

University of Georgia, CES

Efficacy of V-10029 for Postemergence Control of Annual Bluegrass in Bermudagrass Overseeded with Perennial Ryegrass.

Trial ID: TURF902
Location: Griffin

Study Dir.: Bill Nutt
Investigator: Tim R Murphy

Weed Code					
Crop Code	LOLPE	LOLPE	LOLPE	LOLPE	LOLPE
Part Rated	Foliag	Foliag			
Rating Data Type	Suppress	Density	Density	Density	Density
Rating Unit	0-100	0-100	0-100	0-100	0-100
Rating Date	Oct-31-01	Oct-31-01	Nov-06-01	Nov-12-01	Nov-19-01
Trt-Eval Interval	20 DA-A	20 DA-A	26 DA-A	32 DA-A	39 DA-A
# Subsamples, Dec.	0	0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit
1	Untreated Check				
2	V-10029	80 SP	20 G/A		
3	V-10029	80 SP	40 G/A		
4	V-10029	80 SP	80 G/A		
5	V-10029	80 SP	20 G/A		
6	V-10029	80 SP	40 G/A		
7	V-10029	80 SP	80 G/A		
8	V-10029	80 SP	20 G/A		
	V-10029	80 SP	20 G/A		
9	Prograss	1.5 SL	0.75 LB A/A		
	Prograss	1.5 SL	0.75 LB A/A		
LSD (P=.05)	6.0	5.8	3.6	8.7	8.0
Standard Deviation	4.0	3.9	2.4	5.7	5.3
CV	41.88	9.58	4.67	10.64	9.23
Grand Mean	9.58	40.42	51.46	53.96	57.29
Replicate F	0.431	0.833	8.373	0.621	1.328
Replicate Prob(F)	0.7338	0.4962	0.0017	0.6122	0.3025
Treatment F	15.931	6.444	22.301	11.779	12.990
Treatment Prob(F)	0.0001	0.0022	0.0001	0.0001	0.0001

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

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Part Rated					
Rating Data Type	Density	Density	Density	Density	Density
Rating Unit	0-100	0-100	0-100	0-100	0-100
Rating Date	Nov-28-01	Dec-19-01	Jan-09-02	Jan-28-02	Feb-08-02
Trt-Eval Interval	48 DA-A	69 DA-A	90 DA-A	109 DA-A	120 DA-A
# Subsamples, Dec.	0	0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit
1	Untreated Check				
				79 ab	90 a
2	V-10029	80 SP	20 G/A		
				71 b	81 b
3	V-10029	80 SP	40 G/A		
				71 b	84 ab
4	V-10029	80 SP	80 G/A		
				56 c	69 c
5	V-10029	80 SP	20 G/A		
6	V-10029	80 SP	40 G/A		
7	V-10029	80 SP	80 G/A		
8	V-10029	80 SP	20 G/A		
				80 ab	89 ab
	V-10029	80 SP	20 G/A		
					79 b
9	Prograss	1.5 SL	0.75 LB A/A		
				85 a	88 ab
	Prograss	1.5 SL	0.75 LB A/A		
					94 a
					94 a
					95 a
LSD (P=.05)				8.4	7.0
Standard Deviation				5.6	4.7
CV				7.6	5.59
Grand Mean				73.75	83.33
Replicate F				0.575	1.154
Replicate Prob(F)				0.6401	0.3598
Treatment F				12.982	11.385
Treatment Prob(F)				0.0001	0.0001
					3.182
					3.034
					0.0546
					0.0620
					18.600
					10.302
					7.181
					0.0013

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Crop Code	LOLPE	LOLPE	LOLPE	LOLPE	LOLPE
Part Rated					
Rating Data Type	Density	Density	Injury	Injury	Injury
Rating Unit	0-100	0-100	0-100	0-100	0-100
Rating Date	Mar-15-02	Mar-27-02	Nov-06-01	Nov-12-01	Nov-19-01
Trt-Eval Interval	155 DA-A	167 DA-A	26 DA-A	32 DA-A	39 DA-A
# Subsamples, Dec.	0	0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit
1	Untreated Check				
2	V-10029	80	SP	20	G/A
3	V-10029	80	SP	40	G/A
4	V-10029	80	SP	80	G/A
5	V-10029	80	SP	20	G/A
6	V-10029	80	SP	40	G/A
7	V-10029	80	SP	80	G/A
8	V-10029	80	SP	20	G/A
	V-10029	80	SP	20	G/A
9	Prograss	1.5	SL	0.75	LB A/A
	Prograss	1.5	SL	0.75	LB A/A
LSD (P=.05)	8.7	11.9	2.6	4.0	4.9
Standard Deviation	6.0	8.2	1.7	2.6	3.2
CV	7.65	9.86	10.24	17.73	30.48
Grand Mean	77.78	82.78	16.88	14.79	10.63
Replicate F	2.353	0.640	4.070	1.364	0.364
Replicate Prob(F)	0.0974	0.5967	0.0267	0.2919	0.7798
Treatment F	7.843	2.155	285.279	120.515	61.927
Treatment Prob(F)	0.0001	0.0698	0.0001	0.0001	0.0001

