

North Carolina State University

POSTEMERGENCE LAWN BURWEED CONTROL IN COMMON BERMUDAGRASS WITH METSULFURON AND ATRAZINE GRANULES

Trial ID: 05-T26
Protocol ID: Study Director: L.S. WARREN
Location: THORNDALE COUNTRY CLUB 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: OXFORD **Trial Status:** COMPLETED
State/Prov.: NC
Postal Code: 27565 **Initiation Date:** 3-21-05
Country: USA
Directions:

Objectives:

TO EVALUATE EFFICACY OF METSULFURON AND ATRAZINE GRANULAR FORMULATIONS FOR LAWN BURWEED CONTROL IN COMMON BERMUDAGRASS

Conclusions:

Cooperator/Landowner

Cooperator: BRUCE STONE **Country:** USA
Organization: THORNDALE COUNTRY CLUB **Phone No:** 919/693-7404
Address 1: 105 WEST QUAIL RIDGE ROAD
City: OXFORD
State/Prov: NC
Postal Code: 27565

Crop Description

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

Pest Description

Pest 1 Type: W **Code:** SOVPT Soliva pterosperma
Common Name: Burweed, lawn

Site and Design

Plot Width, Unit: 5 FT **Site Type:** TURF - GOLF COURSE FAIRWAY
Plot Length, Unit: 8 FT **Tillage Type:** NA
Replications: 4 **Study Design:** Randomized Complete Block

Trial Initiation Comments:

Field Prep./Maintenance:

Soil Description

% OM: 0.71 **Texture:** SANDY CLAY LOAM
pH: 5.0
CEC: 3.7 **Fert. Level:** FAIR

Moisture Conditions

Overall Moisture Conditions: MAR 4.97"; APR 1.12"; MAY 2.45"
Closest Weather Station: OXFORD AG **Distance:** 0.5 **Unit:** MI

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								W Weed	W Weed	W Weed
								SOVPT	SOVPT	SOVPT
								3-29-05	4-5-05	4-18-05
								INJURY	CONTROL	CONTROL
								PERCENT	PERCENT	PERCENT
								L.S. WARREN	L.S. WARREN	L.S. WARREN
								8	15 15	28 28
								8 DA-A	15 DA-A	28 DA-A
								P	P	P
Trt	Treatment	Form	Form	Rate	Other	Growth	Appl			
No.	Name	Conc	Type	Rate	Rate	Unit	Code	1	2	3
1	DPX-T6376-266	0.017	G	176.46	LB/A		MAR 21	18.8 a	81.3 a	98.8 a
2	DPX-T6376-267	0.017	G	176.46	LB/A		MAR 21	7.5 b	72.5 b	97.5 a
3	DPX-T6376-268	0.023	G	130.68	LB/A		MAR 21	11.3 b	77.5 ab	93.8 a
4	DPX-T7376-269	0.023	G	130.68	LB/A		MAR 21	8.8 b	80.0 ab	93.8 a
5	DPX-T6376-270	0.023	G	130.68	LB/A		MAR 21	11.3 b	77.5 ab	99.5 a
6	MANOR	60	WG	0.03	LB A/A		MAR 21	7.5 b	33.8 c	93.8 a
	X-77 SPREADER		L	0.25	% V/V		MAR 21			
7	SCOTTS BONUS S (ATRAZINE)	100	G	180.25	LB/A		MAR 21	0.0 c	0.0 d	8.8 bc
8	ATRAZINE	4.0	L	1.9	LB A/A		MAR 21	13.8 ab	0.0 d	20.0 b
9	CHECK							0.0 c	0.0 d	0.0 c
LSD (P=.05)								7.04	8.21	12.65
Standard Deviation								4.82	5.63	8.67
CV								55.12	11.98	12.88
Grand Mean								8.75	46.94	67.31
Bartlett's X2								7.587	5.765	32.771
P(Bartlett's X2)								0.27	0.33	0.001*
Replicate F								0.507	1.082	0.419
Replicate Prob(F)								0.6809	0.3754	0.7407
Treatment F								6.313	182.835	101.362
Treatment Prob(F)								0.0002	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	W Weed	W Weed	
							SOVPT	SOVPT	POAAN	
							5-3-05	5-20-05	3-29-05	
							CONTROL	CONTROL	INJURY	
							PERCENT	PERCENT	PERCENT	
							L.S. WARREN	L.S. WARREN	L.S. WARREN	
							43 43	60 60	8	
							43 DA-A	60 DA-A	8 DA-A	
							P	P	P	
Trt	Treatment	Form	Form	Rate	Other	Growth	Appl			
No.	Name	Conc	Type	Rate	Rate	Unit	Code	4	5	6
1	DPX-T6376-266	0.017	G	176.46	LB/A		MAR 21	100.0 a	100.0 a	1.3 b
2	DPX-T6376-267	0.017	G	176.46	LB/A		MAR 21	100.0 a	100.0 a	0.0 b
3	DPX-T6376-268	0.023	G	130.68	LB/A		MAR 21	100.0 a	100.0 a	0.0 b
4	DPX-T7376-269	0.023	G	130.68	LB/A		MAR 21	100.0 a	100.0 a	0.0 b
5	DPX-T6376-270	0.023	G	130.68	LB/A		MAR 21	100.0 a	100.0 a	0.0 b
6	MANOR	60	WG	0.03	LB A/A		MAR 21	100.0 a	100.0 a	1.3 b
	X-77 SPREADER		L	0.25	% V/V		MAR 21			
7	SCOTTS BONUS S (ATRAZINE)	100	G	180.25	LB/A		MAR 21	47.5 b	18.8 b	0.0 b
8	ATRAZINE	4.0	L	1.9	LB A/A		MAR 21	43.8 b	8.8 c	5.0 a
9	CHECK							0.0 c	0.0 d	0.0 b
LSD (P=.05)							21.98	8.11	1.61	
Standard Deviation							15.06	5.55	1.10	
CV							19.61	7.97	132.29	
Grand Mean							76.81	69.72	0.83	
Bartlett's X2							0.023	0.009	0.0	
P(Bartlett's X2)							0.88	0.923	1.00	
Replicate F							1.914	1.591	2.286	
Replicate Prob(F)							0.1542	0.2176	0.1044	
Treatment F							24.430	270.343	9.000	
Treatment Prob(F)							0.0001	0.0001	0.0001	

