

MSU Weed Science Research Program

Interaction of Winter Annual Weed Removal on Insects I

Trial ID: FSB03-08
 Conducted: T-14 Botany

Study Dir.: Barnett, Sprague, Di Fonzo
 Investigator: Christy Sprague

Date Planted: 5/13/08
 Variety: Asgrow 2107
 Population: 210,000 seeds/Acre
 Soil Type: Sandy Loam
 Plot Size: 10 X 180 FT

Row Spacing: 7.5 IN
 No. of Reps: 3
 % OM: 3.2
 pH: 6.7
 Design: RANDOMIZED COMPLETE BLOCK

Tillage: No-till into standing corn stubble

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	STEME	CHICKWEED, COMMON	STELLARIA MEDIA (L.)
2.	TAROF	DANDELION, COMMON	TARAXACUM OFFICINALE
3.	THLAR	PENNYCRESS, FIELD	THLASPI ARVENSE L.
4.	CAPBP	SHEPHERDSPURSE	CAPSELLA BURSA-PASTORIS (L.)
5.	VERPG	SPEEDWELL, PURSLANE	VERONICA PEREGRINA L.
6.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
7.	BARVU	ROCKET, YELLOW	BARBAREA VULGARIS R. BR.
8.	RUMCR	DOCK, CURLY	RUMEX CRISPUS L.
9.	ERICA	HORSEWEED (Marestail)	CONYZA CANADENSIS L.
Crop	Code	Common Name	
1.	GLXMA	SOYBEAN	

Application Description

	A	B	C	D	E
Application Timing:	FALL	34 EPP	27 EPP	21 EPP	8 EPP
Date Treated:	11/13/07	4/8/08	4/15/08	4/21/08	5/5/08
Time Treated:	4:00 pm	1:30 pm	5:30 pm	8:30 pm	4:00 pm
% Cloud Cover:	15	100	0	30	10
Air Temp., Unit:	60 F	62 F	60 F	68 F	70 F
% Relative Humidity:	40	65	39	50	12
Wind Speed/Unit/Dir:	4 mph S	6 mph SE	7 mph NE	9 mph SE	7 mph W
Soil Temp., Unit:	50 F	49 F	50 F	61 F	67 F
Soil/Leaf Surface M:	5 5	2 5	2 5	3 5	5 5
Soil Moist (1=w 5=d):	4	2	2	3	5

Crop Stage at Each Application

	A	B	C	D	E
Crop Name:	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Height (In.):	--	--	--	--	--
Stage (L):	--	--	--	--	--

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Weed Stage at Each Application

	A	B	C	D	E
Weed 1 Name:	STEME	STEME	STEME	STEME	STEME
Height (In.):	2-10 dia	.25-.5 ht	.5-1 ht	1-3 ht	4-6 ht
Stage (L):	6-many	V-fl wr	V-fl wr	flowering	flowering
Weed 2 Name:	TAROF	TAROF	TAROF	TAROF	TAROF
Height (In.):	2-6 dia	--	3-4 dia	2-8 dia	4-8 dia
Stage (L):	4-many	--	Veg	Veg	Veg-fl wr
Weed 3 Name:	THLAR	THLAR	THLAR	THLAR	THLAR
Height (In.):	2-5 dia	1-5 dia	1-4 dia	1-4 dia	8-20 ht
Stage (L):	8-many	Veg	Veg	Veg-bol t	most fl wr
Weed 4 Name:	CAPBP	CAPBP	CAPBP	CAPBP	CAPBP
Height (In.):	--	1-4 dia	3-4 dia	3-7 dia	3-6 dia
Stage (L):	--	Veg	Veg	Veg	fl wr
Weed 5 Name:	VERPG	VERPG	VERPG	VERPG	VERPG
Height (In.):	--	1-3 dia	.5-1.5 ht	1-2 ht	3-5 ht
Stage (L):	--	Veg	Veg	Veg	Veg
Weed 6 Name:	CHEAL	CHEAL	CHEAL	CHEAL	CHEAL
Height (In.):	--	.125	.125	.5	.25-.5
Stage (L):	--	coty	coty	coty	coty-6
Weed 7 Name:	BARVU	BARVU	BARVU	BARVU	BARVU
Height (In.):	--	3-5 dia	1-4 dia	2-6 dia	6-15 ht
Stage (L):	--	Veg	Veg	Veg-bol t	fl wr
Weed 8 Name:	RUMCR	RUMCR	RUMCR	RUMCR	RUMCR
Height (In.):	--	--	1-3 dia	2-4 dia	4-6 dia
Stage (L):	--	--	2-3	Veg	Veg
Weed 9 Name:	ERI CA	ERI CA	ERI CA	ERI CA	ERI CA
Height (In.):	--	--	--	2-3 dia	3-4 dia
Stage (L):	--	--	--	Veg	Veg

Weed Density (plants/sq. ft.)

