

North Carolina State University

POSTEMERGENCE FALSE GREEN KYLLINGA CONTROL IN BERMUDAGRASS WITH MON 44951 75WG

Trial ID: 03-T29
Location: REEDY CREEK 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: SMITHFIELD **Trial Status:** COMPLETED
State/Prov.: NC
Postal Code: 27577 **Initiation Date:** 5-7-03
Country: USA
Directions:

Objectives:

TO COMPARE SINGLE AND SEQUENTIAL APPLICATIONS OF MON 44951 75WG TO OTHER EXPERIMENTALS AND STANDARDS FOR GREEN KYLLINGA CONTROL IN BERMUDAGRASS

Conclusions:

Cooperator/Landowner

Cooperator: BRENT BASS **Country:** USA
Organization: REEDY CREEK COUNTRY CLUB **Phone No:** 919/934-0483
Address 1: 723 SOUTH 2ND STREET
City: SMITHFIELD
State/Prov: NC
Postal Code: 27577

Crop Description

Crop 1: CYNDA Cynodon dactylon Bermuda grass
Variety: TIFWAY 419
BBCH Scale: BGRM

Pest Description

Pest 1 Type: W **Code:** KYLGR KYLLINGA GRACILLIMA
Common Name: FALSE GREEN KYLLINGA

Site and Design

Plot Width, Unit: 5 FT **Site Type:** TURF - RESIDENTIAL
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
pH: 5.8
CEC: 3.1 **Fert. Level:** GOOD

Moisture Conditions

Overall Moisture Conditions: TEST AREA WAS IRRIGATED AS NEEDED

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Application Description

	A	B
Application Date:	5-7-03	7-22-03
Time of Day:	11:15 AM	11:15 AM
Application Method:	SPRAY	SPRAY
Application Timing:	6 LEAF	10 WEEKS
Application Placement:	BROFOL	BROFOL
Applied By:	L.S. WARREN	L.S. WARREN
Air Temperature, Unit:	77 F	86 F
% Relative Humidity:	74	73
Wind Velocity, Unit:	1.7 MPH	4.7 MPH
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	70 F	84 F
Soil Moisture:	WET	MOIST
% Cloud Cover:	85	80

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	CYNDA BGRM	CYNDA BGRM
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	MOWED 100	MOWED 100
Height, Unit:	1.5 IN	1.5 IN

Pest Stage At Each Application

	A	B
Pest 1 Code, Disc., Scale:	KYLGR W DESC	KYLGR W DESC
Stage Majority, Percent:	MOWED 100	MOWED 100
Height, Unit:	2.5 IN	2.5 IN
Height Minimum, Maximum:	2.0 3.0	2.0 3.0
Density, Unit:	10 FT2	10 FT2

