

Soybean Herbicide Program: Cost-Based Solution.

Trial ID: 11-YRC-Cost Location: Murphysboro, IL

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu  
 City State Zip Country: Murphysboro IL 62966 USA  
 Trial Status: FINAL Initiation Date: 5-20-11

Objectives: Determine the success of herbicide programs within three different cost ranges that may be used by growers during the herbicide selection process.

Crop 1: GLXMA Soybean Variety: AG 4005 Description: RR  
 Planting Method: SEEDED Planting Date: 5-20-11  
 Rate, Unit: 75 LB/A Depth, Unit: 1.0 IN  
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: AMASS Amaranthus species amaranthus species  
 Pest Description: Mixture of AMATA and AMARE  
 Pest 2 Type: W Code: AMBTR Ambrosia trifida L. ragweed, giant  
 Pest 3 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common  
 Pest 4 Type: W Code: AMARE Amaranthus retroflexus L. pigweed, redroot

Plot Width, Unit: 10 FT Site Type: FIELD  
 Plot Length, Unit: 30 FT Tillage Type: NO-TILL  
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year  
 1. GLXMA 2010

Field Prep./Maintenance: N 0 LB/A, P205 0 LB/A, K20 0 LB/A

% OM: 2.2 Texture: VERY FINE SANDY LOAM  
 pH: 6.2 Soil Name: ALVIN  
 CEC: 9 Fert. Level: P1 82 LB/A, K 91 LB/A

Application Description

	A	B	C	D
Application Date:	5-20-11	6-9-11	6-24-11	6-30-11
Time of Day:	19:45	14:00	8:30	15:30
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	PRE	POST1	POST2	POST3
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	JRK	LAH	JRK	MJA
Air Temperature, Unit:	76 F	98 F	75 F	87 F
% Relative Humidity:	74	42	52	53
Wind Velocity, Unit:	0 MPH	3 MPH	4 MPH	2 MPH
Wind Direction:		SW	SW	S
Dew Presence (Y/N):	N	N	Y	N
Soil Temperature, Unit:	73 F	90 F	72 F	86 F
Soil Moisture:	ABONOR	NORMAL	NORMAL	NORMAL
% Cloud Cover:	50	5	60	0
Crop stage at application:	20-5-11 NA	9-6-11 V2	24-6-11 V4-V5	30-6-11 V7-V8
Height Min, Max (inch):		4 5 7	12 12	19

Pest Stage At Each Application

	5-20-11	6-9-11	6-24-11	6-30-11
Application Date:	5-20-11	6-9-11	6-24-11	6-30-11
Weed Code:	AMASS	AMASS	AMASS	AMASS
Stage Majority (leaves):	NA	8	10	12
Stage Min, Max:		4 14	6 18	8 40
Height Majority:		4 IN	6 IN	6 IN
Height Min, Max:		1 10	1 14	1 14
Density, Unit:		10 FT2	5 FT2	5 FT2
Weed Code:	AMBTR	AMBTR	AMBTR	AMBTR
Stage Majority (leaves):	NA	10	12	14
Stage Min, Max:		3 16	4 20	5 22
Height Majority:		5 IN	7 IN	8 IN
Height Min, Max:		1 10	2 12	3 14
Density, Unit:		0.1 FT2	0.1 FT2	0.1 FT2
Weed Code:	AMATA	AMATA	AMATA	AMATA
Stage Majority (leaves):	NA	NA	NA	NA
Weed Code:	AMARE	AMARE	AMARE	AMARE
Stage Majority (leaves):	NA	NA	NA	NA

Application Equipment

	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan	Flat fan
Nozzle Size:	XR 8002	XR 8002	XR 8002	XR 8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

Soybean Herbicide Program: Cost-Based Solution.

