

Fall Herbicide Comparison in Soybean.

Project Code: 04-6C-W130 Location: Belleville Research Center
 Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
 Trial Status: Final Updated: 9-1-04

Objective:

Evaluate various strategies for control of winter annual weeds
 with fall applications of herbicides.

Weed Code	Common Name	Scientific Name
1. ALLVI	garlic, wild	Allium vineale L.
2. LAMPU	deadnettle, purple	Lamium purpureum L.
3. STEME	chickweed, common	Stellaria media (L.) Vill.
4. CHEAL	lambsquarters, common	Chenopodium album L.
5. AMATA	waterhemp, common	Amaranthus rudis Sauer
6. XANST	cocklebur, common	Xanthium strumarium L.
7. SETFA	foxtail, giant	Setaria faberi Herrm.

Crop 1: GLXMA soybean Variety: P94M70 RR
 Planting Method: Seeded Planting Date: 5-18-04
 Rate: 75 lb/A Depth: 1.0 IN
 Row Spacing: 15 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 24 FT Reps: 3
 Tillage Type: No-Till Study Design: Randomized complete block
 Previous Crop, Year: ZEAMX, 2003

Field Prep./Maintenance: N 0 LB/A, P2O5 50 LB/A, K2O 100 LB/A

Soil Name: Stoy % OM: 1.6 pH: 6.1 CEC: 8
 Texture: Silt loam Fert. Level: P1: 82 LB/A, K: 408 LB/A

APPLICATION DESCRIPTION

A

Application Date: 11-20-03
 Time of Day: 11:00
 Application Method: Spray
 Application Timing: FALL
 Applic. Placement: BROFOL
 Air Temp., Unit: 65 F
 % Relative Humidity: 40
 Wind Velocity, Unit: 5 MPH
 Soil Moisture: ABONOR

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): 1-3
 Height(inches): 3-5
 Density: Low

Weed 2 Code: LAMPU
 Stage(leaves): 10+
 Height(inches): 1-3
 Density: High

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

Southern Illinois University

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Weed Code				ALLVI	ALLVI	ALLVI	LAMPU	LAMPU	LAMPU	STEME	STEME	STEME	CHEAL	AMATA	XANST	SETFA			
Crop Code				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			
Rating Unit				12-11-03	4-1-04	5-18-04	12-11-03	4-1-04	5-18-04	12-11-03	4-1-04	5-18-04	5-18-04	5-18-04	5-18-04	5-18-04			
Rating Date				21 DA-A	133 DA-A	180 DA-A	12-11-03	4-1-04	5-18-04	12-11-03	4-1-04	5-18-04	180 DA-A	180 DA-A	180 DA-A	180 DA-A			
Trt-Eval Interval				21 DA-A	133 DA-A	180 DA-A	12-11-03	4-1-04	5-18-04	12-11-03	4-1-04	5-18-04	180 DA-A	180 DA-A	180 DA-A	180 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	43	73	77	27	
2	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	FALL	A	50	93	93	50	97	97	97	0	0	0
2	AMS	100	DRY	2.0	% W/W	2	% W/W	FALL	A										
3	TOUCHDOWN TOTAL	4.17	SC	0.78	LB AE/A	24	FL OZ/A	FALL	A	50	96	96	50	95	97	97	0	0	0
3	AMS	100	DRY	2.0	% W/W	2	% W/W	FALL	A										
4	GRAMOXONE MAX	3	SL	0.56	LB A/A	1.5	PT/A	FALL	A	90	96	96	90	92	92	90	100	100	0
4	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	FALL	A										
4	28% UAN	100	LIQ	2.0	% V/V	2	% V/V	FALL	A										
5	CANOPY XL	56.3	WG			4.5	OZ/A	FALL	A	90	99	99	90	100	100	87	100	100	99
5	->CLASSIC	25	WG	0.0264	LB A/A			FALL	A										
5	->AUTHORITY	75	WG	0.132	LB A/A			FALL	A										
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 A/A	1	PT/A	FALL	A										
5	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	FALL	A										
6	TOUCHDOWN TOTAL	4.17	SC	0.78	LB AE/A	24	FL OZ/A	FALL	A	60	96	96	90	100	100	50	87	87	99
6	CANOPY XL	56.3	WG			3	OZ/A	FALL	A										
6	->CLASSIC	25	WG	0.0176	LB A/A			FALL	A										
6	->AUTHORITY	75	WG	0.088	LB A/A			FALL	A										
6	AMS	100	DRY	2.0	% W/W	2	% W/W	FALL	A										
7	GRAMOXONE MAX	3	SL	0.56	LB A/A	1.5	PT/A	FALL	A	90	96	96	90	97	97	90	100	100	99
7	CANOPY XL	56.3	WG			3	OZ/A	FALL	A										
7	->CLASSIC	25	WG	0.0176	LB A/A			FALL	A										
7	->AUTHORITY	75	WG	0.088	LB A/A			FALL	A										
7	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	FALL	A										
7	28% UAN	100	LIQ	2.0	% V/V	2	% V/V	FALL	A										
8	SCEPTER	70	WG	0.092	LB A/A	2.1	OZ/A	FALL	A	50	96	96	25	88	88	25	93	93	80
8	2,4-D LV4	3.8	EC	0.475	LB A/A	1	PT/A	FALL	A										
8	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	FALL	A										
8	AMS	100	DRY	2.0	% W/W	2	% W/W	FALL	A										
9	SCEPTER	70	WG	0.092	LB A/A	2.1	OZ/A	FALL	A	50	76	76	90	95	95	70	100	100	99
9	BLANKET	75	WG	0.187	LB A/A	4	OZ/A	FALL	A										
9	2,4-D LV4	3.8	EC	0.475	LB A/A	1	PT/A	FALL	A										
9	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	FALL	A										
9	AMS	100	DRY	2.0	% W/W	2	% W/W	FALL	A										
10	PURSUIT	70	WG	0.063	LB A/A	1.44	OZ/A	FALL	A	50	80	80	25	90	90	25	93	93	60
10	2,4-D LV4	3.8	EC	0.475	LB A/A	1	PT/A	FALL	A										
10	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	FALL	A										
10	AMS	100	DRY	2.0	% W/W	2	% W/W	FALL	A										

