

University of GA Coop Ext Service

Effect of Spray Volume on Annual Bluegrass Control with MON 44951	
Trial ID: Turf3-03	Study Dir. : Bill Nutt
Location: Georgia Station	Investigator: Tim R Murphy

GENERAL TRIAL INFORMATION

Study Director: Bill Nutt Title: ARC I
 Affiliation: UGA-CAES

Investigator: Tim R Murphy Title: Weed Scientist
 Affiliation: UGA-CAES

TRIAL LOCATION

City: Griffin Trial Status: ARCHIVED
 State/Prov. : GA Initiation Date: 2-19-2003

COOPERATOR/LANDOWNER

Cooperator: Dennis Williamson Org: Monsanto
 City: Mt. Pleasant State/Prov: SC
 Conducted Under GLP (Y/N): N Conducted Under GEP (Y/N): N

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	POANN	Annual bluegrass	<i>Poa annua</i>

Crop 1: CYNDA Hybrid bermudagrass/*Cynodon dactylon* Variety: Tifway Perennial Age: 20 yrs

Crop 2: LOLPE Perennial ryegrass/*Lolium perenne* Variety: *Sunrise Primo Blend

PURE SEED	VARIETY	KIND	GERMINATION	TOTAL	ORIGIN
39.27%	Jet	Perennial Ryegrass	85%	85%	OR
39.07%	Sonata	Perennial Ryegrass	85%	85%	OR
19.08%	Wind Star	Perennial Ryegrass	85%	85%	OR

Planting Date: 9-30-2002 Planting Method: Broadcast Rate: 8 lb/1000sqft

SITE AND DESIGN

Plot Width, Unit: 6 FT Plot Length, Unit: 10 FT Reps: 3
 Site Type: simulated golf course fairway Study Design: RANDOMIZED COMPLETE BLOCK
 Trial Initiation Comments: Test size 65 ft. by 30ft. Tifway overseeded.

MAINTENANCE

Field Prep./Maintenance: Irrigated site. Mowed at 0.625 inch with triplex mower.

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APPLICATION DESCRIPTION

	A	B
Application Date:	2-19-2003	3-11-2003
Time of Day:	1:20 pm	10:30 AM
Application Method:	Broadcast	Broadcast
Application Timing:	Post	Post
Applic. Placement:	Foliar	Foliar
Air Temp., Unit:	52 F	61 F
% Relative Humidity:	63	42
Wind Velocity, Unit:	2.6 mph	3 mph
Dew Presence (Y/N):	N	N
Soil Temp., Unit:	50 F	55 F
Soil Moisture:	High	Good
% Cloud Cover:	80	0

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	CYNDA Dormant	CYNDA Dormant
Height, Unit:	.625 inch	.625 inch
Crop 2 Code, Stage:	LOLPE Active	LOLPE Active
Height, Unit:	.625 inch	.625 inch

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	POANN Multi Tillered	POANN
Stage Scale:	Seedheads just starting to emergence from leaf sheath about 1/4 inch.	Seedhead
Density, Unit:	30 %	30 %

APPLICATION EQUIPMENT

	A	A	A	B	B	B
Appl. Equipment:	Backpack			Backpack		
Operating Pressure:	20 psi	30 psi	30 psi	20 psi	30 psi	30 psi
Nozzle Type:	Flat fan			Flat fan		
Nozzle Size:	8002	8003	8008	8002	8003	8008
Nozzle Spacing, Unit:	20 inch			20 inch		
Boom Length, Unit:	5 feet			5 feet		
Boom Height, Unit:	20 inch			20 inch		
Ground Speed, Unit:	3 mph			3 mph		
Carrier:	Water			Water		
Spray Volume, Unit:	10 gpa	20 gpa	50 gpa	10 gpa	20 gpa	50 gpa
Propellant:	CO2			CO2		

Trial Comments

2-25-03

Broadcast 1 lbN/1000 sq. ft. as 10-10-10 fertilizer.

Weed density ratings for untreated control check plots

	<u>113</u>	<u>206</u>	<u>309</u>
POAAN,3-3-03	30	.	.
POAAN,3-18-03	40	45	45
POAAN,3-31-03	50	.	.

