

Influence of Weed Management on Optimal Soybean Seed Rates.

Trial ID: 09-T2-S240

Location: Belleville Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Belleville IL 62221 USA
 Trial Status: FINAL Initiation Date: 06-27-09

Objectives: Determine if crop management factors such as weed removal timing and disease/insect management influence the optimal seeding rate.

Crop 1: GLXMA Soybean Variety: AG 3905 Description: RR
 Planting Method: See treatment list Planting Date: 06-27-09
 Depth, Unit: 1.5 IN

Row Spacing, Unit: 15 IN

Pest 1 Type: W Code: GGGAN
 Pest 2 Type: W Code: IPOSS
 Pest 3 Type: W Code: AMATA Amaranthus rudis Sauer

grasses, annual
 morningglory, species
 waterhemp, common

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 32 FT Tillage Type: REDUCED-TILL
 Replications: 4 Study Design: Randomized Complete Block

Prior Crops, Year
 1. NONE 2008

Field Prep./Maintenance: N 0 LB/A, P205 0 LB/A, K20 100 LB/A

% OM: 2.8 Texture: SILT LOAM
 pH: 6.4 Soil Name: BETHALTO
 CEC: 14 Fert. Level: P1: 118 LB/A, K: 466 LB/A

	Application Description							
	A	B	C	D	E	F	G	H
Application Date:	06-27-09	07-21-09	08-03-09	08-14-09	08-19-09	07-27-09	08-11-09	08-24-09
Time of Day:	18:00	10:00	8:45	10:00	10:30	17:00	12:45	10:00
Application Method:	Spray	Spray	Spray	Spray	Spray	Spray	Spray	Spray
Application Timing:	PRE	4-6"W	8-12"W	>18"W	R2-3	IF-NEED		
Application Placement:	BROSIO	BROFOL	BROFOL	BROFOL	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	DKP	NVH	DKP	DKP	DKP	NVH	DKP	NVH
Air Temperature, Unit:	94 F	76 F	70 F	82 F	82 F	84 F	78 F	76 F
% Relative Humidity:	58	88	92	70	92	78	92	76
Wind Velocity, Unit:	5 MPH	6 MPH	7 MPH	1 MPH	8 MPH	3 MPH	3 MPH	3 MPH
Wind Direction:	SW	SE	S	W	SE	S	NW	SE
Dew Presence (Y/N):	N	N	Y	Y	N	N	N	N
Soil Moisture:	NORMAL	NORMAL	ABONOR	NORMAL	ABONOR	NORMAL	NORMAL	NORMAL
% Cloud Cover:	20	80	60	0	85	10	75	5
Crop stage at application:	NA	V3	V6	R1	R2-R3	V5	R1	R4
Height Min, Max (inch):		4 6	9 12	13 18	13 22	8 10	12 16	34 40

	Pest Stage At Each Application							
	A	B	C	D	E	F	G	H
Application Date:	06-27-09	07-21-09	08-03-09	08-14-09	08-19-09	07-27-09	08-11-09	08-24-09
Weed Code:	GGGAN	GGGAN	GGGAN	GGGAN	GGGAN	GGGAN	GGGAN	GGGAN
Stage Majority (leaves):	4	5	8	NA	4	NA	NA	
Stage Min, Max:	1 7	3 8	5 9		3 10			
Height Majority:	4 IN	8 IN	20 IN		3 IN			
Height Min, Max:	1 8	4 11	12 25		1.5 5			
Density, Unit:	1 FT2	1 FT2	1 FT2		0.01 FT2			
Weed Code:	IPOSS	IPOSS	IPOSS	IPOSS	IPOSS	IPOSS	IPOSS	IPOSS
Stage Majority (leaves):	4	6	16	NA	2	3	20	
Stage Min, Max:	1 7	2 9	8 25		1 3	1 4	12 35	
Height Majority:	4 IN	7 IN	16 IN		1.5 IN	3 IN	16 IN	
Height Min, Max:	1 6	2 9	8 20		1 2	1 4	12 30	
Density, Unit:	0.3 FT2	0.3 FT2	1 FT2		0.01 FT2	0.5 FT2	0.3 FT2	
Weed Code:	AMATA	AMATA	AMATA	AMATA	AMATA	AMATA	AMATA	AMATA
Stage Majority (leaves):	4	8	20	NA	5	3	16	
Stage Min, Max:	3 7	6 12	12 24		3 7	2 4	8 30	
Height Majority:	4 IN	8 IN	24 IN		2 IN	3 IN	30 IN	
Height Min, Max:	1 5	4 14	10 34		1.5 3	2 5	10 40	
Density, Unit:	8 FT2	14 FT2	4 FT2		0.01 FT2	0.7 FT2	1 FT2	