	1	2	3	4	5
Date:	7/25/08	7/25/08	7/25/08	7/25/08	7/25/08
Weed Name:	ANGR	CHEAL	THLAR	POLCO	TAROF
Density:	0.5	0.17	1.33	0.17	0.33

Application Equipment

Appl	Sprayer Type	Speed MPH	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	GPA	Carrier	PSI
A	Cub	3.8	AirMix	11003	24	20	120	19	water	28
B	Cub	3.8	AirMix	11003	25	20	120	19	water	28
C	Cub	3.8	AirMix	11003	25	20	120	19	water	28
D	Cub	3.8	AirMix	11003	25	20	120	19	water	28
E	Cub	3.8	AirMix	11003	25	20	120	19	water	28

Comments: 6/24/08- Roundup WeatherMax + AMS (22 oz + 17 lb/100 gal) applied to all treatments.

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								STEME	THLAR	BARVU	VERPG
Weed Code											
Crop Code											
Rating Data Type								control	control	control	control
Rating Unit								percent	percent	percent	percent
Rating Date								5/12/08	5/12/08	5/12/08	5/12/08
Trt-Eval Interval								181 DA-A	181 DA-A	181 DA-A	181 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1	Canopy EX		X					99	99	99	99
1	Classic	25	DF	2	oz/a	Fall	A				
1	Express	50	SG	0.3	oz/a	Fall	A				
1	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A				
1	2,4-D Ester	3.8	L	1	pt/a	Fall	A				
1	AMS		DF	17	lb/100 gal	Fall	A				
2	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A	99	99	99	99
2	2,4-D Ester	3.8	L	1	pt/a	Fall	A				
2	AMS		DF	17	lb/100 gal	Fall	A				
3	Untreated							0	0	0	0
4	Canopy EX		X					99	99	99	99
4	Classic	25	DF	2	oz/a	34 EPP	B				
4	Express	50	SG	0.3	oz/a	34 EPP	B				
4	Roundup WeatherMax	4.5	SL	22	fl oz/a	34 EPP	B				
4	2,4-D Ester	3.8	L	1	pt/a	34 EPP	B				
4	AMS		DF	17	lb/100 gal	34 EPP	B				
5	Roundup WeatherMax	4.5	SL	22	fl oz/a	34 EPP	B	98	99	99	99
5	2,4-D Ester	3.8	L	1	pt/a	34 EPP	B				
5	AMS		DF	17	lb/100 gal	34 EPP	B				
6	Canopy EX		X					99	99	99	99
6	Classic	25	DF	2	oz/a	27 EPP	C				
6	Express	50	SG	0.3	oz/a	27 EPP	C				
6	Roundup WeatherMax	4.5	SL	22	fl oz/a	27 EPP	C				
6	2,4-D Ester	3.8	L	1	pt/a	27 EPP	C				
6	AMS		DF	17	lb/100 gal	27 EPP	C				
7	Roundup WeatherMax	4.5	SL	22	fl oz/a	27 EPP	C	98	99	99	99
7	2,4-D Ester	3.8	L	1	pt/a	27 EPP	C				
7	AMS		DF	17	lb/100 gal	27 EPP	C				
8	Canopy EX		X					99	99	99	99
8	Classic	25	DF	2	oz/a	21 EPP	D				
8	Express	50	SG	0.3	oz/a	21 EPP	D				
8	Roundup WeatherMax	4.5	SL	22	fl oz/a	21 EPP	D				
8	2,4-D Ester	3.8	L	1	pt/a	21 EPP	D				
8	AMS		DF	17	lb/100 gal	21 EPP	D				
9	Roundup WeatherMax	4.5	SL	22	fl oz/a	21 EPP	D	99	99	99	99
9	2,4-D Ester	3.8	L	1	pt/a	21 EPP	D				
9	AMS		DF	17	lb/100 gal	21 EPP	D				

