North Carolina State University

HENBIT AND CORN SPEEDWELL CONTROL WITH SULFONYLUREA HERBICIDES IN COMMON BERMUDAGRASS

Trial ID: 03-T7 Study Dir.: L.S. WARREN
Location: NCSU DRIVING RANGE 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: RALEIGH **Trial Status:** PRELIMINARY
State/Prov.: NC
Postal Code: 27606 **Initiation Date:** 3-7-03
Country: USA

COOPERATOR/LANDOWNER

Cooperator: KYLE LEVERETTE **Country:** USA
Org: NORTH CAROLINA STATE UNIVERSITY
City: RALEIGH
State/Prov: NC
Postal Code: 27606

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

Objective: TO EVALUATE SULFONYLUREA HERBICIDES FOR EFFICACY ON HENBIT AND CORN SPEEDWELL IN COMMON BERMUDAGRASS

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	LAMAM	HENBIT	LAMIUM AMPLEXICAULE L.
2.	VERAR	SPEEDWELL, CORN	VERONICA ARVENSIS L.

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

SITE AND DESIGN

Plot Width, Unit: 4 FT **Plot Length, Unit:** 8 FT **Reps:** 4
Site Type: TURF - GOLF COURSE DRIVING RANGE
Tillage Type: NA **Study Design:** RANDOMIZED COMPLETE BLOCK

SOIL DESCRIPTION

% OM: 0.27
pH: 5.0
CEC: 4.9 **Fert. Level:** FAIR

MOISTURE CONDITIONS

	Date	Time	Amount	Unit	Type	Interval	Unit
1.	2-7-03		1.10	IN	RAINFALL	28	DBT
2.	2-21-03		1.08	IN	RAINFALL	14	DBT
3.	3-2-03		0.62	IN	RAINFALL	5	DBT
4.	3-8-03		1.20	IN	RAINFALL	1	DAT
5.	3-17-03		0.51	IN	RAINFALL	10	DAT
6.	3-21-03		1.20	IN	RAINFALL	14	DAT
7.	3-30-03		0.93	IN	RAINFALL	23	DAT
8.	4-9-03		1.25	IN	RAINFALL	33	DAT
9.	4-10-03		1.05	IN	RAINFALL	34	DAT
10.	4-11-03		0.85	IN	RAINFALL	35	DAT

Overall Moisture Conditions: FEB 7.26"; MAR 5.75"; APR 5.27"; MAY 4.10"
Closest Weather Station: RALEIGH STATE UNIV, NC **Distance:** 0.5 **Unit:** MI

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APPLICATION DESCRIPTION

	A
Application Date:	3-7-03
Time of Day:	5:15 PM
Application Method:	SPRAY
Application Timing:	POST
Applic. Placement:	BROFOL
Air Temp., Unit:	39 F
% Relative Humidity:	64
Wind Velocity, Unit:	0 MPH
Dew Presence (Y/N):	Y
Soil Temp., Unit:	49 F
Soil Moisture:	WET
% Cloud Cover:	98

