

Evaluation of FBS 1032 in Soybean for Efficacy, Yield and Quality.

Trial ID: 10-52-W30

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: 06-07-10

Objectives: Evaluate FBS and Kafe on soybean for weed control efficacy with glyphosate and effect on soybean growth and yield.

Crop 1: GLXMA Soybean Variety: AG 4404 Description: RR
 Planting Method: SEEDED Planting Date: 06-07-10
 Rate, Unit: 75 LB/A Depth, Unit: 1.0 IN
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: GGGAN grasses, annual
 Pest 2 Type: W Code: XANST Xanthium strumarium L. cocklebur, common
 Pest 3 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common
 Pest 4 Type: W Code: ABUTH Abutilon theophrasti Medicus velvetleaf
 Pest 5 Type: W Code: IPOHE Ipomoea hederacea (L.) Jacq. morningglory, ivyleaf

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 25 FT Tillage Type: REDUCED-TILL
 Replications: 4 Study Design: Randomized Complete Block

Prior Crops, Year
 1. ZEAMD 2009

Field Prep./Maintenance: N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

% OM: 1.5 Texture: SILT LOAM
 pH: 7 Soil Name: PIERRON
 CEC: 7 Fert. Level: P1: 63 LB/A, K: 274 LB/A

Application Description

Application Date: 07-14-10
 Time of Day: 8:00
 Application Method: Spray
 Application Timing: V7-R1
 Application Placement: BROFOL
 Applied By: JRK
 Air Temperature, Unit: 80 F
 % Relative Humidity: 92
 Wind Velocity, Unit: 1 MPH
 Wind Direction: E
 Dew Presence (Y/N): Y
 Soil Moisture: NORMAL
 % Cloud Cover: 70

Crop stage at application: 07-14-10
 Height Min, Max (inch): R1
 15 22

Pest Stage At Each Application

Application Date: 07-14-10
 Weed Code: GGGAN
 Stage Majority (leaves): 3
 Stage Min, Max: 1 4
 Height Majority: 3 IN
 Height Min, Max: 0.5 5
 Density, Unit: 0.01 FT2
 Weed Code: XANST
 Stage Majority (leaves): 2
 Stage Min, Max: COTY 4
 Height Majority: 1 IN
 Height Min, Max: 1 2
 Density, Unit: 0.01 FT2
 Weed Code: AMATA
 Stage Majority (leaves): 6
 Stage Min, Max: COTY 12
 Height Majority: 4 IN
 Height Min, Max: 6 1
 Density, Unit: 0.01 FT2
 Weed Code: ABUTH
 Stage Majority (leaves): 4
 Stage Min, Max: 2 6
 Height Majority: 4 IN
 Height Min, Max: 3 5
 Density, Unit: 0.01 FT2
 Weed Code: IPOHE
 Stage Majority (leaves): 5
 Stage Min, Max: COTY 10
 Height Majority: 6 IN
 Height Min, Max: 1 12
 Density, Unit: 0.1 FT2

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Application Equipment

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

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Pest Code		GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Crop Code		10-11-10	10-11-10	10-11-10	10-11-10	10-11-10	07-21-10	07-28-10
Rating Date		Protein	Grain Oil	Moisture	Test wt.	Yield	Injury	Injury
Rating Data Type		Percent	Percent	Percent	lb/bu	bu/A	Percent	Percent
Rating Unit								
Rating Timing								
Trt-Eval Interval		98 DA-A	98 DA-A				7 DA-A	14 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Other Rate	Other Rate	Growth Stage	Appl Code								
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V7-R1	A	39.3	b	18.8	a	11.8	a	56.0	a
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V7-R1	A							53	ab
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V7-R1	A	39.9	a	18.6	a	11.8	a	56.0	a
2	FBS 1032	100	SL	32	fl oz/a	32	fl oz/a	V7-R1	A							50	b
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V7-R1	A							0	a
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V7-R1	A	39.5	ab	18.5	a	11.6	a	56.1	a
3	MAX-IN MN	100	SL	32	fl oz/a	32	fl oz/a	V7-R1	A							51	ab
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V7-R1	A							0	a
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V7-R1	A	39.4	b	18.4	a	12.2	a	56.1	a
4	MAX-IN MN	100	SL	32	fl oz/a	32	fl oz/a	V7-R1	A							54	a
4	FBS 1030	100	SL	6	fl oz/a	6	fl oz/a	V7-R1	A							0	a
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V7-R1	A							0	a
5	NONTREATED									39.2	b	18.5	a	11.9	a	56.1	a
LSD (P=.05)										0.53		0.72		0.67		0.61	
Replicate F										0.837		0.922		0.781		0.382	
Replicate Prob(F)										0.4989		0.4598		0.5271		0.7676	
Treatment F										2.493		0.521		0.844		0.059	
Treatment Prob(F)										0.0988		0.7221		0.5235		0.9927	

