

University of GA Coop Ext Service

Evaluation of Experimental Metsulfuron-methyl Formulations for Broadleaf Weed Control in Centipedegrass

Trial ID: Turf32-03

Study Director: Bill Nutt

Location: Griffin

Investigator: Tim R Murphy

General Trial Information

Investigator: Tim R Murphy

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Trial Location

City: Griffin

Trial Status: ARCHIVED

State/Prov.: GA

Initiation Date: 6-10-2003

Planned Completion Date: 8-21-2003

Cooperator/Landowner

Cooperator: Robert Baker

Organization: Scotts Company

City: Marysville

State/Prov: OH

Crop Description

Crop 1: ERLOP *Eremochloa ophiuroides*

Centipedegrass

Variety: Common

Perennial Age, Unit: 15 YEAR

Pest Description

Pest 1 Type: W Code: TAROF *Taraxacum officinale*

Common Name: Common dandelion

Pest 2 Type: W Code: DIQVI *Diodia virginiana*

Common Name: Buttonweed, Virginia

Pest 3 Type: W Code: HRYRA *Hypochoeris radicata*

Common Name: Cat's-ear dandelion

Pest 4 Type: W Code: TRFRE *Trifolium repens*

Common Name: White clover

Site and Design

Plot Width, Unit: 6 FT Plot Length, Unit: 8 FT Replications: 4

Study Design: Randomized Complete Block Site Type: Home lawn

Field Prep./Maintenance: Irrigated site. Mowed at 1.5 inches.

Application Description

	A Granular	A Spray
	Treatment #1-6	Treatment #7
Application Date:	6-10-2003	6-10-03
Time of Day:	8:30-8:45 am	10:55 am
Application Method:	Broadcast	Broadcast
Application Timing:	POST	POST
Application Placement:	FOLIAR	FOLIAR
Air Temperature, Unit:	77 F	84 F
% Relative Humidity:	65	56
Wind Velocity, Unit:	0.5 MPH	0.8 MPH
Dew Presence (Y/N):	Y*	N
Soil Temperature, Unit:	72 F	76 F
Soil Moisture:	HIGH	HIGH
% Cloud Cover:	2	1

*6-10-2003, Trmt. #1-6 Centipede and weed foliage wet with dew.

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Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ERLOP
Stage Scale Used:	DESC
Stage Majority, Percent:	Active Growth
Height, Unit:	2 in

Pest Stage At Each Application

	A
Pest 1 Code, Disc., Scale:	TAROF W
Stage Majority, Percent:	Bloom
Diameter, Unit:	6 IN
Pest 2 Code, Disc., Scale:	DIQVI W
Diameter, Unit:	2-10 IN
Pest 3 Code, Disc., Scale:	HRYRA W
Diameter, Unit:	6 IN
Pest 4 Code, Disc., Scale:	GNAZZ W
Diameter, Unit:	2-4 IN
Pest 5 Code, Disc., Scale:	TRFRE W
Stage Majority, Percent:	Bloom
Height, Unit:	3 IN

Application Equipment

	A
Appl. Equipment:	Backpack
Operating Pressure:	26
Pressure Unit:	PSI
Nozzle Type:	Flat fan
Nozzle Size:	8004
Nozzle Spacing, Unit:	20 inch
Boom Length, Unit:	5 feet
Boom Height, Unit:	19 inch
Ground Speed, Unit:	3 mph
Carrier:	Water
Spray Volume:	25
Volume Unit:	GAL/AC
Propellant:	CO2
Tank Mix (Y/N):	N

Trial Comments

6-23-03: Did ratings for weed control and Centipede injury. Granular herbicides may have been moved by heavy rains or mowing, as there appears to be some weed control in untreated plots and around the outside perimeter of the test.

7-08-03: Virginia Buttonweed populations are highly variable. See initial Virginia Buttonweed density ratings of 6-9-03.

8-24-03: White Clover, TRFRE, Dandelion, TAROF, and Cat's Ear Dandelion, HRYRA, not rated due to complete control that was observed at July 8, 2003 ratings.

Virginia Buttonweed, DIQVI, density not uniform across test site.

PLOT DENSITY RATINGS FOR CONTROL CHECK

101 206 304 403

DIQVI, 8-14-03 30 . . .