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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Pest Type										W Weed	W Weed	W Weed	
Pest Code										KYLGR	KYLGR	KYLGR	
Rating Date										5-27-03	6-20-03	7-7-03	
Rating Data Type										CONTROL	CONTROL	CONTROL	
Rating Unit										PERCENT	PERCENT	PERCENT	
Assessed By										L.S. WARREN	L.S. WARREN	L.S. WARREN	
Trt-Eval Interval										20 DA-A	44 DA-A	61 DA-A	
ARM Action Codes										P	P	P	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Spray Volume			
1	MON 44951 X-77 SPREADER	75 L	WG	0.66 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		62.5 ab	48.8 cd	84.5 ab
2	MON 44951 X-77 SPREADER	75 L	WG	0.75 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		26.3 cd	43.8 d	96.8 a
3	MON 44951 X-77 SPREADER	75 L	WG	1.0 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		57.5 ab	71.3 a-d	94.3 a
4	MON 44951 X-77 SPREADER	75 L	WG	1.33 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		32.5 bc	70.0 a-d	90.8 ab
5	MON 44951 X-77 SPREADER	75 L	WG	1.5 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		33.8 bc	47.5 d	94.5 a
6	MON 44951 X-77 SPREADER	75 L	WG	2.0 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		77.5 a	78.8 abc	96.8 a
7	MON 44951 X-77 SPREADER MON 44951 X-77 SPREADER	75 L 75 L	WG	0.66 0.25 0.66 0.25	oz wt/a % v/v oz wt/a % v/v			MAY 7 MAY 7 JUL 22 JUL 22	A A B B		56.3 abc	55.0 bcd	73.3 b
8	MON 44951 X-77 SPREADER MON 44951 X-77 SPREADER	75 L 75 L	WG	1.33 0.25 1.33 0.25	oz wt/a % v/v oz wt/a % v/v			MAY 7 MAY 7 JUL 22 JUL 22	A A B B		37.5 bc	63.8 a-d	99.0 a
9	TRIFLOXYSULFURON X-77 SPREADER	75 L	WG	0.352 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		68.8 a	86.3 a	96.8 a
10	TRIFLOXYSULFURON X-77 SPREADER TRIFLOXYSULFURON X-77 SPREADER	75 L 75 L	WG	0.352 0.25 0.352 0.25	oz wt/a % v/v oz wt/a % v/v			MAY 7 MAY 7 JUL 22 JUL 22	A A B B		77.5 a	85.0 ab	99.0 a
11	TRIFLOXYSULFURON X-77 SPREADER	75 L	WG	0.587 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		82.5 a	86.3 a	96.8 a
12	TRIFLOXYSULFURON X-77 SPREADER TRIFLOXYSULFURON X-77 SPREADER	75 L 75 L	WG	0.587 0.25 0.587 0.25	oz wt/a % v/v oz wt/a % v/v			MAY 7 MAY 7 JUL 22 JUL 22	A A B B		83.8 a	83.8 ab	98.8 a
13	IMAGE BUENO 6 X-77 SPREADER	70 6.0 L	DG	0.5 2.0 0.25	lb ai/a lb ai/a % v/v			MAY 7 MAY 7 MAY 7	A A A		62.5 ab	71.3 a-d	93.5 ab
14	MANAGE X-77 SPREADER	75 L	WG	1.33 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		70.0 a	82.5 ab	94.3 a
15	MANAGE X-77 SPREADER MANAGE X-77 SPREADER	75 L 75 L	WG	1.33 0.25 1.33 0.25	oz wt/a % v/v oz wt/a % v/v			MAY 7 MAY 7 JUL 22 JUL 22	A A B B		37.5 bc	62.5 a-d	96.8 a
16	CHECK										0.0 d	0.0 e	0.0 c
LSD (P=.05)										30.09	30.69	20.99	
Standard Deviation										21.06	21.47	14.69	
CV										38.9	33.15	16.72	
Grand Mean										54.14	64.77	87.84	
Bartlett's X2										18.593	18.726	67.437	
P(Bartlett's X2)										0.181	0.176	0.001*	
Replicate F										0.574	2.924	0.720	
Replicate Prob(F)										0.6350	0.0440	0.5450	
Treatment F										5.135	4.399	10.966	
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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										W Weed KYLGR 7-22-03 CONTROL PERCENT L.S. WARREN 76 DA-A P	W Weed KYLGR 8-6-03 CONTROL PERCENT L.S. WARREN 15 DA-B P	W Weed KYLGR 8-21-03 CONTROL PERCENT L.S. WARREN 30 DA-B P	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Spray Volume			
1	MON 44951 X-77 SPREADER	75 L	WG	0.66 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		69.8 c	72.0 cd	86.0 abc
2	MON 44951 X-77 SPREADER	75 L	WG	0.75 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		81.3 abc	78.8 a-d	74.8 a-d
3	MON 44951 X-77 SPREADER	75 L	WG	1.0 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		75.0 bc	66.3 d	43.8 d
4	MON 44951 X-77 SPREADER	75 L	WG	1.33 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		78.8 abc	77.5 a-d	63.5 bcd
5	MON 44951 X-77 SPREADER	75 L	WG	1.5 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		85.8 abc	92.0 abc	59.5 cd
6	MON 44951 X-77 SPREADER	75 L	WG	2.0 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		94.5 ab	96.3 abc	98.0 ab
7	MON 44951 X-77 SPREADER MON 44951 X-77 SPREADER	75 L 75 L	WG	0.66 0.25 0.66 0.25	oz wt/a % v/v oz wt/a % v/v			MAY 7 MAY 7 JUL 22 JUL 22	A A B B		72.3 c	80.0 a-d	86.8 abc
8	MON 44951 X-77 SPREADER MON 44951 X-77 SPREADER	75 L 75 L	WG	1.33 0.25 1.33 0.25	oz wt/a % v/v oz wt/a % v/v			MAY 7 MAY 7 JUL 22 JUL 22	A A B B		94.3 ab	100.0 a	99.0 a
9	TRIFLOXYSULFURON X-77 SPREADER	75 L	WG	0.352 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		96.8 ab	97.0 ab	95.5 ab
10	TRIFLOXYSULFURON X-77 SPREADER TRIFLOXYSULFURON X-77 SPREADER	75 L 75 L	WG	0.352 0.25 0.352 0.25	oz wt/a % v/v oz wt/a % v/v			MAY 7 MAY 7 JUL 22 JUL 22	A A B B		97.8 a	100.0 a	99.0 a
11	TRIFLOXYSULFURON X-77 SPREADER	75 L	WG	0.587 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		98.0 a	99.3 ab	98.8 a
12	TRIFLOXYSULFURON X-77 SPREADER TRIFLOXYSULFURON X-77 SPREADER	75 L 75 L	WG	0.587 0.25 0.587 0.25	oz wt/a % v/v oz wt/a % v/v			MAY 7 MAY 7 JUL 22 JUL 22	A A B B		96.8 ab	99.5 ab	99.0 a
13	IMAGE BUENO 6 X-77 SPREADER	70 6.0 L	DG	0.5 2.0 0.25	lb ai/a lb ai/a % v/v			MAY 7 MAY 7 MAY 7	A A A		91.5 abc	77.0 a-d	72.0 a-d
14	MANAGE X-77 SPREADER	75 L	WG	1.33 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		81.3 abc	75.0 bcd	78.8 abc
15	MANAGE X-77 SPREADER MANAGE X-77 SPREADER	75 L 75 L	WG	1.33 0.25 1.33 0.25	oz wt/a % v/v oz wt/a % v/v			MAY 7 MAY 7 JUL 22 JUL 22	A A B B		89.5 abc	100.0 a	99.0 a
16	CHECK										0.0 d	0.0 e	0.0 e
LSD (P=.05)											21.98	24.63	34.90
Standard Deviation											15.38	17.23	24.42
CV											18.89	21.04	31.18
Grand Mean											81.44	81.91	78.33
Bartlett's X2											48.051	53.031	42.097
P(Bartlett's X2)											0.001*	0.001*	0.001*
Replicate F											1.221	2.124	0.787
Replicate Prob(F)											0.3129	0.1105	0.5074
Treatment F											9.505	8.335	4.872
Treatment Prob(F)											0.0001	0.0001	0.0001

