

North Carolina State University

TOLERANCE OF SEEDLING PRINCESS BERMUDAGRASS TO VARIOUS POSTEMERGENCE HERBICIDES

Trial ID: 03-T40
Location: SANDHILLS STATION

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: JACKSON SPRINGS **Trial Status:** COMPLETED
State/Prov.: NC **Initiation Date:** 8-1-03
Country: USA
Directions:

Objectives:

TO EVALUATE VARIOUS POSTEMERGENCE HERBICIDES FOR TOLERANCE TO SEEDLING PRINCESS BERMUDAGRASS

Conclusions:

Cooperator/Landowner

Cooperator: MARK THOMPSON **Country:** USA
Organization: SANDHILLS RESEARCH STATION **Phone No:** 910/974-4673
City: JACKSON SPRINGS
State/Prov: NC

Crop Description

Crop 1: CYNDA Cynodon dactylon Bermuda grass
Variety: PRINCESS
BBCH Scale: BGRM
Planting Method: SEEDED

Site and Design

Plot Width, Unit: 3.33 FT **Site Type:** TURF - RESEARCH
Plot Length, Unit: 6 FT **Tillage Type:** NA
Replications: 4 **Study Design:** Randomized Complete Block

Trial Initiation Comments:

Field Prep./Maintenance:

Soil Description

Fert. Level: EXCELLENT

Moisture Conditions

Overall Moisture Conditions: TEST AREA WAS IRRIGATED AS NEEDED

Application Description

	A	B
Application Date:	8-1-03	8-7-03
Time of Day:	3:45 PM	11:45 AM
Application Method:	SPRAY	SPRAY
Application Timing:	EARLYPOST	6 DAYS
Application Placement:	BROFOL	BROFOL
Applied By:	L.S. WARREN	L.S. WARREN
Air Temperature, Unit:	89 F	82 F
% Relative Humidity:	61	76
Wind Velocity, Unit:	3.8 MPH	2.7 MPH
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	89 F	80 F
Soil Moisture:	MOIST	MOIST
% Cloud Cover:	80	85

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Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	CYNDA BGRM	CYNDA BGRM
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	3"STOLON 75	MOWED 100
Height, Unit:	0.5 IN	0.75 IN

Application Equipment

	A	B
Appl. Equipment:	BACSPR	BACSPR
Operating Pressure:	35	35
Pressure Unit:	PSI	PSI
Nozzle Type:	FLAT FAN	FLAT FAN
Nozzle Size:	XR 8002VS	XR 8002VS
Nozzle Spacing, Unit:	10 IN	10 IN
Band Width, Unit:	40 IN	40 IN
Boom Length, Unit:	40 IN	40 IN
Boom Height, Unit:	10 IN	10 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume:	32.5	32.5
Volume Unit:	GPA	GPA
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y	Y

