

Star-of-Bethlehem Control in a Corn/Soybean Rotation.

Project Code: 03-Dahmer-N100 Location: Marion, IL

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Marion IL 62959 USA
 Trial Status: Established Updated: 9-2-03

Objective:

Determine the effectiveness of a corn/soybean rotation on control of star-of-Bethlehem.

Weed Code	Common Name	Scientific Name
1. OTGUM	star-of-Bethlehem	Ornithogalum umbellatum L.
2. LAMPU	deadnettle, purple	Lamium purpureum L.

Crop 1: ZEAMX corn, field
 Planting Method: Seeded
 Row Spacing: 30 IN

Crop 2: GLXMA soybean
 Planting Method: Seeded
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 30 FT Reps: 4
 Tillage Type: No-Till Study Design: Randomized complete block

Field Prep./Maintenance: N ___ LB/A, P205 ___ LB/A, K20 ___ LB/A in 2002
 N ___ LB/A, P205 ___ LB/A, K20 ___ LB/A in 2003

APPLICATION DESCRIPTION

	A	B
Application Date:	4-11-02	4-18-03
Time of Day:	16:30	9:00
Application Method:	Spray	Spray
Application Timing:	28EPP-1	28EPP-2
Applic. Placement:	BROFOL	BROFOL
Air Temp., Unit:	78 F	53 F
% Relative Humidity:	22	85
Wind Velocity, Unit:	3-5 MPH	1-2 MPH
Dew Presence (Y/N):	N	Y
Soil Temp., Unit:	60 F	57 F
Soil Moisture:	NORMAL	ABONOR
% Cloud Cover:	20	100

CROP STAGE AT EACH APPLICATION

	A		B	
Crop 1 Code, Stage:	ZEAMX	NA	ZEAMX	NA
Height, Unit:	NA	NA	NA	NA
Crop 2 Code, Stage:	GLXMA	NA	GLXMA	NA
Height, Unit:	NA	NA	NA	NA

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code:	OTGUM	OTGUM
Stage(leaves):	5-6	20+
Height(inches):	6-8	6-8
Density:	High	High
Weed 2 Code:	LAMPU	LAMPU
Stage(leaves):	16-20	
Height(inches):	6-12	
Density:	High	

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan
Nozzle Size:	8003	8003
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	20 GPA	20 GPA

NOTES:

Not harvested.

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Weed Code		OTGUM	OTGUM	OTGUM	LAMPU
Crop Code					
Rating Data Type		Control	Control	Control	Control
Rating Unit		Percent	Percent	Percent	Percent
Rating Date		4-25-02	3-24-03	5-2-03	4-25-02
Trt-Eval Interval		14 DA-A	347 DA-A	14 DA-B	14 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code				
1	CORN IN 2002									0	0	0	0
1	NONTREATED												
1	SOYBEAN IN 2003												
1	NONTREATED												
2	CORN IN 2002									39	15	43	38
2	ROUNDUP ULTRA MAX	3.7	SL	0.375	LB AE/A	13	OZ/A	28EPP-1	A				
2	AMS	100	DRY	2.0	% W/W	2	% W/W	28EPP-1	A				
2	SOYBEAN IN 2003												
2	ROUNDUP ULTRA MAX	3.7	SL	0.375	LB AE/A	13	OZ/A	28EPP-2	B				
2	AMS	100	DRY	2.0	% W/W	2	% W/W	28EPP-2	B				
3	CORN IN 2002									48	15	54	75
3	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	28EPP-1	A				
3	AMS	100	DRY	2.0	% W/W	2	% W/W	28EPP-1	A				
3	SOYBEAN IN 2003												
3	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	28EPP-2	B				
3	AMS	100	DRY	2.0	% W/W	2	% W/W	28EPP-2	B				
4	CORN IN 2002									55	29	63	80
4	ROUNDUP ULTRA MAX	3.7	SL	1.13	LB AE/A	39	OZ/A	28EPP-1	A				
4	AMS	100	DRY	2.0	% W/W	2	% W/W	28EPP-1	A				
4	SOYBEAN IN 2003												
4	ROUNDUP ULTRA MAX	3.7	SL	1.13	LB AE/A	39	OZ/A	28EPP-2	B				
4	AMS	100	DRY	2.0	% W/W	2	% W/W	28EPP-2	B				
5	CORN IN 2002									50	16	51	90
5	ROUNDUP ULTRA MAX	3.7	SL	1.5	LB AE/A	52	OZ/A	28EPP-1	A				
5	AMS	100	DRY	2.0	% W/W	2	% W/W	28EPP-1	A				
5	SOYBEAN IN 2003												
5	ROUNDUP ULTRA MAX	3.7	SL	1.5	LB AE/A	52	OZ/A	28EPP-2	B				
5	AMS	100	DRY	2.0	% W/W	2	% W/W	28EPP-2	B				
6	CORN IN 2002									48	3	3	35
6	SALVO	5	EC	0.5	LB AE/A	12.8	OZ/A	28EPP-1	A				
6	SOYBEAN IN 2003												
6	SALVO	5	EC	0.5	LB AE/A	12.8	OZ/A	28EPP-2	B				
7	CORN IN 2002									54	3	0	43
7	SALVO	5	EC	1.0	LB AE/A	25.6	OZ/A	28EPP-1	A				
7	SOYBEAN IN 2003												
7	SALVO	5	EC	1.0	LB AE/A	25.6	OZ/A	28EPP-2	B				