Application Equipment

Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	30 PSI	30 PSI	30 PSI	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan	Flat fan	Flat fan	Flat fan	Flat fan
Nozzle Size:	XR 8002	XR 8002	XR 8002	XR 8002	XR 8002	XR 8002	XR 8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT	7.5 FT	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA	15 GPA	15 GPA	15 GPA

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Pest Code										GLXMA	GLXMA	GGGAN	IPOHE	AMATA
Crop Code										11-04-09	11-04-09	07-20-09	07-20-09	07-20-09
Rating Date										Moisture	Yield	Control	Control	Control
Rating Data Type										Percent	bu/A	Percent	Percent	Percent
Rating Unit														
Rating Timing														
Trt-Eval Interval												-1 DA-B	-1 DA-B	-1 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	50,000 SEEDS/A									11.9 d-h	47 h-k	97 a	98 abc	98 ab
1	WEED FREE													
1	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A					
1	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	PRE	A					
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	IF-NEED	F					
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	IF-NEED	F					
1	HANDWEED													
2	50,000 SEEDS/A									11.9 e-h	46 ijk			
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	B					
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B					
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"RG-1	G					
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-3"RG-1	G					
3	50,000 SEEDS/A									11.8 gh	37 mno			
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"W	C					
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	8-12"W	C					
4	50,000 SEEDS/A									11.8 h	34 op			
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	>18"W	D					
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	>18"W	D					
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"RG-2	H					
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-3"RG-2	H					
5	50,000 SEEDS/A									12.3 a	27 q	0 c	0 d	0 c
5	NONTREATED													
6	100,000 SEEDS/A									11.9 e-h	50 f-i	95 b	98 ab	97 b
6	WEED FREE													
6	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A					
6	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	PRE	A					
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	IF-NEED	F					
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	IF-NEED	F					
6	HANDWEED													
7	100,000 SEEDS/A									11.9 e-h	46 ijk			
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	B					
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B					
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"RG-1	G					
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-3"RG-1	G					
8	100,000 SEEDS/A									12.0 c-h	40 lmn			
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"W	C					
8	N-PAK AMS	100	SL	5	% v/v	5	% v/v	8-12"W	C					
9	100,000 SEEDS/A									11.9 fgh	35 nop			
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	>18"W	D					
9	N-PAK AMS	100	SL	5	% v/v	5	% v/v	>18"W	D					
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"RG-2	H					
9	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-3"RG-2	H					
10	100,000 SEEDS/A									12.0 b-g	34 op	0 c	0 d	0 c
10	NONTREATED													
11	150,000 SEEDS/A									12.0 c-h	53 d-g	97 ab	99 a	98 a
11	WEED FREE													
11	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A					
11	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	PRE	A					
11	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	IF-NEED	F					
11	N-PAK AMS	100	SL	5	% v/v	5	% v/v	IF-NEED	F					
11	HANDWEED													
12	150,000 SEEDS/A									12.2 a-d	51 e-i			
12	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	B					
12	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B					
12	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"RG-1	G					
12	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-3"RG-1	G					
13	150,000 SEEDS/A									11.9 d-h	52 e-h			
13	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"W	C					
13	N-PAK AMS	100	SL	5	% v/v	5	% v/v	8-12"W	C					

