

University of GA Coop Ext Service

Effect of Surfactant on Annual Bluegrass Control with MON 44951

Trial ID: Turf2-03

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: 2-18-2003

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>

Crop 1: CYNDA Hybrid Bermudagrass/*Cynodon Dactylon* Variety: Tifway Perennial Age:20 yrs

Crop 2: LOLPE Perennial ryegrass/*Lolium Perenne* Variety:Sunrise Primo Blend
Lot#L144M-1-OSP019G Planting Date: 9-30-2002 Planting Method: Broadcast Rate:8.0 lb/1000sqft

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

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 30 ft. 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:	2-18-2003	3-11-2003
Time of Day:	3:00 pm	11:30 am
Application Method:	Broadcast	Broadcast
Application Timing:	Post	Post
Applic. Placement:	Foliar	Foliar
Air Temp., Unit:	51 F	64 F
% Relative Humidity:	63	37
Wind Velocity, Unit:	3 mph	3 mph
Dew Presence (Y/N):	N	N
Soil Temp., Unit:	46 F	56 F
Soil Moisture:	High	Good
% Cloud Cover:	0	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 Emergence	POANN
Stage Scale:	Seedhead	Seedhead
Density, Unit:	30 %	30 %

APPLICATION EQUIPMENT

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

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Trial Comments

2-18-03

Weed, Poa annua, at application A is 1-3 inches diameter, multi-tiller, seedhead starting to emerge from sheath about 1/4 inch.

2-25-03

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

WEED DENSITY RATINGS FOR UNTREATED CONTROL CHECK

	<u>113</u>	<u>212</u>	<u>301</u>
POAAN,3-3-03	35	30	25
POAAN,3-18-03	35	40	25
POAAN,3-31-03	40	.	.

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Study Dir.: Bill Nutt

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Weed Code							LOLPE	LOLPE	LOLPE	LOLPE	
Crop Code							Foliag	Foliag	Foliag	Foliag	
Part Rated							Injury	Injury	Injury	Injury	
Rating Data Type							0-100	0-100	0-100	0-100	
Rating Unit							2-25-2003	3-3-2003	3-10-2003	3-18-2003	
Rating Date							7 DA-A	13 DA-A	20 DA-A	28 DA-A	
Trt-Eval Interval											
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Grow Unit	Appl Stg	Code				
1	MON 44951	75	WG	0.01	lb ai/a	FEB 15	A	0 a	10 b	17 cd	3 gh
2	MON 44951	75	WG	0.02	lb ai/a	FEB 15	A	0 a	12 ab	18 cd	8 g
3	MON 44951 fb	75	WG	0.01	lb ai/a	FEB 15	A	0 a	13 ab	15 d	8 g
	MON 44951	75	WG	0.01	lb ai/a	+ 21 day	B				
4	MON 44951 fb	75	WG	0.02	lb ai/a	FEB 15	A	0 a	13 ab	20 bcd	37 cd
	MON 44951	75	WG	0.02	lb ai/a	+ 21 day	B				
5	MON 44951 +	75	WG	0.01	lb ai/a	FEB 15	A	0 a	13 ab	18 cd	8 g
	Activator 90			0.25	% v/v	FEB 15	A				
6	MON 44951 +	75	WG	0.02	lb ai/a	FEB 15	A	0 a	15 a	28 ab	25 e
	Activator 90			0.25	% v/v	FEB 15	A				
7	MON 44951 +	75	WG	0.01	lb ai/a	FEB 15	A	0 a	13 ab	20 bcd	33 d
	Activator 90 fb			0.25	% v/v	FEB 15	A				
	MON 44951 +	75	WG	0.01	lb ai/a	+ 21 day	B				
	Activator 90			0.25	% v/v	+ 21 day	B				
8	MON 44951 +	75	WG	0.02	lb ai/a	FEB 15	A	0 a	15 a	25 abc	45 ab
	Activator 90 fb			0.25	% v/v	FEB 15	A				
	MON 44951 +	75	WG	0.02	lb ai/a	+ 21 day	B				
	Activator 90			0.25	% v/v	+ 21 day	B				
9	MON 44951 +	75	WG	0.01	lb ai/a	FEB 15	A	0 a	15 a	25 abc	17 f
	Methylated Seed Oil			1.0	% v/v	FEB 15	A				
10	MON 44951 +	75	WG	0.02	lb ai/a	FEB 15	A	0 a	13 ab	25 abc	20 ef
	Methylated Seed Oil			1.0	% v/v	FEB 15	A				
11	MON 44951 +	75	WG	0.01	lb ai/a	FEB 15	A	0 a	13 ab	20 bcd	42 bc
	Methylated Seed Oil fb			1.0	% v/v	FEB 15	A				
	MON 44951 +	75	WG	0.01	lb ai/a	+ 21 day	B				
	Methylated Seed Oil			1.0	% v/v	+ 21 day	B				
12	MON 44951 +	75	WG	0.02	lb ai/a	FEB 15	A	0 a	15 a	30 a	52 a
	Methylated Seed Oil fb			1.0	% v/v	FEB 15	A				
	MON 44951 +	75	WG	0.02	lb ai/a	+ 21 day	B				
	Methylated Seed Oil			1.0	% v/v	+ 21 day	B				
13	Untreated Control							0 a	0 c	0 e	0 h
LSD (P=.05)							0.0	3.6	7.5	7.2	
Standard Deviation							0.0	2.2	4.4	4.2	
CV							0.0	17.34	21.97	18.52	