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Pest Code										ERLOP	ERLOP	ERLOP	TAROF
Crop Code										Centipede	Centipede	Centipede	Dandelion
Description													Foliag
Part Rated													
Rating Date										6-23-2003	7-8-2003	8-14-2003	6-9-2003
Rating Data Type										Injury	Injury	Injury	Density
Rating Unit										0-100	0-100	0-100	0-100
Days After Last Applic.										13	28	65	-1
Trt-Eval Interval										13 DA-A	28 DA-A	65 DA-A	-1 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	Untreated Check									0 b	0 a	0 a	3 a
2	S-10439	0.023	GR	0.03 lb ai/a	2.99	lb/1000 ft2	POSPOS	A		0 b	0 a	0 a	5 a
3	S-10842	0.023	GR	0.03 lb ai/a	2.99	lb/1000 ft2	POSPOS	A		0 b	0 a	0 a	4 a
4	S-10888	0.023	GR	0.03 lb ai/a	2.99	lb/1000 ft2	POSPOS	A		1 b	0 a	0 a	5 a
5	S-10925	0.03	GR	0.03 lb ai/a	2.3	lb/1000 ft2	POSPOS	A		1 b	0 a	0 a	5 a
6	S-10926	0.03	GR	0.03 lb ai/a	2.3	lb/1000 ft2	POSPOS	A		0 b	0 a	0 a	4 a
7	Manor + Chem-Nut 80/20 NIS	60	WG	0.03 lb ai/a 0.25 % v/v	0.8	oz wt/a	POSPOS POSPOS	A A		5 a	0 a	0 a	4 a
LSD (P=.05)										2.9	0.0	0.0	5.0
Standard Deviation										2.0	0.0	0.0	3.4
CV										183.59	0.0	0.0	78.55

Pest Code										TAROF	TAROF	DIQVI	
Crop Code										Dandelion	Dandelion	VA Buttonweed	
Description										Foliag	Foliag	Foliag	
Part Rated													
Rating Date										6-23-2003	7-8-2003	6-9-2003	
Rating Data Type										Control	Control	Density	
Rating Unit										0-100	0-100	0-100	
Days After Last Applic.										13	28	-1	
Trt-Eval Interval										13 DA-A	28 DA-A	-1 DA-A	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	Untreated Check									0 c	0 b		17 a
2	S-10439	0.023	GR	0.03 lb ai/a	2.99	lb/1000 ft2	POSPOS	A		62 ab	100 a		3 b
3	S-10842	0.023	GR	0.03 lb ai/a	2.99	lb/1000 ft2	POSPOS	A		50 ab	100 a		3 b
4	S-10888	0.023	GR	0.03 lb ai/a	2.99	lb/1000 ft2	POSPOS	A		49 ab	100 a		6 b
5	S-10925	0.03	GR	0.03 lb ai/a	2.3	lb/1000 ft2	POSPOS	A		44 b	100 a		7 ^a b
6	S-10926	0.03	GR	0.03 lb ai/a	2.3	lb/1000 ft2	POSPOS	A		55 ab	100 a		5 b
7	Manor + Chem-Nut 80/20 NIS	60	WG	0.03 lb ai/a 0.25 % v/v	0.8	oz wt/a	POSPOS POSPOS	A A		64 a	100 a		8 ^a b
LSD (P=.05)										16.4	0.0		9.9
Standard Deviation										11.0	0.0		6.7
CV										23.67	0.01		96.04

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										DIQVI	DIQVI
Pest Code										VA Buttonweed	VA Buttonweed
Crop Code										Foliage	Foliage
Description										6-23-2003	7-8-2003
Part Rated										Control	Control
Rating Date										0-100	0-100
Rating Data Type										13	28
Rating Unit										13 DA-A	28 DA-A
Days After Last Applic.											
Trt-Eval Interval											
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Form Unit	Other Rate	Other Unit	Growth Stage	Appl Code		
1	Untreated Check									0 b	0 b
2	S-10439	0.023	GR	0.03	lb ai/a	2.99	lb/1000 ft2	POSPOS	A	50 a	40 ab
3	S-10842	0.023	GR	0.03	lb ai/a	2.99	lb/1000 ft2	POSPOS	A	48 a	63 a
4	S-10888	0.023	GR	0.03	lb ai/a	2.99	lb/1000 ft2	POSPOS	A	52 a	38 ab
5	S-10925	0.03	GR	0.03	lb ai/a	2.3	lb/1000 ft2	POSPOS	A	42 a	40 ab
6	S-10926	0.03	GR	0.03	lb ai/a	2.3	lb/1000 ft2	POSPOS	A	40 a	55 a
7	Manor + Chem-Nut 80/20 NIS	60	WG	0.03	lb ai/a	0.8	oz wt/a	POSPOS	A	34 a	70 a
				0.25	% v/v			POSPOS	A		
LSD (P=.05)										18.7	47.1
Standard Deviation										12.1	29.9
CV										32.14	68.48

