

University of GA Coop Ext Service

Evaluation of 1,3-D on Golf Course Putting Greens: Creeping Bentgrass

Trial ID: BENT3

Study Director: Jonathan Bohn

Location: The Standard Club #16G

Investigator: Clint Waltz

General Trial Information

Study Director: Jonathan Bohn

Title: Technician

Affiliation: C&SS - UGA

Investigator: Clint Waltz

Title: Asst. Professor

Affiliation: C&SS - UGA

E-mail: CWaltz@UGA.edu

Trial Location

City: Duluth

Trial Status: ARCHIVED

State/Prov.: GA

Initiation Date: 6-30-2003

Planned Completion Date: 9-15-2003

Objectives:

Determine the efficacy of XRM-5048 on plant parasitic nematodes in creeping bentgrass putting greens in the Southern United States.

Cooperator/Landowner

Cooperator: Mark Hoban

Organization: Dublin Country Club

City: Duluth

State/Prov: GA

Crop Description

Crop 1: AGSST *Agrostis stolonifera*

Bentgrass, creeping

Variety: Pencross

Description: Putting Green

BBCH Scale: BGRM

Planting Method: ESTABLISHED

Site and Design

Plot Width, Unit: 6 FT Site Type: Golf Course Putting Green

Plot Length, Unit: 30 FT Tillage Type: Slit Injection

Replications: 4 Study Design: Randomized Complete Block

Field Prep./Maintenance:

Maintained as a golf course putting green by golf course staff.

Soil Description

Texture: USGA Specification Putting Green Mix

Moisture Conditions

Overall Moisture Conditions: Slightly wet

Closest Weather Station: Atlanta Athletic Club

Distance: 5

Unit: MI

	Date	Time	Amount	Unit	Type	Interval	Unit
1.	6-30-2003	12:15	0.25	IN	SPRINKLER - SOLID SET	30	MIN
2.	6-30-2003		0.2	IN	RAIN	24	HR
3.	7-1-2003		3.6	IN	RAIN	24	HR

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Application Description

	A
Application Date:	6-30-2003
Time of Day:	11:30 am
Application Method:	ITA Inject
Application Timing:	POSPOS
Application Placement:	INJSOI
Applied By:	ITA
Air Temperature, Unit:	80 F
% Relative Humidity:	85
Wind Velocity, Unit:	0 MPH
Dew Presence (Y/N):	N

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	AGSST BGRM
Stage Scale Used:	BBCH

Application Equipment

	A
Appl. Equipment:	Inject Rig

Trial comments

Date	By	Notes
6-30-2003	FCW	Golf course staff spiked green morning of application with small dimple spiker in one direction. Green is a mixed stand of 'Pencross' creeping bentgrass and annual blue grass maintained at putting green heights, rating of putting surface was fair (6.5).
6-30-2003	FCW	Soil firmness ratings were taken with a Turf-Tec International penetrometer just (B)efore application and then again just (A)fter irrigation following application. Measurements taken (A)fter application were from between application slits.
6-30-2003	FCW	Firm: 0 = Soft -> 10 = Very Firm
6-30-2003	FCW	Heal: 1 = Open Slit -> 9 = No Observable Slit

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Trial ID: BENT3			Study Director: Jonathan Bohn						
Location: The Standard Club #16G			Investigator: Clint Waltz						
Crop Code							AGSST	AGSST	AGSST
Crop Variety							Pencross	Pencross	Pencross
Rating Date							7-3-2003	7-11-2003	7-31-2003
Rating Data Type							TQ	TQ	TQ
Rating Unit							1-9	1-9	1-9
Number of Subsamples							1	1	1
Assessed By							JB	FCW	JB
Days After Last Applic.							3	11	31
Trt-Eval Interval							3 DA-A	11 DA-A	31 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	
1	Untreated Check								
2	Equipment Check						A	Specialty Application	
3	XRM-5048	6.8 EC		5 gal/a		COVER	A	Speciality Application	
LSD (P=.05)							0.25	0.32	0.00
Standard Deviation							0.14	0.19	0.00
CV							1.81	2.47	0.0

Crop Code							AGSST	AGSST	AGSST
Crop Variety							Pencross	Pencross	Pencross
Rating Date							8-28-2003	7-3-2003	7-11-2003
Rating Data Type							TQ	Color	Color
Rating Unit							1-9	1-9	1-9
Number of Subsamples							1	1	1
Assessed By							JB	JB	FCW
Days After Last Applic.							59	3	11
Trt-Eval Interval							59 DA-A	3 DA-A	11 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	
1	Untreated Check								
2	Equipment Check						A	Specialty Application	
3	XRM-5048	6.8 EC		5 gal/a		COVER	A	Speciality Application	
LSD (P=.05)							0.00	0.25	0.32
Standard Deviation							0.00	0.14	0.19
CV							0.0	1.86	2.5

