

University of GA Coop Ext Service

Efficacy of Revolver and TranXit for Poa annua Control in Bermudagrass Overseeded with Perennial Ryegrass

Trial ID: Turf10-03

Study Dir.: Bill Nutt

Location: Griffin Campus UGA

Investigator: Tim R Murphy

GENERAL TRIAL INFORMATION

Study Director: Bill Nutt

Title: ARCI

Affiliation: UGA CAES

Investigator: Tim R Murphy

Title: Weed Scientist

Affiliation: UGA CAES

TRIAL LOCATION

City: Griffin

Trial Status: ARCHIEVED

State/Prov.: GA

Initiation Date: 10-17-2002

COOPERATOR/LANDOWNER

Cooperator: Laurence Mudge & Stanley Royal

Conducted Under GLP (Y/N): N

Conducted Under GEP (Y/N): N

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	POANN	Annual bluegrass	Poa annua
2.	VERAR	Corn speedwell	Veronica arvensis
3.	APHAR	Parsley-piert	Alchemilla arvensis

Crop 1: CYNDA BERMUDAGRASS/*Cynodon dactylon*

Variety: Common Perennial Age: 20 yrs

Crop 2: LOLPE RYEGRASS, PERENNIAL/*Lolium perenne*

Variety: Sunrise Primo Perennial Ryegrass Blend - 39% 'Jet', 39% 'Sonata', 20% 'Wind Star'

Planting Date: 11-1-2002 Overseeded entire area. Seed distributed in two opposite directions.

Planting Method: Used 3 ft. drop spreader setting #10. Rate: 10 lbs/1000 sq. ft

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 with "Tri-Plex" mower at 0.625 inch.

APPLICATION DESCRIPTION

	A	B	C
Application Date:	10-18-2002	10-24-2002	12-6-2002
Time of Day:	2:00 PM	10:45 AM	3:30 PM
Application Method:	Broadcast	Broadcast	Broadcast
Application Timing:	Pre/Post	Pre/Post	Post
Applic. Placement:	Soil/Folr	Soil/Folr	Foliar
Air Temp., Unit:	68 F	59 F	47 F
% Relative Humidity:	45	92	40
Wind Velocity, Unit:	1 mph	2 mph	3 mph
Dew Presence (Y/N):	N	Y	N
Soil Temp., Unit:	66 F	62 F	49 F
Soil Moisture:	High	High	High
% Cloud Cover:	5	100	0

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	CYNDA Active	CYNDA Active	CYNDA Dormant
Height, Unit:	0.50 inch	.625 inch	.625 inch
Crop 2 Code, Stage:	LOLPE	LOLPE	LOLPE
Stage Scale:			3 Leaf
Height, Unit:			.625 inch

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code, Stage:	POANN	POANN	POANN
Density, Unit:	0 %	0 %	0 %
Weed 2 Code, Stage:	VERAR	VERAR	VERAR
Density, Unit:	0 %	0 %	0 %
Weed 3 Code, Stage:	APHAR	APHAR	APHAR
Density, Unit:	0 %	0 %	0 %

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

Trt No	Treatment Application Comment
A	10-18-02; Granular herbicide mixed with dry sand & broadcast by hand
	0.25 inch irrigation applied 4 hours after treatment.

Trial Comments

11-1-02, 11-13-02; Perennial ryegrass injury expressed as yellowing of foliage.

11-14-02; Broadcast 10-10-10 fertilizer at 10 lbs/1000 sq. ft. = 1 lb N/1000 sq ft. Broadcast on all plots except plots containing treatments 7,8,9 and 10. Used Scotts 2 ft. drop spreader, set on #11 1/4.

1-28-03; Sprayed entire area for winter broadleaf weeds - Used Trimec Classic at 3.25 pints/A + 0.25% v/v Nonionic surfactant.

2-25-03; Broadcast 1 lb N/1000sq ft. as 10-10-10 fertilizer.

