

MSU Weed Science Research Program

Fall-Applied Herbicides for Weed Control in Soybean

Trial ID: FSB01-07 Study Dir.: Sprague, Powell
 Conducted: C-13 East Campus Investigator: Christy Sprague

Date Planted: 5/14/07 Row Spacing: 7.5 IN
 Variety: Asgrow 2107 No. of Reps: 4
 Population: 205,000 seeds/acre % OM: 3.7
 Soil Type: Clay loam pH: 6.4
 Plot Size: 10 X 30 FT Design: RANDOMIZED COMPLETE BLOCK

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

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	ERIST	FLEABANE, ROUGH	ERIGERON STRIGOSUS MUHL.
2.	ERICA	HORSEWEED	CONYZA CANADENSIS L.
3.	TAROF	DANDELION, COMMON	TARAXACUM OFFICINALE WEBER IN WIGGERS
4.	PLAMA	PLANTAIN, BROADLEAF	PLANTAGO MAJOR L.
5.	CAPBP	SHEPHERDSPURSE	CAPSELLA BURSA-PASTORIS (L.) MEDIK.
6.	STEME	CHICKWEED, COMMON	STELLARIA MEDIA (L.) VILL./CYR.
7.	MELAL	COCKLE, WHITE	MELANDRIUM ALBUM (MILL.) GARCKE
8.	DAUCA	CARROT, WILD	DAUCUS CAROTA L.
9.	VERPG	SPEEDWELL, PURSLANE	VERONICA PEREGRINA L.
10.	LAMAM	HENBIT	LAMIUM AMPLEXICAULE L.
11.	ANGR	mainly foxtail species	SETARIA SP.
12.	AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA L.
13.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
Crop	Code	Common Name	
1.	GLXMA	SOYBEAN	

Application Description

A
 Application Timing: Fall
 Date Treated: 11/6/06
 Time Treated: 3:00 PM
 % Cloud Cover: 20
 Air Temp., Unit: 57 F
 % Relative Humidity: 35
 Wind Speed/Unit/Dir: 5 mph SE
 Soil Temp., Unit: 47 F
 Soil/Leaf Surface M: 5 5
 Soil Moist (1=w 5=d): 2

Crop Stage at Each Application

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

MSU Weed Science Research Program

Fall-Applied Herbicides for Weed Control in Soybean

Trial ID: FSB01-07 Study Dir.: Sprague, Powell
 Conducted: C-13 East Campus Investigator: Christy Sprague

Weed Stage at Each Application

A

Weed 1 Name: ERIST
 Height (In.): 4" dia
 Stage (L): rosette
 Weed 2 Name: ERICA
 Height (In.): 2" dia
 Stage (L): many
 Weed 3 Name: TAROF
 Height (In.): 10-12 dia
 Stage (L): many
 Weed 4 Name: PLAMA
 Height (In.): 8" dia
 Stage (L): 10-14
 Weed 5 Name: CAPBP
 Height (In.): 2-4"
 Stage (L): many
 Weed 6 Name: STEME
 Height (In.): 12" dia
 Stage (L): many
 Weed 7 Name: MELAL
 Height (In.): 6-12" dia
 Stage (L): many

Weed Density (plants/sq. ft.)

	1	2	3	4	5	6
Date:	7/10/07	7/10/07	7/10/07	7/10/07	7/10/07	7/10/07
Weed Name:	STEME	TAROF	MELAL	DAUCA	VERPG	LAMAM
Density:	0	1	1	< 1	< 1	< 1
	7	8	9	10	11	12
Date:	7/10/07	7/10/07	7/10/07	7/10/07	7/10/07	7/10/07
Weed Name:	ERIST	ANGR	AMBEL	CHEAL	ERICA	PLAMA
Density:	< 1	< 1	< 1	< 1	< 1	< 1
	13					
Date:	7/10/07					
Weed Name:	CAPBP					
Density:	< 1					

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom			
Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI	
A	Cub	3.8	AirMix	11003	24"	20"	100"	19	water	27

Comments: 6/21/07- Applied Roundup Original Max (22oz) + AMS (17lb/100 gal) to entire study w/ Willmar self-propelled sprayer at 20 GPA, 40 PSI.