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	ALLVI	ALLVI	ALLVI	LAMPU	LAMPU	LAMPU	STEME	STEME	STEME	CHEAL	AMATA	XANST	SETFA					
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent					
						12-11-03	4-1-04	5-18-04	12-11-03	4-1-04	5-18-04	12-11-03	4-1-04	5-18-04	180 DA-A	180 DA-A	180 DA-A	180 DA-A					
11	PURSUIT	70	WG	0.063	LB A/A	1.44	OZ/A	FALL	A	50	93	93	90	98	98	70	98	98	99	27	99	53	
11	BLANKET	75	WG	0.187	LB A/A	4	OZ/A	FALL	A														
11	2,4-D LV4	3.8	EC	0.475	LB A/A	1	PT/A	FALL	A														
11	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	FALL	A														
11	AMS	100	DRY	2.0	% W/W	2	% W/W	FALL	A														
12	VALOR	51	WG	0.096	LB A/A	3	OZ/A	FALL	A	50	90	90	80	98	98	80	100	100	96	53	60	43	
12	ROUNDUP ORIGINAL	3	SL	0.375	LB AE/A	1	PT/A	FALL	A														
12	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	FALL	A														
12	AMS	100	DRY	2.0	% W/W	2	% W/W	FALL	A														
13	VALOR	51	WG	0.08	LB A/A	2.5	OZ/A	FALL	A	50	96	96	80	100	100	80	100	100	90	27	0	0	
13	ROUNDUP ORIGINAL	3	SL	0.375	LB AE/A	1	PT/A	FALL	A														
13	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	FALL	A														
13	AMS	100	DRY	2.0	% W/W	2	% W/W	FALL	A														
14	VALOR	51	WG	0.064	LB A/A	2	OZ/A	FALL	A	50	99	99	80	97	97	80	100	100	58	43	0	0	
14	ROUNDUP ORIGINAL	3	SL	0.375	LB AE/A	1	PT/A	FALL	A														
14	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	FALL	A														
14	AMS	100	DRY	2.0	% W/W	2	% W/W	FALL	A														
15	VALOR	51	WG	0.064	LB A/A	2	OZ/A	FALL	A	50	87	87	80	100	100	80	100	100	96	33	99	17	
15	2,4-D LV4	3.8	EC	0.475	LB A/A	1	PT/A	FALL	A														
15	EXPRESS	75	WG	0.0047	LB A/A	0.1	OZ/A	FALL	A														
15	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	FALL	A														
16	VALOR	51	WG	0.064	LB A/A	2	OZ/A	FALL	A	50	88	88	80	100	100	80	100	100	61	60	98	0	
16	BASIS	75	WG	0.014	LB A/A	0.3	OZ/A	FALL	A														
16	2,4-D LV4	3.8	EC	0.475	LB A/A	1	PT/A	FALL	A														
16	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	FALL	A														
17	VALOR	51	WG	0.048	LB A/A	1.5	OZ/A	FALL	A	50	90	90	80	100	100	80	100	100	90	50	90	0	
17	FIRSTRATE	84	WG	0.0157	LB A/A	0.3	OZ/A	FALL	A														
17	EXPRESS	75	WG	0.0047	LB A/A	0.1	OZ/A	FALL	A														
17	2,4-D LV4	3.8	EC	0.475	LB A/A	1	PT/A	FALL	A														
17	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	FALL	A														
18	CLASSIC	25	WG	0.0263	LB A/A	1.68	OZ/A	FALL	A	50	99	99	50	97	97	50	85	85	99	17	99	57	
18	2,4-D LV4	3.8	EC	0.475	LB A/A	1	PT/A	FALL	A														
18	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	FALL	A														
LSD (P=05)						6.8	10.8	10.8	0.0	6.5	6.5	9.7	6.3	6.3	41.2	57.9	22.0	38.2					
Replicate F						1.000	3.045	3.045	0.000	0.486	0.486	1.695	3.746	3.746	0.171	1.887	1.794	0.958					
Replicate Prob(F)						0.3784	0.0607	0.0607	1.0000	0.6195	0.6195	0.1988	0.0339	0.0339	0.8433	0.1670	0.1817	0.3937					
Treatment F						74.588	36.678	36.678	0.000	104.629	104.629	59.293	113.085	113.085	6.643	1.225	33.603	6.428					
Treatment Prob(F)						0.0001	0.0001	0.0001	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.2978	0.0001	0.0001				

Trial Comments

1. Protocol: Syngenta, BASF, Valent.
2. Ratings: WC 21 DAT, April 1, at planting, and 35 DAP.
3. Blanket (BGY) POST application of Roundup WeatherMax at 22 oz/A applied on 6-1-04 to all plots 10 ft wide including the nontreated.
4. Blanket (BGY) POST application of Roundup WeatherMax at 22 oz/A applied on 7-2-04 to all plots 10 ft wide including the nontreated.
5. DA-A = Days after FALL application.
6. Ratings on 5-18-04 were also at planting.
7. Not possible to rate weed control 35 DAP as plots were too weedy to delay blanket application past 6-1-04.