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

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Pest Code																			
Crop Code																			
Rating Date																			
Rating Data Type																			
Rating Unit																			
Rating Timing																			
Trt-Eval Interval																			
		GLXMA 07-14-10 Vigor 1-10			GLXMA 08-04-10 Vigor 1-10			GLXMA 08-25-10 Vigor 1-10			GLXMA 07-14-10 GrowthStage R			GLXMA 08-04-10 GrowthStage R			GLXMA 08-25-10 GrowthStage R		
		0 DA-A			21 DA-A			42 DA-A			0 DA-A			21 DA-A			42 DA-A		
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code											
1	ROUNDUP POWERMAX	4.5	SL	0.77 lb ae/a	22 fl oz/a	V7-R1	A		8.0 a	7.5 ab	7.0 a	1.0 a	3.0 a	5.0 a					
1	N-PAK AMS	100	SL	5 % v/v	5 % v/v	V7-R1	A												
2	ROUNDUP POWERMAX	4.5	SL	0.77 lb ae/a	22 fl oz/a	V7-R1	A		8.0 a	8.0 a	7.0 a	1.0 a	3.0 a	5.0 a					
2	FBS 1032	100	SL	32 fl oz/a	32 fl oz/a	V7-R1	A												
2	N-PAK AMS	100	SL	5 % v/v	5 % v/v	V7-R1	A												
3	ROUNDUP POWERMAX	4.5	SL	0.77 lb ae/a	22 fl oz/a	V7-R1	A		8.0 a	7.5 ab	7.3 a	1.0 a	3.0 a	5.0 a					
3	MAX-IN MN	100	SL	32 fl oz/a	32 fl oz/a	V7-R1	A												
3	N-PAK AMS	100	SL	5 % v/v	5 % v/v	V7-R1	A												
4	ROUNDUP POWERMAX	4.5	SL	0.77 lb ae/a	22 fl oz/a	V7-R1	A		8.0 a	7.5 ab	7.3 a	1.0 a	3.0 a	5.0 a					
4	MAX-IN MN	100	SL	32 fl oz/a	32 fl oz/a	V7-R1	A												
4	FBS 1030	100	SL	6 fl oz/a	6 fl oz/a	V7-R1	A												
4	N-PAK AMS	100	SL	5 % v/v	5 % v/v	V7-R1	A												
5	NONTREATED								8.0 a	7.0 b	7.3 a	1.0 a	3.0 a	5.0 a					
LSD (P=.05)									0.00	0.97	0.64	0.00	0.00	0.00					
Replicate F									0.000	0.167	0.286	0.000	0.000	0.000					
Replicate Prob(F)									1.0000	0.9168	0.8348	1.0000	1.0000	1.0000					
Treatment F									0.000	1.250	0.429	0.000	0.000	0.000					
Treatment Prob(F)									1.0000	0.3420	0.7854	1.0000	1.0000	1.0000					