MSU Weed Science Research Program

Fall-Applied Herbicides for Weed Control in Soybean

Trial ID: FSB01-07

Study Dir.: Sprague, Powell

Conducted: C-13 East Campus

Investigator: Christy Sprague

Weed Code	STEME	TAROF	MELAL	DAUCA	VERPG	LAMAM
Crop Code						
Rating Data Type	control	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent
Rating Date	5/7/07	5/7/07	5/7/07	5/7/07	5/7/07	5/7/07
Trt-Eval Interval	182 DA-A	182 DA-A	182 DA-A	182 DA-A	182 DA-A	182 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Form Rate	Rate Unit	Grow Stg	Appl Code	STEME	TAROF	MELAL	DAUCA	VERPG	LAMAM
1	Roundup WeatherMax	4.5	SL	22	fl oz/a	fl oz/a	Fall	A	99	99	99	96	97	99
1	2,4-D Ester	4	SC	1	pt/a	pt/a	Fall	A						
1	Ammonium sulfate		WG	17	lb/100 gal	lb/100 gal	Fall	A						
2	Extreme	2.17	L	3	pt/a	pt/a	Fall	A	99	99	96	91	92	99
2	2,4-D Ester	4	SC	1	pt/a	pt/a	Fall	A						
2	Activator 90 NIS		L	0.25	% v/v	% v/v	Fall	A						
2	Ammonium sulfate		WG	17	lb/100 gal	lb/100 gal	Fall	A						
3	Canopy EX (2.2 oz)		X						99	99	93	99	99	99
3	Classic	25	DF	2	oz/a	oz/a	Fall	A						
3	Express	50	DF	0.3	oz/a	oz/a	Fall	A						
3	2,4-D Ester	4	SC	1	pt/a	pt/a	Fall	A						
3	Herbimax (COC)		L	1	% v/v	% v/v	Fall	A						
4	Canopy EX (1.1 oz)		X						99	99	75	96	99	99
4	Classic	25	DF	1	oz/a	oz/a	Fall	A						
4	Express	50	DF	0.15	oz/a	oz/a	Fall	A						
4	2,4-D Ester	4	SC	1	pt/a	pt/a	Fall	A						
4	Herbimax (COC)		L	1	% v/v	% v/v	Fall	A						
5	Autumn (iodosulfuron)	10	DF	0.3	oz/a	oz/a	Fall	A	76	99	51	90	76	94
5	2,4-D Ester	4	SC	1	pt/a	pt/a	Fall	A						
5	Herbimax (COC)		L	1	% v/v	% v/v	Fall	A						
5	Ammonium sulfate		WG	17	lb/100 gal	lb/100 gal	Fall	A						
6	Untreated								0	0	0	0	0	0
7	Valor XLT (3 oz/A)		X						99	99	81	74	99	99
7	Valor	51	WG	1.75	oz/a	oz/a	Fall	A						
7	Classic	25	DF	1.2	oz/a	oz/a	Fall	A						
7	Roundup OriginalMax	4.5	SL	11	fl oz/a	fl oz/a	Fall	A						
7	2,4-D Ester	4	SC	1	qt/a	qt/a	Fall	A						
7	Activator 90 (NIS)		L	0.25	% v/v	% v/v	Fall	A						
7	Ammonium sulfate		WG	2.5	lb/a	lb/a	Fall	A						
8	Valor XLT (3 oz/A)		X						99	99	75	85	99	99
8	Valor	51	WG	1.75	oz/a	oz/a	Fall	A						
8	Classic	25	DF	1.2	oz/a	oz/a	Fall	A						
8	Express	50	DF	0.18	oz/a	oz/a	Fall	A						
8	2,4-D Ester	4	SC	1	qt/a	qt/a	Fall	A						
8	Activator 90 (NIS)		L	0.25	% v/v	% v/v	Fall	A						
9	Canopy 75 DF (2.5 oz)		X						96	99	73	91	99	99
9	Sencor 75 DF	75	WG	2.2	oz/a	oz/a	Fall	A						
9	Classic	25	DF	1.06	oz/a	oz/a	Fall	A						
9	Express	50	DF	0.15	oz/a	oz/a	Fall	A						
9	2,4-D Ester	4	SC	1	pt/a	pt/a	Fall	A						
9	Herbimax (COC)		L	1	% v/v	% v/v	Fall	A						
10	Scepter	70	DG	2.8	oz/a	oz/a	Fall	A	99	99	94	97	98	99
10	2,4-D Ester	3.8	L	1	pt/a	pt/a	Fall	A						
10	Roundup WeatherMax	4.5	SL	16	fl oz/a	fl oz/a	Fall	A						
10	Activator 90 (NIS)		L	0.25	% v/v	% v/v	Fall	A						
10	Ammonium sulfate		WG	17	lb/100 gal	lb/100 gal	Fall	A						