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Pest Code										GLXMA	GLXMA	GGGAN	IPOHE	AMATA
Crop Code										11-04-09	11-04-09	07-20-09	07-20-09	07-20-09
Rating Date										Moisture	Yield	Control	Control	Control
Rating Data Type										Percent	bu/A	Percent	Percent	Percent
Rating Unit														
Rating Timing														
Trt-Eval Interval												-1 DA-B	-1 DA-B	-1 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
23	100,000 SEEDS/A									11.9 d-h	50 f-i			
23	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"W	C					
23	N-PAK AMS	100	SL	5	% v/v	5	% v/v	8-12"W	C					
23	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R2-R3	E					
23	WARRIOR	1	CS	0.02	lb ai/a	2.56	fl oz/a	R2-R3	E					
23	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	R2-R3	E					
24	100,000 SEEDS/A									12.0 c-h	43 jkl			
24	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	>18"W	D					
24	N-PAK AMS	100	SL	5	% v/v	5	% v/v	>18"W	D					
24	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R2-R3	E					
24	WARRIOR	1	CS	0.02	lb ai/a	2.56	fl oz/a	R2-R3	E					
24	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	R2-R3	E					
24	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"RG-2	H					
24	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-3"RG-2	H					
25	100,000 SEEDS/A									12.3 ab	34 op	0 c	0 d	0 c
25	NONTREATED													
25	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R2-R3	E					
25	WARRIOR	1	CS	0.02	lb ai/a	2.56	fl oz/a	R2-R3	E					
25	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	R2-R3	E					
26	150,000 SEEDS/A									12.1 a-g	62 ab	96 ab	98 bc	98 a
26	WEED FREE													
26	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A					
26	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	PRE	A					
26	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	IF-NEED	F					
26	N-PAK AMS	100	SL	5	% v/v	5	% v/v	IF-NEED	F					
26	HANDWEED													
26	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R2-R3	E					
26	WARRIOR	1	CS	0.02	lb ai/a	2.56	fl oz/a	R2-R3	E					
26	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	R2-R3	E					
27	150,000 SEEDS/A									12.1 a-e	62 a			
27	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	B					
27	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B					
27	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R2-R3	E					
27	WARRIOR	1	CS	0.02	lb ai/a	2.56	fl oz/a	R2-R3	E					
27	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	R2-R3	E					
27	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"RG-1	G					
27	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-3"RG-1	G					
28	150,000 SEEDS/A									12.1 a-g	59 abc			
28	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"W	C					
28	N-PAK AMS	100	SL	5	% v/v	5	% v/v	8-12"W	C					
28	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R2-R3	E					
28	WARRIOR	1	CS	0.02	lb ai/a	2.56	fl oz/a	R2-R3	E					
28	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	R2-R3	E					
29	150,000 SEEDS/A									12.1 a-g	57 a-d			
29	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	>18"W	D					
29	N-PAK AMS	100	SL	5	% v/v	5	% v/v	>18"W	D					
29	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R2-R3	E					
29	WARRIOR	1	CS	0.02	lb ai/a	2.56	fl oz/a	R2-R3	E					
29	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	R2-R3	E					
29	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"RG-2	H					
29	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-3"RG-2	H					
30	150,000 SEEDS/A									12.2 abc	48 hij	0 c	0 d	0 c
30	NONTREATED													
30	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R2-R3	E					
30	WARRIOR	1	CS	0.02	lb ai/a	2.56	fl oz/a	R2-R3	E					
30	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	R2-R3	E					

LSD (P=.05)

0.25 5.2 2.2 0.8 0.8

Replicate F

3.726 8.222 3.691 1.045 3.152

Replicate Prob(F)

0.0143 0.0001 0.0214 0.3857 0.0378

Treatment F

2.282 28.161 4469.323 30774.769 32268.652

Treatment Prob(F)