Trial ID: 11-YRC-Cost

Location: Murphysboro, IL

Pest Code  
Crop Code  
Rating Date  
Rating Data Type  
Rating Unit  
Rating Timing  
Trt-Eval Interval

GLXMA GLXMA GLXMA GLXMA GLXMA GLXMA GLXMA  
10-12-11 10-12-11 10-12-11 6-24-11 7-8-11 7-22-11 10-5-11  
Moisture Test wt. Yield Injury Injury Injury Injury  
Percent lb/bu bu/A Percent Percent Percent Percent  
0 DA-C 14 DA-C 28 DA-C EOS

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	10-12-11	10-12-11	10-12-11	6-24-11	7-8-11	7-22-11	10-5-11
1	\$22 TO \$24 PROGRAMS									13.5 d	55.2 a	39 b-g	0 e	0 c	0 b	0 a
1	AUTHORITY FIRST	70	WG	0.141	lb ai/a	3.2	oz/a	PRE	A							
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C							
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C							
2	\$22 TO \$24 PROGRAMS									14.7 bcd	54.4 abc	36 e-h	0 e	0 c	0 b	0 a
2	AUTHORITY MTZ	45	WG	0.31	lb ai/a	11	oz/a	PRE	A							
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C							
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C							
3	\$22 TO \$24 PROGRAMS									13.9 d	54.9 ab	35 e-h	0 e	0 c	0 b	0 a
3	AUTHORITY ASSIST	4	SL	0.156	lb ai/a	5.0	fl oz/a	PRE	A							
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C							
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C							
4	\$22 TO \$24 PROGRAMS									14.7 bcd	54.4 abc	36 e-h	0 e	0 c	0 b	0 a
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B							
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	B							
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST3	D							
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST3	D							
5	\$22 TO \$24 PROGRAMS									16.3 abc	53.4 bcd	31 hi	11 c	2 c	0 b	0 a
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B							
5	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a	POST1	B							
5	SUPERB HC	100	SL	0.5	% v/v	0.5	% v/v	POST1	B							
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	B							
6	\$22 TO \$24 PROGRAMS									16.6 ab	53.2 cd	26 i	0 e	0 c	0 b	0 a
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B							
6	FIRSTRATE	84	WG	0.0158	lb ai/a	0.3	oz/a	POST1	B							
6	SUPERB HC	100	SL	0.5	% v/v	0.5	% v/v	POST1	B							
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	B							
7	\$22 TO \$24 PROGRAMS									13.6 d	55.2 a	35 fgh	12 abc	2 c	0 b	0 a
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B							
7	PREFIX	5.29	EC	1.32	lb ai/a	2.0	pt/a	POST1	B							
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	B							
8	\$34 TO \$36 PROGRAMS									13.5 d	55.2 a	48 a	0 e	0 c	0 b	0 a
8	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.4	oz/a	PRE	A							
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C							
8	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C							
9	\$34 TO \$36 PROGRAMS									14.8 bcd	54.5 abc	37 e-h	0 e	0 c	0 b	0 a
9	AUTHORITY FIRST	70	WG	0.14	lb ai/a	3.2	oz/a	PRE	A							
9	PROWL H2O	3.8	CS	0.95	lb ai/a	2.0	pt/a	PRE	A							
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C							
9	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C							
10	\$34 TO \$36 PROGRAMS									13.8 d	55.1 a	41 a-f	0 e	0 c	0 b	0 a
10	CANOPY	75	WG	0.14	lb ai/a	3.0	oz/a	PRE	A							
10	PREFIX	5.29	EC	1.32	lb ai/a	2.0	pt/a	PRE	A							
10	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C							
10	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C							
11	\$34 TO \$36 PROGRAMS									13.7 d	55.0 a	39 b-g	0 e	0 c	0 b	0 a
11	AUTHORITY FIRST	70	WG	0.141	lb ai/a	3.2	oz/a	PRE	A							
11	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C							
11	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a	POST2	C							
11	SUPERB HC	100	SL	0.5	% v/v	0.5	% v/v	POST2	C							
11	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C							
12	\$34 TO \$36 PROGRAMS									14.2 cd	54.6 abc	42 a-e	0 e	0 c	0 b	0 a
12	AUTHORITY FIRST	70	WG	0.141	lb ai/a	3.2	oz/a	PRE	A							
12	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C							
12	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	POST2	C							
12	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C							