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Pest Type										W Weed	W Weed	
Pest Code										KYLGR	KYLGR	
Rating Date										9-4-03	9-17-03	
Rating Data Type										CONTROL	CONTROL	
Rating Unit										PERCENT	PERCENT	
Assessed By										L.S. WARREN	L.S. WARREN	
Trt-Eval Interval										44 DA-B	57 DA-B	
ARM Action Codes										P	P	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Spray Volume		
1	MON 44951 X-77 SPREADER	75 L	WG	0.66 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		90.5 ab	98.8 a
2	MON 44951 X-77 SPREADER	75 L	WG	0.75 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		69.8 c	90.0 ab
3	MON 44951 X-77 SPREADER	75 L	WG	1.0 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		42.3 d	67.5 b
4	MON 44951 X-77 SPREADER	75 L	WG	1.33 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		70.0 c	70.0 b
5	MON 44951 X-77 SPREADER	75 L	WG	1.5 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		77.5 bc	87.0 ab
6	MON 44951 X-77 SPREADER	75 L	WG	2.0 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		96.8 ab	100.0 a
7	MON 44951 X-77 SPREADER MON 44951 X-77 SPREADER	75 L 75 L	WG	0.66 0.25 0.66 0.25	oz wt/a % v/v oz wt/a % v/v			MAY 7 MAY 7 JUL 22 JUL 22	A A B B		99.0 a	98.8 a
8	MON 44951 X-77 SPREADER MON 44951 X-77 SPREADER	75 L 75 L	WG	1.33 0.25 1.33 0.25	oz wt/a % v/v oz wt/a % v/v			MAY 7 MAY 7 JUL 22 JUL 22	A A B B		99.0 a	100.0 a
9	TRIFLOXYSULFURON X-77 SPREADER	75 L	WG	0.352 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		96.0 ab	100.0 a
10	TRIFLOXYSULFURON X-77 SPREADER TRIFLOXYSULFURON X-77 SPREADER	75 L 75 L	WG	0.352 0.25 0.352 0.25	oz wt/a % v/v oz wt/a % v/v			MAY 7 MAY 7 JUL 22 JUL 22	A A B B		99.0 a	100.0 a
11	TRIFLOXYSULFURON X-77 SPREADER	75 L	WG	0.587 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		99.0 a	100.0 a
12	TRIFLOXYSULFURON X-77 SPREADER TRIFLOXYSULFURON X-77 SPREADER	75 L 75 L	WG	0.587 0.25 0.587 0.25	oz wt/a % v/v oz wt/a % v/v			MAY 7 MAY 7 JUL 22 JUL 22	A A B B		99.0 a	100.0 a
13	IMAGE BUENO 6 X-77 SPREADER	70 6.0 L	DG	0.5 2.0 0.25	lb ai/a lb ai/a % v/v			MAY 7 MAY 7 MAY 7	A A A		97.0 ab	97.5 a
14	MANAGE X-77 SPREADER	75 L	WG	1.33 0.25	oz wt/a % v/v			MAY 7 MAY 7	A A		81.0 abc	76.3 ab
15	MANAGE X-77 SPREADER MANAGE X-77 SPREADER	75 L 75 L	WG	1.33 0.25 1.33 0.25	oz wt/a % v/v oz wt/a % v/v			MAY 7 MAY 7 JUL 22 JUL 22	A A B B		99.0 a	100.0 a
16	CHECK										0.0 e	0.0 c
LSD (P=.05)										19.95	25.99	
Standard Deviation										13.96	18.19	
CV										16.99	21.0	
Grand Mean										82.17	86.61	
Bartlett's X2										33.786	35.661	
P(Bartlett's X2)										0.001*	0.001*	
Replicate F										0.600	0.854	
Replicate Prob(F)										0.6183	0.4720	
Treatment F										15.139	8.004	
Treatment Prob(F)										0.0001	0.0001	

