

# University of GA Coop Ext Service

## Determining Nitrogen Threshold Levels for PolyGraph on Golf Course Fairway Turfgrasses: Zoysiagrass

Trial ID: Zoysia1  
Location: Griffin

Study Director: Jonathan Bohn  
Investigator: Clint Waltz

### General Trial Information

Study Director: Jonathan Bohn  
Affiliation: UGA CAES

Title: Technician

Investigator: Clint Waltz  
Affiliation: UGA CAES

Title: Asst. Professor

### Trial Location

City: Griffin  
State/Prov. : GA

Trial Status: ARCHIVED

### Crop Description

Crop 1: ZOYJA *Zoysia japonica*

Zoysiagrass

### Site and Design

Plot Width, Unit: 6 FT

Plot Length, Unit: 6 FT

Replications: 4

Study Design: Randomized Complete Block

### Application Description

	A
Application Date:	7-15-2003
Time of Day:	5:00 pm
Application Method:	Shaker Jar
Application Timing:	Post
Application Placement:	Surface
Applied By:	JB
Air Temperature, Unit:	93.9 F
% Relative Humidity:	52.1
Wind Velocity, Unit:	0 mph
Dew Presence (Y/N):	N
Water Hardness:	-
Soil Temperature, Unit:	85.2 F
Soil Moisture:	Good
% Cloud Cover:	30

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#### Determining Nitrogen Threshold Levels for PolyGraph on Golf Course Fairway Turfgrasses: Zoysiagrass

Trial ID: Zoysial

Study Director: Jonathan Bohn

Location: Griffin

Investigator: Clint Waltz

							ZOYJA	ZOYJA	ZOYJA		
							Zoysia	Zoysia	Zoysia		
							7-24-2003	8-1-2003	8-8-2003		
							COLOR	COLOR	COLOR		
							1-9	1-9	1-9		
							JB	JB	JB		
							9	17	24		
							9 DA-A	17 DA-A	24 DA-A		
Trt No.	Treatment Name	Form Conc	Form Type	Description	Other Rate	Other Rate Unit	Appl Code				
1	Untreated Check			not treated				5.8 d	6.1 c	6.1 c	
2	Ammonium nitrate 33-0-0	33.5	GR		1.5	lb ai/1000 ft2	A	7.9 a	7.9 a	6.9 ab	
3	Polygon 43 Regular	43	GR		1.5	lb ai/1000 ft2	A	6.1 c	6.8 b	7.0 ab	
4	Polygon 43 Mini	43	GR		2.0	lb ai/1000 ft2	A	6.5 b	7.5 a	7.1 a	
5	Polygon 41 Regular	41	GR		1.5	lb ai/1000 ft2	A	6.1 c	6.3 bc	6.1 c	
6	Polygon 41 Mini	41	GR		2.0	lb ai/1000 ft2	A	6.0 cd	6.5 bc	6.8 b	
7	Calcium Nitrate	16	GR		1.5	lb ai/1000 ft2	A	8.0 a	7.8 a	6.9 ab	
8	Ammonium Sulfate	21	GR		1.5	lb ai/1000 ft2	A	7.8 a	7.9 a	7.0 ab	
LSD (P=.05)									0.30	0.56	0.29
Standard Deviation									0.20	0.38	0.19
CV									2.98	5.37	2.88