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Pest Code		Crop Code		GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA					
Rating Date		10-12-11	10-12-11	10-12-11	6-24-11	7-8-11	7-22-11	10-5-11								
Rating Data Type		Moisture	Test wt.	Yield	Injury	Injury	Injury	Injury								
Rating Unit		Percent	lb/bu	bu/A	Percent	Percent	Percent	Percent								
Rating Timing				15 DA-B		8 DA-D		22 DA-D								
Trt-Eval Interval				0 DA-C		14 DA-C		28 DA-C		EOS						
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code							
13	\$34 TO \$36 PROGRAMS									15.2 bcd	54.1 abc	33 ghi	12 bc	0 c	0 b	0 a
13	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a									
13	FIRSTRATE	84	WG	0.0158	lb ai/a	0.3	oz/a									
13	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a									
13	N-PAK AMS	100	SL		5 % v/v	5	% v/v									
14	\$34 TO \$36 PROGRAMS									15.0 bcd	54.3 abc	38 c-h	0 e	10 b	0 b	0 a
14	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a									
14	N-PAK AMS	100	SL		5 % v/v	5	% v/v									
14	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a									
14	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a									
14	SUPERB HC	100	SL		0.5 % v/v	0.5	% v/v									
14	N-PAK AMS	100	SL		5 % v/v	5	% v/v									
15	\$34 TO \$36 PROGRAMS									13.3 d	55.3 a	39 b-g	13 ab	2 c	0 b	0 a
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a									
15	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a									
15	SUPERB HC	100	SL		0.5 % v/v	0.5	% v/v									
15	N-PAK AMS	100	SL		5 % v/v	5	% v/v									
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a									
15	N-PAK AMS	100	SL		5 % v/v	5	% v/v									
16	\$34 TO \$36 PROGRAMS									13.4 d	55.2 a	41 a-f	14 a	0 c	0 b	0 a
16	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a									
16	PREFIX	5.29	EC	1.32	lb ai/a	2.0	pt/a									
16	N-PAK AMS	100	SL		5 % v/v	5	% v/v									
16	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a									
16	N-PAK AMS	100	SL		5 % v/v	5	% v/v									
17	\$46 TO \$48 PROGRAMS									13.4 d	55.2 a	46 ab	0 e	0 c	0 b	0 a
17	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.4	oz/a									
17	PROWL H2O	3.8	CS	0.95	lb ai/a	2.0	pt/a									
17	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a									
17	N-PAK AMS	100	SL		5 % v/v	5	% v/v									
18	\$46 TO \$48 PROGRAMS									13.3 d	55.3 a	45 abc	0 e	0 c	0 b	0 a
18	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a									
18	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a									
18	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a									
18	N-PAK AMS	100	SL		5 % v/v	5	% v/v									
19	\$46 TO \$48 PROGRAMS									13.8 d	54.9 ab	44 a-d	0 e	0 c	0 b	0 a
19	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.4	oz/a									
19	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a									
19	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a									
19	SUPERB HC	100	SL		0.5 % v/v	0.5	% v/v									
19	N-PAK AMS	100	SL		5 % v/v	5	% v/v									
20	\$46 TO \$48 PROGRAMS									14.1 cd	54.7 abc	38 d-h	8 d	15 a	3 a	0 a
20	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a									
20	PREFIX	5.29	EC	1.32	lb ai/a	2.0	pt/a									
20	N-PAK AMS	100	SL		5 % v/v	5	% v/v									
20	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a									
20	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a									
20	SUPERB HC	100	SL		0.5 % v/v	0.5	% v/v									
20	N-PAK AMS	100	SL		5 % v/v	5	% v/v									
21	NONTREATED									18.0 a	52.5 d	25 i	0 e	0 c	0 b	0 a
22	WEED FREE									13.8 d	55.0 a	39 b-g	0 e	0 c	0 b	0 a
22	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a									
22	DUAL MAGNUM	7.62	EC	1.27	lb ai/a	1.33	pt/a									
22	HANDWEED AS NEEDED															
LSD (P=.05)										2.33	1.54	7.4	2.1	4.3	1.0	0.0
Replicate F										0.073	0.069	0.579	1.501	0.656	1.000	0.000
Replicate Prob(F)										0.9294	0.9339	0.5650	0.2347	0.5240	0.3765	1.0000
Treatment F										2.252	1.958	4.973	55.909	6.031	4.000	0.000
Treatment Prob(F)										0.0125	0.0317	0.0001	0.0001	0.0001	0.0001	1.0000

