

University of GA Coop Ext Service

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

Trial ID: Bent2

Study Director: Jonathan Bohn

Location: The Standard Club #9 G

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 Date: 8-29-2003 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: 5

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	8:00 am	0.25	IN	SPRINKLER - SOLID SET	30	MIN
2.	6-30-2003		0.20	IN	RAIN	24	HR
3.	7-1-2003		3.60	IN	RAIN	24	HR

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Application Description

	A
Application Date:	6-30-2003
Time of Day:	8:00 am
Application Method:	ITA Inject
Application Timing:	POSPOS
Application Placement:	INJSOI
Applied By:	ITA
Air Temperature, Unit:	70 F
% Relative Humidity:	95
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:	InjectRig

Trial Comments

Date	By	Notes
6-30-2003	FCW	Golf course staff spiked green morning of application with small dimple spiker in two directions. Green is a mixed stand of 'Pencross' creeping bentgrass and annual bluegrass 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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Evaluation of 1,3-D on Golf Course Putting Greens: Creeping Bentgrass

Trial ID: BENT2

Location: The Standard Club #9 G

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
4	Nemacur	10	G	100	lb/a	COVER	A	Drop Spreader
LSD (P=.05)								
Standard Deviation								
CV								

Crop Code	AGSST		AGSST					
Crop Variety	Pencross		Pencross					
Rating Date	8-28-2003		7-3-2003					
Rating Data Type	TQ		Color					
Rating Unit	1-9		1-9					
Number of Subsamples	1		1					
Assessed By	JB		JB					
Days After Last Applic.	59		3					
Trt-Eval Interval	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							
2	Equipment Check						A	Specialty Application
3	XRM-5048	6.8	EC	5	gal/a	COVER	A	Speciality Application
4	Nemacur	10	G	100	lb/a	COVER	A	Drop Spreader
LSD (P=.05)								
Standard Deviation								
CV								

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	8-8-2003	
									Color	Color	Color	
									1-9	1-9	1-9	
									1	1	1	
									FCW	JB	Darin	
									11	31	39	
									11 DA-A	31 DA-A	39 DA-A	
Trt	Treatment	Form	Form	Other	Other	Growth	Appl	Appl				
No.	Name	Conc	Type	Rate	Rate	Unit	Stage	Code	Description			
1	Untreated Check									7.7 a	7.0 a	7.0 a
2	Equipment Check							A	Specialty Application	7.5 a	7.0 a	6.8 a
3	XRM-5048	6.8	EC	5	gal/a		COVER	A	Speciality Application	7.5 a	7.0 a	6.7 a
4	Nemacur	10	G	100	lb/a		COVER	A	Drop Spreader	7.7 a	7.0 a	7.0 a
LSD (P=.05)										0.22	0.00	0.58
Standard Deviation										0.16	0.00	0.42
CV										2.08	0.0	6.08

									AGSST	AGSST		
									Pencross	Pencross		
									8-28-2003	7-31-2003		
									Color	ColorMeter		
									1-9	1-9		
									1	10		
									JB	JB		
									59	31		
									59 DA-A	31 DA-A		
Trt	Treatment	Form	Form	Other	Other	Growth	Appl	Appl				
No.	Name	Conc	Type	Rate	Rate	Unit	Stage	Code	Description			
1	Untreated Check									8.0 a	7.1 a	
2	Equipment Check							A	Specialty Application	8.0 a	7.2 a	
3	XRM-5048	6.8	EC	5	gal/a		COVER	A	Speciality Application	8.0 a	7.2 a	
4	Nemacur	10	G	100	lb/a		COVER	A	Drop Spreader	8.0 a	7.1 a	
LSD (P=.05)										0.00	0.21	
Standard Deviation										0.00	0.15	
CV										0.0	2.08	

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

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Crop Code									Pencross	Pencross
Crop Variety									8-28-2003	7-3-2003
Rating Date									ColorMeter	Injury
Rating Data Type									1-9	%
Rating Unit									10	1
Number of Subsamples									JB	JB
Assessed By									59	3
Days After Last Applic.									59 DA-A	3 DA-A
Trt-Eval Interval										
Trt No.	Treatment Name	Form Conc	Form Type	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description		
1	Untreated Check								8.4 a	0 a
2	Equipment Check						A	Specialty Application	8.1 ab	0 a
3	XRM-5048	6.8	EC	5	gal/a	COVER	A	Speciality Application	8.0 b	0 a
4	Nemacur	10	G	100	lb/a	COVER	A	Drop Spreader	8.3 ab	0 a
LSD (P=.05)									0.29	0.0
Standard Deviation									0.21	0.0
CV									2.58	0.0

