

MSU Weed Science Research Program

Fall -Applied Herbicides for Weed Control in Soybean

Trial ID: FSB01-08 Study Dir.: Sprague, Powell
 Conducted: T-16 Botany Farm Investigator: Christy Sprague

Date Planted: 5/13/08 Row Spacing: 7.5 IN
 Variety: Asgrow 2107 No. of Reps: 5
 Population: 210,000 seeds/Acre % OM: 2.6
 Soil Type: Sandy Loam pH: 6.3
 Plot Size: 10 X 40 FT Design: RANDOMIZED COMPLETE BLOCK

Tillage: No-till into standing corn stubble
 Fertilizer: None at planting

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	TAROF	DANDELION, COMMON	TARAXACUM OFFICINALE
2.	STEME	CHICKWEED, COMMON	STELLARIA MEDIA (L.)
3.	VERPG	SPEEDWELL, PURSLANE	VERONICA PEREGRINA L.
4.	AMASS	REDROOT PIGWEED, POWELL AMARANTH	AMARANTHUS SP.
5.	ERICA	HORSEWEED (Marestail)	CONYZA CANADENSIS L.
6.	ANGR	mainly foxtail species	SETARIA SP.
7.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
8.	POLPE	LADYSTHUMB	POLYGONUM PERSICARIA L.
9.	CAPBP	SHEPHERDSPURSE	CAPSELLA BURSA-PASTORIS (L.)
Crop	Code	Common Name	
1.	GLXMA	SOYBEAN	

Application Description

A
 Application Timing: Fall
 Date Treated: 11/13/07
 Time Treated: 12:30 PM
 % Cloud Cover: 10
 Air Temp., Unit: 57 F
 % Relative Humidity: 40
 Wind Speed/Unit/Dir: 5 mph S
 Soil Temp., Unit: 45 F
 Soil/Leaf Surface M: 5 5
 Soil Moist (1=w 5=d): 4

Crop Stage at Each Application

A
 Crop Name: GLXMA
 Height (In.): --
 Stage (L): --

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Weed Stage at Each Application

A
Weed 1 Name: TAROF
Height (In.): 3-8 dia
Stage (L): 6-many
Weed 2 Name: STEME
Height (In.): 6-16 dia
Stage (L): many
Weed 3 Name: VERPG
Height (In.): -
Stage (L): -
Weed 4 Name: AMASS
Height (In.): -
Stage (L): -
Weed 5 Name: ERICA
Height (In.): -
Stage (L): -
Weed 6 Name: ANGR
Height (In.): -
Stage (L): -
Weed 7 Name: CHEAL
Height (In.): -
Stage (L): -
Weed 8 Name: POLPE
Height (In.): -
Stage (L): -
Weed 9 Name: CAPBP

Weed Density (plants/sq. ft.)

	1	2	3	4	5	6	7
Date:	7/25/08	7/25/08	7/25/08	7/25/08	7/25/08	7/25/08	7/25/08
Weed Name:	TAROF	VERPG	AMAPO	ERICA	ANGR	CHEAL	POLPE
Density:	0.5	0.8	0.3	0.4	0.1	1.7	0.1

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom	GPA	Carrier	PSI
	Type	MPH	Type	Size	Height	Spacing	Width			
A	Cub	3.7	AirMix	11003	24	20	100	19	water	27

Comments: 6/23/08- Roundup WeatherMax + AMS (22 fl oz + 17 lb/100 gal) applied to entire study w/ Willmar self-propelled sprayer at 10 GPA.

