

Winter Annual Weed Control in Roundup Ready Soybean.

Project Code: 03-5D-S160 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
 Trial Status: Final Updated: 9-3-03

Objective:

Determine the influence of glyphosate application timing and tank-mix partners for control of marestalk and other winter annual weed species.

Weed Code	Common Name	Scientific Name
1.	STEME chickweed, common	Stellaria media (L.) Vill.
2.	LAMAM henbit	Lamium amplexicaule L.
3.	CAPBP shepherdspurse	Capsella bursa-pastoris (L.) Medicus
4.	ALOCA foxtail, Carolina	Alopecurus carolinianus Walt.
5.	ERICA horseweed	Conyza canadensis (L.) Crong.

Crop 1: GLXMA soybean Variety: Asgrow 4403 RR
 Planting Method: Seeded Planting Date: 5-22-03
 Rate: 75 lb/A Depth: 1.0 IN
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 28 FT Reps: 3
 Tillage Type: No-Till Study Design: Randomized complete block
 Previous Crop, Year: ZEAMX, 2002

Field Prep./Maintenance: N 0 LB/A, P205 50 LB/A, K20 200 LB/A

Texture: Silt loam % OM: 2.0 pH: 6.8 CEC: 7
 Fert. Level: P1: 70 LB/A, K: 192 LB/A

APPLICATION DESCRIPTION

	A	B	C	D	E
Application Date:	11-20-02	4-14-03	4-28-03	5-24-03	6-24-03
Time of Day:	10:00	7:00	7:00	14:00	9:00
Application Method:	Spray	Spray	Spray	Spray	Spray
Application Timing:	FALL	28DBP	14DBP	PRE	V3-V6
Applic. Placement:	BROFOL	BROFOL	BROFOL	BROFOL	BROFOL
Air Temp., Unit:	46 F	50 F	55 F	67 F	74 F
% Relative Humidity:	66	85	95	51	60
Wind Velocity, Unit:	3 MPH	0 MPH	0 MPH	0 MPH	3 MPH
Soil Moisture:	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL

CROP STAGE AT EACH APPLICATION

	A	B	C	D	E
Crop 1 Code, Stage:	GLXMA NA	GLXMA NA	GLXMA NA	GLXMA NA	GLXMA V1
Height, Unit:	NA NA	NA NA	NA NA	NA NA	3-4 IN

WEED STAGE AT EACH APPLICATION

	A	B	C	D	E
Weed 1 Code:	STEME	STEME			
Stage(leaves):	10+	10+			
Height(inches):	0-1	2-3			
Density:	High	High			
Weed 2 Code:	LAMAM	LAMAM			
Stage(leaves):	10+	10+			
Height(inches):	0-1	2-3			
Density:	High	Medium			
Weed 3 Code:		CAPBP	CAPBP		
Stage(leaves):		10+	10+		
Height(inches):		6-18	6-18		
Density:		Medium	Low		

Weed 4 Code:	ALOCA	ALOCA
Stage(leaves):	5-6	10+
Height(inches):	2-4	4-6
Density:	Medium	Medium

Weed 5 Code:	ERICA	ERICA
Stage(leaves):	5-6	6-12
Height(inches):	1-2	4-8
Density:	Low	Medium

APPLICATION EQUIPMENT

	A	B	C	D	E
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI	40 PSI	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan	Flat fan	Flat fan
Nozzle Size:	8003	8003	8003	8003	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	20 GPA	20 GPA	20 GPA	20 GPA	20 GPA

NOTES:
Not harvested.

Winter Annual Weed Control in Roundup Ready Soybean.

Project Code: 03-5D-S160 Location: Belleville Research Center

Weed Code	STEME	STEME	STEME	STEME	LAMAM	LAMAM	LAMAM	LAMAM	CAPBP	CAPBP	CAPBP	ALOCA	ALOCA	ALOCA
Crop Code	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control
Rating Data Type	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit	12-11-02	4-28-03	5-12-03	5-26-03	12-11-02	4-28-03	5-12-03	5-26-03	4-28-03	5-12-03	5-26-03	4-28-03	5-12-03	5-26-03
Rating Date	21 DA-A	14 DA-B	14 DA-C	28 DA-C	21 DA-A	14 DA-B	14 DA-C	28 DA-C	14 DA-B	14 DA-C	28 DA-C	14 DA-B	14 DA-C	28 DA-C
Trt-Eval Interval														