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Weed Code	STEME	THLAR	BARVU	VERPG
Crop Code				
Rating Data Type	control	control	control	control
Rating Unit	percent	percent	percent	percent
Rating Date	5/12/08	5/12/08	5/12/08	5/12/08
Trt-Eval Interval	181 DA-A	181 DA-A	181 DA-A	181 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	STEME	THLAR	BARVU	VERPG
10	Canopy EX		X					30	63	48	99
10	Classic	25	DF	2	oz/a	8 EPP	E				
10	Express	50	SG	0.3	oz/a	8 EPP	E				
10	Roundup WeatherMax	4.5	SL	22	fl oz/a	8 EPP	E				
10	2,4-D Ester	3.8	L	1	pt/a	8 EPP	E				
10	AMS		DF	17	lb/100 gal	8 EPP	E				
11	Roundup WeatherMax	4.5	SL	22	fl oz/a	8 EPP	E	38	60	48	99
11	2,4-D Ester	3.8	L	1	pt/a	8 EPP	E				
11	AMS		DF	17	lb/100 gal	8 EPP	E				
12	Untreated							0	0	0	0
LSD (P=.10)								5.1	2.3	22.3	0.0
Standard Deviation								3.6	1.7	15.9	0.0
CV								5.05	2.18	21.44	0.0

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Weed Code	ERICA	LACSE	CHEAL	AMBEL
Crop Code				
Rating Data Type	control	control	control	control
Rating Unit	percent	percent	percent	percent
Rating Date	5/12/08	5/12/08	5/12/08	5/12/08
Trt-Eval Interval	181 DA-A	181 DA-A	181 DA-A	181 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1	Canopy EX		X					99	99	83	50
1	Classic	25	DF	2	oz/a	Fall	A				
1	Express	50	SG	0.3	oz/a	Fall	A				
1	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A				
1	2,4-D Ester	3.8	L	1	pt/a	Fall	A				
1	AMS		DF	17	lb/100 gal	Fall	A				
2	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A	99	99	0	60
2	2,4-D Ester	3.8	L	1	pt/a	Fall	A				
2	AMS		DF	17	lb/100 gal	Fall	A				
3	Untreated							0	0	0	60
4	Canopy EX		X					99	99	99	
4	Classic	25	DF	2	oz/a	34 EPP	B				
4	Express	50	SG	0.3	oz/a	34 EPP	B				
4	Roundup WeatherMax	4.5	SL	22	fl oz/a	34 EPP	B				
4	2,4-D Ester	3.8	L	1	pt/a	34 EPP	B				
4	AMS		DF	17	lb/100 gal	34 EPP	B				
5	Roundup WeatherMax	4.5	SL	22	fl oz/a	34 EPP	B	99	99	92	60
5	2,4-D Ester	3.8	L	1	pt/a	34 EPP	B				
5	AMS		DF	17	lb/100 gal	34 EPP	B				
6	Canopy EX		X					99	99	98	60
6	Classic	25	DF	2	oz/a	27 EPP	C				
6	Express	50	SG	0.3	oz/a	27 EPP	C				
6	Roundup WeatherMax	4.5	SL	22	fl oz/a	27 EPP	C				
6	2,4-D Ester	3.8	L	1	pt/a	27 EPP	C				
6	AMS		DF	17	lb/100 gal	27 EPP	C				
7	Roundup WeatherMax	4.5	SL	22	fl oz/a	27 EPP	C	99	99	99	60
7	2,4-D Ester	3.8	L	1	pt/a	27 EPP	C				
7	AMS		DF	17	lb/100 gal	27 EPP	C				
8	Canopy EX		X					99	99	99	
8	Classic	25	DF	2	oz/a	21 EPP	D				
8	Express	50	SG	0.3	oz/a	21 EPP	D				
8	Roundup WeatherMax	4.5	SL	22	fl oz/a	21 EPP	D				
8	2,4-D Ester	3.8	L	1	pt/a	21 EPP	D				
8	AMS		DF	17	lb/100 gal	21 EPP	D				
9	Roundup WeatherMax	4.5	SL	22	fl oz/a	21 EPP	D	99	99	99	
9	2,4-D Ester	3.8	L	1	pt/a	21 EPP	D				
9	AMS		DF	17	lb/100 gal	21 EPP	D				

