

Fall Applied Herbicides in Soybean - Study 1.

Project Code: 03-11C-W70 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
 Trial Status: Final Updated: 11-20-03

Objective:

Evaluate the performance of various fall applied herbicides in soybean.

Weed Code	Common Name	Scientific Name
1. ALLVI	garlic, wild	Allium vineale L.
2. STEME	chickweed, common	Stellaria media (L.) Vill.
3. LAMAM	henbit	Lamium amplexicaule L.
4. SETFA	foxtail, giant	Setaria faberi Herrm.
5. AMBEL	ragweed, common	Ambrosia artemisiifolia L.

Crop 1: GLXMA soybean Variety: Asgrow 4403 RR
 Planting Method: Seeded Planting Date: 6-2-03
 Rate: 75 lb/A Depth: 1.0 IN
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 27 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, K2O 200 LB/A

Soil Name: Ebbert % OM: 1.7 pH: 6.0 CEC: 12
 Texture: Silt loam Fert. Level: P1: 68 LB/A, K: 225 LB/A

APPLICATION DESCRIPTION

A

Application Date: 11-19-02
 Time of Day: 15:30
 Application Method: Spray
 Application Timing: FALL
 Applic. Placement: BROFOL
 Air Temp., Unit: 60 F
 % Relative Humidity: 30
 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: STEME
 Stage(leaves): 10+
 Height(inches): 0-1
 Density: Low

Weed 3 Code: LAMAM
 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	STEME	STEME	STEME	STEME	LAMAM	LAMAM	LAMAM	LAMAM	SETFA
Crop Code													
Rating Data Type	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
Rating Date	12-9-02	3-1-03	4-1-03	5-20-03	12-9-02	3-1-03	4-1-03	5-20-03	12-9-02	3-1-03	4-1-03	5-20-03	5-20-03
Trt-Eval Interval	20 DA-A	102 DA-A	133 DA-A	181 DA-A	20 DA-A	102 DA-A	133 DA-A	181 DA-A	20 DA-A	102 DA-A	133 DA-A	181 DA-A	182 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	0	0	0	0	0	0	0	0
2	CANOPY XL	56.3	WG			4.5	OZ/A	FALL	A	0	90	90	90	0	100	100	100	100	17
2	->CLASSIC	25	WG	0.0263	LB A/A			FALL	A										
2	->AUTHORITY	75	WG	0.1317	LB A/A			FALL	A										
2	EXPRESS	75	WG	0.007	LB A/A	0.15	OZ/A	FALL	A										
2	2,4-D LV4	3.8	EC	0.475	LB AE/A	1	PT/A	FALL	A										
2	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	FALL	A										
3	CLASSIC	25	WG	0.0273	LB A/A	1.75	OZ/A	FALL	A	0	90	90	90	0	100	100	100	100	0
3	EXPRESS	75	WG	0.007	LB A/A	0.15	OZ/A	FALL	A										
3	2,4-D LV4	3.8	EC	0.475	LB AE/A	1	PT/A	FALL	A										
3	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	FALL	A										
4	CLASSIC	25	WG	0.0273	LB A/A	1.75	OZ/A	FALL	A	0	90	90	90	0	100	100	100	100	27
4	EXPRESS	75	WG	0.007	LB A/A	0.15	OZ/A	FALL	A										
4	HARMONY GT	75	WG	0.0039	LB A/A	0.0834	OZ/A	FALL	A										
4	2,4-D LV4	3.8	EC	0.475	LB AE/A	1	PT/A	FALL	A										
4	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	FALL	A										
5	SYNCHRONY STS	42	WG	0.0131	LB A/A	0.5	OZ/A	FALL	A	0	90	90	90	0	100	100	100	100	27
5	EXPRESS	75	WG	0.007	LB A/A	0.15	OZ/A	FALL	A										
5	2,4-D LV4	3.8	EC	0.475	LB AE/A	1	PT/A	FALL	A										
5	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	FALL	A										
6	SYNCHRONY STS	42	WG	0.0262	LB A/A	1	OZ/A	FALL	A	0	90	90	90	0	100	100	100	100	0
6	EXPRESS	75	WG	0.007	LB A/A	0.15	OZ/A	FALL	A										
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	VALOR	51	WG	0.063	LB A/A	2	OZ/A	FALL	A	0	90	90	90	0	100	100	100	100	0
7	2,4-D LV4	3.8	EC	0.5	LB AE/A	1.05	PT/A	FALL	A										
7	EXPRESS	75	WG	0.006	LB A/A	0.128	OZ/A	FALL	A										
7	PRIME OIL COC	100	LIQ	1	% V/V	1	%V/V	FALL	A										
8	VALOR	51	WG	0.063	LB A/A	2	OZ/A	FALL	A	0	90	90	90	0	100	100	100	100	27
8	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	OZ/A	FALL	A										
8	AMS	100	DRY	2	% W/W	2	%W/W	FALL	A										
9	VALOR	51	WG	0.063	LB A/A	2	OZ/A	FALL	A	0	90	90	90	0	100	100	100	100	53
9	BASIS	75	WG	0.015	LB A/A	0.32	OZ/A	FALL	A										
9	2,4-D LV4	3.8	EC	0.25	LB AE/A	0.526	PT/A	FALL	A										
9	PRIME OIL COC	100	LIQ	1	% V/V	1	%V/V	FALL	A										

