

University of GA Coop Ext Service

Bermudagrass Responses to Use of Revolver as a Spring Transition Aid for Perennial Ryegrass Removal

Trial ID: TURF28-03

Study Dir.: Bill Nutt

Location: Griffin

Investigator: Tim R Murphy

GENERAL TRIAL INFORMATION

Investigator: Tim R Murphy

Title: Weed Scientist

Affiliation: UGA-CAES

Study Director: Bill Nutt

Title: ARC I

Affiliation: UGA-CAES

TRIAL LOCATION

City: Griffin

Trial Status: ARCHIVED

State/Prov.: GA

Initiation Date: 4-16-2003

COOPERATOR/LANDOWNER

Cooperator: Laurence Mudge

Org: Bayer

City: Camden

State/Prov: SC

Conducted Under GLP (Y/N): N

Conducted Under GEP (Y/N): N

CROP DESCRIPTION

Crop 1: CYNDA Bermudagrass/*Cynodon Dactylon* Variety: Tifway Perennial Age: 20 yrsCrop 2: LOLPE Perennial Ryegrass/*Lolium Perenne*

Variety: Sunrise Primo: 39.27% 'Jet', 39.07% 'Primo', 19.08% 'Wind Star'

Planting Date: 9-30-2002 Planting Method: Broadcast Rate: 9 LB/1000FT2

SITE AND DESIGN

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

Site Type: simulated golf course fairway Study Design: RANDOMIZED COMPLETE BLOCK

MAINTENANCE

Field Prep./Maintenance: Irrigated site. Mowed at 5/8 inch with Triplex-type mower.

APPLICATION DESCRIPTION

	A	B
Application Date:	4-16-2003	5-9-2003
Time of Day:	10:45 am	4:10 pm
Application Method:	Broadcast	Broadcast
Application Timing:	Post	Post
Applic. Placement:	Foliar	Foliar
Air Temp., Unit:	71 F	84 F
% Relative Humidity:	65	63
Wind Velocity, Unit:	4.5 mph	1.7 mph
Dew Presence (Y/N):	N	N
Soil Temp., Unit:	67 F	81 F
Soil Moisture:	Good	High
% Cloud Cover:	30	50

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CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	CYNDA 50-60% Green	CYNDA 80% Green
Height, Unit:	.625 inch	0.75 inch
Crop 2 Code, Stage:	LOLPE Active Growth	LOLPE Active Growth
Height, Unit:	1.0 inch	1.0 inch

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	Backpack	Backpack
Operating Pressure:	26 psi	26 psi
Nozzle Type:	Flat fan	Flat fan
Nozzle Size:	8004	8004
Nozzle Spacing, Unit:	20 inch	20 inch
Boom Length, Unit:	5 feet	5 feet
Boom Height, Unit:	18 inch	18 inch
Ground Speed, Unit:	3 mph	3 mph
Carrier:	Water	Water
Spray Volume, Unit:	25 gpa	25 gpa
Propellant:	CO2	CO2
Tank Mix (Y/N):	N	N

Trial Comments

4-29-03

Broadcast 10-10-10 fertilizer at 10 lb/1000 sq. ft.

7-29-03

1 lb N/1000 sq. ft as 34-0-0 fertilizer broadcast over entire test site.

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										LOLPE	LOLPE	LOLPE
										Injury	Injury	Injury
										0-100	0-100	0-100
										4-28-2003	5-9-2003	5-20-2003
										12 DA-A	23 DA-A	34 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
01	Overseeded Untreated Chk							active	A	0 b	0 c	0 c
02	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	A	65 a	84 b	66 b
03	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	A	65 a	91 a	92 a
04	Overseeded Untreated Chk							active	B			0 c
05	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	B			88 a
06	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	B			86 a
LSD (P=.05)										0.0	4.3	9.3
Standard Deviation										0.0	2.5	6.2
CV										0.0	4.29	11.18