LSD (P=.05)	3.0	0.0	18.6	12.6	4.7	4.4
Standard Deviation	2.1	0.0	12.8	8.7	3.2	3.0
CV	2.43	0.0	17.37	10.64	3.74	3.39

MSU Weed Science Research Program

Fall-Applied Herbicides for Weed Control in Soybean

Trial ID: FSB01-07

Study Dir.: Sprague, Powell

Conducted: C-13 East Campus

Investigator: Christy Sprague

								ANGR	CHEAL	AMBEL	TAROF	ERIST	MELAL	
Weed Code														
Crop Code														
Rating Data Type								control	control	control	control	control	control	
Rating Unit								percent	percent	percent	percent	percent	percent	
Rating Date								5/14/07	5/14/07	5/14/07	6/14/07	6/14/07	6/14/07	
Trt-Eval Interval								189 DA-A	189 DA-A	189 DA-A	220 DA-A	220 DA-A	220 DA-A	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Form Rate	Unit	Grow Stg	Appl Code						
1	Roundup WeatherMax	4.5	SL	22	fl oz/a		Fall	A	0	0	0	98	98	99
1	2,4-D Ester	4	SC	1	pt/a		Fall	A						
1	Ammonium sulfate		WG	17	lb/100 gal		Fall	A						
2	Extreme	2.17	L	3	pt/a		Fall	A	56	65	5	81	99	92
2	2,4-D Ester	4	SC	1	pt/a		Fall	A						
2	Activator 90 NIS		L	0.25	% v/v		Fall	A						
2	Ammonium sulfate		WG	17	lb/100 gal		Fall	A						
3	Canopy EX (2.2 oz)		X						71	99	74	93	99	92
3	Classic	25	DF	2	oz/a		Fall	A						
3	Express	50	DF	0.3	oz/a		Fall	A						
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						50	99	70	89	82	66
4	Classic	25	DF	1	oz/a		Fall	A						
4	Express	50	DF	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	Autumn (iodosulfuron)	10	DF	0.3	oz/a		Fall	A	92	10	13	50	65	53
5	2,4-D Ester	4	SC	1	pt/a		Fall	A						
5	Herbimax (COC)		L	1	% v/v		Fall	A						
5	Ammonium sulfate		WG	17	lb/100 gal		Fall	A						
6	Untreated								0	0	0	0	0	0
7	Valor XLT (3 oz/A)		X						60	99	89	96	99	85
7	Valor	51	WG	1.75	oz/a		Fall	A						
7	Classic	25	DF	1.2	oz/a		Fall	A						
7	Roundup OriginalMax	4.5	SL	11	fl oz/a		Fall	A						
7	2,4-D Ester	4	SC	1	qt/a		Fall	A						
7	Activator 90 (NIS)		L	0.25	% v/v		Fall	A						
7	Ammonium sulfate		WG	2.5	lb/a		Fall	A						
8	Valor XLT (3 oz/A)		X						88	99	99	95	99	75
8	Valor	51	WG	1.75	oz/a		Fall	A						
8	Classic	25	DF	1.2	oz/a		Fall	A						
8	Express	50	DF	0.18	oz/a		Fall	A						
8	2,4-D Ester	4	SC	1	qt/a		Fall	A						
8	Activator 90 (NIS)		L	0.25	% v/v		Fall	A						
9	Canopy 75 DF (2.5 oz)		X						79	99	55	86	93	77
9	Sencor 75 DF	75	WG	2.2	oz/a		Fall	A						
9	Classic	25	DF	1.06	oz/a		Fall	A						
9	Express	50	DF	0.15	oz/a		Fall	A						
9	2,4-D Ester	4	SC	1	pt/a		Fall	A						
9	Herbimax (COC)		L	1	% v/v		Fall	A						
10	Scepter	70	DG	2.8	oz/a		Fall	A	94	94	23	89	99	96
10	2,4-D Ester	3.8	L	1	pt/a		Fall	A						
10	Roundup WeatherMax	4.5	SL	16	fl oz/a		Fall	A						
10	Activator 90 (NIS)		L	0.25	% v/v		Fall	A						
10	Ammonium sulfate		WG	17	lb/100 gal		Fall	A						
LSD (P=.05)								28.7	20.9	34.3	22.8	14.8	21.7	
Standard Deviation								19.8	14.4	23.6	15.7	10.2	15.0	
CV								33.58	21.71	55.51	20.27	12.23	20.41	

