

Aim and Spartan in Fall Burndown.

Project Code: 03-24B-E50 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
 Trial Status: Final Updated: 7-15-03

Objective:

Evaluate the utility of Aim and Spartan (sulfentrazone) in fall burndown programs.

Weed Code	Common Name	Scientific Name
1. ALLVI	garlic, wild	Allium vineale L.
2. LAMAM	henbit	Lamium amplexicaule L.
3. STEME	chickweed, common	Stellaria media (L.) Vill.
4. ERICA	horseweed	Conyza canadensis (L.) Cronq.
5. AMBTR	ragweed, giant	Ambrosia trifida L.
6. AMBEL	ragweed, common	Ambrosia artemisiifolia L.
7. POLPY	smartweed, Pennsylvania	Polygonum pennsylvanicum L.

Crop 1: GLXMA soybean Variety: Asgrow 4403 RR
 Planting Method: Seeded Planting Date: 6-19-03
 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: GLXMA, 2002

Field Prep./Maintenance: N 0 LB/A, P205 50 LB/A, K2O 150 LB/A

Soil Name: Rushville % OM: 1.1 pH: 6.3 CEC: 13
 Texture: Silt loam Fert. Level: P1: 69 LB/A, K: 298 LB/A

APPLICATION DESCRIPTION

A

Application Date: 11-19-02
 Time of Day: 11:00
 Application Method: Spray
 Application Timing: FALL
 Applic. Placement: BROFOL
 Air Temp., Unit: 50 F
 % Relative Humidity: 70
 Wind Velocity, Unit: 3 MPH
 Soil Moisture: NORMAL

CROP STAGE AT EACH APPLICATION

A

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

WEED STAGE AT EACH APPLICATION

A

Weed 1 Code: ALLVI
 Stage(leaves): 3-4
 Height(inches): 4-8
 Density: Medium

Weed 2 Code: LAMAM
 Stage(leaves): 10+
 Height(inches): 0-1
 Density: High

Weed 3 Code: STEME
 Stage(leaves): 10+
 Height(inches): 0-1
 Density: High

Weed 4 Code: ERICA
Stage(leaves): 10+
Height(inches): 0-1
Density: Medium

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:
Not harvested.

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Weed Code	ALLVI	ALLVI	ALLVI	ALLVI	LAMAM	LAMAM	LAMAM	LAMAM	STEME	STEME	STEME	STEME	AMBTR	AMBEL
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	11-26-02	12-10-02	4-1-03	5-20-03	11-26-02	12-10-02	4-1-03	5-20-03	11-26-02	12-10-02	4-1-03	5-20-03	5-20-03	5-20-03
Rating Date	7 DA-A	21 DA-A	133 DA-A	0 DAP	7 DA-A	21 DA-A	133 DA-A	0 DAP	7 DA-A	21 DA-A	133 DA-A	0 DAP	0 DAP	0 DAP
Trt-Eval Interval														

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code														
1	ROUNDUP W-MAX	4.5	SL	0.58	LB AE/A	16.5	OZ/A	FALL	A	0	0	90	90	0	0	100	100	0	0	100	100	0	0
1	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A														
2	ROUNDUP W-MAX	4.5	SL	0.58	LB AE/A	16.5	OZ/A	FALL	A	0	0	93	93	0	0	100	100	0	0	100	100	0	0
2	AIM	2	EW	0.0078	LB A/A	0.5	OZ/A	FALL	A														
2	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A														
3	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	OZ/A	FALL	A	0	0	93	93	0	0	100	100	0	0	100	100	0	0
3	2,4-D LV4	3.8	EC	0.475	LB AE/A	1	PT/A	FALL	A														
3	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A														
4	ROUNDUP W-MAX	4.5	SL	0.58	LB AE/A	16.5	OZ/A	FALL	A	0	0	90	90	0	0	100	100	0	0	100	100	0	0
4	2,4-D LV4	3.8	EC	0.475	LB AE/A	1	PT/A	FALL	A														
4	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A														
5	ROUNDUP W-MAX	4.5	SL	0.58	LB AE/A	16.5	OZ/A	FALL	A	0	0	90	90	0	0	100	100	0	0	100	100	33	33
5	CANOPY XL	56.3	WG			2.5	OZ/A	FALL	A														
5	->CLASSIC	25	WG	0.0147	LB A/A			FALL	A														
5	->AUTHORITY	75	WG	0.0733	LB A/A			FALL	A														
5	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A														
6	AIM	2	EW	0.0078	LB A/A	0.5	OZ/A	FALL	A	0	0	0	0	0	0	100	100	0	0	43	43	33	47
6	2,4-D LV4	3.8	EC	0.475	LB AE/A	1	PT/A	FALL	A														
6	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	FALL	A														
7	AIM	2	EW	0.0078	LB A/A	0.5	OZ/A	FALL	A	0	0	0	0	0	0	100	100	0	0	100	100	17	17
7	EXPRESS	75	WG	0.0047	LB A/A	0.1	OZ/A	FALL	A														
7	2,4-D LV4	3.8	EC	0.238	LB AE/A	0.5	PT/A	FALL	A														
7	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	FALL	A														
8	AIM	2	EW	0.0078	LB A/A	0.5	OZ/A	FALL	A	0	0	0	0	0	0	100	100	0	0	50	50	0	0
8	SPARTAN	75	WG	0.187	LB A/A	4	OZ/A	FALL	A														
8	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	FALL	A														
9	AIM	2	EW	0.0078	LB A/A	0.5	OZ/A	FALL	A	0	0	75	75	0	0	100	100	0	0	53	60	0	0
9	SPARTAN	75	WG	0.14	LB A/A	3	OZ/A	FALL	A														
9	2,4-D LV4	3.8	EC	0.475	LB AE/A	1	PT/A	FALL	A														
9	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	FALL	A														
10	NONTREATED									0	0	0	0	0	0	0	0	0	0	0	0	70	90
LSD (P=.05)										0.0	0.0	4.6	4.6	0.0	0.0	0.0	0.0	0.0	0.0	31.5	34.2	29.9	33.8