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Weed Code	ERICA	LACSE	CHEAL	AMBEL
Crop Code				
Rating Data Type	control	control	control	control
Rating Unit	percent	percent	percent	percent
Rating Date	5/12/08	5/12/08	5/12/08	5/12/08
Trt-Eval Interval	181 DA-A	181 DA-A	181 DA-A	181 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	ERICA	LACSE	CHEAL	AMBEL
10	Canopy EX		X					69	98	63	60
10	Classic	25	DF	2	oz/a	8 EPP	E				
10	Express	50	SG	0.3	oz/a	8 EPP	E				
10	Roundup WeatherMax	4.5	SL	22	fl oz/a	8 EPP	E				
10	2,4-D Ester	3.8	L	1	pt/a	8 EPP	E				
10	AMS		DF	17	lb/100 gal	8 EPP	E				
11	Roundup WeatherMax	4.5	SL	22	fl oz/a	8 EPP	E	99	98	70	60
11	2,4-D Ester	3.8	L	1	pt/a	8 EPP	E				
11	AMS		DF	17	lb/100 gal	8 EPP	E				
12	Untreated							0	0	0	
LSD (P=.10)								21.0	1.3	7.1	14.7
Standard Deviation								15.0	0.9	5.1	7.6
CV								18.75	1.09	7.62	13.0

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Weed Code								TAROF	THLAR	ERICA
Crop Code							GLXMA			
Rating Data Type							injury	control	control	control
Rating Unit							percent	percent	percent	percent
Rating Date							6/12/08	6/12/08	6/12/08	6/12/08
Trt-Eval Interval							212 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	Canopy EX		X					0	99	99	99
1	Classic	25	DF	2	oz/a	Fall	A				
1	Express	50	SG	0.3	oz/a	Fall	A				
1	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A				
1	2,4-D Ester	3.8	L	1	pt/a	Fall	A				
1	AMS		DF	17	lb/100 gal	Fall	A				
2	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A	0	99	48	99
2	2,4-D Ester	3.8	L	1	pt/a	Fall	A				
2	AMS		DF	17	lb/100 gal	Fall	A				
3	Untreated							0	0	0	0
4	Canopy EX		X					0	99	99	99
4	Classic	25	DF	2	oz/a	34 EPP	B				
4	Express	50	SG	0.3	oz/a	34 EPP	B				
4	Roundup WeatherMax	4.5	SL	22	fl oz/a	34 EPP	B				
4	2,4-D Ester	3.8	L	1	pt/a	34 EPP	B				
4	AMS		DF	17	lb/100 gal	34 EPP	B				
5	Roundup WeatherMax	4.5	SL	22	fl oz/a	34 EPP	B	0	99	99	99
5	2,4-D Ester	3.8	L	1	pt/a	34 EPP	B				
5	AMS		DF	17	lb/100 gal	34 EPP	B				
6	Canopy EX		X					0	99	99	99
6	Classic	25	DF	2	oz/a	27 EPP	C				
6	Express	50	SG	0.3	oz/a	27 EPP	C				
6	Roundup WeatherMax	4.5	SL	22	fl oz/a	27 EPP	C				
6	2,4-D Ester	3.8	L	1	pt/a	27 EPP	C				
6	AMS		DF	17	lb/100 gal	27 EPP	C				
7	Roundup WeatherMax	4.5	SL	22	fl oz/a	27 EPP	C	0	99	99	99
7	2,4-D Ester	3.8	L	1	pt/a	27 EPP	C				
7	AMS		DF	17	lb/100 gal	27 EPP	C				
8	Canopy EX		X					0	99	99	99
8	Classic	25	DF	2	oz/a	21 EPP	D				
8	Express	50	SG	0.3	oz/a	21 EPP	D				
8	Roundup WeatherMax	4.5	SL	22	fl oz/a	21 EPP	D				
8	2,4-D Ester	3.8	L	1	pt/a	21 EPP	D				
8	AMS		DF	17	lb/100 gal	21 EPP	D				
9	Roundup WeatherMax	4.5	SL	22	fl oz/a	21 EPP	D	0	99	99	99
9	2,4-D Ester	3.8	L	1	pt/a	21 EPP	D				
9	AMS		DF	17	lb/100 gal	21 EPP	D				

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Weed Code	TAROF	THLAR	ERICA
Crop Code	GLXMA		
Rating Data Type	injury	control	control
Rating Unit	percent	percent	percent
Rating Date	6/12/08	6/12/08	6/12/08
Trt-Eval Interval	212 DA-A	212 DA-A	212 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
10	Canopy EX		X					0	99	99	99
10	Classic	25	DF	2	oz/a	8 EPP	E				
10	Express	50	SG	0.3	oz/a	8 EPP	E				
10	Roundup WeatherMax	4.5	SL	22	fl oz/a	8 EPP	E				
10	2,4-D Ester	3.8	L	1	pt/a	8 EPP	E				
10	AMS		DF	17	lb/100 gal	8 EPP	E				
11	Roundup WeatherMax	4.5	SL	22	fl oz/a	8 EPP	E	0	99	99	99
11	2,4-D Ester	3.8	L	1	pt/a	8 EPP	E				
11	AMS		DF	17	lb/100 gal	8 EPP	E				
12	Untreated							0	0	0	0
LSD (P=.10)								0.0	0.0	5.8	0.0
Standard Deviation								0.0	0.0	4.2	0.0
CV								0.0	0.0	5.32	0.0