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								TAROF	VERPG	CAPBP	ERICA
Weed Code											
Crop Code											
Rating Data Type								control	control	control	control
Rating Unit								percent	percent	percent	percent
Rating Date								5/5/08	5/5/08	5/5/08	5/5/08
Trt-Eval Interval								174 DA-A	174 DA-A	174 DA-A	174 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A	91	90	99	99
1	2,4-D Ester	4	SC	1	pt/a	Fall	A				
1	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A				
2	Express	50	SG	0.5	oz/a	Fall	A	98	97	99	99
2	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A				
2	2,4-D Ester	4	SC	1	pt/a	Fall	A				
2	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A				
3	Express	50	SG	0.33	oz/a	Fall	A	68	82	99	86
3	2,4-D Ester	4	SC	1	pt/a	Fall	A				
3	Herbimax (COC)		L	1	% v/v	Fall	A				
4	Canopy EX (1.1 oz)		X					97	99	99	94
4	Classic	25	DF	1	oz/a	Fall	A				
4	Express	50	SG	0.15	oz/a	Fall	A				
4	2,4-D Ester	4	SC	1	pt/a	Fall	A				
4	Herbimax (COC)		L	1	% v/v	Fall	A				
5	Canopy EX (2.2 oz)		X					98	99	99	96
5	Classic	25	DF	2	oz/a	Fall	A				
5	Express	50	SG	0.3	oz/a	Fall	A				
5	2,4-D Ester	4	SC	1	pt/a	Fall	A				
5	Herbimax (COC)		L	1	% v/v	Fall	A				
6	Valor XLT	40	WG	3	oz/a	Fall	A	98	99	99	96
6	2,4-D Ester	4	SC	1	pt/a	Fall	A				
6	Express	50	SG	0.15	oz/a	Fall	A				
6	Activator 90 (NIS)		L	0.25	% v/v	Fall	A				
7	Valor	51	WG	2	oz/a	Fall	A	67	98	99	85
7	Express	50	SG	0.15	oz/a	Fall	A				
7	2,4-D Ester	4	SC	1	pt/a	Fall	A				
7	Activator 90 (NIS)		L	0.25	% v/v	Fall	A				
8	Authority MTZ	45	DF	8	oz/a	Fall	A	57	85	99	99
8	Roundup WeatherMax	4.5	SL	11	fl oz/a	Fall	A				
8	2,4-D Ester	4	SC	1	pt/a	Fall	A				
8	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A				
9	Authority MTZ	45	DF	11	oz/a	Fall	A	49	91	99	92
9	Roundup WeatherMax	4.5	SL	11	fl oz/a	Fall	A				
9	2,4-D Ester	4	SC	1	pt/a	Fall	A				
9	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A				
10	Authority First	70	DF	3	oz/a	Fall	A	81	88	97	99
10	Roundup WeatherMax	4.5	SL	11	fl oz/a	Fall	A				
10	2,4-D Ester	4	SC	1	pt/a	Fall	A				
10	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A				

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Study Dir.: Sprague, Powell

Conducted: T-16 Botany Farm

Investigator: Christy Sprague

Weed Code	TAROF	VERPG	CAPBP	ERICA
Crop Code				
Rating Data Type	control	control	control	control
Rating Unit	percent	percent	percent	percent
Rating Date	5/5/08	5/5/08	5/5/08	5/5/08
Trt-Eval Interval	174 DA-A	174 DA-A	174 DA-A	174 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	TAROF	VERPG	CAPBP	ERICA
11	No Fall Treatment							0	0	0	0
12	Autumn	10	DF	0.3	oz/a	Fall	A	89	68	99	99
12	2,4-D Ester	4	SC	1	pt/a	Fall	A				
12	Herbimax (COC)		L	1	% v/v	Fall	A				
12	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A				
LSD (P=.10)								13.2	9.6	1.2	6.6
Standard Deviation								12.4	9.0	1.2	6.2
CV								16.61	10.83	1.28	7.13

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Investigator: Christy Sprague