Weed Code	ALLVI	ALLVI	ALLVI	ALLVI	LAMAM	LAMAM	LAMAM	LAMAM	STEME	STEME	STEME	STEME	AMBTR	AMBEL
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	11-26-02	12-10-02	4-1-03	5-20-03	11-26-02	12-10-02	4-1-03	5-20-03	11-26-02	12-10-02	4-1-03	5-20-03	5-20-03	5-20-03
Trt-Eval Interval	7 DA-A	21 DA-A	133 DA-A	0 DAP	7 DA-A	21 DA-A	133 DA-A	0 DAP	7 DA-A	21 DA-A	133 DA-A	0 DAP	0 DAP	0 DAP
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code					
Replicate F				0.000		0.000				0.000		0.000	2.139	0.523
Replicate Prob(F)				1.0000		1.0000				1.0000		1.0000	0.1467	0.6013
Treatment F				0.000		903.803				0.000		0.000	11.308	7.020
Treatment Prob(F)				1.0000		1.0000				1.0000		1.0000	0.0001	0.0002

Weed Code POLPY
 Crop Code
 Rating Data Type Control
 Rating Unit Percent
 Rating Date 5-20-03
 Trt-Eval Interval 0 DAP

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	
1	ROUNDUP W-MAX	4.5	SL	0.58	LB AE/A	16.5	OZ/A	FALL	A	0
1	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A	
2	ROUNDUP W-MAX	4.5	SL	0.58	LB AE/A	16.5	OZ/A	FALL	A	0
2	AIM	2	EW	0.0078	LB A/A	0.5	OZ/A	FALL	A	
2	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A	
3	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	OZ/A	FALL	A	0
3	2,4-D LV4	3.8	EC	0.475	LB AE/A	1	PT/A	FALL	A	
3	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A	
4	ROUNDUP W-MAX	4.5	SL	0.58	LB AE/A	16.5	OZ/A	FALL	A	0
4	2,4-D LV4	3.8	EC	0.475	LB AE/A	1	PT/A	FALL	A	
4	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A	
5	ROUNDUP W-MAX	4.5	SL	0.58	LB AE/A	16.5	OZ/A	FALL	A	90
5	CANOPY XL	56.3	WG			2.5	OZ/A	FALL	A	
5	->CLASSIC	25	WG	0.0147	LB A/A			FALL	A	
5	->AUTHORITY	75	WG	0.0733	LB A/A			FALL	A	
5	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A	
6	AIM	2	EW	0.0078	LB A/A	0.5	OZ/A	FALL	A	50
6	2,4-D LV4	3.8	EC	0.475	LB AE/A	1	PT/A	FALL	A	
6	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	FALL	A	
7	AIM	2	EW	0.0078	LB A/A	0.5	OZ/A	FALL	A	17
7	EXPRESS	75	WG	0.0047	LB A/A	0.1	OZ/A	FALL	A	
7	2,4-D LV4	3.8	EC	0.238	LB AE/A	0.5	PT/A	FALL	A	
7	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	FALL	A	
8	AIM	2	EW	0.0078	LB A/A	0.5	OZ/A	FALL	A	0
8	SPARTAN	75	WG	0.187	LB A/A	4	OZ/A	FALL	A	
8	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	FALL	A	
9	AIM	2	EW	0.0078	LB A/A	0.5	OZ/A	FALL	A	0
9	SPARTAN	75	WG	0.14	LB A/A	3	OZ/A	FALL	A	
9	2,4-D LV4	3.8	EC	0.475	LB AE/A	1	PT/A	FALL	A	
9	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	FALL	A	
10	NONTREATED									100
	LSD (P=.05)									31.3
	Replicate F									1.000
	Replicate Prob(F)									0.3874
	Treatment F									14.290
	Treatment Prob(F)									0.0001

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Trial Comments

1. Protocol: FMC.
2. Ratings: WC 7 and 21 DA application "A", April 1, and at planting.
3. DA-A = days after FALL application. 0 DAP = at planting.
4. On 12-10-02 at 21 DA-A Aim, Spartan, and Canopy XL caused 25% injury to STEME and ERICA.
5. On 5-20-03, at planting, weed control in the nontreated plots is due to competition among weeds.