

Double-Crop Soybean Weed Control.

Trial ID: 09-ARC-5B-DC Location: Agronomy Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Carbondale IL 62901 USA
 Trial Status: FINAL Initiation Date: 06-25-09

Objectives: Evaluate Flexstar GT programs for crop tolerance, weed control,
 and soybean yield.

Crop 1: GLXMA Soybean Variety: FS 45T70 Description: RR/STS
 Planting Method: SEEDED Planting Date: 06-25-09
 Rate, Unit: 75 LB/A Depth, Unit: 1.0 IN
 Row Spacing, Unit: 15 IN

Pest 1 Type: W Code: IPOSS morningglory, species
 Pest 2 Type: W Code: PANDI Panicum dichotomiflorum Michx. panicum, fall
 Pest 3 Type: W Code: DIGSA Digitaria sanguinalis (L.) Scop. crabgrass, large

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 30 FT Tillage Type: NO-TILL
 Replications: 4 Study Design: Randomized Complete Block

Prior Crops, Year
 1. TRAZW 2009

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

% OM: 1.6 Texture: SILT LOAM
 pH: 6.1 Soil Name: WEIR
 CEC: 10 Fert. Level: P1: 26 LB/A, K: 177 LB/A

Application Description

	A	B
Application Date:	06-26-09	07-31-09
Time of Day:	15:00	10:00
Application Method:	Spray	Spray
Application Timing:	BURNDN	4-6"W
Application Placement:	BROFOL	BROFOL
Applied By:	DKT	DKT
Air Temperature, Unit:	93 F	80 F
% Relative Humidity:	51	50
Wind Velocity, Unit:	2 MPH	3 MPH
Wind Direction:	SW	W
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	84 F	78 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	60	60

	A	B
Crop stage at application:	NA	V4
Height Min, Max (inch):	8	10

Pest Stage At Each Application

	A	B
Application Date:	06-26-09	07-31-09
Weed Code:	IPOSS	IPOSS
Stage Majority (leaves):	4	8
Stage Min, Max:	2 8	2 22
Height Majority:	3 IN	5 IN
Height Min, Max:	1 4	2 12
Density, Unit:	0.1 FT2	4 FT2
Weed Code:	PANDI	PANDI
Stage Majority (leaves):	4	6
Stage Min, Max:	2 12	3 18
Height Majority:	6 IN	10 IN
Height Min, Max:	2 16	10 24
Density, Unit:	0.1 FT2	1 FT2
Weed Code:	DIGSA	DIGSA
Stage Majority (leaves):	6	6
Stage Min, Max:	2 16	4 14
Height Majority:	6 IN	6 IN
Height Min, Max:	2 12	2 10
Density, Unit:	0.1 FT2	2 FT2

Application Equipment

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

Double-Crop Soybean Weed Control.

Trial ID: 09-ARC-5B-DC

Location: Agronomy Res. Center

										GLXMA	GLXMA	GLXMA	IPOSS	IPOSS	IPOSS
										11-05-09	11-05-09	08-07-09	07-31-09	08-14-09	09-25-09
										Moisture	Yield	Injury	Control	Control	Control
										Percent	bu/A	Percent	Percent	Percent	Percent
												7 DA-B	35 DA-A	14 DA-B	56 DA-B
Trt	Treatment	Form	Form	Rate	Rate	Other	Other	Growth	Appl						
No.	Name	Conc	Type	Unit	Unit	Rate	Rate	Stage	Code						
1	FLEXSTAR GT	3.31	SL	0.93 lb ai/a	2.25 pt/a			BURNDN	A	11.1 b	43 a	3 a	86 c	99 a	99 a
1	MSO (DESTINY)	100	SL	1 % v/v	1 % v/v			BURNDN	A						
1	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			BURNDN	A						
1	FLEXSTAR GT	3.31	SL	0.93 lb ai/a	2.25 pt/a			4-6"W	B						
1	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			4-6"W	B						
2	FLEXSTAR GT	3.31	SL	1.24 lb ai/a	3 pt/a			BURNDN	A	11.0 b	46 a	0 b	91 b	98 ab	98 a
2	MSO (DESTINY)	100	SL	1 % v/v	1 % v/v			BURNDN	A						
2	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			BURNDN	A						
2	TOUCHDOWN TOTAL	4.17	SL	0.98 lb ae/a	30 fl oz/a			4-6"W	B						
2	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			4-6"W	B						
3	TOUCHDOWN TOTAL	4.17	SL	0.98 lb ae/a	30 fl oz/a			BURNDN	A	11.0 b	48 a	0 b	95 a	98 ab	99 a
3	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			BURNDN	A						
3	TOUCHDOWN TOTAL	4.17	SL	0.98 lb ae/a	30 fl oz/a			4-6"W	B						
3	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			4-6"W	B						
4	TOUCHDOWN TOTAL	4.17	SL	0.98 lb ae/a	30 fl oz/a			4-6"W	B	11.0 b	46 a	0 b		58 e	99 a
4	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			4-6"W	B						
5	TOUCHDOWN TOTAL	4.17	SL	0.98 lb ae/a	30 fl oz/a			BURNDN	A	11.1 b	44 a	0 b	90 b	91 bc	99 a
5	PREFIX	5.29	EC	1.32 lb ai/a	32 fl oz/a			BURNDN	A						
5	MSO (DESTINY)	100	SL	1 % v/v	1 % v/v			BURNDN	A						
5	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			BURNDN	A						
5	TOUCHDOWN TOTAL	4.17	SL	0.98 lb ae/a	30 fl oz/a			4-6"W	B						
5	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			4-6"W	B						
6	GRAMOXONE INTEON	2	SL	0.75 lb ai/a	48 fl oz/a			BURNDN	A	11.3 ab	47 a	0 b	90 b	91 c	99 a
6	SENCOR	75	WG	0.14 lb ai/a	3 oz/a			BURNDN	A						
6	COC (PRIME OIL)	100	SL	1 % v/v	1 % v/v			BURNDN	A						
6	TOUCHDOWN TOTAL	4.17	SL	0.98 lb ae/a	30 fl oz/a			4-6"W	B						
6	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			4-6"W	B						
7	NONTREATED									12.0 a	33 b	0 b	0 d	0 f	0 c
8	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a	32 fl oz/a			4-6"W	B	11.1 b	44 a	0 b		80 d	80 b
8	FIRSTRATE	84	WG	0.0158 lb ai/a	0.3 oz/a			4-6"W	B						
8	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			4-6"W	B						
LSD (P=.05)										0.71	6.6	0.0	3.2	6.9	2.2
Replicate F										0.736	2.641	0.000	2.468	1.908	1.000
Replicate Prob(F)										0.5421	0.0760	1.0000	0.1020	0.1592	0.4123
Treatment F										1.793	4.298	0.000	1187.054	209.533	2131.524
Treatment Prob(F)										0.1418	0.0043	1.0000	0.0001	0.0001	0.0001