Weed Code	CHEAL	STEME	VERPG	ERICA
Crop Code				
Rating Data Type	control	control	control	control
Rating Unit	percent	percent	percent	percent
Rating Date	5/5/08	6/12/08	6/12/08	6/12/08
Trt-Eval Interval	174 DA-A	212 DA-A	212 DA-A	212 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A	0	85	86	97
1	2,4-D Ester	4	SC	1	pt/a	Fall	A				
1	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A				
2	Express	50	SG	0.5	oz/a	Fall	A	81	86	94	96
2	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A				
2	2,4-D Ester	4	SC	1	pt/a	Fall	A				
2	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A				
3	Express	50	SG	0.33	oz/a	Fall	A	0	79	53	61
3	2,4-D Ester	4	SC	1	pt/a	Fall	A				
3	Herbimax (COC)		L	1	% v/v	Fall	A				
4	Canopy EX (1.1 oz)		X					99	93	98	71
4	Classic	25	DF	1	oz/a	Fall	A				
4	Express	50	SG	0.15	oz/a	Fall	A				
4	2,4-D Ester	4	SC	1	pt/a	Fall	A				
4	Herbimax (COC)		L	1	% v/v	Fall	A				
5	Canopy EX (2.2 oz)		X					99	99	99	73
5	Classic	25	DF	2	oz/a	Fall	A				
5	Express	50	SG	0.3	oz/a	Fall	A				
5	2,4-D Ester	4	SC	1	pt/a	Fall	A				
5	Herbimax (COC)		L	1	% v/v	Fall	A				
6	Valor XLT	40	WG	3	oz/a	Fall	A	99	96	99	77
6	2,4-D Ester	4	SC	1	pt/a	Fall	A				
6	Express	50	SG	0.15	oz/a	Fall	A				
6	Activator 90 (NIS)		L	0.25	% v/v	Fall	A				
7	Valor	51	WG	2	oz/a	Fall	A	99	92	98	64
7	Express	50	SG	0.15	oz/a	Fall	A				
7	2,4-D Ester	4	SC	1	pt/a	Fall	A				
7	Activator 90 (NIS)		L	0.25	% v/v	Fall	A				
8	Authority MTZ	45	DF	8	oz/a	Fall	A	99	87	83	98
8	Roundup WeatherMax	4.5	SL	11	fl oz/a	Fall	A				
8	2,4-D Ester	4	SC	1	pt/a	Fall	A				
8	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A				
9	Authority MTZ	45	DF	11	oz/a	Fall	A	97	62	85	94
9	Roundup WeatherMax	4.5	SL	11	fl oz/a	Fall	A				
9	2,4-D Ester	4	SC	1	pt/a	Fall	A				
9	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A				
10	Authority First	70	DF	3	oz/a	Fall	A	99	90	99	99
10	Roundup WeatherMax	4.5	SL	11	fl oz/a	Fall	A				
10	2,4-D Ester	4	SC	1	pt/a	Fall	A				
10	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A				

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Crop Code				
Rating Data Type	control	control	control	control
Rating Unit	percent	percent	percent	percent
Rating Date	5/5/08	6/12/08	6/12/08	6/12/08
Trt-Eval Interval	174 DA-A	212 DA-A	212 DA-A	212 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
11	No Fall Treatment							0	0	0	0
12	Autumn	10	DF	0.3	oz/a	Fall	A	0	83	50	87
12	2,4-D Ester	4	SC	1	pt/a	Fall	A				
12	Herbimax (COC)		L	1	% v/v	Fall	A				
12	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A				
LSD (P=.10)								6.6	18.9	11.1	8.0
Standard Deviation								6.2	17.8	10.5	7.5
CV								9.57	22.4	13.31	9.8

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Weed Code	TAROF	ANGR	CHEAL	GLXMA
Crop Code				
Rating Data Type	control	control	control	moisture
Rating Unit	percent	percent	percent	percent
Rating Date	6/12/08	6/12/08	6/12/08	10/21/08
Trt-Eval Interval	212 DA-A	212 DA-A	212 DA-A	343 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	TAROF	ANGR	CHEAL	GLXMA
1	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A	70	72	0	14.5
1	2,4-D Ester	4	SC	1	pt/a	Fall	A				
1	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A				
2	Express	50	SG	0.5	oz/a	Fall	A	89	73	42	14.8
2	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A				
2	2,4-D Ester	4	SC	1	pt/a	Fall	A				
2	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A				
3	Express	50	SG	0.33	oz/a	Fall	A	58	73	10	15.1
3	2,4-D Ester	4	SC	1	pt/a	Fall	A				
3	Herbimax (COC)		L	1	% v/v	Fall	A				
4	Canopy EX (1.1 oz)		X					90	76	97	15.2
4	Classic	25	DF	1	oz/a	Fall	A				
4	Express	50	SG	0.15	oz/a	Fall	A				
4	2,4-D Ester	4	SC	1	pt/a	Fall	A				
4	Herbimax (COC)		L	1	% v/v	Fall	A				
5	Canopy EX (2.2 oz)		X					95	83	99	14.5
5	Classic	25	DF	2	oz/a	Fall	A				
5	Express	50	SG	0.3	oz/a	Fall	A				
5	2,4-D Ester	4	SC	1	pt/a	Fall	A				
5	Herbimax (COC)		L	1	% v/v	Fall	A				
6	Valor XLT	40	WG	3	oz/a	Fall	A	91	89	99	14.7
6	2,4-D Ester	4	SC	1	pt/a	Fall	A				
6	Express	50	SG	0.15	oz/a	Fall	A				
6	Activator 90 (NIS)		L	0.25	% v/v	Fall	A				
7	Valor	51	WG	2	oz/a	Fall	A	22	89	76	15.3
7	Express	50	SG	0.15	oz/a	Fall	A				
7	2,4-D Ester	4	SC	1	pt/a	Fall	A				
7	Activator 90 (NIS)		L	0.25	% v/v	Fall	A				
8	Authority MTZ	45	DF	8	oz/a	Fall	A	24	54	48	14.7
8	Roundup WeatherMax	4.5	SL	11	fl oz/a	Fall	A				
8	2,4-D Ester	4	SC	1	pt/a	Fall	A				
8	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A				
9	Authority MTZ	45	DF	11	oz/a	Fall	A	0	83	83	14.8
9	Roundup WeatherMax	4.5	SL	11	fl oz/a	Fall	A				
9	2,4-D Ester	4	SC	1	pt/a	Fall	A				
9	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A				
10	Authority First	70	DF	3	oz/a	Fall	A	51	70	71	15.5
10	Roundup WeatherMax	4.5	SL	11	fl oz/a	Fall	A				
10	2,4-D Ester	4	SC	1	pt/a	Fall	A				
10	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A				