										LOLPE	LOLPE	LOLPE
										Injury	Injury	Density
										0-100	0-100	0-100
										5-27-2003	6-9-2003	5-20-2003
										41 DA-A	54 DA-A	34 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
01	Overseeded Untreated Chk							active	A	0 c	0 a	71 a
02	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	A	71 b	0 a	30 b
03	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	A	94 a	0 a	6 c
04	Overseeded Untreated Chk							active	B	0 c	0 a	71 a
05	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	B	90 a	0 a	9 c
06	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	B	91 a	0 a	12 c
LSD (P=.05)										7.2	0.0	9.0
Standard Deviation										4.8	0.0	5.9
CV										8.31	0.0	17.94

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Crop Code										LOLPE	LOLPE	LOLPE
Part Rated												
Rating Data Type										Density	Density	Density
Rating Unit										0-100	0-100	0-100
Rating Date										5-27-2003	6-9-2003	6-18-2003
Trt-Eval Interval										41 DA-A	54 DA-A	63 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
01	Overseeded Untreated Chk							active	A	66 a	45 a	31 a
02	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	A	23 b	25 b	8 b
03	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	A	4 c	10 c	1 c
04	Overseeded Untreated Chk							active	B	68 a	45 a	34 a
05	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	B	8 c	0 d	0 c
06	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	B	9 c	0 d	0 c
LSD (P=.05)										6.9	6.3	5.2
Standard Deviation										4.6	4.1	3.5
CV										15.61	19.92	28.11

Crop Code										LOLPE	LOLPE	CYNDA
Part Rated												
Rating Data Type										Density	Density	Injury
Rating Unit										0-100	0-100	0-100
Rating Date										7-3-2003	7-30-2003	4-28-2003
Trt-Eval Interval										78 DA-A	105 DA-A	12 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
01	Overseeded Untreated Chk							active	A	14 a	0 a	0 a
02	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	A	1 b	0 a	0 a
03	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	A	0 b	0 a	0 a
04	Overseeded Untreated Chk							active	B	15 a	1 a	
05	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	B	0 b	0 a	
06	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	B	0 b	0 a	
LSD (P=.05)										3.8	0.6	0.0
Standard Deviation										2.5	0.4	0.0
CV										50.92	489.9	0.0

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

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Crop Code										CYNDA	CYNDA	CYNDA
Part Rated												
Rating Data Type										Injury	Injury	Injury
Rating Unit										0-100	0-100	0-100
Rating Date										5-9-2003	5-20-2003	5-27-2003
Trt-Eval Interval										23 DA-A	34 DA-A	41 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
01	Overseeded Untreated Chk							active	A	0 a	0 c	0 b
02	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	A	0 a	0 c	0 b
03	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	A	0 a	1 c	3 b
04	Overseeded Untreated Chk							active	B		0 c	0 b
05	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	B		6 b	11 a
06	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	B		10 a	15 a
LSD (P=.05)										0.0	2.2	3.9
Standard Deviation										0.0	1.5	2.6
CV										0.0	51.11	53.6

Crop Code										CYNDA	CYNDA	CYNDA
Part Rated												
Rating Data Type										Injury	Injury	Injury
Rating Unit										0-100	0-100	0-100
Rating Date										6-9-2003	6-18-2003	7-3-2003
Trt-Eval Interval										54 DA-A	63 DA-A	78 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
01	Overseeded Untreated Chk							active	A	0 a	0 a	0 a
02	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	A	0 a	4 a	0 a
03	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	A	0 a	1 a	0 a
04	Overseeded Untreated Chk							active	B	0 a	0 a	0 a
05	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	B	1 a	1 a	0 a
06	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	B	5 a	3 a	0 a
LSD (P=.05)										4.7	4.4	0.0
Standard Deviation										3.2	2.9	0.0
CV										302.52	200.41	0.0

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

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Crop Code										CYNDA	CYNDA	CYNDA
Part Rated												
Rating Data Type										Injury	Density	Density
Rating Unit										0-100	0-100	0-100
Rating Date										7-30-2003	5-29-2003	6-9-2003
Trt-Eval Interval										63 DA-A	43 DA-A	54 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
01	Overseeded Untreated Chk							active	A	0 a	33 d	55 c
02	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	A	0 a	68 bc	73 b
03	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	A	0 a	79 a	86 a
04	Overseeded Untreated Chk							active	B	0 a	33 d	55 c
05	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	B	0 a	73 ab	81 ab
06	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	B	0 a	63 c	75 ab
LSD (P=.05)										0.0	6.5	10.9
Standard Deviation										0.0	4.3	7.2
CV										0.0	7.52	10.23

