

Evaluation of Fall Applications of Autumn, Spartan, and Aim Prior to Soybean.

Project Code: 06-WF-SE-MN80 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: 8-3-06**Objective:**

Evaluate the efficacy of Autumn, Spartan, and Aim applied in the fall prior to soybean.

Weed Code	Common Name	Scientific Name
1. POAN	bluegrass, annual	Poa annua L.
2. CERVU	chickweed, mouseear	Cerastium vulgatum L.
3. LAMAM	henbit	Lamium amplexicaule L.
4. CAPBP	shepherdspurse	Capsella bursa-pastoris (L.) Medicus
5. CARPA	bittercress, smallflowered	Cardamine parviflora L.
6. ERICA	horseweed	Conyza canadensis (L.) Crong.
7. PANDI	panicum, fall	Panicum dichotomiflorum Michx.
8. AMATA	waterhemp, common	Amaranthus rudis Sauer

Crop 1:	GLXMA soybean	Variety:	Asgrow 4403 RR
Planting Method:	Seeded	Planting Date:	5-22-06
Rate:	75 lb/A	Depth:	1.0 IN
Row Spacing:	15 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	30 FT	Reps:	3
Tillage Type:	No-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	ZEAMX, 2005				
Field Prep./Maintenance:	N 0 LB/A, P205 50 LB/A, K20 150 LB/A				

Soil Name:	Ebbert	% OM:	2.1	pH:	5.6	CEC:	10
Texture:	Silt loam	Fert. Level:	P1: 54 LB/A, K: 316 LB/A				

APPLICATION DESCRIPTION

A	
Application Date:	11-18-05
Time of Day:	11:00
Application Method:	Spray
Application Timing:	FALL
Applic. Placement:	BROFOL
Air Temp., Unit:	53 F
% Relative Humidity:	37
Wind Velocity, Unit:	3 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 2 Code:	CERVU
Stage (leaves):	10+
Height (inches):	0-1
Density:	Low
Weed 3 Code:	LAMAM
Stage (leaves):	5-8
Height (inches):	0-1
Density:	Medium
Weed 4 Code:	CAPBP
Stage (leaves):	5-6
Height (inches):	0-1
Density:	Low

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:

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Weed Code	POAAN	CERVU	CERVU	CERVU	LAMAM	LAMAM	LAMAM
Crop Code	Control	Control	Control	Control	Control	Control	Control
Rating Data Type	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit	12-9-05	12-9-05	4-1-06	5-1-06	12-9-05	4-1-06	5-1-06
Rating Date	21 DA-A	21 DA-A	134 DA-A	164 DA-A	21 DA-A	134 DA-A	164 DA-A
Trt-Eval Interval							

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
2	AUTUMN	10	WG	0.00187	lb ai/a	0.3	oz/a	FALL	A	0	0	80	78	0	90	97
2	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL	A							
2	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	FALL	A							
3	AUTUMN	10	WG	0.00375	lb ai/a	0.6	oz/a	FALL	A	0	0	87	87	0	95	95
3	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL	A							
3	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	FALL	A							
4	AUTUMN	10	WG	0.00187	lb ai/a	0.3	oz/a	FALL	A	0	0	93	97	0	100	100
4	SENCOR	75	WG	0.25	lb ai/a	5.33	oz/a	FALL	A							
4	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL	A							
4	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	FALL	A							
5	AUTUMN	10	WG	0.00187	lb ai/a	0.3	oz/a	FALL	A	0	0	85	85	0	100	100
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							
5	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	FALL	A							
6	AUTUMN	10	WG	0.00187	lb ai/a	0.3	oz/a	FALL	A	0	0	99	100	0	100	100
6	ROUNDUP W-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	FALL	A							
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	FALL	A							
7	ROUNDUP W-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	FALL	A	0	0	100	96	0	100	100
7	2,4-D LV4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A							
7	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	FALL	A							
8	AUTUMN	10	WG	0.00187	lb ai/a	0.3	oz/a	FALL	A	0	0	80	80	0	97	97
8	SPARTAN	4	F	0.117	lb ai/a	3.75	fl oz/a	FALL	A							
8	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL	A							
8	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	FALL	A							
9	CANOPY XL	56.3	WG			4	oz/a	FALL	A	0	0	87	87	0	100	100
9	->SPARTAN	4	F	0.1173	lb ai/a			FALL	A							
9	->CLASSIC	25	WG	0.0235	lb ai/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							
9	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	FALL	A							
10	CANOPY EX	29.5	WG			1.75	oz/a	FALL	A	0	0	97	97	0	100	100
10	->CLASSIC	25	WG	0.0248	lb ai/a			FALL	A							
10	->EXPRESS	75	WG	0.00744	lb ai/a			FALL	A							
10	2,4-D LV4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A							
10	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL	A							
10	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	FALL	A							
11	SPARTAN	4	F	0.125	lb ai/a	4	fl oz/a	FALL	A	0	0	87	87	0	100	100
11	CLASSIC	25	WG	0.0156	lb ai/a	1	oz/a	FALL	A							
11	2,4-D LV4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A							
11	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL	A							
12	SPARTAN	4	F	0.125	lb ai/a	4	fl oz/a	FALL	A	0	0	87	87	0	100	100
12	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	FALL	A							
12	2,4-D LV4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A							
12	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL	A							
13	SPARTAN	4	F	0.125	lb ai/a	4	fl oz/a	FALL	A	0	0	98	93	0	100	100
13	SENCOR	75	WG	0.187	lb ai/a	4	oz/a	FALL	A							
13	2,4-D LV4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A							
13	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL	A							
14	SPARTAN	4	F	0.125	lb ai/a	4	fl oz/a	FALL	A	0	0	90	90	0	100	100
14	SENCOR	75	WG	0.094	lb ai/a	2	oz/a	FALL	A							
14	2,4-D LV4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A							
14	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL	A							
15	AIM	2	EW	0.0078	lb ai/a	0.5	fl oz/a	FALL	A	0	0	87	77	0	100	100
15	EXPRESS	75	WG	0.0047	lb ai/a	0.1	oz/a	FALL	A							
15	2,4-D LV4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A							
15	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL	A							
16	CLASSIC	25	WG	0.0156	lb ai/a	1	oz/a	FALL	A	0	0	87	85	0	100	100
16	2,4-D LV4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A							
16	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL	A							
LSD (P=.05)										0.0	0.0	8.1	12.1	0.0	5.1	4.0
Replicate F										0.000	0.000	1.854	0.433	0.000	2.079	1.196
Replicate Prob(F)										1.0000	1.0000	0.1740	0.6525	1.0000	0.1427	0.3163
Treatment F										0.000	0.000	68.314	30.240	0.000	199.787	327.503
Treatment Prob(F)										1.0000	1.0000	0.0001	0.0001	1.0000	0.0001	0.0001