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

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Crop Code									AGSST	AGSST	AGSST
Crop Variety									Pencross	Pencross	Pencross
Rating Date									7-31-2003	8-8-2003	8-28-2003
Rating Data Type									Color	Color	Color
Rating Unit									1-9	1-9	1-9
Number of Subsamples									1	1	1
Assessed By									JB	Darin	JB
Days After Last Applic.									31	39	59
Trt-Eval Interval									31 DA-A	39 DA-A	59 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description			
1	Untreated Check								7.6 a	7.9 a	8.0 a
2	Equipment Check						A	Specialty Application	7.5 a	7.5 a	8.0 a
3	XRM-5048	6.8	EC	5	gal/a	COVER	A	Speciality Application	7.5 a	7.9 a	8.0 a
LSD (P=.05)									0.25	0.48	0.00
Standard Deviation									0.14	0.28	0.00
CV									1.91	3.57	0.0

Crop Code									AGSST	AGSST	AGSST
Crop Variety									Pencross	Pencross	Pencross
Rating Date									7-31-2003	8-28-2003	7-3-2003
Rating Data Type									ColorMeter	ColorMeter	Injury
Rating Unit									1-9	1-9	%
Number of Subsamples									10	10	1
Assessed By									JB	JB	JB
Days After Last Applic.									31	59	3
Trt-Eval Interval									31 DA-A	59 DA-A	3 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description			
1	Untreated Check								7.4 a	8.5 a	0 a
2	Equipment Check						A	Specialty Application	7.4 a	8.3 a	0 a
3	XRM-5048	6.8	EC	5	gal/a	COVER	A	Speciality Application	7.2 a	8.3 a	0 a
LSD (P=.05)									0.31	0.37	0.0
Standard Deviation									0.18	0.21	0.0
CV									2.42	2.53	0.0

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

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									AGSST	AGSST	AGSST	
									Pencross	Pencross	Pencross	
									7-11-2003	7-31-2003	8-28-2003	
									Heal	Heal	Heal	
									1-9	1-9	1-9	
									1	1	1	
									FCW	JB	JB	
									11	31	59	
									11 DA-A	31 DA-A	59 DA-A	
Trt	Treatment	Form	Form	Other	Other	Growth	Appl	Appl				
No.	Name	Conc	Type	Rate	Rate	Unit	Stage	Code	Description			
1	Untreated Check									9.0 a	9.0 a	9.0 a
2	Equipment Check							A	Specialty Application	7.3 b	9.0 a	9.0 a
3	XRM-5048	6.8	EC	5	gal/a	COVER		A	Speciality Application	7.6 b	9.0 a	9.0 a
LSD (P=.05)										0.52	0.00	0.00
Standard Deviation										0.30	0.00	0.00
CV										3.78	0.0	0.0

									AGSST	AGSST	AGSST	
									Pencross	Pencross	Pencross	
									8-8-2003	6-30-2003	6-30-2003	
									Density	Firm (B)	Firm (A)	
									%			
									1	2	2	
									Darin	Darin	Darin	
									39	0	0	
									39 DA-A	0 DA-A	0 DA-A	
Trt	Treatment	Form	Form	Other	Other	Growth	Appl	Appl				
No.	Name	Conc	Type	Rate	Rate	Unit	Stage	Code	Description			
1	Untreated Check									96 a	5.50 a	5.78 a
2	Equipment Check							A	Specialty Application	95 a	5.63 a	2.72 b
3	XRM-5048	6.8	EC	5	gal/a	COVER		A	Speciality Application	91 a	5.59 a	2.56 b
LSD (P=.05)										5.6	0.702	0.904
Standard Deviation										3.2	0.406	0.522
CV										3.45	7.28	14.17

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

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									AGSST	AGSST	AGSST
									Pencross	Pencross	Pencross
									6-26-2003	7-14-2003	6-26-2003
									Ring	Ring	Stunt
									Count	Count	Count
Crop Code											
Crop Variety											
Rating Date											
Rating Data Type											
Rating Unit											
Number of Subsamples									1	1	1
Assessed By									Lab	Lab	Lab
Days After Last Applic.									-4	14	-4
Trt-Eval Interval									-4 DA-A	14 DA-A	-4 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description			
1	Untreated Check								117 a	132 a	98 a
2	Equipment Check						A	Specialty Application	138 a	120 a	125 a
3	XRM-5048	6.8	EC	5	gal/a	COVER	A	Speciality Application	162 a	80 a	87 a
LSD (P=.05)									82.5	95.2	70.6
Standard Deviation									47.7	55.0	40.8
CV									34.4	49.72	39.53

									AGSST	AGSST	AGSST
									Pencross	Pencross	Pencross
									7-14-2003	6-26-2003	7-14-2003
									Stunt	Total	Total
									Count	Count	Count
Crop Code											
Crop Variety											
Rating Date											
Rating Data Type											
Rating Unit											
Number of Subsamples									1	1	1
Assessed By									Lab	Lab	Lab
Days After Last Applic.									14	-4	14
Trt-Eval Interval									14 DA-A	-4 DA-A	14 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description			
1	Untreated Check								166 ab	216 a	304 a
2	Equipment Check						A	Specialty Application	180 a	263 a	300 a
3	XRM-5048	6.8	EC	5	gal/a	COVER	A	Speciality Application	107 b	251 a	195 b
LSD (P=.05)									69.1	117.0	100.2
Standard Deviation									39.9	67.6	57.9
CV									26.43	27.81	21.75

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