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								W Weed	W Weed	W Weed
								POAAN	POAAN	POAAN
								4-5-05	4-18-05	5-3-05
								CONTROL	CONTROL	CONTROL
								PERCENT	PERCENT	PERCENT
								L.S. WARREN	L.S. WARREN	L.S. WARREN
								15 15	28 28	43 43
								15 DA-A	28 DA-A	43 DA-A
								P	P	P
Trt	Treatment	Form	Form	Rate	Other	Growth	Appl			
No.	Name	Conc	Type	Rate	Rate	Unit	Code	7	8	9
1	DPX-T6376-266	0.017	G	176.46	LB/A		MAR 21	0.0 a	0.0 b	0.0 c
2	DPX-T6376-267	0.017	G	176.46	LB/A		MAR 21	0.0 a	0.0 b	0.0 c
3	DPX-T6376-268	0.023	G	130.68	LB/A		MAR 21	0.0 a	0.0 b	0.0 c
4	DPX-T7376-269	0.023	G	130.68	LB/A		MAR 21	0.0 a	0.0 b	0.0 c
5	DPX-T6376-270	0.023	G	130.68	LB/A		MAR 21	0.0 a	0.0 b	0.0 c
6	MANOR	60	WG	0.03	LB A/A		MAR 21	0.0 a	10.0 b	0.0 c
	X-77 SPREADER		L	0.25	% V/V		MAR 21			
7	SCOTTS BONUS S (ATRAZINE)	100	G	180.25	LB/A		MAR 21	0.0 a	84.3 a	98.5 b
8	ATRAZINE	4.0	L	1.9	LB A/A		MAR 21	0.0 a	91.5 a	99.5 a
9	CHECK							0.0 a	0.0 b	0.0 c
LSD (P=.05)								0.00	12.01	0.73
Standard Deviation								0.00	8.23	0.50
CV								0.0	39.89	2.27
Grand Mean								0.0	20.64	22.0
Bartlett's X2								0.0	2.548	0.0
P(Bartlett's X2)								.	0.11	1.00
Replicate F								0.000	1.010	0.000
Replicate Prob(F)								1.0000	0.4053	1.0000
Treatment F								0.000	86.600	30493.003
Treatment Prob(F)								1.0000	0.0001	0.0001

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Pest Type	W Weed								
Pest Code	POAAN								
Rating Date	5-20-05								
Rating Data Type	CONTROL								
Rating Unit	PERCENT								
Assessed By	L.S. WARREN								
Days After First/Last Applic.	60 60								
Trt-Eval Interval	60 DA-A								
ARM Action Codes	P								
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Other Rate Unit	Growth Stage	Appl Code	
1	DPX-T6376-266	0.017	G	176.46	LB/A		MAR 21		0.0 b
2	DPX-T6376-267	0.017	G	176.46	LB/A		MAR 21		0.0 b
3	DPX-T6376-268	0.023	G	130.68	LB/A		MAR 21		0.0 b
4	DPX-T7376-269	0.023	G	130.68	LB/A		MAR 21		0.0 b
5	DPX-T6376-270	0.023	G	130.68	LB/A		MAR 21		0.0 b
6	MANOR X-77 SPREADER	60	WG	0.03	LB A/A		MAR 21		0.0 b
		L		0.25	% V/V		MAR 21		
7	SCOTTS BONUS S (ATRAZINE)	100	G	180.25	LB/A		MAR 21		93.8 a
8	ATRAZINE	4.0	L	1.9	LB A/A		MAR 21		90.0 a
9	CHECK								0.0 b
LSD (P=.05)									11.69
Standard Deviation									8.01
CV									39.22
Grand Mean									20.42
Bartlett's X2									0.628
P(Bartlett's X2)									0.428
Replicate F									0.675
Replicate Prob(F)									0.5758
Treatment F									102.444
Treatment Prob(F)									0.0001

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Trial Comments

03-29-05: WEED INJURY SYMPTOMS CONSISTED OF BRIGHT YELLOWISH-GREEN APPEARANCE IN PLOTS TREATED WITH ATRAZINE 4L AND DULL BROWNISH-GREEN APPEARANCE IN PLOTS TREATED WITH MANOR AND DPX PRODUCTS