

Liberty Link and Roundup Ready Soybean Yield Comparison.

Trial ID: 08-T4-N135 Location: Belleville Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Belleville IL USA
 Trial Status: FINAL Initiation Date: 06-18-08

Objectives: To compare soybean yield with herbicide systems in glyphosate-resistant and glufosinate-resistant soybean.

Crop 1: GLXMA Soybean Variety: SG3888 LL
 Planting Method: SEEDED Planting Date: 06-18-08
 Rate, Unit: 90 LB/A Depth, Unit: 1.0 IN
 Row Spacing, Unit: 15 IN Seed Bed: SMOOTH
 Soil Moisture: ABOVE NORMAL Soil Temp, Unit: 83 F

Crop 2: GLXMA Soybean Variety: AG3905 RR
 Planting Method: SEEDED Planting Date: 06-18-08
 Rate, Unit: 90 LB/A Depth, Unit: 1.0 IN
 Row Spacing, Unit: 15 IN Seed Bed: SMOOTH
 Soil Moisture: ABOVE NORMAL Soil Temp, Unit: 83 F

Pest 1 Type: W Code: IPOSS Ipomoea sp. morningglory, species

Plot Width, Unit: 30 FT Site Type: FIELD
 Plot Length, Unit: 50 FT Tillage Type: REDUCED-TILL
 Replications: 6 Study Design: Non-Randomized

Prior Crops, Year
 1. GLXMA 2007

Field Prep./Maintenance: N 0 LB/A, P205 0 LB/A, K20 150 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
Application Date:	06-18-08	07-15-08	08-05-08
Time of Day:	10:00	8:30	17:30
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	22DAE	44DAE
Application Placement:	BROSOI	BROFOL	BROFOL
Air Temperature, Unit:	88 F	80 F	92 F
% Relative Humidity:	60	68	78
Wind Velocity, Unit:	1 MPH	1 MPH	1 MPH
Dew Presence (Y/N):	N	Y	N
Soil Temperature, Unit:	83 F	80 F	90 F
Soil Moisture:	ABONOR	ABONOR	ABONOR
% Cloud Cover:	10	5	90

	A	B	C
Crop stage at application:	NA	V4	R2
Height Min, Max (inch):		6 10	18 25
Crop stage at application:	NA	V3	R2
Height Min, Max (inch):		6 7	18 24

Pest Stage At Each Application

	A	B	C
Application Date:	06-18-08	07-15-08	08-05-08
Weed Code:	IPOSS	IPOSS	IPOSS
Stage Majority (leaves):	NA	4	4
Stage Min, Max:		COTY 12	2 10
Height Majority:		3	IN 4 IN
Height Min, Max:		1	10 3 8
Density, Unit:		1 FT2	1 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	30 PSI	30 PSI	30 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan
Nozzle Size:	XR 8002	XR 8002	XR 8002
Boom Length, Unit:	10 FT	10 FT	10 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

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Pest Code												IPOSS	IPOSS	IPOSS											
Crop Code												GLXMA	GLXMA	GLXMA											
Rating Date												11-01-08	11-01-08	07-15-08	07-29-08	08-19-08									
Rating Data Type												Moisture	Yield	Injury	Injury	Injury	Control	Control	Control						
Rating Unit												Percent	bu/A	Percent	Percent	Percent	Percent	Percent	Percent						
Rating Timing												27 DA-A	-7 DA-C	14 DA-B	14 DA-C	27 DA-A	-7 DA-C	14 DA-C	14 DA-C						
Trt-Eval Interval												0 DA-B	14 DA-B	35 DA-B	0 DA-B	14 DA-B	35 DA-B	35 DA-B							
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code																
1	ASGROW 3905 RR									12.3	a	60	a	0	a	0	a	0	a	68	a	72	a	85	a
1	SONIC	70	WG	0.131	lb ai/a	3.0	oz/a	PRE	A																
1	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	22DAE	B																
1	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B																
1	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	44DAE	C																
1	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	C																
2	SG3888 LL									12.3	a	56	b	0	a	0	a	0	a	62	b	54	b	74	b
2	SONIC	70	WG	0.131	lb ai/a	3.0	oz/a	PRE	A																
2	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	22DAE	B																
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	22DAE	B																
2	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	44DAE	C																
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	44DAE	C																
LSD (P=.05)										0.35		1.9		0.0		0.0		0.0		5.3		6.5		6.0	
Treatment F										0.101		26.191		0.000		0.000		0.000		8.000		36.148		15.943	
Treatment Prob(F)										0.7568		0.0005		1.0000		1.0000		1.0000		0.0179		0.0001		0.0025	

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

Trial Comments

1. Protocol: Bayer (MRE).
2. Ratings: CI/WC at 0 and 14 da"B" and 14 and 35 da"C".
3. For each crop and weed at each application, document the stage of growth (leaves), height, and % ground cover.
4. At the Belleville Research Center the above normal rainfall in spring 2008 (no more than four consecutive rain-free days between March 22 and June 15) delayed corn and soybean planting until mid-June.
Following the PRE application on June 18, rainfall was 0.29 inch 2 days later and 0.35 inch 9 days later.
5. DA-A = Days after PRE application. DA-B = Days after 22DAE application. DA-C = Days after 44DAE application.
IPOSS = Morningglory species including IPOHE and IPOLA.
6. The planned 35 DA-C rating was not made due to the late planting date delaying the rating until mid-September.
There were no changes in weed control following the 14 DA-C rating on 8-19-08.
7. Harvested 11-1-08, (8) 15 inch rows by 47 ft.