Weed Code								ALLVI	ALLVI	ALLVI	ALLVI	STEME	STEME	STEME	STEME	LAMAM	LAMAM	LAMAM	LAMAM	SETFA	
Crop Code																					
Rating Data Type								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	
Rating Date								12-9-02	3-1-03	4-1-03	5-20-03	12-9-02	3-1-03	4-1-03	5-20-03	12-9-02	3-1-03	4-1-03	5-20-03	5-20-03	
Trt-Eval Interval								20 DA-A	102 DA-A	133 DA-A	181 DA-A	20 DA-A	102 DA-A	133 DA-A	181 DA-A	20 DA-A	102 DA-A	133 DA-A	181 DA-A	182 DA-A	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code												
10	VALOR	51	WG	0.063	LB A/A	2	OZ/A	FALL	A	0	90	90	90	0	100	100	100	0	100	100	47
10	BASIS	75	WG	0.015	LB A/A	0.32	OZ/A	FALL	A												
10	PRIME OIL COC	100	LIQ	1	% V/V	1	%V/V	FALL	A												
11	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	FALL	A	0	90	90	90	0	100	100	100	0	100	100	0
11	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A												
12	ROUNDUP W-MAX	4.5	SL	0.56	LB AE/A	16	OZ/A	FALL	A	0	90	90	90	0	100	100	100	0	100	100	0
12	2,4-D LV4	3.8	EC	0.5	LB AE/A	1.05	PT/A	FALL	A												
12	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A												
13	BACKDRAFT	1.5	SL	0.94	LB A/A	5	PT/A	FALL	A	0	90	90	90	0	100	100	100	0	100	100	17
13	2,4-D LV4	3.8	EC	0.5	LB AE/A	1.05	PT/A	FALL	A												
13	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	FALL	A												
13	AMS	100	DRY	2	% W/W	2	%W/W	FALL	A												
14	EXTREME	2.17	SL	0.81	LB A/A	3	PT/A	FALL	A	0	90	90	90	0	100	100	100	0	100	100	0
14	2,4-D LV4	3.8	EC	0.5	LB AE/A	1.05	PT/A	FALL	A												
14	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	FALL	A												
14	AMS	100	DRY	2	% W/W	2	%W/W	FALL	A												
LSD (P=.05)										0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.1
Replicate F										0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.248
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0551
Treatment F										0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.367
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.2401

Weed Code	AMBEL
Crop Code	GLXMA
Rating Data Type	Control Injury
Rating Unit	Percent Percent
Rating Date	5-20-03 6-16-03
Trt-Eval Interval	182 DA-A 14 DAP