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Weed Code					
Crop Code	LOLPE	LOLPE	LOLPE	LOLPE	LOLPE
Part Rated					
Rating Data Type	Injury	Injury	Injury	Injury	Injury
Rating Unit	0-100	0-100	0-100	0-100	0-100
Rating Date	Nov-28-01	Dec-19-01	Mar-15-02	Apr-05-02	Mar-27-02
Trt-Eval Interval	48 DA-A	69 DA-A	155 DA-A	176 DA-A	167 DA-A
# Subsamples, Dec.	0	0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit
1	Untreated Check				
2	V-10029	80 SP		20 G/A	
3	V-10029	80 SP		40 G/A	
4	V-10029	80 SP		80 G/A	
5	V-10029	80 SP		20 G/A	
6	V-10029	80 SP		40 G/A	
7	V-10029	80 SP		80 G/A	
8	V-10029	80 SP		20 G/A	
	V-10029	80 SP		20 G/A	
9	Prograss	1.5 SL		0.75 LB A/A	
	Prograss	1.5 SL		0.75 LB A/A	
	LSD (P=.05)			2.8	0.0
	Standard Deviation			1.8	0.0
	CV			87.64	0.0
	Grand Mean			2.08	0.0
	Replicate F			1.250	0.000
	Replicate Prob(F)			0.3268	1.0000
	Treatment F			8.000	0.000
	Treatment Prob(F)			0.0008	1.0000

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Weed Code				POAAN	POAAN	POAAN	POAAN		
Crop Code									
Part Rated									
Rating Data Type				Injury	Control	Control	Control		
Rating Unit				0-100	0-100	0-100	0-100		
Rating Date				Apr-05-02	Mar-15-02	Mar-27-02	Apr-05-02		
Trt-Eval Interval				167 DA-A	155 DA-A	167 DA-A	176 DA-A		
# Subsamples, Dec.				0	0	0	0		
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit					
1	Untreated Check				0 a	0 d	0 d	0 e	
2	V-10029	80	SP	20 G/A	0 a	26 c	20 c	28 c	
3	V-10029	80	SP	40 G/A	0 a	83 b	83 ab	73 a	
4	V-10029	80	SP	80 G/A	0 a	94 a	96 ab	88 a	
5	V-10029	80	SP	20 G/A	0 a	96 a	81 b	5 d	
6	V-10029	80	SP	40 G/A	0 a	100 a	97 ab	44 bc	
7	V-10029	80	SP	80 G/A	0 a	100 a	100 a	86 a	
8	V-10029	80	SP	20 G/A	0 a	98 a	95 ab	48 b	
	V-10029	80	SP	20 G/A				56 bc	
9	Prograss	1.5	SL	0.75 LB A/A	0 a	94 a	91 ab	89 a	
	Prograss	1.5	SL	0.75 LB A/A				83 a	
LSD (P=.05)					0.0	8.8	15.2	18.7	23.5
Standard Deviation					0.0	6.0	10.4	12.8	16.1
CV					0.0	7.83	14.14	25.13	35.17
Grand Mean					0.0	76.67	73.5	50.97	45.83
Replicate F					0.000	1.029	2.410	1.156	0.389
Replicate Prob(F)					1.0000	0.3974	0.0918	0.3471	0.7623
Treatment F					0.000	152.016	50.400	29.855	15.897
Treatment Prob(F)					1.0000	0.0001	0.0001	0.0001	0.0001

