

North Carolina State University

BARRICADE 4F COMPATABILITY WITH STANDARD BROADLEAF HERBICIDES FOR GOOSEGRASS CONTROL IN COMMON BERMUDAGRASS

Trial ID: 03-T10
Location: THORNDALE C.C.

Study Dir.: L.S. WARREN
Investigator: Leon Warren

GENERAL TRIAL INFORMATION

Study Director: L.S. WARREN	Title: RESEARCH ASSOCIATE
Affiliation: NORTH CAROLINA STATE UNIVERSITY	
Postal Code: 27695	
Investigator: Leon Warren	Title: RESEARCH ASSOCIATE
Affiliation: NORTH CAROLINA STATE UNIVERSITY	
Postal Code: 27695	

TRIAL LOCATION

City: OXFORD	Trial Status: COMPLETED	
State/Prov.: NC	Initiation Date: 3-12-03	
Country: USA		

COOPERATOR/LANDOWNER

Cooperator: BRUCE STONE	Country: USA
Org: THORNDALE COUNTRY CLUB	Phone No: 919/693-7404
City: OXFORD	
State/Prov: NC	

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

Objective: EVALUATE COMPATIBILITY OF BARRICADE 4F WITH VARIOUS BROADLEAF TANK-MIXES FOR PRE GOOSEGRASS CONTROL AND COMMON BERMUDAGRASS INJURY

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	ELEIN	GOOSEGRASS	ELEUSINE INDICA

Crop 1: CYNDA BERMUDAGRASS **Variety:** COMMON

SITE AND DESIGN

Plot Width, Unit: 5 FT **Plot Length, Unit:** 10 FT **Reps:** 4
Site Type: TURF - GOLF COURSE FAIRWAY
Tillage Type: NA **Study Design:** RANDOMIZED COMPLETE BLOCK

SOIL DESCRIPTION

% OM: 0.76
pH: 4.7
CEC: 4.2 **Fert. Level:** POOR

MOISTURE CONDITIONS

#	Date	Time	Amount	Unit	Type	Interval	Unit
1.	3-6-03		0.58	IN	RAINFALL	6	DBT
2.	3-14-03		0.26	IN	RAINFALL	2	DAT
3.	3-17-03		0.47	IN	RAINFALL	5	DAT
4.	3-20-03		1.37	IN	RAINFALL	8	DAT
5.	4-9-03		1.80	IN	RAINFALL	28	DAT
6.	4-27-03		0.90	IN	RAINFALL	46	DAT
7.	5-6-03		0.24	IN	RAINFALL	55	DAT
8.	5-11-03		0.64	IN	RAINFALL	60	DAT
9.	5-16-03		0.78	IN	RAINFALL	65	DAT
10.	5-22-03		1.05	IN	RAINFALL	71	DAT

Overall Moisture Conditions: MAR 6.08"; APR 6.25"; MAY 6.95; JUN 5.61"
Closest Weather Station: OXFORD AG, NC **Distance:** 0.5 **Unit:** MI

APPLICATION DESCRIPTION

	A
Application Date:	3-12-03
Time of Day:	1:30 PM
Application Method:	SPRAY
Application Timing:	PRE
Applic. Placement:	BROSOI
Air Temp., Unit:	71 F
% Relative Humidity:	50
Wind Velocity, Unit:	2.0 MPH
Dew Presence (Y/N):	N
Soil Temp., Unit:	57 F
Soil Moisture:	WET
% Cloud Cover:	0

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CROP STAGE AT EACH APPLICATION

A	
Crop 1 Code, Stage:	CYNDA DORMANT
Stage Scale:	NA
Height, Unit:	0.5 IN

WEED STAGE AT EACH APPLICATION

A	
Weed 1 Code, Stage:	ELEIN PRE
Stage Scale:	NA
Density, Unit:	0 FT2

APPLICATION EQUIPMENT

A	
Appl. Equipment:	BACSPR
Operating Pressure:	35 PSI
Nozzle Type:	FLAT FAN
Nozzle Size:	XR 8002VS
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, Unit:	32.5 GPA
Propellant:	COMCO2
Tank Mix (Y/N):	Y

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BARRICADE 4F COMPATABILITY WITH STANDARD BROADLEAF HERBICIDES FOR GOOSEGRASS

CONTROL IN COMMON BERMUDAGRASS

Trial ID: 03-T10
Location: THORNDALE C.C.

