

## University of GA Coop Ext Service

## Effect of Application Time Interval on Annual Bluegrass Control with MON 44951

Trial ID: Turf4-03

Study Dir.: Bill Nutt

Location: Griffin

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: 2-18-2003

## 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> L.

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: 8.0 LB/1000FT<sup>2</sup>

## 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

## MAINTENANCE

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

## APPLICATION DESCRIPTION

	A	B	C	D
Application Date:	2-18-2003	3-3-2003	3-11-2003	4-1-2003
Time of Day:	3:00 pm	3:00 pm	11:30 am	9:30 am
Application Method:	Broadcast	Broadcast	Broadcast	Broadcast
Application Timing:	Post	Post	Post	Post
Applic. Placement:	Foliar	Foliar	Foliar	Foliar
Air Temp., Unit:	51 F	59 F	64 F	58 F
% Relative Humidity:	63	30	37	60
Wind Velocity, Unit:	3 mph	2.8 mph	3 mph	5 mph
Dew Presence (Y/N):	N	N	N	N
Soil Temp., Unit:	46 F	55 F	56 F	52 F
Soil Moisture:	High	Good	Good	Good

% Cloud Cover:	0	98	0	0
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#### CROP STAGE AT EACH APPLICATION

	A	B	C	D
Crop 1 Code, Stage:	CYNDA Dormant	CYNDA Dormant	CYNDA Dormant	CYNDA 30 % Green
Height, Unit:	.625 inch	.625 inch	.625 inch	.625 inch
Crop 2 Code, Stage:	LOLPE Active	LOLPE Active	LOLPE Active	LOLPE Active
Height, Unit:	.625 inch	0.75 inch	.625 inch	.625 inch

#### WEED STAGE AT EACH APPLICATION

	A	B	C	D
Weed 1 Code, Stage:	POANN Seedhead Emergence	POANN Seedhead Emergence	POANN	POANN
Stage Scale:	Beginning from leaf sheath	Beginning from leaf sheath	Seedhead	Seedhead
	about ¼ inch.	about ¼ inch.		
	1-3 inch Dia.	1-3 inch Dia.		
	Multi-tillered	Multi-tillered		
Density, Unit:	30 %	30 %	30 %	30 %

#### APPLICATION EQUIPMENT

	A	B	C	D
Appl. Equipment:	Backpack	Backpack	Backpack	Backpack
Operating Pressure:	26 psi	26 psi	26 psi	26 psi
Nozzle Type:	Flat fan	Flat fan	Flat fan	Flat fan
Nozzle Size:	8004VS	8004VS	8004VS	8004VS
Nozzle Spacing, Unit:	20 inch	20 inch	20 inch	20 inch
Boom Length, Unit:	5 feet	5 feet	5 feet	5 feet
Boom Height, Unit:	18 inch	18 inch	18 inch	18 inch
Ground Speed, Unit:	3 mph	3 mph	3 mph	3 mph
Carrier:	Water	Water	Water	Water
Spray Volume, Unit:	25 gpa	25 gpa	25 gpa	25 gpa
Propellant:	CO2	CO2	CO2	CO2
Tank Mix (Y/N):	N	N	N	N

#### Trial Comments

2-25-03

Broadcast 1 lb N/1000 sq. ft. as 10-10-10 fertilizer.

3-4-03

Poa annua (POAAN, annual bluegrass) control observed as stunting and yellowing of plants and suppression of seedheads

Weed density ratings for untreated control check plots

	109	204	302
POAAN,3-4-03	20	20	20
POAAN,3-18-03	25	30	30
POAAN,3-31-03	25	25	25

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with MON 44951

Trial ID: Turf4-03

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Weed Code							LOLPE	LOLPE	LOLPE	LOLPE	LOLPE	
Crop Code							Foliar	Foliar	Foliar	Foliar	Foliar	
Part Rated							Injury	Injury	Injury	Injury	Injury	
Rating Data Type							0-100	0-100	0-100	0-100	0-100	
Rating Unit							2-25-2003	3-4-2003	3-10-2003	3-18-2003	3-31-2003	
Rating Date							7 DA-A	14 DA-A	20 DA-A	28 DA-A	41 DA-A	
Trt-Eval Interval												
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Grow Unit	Appl Stg	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	10 b	20 e	7 ef	0 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 a	10 b	23 cd	18 de	0 b
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 + 14 day + 14 day	A A B B	0 a	13 a	35 a	77 ab	17 a
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 + 14 day + 14 day	A A B B	0 a	8 b	35 a	85 a	28 a
5	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 C C	0 a	15 a	22 de	35 c	23 a
6	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 C C	0 a	15 a	27 b	65 b	30 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 + 43 day + 43 day	A A D D	0 a	15 a	20 e	13 def	2 b
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 + 43 day + 43 day	A A D D	0 a	13 a	25 bc	23 cd	2 b
9	Untreated Control							0 a	0 c	0 f	0 f	0 b
LSD (P=.05)							0.0	2.9	2.6	13.8	13.4	
Standard Deviation							0.0	1.7	1.5	8.0	7.7	
CV							0.0	15.0	6.63	22.23	68.35	

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Weed Code							LOLPE	LOLPE	POAAN	POAAN	POAAN	
Crop Code							Injury	Density	Control	Control	Control	
Part Rated							0-100	0-100	0-100	0-100	0-100	
Rating Data Type							4-16-2003	3-4-2003	3-4-2003	3-10-2003	3-18-2003	
Rating Unit							57 DA-A	14 DA-A	14 DA-A	20 DA-A	28 DA-A	
Rating Date							0	0	0	0	0	
Trt-Eval Interval												
# Subsamples, Dec.												
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Grow Unit	Appl Stg	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 b	67 ab	50 a	50 b	57 cd
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 b	65 ab	50 a	50 b	70 abc
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 + 14 day + 14 day	A A B B	0 b	62 b	50 a	62 a	70 abc
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 + 14 day + 14 day	A A B B	0 b	68 ab	50 a	63 a	78 a
5	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 C C	0 b	62 b	50 a	50 b	62 bcd
6	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 C C	0 b	62 b	50 a	50 b	75 ab
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 + 43 day + 43 day	A A D D	28 a	63 ab	50 a	50 b	50 d
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 + 43 day + 43 day	A A D D	28 a	62 b	50 a	50 b	52 d
9	Untreated Control							0 b	70 a	0 b	0 c	0 e
LSD (P=.05)							2.2	6.1	0.0	5.2	14.7	
Standard Deviation							1.3	3.5	0.0	3.0	8.5	
CV							20.22	5.49	0.0	6.36	14.89	

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							POAAN	POAAN
Weed Code								
Crop Code								
Part Rated								
Rating Data Type							Control	Control
Rating Unit							0-100	0-100
Rating Date							3-31-2003	4-16-2003
Trt-Eval Interval							41 DA-A	57 DA-A
# Subsamples, Dec.							0	0
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	17 b 20 cd
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	17 b 17 cd
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 + 14 day + 14 day	A A B B	55 a 30 cd
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 + 14 day + 14 day	A A B B	65 a 35 abc
5	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 C C	68 a 33 bc
6	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 C C	73 a 47 abc
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 + 43 day + 43 day	A A D D	23 b 67 a
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 + 43 day + 43 day	A A D D	17 b 65 ab
9	Untreated Control							0 b 0 d
LSD (P=.05)							21.5	29.7
Standard Deviation							12.4	17.1
CV							33.43	49.22

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)