WEED DENSITY RATINGS FOR UNTREATED CONTROL CHECK

	<u>101</u>	<u>203</u>	<u>304</u>	<u>412</u>
POAAN, 3-4-03	25	10	10	10
POAAN, 3-24-03	25	40	25	20
VERAR, 4-08-03	5	10	10	15
APHAR, 4-08-03	10	10	10	10

University of GA Coop Ext Service

Efficacy of Revolver and TranXit for Poa annua Control in Bermudagrass Overseeded with Perennial Ryegrass

Trial ID: Turf10-03

Study Dir. : Bill Nutt

Location: Griffin Campus UGA

Investigator: Tim R Murphy

										CYNDA	LOLPE	
										Injury	Injury	
										0-100	0-100	
										10-24-2002	11-13-2002	
										6 DA-A	26 DA-A	
										0	0	
Trt	Treatment	Form	Form	Rate	Product	Product	Grow	Appl				
No.	Name	Conc	Type	Rate	Unit	Rate	Rate	Unit	Stg	Code		
1	Untreated Check										0 c	0 a
2	AE F130360 001KO2 AI	22.5	SC	15	g ai/ha	0.2	oz/1000 ft2	2	WBS	A	4 bc	0 a
3	AE F130360 001KO2 AI	22.5	SC	30	g ai/ha	0.4	oz/1000 ft2	2	WBS	A	6 ab	0 a
4	AE F130360 001KO2 AI fb	22.5	SC	15	g ai/ha	0.2	oz/1000 ft2	2	WBS	A	4 bc	0 a
	Prograss	180	EC	1.68	kg ai/ha	1	gal/a	6	WPS	C		
5	TranXit	25	WG	17.5	g ai/ha	1.0	oz wt/a	2	WBS	A	9 a	5 a
	Nonionic surfactant			0.25	% v/v			2	WBS	A		
6	Tranxit	25	WG	35	g ai/ha	2.0	oz wt/a	2	WBS	A	8 a	7 a
	Nonionic surfactant			0.25	% v/v			2	WBS	A		
7	GX7280001H (5-10-30)	0.03	GR	67	g ai/ha	200	lb/a	2	WBS	A	0 c	3 a
8	GX7280002H (5-10-30)	0.06	GR	135	g ai/ha	200	lb/a	2	WBS	A	0 c	3 a
9	GX7280001R(9-23-25)	0.03	GR	67	g ai/ha	200	lb/a	2	WBS	A	0 c	4 a
10	GX7280002R(9-23-25)	0.06	GR	135	g ai/ha	200	lb/a	2	WBS	A	0 c	5 a
11	Prograss	180	EC	1.68	kg ai/ha	1	gal/a	6	WPS	C	0 c	0 a
12	AE F130360 001KO2 AI	22.5	SC	15	g ai/ha	0.2	oz/1000 ft2	1	WBS	B	0 c	6 a
13	AE F130360 001KO2 AI	22.5	SC	30	g ai/ha	0.4	oz/1000 ft2	1	WBS	B	0 c	4 a
LSD (P=.05)										3.4	6.3	
Standard Deviation										2.4	4.4	
CV										99.39	160.94	

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

University of GA Coop Ext Service

Weed Code										LOLPE	LOLPE
Crop Code										Density	Density
Rating Data Type										0-100	0-100
Rating Unit										11-13-2002	11-25-2002
Rating Date										26 DA-A	38 DA-A
Trt-Eval Interval										0	0
# Subsamples, Dec.											
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
1	Untreated Check									34	46
2	AE F130360 001KO2 AI	22.5	SC	15 g ai/ha	0.2 oz/1000 ft2		2 WBS	A		35	49
3	AE F130360 001KO2 AI	22.5	SC	30 g ai/ha	0.4 oz/1000 ft2		2 WBS	A		35	44
4	AE F130360 001KO2 AI fb	22.5	SC	15 g ai/ha	0.2 oz/1000 ft2		2 WBS	A		35	48
	Prograss	180	EC	1.68 kg ai/ha	1 gal/a		6WPS	C			
5	TranXit	25	WG	17.5 g ai/ha	1.0 oz wt/a		2WBS	A		35	43
	Nonionic surfactant			0.25 % v/v			2WBS	A			
6	Tranxit	25	WG	35 g ai/ha	2.0 oz wt/a		2WBS	A		35	43
	Nonionic surfactant			0.25 % v/v			2WBS	A			
7	GX7280001H (5-10-30)	0.03	GR	67 g ai/ha	200 lb/a		2WBS	A		35	49
8	GX7280002H (5-10-30)	0.06	GR	135 g ai/ha	200 lb/a		2WBS	A		35	43
9	GX7280001R(9-23-25)	0.03	GR	67 g ai/ha	200 lb/a		2WBS	A		35	41
10	GX7280002R(9-23-25)	0.06	GR	135 g ai/ha	200 lb/a		2WBS	A		35	37
11	Prograss	180	EC	1.68 kg ai/ha	1 gal/a		6WPS	C		35	49
12	AE F130360 001KO2 AI	22.5	SC	15 g ai/ha	0.2 oz/1000 ft2		1WBS	B		35	40
13	AE F130360 001KO2 AI	22.5	SC	30 g ai/ha	0.4 oz/1000 ft2		1WBS	B		35	41
LSD (P=.05)										1.0	7.0
Standard Deviation										0.7	4.8
CV										2.04	10.98

