

# University of GA Coop Ext Service

## Efficacy of Flazasulfuron for Weed Control in Common Bermudagrass.

Trial ID: Turf38-03

Study Dir.: Jay Ferrell

Location: Griffin

Investigator: Tim R Murphy

### GENERAL TRIAL INFORMATION

Study Director: Jay Ferrell

Title: Research Scientist

Affiliation: UGA-CAES

Investigator: Tim R Murphy

Title: Weed Scientist

Affiliation: UGA-CAES

### TRIAL LOCATION

City: Griffin

Trial Status: ARCHIVED

State/Prov.: GA

Initiation Date: 3-28-2003

Planned Completion Date: 8-21-2003

### COOPERATOR/LANDOWNER

Cooperator: Mel Grove

Org: ISk BioSciences

### CROP AND WEED DESCRIPTION

Weed	Code	Scientific Name	Common Name
1.	TRFRE	<i>Trifolium repens</i>	White clover
2.	MODCA	<i>Modiola caroliniana</i>	Mallow, bristly
3.	DIORE	<i>Dichondra repens</i>	dichondra
4.	CYPRO	<i>Cyperus rotundus</i>	Nutsedge, purple
5.	OXAST	<i>Oxalis stricta</i>	Common yellow woodsorrel

Crop 1: CYNDA Bermudagrass/*Cyndon Dactylon* Variety: Common Perennial Age: 20 year

### SITE AND DESIGN

Plot Width, Unit: 6 FT Plot Length, Unit: 10 FT Reps: 4

Site Type: home lawn

Study Design: RANDOMIZED COMPLETE BLOCK

### MAINTENANCE

Field Prep./Maintenance: Mowed at 2.5 inches. Non-irrigated site.

### APPLICATION DESCRIPTION

	A
Application Date:	6-17-2003
Time of Day:	1:28 pm
Application Method:	Broadcast
Application Timing:	Post
Applic. Placement:	Foliar
Air Temp., Unit:	86 F
% Relative Humidity:	65
Wind Velocity, Unit:	1 mph
Dew Presence (Y/N):	N
Soil Temp., Unit:	81 F
Soil Moisture:	High
% Cloud Cover:	92

## University of GA Coop Ext Service

## CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	CYNDA Growth
Stage Scale:	Active

## WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	TRFRE Blooming
Weed 2 Code, Stage:	MODCA Bloom, Seed pods
Stage Scale:	4-5"runners
Weed 3 Code, Stage:	DIORE Active Growth
Stage Scale:	2"Hght
Weed 4 Code, Stage:	CYPRO Active Growth
Stage Scale:	4-5"Hght
Weed 5 Code, Stage:	OXAST
Stage Scale:	4-5"Hght

## APPLICATION EQUIPMENT

	A
Appl. Equipment:	Backpack
Operating Pressure:	26 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, Unit:	25 gpa
Propellant:	CO2
Tank Mix (Y/N):	Y

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Trial ID: Turf38-03

Study Dir.: Jay Ferrell

Location: Griffin

Investigator: Tim R Murphy

Weed Code						TRFRE	TRFRE	TRFRE	TRFRE	TRFRE
Crop Code						Density	Control	Control	Control	Control
Part Rated						0-100	0-100	0-100	0-100	0-100
Rating Data Type						6-17-2003	6-26-2003	7-2-2003	7-7-2003	7-14-2003
Rating Unit						0 DA-A	9 DA-A	15 DA-A	20 DA-A	27 DA-A
Rating Date										
Trt-Eval Interval										
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	Untreated							12 a	0 c	0 d
2	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	1.5 oz wt/a 0.25 % v/v	Active A Active A			29 a	50 b	84 abc
3	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	2.25 oz wt/a 0.25 % v/v	Active A Active A			38 a	54 b	75 bc
4	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	3.0 oz wt/a 0.25 % v/v	Active A Active A			34 a	56 b	87 ab
5	Flazasulfuron + Chem-Nut 80/20 NIS + MSMA	25	DG	3.0 oz wt/a 0.25 % v/v	Active A Active A			18 a	91 a	95 a
		6	SC	2.0 lb ai/a	Active A					95 a
6	Flazasulfuron + Chem-Nut 80/20 NIS + 2,4-D Amine	25	DG	3.0 oz wt/a 0.25 % v/v	Active A Active A			25 a	54 b	68 c
		3.8	SL	0.75 lb ai/a	Active A					91 b
7	Manor + Chem-Nut 80/20 NIS	60	DG	0.75 oz wt/a 0.25 % v/v	Active A Active A			21 a	46 b	91 ab
										95 a
										97 b
	LSD (P=.05)							24.2	13.1	16.9
	Standard Deviation							16.3	8.8	11.3
	CV							64.45	17.46	15.78
										3.1
										2.1
										2.62
										1.4
										1.0
										1.13