Study Dir.: L.S. WARREN
Investigator: Leon Warren

Weed Code										ELEIN	ELEIN	ELEIN	
Rating Data Type										CONTROL	CONTROL	CONTROL	
Rating Unit										PERCENT	PERCENT	PERCENT	
Rating Date										6-9-03	7-1-03	8-5-03	
Assessed By										L.S. WARREN	L.S. WARREN	L.S. WARREN	
Trt-Eval Interval										89 DA-A	111 DA-A	146 DA-A	
ARM Action Codes										P	P	P	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	Spray Volume			
1	BARRICADE	480	F	730	g ai/ha			MAR 12	A		100.0 a	98.0 a	95.8 ab
2	BARRICADE TRIMEC CLASSIC	480 326	F SL	730 1630	g ai/ha g ai/ha			MAR 12 MAR 12	A A		100.0 a	96.8 a	94.5 ab
3	BARRICADE SPEED ZONE	480 264	F EC	730 1240	g ai/ha g ai/ha			MAR 12 MAR 12	A A		100.0 a	96.8 a	97.0 a
4	BARRICADE COOL POWER	480 431	F EC	730 1500	g ai/ha g ai/ha			MAR 12 MAR 12	A A		100.0 a	98.0 a	93.3 ab
5	BARRICADE THREE-WAY ESTER	480 431	F EC	730 1520	g ai/ha g ae/ha			MAR 12 MAR 12	A A		99.8 b	91.0 b	80.0 c
6	BARRICADE HORSEPOWER	480 547	F SL	730 1600	g ai/ha g ai/ha			MAR 12 MAR 12	A A		100.0 a	94.3 ab	90.0 abc
7	BARRICADE TRIMEC CLASSIC X-77 SPREADER	480 326	F SL	730 1630	g ai/ha g ai/ha			MAR 12 MAR 12 MAR 12	A A A		100.0 a	94.5 ab	97.0 a
8	BARRICADE SPEED ZONE X-77 SPREADER	480 264	F EC	730 1230	g ai/ha g ai/ha			MAR 12 MAR 12 MAR 12	A A A		100.0 a	96.8 a	93.8 ab
9	BARRICADE COOL POWER X-77 SPREADER	480 431	F EC	730 1510	g ai/ha g ai/ha			MAR 12 MAR 12 MAR 12	A A A		100.0 a	98.0 a	93.8 ab
10	BARRICADE THREE-WAY ESTER X-77 SPREADER	480 431	F EC	730 1520	g ai/ha g ae/ha			MAR 12 MAR 12 MAR 12	A A A		100.0 a	97.0 a	83.8 bc
11	BARRICADE HORSEPOWER X-77 SPREADER	480 547	F SL	730 1600	g ai/ha g ai/ha			MAR 12 MAR 12 MAR 12	A A A		100.0 a	98.0 a	90.8 abc
12	BARRICADE TRIMEC CLASSIC INDUCE	480 326	F SL	730 1630	g ai/ha g ai/ha			MAR 12 MAR 12 MAR 12	A A A		100.0 a	92.5 ab	86.3 abc
13	BARRICADE SPEED ZONE INDUCE	480 264	F EC	730 1230	g ai/ha g ai/ha			MAR 12 MAR 12 MAR 12	A A A		100.0 a	98.0 a	92.5 abc
14	BARRICADE COOL POWER INDUCE	480 431	F EC	730 1510	g ai/ha g ai/ha			MAR 12 MAR 12 MAR 12	A A A		100.0 a	98.0 a	96.3 ab
15	BARRICADE THREE-WAY ESTER INDUCE	480 431	F EC	730 1520	g ai/ha g ae/ha			MAR 12 MAR 12 MAR 12	A A A		100.0 a	94.5 ab	90.0 abc
16	BARRICADE HORSEPOWER INDUCE	480 547	F SL	730 1600	g ai/ha g ai/ha			MAR 12 MAR 12 MAR 12	A A A		100.0 a	97.0 a	93.8 ab
17	CHECK										0.0 c	0.0 c	0.0 d
LSD (P=.05)											0.17	5.63	13.22
Standard Deviation											0.12	3.94	9.25
CV											0.13	4.35	10.71
Grand Mean											94.1	90.53	86.37
Bartlett's X2											0.0	24.447	22.743
P(Bartlett's X2)											.	0.058	0.09
Replicate F											1.000	3.235	5.225
Replicate Prob(F)											0.4010	0.0302	0.0033
Treatment F											159951.000	141.363	24.195
Treatment Prob(F)											0.0001	0.0001	0.0001

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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CONTROL IN COMMON BERMUDAGRASS