0.0017 0.0001 0.0001 0.0001 0.0001

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

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									SETFA	AMATA	IPOSS	PANDI	DIGSA	ABUTH	TTTTT
Pest Code									10-01-09	10-01-09	10-01-09	10-01-09	10-01-09	10-01-09	10-01-09
Crop Code									Plants	Plants	Plants	Plants	Plants	Plants	Biomass-ODW
Rating Date									0.5 m2	0.5 m2	0.5 m2	0.5 m2	0.5 m2	0.5 m2	g/0.5 m2
Rating Data Type															
Rating Unit									EOS	EOS	EOS	EOS	EOS	EOS	EOS
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						
1	50,000 SEEDS/A														
1	WEED FREE														
1	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A						
1	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	PRE	A						
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	IF-NEED	F						
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	IF-NEED	F						
1	HANDWEED														
2	50,000 SEEDS/A														
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	B						
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"RG-1	G						
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-3"RG-1	G						
3	50,000 SEEDS/A														
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"W	C						
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	8-12"W	C						
4	50,000 SEEDS/A														
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	>18"W	D						
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	>18"W	D						
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"RG-2	H						
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-3"RG-2	H						
5	50,000 SEEDS/A									10.0 a	22.4 a	1.3 a	7.6 a	7.5 a	1.3 a
5	NONTREATED														105 a
6	100,000 SEEDS/A														
6	WEED FREE														
6	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A						
6	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	PRE	A						
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	IF-NEED	F						
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	IF-NEED	F						
6	HANDWEED														
7	100,000 SEEDS/A														
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	B						
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"RG-1	G						
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-3"RG-1	G						
8	100,000 SEEDS/A														
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"W	C						
8	N-PAK AMS	100	SL	5	% v/v	5	% v/v	8-12"W	C						
9	100,000 SEEDS/A														
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	>18"W	D						
9	N-PAK AMS	100	SL	5	% v/v	5	% v/v	>18"W	D						
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"RG-2	H						
9	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-3"RG-2	H						
10	100,000 SEEDS/A									2.6 a	29.5 a	0.5 a	10.5 a	2.1 a	0.0 a
10	NONTREATED														94 a
11	150,000 SEEDS/A														
11	WEED FREE														
11	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A						
11	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	PRE	A						
11	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	IF-NEED	F						
11	N-PAK AMS	100	SL	5	% v/v	5	% v/v	IF-NEED	F						
11	HANDWEED														
12	150,000 SEEDS/A														
12	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	B						
12	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
12	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"RG-1	G						
12	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-3"RG-1	G						
13	150,000 SEEDS/A														
13	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"W	C						
13	N-PAK AMS	100	SL	5	% v/v	5	% v/v	8-12"W	C						

Influence of Weed Management on Optimal Soybean Seed Rates.