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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							41 DA-A	57 DA-A	13 DA-A	20 DA-A
Trt-Eval Interval										
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg Code				
1	MON 44951	75	WG	0.01 lb ai/a	FEB 15	A	0 d	0 a	60 a	43 c
2	MON 44951	75	WG	0.02 lb ai/a	FEB 15	A	2 d	0 a	60 a	63 ab
3	MON 44951 fb	75	WG	0.01 lb ai/a	FEB 15	A	3 d	0 a	60 a	47 bc
	MON 44951	75	WG	0.01 lb ai/a + 21 day		B				
4	MON 44951 fb	75	WG	0.02 lb ai/a	FEB 15	A	27 bc	0 a	57 a	57 abc
	MON 44951	75	WG	0.02 lb ai/a + 21 day		B				
5	MON 44951 + Activator 90	75	WG	0.01 lb ai/a	FEB 15	A	0 d	0 a	57 a	67 a
				0.25 % v/v	FEB 15	A				
6	MON 44951 + Activator 90	75	WG	0.02 lb ai/a	FEB 15	A	0 d	0 a	60 a	60 ab
				0.25 % v/v	FEB 15	A				
7	MON 44951 + Activator 90 fb	75	WG	0.01 lb ai/a	FEB 15	A	18 c	0 a	60 a	67 a
				0.25 % v/v	FEB 15	A				
	MON 44951 + Activator 90	75	WG	0.01 lb ai/a + 21 day		B				
				0.25 % v/v + 21 day		B				
8	MON 44951 + Activator 90 fb	75	WG	0.02 lb ai/a	FEB 15	A	33 b	0 a	60 a	67 a
				0.25 % v/v	FEB 15	A				
	MON 44951 + Activator 90	75	WG	0.02 lb ai/a + 21 day		B				
				0.25 % v/v + 21 day		B				
9	MON 44951 + Methylated Seed Oil	75	WG	0.01 lb ai/a	FEB 15	A	2 d	0 a	60 a	67 a
				1.0 % v/v	FEB 15	A				
10	MON 44951 + Methylated Seed Oil	75	WG	0.02 lb ai/a	FEB 15	A	2 d	0 a	60 a	63 ab
				1.0 % v/v	FEB 15	A				
11	MON 44951 + Methylated Seed Oil fb	75	WG	0.01 lb ai/a	FEB 15	A	18 c	0 a	60 a	70 a
				1.0 % v/v	FEB 15	A				
	MON 44951 + Methylated Seed Oil	75	WG	0.01 lb ai/a + 21 day		B				
				1.0 % v/v + 21 day		B				
12	MON 44951 + Methylated Seed Oil fb	75	WG	0.02 lb ai/a	FEB 15	A	50 a	0 a	60 a	70 a
				1.0 % v/v	FEB 15	A				
	MON 44951 + Methylated Seed Oil	75	WG	0.02 lb ai/a + 21 day		B				
				1.0 % v/v + 21 day		B				
13	Untreated Control						0 d	0 a	0 b	0 d
LSD (P=.05)							10.2	0.0	3.7	15.3
Standard Deviation							6.1	0.0	2.2	9.1
CV							50.77	0.0	3.95	15.91