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code		
1	NONTREATED									30	0
2	CANOPY XL	56.3	WG			4.5	OZ/A	FALL	A	100	0
2	->CLASSIC	25	WG	0.0263	LB A/A			FALL	A		
2	->AUTHORITY	75	WG	0.1317	LB A/A			FALL	A		
2	EXPRESS	75	WG	0.007	LB A/A	0.15	OZ/A	FALL	A		
2	2,4-D LV4	3.8	EC	0.475	LB AE/A	1	PT/A	FALL	A		
2	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	FALL	A		
3	CLASSIC	25	WG	0.0273	LB A/A	1.75	OZ/A	FALL	A	100	0
3	EXPRESS	75	WG	0.007	LB A/A	0.15	OZ/A	FALL	A		
3	2,4-D LV4	3.8	EC	0.475	LB AE/A	1	PT/A	FALL	A		
3	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	FALL	A		
4	CLASSIC	25	WG	0.0273	LB A/A	1.75	OZ/A	FALL	A	100	0
4	EXPRESS	75	WG	0.007	LB A/A	0.15	OZ/A	FALL	A		
4	HARMONY GT	75	WG	0.0039	LB A/A	0.0834	OZ/A	FALL	A		
4	2,4-D LV4	3.8	EC	0.475	LB AE/A	1	PT/A	FALL	A		
4	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	FALL	A		
5	SYNCHRONY STS	42	WG	0.0131	LB A/A	0.5	OZ/A	FALL	A	93	0
5	EXPRESS	75	WG	0.007	LB A/A	0.15	OZ/A	FALL	A		
5	2,4-D LV4	3.8	EC	0.475	LB AE/A	1	PT/A	FALL	A		
5	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	FALL	A		
6	SYNCHRONY STS	42	WG	0.0262	LB A/A	1	OZ/A	FALL	A	100	0
6	EXPRESS	75	WG	0.007	LB A/A	0.15	OZ/A	FALL	A		
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	VALOR	51	WG	0.063	LB A/A	2	OZ/A	FALL	A	0	0
7	2,4-D LV4	3.8	EC	0.5	LB AE/A	1.05	PT/A	FALL	A		
7	EXPRESS	75	WG	0.006	LB A/A	0.128	OZ/A	FALL	A		
7	PRIME OIL COC	100	LIQ	1	% V/V	1	%V/V	FALL	A		
8	VALOR	51	WG	0.063	LB A/A	2	OZ/A	FALL	A	0	0
8	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	OZ/A	FALL	A		
8	AMS	100	DRY	2	% W/W	2	%W/W	FALL	A		
9	VALOR	51	WG	0.063	LB A/A	2	OZ/A	FALL	A	100	0
9	BASIS	75	WG	0.015	LB A/A	0.32	OZ/A	FALL	A		
9	2,4-D LV4	3.8	EC	0.25	LB AE/A	0.526	PT/A	FALL	A		
9	PRIME OIL COC	100	LIQ	1	% V/V	1	%V/V	FALL	A		
10	VALOR	51	WG	0.063	LB A/A	2	OZ/A	FALL	A	90	0
10	BASIS	75	WG	0.015	LB A/A	0.32	OZ/A	FALL	A		
10	PRIME OIL COC	100	LIQ	1	% V/V	1	%V/V	FALL	A		

Weed Code	AMBEL
Crop Code	GLXMA
Rating Data Type	Control Injury
Rating Unit	Percent Percent
Rating Date	5-20-03 6-16-03
Trt-Eval Interval	182 DA-A 14 DAP

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code		
11	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	FALL	A	0	0
11	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A		
12	ROUNDUP W-MAX	4.5	SL	0.56	LB AE/A	16	OZ/A	FALL	A	0	0
12	2,4-D LV4	3.8	EC	0.5	LB AE/A	1.05	PT/A	FALL	A		
12	AMS	100	DRY	2.0	% W/W	2	%W/W	FALL	A		
13	BACKDRAFT	1.5	SL	0.94	LB A/A	5	PT/A	FALL	A	87	0
13	2,4-D LV4	3.8	EC	0.5	LB AE/A	1.05	PT/A	FALL	A		
13	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	FALL	A		
13	AMS	100	DRY	2	% W/W	2	%W/W	FALL	A		
14	EXTREME	2.17	SL	0.81	LB A/A	3	PT/A	FALL	A	0	0
14	2,4-D LV4	3.8	EC	0.5	LB AE/A	1.05	PT/A	FALL	A		
14	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	FALL	A		
14	AMS	100	DRY	2	% W/W	2	%W/W	FALL	A		
LSD (P=.05)										24.3	0.0
Replicate F										0.646	0.000
Replicate Prob(F)										0.5323	1.0000
Treatment F										32.415	0.000
Treatment Prob(F)										0.0001	1.0000

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Project Code: 03-11C-W70 Location: Belleville Research Center

Trial Comments

1. Protocol: DuPont, Valent, Monsanto, and BASF.
2. Ratings: WC Dec. 1, March 1, April 1, at planting, and 28 DAP; CI 14 and 28 DAP.
3. Blanket POST application of Roundup WeatherMax 0.75 lbae/A + AMS 2.0% applied 10 ft wide to all plots including the nontreated at 28 DAP.
4. DA-A = days after FALL application. DAP = days after planting.
5. Weed control in the nontreated plots is a result of competition from other weeds.
6. The planned 28 DAP rating was not possible due to delayed planting.