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	GLXMA Injury Percent 6-5-06 14 DAP	GLXMA Injury Percent 6-19-06 28 DAP
1	NONTREATED									0	0
2	AUTUMN	10	WG	0.00187	lb ai/a	0.3	oz/a	FALL A		0	0
2	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL A			
2	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	FALL A			
3	AUTUMN	10	WG	0.00375	lb ai/a	0.6	oz/a	FALL A		0	0
3	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL A			
3	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	FALL A			
4	AUTUMN	10	WG	0.00187	lb ai/a	0.3	oz/a	FALL A		0	0
4	SENCOR	75	WG	0.25	lb ai/a	5.33	oz/a	FALL A			
4	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL A			
4	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	FALL A			
5	AUTUMN	10	WG	0.00187	lb ai/a	0.3	oz/a	FALL A		0	0
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			
5	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	FALL A			
6	AUTUMN	10	WG	0.00187	lb ai/a	0.3	oz/a	FALL A		0	0
6	ROUNDUP W-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	FALL A			
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	FALL A			
7	ROUNDUP W-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	FALL A		0	0
7	2,4-D LV4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL A			
7	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	FALL A			
8	AUTUMN	10	WG	0.00187	lb ai/a	0.3	oz/a	FALL A		0	0
8	SPARTAN	4	F	0.117	lb ai/a	3.75	fl oz/a	FALL A			
8	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL A			
8	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	FALL A			
9	CANOPY XL	56.3	WG			4	oz/a	FALL A		0	0
9	->SPARTAN	4	F	0.1173	lb ai/a			FALL A			
9	->CLASSIC	25	WG	0.0235	lb ai/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			
9	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	FALL A			
10	CANOPY EX	29.5	WG			1.75	oz/a	FALL A		0	0
10	->CLASSIC	25	WG	0.0248	lb ai/a			FALL A			
10	->EXPRESS	75	WG	0.00744	lb ai/a			FALL A			
10	2,4-D LV4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL A			
10	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL A			
10	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	FALL A			
11	SPARTAN	4	F	0.125	lb ai/a	4	fl oz/a	FALL A		0	0
11	CLASSIC	25	WG	0.0156	lb ai/a	1	oz/a	FALL A			
11	2,4-D LV4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL A			
11	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL A			
12	SPARTAN	4	F	0.125	lb ai/a	4	fl oz/a	FALL A		0	0
12	CLASSIC	25	WG	0.0078	lb ai/a	0.5	oz/a	FALL A			
12	2,4-D LV4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL A			
12	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL A			
13	SPARTAN	4	F	0.125	lb ai/a	4	fl oz/a	FALL A		0	0
13	SENCOR	75	WG	0.187	lb ai/a	4	oz/a	FALL A			
13	2,4-D LV4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL A			
13	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL A			
14	SPARTAN	4	F	0.125	lb ai/a	4	fl oz/a	FALL A		0	0
14	SENCOR	75	WG	0.094	lb ai/a	2	oz/a	FALL A			
14	2,4-D LV4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL A			
14	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL A			
15	AIM	2	EW	0.0078	lb ai/a	0.5	fl oz/a	FALL A		0	0
15	EXPRESS	75	WG	0.0047	lb ai/a	0.1	oz/a	FALL A			
15	2,4-D LV4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL A			
15	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL A			
16	CLASSIC	25	WG	0.0156	lb ai/a	1	oz/a	FALL A		0	0
16	2,4-D LV4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL A			
16	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL A			

LSD (P=.05) 0.0 0.0

Replicate F 0.000 0.000
 Replicate Prob(F) 1.0000 1.0000
 Treatment F 0.000 0.000
 Treatment Prob(F) 1.0000 1.0000

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Trial Comments

1. Protocol: Bayer, FMC.
2. Ratings: WC 21 DAT, April 1, May 1, and 28 DAP. CI 14 and 28 DAP.
3. Blanket application, if needed.
4. DA-A = Days after FALL application. DAP = Days after planting.
5. Not harvested.