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)

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							TRFRE	TRFRE	MODCA	MODCA	MODCA	
							Control	Control	Density	Control	Control	
							0-100	0-100	0-100	0-100	0-100	
							7-28-2003	8-20-2003	6-17-2003	6-26-2003	7-2-2003	
							41 DA-A	64 DA-A	0 DA-A	9 DA-A	15 DA-A	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code					
1	Untreated							0 b	0 b	23 a	0 c	0 b
2	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	1.5 oz wt/a 0.25 % v/v		Active Active	A A	100 a	100 a	24 a	28 ab	54 a
3	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	2.25 oz wt/a 0.25 % v/v		Active Active	A A	100 a	100 a	24 a	26 b	66 a
4	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	3.0 oz wt/a 0.25 % v/v		Active Active	A A	100 a	100 a	20 a	29 ab	73 a
5	Flazasulfuron + Chem-Nut 80/20 NIS + MSMA	25 6	DG SC	3.0 oz wt/a 2.0 lb ai/a		Active Active	A A	100 a	100 a	24 a	36 ab	74 a
6	Flazasulfuron + Chem-Nut 80/20 NIS + 2,4-D Amine	25 3.8	DG SL	3.0 oz wt/a 0.75 lb ai/a		Active Active	A A	100 a	100 a	25 a	29 ab	65 a
7	Manor + Chem-Nut 80/20 NIS	60	DG	0.75 oz wt/a 0.25 % v/v		Active Active	A A	100 a	100 a	25 a	38 a	56 a
LSD (P=.05)							0.0	0.0	9.8	9.7	21.0	
Standard Deviation							0.0	0.0	6.6	6.5	14.1	
CV							0.0	0.0	28.24	24.6	25.56	

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)

## University of GA Coop Ext Service

Weed Code								MODCA	MODCA	MODCA	MODCA	DIORE
Crop Code												
Part Rated												
Rating Data Type								Control	Control	Control	Control	Density
Rating Unit								0-100	0-100	0-100	0-100	0-100
Rating Date								7-7-2003	7-14-2003	7-28-2003	8-20-2003	6-17-2003
Trt-Eval Interval								20 DA-A	27 DA-A	41 DA-A	64 DA-A	0 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code					
1	Untreated							0 b	0 c	0 b	0 b	20 a
2	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	1.5 oz wt/a 0.25 % v/v		Active Active	A A	94 a	100 a	100 a	100 a	11 ab
3	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	2.25 oz wt/a 0.25 % v/v		Active Active	A A	95 a	100 a	100 a	100 a	8 b
4	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	3.0 oz wt/a 0.25 % v/v		Active Active	A A	95 a	100 a	100 a	100 a	21 a
5	Flazasulfuron + Chem-Nut 80/20 NIS + MSMA	25 6	DG SC	3.0 oz wt/a 2.0 lb ai/a		Active Active	A A	91 a	99 a	100 a	100 a	21 a
6	Flazasulfuron + Chem-Nut 80/20 NIS + 2,4-D Amine	25 3.8	DG SL	3.0 oz wt/a 0.75 lb ai/a		Active Active	A A	95 a	100 a	100 a	100 a	18 ab
7	Manor + Chem-Nut 80/20 NIS	60	DG	0.75 oz wt/a 0.25 % v/v		Active Active	A A	90 a	97 b	100 a	100 a	8 b
LSD (P=.05)								5.3	1.4	0.0	0.0	9.8
Standard Deviation								3.6	1.0	0.0	0.0	6.6
CV								4.48	1.13	0.0	0.0	43.33

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)

