

## Star-of-Bethlehem Control in No-Till Corn.

02-Dahmer-N100

**OBJECTIVE:** Determine the effectiveness of corn herbicides for burndown control of star-of-Bethlehem.

**SUMMARY:** The purpose of this study was to evaluate various corn herbicides for burndown control of Star-of-Bethlehem, an emerging weed problem in some no-till fields. Gramoxone Max controlled 97 to 99% of Star-of-Bethlehem at 14 days after treatment. The only other herbicides evaluated that provided at least 70% control of Star-of-Bethlehem were Sencor at 5.33 oz/A (75%) and Aatrex at 2.22 lb/A (70%). Roundup UltraMax controlled only 39 to 55% of Star-of-Bethlehem with no significant increase in control when the Roundup UltraMax rate was increased from 26 oz/A to 51 oz/A. Tank mixing Salvo or Harmony GT with Roundup UltraMax did not increase Star-of-Bethlehem control. This research indicates Gramoxone Max is the only effective herbicide option for burndown control of Star-of-Bethlehem prior to planting corn.

### HERBICIDES

AATREX 90 WG  
 BALANCE PRO 4 SC  
 BASIS 75 WG  
 CALLISTO 4 SC  
 GRAMOXONE MAX 3 SL  
 HARMONY GT 75 WG  
 HORNET 68.5 WG  
 ROUNDUP ULTRA MAX 3.7 SL  
 SALVO 5 EC  
 SENCOR 75 WG

### WEEDS

deadnettle, purple  
 star-of-Bethlehem

### CROP

corn, field

Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

Star-of-Bethlehem Control in No-Till Corn.

Project Code: 02-Dahmer-N100 Location: Marion, IL

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Marion IL 62959 USA  
 Trial Status: Final Updated: 4-9-02

**Objective:**

Determine the effectiveness of corn herbicides for burndown 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

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

**APPLICATION DESCRIPTION**

**A**

Application Date: 4-11-02  
 Time of Day: 16:30  
 Application Method: Spray  
 Application Timing: 28EPP  
 Applic. Placement: BROFOL  
 Air Temp., Unit: 78 F  
 Wind Velocity, Unit: 3-5 MPH  
 Dew Presence (Y/N): N  
 Soil Temp., Unit: 60 F  
 Soil Moisture: NORMAL  
 % Cloud Cover: 20

**CROP STAGE AT EACH APPLICATION**

**A**

Crop 1 Code, Stage: ZEAMX NA  
 Height, Unit: NA NA

**WEED STAGE AT EACH APPLICATION**

**A**

Weed 1 Code: OTGUM  
 Stage(leaves): 5-6  
 Height(inches): 6-8  
 Density: High

Weed 2 Code: LAMPU  
 Stage(leaves): 16-20  
 Height(inches): 6-12  
 Density: High

**APPLICATION EQUIPMENT**

**A**

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

**NOTES:**

This study was not harvested.

Star-of-Bethlehem Control in No-Till Corn.