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Crop Code							CYNDA	CYNDA	CYNDA	CYNDA		
BBCH Scale							BGRM	BGRM	BGRM	BGRM		
Rating Date							8-7-03	8-15-03	8-19-03	9-3-03		
Rating Data Type							INJURY	COVERAGE	COVERAGE	COVERAGE		
Rating Unit							PERCENT	PERCENT	PERCENT	PERCENT		
Assessed By							L.S. WARREN	L.S. WARREN	L.S. WARREN	L.S. WARREN		
Days After Last Applic.							0	8	12	27		
Trt-Eval Interval							6 DA-A	8 DA-B	12 DA-B	27 DA-B		
ARM Action Codes							P	P	P	P		
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Other Rate Unit	Growth Stage	Appl Code				
1	AATREX	4.0	L	1.0	lb ai/a		AUG 1 A	A	62.5 a	18.8 d	31.3 c	80.0 b
2	BUENO 6	6.0	L	1.0	lb ai/a		AUG 1 A	A	1.3 g	90.8 ab	96.5 a	98.0 a
	BUENO 6	6.0	L	1.0	lb ai/a		AUG 7 B	B				
3	BUENO 6	6.0	L	1.5	lb ai/a		AUG 1 A	A	5.0 fg	72.0 abc	84.5 ab	97.3 a
	BUENO 6	6.0	L	1.5	lb ai/a		AUG 7 B	B				
4	BUENO 6	6.0	L	2.0	lb ai/a		AUG 1 A	A	2.5 g	86.3 ab	96.0 a	98.0 a
	BUENO 6	6.0	L	2.0	lb ai/a		AUG 7 B	B				
5	CONFRONT	3.0	SL	1.0	pt/a		AUG 1 A	A	21.3 cd	61.3 bc	74.5 ab	97.3 a
6	CONFRONT	3.0	SL	2.0	pt/a		AUG 1 A	A	41.3 b	50.0 cd	60.0 b	94.5 a
7	DRIVE	75	DF	0.75	lb ai/a		AUG 1 A	A	7.5 efg	92.5 ab	96.5 a	98.0 a
	DYNE-AMIC		L	1.5	pt/a		AUG 1 A	A				
8	MILLENNIUM ULTRA	3.75	L	1.25	pt/a		AUG 1 A	A	8.8 d-g	67.5 abc	87.0 ab	98.0 a
9	MILLENNIUM ULTRA	3.75	L	2.5	pt/a		AUG 1 A	A	17.5 def	75.8 abc	85.8 ab	96.5 a
10	MONUMENT	75	WG	0.47	oz wt/a		AUG 1 A	A	1.3 g	81.3 abc	92.0 a	97.3 a
	X-77 SPREADER		L	0.25	% v/v		AUG 1 A	A				
11	REVOLVER	0.19	L	17.42	fl oz/a		AUG 1 A	A	2.5 g	96.5 a	98.0 a	98.0 a
12	TRIMEC CLASSIC	2.72	L	1.75	pt/a		AUG 1 A	A	20.0 cde	82.5 abc	90.8 a	98.0 a
13	TRIMEC CLASSIC	2.72	L	3.5	pt/a		AUG 1 A	A	31.3 bc	68.8 abc	74.5 ab	96.0 a
14	CHECK								0.0 g	92.8 ab	97.3 a	98.0 a
LSD (P=.05)							12.99	33.81	28.09	6.83		
Standard Deviation							9.09	23.66	19.66	4.78		
CV							57.19	31.95	23.63	4.97		
Grand Mean							15.89	74.04	83.18	96.05		
Bartlett's X2							31.347	35.55	52.497	35.309		
P(Bartlett's X2)							0.001*	0.001*	0.001*	0.001*		
Replicate F							1.881	0.094	0.002	1.025		
Replicate Prob(F)							0.1488	0.9628	0.9999	0.3920		
Treatment F							16.314	3.092	3.567	3.925		
Treatment Prob(F)							0.0001	0.0032	0.0010	0.0004		

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.

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Crop Code								CYNDA	
BBCH Scale								BGRM	
Rating Date								9-15-03	
Rating Data Type								COVERAGE	
Rating Unit								PERCENT	
Assessed By								L.S. WARREN	
Days After Last Applic.								39	
Trt-Eval Interval								39 DA-B	
ARM Action Codes								P	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate Unit	Growth Stage	Appl Code	
1	AATREX	4.0	L	1.0	lb ai/a		AUG 1	A	86.3 b
2	BUENO 6	6.0	L	1.0	lb ai/a		AUG 1	A	98.8 a
	BUENO 6	6.0	L	1.0	lb ai/a		AUG 7	B	
3	BUENO 6	6.0	L	1.5	lb ai/a		AUG 1	A	98.8 a
	BUENO 6	6.0	L	1.5	lb ai/a		AUG 7	B	
4	BUENO 6	6.0	L	2.0	lb ai/a		AUG 1	A	98.0 a
	BUENO 6	6.0	L	2.0	lb ai/a		AUG 7	B	
5	CONFRONT	3.0	SL	1.0	pt/a		AUG 1	A	98.8 a
6	CONFRONT	3.0	SL	2.0	pt/a		AUG 1	A	97.0 a
7	DRIVE	75	DF	0.75	lb ai/a		AUG 1	A	99.0 a
	DYNE-AMIC		L	1.5	pt/a		AUG 1	A	
8	MILLENNIUM ULTRA	3.75	L	1.25	pt/a		AUG 1	A	98.0 a
9	MILLENNIUM ULTRA	3.75	L	2.5	pt/a		AUG 1	A	98.0 a
10	MONUMENT	75	WG	0.47	oz wt/a		AUG 1	A	99.0 a
	X-77 SPREADER		L	0.25	% v/v		AUG 1	A	
11	REVOLVER	0.19	L	17.42	fl oz/a		AUG 1	A	99.0 a
12	TRIMEC CLASSIC	2.72	L	1.75	pt/a		AUG 1	A	99.0 a
13	TRIMEC CLASSIC	2.72	L	3.5	pt/a		AUG 1	A	96.8 a
14	CHECK								99.0 a
LSD (P=.05)								4.79	
Standard Deviation								3.35	
CV								3.43	
Grand Mean								97.52	
Bartlett's X2								47.698	
P(Bartlett's X2)								0.001*	
Replicate F								1.144	
Replicate Prob(F)								0.3434	
Treatment F								3.953	
Treatment Prob(F)								0.0004	

Means followed by same letter do not significantly differ (P=.05, LSD)
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Trial Comments