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	STEME	STEME	STEME	STEME	LAMAM	LAMAM	LAMAM	LAMAM	CAPBP	CAPBP	CAPBP	ALOCA	ALOCA	ALOCA
1	NONTREATED									0	0			0	0			0			0		
2	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	FALL	A	0	97			0	100			90			93		
2	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A														
2	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E														
2	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E														
3	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	FALL	A	0	90	100	100	0	100	100	100	90	100	100	88	100	100
3	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A														
3	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	14DBP	C														
3	AMS	100	DRY	2.0	% W/W	2	%W/W	14DBP	C														
3	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E														
3	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E														
4	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	FALL	A	0	90			0	100			85			88		
4	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A														
4	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	PRE	D														
4	AMS	100	DRY	2.0	% W/W	2	%W/W	PRE	D														
4	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E														
4	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E														
5	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	28DBP	B		100	100		100	100			100	100		100	100	
5	AMS	100	DRY	2.0	% W/W	2	%W/W	28DBP	B														
5	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E														
5	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E														
6	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	PRE	D														
6	AMS	100	DRY	2.0	% W/W	2	%W/W	PRE	D														
6	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E														
6	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E														
7	ROUNDUP W-MAX	4.5	SL	0.56	LB AE/A	16	OZ/A	FALL	A	0	100			0	100			92			92		
7	2,4-D LV4	3.8	EC	0.5	LB AE/A	1.05	PT/A	FALL	A														
7	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A														
7	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E														
7	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E														
8	ROUNDUP W-MAX	4.5	SL	0.56	LB AE/A	16	OZ/A	FALL	A	0	100			0	100			100			100		
8	CANOPY XL	56.3	WG			1.31	OZ/A	FALL	A														
8	->CLASSIC	25	WG	0.0077	LB A/A			FALL	A														
8	->AUTHORITY	75	WG	0.0383	LB A/A			FALL	A														
8	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A														
8	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E														
8	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E														

Weed Code	STEME	STEME	STEME	STEME	LAMAM	LAMAM	LAMAM	LAMAM	CAPBP	CAPBP	CAPBP	ALOCA	ALOCA	ALOCA
Crop Code	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control
Rating Data Type	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit	12-11-02	4-28-03	5-12-03	5-26-03	12-11-02	4-28-03	5-12-03	5-26-03	4-28-03	5-12-03	5-26-03	4-28-03	5-12-03	5-26-03
Rating Date	21 DA-A	14 DA-B	14 DA-C	28 DA-C	21 DA-A	14 DA-B	14 DA-C	28 DA-C	14 DA-B	14 DA-C	28 DA-C	14 DA-B	14 DA-C	28 DA-C
Trt-Eval Interval														

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code							
9	ROUNDUP W-MAX	4.5	SL	0.56	LB AE/A	16	OZ/A	FALL	A	0	100			99		99
9	CLASSIC	25	WG	0.008	LB A/A	0.51	OZ/A	FALL	A							
9	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A							
9	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E							
9	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E							
10	ROUNDUP W-MAX	4.5	SL	0.56	LB AE/A	16	OZ/A	FALL	A	0	100			90		97
10	VALOR	51	WG	0.064	LB A/A	2	OZ/A	FALL	A							
10	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A							
10	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E							
10	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E							
11	ROUNDUP W-MAX	4.5	SL	0.56	LB AE/A	16	OZ/A	FALL	A	0	100			95		99
11	AMPLIFY	84	WG	0.016	LB A/A	0.305	OZ/A	FALL	A							
11	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A							
11	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E							
11	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E							
12	ROUNDUP W-MAX	4.5	SL	0.56	LB AE/A	16	OZ/A	FALL	A	0	100			93		100
12	MAVERICK	75	WG	0.03125	LB A/A	0.67	OZ/A	FALL	A							
12	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A							
12	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E							
12	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E							
13	ROUNDUP W-MAX	4.5	SL	0.56	LB AE/A	16	OZ/A	FALL	A	0	100			87		97
13	SENCOR	75	WG	0.47	LB A/A	10	OZ/A	FALL	A							
13	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A							
13	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E							
13	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E							
14	ROUNDUP W-MAX	4.5	SL	0.56	LB AE/A	16	OZ/A	FALL	A	0	100			93		87
14	PYTHON	80	WG	0.05	LB A/A	1	OZ/A	FALL	A							
14	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A							
14	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E							
14	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E							
15	EXTREME	2.17	SL	0.81	LB A/A	3	PT/A	FALL	A	0	100			90		96
15	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A							
15	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	FALL	A							
15	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E							
15	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E							
16	BACKDRAFT	1.5	SL	0.94	LB A/A	5	PT/A	FALL	A	0	100			90		93
16	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A							
16	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	FALL	A							
16	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E							
16	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E							

LSD (P=.05)	0.0	2.5	0.0	.	0.0	0.0	0.0	.	4.4	0.0	.	6.4	0.0	.
-------------	-----	-----	-----	---	-----	-----	-----	---	-----	-----	---	-----	-----	---