Soybean Herbicide Program: Cost-Based Solution.

Trial ID: 11-YRC-Cost      Location: Murphysboro, IL

Pest Code							
Crop Code							
Rating Date	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Rating Data Type	10-12-11	10-12-11	10-12-11	6-24-11	7-8-11	7-22-11	10-5-11
Rating Unit	Moisture	Test wt.	Yield	Injury	Injury	Injury	Injury
Rating Timing	Percent	lb/bu	bu/A	Percent	Percent	Percent	Percent
Trt-Eval Interval				15 DA-B	8 DA-D	22 DA-D	
				0 DA-C	14 DA-C	28 DA-C	EOS

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Other Rate	Other Rate	Other Unit	Growth Stage	Appl Code
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Means followed by same letter do not significantly differ (P=.05, LSD)

Soybean Herbicide Program: Cost-Based Solution.

Trial ID: 11-YRC-Cost Location: Murphysboro, IL

Pest Code	Crop Code	Rating Date	Rating Data Type	Rating Unit	Rating Timing	Trt-Eval Interval	AMASS	AMASS	AMASS	AMASS	AMBTR	AMBTR	AMBTR	AMBTR
							6-24-11	7-8-11	7-22-11	10-5-11	6-24-11	7-8-11	7-22-11	10-5-11
							Control	Control	Control	Control	Control	Control	Control	Control
							Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
							15 DA-B	8 DA-D	22 DA-D		15 DA-B	8 DA-D	22 DA-D	
							0 DA-C	14 DA-C	28 DA-C	EOS	0 DA-C	14 DA-C	28 DA-C	EOS
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	\$22 TO \$24 PROGRAMS									72 fg	83 a-d	82 b-e	86 abc	98 a 99 a 99 a 99 a
1	AUTHORITY FIRST	70	WG	0.141	lb ai/a	3.2	oz/a	PRE	A					
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C					
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C					
2	\$22 TO \$24 PROGRAMS									63 g	75 de	62 fg	58 d	70 b 73 abc 73 b 97 a
2	AUTHORITY MTZ	45	WG	0.31	lb ai/a	11	oz/a	PRE	A					
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C					
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C					
3	\$22 TO \$24 PROGRAMS									73 f	77 cde	73 ef	61 d	68 b 73 abc 72 b 79 b
3	AUTHORITY ASSIST	4	SL	0.156	lb ai/a	5.0	fl oz/a	PRE	A					
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C					
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C					
4	\$22 TO \$24 PROGRAMS									70 fg	57 fg	48 ghi	25 e	93 a 90 abc 86 ab 93 ab
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B					
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	B					
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST3	D					
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST3	D					