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

University of GA Coop Ext Service

Weed Code										LOLPE	LOLPE	LOLPE
Crop Code										Density	Density	Density
Rating Data Type										0-100	0-100	0-100
Rating Unit										12-6-2002	12-23-2002	2-2-2003
Rating Date										49 DA-A	66 DA-A	107 DA-A
Trt-Eval Interval										0	0	0
# Subsamples, Dec.												
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
1	Untreated Check									51 a	60 ab	78 a
2	AE F130360 001KO2 AI	22.5	SC	15 g ai/ha		0.2 oz/1000 ft2		2 WBS	A	53 a	59 abc	74 a
3	AE F130360 001KO2 AI	22.5	SC	30 g ai/ha		0.4 oz/1000 ft2		2 WBS	A	45 ab	53 a-d	75 a
4	AE F130360 001KO2 AI fb Prograss	22.5	SC	15 g ai/ha		0.2 oz/1000 ft2		2 WBS	A	51 a	60 ab	75 a
		180	EC	1.68 kg ai/ha		1 gal/a		6WPS	C			
5	TranXit Nonionic surfactant	25	WG	17.5 g ai/ha		1.0 oz wt/a		2WBS	A	44 ab	54 a-d	74 a
				0.25 % v/v				2WBS	A			
6	Tranxit Nonionic surfactant	25	WG	35 g ai/ha		2.0 oz wt/a		2WBS	A	53 a	63 a	76 a
				0.25 % v/v				2WBS	A			
7	GX7280001H (5-10-30)	0.03	GR	67 g ai/ha		200 lb/a		2WBS	A	48 ab	51 a-d	68 abc
8	GX7280002H (5-10-30)	0.06	GR	135 g ai/ha		200 lb/a		2WBS	A	40 ab	45 bcd	59 c
9	GX7280001R(9-23-25)	0.03	GR	67 g ai/ha		200 lb/a		2WBS	A	40 ab	44 cd	59 c
10	GX7280002R(9-23-25)	0.06	GR	135 g ai/ha		200 lb/a		2WBS	A	35 b	43 d	61 bc
11	Prograss	180	EC	1.68 kg ai/ha		1 gal/a		6WPS	C	53 a	59 abc	74 a
12	AE F130360 001KO2 AI	22.5	SC	15 g ai/ha		0.2 oz/1000 ft2		1WBS	B	48 ab	54 a-d	70 ab
13	AE F130360 001KO2 AI	22.5	SC	30 g ai/ha		0.4 oz/1000 ft2		1WBS	B	44 ab	50 a-d	71 a
LSD (P=.05)										11.9	13.2	8.7
Standard Deviation										8.2	9.1	6.0
CV										17.78	17.06	8.58

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

University of GA Coop Ext Service

Weed Code										LOLPE	LOLPE	LOLPE
Crop Code												Turf
Part Rated												
Rating Data Type										Density	Density	Quality
Rating Unit										0-100	0-100	0-10
Rating Date										3-4-2003	3-24-2003	1-2-2003
Trt-Eval Interval										137 DA-A	157 DA-A	76 DA-A
# Subsamples, Dec.										0	0	1
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
1	Untreated Check									78 cd	74 bc	7.1 a
2	AE F130360 001KO2 AI	22.5	SC	15	g ai/ha	0.2	oz/1000 ft2	2 WBS	A	85 abc	95 ab	6.9 a
3	AE F130360 001KO2 AI	22.5	SC	30	g ai/ha	0.4	oz/1000 ft2	2 WBS	A	83 a-d	95 ab	6.6 ab
4	AE F130360 001KO2 AI fb	22.5	SC	15	g ai/ha	0.2	oz/1000 ft2	2 WBS	A	88 a	98 a	7.0 a
	Prograss	180	EC	1.68	kg ai/ha	1	gal/a	6WPS	C			
5	TranXit	25	WG	17.5	g ai/ha	1.0	oz wt/a	2WBS	A	83 a-d	95 ab	6.6 ab
	Nonionic surfactant			0.25	% v/v			2WBS	A			
6	Tranxit	25	WG	35	g ai/ha	2.0	oz wt/a	2WBS	A	87 ab	94 ab	7.1 a
	Nonionic surfactant			0.25	% v/v			2WBS	A			
7	GX7280001H (5-10-30)	0.03	GR	67	g ai/ha	200	lb/a	2WBS	A	79 bcd	63 c	5.8 bcd
8	GX7280002H (5-10-30)	0.06	GR	135	g ai/ha	200	lb/a	2WBS	A	75 d	86 ab	5.4 d
9	GX7280001R(9-23-25)	0.03	GR	67	g ai/ha	200	lb/a	2WBS	A	75 d	89 ab	5.6 cd
10	GX7280002R(9-23-25)	0.06	GR	135	g ai/ha	200	lb/a	2WBS	A	80 a-d	88 ab	5.3 d
11	Prograss	180	EC	1.68	kg ai/ha	1	gal/a	6WPS	C	85 abc	95 ab	7.0 a
12	AE F130360 001KO2 AI	22.5	SC	15	g ai/ha	0.2	oz/1000 ft2	1WBS	B	83 a-d	95 ab	6.5 abc
13	AE F130360 001KO2 AI	22.5	SC	30	g ai/ha	0.4	oz/1000 ft2	1WBS	B	83 a-d	93 ab	6.5 abc
LSD (P=.05)										7.5	19.1	0.89
Standard Deviation										5.2	13.2	0.62
CV										6.37	14.85	9.61

