

North Carolina State University

POSTEMERGENCE DOLLARWEED CONTROL IN COMMON BERMUDAGRASS USING DRY AND LIQUID MONUMENT FORMULATIONS

Trial ID: 04-T24

Study Director: L.S. WARREN

Location: WRIGHTSVILLE PARK&REC

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: WRIGHTSVILLE BEACH **Trial Status:** COMPLETED
State/Prov.: NC
Postal Code: 28480 **Initiation Date:** 4-15-04
Country: USA
Directions:

Objectives:

TO EVALUATE A DRY AND LIQUID FORMULATION OF MONUMENT FOR POSTEMERGENCE DOLLARWEED CONTROL IN COMMON BERMUDAGRASS

Conclusions:

Cooperator/Landowner

Cooperator: BILLY BEASLEY **Country:** USA
Organization: WRIGHTSVILLE BEACH PARKS AND REC **Phone No:** 910/256-7928
Address 1: P.O. BOX 626
City: WRIGHTSVILLE BEACH
State/Prov: NC
Postal Code: 28480

Crop Description

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

Pest Description

Pest 1 Type: W **Code:** HYDSI Hydrocotyle sibthorpioides
Common Name: Lawn pennywort

Site and Design

Plot Width, Unit: 5 FT **Site Type:** ATHLETIC FIELD
Plot Length, Unit: 10 FT **Tillage Type:** NA
Replications: 4 **Study Design:** Randomized Complete Block

Trial Initiation Comments:

Field Prep./Maintenance:

Soil Description

% OM: 0.36 **Texture:** LOAMY SAND
pH: 6.9
CEC: 10.3

Moisture Conditions

Overall Moisture Conditions: TEST AREA IRRIGATED AS NEEDED

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Application Description

	A	B
Application Date:	4-15-04	5-12-04
Time of Day:	1:00 PM	11:30 AM
Application Method:	SPRAY	SPRAY
Application Timing:	POST	LATE POST
Application Placement:	BROFOL	BROFOL
Applied By:	L.S. WARREN	L.S. WARREN
Air Temperature, Unit:	63 F	76 F
% Relative Humidity:	39	86
Wind Velocity, Unit:	6.6 MPH	2.7 MPH
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	63 F	76 F
Soil Moisture:	MOIST	MOIST
% Cloud Cover:	0	40

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	CYNDA BGRM	CYNDA BGRM
Stage Scale Used:	BBCH	BBCH
Height, Unit:	1.5 IN	1.5 IN

Pest Stage At Each Application

	A	B
Pest 1 Code, Disc., Scale:	HYDSI W	HYDSI W
Height, Unit:	1.5 IN	1.5 IN
Coverage, Unit:	40 %	40 %