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Crop Code							LOLPE	LOLPE	LOLPE	LOLPE	
Part Rated							Foliag	Foliag	Foliag	Foliag	
Rating Data Type							Injury	Injury	Injury	Injury	
Rating Unit							0-100	0-100	0-100	0-100	
Rating Date							2-24-2003	3-3-2003	3-10-2003	3-18-2003	
Trt-Eval Interval							5 DA-A	12 DA-A	19 DA-A	27 DA-A	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1	MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.01 0.25	lb ai/a % v/v	FEB 15 FEB 15	A A	0 a	12 a	23 ab	10 gh
2	MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.02 0.25	lb ai/a % v/v	FEB 15 FEB 15	A A	0 a	12 a	27 ab	15 fg
3	MON 44951 + Chem-Nut 80/20 NIS fb MON 44951 + Chem-Nut 80/20 NIS	75 75	WG WG	0.01 0.25 0.01 0.25	lb ai/a % v/v lb ai/a % v/v	FEB 15 FEB 15 + 21 day + 21 day	A A B B	0 a	8 a	22 b	37 cd
4	MON 44951 + Chem-Nut 80/20 NIS fb MON 44951 + Chem-Nut 80/20 NIS	75 75	WG WG	0.02 0.25 0.02 0.25	lb ai/a % v/v lb ai/a % v/v	FEB 15 FEB 15 + 21 day + 21 day	A A B B	0 a	12 a	25 ab	48 ab
5	MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.01 0.25	lb ai/a % v/v	FEB 15 FEB 15	A A	0 a	13 a	25 ab	10 gh
6	MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.02 0.25	lb ai/a % v/v	FEB 15 FEB 15	A A	0 a	12 a	28 a	32 de
7	MON 44951 + Chem-Nut 80/20 NIS fb MON 44951 + Chem-Nut 80/20 NIS	75 75	WG WG	0.01 0.25 0.01 0.25	lb ai/a % v/v lb ai/a % v/v	FEB 15 FEB 15 + 21 day + 21 day	A A B B	0 a	10 a	25 ab	38 bcd
8	MON 44951 + Chem-Nut 80/20 NIS fb MON 44951 + Chem-Nut 80/20 NIS	75 75	WG WG	0.02 0.25 0.02 0.25	lb ai/a % v/v lb ai/a % v/v	FEB 15 FEB 15 + 21 day + 21 day	A A B B	0 a	12 a	27 ab	53 a
9	MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.01 0.25	lb ai/a % v/v	FEB 15 FEB 15	A A	0 a	13 a	25 ab	12 g
10	MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.02 0.25	lb ai/a % v/v	FEB 15 FEB 15	A A	0 a	13 a	28 a	25 ef
11	MON 44951 + Chem-Nut 80/20 NIS fb MON 44951 + Chem-Nut 80/20 NIS	75 75	WG WG	0.01 0.25 0.01 0.25	lb ai/a % v/v lb ai/a % v/v	FEB 15 FEB 15 + 21 day + 21 day	A A B B	0 a	12 a	22 b	43 abc
12	MON 44951 + Chem-Nut 80/20 NIS fb MON 44951 + Chem-Nut 80/20 NIS	75 75	WG WG	0.02 0.25 0.02 0.25	lb ai/a % v/v lb ai/a % v/v	FEB 15 FEB 15 + 21 day + 21 day	A A B B	0 a	12 a	28 a	53 a
13	Untreated Control							0 a	0 b	0 c	0 h
LSD (P=.05)							0.0	4.5	4.6	10.1	
Standard Deviation							0.0	2.6	2.7	6.0	
CV							0.0	24.56	11.66	20.6	

(Turf3-03)