Trial ID: 09-T2-S240

Location: Belleville Res. Center

									SETFA	AMATA	IPOSS	PANDI	DIGSA	ABUTH	TTTTT
Pest Code									10-01-09	10-01-09	10-01-09	10-01-09	10-01-09	10-01-09	10-01-09
Crop Code									Plants	Plants	Plants	Plants	Plants	Plants	Biomass-ODW
Rating Date									0.5 m2	0.5 m2	0.5 m2	0.5 m2	0.5 m2	0.5 m2	g/0.5 m2
Rating Data Type															
Rating Unit									EOS	EOS	EOS	EOS	EOS	EOS	EOS
Rating Timing															
Trt-Eval Interval															
Trt	Treatment	Form	Form	Rate	Other	Other	Growth	Appl							
No.	Name	Conc	Type	Unit	Rate	Rate	Stage	Code							
14	150,000 SEEDS/A														
14	ROUNDUP POWERMAX	4.5	SL	0.77 lb ae/a	22 fl oz/a	>18"W	D								
14	N-PAK AMS	100	SL	5 % v/v	5 % v/v	>18"W	D								
14	ROUNDUP POWERMAX	4.5	SL	0.77 lb ae/a	22 fl oz/a	2-3"RG-2	H								
14	N-PAK AMS	100	SL	5 % v/v	5 % v/v	2-3"RG-2	H								
15	150,000 SEEDS/A								0.9 a	16.4 a	1.9 a	4.1 a	1.4 a	0.5 a	87 a
15	NONTREATED														
16	50,000 SEEDS/A														
16	WEED FREE														
16	SONIC	70	WG	0.28 lb ai/a	6.4 oz/a	PRE	A								
16	PROWL H2O	3.8	CS	1.19 lb ai/a	2.5 pt/a	PRE	A								
16	ROUNDUP POWERMAX	4.5	SL	0.77 lb ae/a	22 fl oz/a	IF-NEED	F								
16	N-PAK AMS	100	SL	5 % v/v	5 % v/v	IF-NEED	F								
16	HANDWEED														
16	HEADLINE	2.09	EC	0.098 lb ai/a	6 fl oz/a	R2-R3	E								
16	WARRIOR	1	CS	0.02 lb ai/a	2.56 fl oz/a	R2-R3	E								
16	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v	R2-R3	E								
17	50,000 SEEDS/A														
17	ROUNDUP POWERMAX	4.5	SL	0.77 lb ae/a	22 fl oz/a	4-6"W	B								
17	N-PAK AMS	100	SL	5 % v/v	5 % v/v	4-6"W	B								
17	HEADLINE	2.09	EC	0.098 lb ai/a	6 fl oz/a	R2-R3	E								
17	WARRIOR	1	CS	0.02 lb ai/a	2.56 fl oz/a	R2-R3	E								
17	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v	R2-R3	E								
17	ROUNDUP POWERMAX	4.5	SL	0.77 lb ae/a	22 fl oz/a	2-3"RG-1	G								
17	N-PAK AMS	100	SL	5 % v/v	5 % v/v	2-3"RG-1	G								
18	50,000 SEEDS/A														
18	ROUNDUP POWERMAX	4.5	SL	0.77 lb ae/a	22 fl oz/a	8-12"W	C								
18	N-PAK AMS	100	SL	5 % v/v	5 % v/v	8-12"W	C								
18	HEADLINE	2.09	EC	0.098 lb ai/a	6 fl oz/a	R2-R3	E								
18	WARRIOR	1	CS	0.02 lb ai/a	2.56 fl oz/a	R2-R3	E								
18	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v	R2-R3	E								
19	50,000 SEEDS/A														
19	ROUNDUP POWERMAX	4.5	SL	0.77 lb ae/a	22 fl oz/a	>18"W	D								
19	N-PAK AMS	100	SL	5 % v/v	5 % v/v	>18"W	D								
19	HEADLINE	2.09	EC	0.098 lb ai/a	6 fl oz/a	R2-R3	E								
19	WARRIOR	1	CS	0.02 lb ai/a	2.56 fl oz/a	R2-R3	E								
19	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v	R2-R3	E								
19	ROUNDUP POWERMAX	4.5	SL	0.77 lb ae/a	22 fl oz/a	2-3"RG-2	H								
19	N-PAK AMS	100	SL	5 % v/v	5 % v/v	2-3"RG-2	H								
20	50,000 SEEDS/A														
20	NONTREATED														
20	HEADLINE	2.09	EC	0.098 lb ai/a	6 fl oz/a	R2-R3	E								
20	WARRIOR	1	CS	0.02 lb ai/a	2.56 fl oz/a	R2-R3	E								
20	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v	R2-R3	E								
21	100,000 SEEDS/A														
21	WEED FREE														
21	SONIC	70	WG	0.28 lb ai/a	6.4 oz/a	PRE	A								
21	PROWL H2O	3.8	CS	1.19 lb ai/a	2.5 pt/a	PRE	A								
21	ROUNDUP POWERMAX	4.5	SL	0.77 lb ae/a	22 fl oz/a	IF-NEED	F								
21	N-PAK AMS	100	SL	5 % v/v	5 % v/v	IF-NEED	F								
21	HANDWEED														
21	HEADLINE	2.09	EC	0.098 lb ai/a	6 fl oz/a	R2-R3	E								
21	WARRIOR	1	CS	0.02 lb ai/a	2.56 fl oz/a	R2-R3	E								
21	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v	R2-R3	E								
22	100,000 SEEDS/A														
22	ROUNDUP POWERMAX	4.5	SL	0.77 lb ae/a	22 fl oz/a	4-6"W	B								
22	N-PAK AMS	100	SL	5 % v/v	5 % v/v	4-6"W	B								
22	HEADLINE	2.09	EC	0.098 lb ai/a	6 fl oz/a	R2-R3	E								
22	WARRIOR	1	CS	0.02 lb ai/a	2.56 fl oz/a	R2-R3	E								
22	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v	R2-R3	E								
22	ROUNDUP POWERMAX	4.5	SL	0.77 lb ae/a	22 fl oz/a	2-3"RG-1	G								
22	N-PAK AMS	100	SL	5 % v/v	5 % v/v	2-3"RG-1	G								

Influence of Weed Management on Optimal Soybean Seed Rates.