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

University of GA Coop Ext Service

Weed Code										LOLPE	POAAN	POAAN
Crop Code										Turf		
Part Rated										Quality	Control	Control
Rating Data Type										0-10	0-100	0-100
Rating Unit										2-2-2003	3-4-2003	3-24-2003
Rating Date										107 DA-A	137 DA-A	157 DA-A
Trt-Eval Interval										1	0	0
# Subsamples, Dec.												
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
1	Untreated Check									7.8 a	0 c	0 c
2	AE F130360 001KO2 AI	22.5	SC	15	g ai/ha	0.2	oz/1000 ft2	2 WBS	A	7.4 ab	99 a	96 a
3	AE F130360 001KO2 AI	22.5	SC	30	g ai/ha	0.4	oz/1000 ft2	2 WBS	A	7.5 ab	100 a	97 a
4	AE F130360 001KO2 AI fb	22.5	SC	15	g ai/ha	0.2	oz/1000 ft2	2 WBS	A	7.4 ab	100 a	94 a
	Prograss	180	EC	1.68	kg ai/ha	1	gal/a	6WPS	C			
5	TranXit	25	WG	17.5	g ai/ha	1.0	oz wt/a	2WBS	A	7.4 ab	100 a	99 a
	Nonionic surfactant			0.25	% v/v			2WBS	A			
6	Tranxit	25	WG	35	g ai/ha	2.0	oz wt/a	2WBS	A	7.7 a	99 a	101 a
	Nonionic surfactant			0.25	% v/v			2WBS	A			
7	GX7280001H (5-10-30)	0.03	GR	67	g ai/ha	200	lb/a	2WBS	A	6.6 bc	41 b	64 b
8	GX7280002H (5-10-30)	0.06	GR	135	g ai/ha	200	lb/a	2WBS	A	6.0 c	100 a	100 a
9	GX7280001R(9-23-25)	0.03	GR	67	g ai/ha	200	lb/a	2WBS	A	6.0 c	100 a	96 a
10	GX7280002R(9-23-25)	0.06	GR	135	g ai/ha	200	lb/a	2WBS	A	6.1 c	101 a	100 a
11	Prograss	180	EC	1.68	kg ai/ha	1	gal/a	6WPS	C	7.1 ab	100 a	100 a
12	AE F130360 001KO2 AI	22.5	SC	15	g ai/ha	0.2	oz/1000 ft2	1WBS	B	7.0 ab	100 a	100 a
13	AE F130360 001KO2 AI	22.5	SC	30	g ai/ha	0.4	oz/1000 ft2	1WBS	B	7.0 ab	100 a	100 a
LSD (P=.05)										0.79	13.7	11.0
Standard Deviation										0.55	9.5	7.6
CV										7.81	10.8	8.65