										DIQVI	HRYRA
Pest Code										VA Buttonweed	Cat's ear Dandelion
Crop Code										Foliage	Foliage
Description										8-14-2003	6-9-2003
Part Rated										Control	Control
Rating Date										0-100	0-100
Rating Data Type										65	-1
Rating Unit										65 DA-A	-1 DA-A
Days After Last Applic.											
Trt-Eval Interval											
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Form Unit	Other Rate	Other Unit	Growth Stage	Appl Code		
1	Untreated Check									0 b	2 a
2	S-10439	0.023	GR	0.03	lb ai/a	2.99	lb/1000 ft2	POSPOS	A	33 a	3 a
3	S-10842	0.023	GR	0.03	lb ai/a	2.99	lb/1000 ft2	POSPOS	A	43 a	5 a
4	S-10888	0.023	GR	0.03	lb ai/a	2.99	lb/1000 ft2	POSPOS	A	28 a	4 a
5	S-10925	0.03	GR	0.03	lb ai/a	2.3	lb/1000 ft2	POSPOS	A	19 ab	2 a
6	S-10926	0.03	GR	0.03	lb ai/a	2.3	lb/1000 ft2	POSPOS	A	35 a	3 a
7	Manor + Chem-Nut 80/20 NIS	60	WG	0.03	lb ai/a	0.8	oz wt/a	POSPOS	A	38 a	3 a
				0.25	% v/v			POSPOS	A		
LSD (P=.05)										24.3	2.8
Standard Deviation										16.3	1.9
CV										59.05	64.18

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										HRYRA	HRYRA
Pest Code											
Crop Code											
Description										Cat's ear Dandelion	Cat's ear Dandelion
Part Rated										Foliage	Foliage
Rating Date										6-23-2003	7-8-2003
Rating Data Type										Control	Control
Rating Unit										0-100	0-100
Days After Last Applic.										13	28
Trt-Eval Interval										13 DA-A	28 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code		
1	Untreated Check									0 c	0 b
2	S-10439	0.023	GR	0.03	lb ai/a	2.99	lb/1000 ft2	POSPOS	A	95 a	100 a
3	S-10842	0.023	GR	0.03	lb ai/a	2.99	lb/1000 ft2	POSPOS	A	94 a	100 a
4	S-10888	0.023	GR	0.03	lb ai/a	2.99	lb/1000 ft2	POSPOS	A	89 b	100 a
5	S-10925	0.03	GR	0.03	lb ai/a	2.3	lb/1000 ft2	POSPOS	A	95 a	100 a
6	S-10926	0.03	GR	0.03	lb ai/a	2.3	lb/1000 ft2	POSPOS	A	94 a	100 a
7	Manor + Chem-Nut 80/20 NIS	60	WG	0.03	lb ai/a	0.8	oz wt/a	POSPOS	A	95 a	100 a
				0.25	% v/v			POSPOS	A		
LSD (P=.05)										3.9	0.0
Standard Deviation										2.6	0.0
CV										3.29	0.0

										TRFRE	TRFRE	TRFRE
Pest Code												
Crop Code												
Description										White Clover	White Clover	White Clover
Part Rated										Foliage	Foliage	Foliage
Rating Date										6-9-2003	6-23-2003	7-8-2003
Rating Data Type										Density	Control	Control
Rating Unit										0-100	0-100	0-100
Days After Last Applic.										-1	13	28
Trt-Eval Interval										-1 DA-A	13 DA-A	28 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	Untreated Check									16 a	0 b	0 b
2	S-10439	0.023	GR	0.03	lb ai/a	2.99	lb/1000 ft2	POSPOS	A	26 a	79 a	100 a
3	S-10842	0.023	GR	0.03	lb ai/a	2.99	lb/1000 ft2	POSPOS	A	14 a	74 a	100 a
4	S-10888	0.023	GR	0.03	lb ai/a	2.99	lb/1000 ft2	POSPOS	A	11 a	83 a	100 a
5	S-10925	0.03	GR	0.03	lb ai/a	2.3	lb/1000 ft2	POSPOS	A	33 a	73 a	100 a
6	S-10926	0.03	GR	0.03	lb ai/a	2.3	lb/1000 ft2	POSPOS	A	23 a	78 a	100 a
7	Manor + Chem-Nut 80/20 NIS	60	WG	0.03	lb ai/a	0.8	oz wt/a	POSPOS	A	25 a	79 a	100 a
				0.25	% v/v			POSPOS	A			
LSD (P=.05)										25.7	11.4	0.0
Standard Deviation										17.3	7.7	0.0
CV										81.93	11.57	0.0