## University of GA Coop Ext Service

							DIORE	DIORE	DIORE	DIORE	DIORE	
							Control	Control	Control	Control	Control	
							0-100	0-100	0-100	0-100	0-100	
							6-26-2003	7-2-2003	7-7-2003	7-14-2003	7-28-2003	
							9 DA-A	15 DA-A	20 DA-A	27 DA-A	41 DA-A	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code					
1	Untreated							0 c	0 b	0 d	0 d	0 b
2	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	1.5 oz wt/a 0.25 % v/v		Active Active	A A	13 ab	8 b	0 d	8 cd	24 b
3	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	2.25 oz wt/a 0.25 % v/v		Active Active	A A	8 bc	0 b	10 d	13 c	0 b
4	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	3.0 oz wt/a 0.25 % v/v		Active Active	A A	9 bc	3 b	0 d	5 cd	24 b
5	Flazasulfuron + Chem-Nut 80/20 NIS + MSMA	25 6	DG SC	3.0 oz wt/a 2.0 lb ai/a		Active Active	A A	21 a	13 ab	30 c	10 c	20 b
6	Flazasulfuron + Chem-Nut 80/20 NIS + 2,4-D Amine	25 3.8	DG SL	3.0 oz wt/a 0.75 lb ai/a		Active Active	A A	15 ab	23 a	93 a	100 a	96 a
7	Manor + Chem-Nut 80/20 NIS	60	DG	0.75 oz wt/a 0.25 % v/v		Active Active	A A	16 ab	10 ab	60 b	50 b	90 a
LSD (P=.05)							8.4	12.9	18.1	7.3	38.8	
Standard Deviation							5.7	8.6	12.2	4.9	26.1	
CV							49.0	105.93	44.36	18.62	71.98	

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)

## University of GA Coop Ext Service

Weed Code							DIORE	CYPRO	CYPRO	CYPRO	CYPRO
Crop Code											
Part Rated											
Rating Data Type							Control	Density	Control	Control	Control
Rating Unit							0-100	0-100	0-100	0-100	0-100
Rating Date							8-20-2003	6-17-2003	6-26-2003	7-2-2003	7-7-2003
Trt-Eval Interval							64 DA-A	0 DA-A	9 DA-A	15 DA-A	20 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code				
1	Untreated							0 b	11 a	0 c	0 c
2	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	1.5 oz wt/a 0.25 % v/v		Active A Active A		0 b	16 a	63 a	93 a
3	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	2.25 oz wt/a 0.25 % v/v		Active A Active A		0 b	15 a	66 a	91 a
4	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	3.0 oz wt/a 0.25 % v/v		Active A Active A		3 b	11 a	66 a	93 a
5	Flazasulfuron + Chem-Nut 80/20 NIS + MSMA	25 6	DG SC	3.0 oz wt/a 2.0 lb ai/a		Active A Active A		20 b	11 a	61 a	67 a
6	Flazasulfuron + Chem-Nut 80/20 NIS + 2,4-D Amine	25 3.8	DG SL	3.0 oz wt/a 0.75 lb ai/a		Active A Active A		96 a	14 a	60 a	89 a
7	Manor + Chem-Nut 80/20 NIS	60	DG	0.75 oz wt/a 0.25 % v/v		Active A Active A		80 a	14 a	18 b	33 b
LSD (P=.05)							21.3	8.9	6.2	31.3	15.7
Standard Deviation							14.4	6.0	4.2	21.0	10.5
CV							50.58	45.85	8.73	31.57	17.61

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)

## University of GA Coop Ext Service

Weed Code							CYPRO	CYPRO	CYPRO	OXAST	OXAST
Crop Code											
Part Rated											
Rating Data Type							Control	Control	Control	Density	Control
Rating Unit							0-100	0-100	0-100	0-100	0-100
Rating Date							7-14-2003	7-28-2003	8-20-2003	6-17-2003	6-26-2003
Trt-Eval Interval							27 DA-A	41 DA-A	64 DA-A	0 DA-A	9 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg Code					
1	Untreated						0 d	0 c	0 d	13 a	0 d
2	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	1.5 oz wt/a 0.25 % v/v	Active A Active A	A	76 ab	38 ab	25 abc	13 a	53 bc
3	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	2.25 oz wt/a 0.25 % v/v	Active A Active A	A	86 a	58 a	41 a	8 a	60 ab
4	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	3.0 oz wt/a 0.25 % v/v	Active A Active A	A	86 a	50 ab	33 ab	11 a	60 ab
5	Flazasulfuron + Chem-Nut 80/20 NIS + MSMA	25 6	DG SC	3.0 oz wt/a 2.0 lb ai/a	Active A Active A	A	55 c	30 b	13 bcd	8 a	63 a
6	Flazasulfuron + Chem-Nut 80/20 NIS + 2,4-D Amine	25 3.8	DG SL	3.0 oz wt/a 0.75 lb ai/a	Active A Active A	A	63 bc	40 ab	28 abc	13 a	56 abc
7	Manor + Chem-Nut 80/20 NIS	60	DG	0.75 oz wt/a 0.25 % v/v	Active A Active A	A	0 d	5 c	5 cd	13 a	49 c
LSD (P=.05)							15.8	19.5	22.9	6.9	8.7
Standard Deviation							10.6	13.1	15.4	4.6	5.9
CV							20.29	41.8	75.06	42.59	12.04

