

University of GA Coop Ext Service

Bermudagrass Renovation with Roundup Pro

Trial ID: Turf53-02

Study Dir.: Tim Murphy

Location: Griffin

Investigator: Tim R Murphy

GENERAL TRIAL INFORMATION

Investigator: Tim Murphy

Title: Weed Scientist

Affiliation: UGA CAES

Study Director: Bill Nutt

Title: ARCI

Affiliation: UGA CAES

TRIAL LOCATION

City: Griffin

Trial Status: ARCHIVED

State/Prov.: GA

Initiation Date: 6-3-2002

Planned Completion Date: 9-15-2003

COOPERATOR/LANDOWNER

Cooperator: Dennis Williamson

Org: Monsanto

City: Mt. Pleasant

State/Prov: SC

Conducted Under GLP (Y/N): N

Conducted Under GEP (Y/N): N

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	ELEIN	Goosegrass	<i>Eleusine indica</i>
2.	EPHNU	Euphorbia nutans	<i>Spurge, nodding</i>

Crop 1: CYNDA Bermudagrass/*Cynodon Dactylon* Variety: not knownCrop 2: FESAR Tall Fescue/*Festuca Arundinacea* Variety: Kentucky 31 Planting Date: 9-30-02Planting Method: Verticut/drilled Rate: 8.0 LB/1000FT² Depth: 0.37 IN

SITE AND DESIGN

Plot Width, Unit: 10 FT Plot Length, Unit: 16 FT Reps: 3

Site Type: simulated home lawn

Study Design: RANDOMIZED COMPLETE BLOCK

Trial Initiation Comments: Irrigated site.

MAINTENANCE

Field Prep./Maintenance: Used Ryan Mataway overseeder. Seeded tall fescue in center 5.0 ft. each plot. Site mowed at 3.0 inches with rotary mower. Clippings returned to site.

Irrigated as needed to prevent wilt.

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APPLICATION DESCRIPTION

	A	B	C
Application Date:	6-3-2002	7-16-2002	8-28-2002
Time of Day:	1:45 PM	3:00 PM	10:30 AM
Application Method:	BROADCAST	BROADCAST	BROADCAST
Application Timing:	POST	POST	POST
Applic. Placement:	FOLIAR	FOLIAR	FOLIAR
Air Temp., Unit:	96.5 F	93 F	73 F
% Relative Humidity:	54	55	90
Wind Velocity, Unit:	3 MPH	1.5 MPH	2.5 MPH
Dew Presence (Y/N):	N	N	N
Soil Temp., Unit:	87 F	86 F	76 F
Soil Moisture:	FAIR	GOOD	POOR
% Cloud Cover:	10	65	100

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	CYNDA	CYNDA	CYNDA
Stage Scale:	100% GREEN	100% GREEN	100% GREEN
Height, Unit:	0.5 INCH	0.5 INCH	0.5 INCH

APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	BACKPACK	BACKPACK	BACKPACK
Operating Pressure:	26 PSI	26 PSI	26 PSI
Nozzle Type:	FLAT FAN	FLAT FAN	FLAT FAN
Nozzle Size:	8004	8004	8004
Nozzle Spacing, Unit:	20 INCH	20 INCH	20 INCH
Boom Length, Unit:	5 FEET	5 FEET	5 FEET
Boom Height, Unit:	19 INCH	19 INCH	19 INCH
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	25 GPA	25 GPA	25 GPA
Propellant:	CO2	CO2	CO2
Tank Mix (Y/N):	N	N	N

Trial Comments

8-13-03

Broadcast sprayed Trimec Classic herbicide at 4 pts/A + Non ionic surfactant @ 0.25% v/v over entire area to control broadleaf weeds.

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Weed Code							CYNDA	CYNDA	CYNDA	CYNDA	CYNDA
Crop Code							w/Fescue	w/Fescue	w/Fescue	w/Fescue	w/Fescue
Part Rated											
Rating Data Type							Control	Control	Control	Control	Control
Rating Unit							0-100	0-100	0-100	0-100	0-100
Rating Date							9-17-2002	9-30-2002	5-20-2003	6-17-2003	7-15-2003
Trt-Eval Interval							106 DA-A	119 DA-A	351 DA-A	379 DA-A	407 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code				
1	Roundup Pro	3	SL	2.25	lb ae/a		A	73 bc	40 c	57 b	17 cd
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B				
	Sprig 1/2 plot					30 DA3A	D				20 cd
2	Roundup Pro	3	SL	2.25	lb ae/a		A	67 c	50 bc	65 b	40 bc
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA1A	B				
	MON 54110	51	SP	2.0	lb ae/a	4-6 WA1A	B				
	Sprig 1/2 plot					30 DA3A	D				33 c
3	Roundup Pro	3	SL	2.25	lb ae/a		A	80 b	65 b	73 b	67 b
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA1A	B				
	MON 25129	1	SL	0.5	lb ae/a	4-6 WA1A	B				
	Sprig 1/2 plot					30 DA3A	D				65 b
4	Roundup Pro	3	SL	2.25	lb ae/a		A	100 a	97 a	100 a	100 a
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B				
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA2A	C				
	Sprig 1/2 plot					30 DA3A	D				100 a
5	Roundup Pro	3	SL	2.25	lb ae/a		A	99 a	93 a	100 a	100 a
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B				
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA2A	C				
	MON 54110	51	SP	2.0	lb ae/a	4-6 WA2A	C				
	Sprig 1/2 plot					30 DA3A	D				100 a
6	Roundup Pro	3	SL	2.25	lb ae/a		A	99 a	90 a	100 a	100 a
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B				
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA2A	C				
	MON 25129	1	SL	0.5	lb ae/a	4-6 WA2A	C				
	Sprig 1/2 plot					30 DA3A	D				100 a
7	Untreated Check							0 d	0 d	0 c	0 d
	LSD (P=.05)							8.5	18.6	22.0	28.6
	Standard Deviation							4.8	10.5	12.4	16.1
	CV							6.45	16.87	17.48	26.56