Project Code: 02-Dahmer-N100 Location: Marion, IL

Weed Code	OTGUM	LAMPU
Crop Code		
Rating Data Type	Control	Control
Rating Unit	Percent	Percent
Rating Date	4-25-02	4-25-02
Trt-Eval Interval	14 DA-A	14 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code		
1	NONTREATED									0	0
2	ROUNDUP ULTRA MAX	3.7	SL	0.375	LB AE/A	13	OZ/A	28EPP	A	39	38
2	AMS	100	DRY	2.0	% W/W	2	% W/W	28EPP	A		
3	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	28EPP	A	48	75
3	AMS	100	DRY	2.0	% W/W	2	% W/W	28EPP	A		
4	ROUNDUP ULTRA MAX	3.7	SL	1.13	LB AE/A	39	OZ/A	28EPP	A	55	80
4	AMS	100	DRY	2.0	% W/W	2	% W/W	28EPP	A		
5	ROUNDUP ULTRA MAX	3.7	SL	1.5	LB AE/A	52	OZ/A	28EPP	A	50	90
5	AMS	100	DRY	2.0	% W/W	2	% W/W	28EPP	A		
6	SALVO	5	EC	0.5	LB AE/A	12.8	OZ/A	28EPP	A	48	35
7	SALVO	5	EC	1.0	LB AE/A	25.6	OZ/A	28EPP	A	54	43
8	SALVO	5	EC	1.5	LB AE/A	38.4	OZ/A	28EPP	A	54	48
9	SALVO	5	EC	2.0	LB AE/A	51	OZ/A	28EPP	A	68	75
10	GRAMOXONE MAX	3	SL	0.5	LB A/A	1.33	PT/A	28EPP	A	97	97
10	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP	A		
11	GRAMOXONE MAX	3	SL	0.75	LB A/A	2	PT/A	28EPP	A	99	99
11	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP	A		
12	GRAMOXONE MAX	3	SL	1.0	LB A/A	2.67	PT/A	28EPP	A	99	99
12	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP	A		
13	AATREX	90	WG	2.0	LB A/A	2.22	LB/A	28EPP	A	70	95
13	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	28EPP	A		
14	BALANCE PRO	4	SC	0.117	LB A/A	3.74	OZ/A	28EPP	A	44	66
14	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	28EPP	A		
15	CALLISTO	4	SC	0.188	LB A/A	6	OZ/A	28EPP	A	51	86
15	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	28EPP	A		
15	28% UAN	100	LIQ	2.5	% V/V	2.5	% V/V	28EPP	A		
16	HORNET	68.5	WG	0.213	LB A/A	5	OZ/A	28EPP	A	31	21
16	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	28EPP	A		
16	28% UAN	100	LIQ	2.5	% V/V	2.5	% V/V	28EPP	A		

Weed Code	OTGUM LAMPU
Crop Code	
Rating Data Type	Control Control
Rating Unit	Percent Percent
Rating Date	4-25-02 4-25-02
Trt-Eval Interval	14 DA-A 14 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code		
17	BASIS	75	WG	0.047	LB A/A	1	OZ/A	28EPP	A	36	40
17	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	28EPP	A		
17	28% UAN	100	LIQ	2.5	% V/V	2.5	% V/V	28EPP	A		
18	SENCOR	75	WG	0.25	LB A/A	5.33	OZ/A	28EPP	A	75	95
18	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	28EPP	A		
19	HARMONY GT	75	WG	0.028	LB A/A	0.6	OZ/A	28EPP	A	41	40
19	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP	A		
20	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	28EPP	A	39	55
20	HARMONY GT	75	WG	0.028	LB A/A	0.6	OZ/A	28EPP	A		
20	AMS	100	DRY	2.0	% W/W	2	% W/W	28EPP	A		
21	SALVO	5	EC	1.0	LB AE/A	25.6	OZ/A	28EPP	A	56	66
21	HARMONY GT	75	WG	0.028	LB A/A	0.6	OZ/A	28EPP	A		
21	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP	A		
22	GRAMOXONE MAX	3	SL	0.75	LB A/A	2	PT/A	28EPP	A	99	99
22	HARMONY GT	75	WG	0.028	LB A/A	0.6	OZ/A	28EPP	A		
22	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP	A		
23	ROUNDUP ULTRA MAX	3.7	SL	0.375	LB AE/A	13	OZ/A	28EPP	A	59	51
23	SALVO	5	EC	0.5	LB AE/A	12.8	OZ/A	28EPP	A		
23	AMS	100	DRY	2.0	% W/W	2	% W/W	28EPP	A		
24	GRAMOXONE MAX	3	SL	0.75	LB A/A	2	PT/A	28EPP	A	99	99
24	SALVO	5	EC	0.5	LB AE/A	12.8	OZ/A	28EPP	A		
24	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	28EPP	A		
LSD (P=.05)										14.0	19.6
Replicate F										8.930	0.599
Replicate Prob(F)										0.0001	0.6181
Treatment F										26.417	17.226
Treatment Prob(F)										0.0001	0.0001

Star-of-Bethlehem Control in No-Till Corn.

Project Code: 02-Dahmer-N100    Location: Marion, IL

Trial Comments

1. Protocol: SIU (BGY).
2. DA-A = days after 28EPP application.
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.