Application Equipment

	A	B
Appl. Equipment:	BACSPR	BACSPR
Operating Pressure:	28	28
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	W Weed		
Pest Code							HYDSI	HYDSI	HYDSI	HYDSI		
Crop Code												
BBCH Scale												
Crop Name												
Rating Date							4-28-04	5-12-04	5-27-04	6-10-04		
Rating Data Type							PHYTO	PHYTO	CONTROL	CONTROL		
Rating Unit							PERCENT	PERCENT	PERCENT	PERCENT		
Assessed By							L.S. WARREN	L.S. WARREN	L.S. WARREN	L.S. WARREN		
Days After Last Applic.							13	0	15	29		
Trt-Eval Interval							13 DA-A	27 DA-A	15 DA-B	29 DA-B		
ARM Action Codes							P	P	P	P		
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
1	MONUMENT	75	WG	0.33 oz wt/a			APR 15 A		12.5 ab	58.8 ab	99.5 a	77.5 b
	X-77 SPREADER	L		0.25 % v/v			APR 15 A					
2	MONUMENT	75	WG	0.56 oz wt/a			APR 15 A		15.0 ab	65.0 ab	100.0 a	93.5 a
	X-77 SPREADER	L		0.25 % v/v			APR 15 A					
3	A14350	0.91	F	2.16 fl oz/a			APR 15 A		11.3 ab	72.5 a	98.3 ab	77.3 b
	X-77 SPREADER	L		0.25 % v/v			APR 15 A					
4	MONUMENT	75	WG	0.33 oz wt/a			APR 15 A		12.5 ab	65.0 ab	99.5 a	100.0 a
	X-77 SPREADER	L		0.25 % v/v			APR 15 A					
	MONUMENT	75	WG	0.33 oz wt/a			MAY 12 B					
	X-77 SPREADER	L		0.25 % v/v			MAY 12 B					
5	MONUMENT	75	WG	0.56 oz wt/a			APR 15 A		17.5 a	73.8 a	100.0 a	100.0 a
	X-77 SPREADER	L		0.25 % v/v			APR 15 A					
	MONUMENT	75	WG	0.56 oz wt/a			MAY 12 B					
	X-77 SPREADER	L		0.25 % v/v			MAY 12 B					
6	A14350	0.91	F	2.16 fl oz/a			APR 15 A		7.5 bc	52.5 b	99.8 a	98.8 a
	X-77 SPREADER	L		0.25 % v/v			APR 15 A					
	A14350	0.91	F	2.16 fl oz/a			MAY 12 B					
	X-77 SPREADER	L		0.25 % v/v			MAY 12 B					
7	MANOR	60	WG	0.5 oz wt/a			APR 15 A		16.3 a	70.0 a	97.0 b	92.5 a
	X-77 SPREADER	L		0.25 % v/v			APR 15 A					
8	CHECK								0.0 c	0.0 c	0.0 c	0.0 c
LSD (P=.05)							8.00	16.38	1.83	8.69		
Standard Deviation							5.44	11.13	1.24	5.91		
CV							47.06	19.47	1.43	7.39		
Grand Mean							11.56	57.19	86.75	79.94		
Bartlett's X2							5.966	4.71	7.996	11.966		
P(Bartlett's X2)							0.427	0.582	0.092	0.018*		
Friedman's X2							14.667	15.875	14.979	24.625		
P(Friedman's X2)							0.041	0.026	0.036	0.001		
Replicate F							1.864	0.630	1.508	2.620		
Replicate Prob(F)							0.1666	0.6036	0.2416	0.0776		
Treatment F							4.266	18.854	3178.385	129.505		
Treatment Prob(F)							0.0045	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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Pest Type										
Pest Code										
Crop Code					CYNDA	CYNDA				
BBCH Scale					BGRM	BGRM				
Crop Name					Bermuda grass	Bermuda grass				
Rating Date					5-27-04	6-10-04				
Rating Data Type					PHYTO	PHYTO				
Rating Unit					PERCENT	PERCENT				
Assessed By					L.S. WARREN	L.S. WARREN				
Days After Last Applic.					15	29				
Trt-Eval Interval					15 DA-B	29 DA-B				
ARM Action Codes					P	P				
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code		
1	MONUMENT	75	WG	0.33 oz wt/a			APR 15 A		0.0 a	0.0 a
	X-77 SPREADER	L		0.25 % v/v			APR 15 A			
2	MONUMENT	75	WG	0.56 oz wt/a			APR 15 A		3.8 a	0.0 a
	X-77 SPREADER	L		0.25 % v/v			APR 15 A			
3	A14350	0.91	F	2.16 fl oz/a			APR 15 A		0.0 a	0.0 a
	X-77 SPREADER	L		0.25 % v/v			APR 15 A			
4	MONUMENT	75	WG	0.33 oz wt/a			APR 15 A		3.8 a	0.0 a
	X-77 SPREADER	L		0.25 % v/v			APR 15 A			
	MONUMENT	75	WG	0.33 oz wt/a			MAY 12 B			
	X-77 SPREADER	L		0.25 % v/v			MAY 12 B			
5	MONUMENT	75	WG	0.56 oz wt/a			APR 15 A		6.3 a	0.0 a
	X-77 SPREADER	L		0.25 % v/v			APR 15 A			
	MONUMENT	75	WG	0.56 oz wt/a			MAY 12 B			
	X-77 SPREADER	L		0.25 % v/v			MAY 12 B			
6	A14350	0.91	F	2.16 fl oz/a			APR 15 A		1.3 a	0.0 a
	X-77 SPREADER	L		0.25 % v/v			APR 15 A			
	A14350	0.91	F	2.16 fl oz/a			MAY 12 B			
	X-77 SPREADER	L		0.25 % v/v			MAY 12 B			
7	MANOR	60	WG	0.5 oz wt/a			APR 15 A		0.0 a	0.0 a
	X-77 SPREADER	L		0.25 % v/v			APR 15 A			
8	CHECK								0.0 a	0.0 a
LSD (P=.05)									5.14	0.00
Standard Deviation									3.49	0.00
CV									186.3	0.0
Grand Mean									1.88	0.0
Bartlett's X2									3.124	0.0
P(Bartlett's X2)									0.373	.
Friedman's X2									6.188	0.0
P(Friedman's X2)									0.518	1.00
Replicate F									3.244	0.000
Replicate Prob(F)									0.0425	1.0000
Treatment F									1.902	0.000
Treatment Prob(F)									0.1201	1.0000

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Trial Comments

04-28-04: HYDSI PHYTO CONSISTED OF SLIGHT TO MODERATE YELLOWISH-GREEN APPEARANCE

05-12-04: HYDSI PHYTO CONSISTED OF BROWNISH YELLOW-GREEN APPEARANCE, PLANTS NOT COMPLETELY BROWN OR CONSIDERED DEAD AT THIS TIME