							ZOYJA	ZOYJA	ZOYJA		
							Zoysia	Zoysia	Zoysia		
							8-15-2003	8-22-2003	8-29-2003		
							COLOR	COLOR	COLOR		
							1-9	1-9	1-9		
							JB	JB	JB		
							31	38	45		
							31 DA-A	38 DA-A	45 DA-A		
Trt No.	Treatment Name	Form Conc	Form Type	Description	Other Rate	Other Rate Unit	Appl Code				
1	Untreated Check			not treated				6.0 c	6.0 c	6.0 d	
2	Ammonium nitrate 33-0-0	33.5	GR		1.5	lb ai/1000 ft2	A	6.8 ab	6.4 bc	7.0 c	
3	Polygon 43 Regular	43	GR		1.5	lb ai/1000 ft2	A	7.1 a	7.1 ab	7.4 abc	
4	Polygon 43 Mini	43	GR		2.0	lb ai/1000 ft2	A	7.3 a	7.1 ab	7.6 ab	
5	Polygon 41 Regular	41	GR		1.5	lb ai/1000 ft2	A	6.4 bc	6.5 bc	7.1 bc	
6	Polygon 41 Mini	41	GR		2.0	lb ai/1000 ft2	A	7.1 a	7.6 a	7.9 a	
7	Calcium Nitrate	16	GR		1.5	lb ai/1000 ft2	A	7.0 a	6.5 bc	7.3 bc	
8	Ammonium Sulfate	21	GR		1.5	lb ai/1000 ft2	A	7.0 a	6.4 bc	7.5 abc	
LSD (P=.05)									0.51	0.90	0.55
Standard Deviation									0.34	0.61	0.38
CV									5.03	9.09	5.21

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

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Crop Code							ZOYJA	ZOYJA	ZOYJA		
Description							Zoysia	Zoysia	Zoysia		
Rating Date							9-12-2003	9-30-2003	10-22-2003		
Rating Data Type							COLOR	COLOR	COLOR		
Rating Unit							1-9	1-9	1-9		
Rated By							JB	FCW	JB		
Days After Last Applic.							59	77	99		
Trt-Eval Interval							59 DA-A	77 DA-A	100 DA-A		
Trt No.	Treatment Name	Form Conc	Form Type	Description	Other Rate	Other Rate Unit	Appl Code				
1	Untreated Check			not treated				6.1 ab	6.4 b	5.6 c	
2	Ammonium nitrate 33-0-0	33.5	GR		1.5	lb ai/1000 ft2	A	6.0 b	7.1 ab	6.8 a	
3	Polygon 43 Regular	43	GR		1.5	lb ai/1000 ft2	A	6.3 ab	7.1 ab	6.3 abc	
4	Polygon 43 Mini	43	GR		2.0	lb ai/1000 ft2	A	6.1 ab	7.3 ab	6.8 a	
5	Polygon 41 Regular	41	GR		1.5	lb ai/1000 ft2	A	6.5 a	7.3 ab	6.5 ab	
6	Polygon 41 Mini	41	GR		2.0	lb ai/1000 ft2	A	6.5 a	7.5 a	6.8 a	
7	Calcium Nitrate	16	GR		1.5	lb ai/1000 ft2	A	6.0 b	7.0 ab	6.0 bc	
8	Ammonium Sulfate	21	GR		1.5	lb ai/1000 ft2	A	6.1 ab	7.1 ab	6.3 abc	
LSD (P=.05)									0.38	0.83	0.66
Standard Deviation									0.26	0.57	0.45
CV									4.18	7.97	7.05

Crop Code							ZOYJA	ZOYJA	ZOYJA		
Description							Zoysia	Zoysia	Zoysia		
Rating Date							7-25-2003	8-1-2003	8-8-2003		
Rating Data Type							COLOR	COLOR	COLOR		
Rating Unit							1-9	1-9	1-9		
Rated By							Color Meter	Color Meter	Color Meter		
Days After Last Applic.							10	17	24		
Trt-Eval Interval							10 DA-A	17 DA-A	24 DA-A		
Trt No.	Treatment Name	Form Conc	Form Type	Description	Other Rate	Other Rate Unit	Appl Code				
1	Untreated Check			not treated				6.7 c	7.0 bc	7.2 a	
2	Ammonium nitrate 33-0-0	33.5	GR		1.5	lb ai/1000 ft2	A	7.8 a	7.8 a	7.6 a	
3	Polygon 43 Regular	43	GR		1.5	lb ai/1000 ft2	A	6.6 c	7.2 abc	7.4 a	
4	Polygon 43 Mini	43	GR		2.0	lb ai/1000 ft2	A	7.1 bc	7.8 a	7.5 a	
5	Polygon 41 Regular	41	GR		1.5	lb ai/1000 ft2	A	6.4 c	6.9 c	6.9 a	
6	Polygon 41 Mini	41	GR		2.0	lb ai/1000 ft2	A	6.5 c	7.2 abc	7.0 a	
7	Calcium Nitrate	16	GR		1.5	lb ai/1000 ft2	A	7.5 ab	7.7 ab	7.4 a	
8	Ammonium Sulfate	21	GR		1.5	lb ai/1000 ft2	A	7.6 ab	7.4 abc	7.5 a	
LSD (P=.05)									0.67	0.69	0.61
Standard Deviation									0.45	0.47	0.41
CV									6.46	6.37	5.65