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Weed Code				POAAN
Crop Code				
Part Rated				
Rating Data Type				Control
Rating Unit				0-100
Rating Date				May-07-02
Trt-Eval Interval				208 DA-A
# Subsamples, Dec.				0
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit
1	Untreated Check			0 e
2	V-10029	80	SP	20 G/A 13 de
3	V-10029	80	SP	40 G/A 63 ab
4	V-10029	80	SP	80 G/A 83 a
5	V-10029	80	SP	20 G/A 5 e
6	V-10029	80	SP	40 G/A 33 cd
7	V-10029	80	SP	80 G/A 54 bc
8	V-10029	80	SP	20 G/A 59 ab
	V-10029	80	SP	20 G/A
9	Prograss	1.5	SL	0.75 LB A/A 83 a
	Prograss	1.5	SL	0.75 LB A/A
LSD (P=.05)				23.2
Standard Deviation				15.9
CV				36.74
Grand Mean				43.33
Replicate F				0.365
Replicate Prob(F)				0.7787
Treatment F				16.165
Treatment Prob(F)				0.0001

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Investigator: Tim R Murphy

GENERAL TRIAL INFORMATION

Study Director: Tim R. Murphy
Affiliation: UGA-CAES
Postal Code: 30223
Investigator: Bill Nutt
Affiliation: UGA-CAES
Postal Code: 30223

Title: Weed Scientist

Title: ARCI

TRIAL LOCATION

City: Griffin
State/Prov.: GA
Postal Code: 30223

Trial Status: ONE-YEAR/FINAL

Initiation Date: Oct-11-01
Angle y-axis to North °: 0.00

Conducted Under GLP (Y/N): N

Conducted Under GEP (Y/N): N

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	POAAN	ANNUAL BLUEGRASS	POA ANNUA

Crop 1: CYNDA Bermudagrass

Variety: Tifway
Perennial Age: 15 yrs

Crop 2: LOLPE Perennial ryegrass
Planting Date: Sep-26-01
Rate: 9 lbs./1,000

Variety: Sunrise Primo
Planting Method: Broadcast

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 reel mower.

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APPLICATION DESCRIPTION

	A	B	C	D
Application Date:	Oct-11-01	Oct-23-01	Nov-08-01	Feb-08-02
Time of Day:	10:00 am	1:30 pm	3:00 pm	2:30 pm
Application Method:	Broadcast	Broadcast	Broadcast	Broadcast
Application Timing:	Pre	Post	Post	Post
Applic. Placement:	Soil	Foliar	Foliar	Foliar
Air Temp., Unit:	68 F	84 F	74 F	64 F
% Relative Humidity:	82	45	50	42
Wind Velocity, Unit:	3.5 mph	1.5 mph	2.5 mph	2 mph
Dew Presence (Y/N):	N	N	N	N
Soil Temp., Unit:	62 F	74 F	63 F	54 F
Soil Moisture:	Good	Good	Good	Very High
% Cloud Cover:	80	20	15	0

CROP STAGE AT EACH APPLICATION

	A	B	C	D
Crop 1 Code, Stage:	CYNDA Growth	CYNDA Growth	CYNDA Green	CYNDA Dormant
Stage Scale:	Active	Active	50%	
Height, Unit:	0.5 inch	0.5 inch	0.62 inch	
Crop 2 Code, Stage:	LOLPE	LOLPE	LOLPE	LOLPE Active
Stage Scale:	3 Leaf	3 Leaf	3-5 Leaf	3-4Tiller
Height, Unit:	0.5 inch	0.5 inch	0.62 inch	0.75 inch

WEED STAGE AT EACH APPLICATION

	A	B	C	D
Weed 1 Code, Stage:	POAAN .	POAAN .	POAAN .	POAAN Erly Flwr
Stage Scale:				3-4Tiller
Density, Unit:				15 %

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APPLICATION EQUIPMENT

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

Trt No	Treatment Application Comment
A	Watered in during pm with 1/4 - 1/2 inch irrigation.
C	Watered in during pm with 1/4 - 1/2 inch irrigation.

Trial Comments

PLOT DENSITY RATINGS FOR CONTROL CHECK PLOTS

	101	205	302	409
POAAN, 3-15-02	30	20	25	30
POAAN, 3-27-02	30	25	30	30

10-31-01

V-10029 stunting or suppressing perennial ryegrass growth. No foliage discoloration of perennial ryegrass observed on this date with V-10029.

10-31-01

1 lb N per 1000 sq. ft. as 10-10-10 fertilizer.

1-9-02

Bermudagrass, CYNDA, went dormant between 12-19-01 and 1-9-02.

Ryegrass, LOLPE, density ratings not confounded by presence of actively growing bermudagrass.

No ryegrass foliage injury observed in plots.

3-14-02

1 lb N per 1000 sq. ft. as 10-10-10 fertilizer.

3-27-02

Ryegrass, LOLPE, density ratings may have been confounded by presence of bermudagrass, CYNDA, greenup.

4-26-02 and 5-7-02

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No ryegrass or bermudagrass injury observed on these dates.