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

University of GA Coop Ext Service

Weed Code										POAAN	POAAN	VERAR
Crop Code												
Part Rated												
Rating Data Type										Control	Control	Control
Rating Unit										0-100	0-100	0-100
Rating Date										4-8-2003	4-21-2003	4-8-2003
Trt-Eval Interval										172 DA-A	185 DA-A	172 DA-A
# Subsamples, Dec.										0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
1	Untreated Check									0 d	0 e	0 b
2	AE F130360 001KO2 AI	22.5	SC	15	g ai/ha	0.2	oz/1000 ft2	2 WBS	A	83 b	84 ab	95 a
3	AE F130360 001KO2 AI	22.5	SC	30	g ai/ha	0.4	oz/1000 ft2	2 WBS	A	90 ab	94 ab	94 a
4	AE F130360 001KO2 AI fb	22.5	SC	15	g ai/ha	0.2	oz/1000 ft2	2 WBS	A	86 ab	81 bc	91 a
	Prograss	180	EC	1.68	kg ai/ha	1	gal/a	6WPS	C			
5	TranXit	25	WG	17.5	g ai/ha	1.0	oz wt/a	2WBS	A	99 a	93 ab	89 a
	Nonionic surfactant			0.25	% v/v			2WBS	A			
6	Tranxit	25	WG	35	g ai/ha	2.0	oz wt/a	2WBS	A	99 a	97 a	79 a
	Nonionic surfactant			0.25	% v/v			2WBS	A			
7	GX7280001H (5-10-30)	0.03	GR	67	g ai/ha	200	lb/a	2WBS	A	60 c	56 d	66 a
8	GX7280002H (5-10-30)	0.06	GR	135	g ai/ha	200	lb/a	2WBS	A	97 a	95 a	75 a
9	GX7280001R(9-23-25)	0.03	GR	67	g ai/ha	200	lb/a	2WBS	A	93 ab	93 ab	74 a
10	GX7280002R(9-23-25)	0.06	GR	135	g ai/ha	200	lb/a	2WBS	A	96 ab	94 ab	93 a
11	Prograss	180	EC	1.68	kg ai/ha	1	gal/a	6WPS	C	94 ab	70 c	74 a
12	AE F130360 001KO2 AI	22.5	SC	15	g ai/ha	0.2	oz/1000 ft2	1WBS	B	98 a	94 ab	95 a
13	AE F130360 001KO2 AI	22.5	SC	30	g ai/ha	0.4	oz/1000 ft2	1WBS	B	95 ab	90 ab	93 a
LSD (P=.05)										11.7	11.6	29.7
Standard Deviation										8.1	8.0	20.5
CV										9.67	10.01	26.25

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

University of GA Coop Ext Service

Weed Code										APHAR
Crop Code										
Part Rated										
Rating Data Type										Control
Rating Unit										0-100
Rating Date										4-8-2003
Trt-Eval Interval										172 DA-A
# Subsamples, Dec.										0
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	
1	Untreated Check									0 c
2	AE F130360 001K02 AI	22.5	SC	15	g ai/ha	0.2	oz/1000 ft2	2 WBS	A	60 ab
3	AE F130360 001K02 AI	22.5	SC	30	g ai/ha	0.4	oz/1000 ft2	2 WBS	A	69 ab
4	AE F130360 001K02 AI fb	22.5	SC	15	g ai/ha	0.2	oz/1000 ft2	2 WBS	A	78 ab
	Prograss	180	EC	1.68	kg ai/ha	1	gal/a	6WPS	C	
5	TranXit	25	WG	17.5	g ai/ha	1.0	oz wt/a	2WBS	A	91 a
	Nonionic surfactant			0.25	% v/v			2WBS	A	
6	Tranxit	25	WG	35	g ai/ha	2.0	oz wt/a	2WBS	A	77 ab
	Nonionic surfactant			0.25	% v/v			2WBS	A	
7	GX7280001H (5-10-30)	0.03	GR	67	g ai/ha	200	lb/a	2WBS	A	60 ab
8	GX7280002H (5-10-30)	0.06	GR	135	g ai/ha	200	lb/a	2WBS	A	88 ab
9	GX7280001R(9-23-25)	0.03	GR	67	g ai/ha	200	lb/a	2WBS	A	63 ab
10	GX7280002R(9-23-25)	0.06	GR	135	g ai/ha	200	lb/a	2WBS	A	69 ab
11	Prograss	180	EC	1.68	kg ai/ha	1	gal/a	6WPS	C	48 b
12	AE F130360 001K02 AI	22.5	SC	15	g ai/ha	0.2	oz/1000 ft2	1WBS	B	51 ab
13	AE F130360 001K02 AI	22.5	SC	30	g ai/ha	0.4	oz/1000 ft2	1WBS	B	76 ab
LSD (P=.05)										34.6
Standard Deviation										24.0
CV										37.63

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