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Rating Unit		Percent	Percent	Percent	Percent
Rating Date		4-25-02	3-24-03	5-2-03	4-25-02
Trt-Eval Interval		14 DA-A	347 DA-A	14 DA-B	14 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code				
8	CORN IN 2002									54	1	8	48
8	SALVO	5	EC	1.5	LB AE/A	38.4	OZ/A	28EPP-1	A				
8	SOYBEAN IN 2003												
8	SALVO	5	EC	1.5	LB AE/A	38.4	OZ/A	28EPP-2	B				
9	CORN IN 2002									68	0	6	75
9	SALVO	5	EC	2.0	LB AE/A	51	OZ/A	28EPP-1	A				
9	SOYBEAN IN 2003												
9	SALVO	5	EC	2.0	LB AE/A	51	OZ/A	28EPP-2	B				
10	CORN IN 2002									97	70	99	97
10	GRAMOXONE MAX	3	SL	0.5	LB A/A	1.33	PT/A	28EPP-1	A				
10	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP-1	A				
10	SOYBEAN IN 2003												
10	GRAMOXONE MAX	3	SL	0.5	LB A/A	1.33	PT/A	28EPP-2	B				
10	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP-2	B				
11	CORN IN 2002									99	86	99	99
11	GRAMOXONE MAX	3	SL	0.75	LB A/A	2	PT/A	28EPP-1	A				
11	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP-1	A				
11	SOYBEAN IN 2003												
11	GRAMOXONE MAX	3	SL	0.75	LB A/A	2	PT/A	28EPP-2	B				
11	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP-2	B				
12	CORN IN 2002									99	89	99	99
12	GRAMOXONE MAX	3	SL	1.0	LB A/A	2.67	PT/A	28EPP-1	A				
12	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP-1	A				
12	SOYBEAN IN 2003												
12	GRAMOXONE MAX	3	SL	1.0	LB A/A	2.67	PT/A	28EPP-2	B				
12	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP-2	B				
13	CORN IN 2002									70	0	6	95
13	AATREX	90	WG	2.0	LB A/A	2.22	LB/A	28EPP-1	A				
13	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	28EPP-1	A				
13	SOYBEAN IN 2003												
13	NONTREATED												
14	CORN IN 2002									44	1	3	66
14	BALANCE PRO	4	SC	0.117	LB A/A	3.74	OZ/A	28EPP-1	A				
14	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	28EPP-1	A				
14	SOYBEAN IN 2003												
14	NONTREATED												
15	CORN IN 2002									51	9	10	86
15	CALLISTO	4	SC	0.188	LB A/A	6	OZ/A	28EPP-1	A				
15	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	28EPP-1	A				
15	28% UAN	100	LIQ	2.5	% V/V	2.5	% V/V	28EPP-1	A				
15	SOYBEAN IN 2003												
15	NONTREATED												