Crop Code										CYNDA	CYNDA	CYNDA
Part Rated												
Rating Data Type										Density	Density	Density
Rating Unit										0-100	0-100	0-100
Rating Date										6-18-2003	7-3-2003	7-30-2003
Trt-Eval Interval										63 DA-A	78 DA-A	105 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
01	Overseeded Untreated Chk							active	A	69 b	86 b	88 b
02	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	A	89 a	99 a	97 a
03	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	A	95 a	100 a	98 a
04	Overseeded Untreated Chk							active	B	66 b	85 b	85 b
05	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	B	90 a	100 a	95 a
06	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	B	90 a	100 a	98 a
LSD (P=.05)										6.5	3.8	6.4
Standard Deviation										4.3	2.5	4.3
CV										5.2	2.64	4.57

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

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Crop Code										CYNDA	CYNDA	Turf
Part Rated												
Rating Data Type										Density	Quality	Quality
Rating Unit										0-100	0-10	0-10
Rating Date										8-28-2003	8-28-2003	4-28-2003
Trt-Eval Interval										134 DA-A	134 DA-A	12 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
01	Overseeded Untreated Chk							active	A	98 a	9.5 a	8.8 a
02	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	A	98 a	9.5 a	5.8 b
03	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	A	97 a	9.4 a	6.0 b
04	Overseeded Untreated Chk							active	B	98 a	9.5 a	
05	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	B	98 a	9.5 a	
06	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	B	98 a	9.5 a	
LSD (P=.05)										0.9	0.15	0.64
Standard Deviation										0.6	0.10	0.37
CV										0.63	1.08	5.45

Crop Code										Turf	Turf	Turf
Part Rated												
Rating Data Type										Quality	Quality	Quality
Rating Unit										0-10	0-10	0-10
Rating Date										5-9-2003	5-20-2003	5-27-2003
Trt-Eval Interval										23 DA-A	34 DA-A	41 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
01	Overseeded Untreated Chk							active	A	28	29	30
02	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	A	8.5 a	9.0 a	8.6 a
03	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	A	6.8 b	6.1 c	7.1 b
04	Overseeded Untreated Chk							active	B	6.6 b	6.8 bc	7.5 b
05	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	B		9.0 a	8.6 a
06	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	B		7.5 b	6.1 c
LSD (P=.05)										0.59	0.73	0.46
Standard Deviation										0.34	0.48	0.31
CV										4.71	6.38	4.24

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

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										Turf	Turf	Turf
										Quality	Quality	Quality
										0-10	0-10	0-10
										6-9-2003	6-18-2003	7-3-2003
										54 DA-A	63 DA-A	78 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
01	Overseeded Untreated Chk							active	A	8.5 a	6.0 b	7.4 b
02	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	A	6.4 c	8.6 a	9.0 a
03	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	A	7.5 b	9.0 a	9.1 a
04	Overseeded Untreated Chk							active	B	8.5 a	6.1 b	7.1 b
05	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	B	6.8 bc	8.5 a	9.0 a
06	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	B	6.3 c	8.5 a	9.0 a
LSD (P=.05)										0.81	0.55	0.38
Standard Deviation										0.54	0.37	0.25
CV										7.34	4.69	2.98

										Turf	
										Quality	
										0-10	
										7-30-2003	
										105 DA-A	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code		
01	Overseeded Untreated Chk							active	A	8.8 b	
02	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	A	9.5 a	
03	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	A	9.5 a	
04	Overseeded Untreated Chk							active	B	8.5 b	
05	Revolver	22.5	SC	15	g ai/ha	0.21	fl oz/1000 ft2	active	B	9.3 a	
06	Revolver	22.5	SC	30	g ai/ha	0.42	fl oz/1000 ft2	active	B	9.5 a	
LSD (P=.05)										0.54	
Standard Deviation										0.36	
CV										3.88	

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