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

Double-Crop Soybean Weed Control.

Trial ID: 09-ARC-5B-DC

Location: Agronomy Res. Center

										PANDI	PANDI	PANDI	DIGSA	DIGSA	DIGSA
Pest Code										07-31-09	08-14-09	09-25-09	07-31-09	08-14-09	09-25-09
Crop Code										Control	Control	Control	Control	Control	Control
Rating Date										Percent	Percent	Percent	Percent	Percent	Percent
Rating Data Type										35 DA-A	14 DA-B	56 DA-B	35 DA-A	14 DA-B	56 DA-B
Rating Unit										0 DA-B	14 DA-B	56 DA-B	0 DA-B	14 DA-B	56 DA-B
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	FLEXSTAR GT	3.31	SL	0.93	lb ai/a	2.25	pt/a	BURNDN	A	95 a	99 a	99 a	93 a	98 a	99 a
1	MSO (DESTINY)	100	SL	1	% v/v	1	% v/v	BURNDN	A						
1	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	BURNDN	A						
1	FLEXSTAR GT	3.31	SL	0.93	lb ai/a	2.25	pt/a	4-6"W	B						
1	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	B						
2	FLEXSTAR GT	3.31	SL	1.24	lb ai/a	3	pt/a	BURNDN	A	95 a	99 a	99 a	93 a	99 a	99 a
2	MSO (DESTINY)	100	SL	1	% v/v	1	% v/v	BURNDN	A						
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	BURNDN	A						
2	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	4-6"W	B						
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	B						
3	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	BURNDN	A	96 a	99 a	99 a	88 ab	99 a	99 a
3	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	BURNDN	A						
3	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	4-6"W	B						
3	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	B						
4	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	4-6"W	B		86 b	99 a		93 b	99 a
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	B						
5	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	BURNDN	A	95 a	99 a	99 a	93 a	99 a	99 a
5	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	BURNDN	A						
5	MSO (DESTINY)	100	SL	1	% v/v	1	% v/v	BURNDN	A						
5	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	BURNDN	A						
5	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	4-6"W	B						
5	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	B						
6	GRAMOXONE INTEON	2	SL	0.75	lb ai/a	48	fl oz/a	BURNDN	A	84 b	99 a	99 a	87 b	99 a	99 a
6	SENCOR	75	WG	0.14	lb ai/a	3	oz/a	BURNDN	A						
6	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	BURNDN	A						
6	TOUCHDOWN TOTAL	4.17	SL	0.98	lb ae/a	30	fl oz/a	4-6"W	B						
6	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	B						
7	NONTREATED									0 c	0 c	0 b	0 c	0 c	0 b
8	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	4-6"W	B		98 a	99 a		99 a	99 a
8	FIRSTRATE	84	WG	0.0158	lb ai/a	0.3	oz/a	4-6"W	B						
8	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	B						
LSD (P=.05)										2.0	4.3	0.0	5.6	2.0	0.0
Replicate F										1.019	0.746	0.000	0.691	0.900	0.000
Replicate Prob(F)										0.4121	0.5369	1.0000	0.5718	0.4579	1.0000
Treatment F										3238.371	567.258	0.000	405.719	2535.865	0.000
Treatment Prob(F)										0.0001	0.0001	1.0000	0.0001	0.0001	1.0000

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

Trial Comments

1. Protocol: Syngenta (SC051A4).
2. Ratings: CI at 7 DA-B; WC at 0, 14, 28 and 56 DA-B.
3. Yield.
4. IPOSS = Morningglory species including IPOHE (ivyleaf morningglory) and IPOLA (pitted morningglory).
5. The planned 28 DA-B rating was not made due to an oversight.
6. Harvested 11-5-09, (4) 15 inch rows by 27 ft.