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								TAROF	ANGR	CHEAL	GLXMA
								control	control	control	moisture
								percent	percent	percent	percent
								6/12/08	6/12/08	6/12/08	10/21/08
								212 DA-A	212 DA-A	212 DA-A	343 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
11	No Fall Treatment							0	0	0	14.8
12	Autumn	10	DF	0.3	oz/a	Fall	A	52	35	0	15.0
12	2,4-D Ester	4	SC	1	pt/a	Fall	A				
12	Herbimax (COC)		L	1	% v/v	Fall	A				
12	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A				
LSD (P=.10)								14.9	14.8	10.6	0.68
Standard Deviation								14.0	13.9	10.0	0.63
CV								26.16	21.0	19.18	4.25

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Weed Code

Crop Code

Rating Data Type

Rating Unit

Rating Date

Trt-Eval Interval

GLXMA
yield
bu/acre
10/21/08
at 13% M

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	
1	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A	51.6
1	2,4-D Ester	4	SC	1	pt/a	Fall	A	
1	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A	
2	Express	50	SG	0.5	oz/a	Fall	A	53.8
2	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A	
2	2,4-D Ester	4	SC	1	pt/a	Fall	A	
2	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A	
3	Express	50	SG	0.33	oz/a	Fall	A	49.3
3	2,4-D Ester	4	SC	1	pt/a	Fall	A	
3	Herbimax (COC)		L	1	% v/v	Fall	A	
4	Canopy EX (1.1 oz)		X					49.9
4	Classic	25	DF	1	oz/a	Fall	A	
4	Express	50	SG	0.15	oz/a	Fall	A	
4	2,4-D Ester	4	SC	1	pt/a	Fall	A	
4	Herbimax (COC)		L	1	% v/v	Fall	A	
5	Canopy EX (2.2 oz)		X					49.3
5	Classic	25	DF	2	oz/a	Fall	A	
5	Express	50	SG	0.3	oz/a	Fall	A	
5	2,4-D Ester	4	SC	1	pt/a	Fall	A	
5	Herbimax (COC)		L	1	% v/v	Fall	A	
6	Valor XLT	40	WG	3	oz/a	Fall	A	52.0
6	2,4-D Ester	4	SC	1	pt/a	Fall	A	
6	Express	50	SG	0.15	oz/a	Fall	A	
6	Activator 90 (NIS)		L	0.25	% v/v	Fall	A	
7	Valor	51	WG	2	oz/a	Fall	A	46.0
7	Express	50	SG	0.15	oz/a	Fall	A	
7	2,4-D Ester	4	SC	1	pt/a	Fall	A	
7	Activator 90 (NIS)		L	0.25	% v/v	Fall	A	
8	Authority MTZ	45	DF	8	oz/a	Fall	A	46.2
8	Roundup WeatherMax	4.5	SL	11	fl oz/a	Fall	A	
8	2,4-D Ester	4	SC	1	pt/a	Fall	A	
8	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A	
9	Authority MTZ	45	DF	11	oz/a	Fall	A	49.9
9	Roundup WeatherMax	4.5	SL	11	fl oz/a	Fall	A	
9	2,4-D Ester	4	SC	1	pt/a	Fall	A	
9	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A	
10	Authority First	70	DF	3	oz/a	Fall	A	39.2
10	Roundup WeatherMax	4.5	SL	11	fl oz/a	Fall	A	
10	2,4-D Ester	4	SC	1	pt/a	Fall	A	
10	Ammonium Sulfate		WG	17	lb/100 gal	Fall	A	