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

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							ZOYJA	ZOYJA	ZOYJA		
							Zoysia	Zoysia	Zoysia		
							8-15-2003	8-22-2003	8-29-2003		
							COLOR	COLOR	COLOR		
							1-9	1-9	1-9		
							Color	Color	Color		
							Meter	Meter	Meter		
							31	38	45		
Trt-Eval Interval							31 DA-A	38 DA-A	45 DA-A		
Trt No.	Treatment Name	Form Conc	Form Type	Description	Other Rate	Other Rate Unit	Appl Code				
1	Untreated Check			not treated				7.3 bc	7.5 ab	7.8 ab	
2	Ammonium nitrate 33-0-0	33.5	GR		1.5	lb ai/1000 ft2	A	7.8 ab	7.8 ab	8.2 a	
3	Polygon 43 Regular	43	GR		1.5	lb ai/1000 ft2	A	7.7 abc	7.8 ab	7.8 ab	
4	Polygon 43 Mini	43	GR		2.0	lb ai/1000 ft2	A	7.9 a	8.2 a	7.9 ab	
5	Polygon 41 Regular	41	GR		1.5	lb ai/1000 ft2	A	7.2 c	7.5 b	7.5 b	
6	Polygon 41 Mini	41	GR		2.0	lb ai/1000 ft2	A	7.5 abc	7.9 ab	7.7 ab	
7	Calcium Nitrate	16	GR		1.5	lb ai/1000 ft2	A	7.8 ab	8.0 ab	7.8 ab	
8	Ammonium Sulfate	21	GR		1.5	lb ai/1000 ft2	A	7.7 abc	7.9 ab	7.8 ab	
LSD (P=.05)									0.48	0.63	0.52
Standard Deviation									0.33	0.43	0.35
CV									4.32	5.44	4.48

							ZOYJA	ZOYJA	ZOYJA		
							Zoysia	Zoysia	Zoysia		
							9-12-2003	9-17-2003	10-22-2003		
							COLOR	COLOR	COLOR		
							1-9	1-9	1-9		
							59	64	99		
							Color	Color	Color		
							Meter	Meter	Meter		
Trt-Eval Interval							59 DA-A	64 DA-A	99 DA-A		
Trt No.	Treatment Name	Form Conc	Form Type	Description	Other Rate	Other Rate Unit	Appl Code				
1	Untreated Check			not treated				7.4 ab	7.4 a	6.4 c	
2	Ammonium nitrate 33-0-0	33.5	GR		1.5	lb ai/1000 ft2	A	7.5 ab	7.6 a	7.1 ab	
3	Polygon 43 Regular	43	GR		1.5	lb ai/1000 ft2	A	7.6 ab	7.5 a	7.0 abc	
4	Polygon 43 Mini	43	GR		2.0	lb ai/1000 ft2	A	7.9 a	7.6 a	7.4 a	
5	Polygon 41 Regular	41	GR		1.5	lb ai/1000 ft2	A	7.4 ab	7.6 a	6.7 bc	
6	Polygon 41 Mini	41	GR		2.0	lb ai/1000 ft2	A	7.6 ab	7.7 a	7.2 ab	
7	Calcium Nitrate	16	GR		1.5	lb ai/1000 ft2	A	7.4 b	7.4 a	7.1 ab	
8	Ammonium Sulfate	21	GR		1.5	lb ai/1000 ft2	A	7.6 ab	7.5 a	7.0 abc	
LSD (P=.05)									0.41	0.48	0.55
Standard Deviation									0.28	0.32	0.38
CV									3.71	4.29	5.37

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