75	LB AE/A	2.0 PT/A	V4	A	36	1	0	0	99	99	95	95	99	99
36 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A										
36 ROUNDUP CUSTOM	4 SL	1.5	LB AE/A	3.0 PT/A	R2	B										
36 AQUAGENE 90	100 LIQ	0.5	% V/V	0.5 %V/V	R2	B										
36 AMS	100 DRY	2.0	% W/W	2.0 %W/W	R2	B										
36 POINT	100 DRY	0.086	% W/W	11.5 OZ/100 GAL	R2	B										
37 ROUNDUP ULTRA	3 SL	0.75	LB AE/A	2.0 PT/A	V4	A	41	3	0	0	99	99	95	95	99	99
37 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A										
37 ROUNDUP CUSTOM	4 SL	1.5	LB AE/A	3.0 PT/A	R2	B										
37 AQUAGENE 90	100 LIQ	0.5	% V/V	0.5 %V/V	R2	B										
37 AMS	100 DRY	2.0	% W/W	2.0 %W/W	R2	B										
37 DOWNRIGHT	100 LIQ	0.5	% V/V	0.5 %V/V	R2	B										
38 ROUNDUP ULTRA	3 SL	0.75	LB AE/A	2.0 PT/A	V4	A	39	1	0	0	99	99	95	95	99	99
38 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A										
38 ROUNDUP CUSTOM	4 SL	1.5	LB AE/A	3.0 PT/A	R2	B										
38 AQUAGENE 90	100 LIQ	0.5	% V/V	0.5 %V/V	R2	B										
38 AMS COMPLETE	100 LIQ	2.5	% V/V	2.5 %V/V	R2	B										
39 ROUNDUP ULTRA	3 SL	0.75	LB AE/A	2.0 PT/A	V4	A	42	0	0	0	99	99	95	95	99	99
39 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A										
39 ROUNDUP CUSTOM	4 SL	1.5	LB AE/A	3.0 PT/A	R2	B										
39 ACTIVATOR 90	100 LIQ	0.5	% V/V	0.5 %V/V	R2	B										
39 ARRAY	100 DRY	1.08	% W/W	9.0 LB/100 GAL	R2	B										

(CONTINUED)

TABLE. EFFECT OF ADJUVANT AND TIMING ON ROUNDUP CUSTOM PERFORMANCE IN ROUNDUP READY SOYBEAN. PROJECT CODE:00-51W-N170 (CONTINUED)

TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	YIELD	GLYMA			CONTROL, DAYS AFTER TREATMENT						
								INJURY, DAT			SETFA		CYPES		AMATA		
								7	14	28	14	28	14	28	14	28	
							BU/A	%	%	%	%	%	%	%	%	%	%
40 ROUNDUP ULTRA	3 SL	0.75	LB AE/A	2.0 PT/A	V4	A	37	0	0	0	99	99	95	95	98	99	
40 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A											
40 ROUNDUP CUSTOM	4 SL	1.5	LB AE/A	3.0 PT/A	R2	B											
40 ACTIVATOR 90	100 LIQ	0.5	% V/V	0.5 %V/V	R2	B											
40 ARRAY	100 DRY	1.68	% W/W	14.0 LB/100 GAL	R2	B											
41 NONTREATED							23	0	0	0	0	0	0	0	0	0	0
42 ROUNDUP ULTRA	3 SL	0.5	LB AE/A	1.33 PT/A	V4	A	33	0	0	0	99	99	70	70	95	96	
42 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A											
43 ROUNDUP ULTRA	3 SL	1.5	LB AE/A	4.0 PT/A	V4	A	34	0	0	0	99	99	70	70	95	95	
43 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A											
44 ROUNDUP ULTRA	3 SL	0.75	LB AE/A	2.0 PT/A	V4	A	37	2	0	0	99	99	95	95	99	99	
44 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A											
44 ROUNDUP ULTRA	3 SL	0.5	LB AE/A	1.33 PT/A	R2	B											
44 AMS	100 DRY	2.0	% W/W	2.0 %W/W	R2	B											
45 ROUNDUP ULTRA	3 SL	0.75	LB AE/A	2.0 PT/A	V4	A	32	3	0	0	99	99	95	95	99	99	
45 AMS	100 DRY	2.0	% W/W	2.0 %W/W	V4	A											
45 ROUNDUP ULTRA	3 SL	1.5	LB AE/A	4.0 PT/A	R2	B											
45 AMS	100 DRY	2.0	% W/W	2.0 %W/W	R2	B											
LSD							9	2	0	0	0	0	7	0	7	8	
P							0.2	0.01	1.0	1.0	1.0	1.0	0.01	1.0	0.01	0.01	

1. PROTOCOL: SIU-BGY.
2. FOR TREATMENTS WHICH INCLUDED SEQUENTIAL APPLICATIONS, RATINGS ARE AFTER THE FINAL APPLICATION.
3. RATING DATES:
 7 DAYS AFTER V4 AND R2 APPLICATIONS WAS ON JUN-26-00 AND JUL-17-00, RESPECTIVELY.
 14 DAYS AFTER V4 AND R2 APPLICATIONS WAS ON JUL-3-00 AND JUL-24-00, RESPECTIVELY.
 28 DAYS AFTER V4 AND R2 APPLICATIONS WAS ON JUL-17-00 AND AUG-7-00, RESPECTIVELY.