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								STEME	MUSTARD	BLACK	ANGR
								control	control	control	control
								percent	percent	percent	percent
								6/12/08	6/12/08	6/12/08	6/12/08
								212 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	Canopy EX		X					99	99	90	28
1	Classic	25	DF	2	oz/a	Fall	A				
1	Express	50	SG	0.3	oz/a	Fall	A				
1	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A				
1	2,4-D Ester	3.8	L	1	pt/a	Fall	A				
1	AMS		DF	17	lb/100 gal	Fall	A				
2	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A	99	96	0	0
2	2,4-D Ester	3.8	L	1	pt/a	Fall	A				
2	AMS		DF	17	lb/100 gal	Fall	A				
3	Untreated							0	0	0	0
4	Canopy EX		X					99	99	99	83
4	Classic	25	DF	2	oz/a	34 EPP	B				
4	Express	50	SG	0.3	oz/a	34 EPP	B				
4	Roundup WeatherMax	4.5	SL	22	fl oz/a	34 EPP	B				
4	2,4-D Ester	3.8	L	1	pt/a	34 EPP	B				
4	AMS		DF	17	lb/100 gal	34 EPP	B				
5	Roundup WeatherMax	4.5	SL	22	fl oz/a	34 EPP	B	86	99	65	0
5	2,4-D Ester	3.8	L	1	pt/a	34 EPP	B				
5	AMS		DF	17	lb/100 gal	34 EPP	B				
6	Canopy EX		X					99	99	99	75
6	Classic	25	DF	2	oz/a	27 EPP	C				
6	Express	50	SG	0.3	oz/a	27 EPP	C				
6	Roundup WeatherMax	4.5	SL	22	fl oz/a	27 EPP	C				
6	2,4-D Ester	3.8	L	1	pt/a	27 EPP	C				
6	AMS		DF	17	lb/100 gal	27 EPP	C				
7	Roundup WeatherMax	4.5	SL	22	fl oz/a	27 EPP	C	99	99	18	18
7	2,4-D Ester	3.8	L	1	pt/a	27 EPP	C				
7	AMS		DF	17	lb/100 gal	27 EPP	C				
8	Canopy EX		X					99	99	99	85
8	Classic	25	DF	2	oz/a	21 EPP	D				
8	Express	50	SG	0.3	oz/a	21 EPP	D				
8	Roundup WeatherMax	4.5	SL	22	fl oz/a	21 EPP	D				
8	2,4-D Ester	3.8	L	1	pt/a	21 EPP	D				
8	AMS		DF	17	lb/100 gal	21 EPP	D				
9	Roundup WeatherMax	4.5	SL	22	fl oz/a	21 EPP	D	99	99	68	37
9	2,4-D Ester	3.8	L	1	pt/a	21 EPP	D				
9	AMS		DF	17	lb/100 gal	21 EPP	D				

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								STEME	MUSTARD	BLACK	ANGR
								control	control	control	control
								percent	percent	percent	percent
								6/12/08	6/12/08	6/12/08	6/12/08
								212 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				
10	Canopy EX		X					99	99	99	93
10	Classic	25	DF	2	oz/a	8 EPP	E				
10	Express	50	SG	0.3	oz/a	8 EPP	E				
10	Roundup WeatherMax	4.5	SL	22	fl oz/a	8 EPP	E				
10	2,4-D Ester	3.8	L	1	pt/a	8 EPP	E				
10	AMS		DF	17	lb/100 gal	8 EPP	E				
11	Roundup WeatherMax	4.5	SL	22	fl oz/a	8 EPP	E	99	99	91	78
11	2,4-D Ester	3.8	L	1	pt/a	8 EPP	E				
11	AMS		DF	17	lb/100 gal	8 EPP	E				
12	Untreated							0	0	0	0
LSD (P=.10)								4.4	2.1	12.8	23.7
Standard Deviation								3.2	1.5	9.2	16.9
CV								3.89	1.82	15.07	40.85