5	\$22 TO \$24 PROGRAMS									92 abc	42 g	37 i	12 efg	99 a 70 bc 70 b 61 c
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B					
5	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a	POST1	B					
5	SUPERB HC	100	SL	0.5	% v/v	0.5	% v/v	POST1	B					
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	B					
6	\$22 TO \$24 PROGRAMS									71 fg	47 g	32 i	7 fg	95 a 95 ab 93 a 98 a
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B					
6	FIRSTRATE	84	WG	0.0158	lb ai/a	0.3	oz/a	POST1	B					
6	SUPERB HC	100	SL	0.5	% v/v	0.5	% v/v	POST1	B					
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	B					
7	\$22 TO \$24 PROGRAMS									90 b-e	57 fg	43 hi	22 ef	99 a 99 a 99 a 99 a
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B					
7	PREFIX	5.29	EC	1.32	lb ai/a	2.0	pt/a	POST1	B					
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	B					
8	\$34 TO \$36 PROGRAMS									96 ab	97 a	97 abc	98 ab	99 a 99 a 99 a 99 a
8	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.4	oz/a	PRE	A					
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C					
8	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C					
9	\$34 TO \$36 PROGRAMS									84 cde	89 a-d	89 a-e	93 ab	98 a 98 a 98 a 99 a
9	AUTHORITY FIRST	70	WG	0.14	lb ai/a	3.2	oz/a	PRE	A					
9	PROWL H2O	3.8	CS	0.95	lb ai/a	2.0	pt/a	PRE	A					
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C					
9	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C					
10	\$34 TO \$36 PROGRAMS									96 ab	97 a	97 ab	99 a	97 a 98 a 98 a 99 a
10	CANOPY	75	WG	0.14	lb ai/a	3.0	oz/a	PRE	A					
10	PREFIX	5.29	EC	1.32	lb ai/a	2.0	pt/a	PRE	A					
10	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C					
10	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C					
11	\$34 TO \$36 PROGRAMS									83 de	90 a-d	91 abc	94 ab	96 a 99 a 99 a 99 a
11	AUTHORITY FIRST	70	WG	0.141	lb ai/a	3.2	oz/a	PRE	A					
11	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C					
11	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a	POST2	C					
11	SUPERB HC	100	SL	0.5	% v/v	0.5	% v/v	POST2	C					
11	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C					
12	\$34 TO \$36 PROGRAMS									82 e	90 a-d	90 a-d	90 abc	98 a 98 a 98 a 99 a
12	AUTHORITY FIRST	70	WG	0.141	lb ai/a	3.2	oz/a	PRE	A					
12	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C					
12	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	POST2	C					
12	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C					