MSU Weed Science Research Program

Fall-Applied Herbicides for Weed Control in Soybean

Trial ID: FSB01-07

Study Dir.: Sprague, Powell

Conducted: C-13 East Campus

Investigator: Christy Sprague

Weed Code								ERICA	DAUCA	ANGR	AMBEL	CHEAL	NOTILL	
Crop Code													WEEDS	
Rating Data Type								control	control	control	control	control	Overall	
Rating Unit								percent	percent	percent	percent	percent	percent	
Rating Date								6/14/07	6/14/07	6/14/07	6/14/07	6/14/07	6/14/07	
Trt-Eval Interval								220 DA-A	220 DA-A	220 DA-A	220 DA-A	220 DA-A	220 DA-A	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Form Rate	Unit	Grow Stg	Appl Code						
1	Roundup WeatherMax	4.5	SL	22	fl oz/a		Fall	A	97	82	0	0	0	90
1	2,4-D Ester	4	SC	1	pt/a		Fall	A						
1	Ammonium sulfate		WG	17	lb/100 gal		Fall	A						
2	Extreme	2.17	L	3	pt/a		Fall	A	97	74	69	15	33	86
2	2,4-D Ester	4	SC	1	pt/a		Fall	A						
2	Activator 90 NIS		L	0.25	% v/v		Fall	A						
2	Ammonium sulfate		WG	17	lb/100 gal		Fall	A						
3	Canopy EX (2.2 oz)		X						96	99	85	73	99	91
3	Classic	25	DF	2	oz/a		Fall	A						
3	Express	50	DF	0.3	oz/a		Fall	A						
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						91	69	71	71	99	74
4	Classic	25	DF	1	oz/a		Fall	A						
4	Express	50	DF	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	Autumn (iodosulfuron)	10	DF	0.3	oz/a		Fall	A	89	48	30	13	23	30
5	2,4-D Ester	4	SC	1	pt/a		Fall	A						
5	Herbimax (COC)		L	1	% v/v		Fall	A						
5	Ammonium sulfate		WG	17	lb/100 gal		Fall	A						
6	Untreated								0	0	0	0	0	2
7	Valor XLT (3 oz/A)		X						99	67	80	86	99	79
7	Valor	51	WG	1.75	oz/a		Fall	A						
7	Classic	25	DF	1.2	oz/a		Fall	A						
7	Roundup OriginalMax	4.5	SL	11	fl oz/a		Fall	A						
7	2,4-D Ester	4	SC	1	qt/a		Fall	A						
7	Activator 90 (NIS)		L	0.25	% v/v		Fall	A						
7	Ammonium sulfate		WG	2.5	lb/a		Fall	A						
8	Valor XLT (3 oz/A)		X						99	62	88	83	99	70
8	Valor	51	WG	1.75	oz/a		Fall	A						
8	Classic	25	DF	1.2	oz/a		Fall	A						
8	Express	50	DF	0.18	oz/a		Fall	A						
8	2,4-D Ester	4	SC	1	qt/a		Fall	A						
8	Activator 90 (NIS)		L	0.25	% v/v		Fall	A						
9	Canopy 75 DF (2.5 oz)		X						96	72	85	51	99	78
9	Sencor 75 DF	75	WG	2.2	oz/a		Fall	A						
9	Classic	25	DF	1.06	oz/a		Fall	A						
9	Express	50	DF	0.15	oz/a		Fall	A						
9	2,4-D Ester	4	SC	1	pt/a		Fall	A						
9	Herbimax (COC)		L	1	% v/v		Fall	A						
10	Scepter	70	DG	2.8	oz/a		Fall	A	96	79	80	35	92	86
10	2,4-D Ester	3.8	L	1	pt/a		Fall	A						
10	Roundup WeatherMax	4.5	SL	16	fl oz/a		Fall	A						
10	Activator 90 (NIS)		L	0.25	% v/v		Fall	A						
10	Ammonium sulfate		WG	17	lb/100 gal		Fall	A						
LSD (P=.05)									7.7	37.9	18.0	21.2	11.5	21.5
Standard Deviation									5.3	26.1	12.4	14.6	8.0	14.8
CV									6.2	40.21	21.13	34.21	12.4	21.64