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Study Dir.: L.S. WARREN
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Weed Code										ELEIN	
Rating Data Type										CONTROL	
Rating Unit										PERCENT	
Rating Date										9-2-03	
Assessed By										L.S. WARREN	
Trt-Eval Interval										174 DA-A	
ARM Action Codes										P	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	Spray Volume	
1	BARRICADE	480	F	730	g ai/ha			MAR 12	A		93.5 a
2	BARRICADE	480	F	730	g ai/ha			MAR 12	A		85.8 ab
	TRIMEC CLASSIC	326	SL	1630	g ai/ha			MAR 12	A		
3	BARRICADE	480	F	730	g ai/ha			MAR 12	A		94.8 a
	SPEED ZONE	264	EC	1240	g ai/ha			MAR 12	A		
4	BARRICADE	480	F	730	g ai/ha			MAR 12	A		82.3 ab
	COOL POWER	431	EC	1500	g ai/ha			MAR 12	A		
5	BARRICADE	480	F	730	g ai/ha			MAR 12	A		73.8 b
	THREE-WAY ESTER	431	EC	1520	g ae/ha			MAR 12	A		
6	BARRICADE	480	F	730	g ai/ha			MAR 12	A		86.0 ab
	HORSEPOWER	547	SL	1600	g ai/ha			MAR 12	A		
7	BARRICADE	480	F	730	g ai/ha			MAR 12	A		89.8 ab
	TRIMEC CLASSIC	326	SL	1630	g ai/ha			MAR 12	A		
	X-77 SPREADER		L	0.25	% v/v			MAR 12	A		
8	BARRICADE	480	F	730	g ai/ha			MAR 12	A		78.5 ab
	SPEED ZONE	264	EC	1230	g ai/ha			MAR 12	A		
	X-77 SPREADER		L	0.25	% v/v			MAR 12	A		
9	BARRICADE	480	F	730	g ai/ha			MAR 12	A		81.3 ab
	COOL POWER	431	EC	1510	g ai/ha			MAR 12	A		
	X-77 SPREADER		L	0.25	% v/v			MAR 12	A		
10	BARRICADE	480	F	730	g ai/ha			MAR 12	A		76.3 ab
	THREE-WAY ESTER	431	EC	1520	g ae/ha			MAR 12	A		
	X-77 SPREADER		L	0.25	% v/v			MAR 12	A		
11	BARRICADE	480	F	730	g ai/ha			MAR 12	A		85.8 ab
	HORSEPOWER	547	SL	1600	g ai/ha			MAR 12	A		
	X-77 SPREADER		L	0.25	% v/v			MAR 12	A		
12	BARRICADE	480	F	730	g ai/ha			MAR 12	A		76.3 ab
	TRIMEC CLASSIC	326	SL	1630	g ai/ha			MAR 12	A		
	INDUCE		L	0.25	% v/v			MAR 12	A		
13	BARRICADE	480	F	730	g ai/ha			MAR 12	A		89.8 ab
	SPEED ZONE	264	EC	1230	g ai/ha			MAR 12	A		
	INDUCE		L	0.25	% v/v			MAR 12	A		
14	BARRICADE	480	F	730	g ai/ha			MAR 12	A		91.0 ab
	COOL POWER	431	EC	1510	g ai/ha			MAR 12	A		
	INDUCE		L	0.25	% v/v			MAR 12	A		
15	BARRICADE	480	F	730	g ai/ha			MAR 12	A		89.8 ab
	THREE-WAY ESTER	431	EC	1520	g ae/ha			MAR 12	A		
	INDUCE		L	0.25	% v/v			MAR 12	A		
16	BARRICADE	480	F	730	g ai/ha			MAR 12	A		81.3 ab
	HORSEPOWER	547	SL	1600	g ai/ha			MAR 12	A		
	INDUCE		L	0.25	% v/v			MAR 12	A		
17	CHECK										0.0 c
LSD (P=.05)										18.70	
Standard Deviation										13.08	
CV										16.41	
Grand Mean										79.74	
Bartlett's X2										17.239	
P(Bartlett's X2)										0.305	
Replicate F										1.477	
Replicate Prob(F)										0.2327	
Treatment F										10.785	
Treatment Prob(F)										0.0001	

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

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Trial Comments

04-11-03: ELEIN IN OPEN AREAS BEGINNING TO GERMINATE AND IN THE VERY EARLY 1 LEAF STAGE AT 0.25 INCHES

05-06-03: ELEIN IN NONTREATED OPEN BARE AREAS AT 2 LEAF STAGE AND 0.25 INCHES TALL
ELEIN WAS NOT OBSERVED IN ANY OF THE TREATED PLOTS

POAAN INFESTATION SEVERE WHERE DIGIS COULD NOT BE ACCURATELY EVALUATED AT THIS TIME

06-09-03: ELEIN STILL BASICALLY IN THE 2 TO 3 LEAF STAGE WITH VERY FEW PLANTS LARGER THAN 0.25 INCH OR TILLERING AND
DIFFICULT TO EVALUATE DUE TO HEAVY POAAN INFESTATION THAT LASTED THROUGH THE FIRST OF JUNE (FAIRWAYS WERE
SHAGGY ALL SPRING DUE TO FREQUENT RAINS THROUGHOUT THE ENTIRE WINTER AND SPRING)