MSU Weed Science Research Program

Interaction of Winter Annual Weed Removal on Insects I

Trial ID: FSB03-08
 Conducted: T-14 Botany

Study Dir.: Barnett, Sprague, Di Fonzo
 Investigator: Christy Sprague

								CHEAL	AMBEL	GLXMA	ANGR
								control	control	injury	control
								percent	percent	percent	percent
								6/12/08	6/12/08	7/11/08	7/11/08
								212 DA-A	212 DA-A	241 DA-A	241 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1	Canopy EX		X					77	83	0	98
1	Classic	25	DF	2	oz/a	Fall	A				
1	Express	50	SG	0.3	oz/a	Fall	A				
1	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A				
1	2,4-D Ester	3.8	L	1	pt/a	Fall	A				
1	AMS		DF	17	lb/100 gal	Fall	A				
2	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A	0	0	0	99
2	2,4-D Ester	3.8	L	1	pt/a	Fall	A				
2	AMS		DF	17	lb/100 gal	Fall	A				
3	Untreated							0	0	0	97
4	Canopy EX		X					99	99	0	98
4	Classic	25	DF	2	oz/a	34 EPP	B				
4	Express	50	SG	0.3	oz/a	34 EPP	B				
4	Roundup WeatherMax	4.5	SL	22	fl oz/a	34 EPP	B				
4	2,4-D Ester	3.8	L	1	pt/a	34 EPP	B				
4	AMS		DF	17	lb/100 gal	34 EPP	B				
5	Roundup WeatherMax	4.5	SL	22	fl oz/a	34 EPP	B	65	53	0	93
5	2,4-D Ester	3.8	L	1	pt/a	34 EPP	B				
5	AMS		DF	17	lb/100 gal	34 EPP	B				
6	Canopy EX		X					94	83	0	90
6	Classic	25	DF	2	oz/a	27 EPP	C				
6	Express	50	SG	0.3	oz/a	27 EPP	C				
6	Roundup WeatherMax	4.5	SL	22	fl oz/a	27 EPP	C				
6	2,4-D Ester	3.8	L	1	pt/a	27 EPP	C				
6	AMS		DF	17	lb/100 gal	27 EPP	C				
7	Roundup WeatherMax	4.5	SL	22	fl oz/a	27 EPP	C	43	20	0	98
7	2,4-D Ester	3.8	L	1	pt/a	27 EPP	C				
7	AMS		DF	17	lb/100 gal	27 EPP	C				
8	Canopy EX		X					99	99	0	93
8	Classic	25	DF	2	oz/a	21 EPP	D				
8	Express	50	SG	0.3	oz/a	21 EPP	D				
8	Roundup WeatherMax	4.5	SL	22	fl oz/a	21 EPP	D				
8	2,4-D Ester	3.8	L	1	pt/a	21 EPP	D				
8	AMS		DF	17	lb/100 gal	21 EPP	D				
9	Roundup WeatherMax	4.5	SL	22	fl oz/a	21 EPP	D	55	78	0	98
9	2,4-D Ester	3.8	L	1	pt/a	21 EPP	D				
9	AMS		DF	17	lb/100 gal	21 EPP	D				

MSU Weed Science Research Program

Interaction of Winter Annual Weed Removal on Insects I

Trial ID: FSB03-08
 Conducted: T-14 Botany

Study Dir.: Barnett, Sprague, Di Fonzo
 Investigator: Christy Sprague

Weed Code	CHEAL	AMBEL		ANGR
Crop Code			GLXMA	
Rating Data Type	control	control	injury	control
Rating Unit	percent	percent	percent	percent
Rating Date	6/12/08	6/12/08	7/11/08	7/11/08
Trt-Eval Interval	212 DA-A	212 DA-A	241 DA-A	241 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	CHEAL	AMBEL	GLXMA	ANGR
10	Canopy EX		X					99	98		97
10	Classic	25	DF	2	oz/a	8 EPP	E				
10	Express	50	SG	0.3	oz/a	8 EPP	E				
10	Roundup WeatherMax	4.5	SL	22	fl oz/a	8 EPP	E				
10	2,4-D Ester	3.8	L	1	pt/a	8 EPP	E				
10	AMS		DF	17	lb/100 gal	8 EPP	E				
11	Roundup WeatherMax	4.5	SL	22	fl oz/a	8 EPP	E	85	93	0	88
11	2,4-D Ester	3.8	L	1	pt/a	8 EPP	E				
11	AMS		DF	17	lb/100 gal	8 EPP	E				
12	Untreated							0	0	0	99
LSD (P=.10)								16.3	19.5	0.0	5.8
Standard Deviation								11.6	13.9	0.0	4.2
CV								19.45	23.63	0.0	4.37