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Pest Code Crop Code Rating Date Rating Data Type Rating Unit Rating Timing Trt-Eval Interval									GGGAN	GGGAN	XANST	XANST	AMATA	AMATA	ABUTH	ABUTH
									07-28-10	08-04-10	07-28-10	08-04-10	07-28-10	08-04-10	07-28-10	08-04-10
									Control	Control	Control	Control	Control	Control	Control	Control
									Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
									14 DA-A	21 DA-A	14 DA-A	21 DA-A	14 DA-A	21 DA-A	14 DA-A	21 DA-A
Trt	Treatment	Form	Form	Rate	Other	Other	Growth	Appl								
No.	Name	Conc	Type	Rate	Unit	Rate	Rate	Unit	Stage	Code						
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V7-R1	A		99 a	99 a	99 a	98 a	99 a	99 a
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V7-R1	A							
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V7-R1	A		99 a	99 a	98 a	98 a	99 a	99 a
2	FBS 1032	100	SL	32	fl oz/a	32	fl oz/a	V7-R1	A							
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V7-R1	A							
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V7-R1	A		99 a	99 a	98 a	96 a	99 a	99 a
3	MAX-IN MN	100	SL	32	fl oz/a	32	fl oz/a	V7-R1	A							
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V7-R1	A							
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V7-R1	A		99 a	98 a	98 a	97 a	99 a	99 a
4	MAX-IN MN	100	SL	32	fl oz/a	32	fl oz/a	V7-R1	A							
4	FBS 1030	100	SL	6	fl oz/a	6	fl oz/a	V7-R1	A							
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V7-R1	A							
5	NONTREATED										96 b	91 b	91 b	87 b	95 b	92 b
LSD (P=.05)											0.7	1.9	3.5	5.8	2.6	3.5
Replicate F											1.000	1.397	1.280	1.201	1.000	1.000
Replicate Prob(F)											0.4262	0.2915	0.3256	0.3513	0.4262	0.4262
Treatment F											49.000	29.317	7.426	5.998	4.571	6.943
Treatment Prob(F)											0.0001	0.0001	0.0030	0.0069	0.0179	0.0039

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

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Pest Code		IPOHE	IPOHE
Crop Code			
Rating Date		07-28-10	08-04-10
Rating Data Type		Control	Control
Rating Unit		Percent	Percent
Rating Timing			
Trt-Eval Interval		14 DA-A	21 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code		
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V7-R1	A	85 a	83 a
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V7-R1	A		
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V7-R1	A	75 b	72 b
2	FBS 1032	100	SL	32	fl oz/a	32	fl oz/a	V7-R1	A		
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V7-R1	A		
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V7-R1	A	73 b	71 b
3	MAX-IN MN	100	SL	32	fl oz/a	32	fl oz/a	V7-R1	A		
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V7-R1	A		
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V7-R1	A	75 b	71 b
4	MAX-IN MN	100	SL	32	fl oz/a	32	fl oz/a	V7-R1	A		
4	FBS 1030	100	SL	6	fl oz/a	6	fl oz/a	V7-R1	A		
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V7-R1	A		
5	NONTREATED									66 c	61 c
LSD (P=.05)										4.9	6.1
Replicate F										4.817	1.666
Replicate Prob(F)										0.0200	0.2268
Treatment F										16.721	14.673
Treatment Prob(F)										0.0001	0.0001

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

Trial Comments

1. Protocol: Floratine BioSciences.
2. Ratings: CI at 7 and 14 DAT; Crop vigor and soybean growth stage at 0, 21, and 42 DAT. WC at 14 and 21 DAT.
3. Yield, test weight, % moisture, protien (rep 2 and 4 combined and send to FBSciences).
4. Blanket application of Roundup PowerMax (22 fl oz/A) plus liquid AMS (5% v/v) was applied to all plots 10 ft wide at V3 soybean on 6-30-10.
5. Weed control in treatment 5 (nontreated) is result of the blanket application on 6-30-10.
6. GGGAN = Annual grasses including SETFA (giant foxtail) and PANDI (fall panicum). GrowthStage, R = Soybean reproductive growth stage. Soybean vigor scale is 1-10, 1 = dead, 10 = very vigorous.
7. Harvested 10-11-10, (2) 30 inch rows by 22 ft.