Trial ID: 09-T2-S240

Location: Belleville Res. Center

									SETFA	AMATA	IPOSS	PANDI	DIGSA	ABUTH	TTTTT
Pest Code									10-01-09	10-01-09	10-01-09	10-01-09	10-01-09	10-01-09	10-01-09
Crop Code									Plants	Plants	Plants	Plants	Plants	Plants	Biomass-ODW
Rating Date									0.5 m2	0.5 m2	0.5 m2	0.5 m2	0.5 m2	0.5 m2	g/0.5 m2
Rating Data Type															
Rating Unit									EOS	EOS	EOS	EOS	EOS	EOS	EOS
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						
23	100,000 SEEDS/A														
23	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"W	C						
23	N-PAK AMS	100	SL	5	% v/v	5	% v/v	8-12"W	C						
23	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R2-R3	E						
23	WARRIOR	1	CS	0.02	lb ai/a	2.56	fl oz/a	R2-R3	E						
23	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	R2-R3	E						
24	100,000 SEEDS/A														
24	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	>18"W	D						
24	N-PAK AMS	100	SL	5	% v/v	5	% v/v	>18"W	D						
24	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R2-R3	E						
24	WARRIOR	1	CS	0.02	lb ai/a	2.56	fl oz/a	R2-R3	E						
24	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	R2-R3	E						
24	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"RG-2	H						
24	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-3"RG-2	H						
25	100,000 SEEDS/A														
25	NONTREATED														
25	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R2-R3	E						
25	WARRIOR	1	CS	0.02	lb ai/a	2.56	fl oz/a	R2-R3	E						
25	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	R2-R3	E						
26	150,000 SEEDS/A														
26	WEED FREE														
26	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A						
26	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	PRE	A						
26	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	IF-NEED	F						
26	N-PAK AMS	100	SL	5	% v/v	5	% v/v	IF-NEED	F						
26	HANDWEED														
26	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R2-R3	E						
26	WARRIOR	1	CS	0.02	lb ai/a	2.56	fl oz/a	R2-R3	E						
26	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	R2-R3	E						
27	150,000 SEEDS/A														
27	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W	B						
27	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
27	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R2-R3	E						
27	WARRIOR	1	CS	0.02	lb ai/a	2.56	fl oz/a	R2-R3	E						
27	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	R2-R3	E						
27	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"RG-1	G						
27	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-3"RG-1	G						
28	150,000 SEEDS/A														
28	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"W	C						
28	N-PAK AMS	100	SL	5	% v/v	5	% v/v	8-12"W	C						
28	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R2-R3	E						
28	WARRIOR	1	CS	0.02	lb ai/a	2.56	fl oz/a	R2-R3	E						
28	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	R2-R3	E						
29	150,000 SEEDS/A														
29	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	>18"W	D						
29	N-PAK AMS	100	SL	5	% v/v	5	% v/v	>18"W	D						
29	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R2-R3	E						
29	WARRIOR	1	CS	0.02	lb ai/a	2.56	fl oz/a	R2-R3	E						
29	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	R2-R3	E						
29	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"RG-2	H						
29	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-3"RG-2	H						
30	150,000 SEEDS/A														
30	NONTREATED														
30	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R2-R3	E						
30	WARRIOR	1	CS	0.02	lb ai/a	2.56	fl oz/a	R2-R3	E						
30	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	R2-R3	E						
LSD (P=.05)									16.75	22.09	1.51	14.89	16.06	2.18	37.1
Replicate F									0.801	1.021	0.615	0.557	0.830	2.579	1.513
Replicate Prob(F)									0.5371	0.4470	0.6302	0.6623	0.5240	0.1492	0.3042
Treatment F									1.001	1.060	2.505	0.551	0.518	1.000	0.711
Treatment Prob(F)									0.4215	0.4035	0.1619	0.6031	0.6202	0.4219	0.5284

Location: Belleville Res. Center

Pest Code	SETFA	AMATA	IPOSS	PANDI	DIGSA	ABUTH	TTTTT
Crop Code							
Rating Date	10-01-09	10-01-09	10-01-09	10-01-09	10-01-09	10-01-09	10-01-09
Rating Data Type	Plants	Plants	Plants	Plants	Plants	Plants	Biomass-ODW
Rating Unit	0.5 m2	0.5 m2	0.5 m2	0.5 m2	0.5 m2	0.5 m2	g/0.5 m2
Rating Timing							
Trt-Eval Interval	EOS	EOS	EOS	EOS	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: ISA.
2. Ratings: WC at B timing and 21 da D.
3. Yield.
4. Consider weed counts or biomass per plot for data collection.
5. Blanket POST application of Roundup PowerMax (22 fl oz/A) + N-Pak AMS (5 %v/v), as needed, at 2-3 inch weed regrowth to maintain weed-free following the initial herbicide application, for all treatments except the nontreated weedy checks. The 2-3 inch weed regrowth application were required following the 4-6"W (B) and >18"W (D) timings and were added to the treatment list and site description as 2-3"RG-1 (G) and 2-3"RG-2 (H), respectively.
6. EOS = End of season. Plants 0.5 m² = Plants per 0.5 square meter. g/0.5 m² = Grams per 0.5 square meter. TTTT = Weeds generally, all species combined. Biomass-ODW = Oven dry weight of harvested plants.
7. Harvested 11-4-09. (4) 15 inch rows by 29 ft.