Soybean Herbicide Program: Cost-Based Solution.

Trial ID: 11-YRC-Cost Location: Murphysboro, IL

Pest Code		AMASS	AMASS	AMASS	AMASS	AMBTR	AMBTR	AMBTR	AMBTR
Crop Code									
Rating Date		6-24-11	7-8-11	7-22-11	10-5-11	6-24-11	7-8-11	7-22-11	10-5-11
Rating Data Type		Control	Control	Control	Control	Control	Control	Control	Control
Rating Unit		Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing		15 DA-B	8 DA-D	22 DA-D		15 DA-B	8 DA-D	22 DA-D	
Trt-Eval Interval		0 DA-C	14 DA-C	28 DA-C	EOS	0 DA-C	14 DA-C	28 DA-C	EOS
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code
13	\$34 TO \$36 PROGRAMS								
13	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B
13	FIRSTRATE	84	WG	0.0158	lb ai/a	0.3	oz/a	POST1	B
13	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	POST1	B
13	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	B
								92 abc	65 ef 57 fgh 22 ef 97 a 96 a 95 a 88 ab
14	\$34 TO \$36 PROGRAMS								
14	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B
14	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	B
14	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST3	D
14	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a	POST3	D
14	SUPERB HC	100	SL	0.5	% v/v	0.5	% v/v	POST3	D
14	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST3	D
								69 fg	92 abc 90 a-d 88 abc 94 a 98 a 98 a 99 a
15	\$34 TO \$36 PROGRAMS								
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B
15	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a	POST1	B
15	SUPERB HC	100	SL	0.5	% v/v	0.5	% v/v	POST1	B
15	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	B
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST3	D
15	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST3	D
								91 a-d	77 cde 73 def 73 cd 99 a 99 a 99 a 99 a
16	\$34 TO \$36 PROGRAMS								
16	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B
16	PREFIX	5.29	EC	1.32	lb ai/a	2.0	pt/a	POST1	B
16	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	B
16	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST3	D
16	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST3	D
								93 ab	80 b-e 80 cde 81 bc 99 a 99 a 99 a 99 a
17	\$46 TO \$48 PROGRAMS								
17	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.4	oz/a	PRE	A
17	PROWL H2O	3.8	CS	0.95	lb ai/a	2.0	pt/a	PRE	A
17	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C
17	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C
								91 a-d	94 ab 95 abc 99 ab 93 a 99 a 99 a 99 a
18	\$46 TO \$48 PROGRAMS								
18	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A
18	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A
18	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C
18	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C
								95 ab	95 ab 96 abc 99 a 98 a 99 a 99 a 99 a
19	\$46 TO \$48 PROGRAMS								
19	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.4	oz/a	PRE	A
19	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C
19	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a	POST2	C
19	SUPERB HC	100	SL	0.5	% v/v	0.5	% v/v	POST2	C
19	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C
								95 ab	98 a 98 ab 99 a 96 a 98 a 98 a 99 a
20	\$46 TO \$48 PROGRAMS								
20	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B
20	PREFIX	5.29	EC	1.32	lb ai/a	2.0	pt/a	POST1	B
20	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	B
20	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST3	D
20	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a	POST3	D
20	SUPERB HC	100	SL	0.5	% v/v	0.5	% v/v	POST3	D
20	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST3	D
								94 ab	96 ab 95 abc 94 ab 99 a 99 a 99 a 99 a
21	NONTREATED								
								0 h	0 h 0 j 0 g 0 c 0 d 0 c 0 d
22	WEED FREE								
22	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A
22	DUAL MAGNUM	7.62	EC	1.27	lb ai/a	1.33	pt/a	PRE	A
22	HANDWEED AS NEEDED								
								99 a	99 a 99 a 99 a 99 a 66 c 99 a 99 a
LSD (P=.05)								8.4	16.7 16.8 17.7 13.4 26.4 17.8 17.3
Replicate F								1.576	0.915 0.625 1.191 0.820 0.019 1.542 1.956
Replicate Prob(F)								0.2188	0.4085 0.5402 0.3140 0.4472 0.9815 0.2258 0.1540
Treatment F								52.371	17.410 21.178 33.393 21.521 5.953 12.557 13.403
Treatment Prob(F)								0.0001	0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001

Soybean Herbicide Program: Cost-Based Solution.

Trial ID: 11-YRC-Cost      Location: Murphysboro, IL

Pest Code																					
Crop Code																					
Rating Date																					
Rating Data Type																					
Rating Unit																					
Rating Timing																					
Trt-Eval Interval																					

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code

Means followed by same letter do not significantly differ (P=.05, LSD)

## Soybean Herbicide Program: Cost-Based Solution.

Trial ID: 11-YRC-Cost

Location: Murphysboro, IL

Pest Code	AMATA	AMARE	AMBTR
Crop Code			
Rating Date	10-5-11	10-5-11	10-5-11
Rating Data Type	Plants	Plants	Plants
Rating Unit	0.5 m2	0.5 m2	0.5 m2
Rating Timing			
Trt-Eval Interval	EOS	EOS	EOS