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

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Weed Code								CYNDA	CYNDA	CYNDA	CYNDA	CYNDA
Crop Code								w/Fescue	w/Fescue	NO Fescu	NO Fescu	NO Fescu
Part Rated												
Rating Data Type								Control	Control	Control	Control	Control
Rating Unit								0-100	0-100	0-100	0-100	0-100
Rating Date								8-15-2003	9-15-2003	5-20-2003	6-17-2003	7-15-2003
Trt-Eval Interval								438 DA-A	469 DA-A	351 DA-A	379 DA-A	407 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1	Roundup Pro	3	SL	2.25	lb ae/a		A	17 c	0 c	0 c	60 b	30 b
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B					
	Sprig 1/2 plot					30 DA3A	D					
2	Roundup Pro	3	SL	2.25	lb ae/a		A	20 c	0 c	0 c	65 b	47 b
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA1A	B					
	MON 54110	51	SP	2.0	lb ae/a	4-6 WA1A	B					
	Sprig 1/2 plot					30 DA3A	D					
3	Roundup Pro	3	SL	2.25	lb ae/a		A	62 b	33 b	33 b	60 b	40 b
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA1A	B					
	MON 25129	1	SL	0.5	lb ae/a	4-6 WA1A	B					
	Sprig 1/2 plot					30 DA3A	D					
4	Roundup Pro	3	SL	2.25	lb ae/a		A	100 a	98 a	98 a	97 a	95 a
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B					
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA2A	C					
	Sprig 1/2 plot					30 DA3A	D					
5	Roundup Pro	3	SL	2.25	lb ae/a		A	100 a	98 a	98 a	95 a	80 a
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B					
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA2A	C					
	MON 54110	51	SP	2.0	lb ae/a	4-6 WA2A	C					
	Sprig 1/2 plot					30 DA3A	D					
6	Roundup Pro	3	SL	2.25	lb ae/a		A	100 a	87 a	87 a	97 a	90 a
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B					
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA2A	C					
	MON 25129	1	SL	0.5	lb ae/a	4-6 WA2A	C					
	Sprig 1/2 plot					30 DA3A	D					
7	Untreated Check							0 c	0 c	0 c	0 c	0 c
LSD (P=.05)								26.9	21.6	21.6	18.9	23.1
Standard Deviation								15.1	12.1	12.1	10.6	13.0
CV								26.55	26.87	26.87	15.74	23.85

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

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Weed Code							CYNDA	CYNDA	FESAR	FESAR	FESAR
Crop Code							NO Fescu	NO Fescu			
Part Rated											
Rating Data Type							Control	Control	Density	Density	Density
Rating Unit							0-100	0-100	0-100	0-100	0-100
Rating Date							8-15-2003	9-15-2003	11-25-2002	2-28-2003	5-20-2003
Trt-Eval Interval							438 DA-A	469 DA-A	175 DA-A	270 DA-A	351 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1	Roundup Pro	3	SL	2.25	lb ae/a		A	20 bc	0 a	3 b	83 a
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B				82 a
	Sprig 1/2 plot					30 DA3A	D				
2	Roundup Pro	3	SL	2.25	lb ae/a		A	33 b	0 a	17 b	83 a
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA1A	B				82 a
	MON 54110	51	SP	2.0	lb ae/a	4-6 WA1A	B				
	Sprig 1/2 plot					30 DA3A	D				
3	Roundup Pro	3	SL	2.25	lb ae/a		A	37 b	0 a	27 b	77 a
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA1A	B				80 a
	MON 25129	1	SL	0.5	lb ae/a	4-6 WA1A	B				
	Sprig 1/2 plot					30 DA3A	D				
4	Roundup Pro	3	SL	2.25	lb ae/a		A	97 a	0 a	93 a	78 a
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B				83 a
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA2A	C				
	Sprig 1/2 plot					30 DA3A	D				
5	Roundup Pro	3	SL	2.25	lb ae/a		A	75 a	0 a	72 a	82 a
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B				85 a
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA2A	C				
	MON 54110	51	SP	2.0	lb ae/a	4-6 WA2A	C				
	Sprig 1/2 plot					30 DA3A	D				
6	Roundup Pro	3	SL	2.25	lb ae/a		A	83 a	0 a	77 a	78 a
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B				83 a
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA2A	C				
	MON 25129	1	SL	0.5	lb ae/a	4-6 WA2A	C				
	Sprig 1/2 plot					30 DA3A	D				
7	Untreated Check							0 c	0 a	0 b	73 a
	LSD (P=.05)							31.7	0.0	29.4	12.4
	Standard Deviation							17.8	0.0	16.3	7.0
	CV							36.12	0.0	39.58	8.78