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:	LAMAM FLOWERING
Stage Scale:	1-6" TALL
Density, Unit:	1-5 FT2
Weed 2 Code, Stage:	VERAR PREFLOWER
Stage Scale:	1-2 INCH
Density, Unit:	1-5 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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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	Spray Volume	LAMAM INJURY PERCENT 3-13-03 6 DA-A P	LAMAM INJURY PERCENT 3-21-03 14 DA-A P	VERAR INJURY PERCENT 3-13-03 6 DA-A P	VERAR INJURY PERCENT 3-21-03 14 DA-A P
1	FLAZASULFURON	25	WG	0.5	oz wt/a			MAR 7	A		2.5 a	38.8 a	7.5 a	5.0 d
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A					
2	FLAZASULFURON	25	WG	2.86	oz wt/a			MAR 7	A		3.8 a	48.8 a	8.8 a	18.8 c
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A					
3	MANAGE	75	WG	1.33	oz wt/a			MAR 7	A		5.0 a	45.0 a	7.5 a	5.0 d
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A					
4	MANOR	60	DF	0.1	oz wt/a			MAR 7	A		5.0 a	38.8 a	7.5 a	16.3 c
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A					
5	MANOR	60	DF	0.5	oz wt/a			MAR 7	A		3.8 a	50.0 a	7.5 a	28.8 ab
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A					
6	MANOR	60	DF	1.0	oz wt/a			MAR 7	A		2.5 a	42.5 a	10.0 a	31.3 a
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A					
7	MONUMENT	75	WG	0.58736	oz wt/a			MAR 7	A		2.5 a	45.0 a	10.0 a	35.0 a
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A					
8	REVOLVER	0.19	L	4.5	pt/a			MAR 7	A		5.0 a	43.8 a	8.8 a	22.5 bc
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A					
9	SULFOSULFURON	75	WG	2.56	oz wt/a			MAR 7	A		6.3 a	37.5 a	7.5 a	21.3 bc
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A					
10	TRANXIT GTA	25	DF	2.0	oz wt/a			MAR 7	A		8.8 a	52.5 a	10.0 a	6.3 d
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A					
11	CHECK										0.0 a	0.0 b	0.0 b	0.0 d
	LSD (P=.05)										6.60	25.25	4.92	8.03
	Standard Deviation										4.57	17.49	3.41	5.56
	CV										111.78	43.47	44.13	32.21
	Grand Mean										4.09	40.23	7.73	17.27
	Bartlett's X2										4.455	6.521	2.983	11.667
	P(Bartlett's X2)										0.879	0.687	0.935	0.112
	Replicate F										0.362	4.768	0.391	10.330
	Replicate Prob(F)										0.7806	0.0078	0.7604	0.0001
	Treatment F										1.022	2.631	2.668	18.209
	Treatment Prob(F)										0.4491	0.0197	0.0183	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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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	Spray Volume	VERAR CONTROL PERCENT 4-3-03 27 DA-A P	VERAR CONTROL PERCENT 4-14-03 38 DA-A P
	Weed Code											
	Rating Data Type											
	Rating Unit											
	Rating Date											
	Trt-Eval Interval											
	ARM Action Codes											
1	FLAZASULFURON	25	WG	0.5	oz wt/a			MAR 7	A		0.0 f	2.5 d
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A			
2	FLAZASULFURON	25	WG	2.86	oz wt/a			MAR 7	A		11.3 de	13.8 c
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A			
3	MANAGE	75	WG	1.33	oz wt/a			MAR 7	A		0.0 f	0.0 d
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A			
4	MANOR	60	DF	0.1	oz wt/a			MAR 7	A		10.0 def	2.5 d
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A			
5	MANOR	60	DF	0.5	oz wt/a			MAR 7	A		42.5 c	23.8 bc
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A			
6	MANOR	60	DF	1.0	oz wt/a			MAR 7	A		55.0 b	32.5 b
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A			
7	MONUMENT	75	WG	0.58736	oz wt/a			MAR 7	A		91.3 a	94.0 a
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A			
8	REVOLVER	0.19	L	4.5	pt/a			MAR 7	A		91.3 a	93.5 a
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A			
9	SULFOSULFURON	75	WG	2.56	oz wt/a			MAR 7	A		20.0 d	20.0 c
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A			
10	TRANXIT GTA	25	DF	2.0	oz wt/a			MAR 7	A		1.3 ef	2.5 d
	X-77 SPREADER		L	0.25	% v/v			MAR 7	A			
11	CHECK										0.0 f	0.0 d
	LSD (P=.05)										10.58	10.73
	Standard Deviation										7.33	7.43
	CV										25.0	28.68
	Grand Mean										29.32	25.91
	Bartlett's X2										15.126	15.123
	P(Bartlett's X2)										0.034*	0.057
	Replicate F										1.171	0.317
	Replicate Prob(F)										0.3373	0.8127
	Treatment F										94.261	90.019
	Treatment Prob(F)										0.0001	0.0001

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

03-05-03: STAKED OUT TEST - TOO WET TO APPLY TREATMENTS
- REPS 1 AND 2 PLOTS 4 X 8 FEET; REPS 3 AND 4 PLOTS 4 X 10 FEET

03-07-03: APPLIED TREATMENTS

03-13-03: LAMAM INJURY RATINGS BASED ON VERY SLIGHT DISCOLORATION (YELLOW-GREEN APPEARANCE)
VERAR INJURY RATINGS BASED ON LEAF BRONZING

04-03-03: TEST AREA MOWED AND LAMAM COULD NOT BE EFFECTIVELY EVALUATED AT THIS TIME

04-14-03: LAMAM KILLED DUE TO EARLIER MOWING AROUND 1ST OF APRIL