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	\$22 TO \$24 PROGRAMS									3.2	ef	0.0 b 0.0 c
1	AUTHORITY FIRST	70	WG	0.141	lb ai/a	3.2	oz/a	PRE	A			
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C			
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C			
2	\$22 TO \$24 PROGRAMS									4.5	def	0.0 b 0.5 abc
2	AUTHORITY MTZ	45	WG	0.31	lb ai/a	11	oz/a	PRE	A			
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C			
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C			
3	\$22 TO \$24 PROGRAMS									4.7	def	0.3 b 0.8 a
3	AUTHORITY ASSIST	4	SL	0.156	lb ai/a	5.0	fl oz/a	PRE	A			
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C			
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C			
4	\$22 TO \$24 PROGRAMS									11.7	bc	0.0 b 0.0 c
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B			
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	B			
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST3	D			
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST3	D			
5	\$22 TO \$24 PROGRAMS									10.3	cd	1.5 b 0.7 ab
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B			
5	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a	POST1	B			
5	SUPERB HC	100	SL	0.5	% v/v	0.5	% v/v	POST1	B			
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	B			
6	\$22 TO \$24 PROGRAMS									19.0	a	0.0 b 0.0 c
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B			
6	FIRSTRATE	84	WG	0.0158	lb ai/a	0.3	oz/a	POST1	B			
6	SUPERB HC	100	SL	0.5	% v/v	0.5	% v/v	POST1	B			
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	B			
7	\$22 TO \$24 PROGRAMS									10.3	cd	0.2 b 0.2 bc
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B			
7	PREFIX	5.29	EC	1.32	lb ai/a	2.0	pt/a	POST1	B			
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST1	B			
8	\$34 TO \$36 PROGRAMS									0.3	f	0.0 b 0.0 c
8	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.4	oz/a	PRE	A			
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C			
8	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C			
9	\$34 TO \$36 PROGRAMS									1.5	f	0.0 b 0.2 bc
9	AUTHORITY FIRST	70	WG	0.14	lb ai/a	3.2	oz/a	PRE	A			
9	PROWL H2O	3.8	CS	0.95	lb ai/a	2.0	pt/a	PRE	A			
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C			
9	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C			
10	\$34 TO \$36 PROGRAMS									0.0	f	0.0 b 0.2 bc
10	CANOPY	75	WG	0.14	lb ai/a	3.0	oz/a	PRE	A			
10	PREFIX	5.29	EC	1.32	lb ai/a	2.0	pt/a	PRE	A			
10	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C			
10	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C			
11	\$34 TO \$36 PROGRAMS									0.0	f	0.2 b 0.0 c
11	AUTHORITY FIRST	70	WG	0.141	lb ai/a	3.2	oz/a	PRE	A			
11	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C			
11	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a	POST2	C			
11	SUPERB HC	100	SL	0.5	% v/v	0.5	% v/v	POST2	C			
11	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C			
12	\$34 TO \$36 PROGRAMS									1.5	f	0.0 b 0.0 c
12	AUTHORITY FIRST	70	WG	0.141	lb ai/a	3.2	oz/a	PRE	A			
12	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C			
12	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	POST2	C			
12	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST2	C			



Soybean Herbicide Program: Cost-Based Solution.

Trial ID: 11-YRC-Cost Location: Murphysboro, IL

Pest Code	AMATA	AMARE	AMBTR
Crop Code			
Rating Date	10-5-11	10-5-11	10-5-11
Rating Data Type	Plants	Plants	Plants
Rating Unit	0.5 m2	0.5 m2	0.5 m2
Rating Timing			
Trt-Eval Interval	EOS	EOS	EOS