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)



## University of GA Coop Ext Service

Weed Code								OXAST	OXAST	OXAST	OXAST	OXAST
Crop Code												
Part Rated												
Rating Data Type								Control	Control	Control	Control	Control
Rating Unit								0-100	0-100	0-100	0-100	0-100
Rating Date								7-2-2003	7-7-2003	7-14-2003	7-28-2003	8-20-2003
Trt-Eval Interval								15 DA-A	20 DA-A	27 DA-A	41 DA-A	64 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1	Untreated							0 d	0 b	0 b	0 c	0 d
2	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	1.5 oz wt/a 0.25 % v/v		Active Active	A A	88 a	96 a	100 a	95 ab	84 c
3	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	2.25 oz wt/a 0.25 % v/v		Active Active	A A	78 ab	96 a	100 a	94 b	89 bc
4	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	3.0 oz wt/a 0.25 % v/v		Active Active	A A	88 a	95 a	100 a	98 ab	93 b
5	Flazasulfuron + Chem-Nut 80/20 NIS + MSMA	25 6	DG SC	3.0 oz wt/a 2.0 lb ai/a		Active Active	A A	44 c	86 a	100 a	98 ab	93 b
6	Flazasulfuron + Chem-Nut 80/20 NIS + 2,4-D Amine	25 3.8	DG SL	3.0 oz wt/a 0.75 lb ai/a		Active Active	A A	65 b	96 a	100 a	95 ab	84 c
7	Manor + Chem-Nut 80/20 NIS	60	DG	0.75 oz wt/a 0.25 % v/v		Active Active	A A	88 a	95 a	99 a	100 a	100 a
LSD (P=.05)								14.6	9.9	1.4	5.5	6.1
Standard Deviation								9.8	6.7	0.9	3.7	4.1
CV								15.31	8.28	1.1	4.46	5.31

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)

## University of GA Coop Ext Service

Weed Code								CYND A	CYND A	CYND A	CYND A	CYND A
Crop Code								Foliag	Foliag	Foliag	Foliag	Foliag
Part Rated								Injury	Injury	Injury	Injury	Injury
Rating Data Type								0-100	0-100	0-100	0-100	0-100
Rating Unit								6-26-2003	7-2-2003	7-7-2003	7-14-2003	7-28-2003
Rating Date								9 DA-A	15 DA-A	20 DA-A	27 DA-A	41 DA-A
Trt-Eval Interval												
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code					
1	Untreated							0 b	0 c	0 c	0 a	0 a
2	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	1.5 oz wt/a 0.25 % v/v		Active Active	A A	1 ab	4 bc	6 bc	0 a	0 a
3	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	2.25 oz wt/a 0.25 % v/v		Active Active	A A	3 ab	9 ab	10 ab	0 a	0 a
4	Flazasulfuron + Chem-Nut 80/20 NIS	25	DG	3.0 oz wt/a 0.25 % v/v		Active Active	A A	3 ab	3 bc	10 ab	0 a	0 a
5	Flazasulfuron + Chem-Nut 80/20 NIS + MSMA	25 6	DG SC	3.0 oz wt/a 2.0 lb ai/a		Active Active	A A	6 a	13 a	16 a	0 a	0 a
6	Flazasulfuron + Chem-Nut 80/20 NIS + 2,4-D Amine	25 3.8	DG SL	3.0 oz wt/a 0.75 lb ai/a		Active Active	A A	0 b	8 abc	10 ab	0 a	0 a
7	Manor + Chem-Nut 80/20 NIS	60	DG	0.75 oz wt/a 0.25 % v/v		Active Active	A A	0 b	0 c	0 c	0 a	0 a
LSD (P=.05)								5.2	7.7	8.5	0.0	0.0
Standard Deviation								3.5	5.2	5.7	0.0	0.0
CV								195.62	103.7	76.41	0.0	0.0

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)