MSU Weed Science Research Program

Interaction of Winter Annual Weed Removal on Insects I

Trial ID: FSB03-08
 Conducted: T-14 Botany

Study Dir.: Barnett, Sprague, Di Fonzo
 Investigator: Christy Sprague

Weed Code	CHEAL	AMBEL	MEDLU	GLXMA
Crop Code				
Rating Data Type	control	control	control	moisture
Rating Unit	percent	percent	percent	percent
Rating Date	7/11/08	7/11/08	7/11/08	10/23/08
Trt-Eval Interval	241 DA-A	241 DA-A	241 DA-A	345 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	CHEAL	AMBEL	MEDLU	GLXMA
1	Canopy EX		X					88	99	87	13.8
1	Classic	25	DF	2	oz/a	Fall	A				
1	Express	50	SG	0.3	oz/a	Fall	A				
1	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A				
1	2,4-D Ester	3.8	L	1	pt/a	Fall	A				
1	AMS		DF	17	lb/100 gal	Fall	A				
2	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A	75	96	68	13.6
2	2,4-D Ester	3.8	L	1	pt/a	Fall	A				
2	AMS		DF	17	lb/100 gal	Fall	A				
3	Untreated							99	99	70	13.9
4	Canopy EX		X					99	99	99	14.1
4	Classic	25	DF	2	oz/a	34 EPP	B				
4	Express	50	SG	0.3	oz/a	34 EPP	B				
4	Roundup WeatherMax	4.5	SL	22	fl oz/a	34 EPP	B				
4	2,4-D Ester	3.8	L	1	pt/a	34 EPP	B				
4	AMS		DF	17	lb/100 gal	34 EPP	B				
5	Roundup WeatherMax	4.5	SL	22	fl oz/a	34 EPP	B	99	99	85	14.2
5	2,4-D Ester	3.8	L	1	pt/a	34 EPP	B				
5	AMS		DF	17	lb/100 gal	34 EPP	B				
6	Canopy EX		X					99	99	99	13.5
6	Classic	25	DF	2	oz/a	27 EPP	C				
6	Express	50	SG	0.3	oz/a	27 EPP	C				
6	Roundup WeatherMax	4.5	SL	22	fl oz/a	27 EPP	C				
6	2,4-D Ester	3.8	L	1	pt/a	27 EPP	C				
6	AMS		DF	17	lb/100 gal	27 EPP	C				
7	Roundup WeatherMax	4.5	SL	22	fl oz/a	27 EPP	C	94	99	62	13.9
7	2,4-D Ester	3.8	L	1	pt/a	27 EPP	C				
7	AMS		DF	17	lb/100 gal	27 EPP	C				
8	Canopy EX		X					99	99	99	13.7
8	Classic	25	DF	2	oz/a	21 EPP	D				
8	Express	50	SG	0.3	oz/a	21 EPP	D				
8	Roundup WeatherMax	4.5	SL	22	fl oz/a	21 EPP	D				
8	2,4-D Ester	3.8	L	1	pt/a	21 EPP	D				
8	AMS		DF	17	lb/100 gal	21 EPP	D				
9	Roundup WeatherMax	4.5	SL	22	fl oz/a	21 EPP	D	99	99	80	13.8
9	2,4-D Ester	3.8	L	1	pt/a	21 EPP	D				
9	AMS		DF	17	lb/100 gal	21 EPP	D				

MSU Weed Science Research Program

Interaction of Winter Annual Weed Removal on Insects I

Trial ID: FSB03-08
 Conducted: T-14 Botany

Study Dir.: Barnett, Sprague, Di Fonzo
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Weed Code	CHEAL	AMBEL	MEDLU	
Crop Code				GLXMA
Rating Data Type	control	control	control	moisture
Rating Unit	percent	percent	percent	percent
Rating Date	7/11/08	7/11/08	7/11/08	10/23/08
Trt-Eval Interval	241 DA-A	241 DA-A	241 DA-A	345 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	CHEAL	AMBEL	MEDLU	GLXMA
10	Canopy EX		X					99	99	99	13.5
10	Classic	25	DF	2	oz/a	8 EPP	E				
10	Express	50	SG	0.3	oz/a	8 EPP	E				
10	Roundup WeatherMax	4.5	SL	22	fl oz/a	8 EPP	E				
10	2,4-D Ester	3.8	L	1	pt/a	8 EPP	E				
10	AMS		DF	17	lb/100 gal	8 EPP	E				
11	Roundup WeatherMax	4.5	SL	22	fl oz/a	8 EPP	E	90	99	96	13.6
11	2,4-D Ester	3.8	L	1	pt/a	8 EPP	E				
11	AMS		DF	17	lb/100 gal	8 EPP	E				
12	Untreated							98	99	80	13.6
LSD (P=.10)								6.8	2.1	20.7	0.63
Standard Deviation								4.9	1.5	14.8	0.45
CV								5.13	1.52	17.32	3.27