Weed Code	STEME	STEME	STEME	STEME	LAMAM	LAMAM	LAMAM	LAMAM	CAPBP	CAPBP	CAPBP	ALOCA	ALOCA	ALOCA	
Crop Code															
Rating Data Type	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
Rating Date	12-11-02	4-28-03	5-12-03	5-26-03	12-11-02	4-28-03	5-12-03	5-26-03	4-28-03	5-12-03	5-26-03	4-28-03	5-12-03	5-26-03	
Trt-Eval Interval	21 DA-A	14 DA-B	14 DA-C	28 DA-C	21 DA-A	14 DA-B	14 DA-C	28 DA-C	14 DA-B	14 DA-C	28 DA-C	14 DA-B	14 DA-C	28 DA-C	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Prod Rate	Prod Unit	Grow Stg	Appl Code							
Replicate F				0.000	1.000	0.000			0.000	0.000	0.000	1.788	0.000	0.952	0.000
Replicate Prob(F)				1.0000	0.3806	1.0000			1.0000	1.0000	1.0000	0.1858	1.0000	0.3981	1.0000
Treatment F				0.000	886.857	0.000			0.000	0.000	0.000	255.027	0.000	125.564	0.000
Treatment Prob(F)				1.0000	0.0001	1.0000			1.0000	1.0000	1.0000	0.0001	1.0000	0.0001	1.0000

Weed Code	ERICA	ERICA	ERICA	ERICA	ERICA	GLXMA	GLXMA
Crop Code							
Rating Data Type	Control	Control	Control	Control	Control	Injury	Injury
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date	4-28-03	5-12-03	5-26-03	6-7-03	6-21-03	6-14-03	6-21-03
Trt-Eval Interval	14 DA-B	14 DA-C	28 DA-C	14 DA-D	28 DA-D	14 DAP	21 DAP

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code				
1	NONTREATED									87		0	0
2	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	FALL	A	100		0	0
2	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A				
2	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E				
2	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E				
3	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	FALL	A	100	100	100	0
3	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A				
3	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	14DBP	C				
3	AMS	100	DRY	2.0	% W/W	2	%W/W	14DBP	C				
3	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E				
3	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E				
4	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	FALL	A	100		100	100
4	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A				
4	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	PRE	D				
4	AMS	100	DRY	2.0	% W/W	2	%W/W	PRE	D				
4	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E				
4	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E				
5	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	28DBP	B	100	100		0
5	AMS	100	DRY	2.0	% W/W	2	%W/W	28DBP	B				
5	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E				
5	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E				
6	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	PRE	D			97	100
6	AMS	100	DRY	2.0	% W/W	2	%W/W	PRE	D				
6	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E				
6	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E				
7	ROUNDUP W-MAX	4.5	SL	0.56	LB AE/A	16	OZ/A	FALL	A	100			0
7	2,4-D LV4	3.8	EC	0.5	LB AE/A	1.05	PT/A	FALL	A				
7	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A				
7	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E				
7	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E				
8	ROUNDUP W-MAX	4.5	SL	0.56	LB AE/A	16	OZ/A	FALL	A	97			0
8	CANOPY XL	56.3	WG			1.31	OZ/A	FALL	A				
8	->CLASSIC	25	WG	0.0077	LB A/A			FALL	A				
8	->AUTHORITY	75	WG	0.0383	LB A/A			FALL	A				
8	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A				
8	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	V3-V6	E				
8	AMS	100	DRY	2.0	% W/W	2	%W/W	V3-V6	E				

Weed Code	ERICA	ERICA	ERICA	ERICA	ERICA		
Crop Code						GLXMA	GLXMA
Rating Data Type	Control	Control	Control	Control	Control	Injury	Injury
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date	4-28-03	5-12-03	5-26-03	6-7-03	6-21-03	6-14-03	6-21-03
Trt-Eval Interval	14 DA-B	14 DA-C	28 DA-C	14 DA-D	28 DA-D	14 DAP	21 DAP

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code
Replicate F				1.658	0.000				
Replicate Prob(F)				0.2087	1.0000				
Treatment F				4.632	0.000				
Treatment Prob(F)				0.0003	1.0000				

Winter Annual Weed Control in Roundup Ready Soybean.

Project Code: 03-5D-S160 Location: Belleville Research Center

Trial Comments

1. Protocol: Monsanto (2, 7-11); SIU (BGY and RFK).
2. Ratings: WC 21 DA application A, 14 and 28 DA Application B, C and D; CI 14 and 21 DAP.
3. DA-A = days after FALL application. DA-B = days after 28DBP application. DA-C = days after 14DBP application. DA-D = days after PRE application. DAP = days after planting.
4. 14 DA-B was prior to 14DBP application and 159 DA-A. 14 DA-C was also 28 DA-B and 173 DA-A. 14 DA-D was also 199 DA-A. 28 DA-D was also 213 DA-A.
5. 14 DAP was also 206, 61, 47, and 21 days after FALL, 28DBP, 14DBP, and PRE applications, respectively.
21 DAP was also 213, 68, 54, and 28 days after FALL, 28DBP, 14DBP, and PRE applications, respectively.