

# North Carolina State University

## TOLERANCE OF FAIRWAY HEIGHT BENTGRASS TO CARFENTRAZONE AND SULFENTRAZONE COMBINATIONS

Trial ID: 03-T35  
Location: ELK RIVER C.C.

Study Director: L.S. WARREN  
Investigator: Fred Yelverton

### General Trial Information

**Study Director:** L.S. WARREN **Title:** RESEARCH ASSOCIATE  
**Affiliation:** NORTH CAROLINA STATE UNIVERSITY  
**Postal Code:** 27695 **E-mail:** leon\_warren@ncsu.edu  
**Investigator:** Fred Yelverton **Title:** PROFESSOR  
**Affiliation:** NORTH CAROLINA STATE UNIVERSITY  
**Postal Code:** 27695 **E-mail:** fred\_yelverton@ncsu.edu

### Trial Location

**City:** BANNER ELK **Trial Status:** COMPLETED  
**State/Prov.:** NC  
**Postal Code:** 28604 **Initiation Date:** 6-9-03  
**Country:** USA  
**Directions:**

### Objectives:

TO EVALUATE NEW CARFENTRAZONE AND SULFENTRAZONE FORMULATIONS FOR SAFETY ON FAIRWAY HEIGHT CREEPING BENTGRASS

### Conclusions:

### Cooperator/Landowner

**Cooperator:** JOSH SMITH **Country:** USA  
**Organization:** ELK RIVER CLUB **Phone No:** 828/898-9779  
**Address 1:** P.O. BOX 1238  
**City:** BANNER ELK  
**State/Prov:** NC  
**Postal Code:** 28604

### Crop Description

**Crop 1:** AGSST Agrostis stolonifera Bent, creeping  
**BBCH Scale:** BGRM

### Site and Design

**Plot Width, Unit:** 5 FT **Site Type:** TURF - GOLF COURSE FAIRWAY  
**Plot Length, Unit:** 10 FT **Tillage Type:** NA  
**Replications:** 4 **Study Design:** Randomized Complete Block

### Trial Initiation Comments:

### Field Prep./Maintenance:

### Soil Description

**% OM:** 0.41 **Texture:** SILT LOAM  
**pH:** 6.6  
**CEC:** 10.3 **Fert. Level:** EXCELLENT

### Moisture Conditions

**Overall Moisture Conditions:** TEST AREA WAS IRRIGATED AS NEEDED

### Application Description

	A
<b>Application Date:</b>	6-9-03
<b>Time of Day:</b>	6:30 PM
<b>Application Method:</b>	SPRAY
<b>Application Timing:</b>	POST
<b>Application Placement:</b>	BROFOL
<b>Applied By:</b>	L.S. WARREN
<b>Air Temperature, Unit:</b>	69 F
<b>% Relative Humidity:</b>	50
<b>Wind Velocity, Unit:</b>	3.2 MPH
<b>Dew Presence (Y/N):</b>	N
<b>Soil Temperature, Unit:</b>	75 F
<b>Soil Moisture:</b>	WET
<b>% Cloud Cover:</b>	5

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### Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	AGSST BGRM
Stage Scale Used:	DESC
Stage Majority, Percent:	MOWED 100
Height, Unit:	0.5 IN

### Application Equipment

	A
Appl. Equipment:	BACSPR
Operating Pressure:	35
Pressure Unit:	PSI
Nozzle Type:	FLAT FAN
Nozzle Size:	XR8002 VS
Nozzle Spacing, Unit:	10 IN
Band Width, Unit:	40 IN
Boom Length, Unit:	40 IN
Boom Height, Unit:	10 IN
Ground Speed, Unit:	3 MPH
Carrier:	WATER
Spray Volume:	32.5
Volume Unit:	GPA
Propellant:	COMCO2
Tank Mix (Y/N):	N

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								AGSST	AGSST	AGSST			
								BGRM	BGRM	BGRM			
								6-12-03	6-16-03	6-24-03			
								PHYTO	PHYTO	PHYTO			
								PERCENT	PERCENT	PERCENT			
								L.S. WARREN	L.S. WARREN	L.S. WARREN			
								3	7	15			
								3 DA-A	7 DA-A	15 DA-A			
								P	P	P			
Trt	Treatment	Form	Form	Rate	Other	Growth	Appl						
No.	Name	Conc	Type	Rate	Rate	Stage	Code						
1	EH 1381	L		3.0	pt/a	JUN 9	A	0.0	c	2.5	bcd	0.0	a
2	EH 1381	L		5.0	pt/a	JUN 9	A	5.0	a	8.8	a	0.0	a
3	EH 1382	L		4.0	pt/a	JUN 9	A	0.0	c	2.5	bcd	0.0	a
4	EH 1382	L		6.0	pt/a	JUN 9	A	0.0	c	1.3	cd	0.0	a
5	EH 1349	L		5.0	pt/a	JUN 9	A	0.0	c	5.0	abc	0.0	a
6	EH 1349	L		6.0	pt/a	JUN 9	A	1.3	bc	2.5	bcd	0.0	a
7	EH 1406	L		3.25	pt/a	JUN 9	A	1.3	bc	2.5	bcd	0.0	a
8	EH 1406	L		4.0	pt/a	JUN 9	A	0.0	c	6.3	ab	0.0	a
9	EH 1408	L		4.0	pt/a	JUN 9	A	2.5	b	2.5	bcd	0.0	a
10	EH 1409	L		4.75	pt/a	JUN 9	A	1.3	bc	1.3	cd	0.0	a
11	TRIMEC CLASSIC	3.32	SL	1.8	pt/a	JUN 9	A	0.0	c	0.0	d	0.0	a
12	TRIMEC BENTGRASS	2.1	SL	4.0	pt/a	JUN 9	A	0.0	c	2.5	bcd	0.0	a
13	CHECK							0.0	c	0.0	d	0.0	a
LSD (P=.05)								2.13		4.50		0.00	
Standard Deviation								1.49		3.15		0.00	
CV								172.05		109.27		0.0	
Grand Mean								0.87		2.88		0.0	
Bartlett's X2								0.094		4.588		0.0	
P(Bartlett's X2)								0.992		0.917		.	
Replicate F								0.217		0.581		0.000	
Replicate Prob(F)								0.8841		0.6315		1.0000	
Treatment F								3.940		2.452		0.000	
Treatment Prob(F)								0.0007		0.0188		1.0000	

Means followed by same letter do not significantly differ (P=.05, LSD)  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

### Trial Comments

06-10-03: AGSST INJURY SYMPTOMS WERE NOT OBSERVED  
DIGITAL IMAGES TAKEN OF ALL PLOTS

06-12-03 AND 06-16-03: AGSST PHYTO CONSISTED OF VERY SLIGHT YELLOWING AND WAS NOT CONSIDERED OBJECTIONABLE  
DIGITAL IMAGES TAKEN OF ALL PLOTS

06-24-03: AGSST INJURY SYMPTOMS WERE NOT OBSERVED AT THIS TIME  
DIGITAL IMAGES TAKEN OF ALL PLOTS