University of GA Coop Ext Service									AGSST	AGSST	AGSST
Crop Code									Pencross	Pencross	Pencross
Crop Variety									7-11-2003	7-31-2003	8-28-2003
Rating Date									Heal	Heal	Heal
Rating Data Type									1-9	1-9	1-9
Rating Unit									1	1	1
Number of Subsamples									FCW	JB	JB
Assessed By									11	31	59
Days After Last Applic.									11 DA-A	31 DA-A	59 DA-A
Trt-Eval Interval											
Trt No.	Treatment Name	Form Conc	Form Type	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description			
1	Untreated Check								9.0 a	9.0 a	9.0 a
2	Equipment Check						A	Specialty Application	8.2 b	9.0 a	9.0 a
3	XRM-5048	6.8	EC	5	gal/a	COVER	A	Speciality Application	8.0 b	9.0 a	9.0 a
4	Nemacur	10	G	100	lb/a	COVER	A	Drop Spreader	9.0 a	9.0 a	9.0 a
LSD (P=.05)									0.31	0.00	0.00
Standard Deviation									0.22	0.00	0.00
CV									2.62	0.0	0.0

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

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Crop Code									AGSST	AGSST	
Crop Variety									Pencross	Pencross	
Rating Date									8-8-2003	6-30-2003	
Rating Data Type									Density	Firm (B)	
Rating Unit									%	1-10	
Number of Subsamples									1	2	
Assessed By									Darin	Darin	
Days After Last Applic.									39	0	
Trt-Eval Interval									39 DA-A	0 DA-A	
Trt No.	Treatment Name	Form Conc	Form Type	Other Rate	Other Rate	Unit	Growth Stage	Appl Code	Appl Description		
1	Untreated Check									99 a	5.60 a
2	Equipment Check							A	Specialty Application	97 a	5.38 a
3	XRM-5048	6.8	EC	5	gal/a		COVER	A	Speciality Application	96 a	5.53 a
4	Nemacur	10	G	100	lb/a		COVER	A	Drop Spreader	98 a	5.58 a
LSD (P=.05)										2.7	0.494
Standard Deviation										1.9	0.358
CV										2.0	6.49

Crop Code									AGSST	AGSST	
Crop Variety									Pencross	Pencross	
Rating Date									6-30-2003	6-23-2003	
Rating Data Type									Firm (A)	Ring	
Rating Unit									1-10	Count	
Number of Subsamples									2	1	
Assessed By									Darin	Lab	
Days After Last Applic.									0	-7	
Trt-Eval Interval									0 DA-A	-7 DA-A	
Trt No.	Treatment Name	Form Conc	Form Type	Other Rate	Other Rate	Unit	Growth Stage	Appl Code	Appl Description		
1	Untreated Check									5.38 a	363 a
2	Equipment Check							A	Specialty Application	1.53 b	551 a
3	XRM-5048	6.8	EC	5	gal/a		COVER	A	Speciality Application	1.98 b	434 a
4	Nemacur	10	G	100	lb/a		COVER	A	Drop Spreader	5.33 a	406 a
LSD (P=.05)										0.523	203.5
Standard Deviation										0.379	146.2
CV										10.68	33.33

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

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University of GA Coop Ext Service									AGSST	AGSST	AGSST
									BGRM	BGRM	BGRM
									Pencross	Pencross	Pencross
									7-14-2003	6-23-2003	7-14-2003
									Ring	Stunt	Stunt
									Count	Count	Count
									1	1	1
									Lab	Lab	Lab
									14	-7	14
									14 DA-A	-7 DA-A	14 DA-A
									0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description			
1	Untreated Check								208 a	393 a	262 a
2	Equipment Check						A	Specialty Application	170 a	513 a	170 b
3	XRM-5048	6.8	EC	5	gal/a	COVER	A	Speciality Application	114 a	393 a	174 b
4	Nemacur	10	G	100	lb/a	COVER	A	Drop Spreader	190 a	438 a	147 b
LSD (P=.05)									136.7	284.4	85.4
Standard Deviation									99.2	204.3	61.9
CV									58.19	47.08	32.9

									AGSST	AGSST
									BGRM	BGRM
									Pencross	Pencross
									6-23-2003	7-14-2003
									Total	Total
									Count	Count
									1	1
									Lab	Lab
									-7	14
									-7 DA-A	14 DA-A
									0	0
Trt No.	Treatment Name	Form Conc	Form Type	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description		
1	Untreated Check								760 a	472 a
2	Equipment Check						A	Specialty Application	842 a	344 a
3	XRM-5048	6.8	EC	5	gal/a	COVER	A	Speciality Application	826 a	293 a
4	Nemacur	10	G	100	lb/a	COVER	A	Drop Spreader	843 a	338 a
LSD (P=.05)									523.0	202.9
Standard Deviation									379.5	147.2
CV									46.4	40.73

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