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Weed Code							LOLPE	LOLPE	POAAN	POAAN	
Crop Code							Foliag	Foliag			
Part Rated							Injury	Injury	Control	Control	
Rating Data Type							0-100	0-100	0-100	0-100	
Rating Unit							3-31-2003	4-16-2003	3-3-2003	3-10-2003	
Rating Date							40 DA-A	56 DA-A	12 DA-A	19 DA-A	
Trt-Eval Interval											
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Grow Stg	Appl Code				
1	MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.01 0.25	lb ai/a % v/v	FEB 15 FEB 15	A A	0 d	0 a	57 a	47 b
2	MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.02 0.25	lb ai/a % v/v	FEB 15 FEB 15	A A	0 d	0 a	60 a	60 ab
3	MON 44951 + Chem-Nut 80/20 NIS fb MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.01 0.25 0.01 0.25	lb ai/a % v/v lb ai/a % v/v	FEB 15 FEB 15 + 21 day + 21 day	A A B B	23 c	0 a	60 a	57 ab
4	MON 44951 + Chem-Nut 80/20 NIS fb MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.02 0.25 0.02 0.25	lb ai/a % v/v lb ai/a % v/v	FEB 15 FEB 15 + 21 day + 21 day	A A B B	47 a	0 a	60 a	53 ab
5	MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.01 0.25	lb ai/a % v/v	FEB 15 FEB 15	A A	3 d	0 a	57 a	60 ab
6	MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.02 0.25	lb ai/a % v/v	FEB 15 FEB 15	A A	0 d	0 a	57 a	63 a
7	MON 44951 + Chem-Nut 80/20 NIS fb MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.01 0.25 0.01 0.25	lb ai/a % v/v lb ai/a % v/v	FEB 15 FEB 15 + 21 day + 21 day	A A B B	25 c	0 a	57 a	57 ab
8	MON 44951 + Chem-Nut 80/20 NIS fb MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.02 0.25 0.02 0.25	lb ai/a % v/v lb ai/a % v/v	FEB 15 FEB 15 + 21 day + 21 day	A A B B	43 ab	0 a	57 a	60 ab
9	MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.01 0.25	lb ai/a % v/v	FEB 15 FEB 15	A A	0 d	0 a	57 a	60 ab
10	MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.02 0.25	lb ai/a % v/v	FEB 15 FEB 15	A A	0 d	0 a	60 a	60 ab
11	MON 44951 + Chem-Nut 80/20 NIS fb MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.01 0.25 0.01 0.25	lb ai/a % v/v lb ai/a % v/v	FEB 15 FEB 15 + 21 day + 21 day	A A B B	18 c	0 a	57 a	57 ab
12	MON 44951 + Chem-Nut 80/20 NIS fb MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.02 0.25 0.02 0.25	lb ai/a % v/v lb ai/a % v/v	FEB 15 FEB 15 + 21 day + 21 day	A A B B	35 b	0 a	60 a	60 ab
13	Untreated Control							0 d	0 a	0 b	0 c
LSD (P=.05)							9.6	0.0	7.3	11.5	
Standard Deviation							5.7	0.0	4.3	6.8	
CV							38.09	0.0	8.05	12.8	

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Weed Code							POAAN	POAAN	POAAN
Crop Code							Control	Control	Control
Rating Data Type							0-100	0-100	0-100
Rating Unit							3-18-2003	3-31-2003	4-16-2003
Rating Date							27 DA-A	40 DA-A	56 DA-A
Trt-Eval Interval									
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Grow Stg	Appl Code			
1	MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.01 lb ai/a 0.25 % v/v	FEB 15 FEB 15	A A	55 bc	23 b	30 ab
2	MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.02 lb ai/a 0.25 % v/v	FEB 15 FEB 15	A A	65 abc	20 bc	30 ab
3	MON 44951 + Chem-Nut 80/20 NIS fb MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.01 lb ai/a 0.25 % v/v 0.01 lb ai/a 0.25 % v/v	FEB 15 FEB 15 + 21 day + 21 day	A A B B	68 ab	63 a	40 a
4	MON 44951 + Chem-Nut 80/20 NIS fb MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.02 lb ai/a 0.25 % v/v 0.02 lb ai/a 0.25 % v/v	FEB 15 FEB 15 + 21 day + 21 day	A A B B	78 a	70 a	55 a
5	MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.01 lb ai/a 0.25 % v/v	FEB 15 FEB 15	A A	53 bc	13 bc	17 ab
6	MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.02 lb ai/a 0.25 % v/v	FEB 15 FEB 15	A A	50 c	15 bc	17 ab
7	MON 44951 + Chem-Nut 80/20 NIS fb MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.01 lb ai/a 0.25 % v/v 0.01 lb ai/a 0.25 % v/v	FEB 15 FEB 15 + 21 day + 21 day	A A B B	77 a	63 a	20 ab
8	MON 44951 + Chem-Nut 80/20 NIS fb MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.02 lb ai/a 0.25 % v/v 0.02 lb ai/a 0.25 % v/v	FEB 15 FEB 15 + 21 day + 21 day	A A B B	78 a	65 a	43 a
9	MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.01 lb ai/a 0.25 % v/v	FEB 15 FEB 15	A A	52 c	17 bc	17 ab
10	MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.02 lb ai/a 0.25 % v/v	FEB 15 FEB 15	A A	73 a	33 b	35 ab
11	MON 44951 + Chem-Nut 80/20 NIS fb MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.01 lb ai/a 0.25 % v/v 0.01 lb ai/a 0.25 % v/v	FEB 15 FEB 15 + 21 day + 21 day	A A B B	80 a	65 a	30 ab
12	MON 44951 + Chem-Nut 80/20 NIS fb MON 44951 + Chem-Nut 80/20 NIS	75	WG	0.02 lb ai/a 0.25 % v/v 0.02 lb ai/a 0.25 % v/v	FEB 15 FEB 15 + 21 day + 21 day	A A B B	78 a	62 a	37 ab
13	Untreated Control						0 d	0 c	0 b
LSD (P=.05)							15.1	19.5	33.2
Standard Deviation							8.9	11.6	19.7
CV							14.37	29.51	69.22