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
13	\$34 TO \$36 PROGRAMS									8.2	cde	0.2 b 0.3 abc
13	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B			
13	FIRSTRATE	84	WG	0.0158	lb ai/a	0.3	oz/a	POST1	B			
13	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	POST1	B			
13	N-PAK AMS	100	SL		5 % v/v	5	% v/v	POST1	B			
14	\$34 TO \$36 PROGRAMS									4.2	def	0.0 b 0.0 c
14	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B			
14	N-PAK AMS	100	SL		5 % v/v	5	% v/v	POST1	B			
14	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST3	D			
14	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a	POST3	D			
14	SUPERB HC	100	SL		0.5 % v/v	0.5	% v/v	POST3	D			
14	N-PAK AMS	100	SL		5 % v/v	5	% v/v	POST3	D			
15	\$34 TO \$36 PROGRAMS									6.0	c-f	0.0 b 0.0 c
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B			
15	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a	POST1	B			
15	SUPERB HC	100	SL		0.5 % v/v	0.5	% v/v	POST1	B			
15	N-PAK AMS	100	SL		5 % v/v	5	% v/v	POST1	B			
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST3	D			
15	N-PAK AMS	100	SL		5 % v/v	5	% v/v	POST3	D			
16	\$34 TO \$36 PROGRAMS									3.7	ef	0.0 b 0.0 c
16	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B			
16	PREFIX	5.29	EC	1.32	lb ai/a	2.0	pt/a	POST1	B			
16	N-PAK AMS	100	SL		5 % v/v	5	% v/v	POST1	B			
16	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST3	D			
16	N-PAK AMS	100	SL		5 % v/v	5	% v/v	POST3	D			
17	\$46 TO \$48 PROGRAMS									0.0	f	0.0 b 0.0 c
17	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.4	oz/a	PRE	A			
17	PROWL H2O	3.8	CS	0.95	lb ai/a	2.0	pt/a	PRE	A			
17	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C			
17	N-PAK AMS	100	SL		5 % v/v	5	% v/v	POST2	C			
18	\$46 TO \$48 PROGRAMS									0.2	f	0.0 b 0.0 c
18	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A			
18	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A			
18	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C			
18	N-PAK AMS	100	SL		5 % v/v	5	% v/v	POST2	C			
19	\$46 TO \$48 PROGRAMS									0.0	f	0.0 b 0.0 c
19	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.4	oz/a	PRE	A			
19	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST2	C			
19	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a	POST2	C			
19	SUPERB HC	100	SL		0.5 % v/v	0.5	% v/v	POST2	C			
19	N-PAK AMS	100	SL		5 % v/v	5	% v/v	POST2	C			
20	\$46 TO \$48 PROGRAMS									0.7	f	0.0 b 0.3 abc
20	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST1	B			
20	PREFIX	5.29	EC	1.32	lb ai/a	2.0	pt/a	POST1	B			
20	N-PAK AMS	100	SL		5 % v/v	5	% v/v	POST1	B			
20	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST3	D			
20	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a	POST3	D			
20	SUPERB HC	100	SL		0.5 % v/v	0.5	% v/v	POST3	D			
20	N-PAK AMS	100	SL		5 % v/v	5	% v/v	POST3	D			
21	NONTREATED									17.3	ab	16.2 a 0.7 ab
22	WEED FREE									0.0	f	0.0 b 0.0 c
22	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A			
22	DUAL MAGNUM	7.62	EC	1.27	lb ai/a	1.33	pt/a	PRE	A			
22	HANDWEED AS NEEDED											

LSD (P=.05)	6.24	4.47	0.65
Replicate F	0.230	1.066	0.747
Replicate Prob(F)	0.7954	0.3537	0.4798
Treatment F	6.798	4.840	1.338
Treatment Prob(F)	0.0001	0.0001	0.2071

Soybean Herbicide Program: Cost-Based Solution.

Trial ID: 11-YRC-Cost      Location: Murphysboro, IL

Pest Code				AMATA	AMARE	AMBTR
Crop Code						
Rating Date				10-5-11	10-5-11	10-5-11
Rating Data Type				Plants	Plants	Plants
Rating Unit				0.5 m2	0.5 m2	0.5 m2
Rating Timing						
Trt-Eval Interval				EOS	EOS	EOS

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code
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Means followed by same letter do not significantly differ (P=.05, LSD)

Trial Comments

1. Protocol: SIU-BGY.
2. Ratings: CI/WC prior to C, 14 + 28 DA-C, and EOS; Photos at 0, 14 and 28 DA-C;  
Weed counts as (2) 0.5 m2 quads per plot at EOS.
3. Yield.
4. Blanket application of Roundup WeatherMax was applied to all plots on 5-10-11.
5. AMASS = Amaranth species including AMATA (common waterhemp) and AMARE (redroot pigweed).  
EOS = End of season. Plants 0.5 m2 = Plants per 0.5 square meter.
6. Rainfall for the week prior to planting and the PRE application was 1.2 inch.  
Rainfall (weekly totals) for the the next six weeks were 2.18, 0, 0, 0.75, 1.81, and 4.38 inch.
7. Harvested 10-12-11, (2) 30 inch rows by 26.5 ft.