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

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Weed Code								FESAR	FESAR	FESAR	FESAR
Crop Code								Density	Density	Density	Density
Part Rated								0-100	0-100	0-100	0-100
Rating Data Type								6-17-2003	7-15-2003	8-15-2003	9-15-2003
Rating Unit								379 DA-A	407 DA-A	438 DA-A	469 DA-A
Rating Date											
Trt-Eval Interval											
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1	Roundup Pro	3	SL	2.25	lb ae/a		A	57 cd	42 bc	40 b	20 c
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B				
	Sprig 1/2 plot					30 DA3A	D				
2	Roundup Pro	3	SL	2.25	lb ae/a		A	67 bc	52 bc	47 b	20 c
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA1A	B				
	MON 54110	51	SP	2.0	lb ae/a	4-6 WA1A	B				
	Sprig 1/2 plot					30 DA3A	D				
3	Roundup Pro	3	SL	2.25	lb ae/a		A	73 ab	63 ab	63 ab	43 b
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA1A	B				
	MON 25129	1	SL	0.5	lb ae/a	4-6 WA1A	B				
	Sprig 1/2 plot					30 DA3A	D				
4	Roundup Pro	3	SL	2.25	lb ae/a		A	87 a	87 a	87 a	87 a
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B				
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA2A	C				
	Sprig 1/2 plot					30 DA3A	D				
5	Roundup Pro	3	SL	2.25	lb ae/a		A	87 a	87 a	87 a	90 a
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B				
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA2A	C				
	MON 54110	51	SP	2.0	lb ae/a	4-6 WA2A	C				
	Sprig 1/2 plot					30 DA3A	D				
6	Roundup Pro	3	SL	2.25	lb ae/a		A	87 a	87 a	87 a	85 a
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B				
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA2A	C				
	MON 25129	1	SL	0.5	lb ae/a	4-6 WA2A	C				
	Sprig 1/2 plot					30 DA3A	D				
7	Untreated Check							50 d	32 c	0 c	10 c
LSD (P=.05)								15.3	22.6	22.3	14.2
Standard Deviation								8.6	12.7	12.6	8.0
CV								11.9	19.87	21.43	15.79

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

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Weed Code								EPHNU	ELEIN
Crop Code									
Part Rated									
Rating Data Type								Control	Control
Rating Unit								0-100	0-100
Rating Date								8-19-2002	8-19-2002
Trt-Eval Interval								77 DA-A	77 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code		
1	Roundup Pro	3	SL	2.25	lb ae/a		A	0 c	30 c
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B		
	Sprig 1/2 plot					30 DA3A	D		
2	Roundup Pro	3	SL	2.25	lb ae/a		A	63 ab	37 bc
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA1A	B		
	MON 54110	51	SP	2.0	lb ae/a	4-6 WA1A	B		
	Sprig 1/2 plot					30 DA3A	D		
3	Roundup Pro	3	SL	2.25	lb ae/a		A	92 a	62 a b
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA1A	B		
	MON 25129	1	SL	0.5	lb ae/a	4-6 WA1A	B		
	Sprig 1/2 plot					30 DA3A	D		
4	Roundup Pro	3	SL	2.25	lb ae/a		A	0 c	85 a
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B		
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA2A	C		
	Sprig 1/2 plot					30 DA3A	D		
5	Roundup Pro	3	SL	2.25	lb ae/a		A	0 c	85 a
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B		
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA2A	C		
	MON 54110	51	SP	2.0	lb ae/a	4-6 WA2A	C		
	Sprig 1/2 plot					30 DA3A	D		
6	Roundup Pro	3	SL	2.25	lb ae/a		A	32 bc	85 a
	Roundup Pro	3	SL	2.25	lb ae/a	4-6 WA1A	B		
	Roundup Pro +	3	SL	2.25	lb ae/a	4-6 WA2A	C		
	MON 25129	1	SL	0.5	lb ae/a	4-6 WA2A	C		
	Sprig 1/2 plot					30 DA3A	D		
7	Untreated Check							0 c	0 d
LSD (P=.05)								40.2	26.0
Standard Deviation								22.6	14.6
CV								84.83	26.71

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