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Rating Unit		Percent	Percent	Percent	Percent
Rating Date		4-25-02	3-24-03	5-2-03	4-25-02
Trt-Eval Interval		14 DA-A	347 DA-A	14 DA-B	14 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code				
16	CORN IN 2002									31	5	4	21
16	HORNET	68.5	WG	0.213	LB A/A	5	OZ/A	28EPP-1	A				
16	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	28EPP-1	A				
16	28% UAN	100	LIQ	2.5	% V/V	2.5	% V/V	28EPP-1	A				
16	SOYBEAN IN 2003												
16	NONTREATED												
17	CORN IN 2002									36	0	13	40
17	BASIS	75	WG	0.047	LB A/A	1	OZ/A	28EPP-1	A				
17	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	28EPP-1	A				
17	28% UAN	100	LIQ	2.5	% V/V	2.5	% V/V	28EPP-1	A				
17	SOYBEAN IN 2003												
17	NONTREATED												
18	CORN IN 2002									75	0	15	95
18	SENCOR	75	WG	0.25	LB A/A	5.33	OZ/A	28EPP-1	A				
18	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	28EPP-1	A				
18	SOYBEAN IN 2003												
18	SENCOR	75	WG	0.25	LB A/A	5.33	OZ/A	28EPP-2	B				
18	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	28EPP-2	B				
19	CORN IN 2002									41	8	5	40
19	HARMONY GT	75	WG	0.028	LB A/A	0.6	OZ/A	28EPP-1	A				
19	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP-1	A				
19	SOYBEAN IN 2003												
19	HARMONY GT	75	WG	0.028	LB A/A	0.6	OZ/A	28EPP-2	B				
19	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP-2	B				
20	CORN IN 2002									39	25	39	55
20	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	28EPP-1	A				
20	HARMONY GT	75	WG	0.028	LB A/A	0.6	OZ/A	28EPP-1	A				
20	AMS	100	DRY	2.0	% W/W	2	% W/W	28EPP-1	A				
20	SOYBEAN IN 2003												
20	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	28EPP-2	B				
20	HARMONY GT	75	WG	0.028	LB A/A	0.6	OZ/A	28EPP-2	B				
20	AMS	100	DRY	2.0	% W/W	2	% W/W	28EPP-2	B				
21	CORN IN 2002									56	0	4	66
21	SALVO	5	EC	1.0	LB AE/A	25.6	OZ/A	28EPP-1	A				
21	HARMONY GT	75	WG	0.028	LB A/A	0.6	OZ/A	28EPP-1	A				
21	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP-1	A				
21	SOYBEAN IN 2003												
21	SALVO	5	EC	1.0	LB AE/A	25.6	OZ/A	28EPP-2	B				
21	HARMONY GT	75	WG	0.028	LB A/A	0.6	OZ/A	28EPP-2	B				
21	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP-2	B				

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Trt-Eval Interval		14 DA-A	347 DA-A	14 DA-B	14 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code				
22	CORN IN 2002									99	83	99	99
22	GRAMOXONE MAX	3	SL	0.75	LB A/A	2	PT/A	28EPP-1	A				
22	HARMONY GT	75	WG	0.028	LB A/A	0.6	OZ/A	28EPP-1	A				
22	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP-1	A				
22	SOYBEAN IN 2003												
22	GRAMOXONE MAX	3	SL	0.75	LB A/A	2	PT/A	28EPP-2	B				
22	HARMONY GT	75	WG	0.028	LB A/A	0.6	OZ/A	28EPP-2	B				
22	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP-2	B				
23	CORN IN 2002									59	5	33	51
23	ROUNDUP ULTRA MAX	3.7	SL	0.375	LB AE/A	13	OZ/A	28EPP-1	A				
23	SALVO	5	EC	0.5	LB AE/A	12.8	OZ/A	28EPP-1	A				
23	AMS	100	DRY	2.0	% W/W	2	% W/W	28EPP-1	A				
23	SOYBEAN IN 2003												
23	ROUNDUP ULTRA MAX	3.7	SL	0.375	LB AE/A	13	OZ/A	28EPP-2	B				
23	SALVO	5	EC	0.5	LB AE/A	12.8	OZ/A	28EPP-2	B				
23	AMS	100	DRY	2.0	% W/W	2	% W/W	28EPP-2	B				
24	CORN IN 2002									99	78	99	99
24	GRAMOXONE MAX	3	SL	0.75	LB A/A	2	PT/A	28EPP-1	A				
24	SALVO	5	EC	0.5	LB AE/A	12.8	OZ/A	28EPP-1	A				
24	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP-1	A				
24	SOYBEAN IN 2003												
24	GRAMOXONE MAX	3	SL	0.75	LB A/A	2	PT/A	28EPP-2	B				
24	SALVO	5	EC	0.5	LB AE/A	12.8	OZ/A	28EPP-2	B				
24	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP-2	B				
LSD (P=.05)										14.0	14.1	20.0	19.6
Replicate F										8.930	4.239	0.282	0.599
Replicate Prob(F)										0.0001	0.0083	0.8384	0.6181
Treatment F										26.417	40.844	28.862	17.226
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

Star-of-Bethlehem Control in a Corn/Soybean Rotation.

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Trial Comments

1. Protocol: SIU (BGY).
2. Ratings: WC 14 and 28 DAT, control next spring, take bulb density counts in the fall.
3. At 28 DA-A on 5-9-02, star-of-Bethlehem was not rated due to advanced maturity and senescence in nontreated areas making herbicide evaluations unreliable.
4. At 28 DA-B on 5-16-03, star-of-Bethlehem was not rated due to advanced maturity and senescence in nontreated areas making herbicide evaluations unreliable.
5. DA-A and DA-B = days after 28EPP-1 and 28EPP-2 applications, respectively.
6. Study incomplete, plots to be evaluated in spring of 2004.