MSU Weed Science Research Program

Interaction of Winter Annual Weed Removal on Insects I

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Weed Code
 Crop Code
 Rating Data Type
 Rating Unit
 Rating Date
 Trt-Eval Interval

GLXMA
 yield
 bu/acre
 10/23/08
 at 13% M

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	
1	Canopy EX		X					41.1
1	Classic	25	DF	2	oz/a	Fall	A	
1	Express	50	SG	0.3	oz/a	Fall	A	
1	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A	
1	2,4-D Ester	3.8	L	1	pt/a	Fall	A	
1	AMS		DF	17	lb/100 gal	Fall	A	
2	Roundup WeatherMax	4.5	SL	22	fl oz/a	Fall	A	38.8
2	2,4-D Ester	3.8	L	1	pt/a	Fall	A	
2	AMS		DF	17	lb/100 gal	Fall	A	
3	Untreated							36.1
4	Canopy EX		X					40.3
4	Classic	25	DF	2	oz/a	34 EPP	B	
4	Express	50	SG	0.3	oz/a	34 EPP	B	
4	Roundup WeatherMax	4.5	SL	22	fl oz/a	34 EPP	B	
4	2,4-D Ester	3.8	L	1	pt/a	34 EPP	B	
4	AMS		DF	17	lb/100 gal	34 EPP	B	
5	Roundup WeatherMax	4.5	SL	22	fl oz/a	34 EPP	B	43.5
5	2,4-D Ester	3.8	L	1	pt/a	34 EPP	B	
5	AMS		DF	17	lb/100 gal	34 EPP	B	
6	Canopy EX		X					38.0
6	Classic	25	DF	2	oz/a	27 EPP	C	
6	Express	50	SG	0.3	oz/a	27 EPP	C	
6	Roundup WeatherMax	4.5	SL	22	fl oz/a	27 EPP	C	
6	2,4-D Ester	3.8	L	1	pt/a	27 EPP	C	
6	AMS		DF	17	lb/100 gal	27 EPP	C	
7	Roundup WeatherMax	4.5	SL	22	fl oz/a	27 EPP	C	41.4
7	2,4-D Ester	3.8	L	1	pt/a	27 EPP	C	
7	AMS		DF	17	lb/100 gal	27 EPP	C	
8	Canopy EX		X					40.5
8	Classic	25	DF	2	oz/a	21 EPP	D	
8	Express	50	SG	0.3	oz/a	21 EPP	D	
8	Roundup WeatherMax	4.5	SL	22	fl oz/a	21 EPP	D	
8	2,4-D Ester	3.8	L	1	pt/a	21 EPP	D	
8	AMS		DF	17	lb/100 gal	21 EPP	D	
9	Roundup WeatherMax	4.5	SL	22	fl oz/a	21 EPP	D	41.0
9	2,4-D Ester	3.8	L	1	pt/a	21 EPP	D	
9	AMS		DF	17	lb/100 gal	21 EPP	D	

MSU Weed Science Research Program

Interaction of Winter Annual Weed Removal on Insects I

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Weed Code
 Crop Code
 Rating Data Type
 Rating Unit
 Rating Date
 Trt-Eval Interval

GLXMA
 yield
 bu/acre
 10/23/08
 at 13% M

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	
10	Canopy EX		X					34.0
10	Classic	25	DF	2	oz/a	8 EPP	E	
10	Express	50	SG	0.3	oz/a	8 EPP	E	
10	Roundup WeatherMax	4.5	SL	22	fl oz/a	8 EPP	E	
10	2,4-D Ester	3.8	L	1	pt/a	8 EPP	E	
10	AMS		DF	17	lb/100 gal	8 EPP	E	
11	Roundup WeatherMax	4.5	SL	22	fl oz/a	8 EPP	E	40.0
11	2,4-D Ester	3.8	L	1	pt/a	8 EPP	E	
11	AMS		DF	17	lb/100 gal	8 EPP	E	
12	Untreated							38.9
LSD (P=.10)								4.36
Standard Deviation								3.11
CV								7.88