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Investigator: Fred Yelverton

Trial Comments

05-27-03: CYNDA WAS MOWED, SCALPED AND DISCOLORED IN SOME AREAS AND WAS IN SATURATED SOIL DUE TO RECENT RAINS
KYLGR WAS IN SAME CONDITION AS CYNDA, THUS MAKING PERCENT CONTROL HARD TO ACCURATELY DETERMINE AT THIS TIME

06-20-03: SOIL WAS COMPLETELY SATURATED
KYLGR WAS BROWNISH-GREEN IN NONTREATED PLOTS AS COMPARED TO A BRIGHT LIGHT GREEN APPEARANCE IN HIGHER
ELEVATION AREAS WHERE SOIL WAS NOT SATURATED

08-21-03: TEST AREA RECENTLY MOWED WITH HEAVY CLIPPINGS THAT HELPED INFLUENCE RATINGS

09-03-03: ALL ANNUAL SEDGE AND KYLGR SPECIES WERE IN FLOWER STAGE THROUGHOUT THE TEST AREA - RATINGS TODAY
WERE TRUE REFLECTION OF KYLGR CONTROL ONLY - ALL RATINGS UP UNTIL TODAY WERE INFLUENCED BY ANNUAL SEDGE
PRESENCE

09-17-03: SAME STATEMENT AS 09-03-03