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Weed Code							POAAN	POAAN	POAAN	
Crop Code										
Part Rated										
Rating Data Type							Control	Control	Control	
Rating Unit							0-100	0-100	0-100	
Rating Date							3-18-2003	3-31-2003	4-16-2003	
Trt-Eval Interval							28 DA-A	41 DA-A	57 DA-A	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Stg	Appl Code			
1	MON 44951	75	WG	0.01 lb ai/a	FEB 15	A		30 c	17 bcd	10 cde
2	MON 44951	75	WG	0.02 lb ai/a	FEB 15	A		57 a	33 b	35 a-d
3	MON 44951 fb	75	WG	0.01 lb ai/a	FEB 15	A		30 c	8 cd	10 cde
	MON 44951	75	WG	0.01 lb ai/a	+ 21 day	B				
4	MON 44951 fb	75	WG	0.02 lb ai/a	FEB 15	A		55 ab	65 a	23 b-e
	MON 44951	75	WG	0.02 lb ai/a	+ 21 day	B				
5	MON 44951 +	75	WG	0.01 lb ai/a	FEB 15	A		35 bc	0 d	0 e
	Activator 90			0.25 % v/v	FEB 15	A				
6	MON 44951 +	75	WG	0.02 lb ai/a	FEB 15	A		52 ab	13 bcd	0 e
	Activator 90			0.25 % v/v	FEB 15	A				
7	MON 44951 +	75	WG	0.01 lb ai/a	FEB 15	A		63 a	67 a	17 b-e
	Activator 90 fb			0.25 % v/v	FEB 15	A				
	MON 44951 +	75	WG	0.01 lb ai/a	+ 21 day	B				
	Activator 90			0.25 % v/v	+ 21 day	B				
8	MON 44951 +	75	WG	0.02 lb ai/a	FEB 15	A		68 a	83 a	55 a
	Activator 90 fb			0.25 % v/v	FEB 15	A				
	MON 44951 +	75	WG	0.02 lb ai/a	+ 21 day	B				
	Activator 90			0.25 % v/v	+ 21 day	B				
9	MON 44951 +	75	WG	0.01 lb ai/a	FEB 15	A		48 abc	10 cd	7 de
	Methylated Seed Oil			1.0 % v/v	FEB 15	A				
10	MON 44951 +	75	WG	0.02 lb ai/a	FEB 15	A		50 abc	28 bc	33 a-d
	Methylated Seed Oil			1.0 % v/v	FEB 15	A				
11	MON 44951 +	75	WG	0.01 lb ai/a	FEB 15	A		58 a	68 a	40 abc
	Methylated Seed Oil fb			1.0 % v/v	FEB 15	A				
	MON 44951 +	75	WG	0.01 lb ai/a	+ 21 day	B				
	Methylated Seed Oil			1.0 % v/v	+ 21 day	B				
12	MON 44951 +	75	WG	0.02 lb ai/a	FEB 15	A		60 a	75 a	47 ab
	Methylated Seed Oil fb			1.0 % v/v	FEB 15	A				
	MON 44951 +	75	WG	0.02 lb ai/a	+ 21 day	B				
	Methylated Seed Oil			1.0 % v/v	+ 21 day	B				
13	Untreated Control							0 d	8 cd	0 e
LSD (P=.05)							18.2	20.3	27.7	
Standard Deviation							10.8	12.0	16.5	
CV							23.09	32.82	77.36	

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