

University of GA Coop Ext Service

Application Timing Effects on Annual Bluegrass Control with Velocity	
Trial ID: Turf 6-03	Study Dir.: Bill Nutt
Location: Georgia Station	Investigator: Tim R Murphy

GENERAL TRIAL INFORMATION			
Study Director: Bill Nutt			Title: ARC I
Affiliation: UAG-CAES			
Investigator: Tim R Murphy			Title: Weed Scientist
Affiliation: UAG-CAES			
TRIAL LOCATION			
City: Griffin	Trial Status:	ONE-YEAR/FINAL	
State/Prov.: GA	Initiation Date:	2-18-2003	
COOPERATOR/LANDOWNER			
Cooperator: Joe Chamberlin	Org:	Valent	

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

Crop 1: LOLPE Perennial ryegrass/ <i>Lolium Perenne</i>	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/1000ft2 Soil Moisture: Good	
Crop 2: CYNDA Hybrid bermudagrass/ <i>CynodonDactylon</i>	Variety: Tifway

SITE AND DESIGN			
Plot Width, Unit: 6 FT	Plot Length, Unit: 10 FT	Reps: 4	
Site Type: simulated golf course fairway		Study Design: RANDOMIZED COMPLETE BLOCK	
Trial Initiation Comments: Test site 60 ft. by 40 ft.			

MAINTENANCE

Field Prep./Maintenance: Irrigated site.

APPLICATION DESCRIPTION			
	A	B	C
Application Date:	2-18-2003	3-11-2003	3-24-2003
Time of Day:	2:00 pm	11:30 am	4:20 pm
Application Method:	Broadcast	Broadcast	Broadcast
Application Timing:	Post	Post	Post
Applic. Placement:	Foliar	Foliar	Foliar
Air Temp., Unit:	51 F	64 F	74 F
% Relative Humidity:	63	37	34
Wind Velocity, Unit:	3 mph	3 mph	0 mph
Dew Presence (Y/N):	N	N	N
Soil Temp., Unit:	48 F	56 F	67 F
Soil Moisture:	High	Good	Good
% Cloud Cover:	0	0	0

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CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	LOLPE Active	LOLPE Active	LOLPE Active
Height, Unit:	.625 inch	.625 inch	.625 inch
Crop 2 Code, Stage:	CYNDA Dormant	CYNDA Dormant	CYNDA Green up
Stage Scale:			15%
Height, Unit:	.625 inch	.625 inch	.625 inch

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code, Stage:	*POANN Emergence	POANN	POANN
Stage Scale:	Seedhead*	Seedhead	Seedhead
Density, Unit:	30 %	30 %	30 %

*2-18-03 Weed, Poa annua, in application A is 1-3 inch diameter, multitiller, seedheads just starting to emerge from sheath (about 1/4 inch).

APPLICATION EQUIPMENT

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

Trial Comments

Begin treatments in early February at first emergence of Poa annua seedheads

2-25-03

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

3-10-03

Velocity injury expressed as leaf yellowing of upper 1/2 of leaf.

WEED DENSITY RATINGS FOR CONTROL CHECK

	<u>101</u>	<u>206</u>	<u>307</u>	<u>405</u>
POAAN,2-28-03	25	30	30	30
POAAN,3-31-03	35	35	35	45

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Trial ID: Turf 6-03			Study Dir.: Bill Nutt									
Location: Georgia Station			Investigator: Tim R Murphy									
Weed Code	Crop Code	Part Rated	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	# Subsamples, Dec.	LOLPE Foliag Injury 0-100	LOLPE Injury 0-100	LOLPE Injury 0-100	LOLPE Injury 0-100	LOLPE Injury 0-100
								2-24-2003	2-28-2003	3-3-2003	3-10-2003	3-18-2003
								6 DA-A	10 DA-A	13 DA-A	20 DA-A	28 DA-A
								0	0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code	1	2	3	4	5
1	Untreated Check							0 a	0 b	0 c	0 e	0 c
2	Velocity fb	80	SP	30	g ai/a	1st Seedhead	A	0 a	3 ab	11 ab	10 d	24 ab
	Velocity fb	80	SP	30	g ai/a	+ 21 days	B					
	Velocity	80	SP	30	g ai/a	+14 days	C					
3	Velocity fb	80	SP	60	g ai/a	1st Seedhead	A	0 a	4 ab	11 ab	19 bc	30 a
	Velocity fb	80	SP	60	g ai/a	+ 21 days	B					
	Velocity	80	SP	60	g ai/a	+14 days	C					
4	Velocity fb	80	SP	30	g ai/a	1st Seedhead	A	0 a	1 ab	10 b	11 d	24 ab
	Velocity fb	80	SP	30	g ai/a	+ 21 days	B					
	Velocity	80	SP	60	g ai/a	+14 days	C					
5	Velocity	80	SP	30	g ai/a	1st Seedhead	A	0 a	4 ab	9 b	10 d	23 ab
	Velocity fb	80	SP	30	g ai/a	+ 21 days	B					
6	Velocity	80	SP	30	g ai/a	1st Seedhead	A	0 a	3 ab	10 b	13 cd	4 c
	Velocity fb	80	SP	60	g ai/a	+ 35 days	C					
7	Velocity	80	SP	60	g ai/a	1st Seedhead	A	0 a	4 ab	11 ab	20 b	4 c
	Velocity fb	80	SP	60	g ai/a	+ 35 days	C					
8	Velocity	80	SP	120	g ai/a	1st Seedhead	A	0 a	6 a	15 a	38 a	19 b
	Velocity fb	80	SP	120	g ai/a	+ 35 days	C					
9	Velocity	80	SP	60	g ai/a	1st Seedhead	A	0 a	3 ab	11 ab	18 bc	5 c
10	Velocity	80	SP	60	g ai/a		C	0 a	0 b	0 c		
LSD (P=.05)								0.0	4.8	3.6	6.0	9.3
Standard Deviation								0.0	3.3	2.5	4.1	6.4
CV								0.0	123.23	27.62	26.6	43.57

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

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Weed Code							LOLPE	LOLPE	POAAN	POAAN	POAAN	
Crop Code												
Part Rated												
Rating Data Type							Injury	Injury	Control	Control	Control	
Rating Unit							0-100	0-100	0-100	0-100	0-100	
Rating Date							3-31-2003	4-16-2003	2-28-2003	3-3-2003	3-10-2003	
Trt-Eval Interval							41 DA-A	57 DA-A	10 DA-A	13 DA-A	20 DA-A	
# Subsamples, Dec.							0	0	0	0	0	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Grow Unit	Stg	Appl Code	6	7	8	9	10
1	Untreated Check							0 e	3 c	0 b	0 c	0 d
2	Velocity fb	80	SP	30	g ai/a	1st Seedhead	A	20 ab	5 bc	15 a	85 a	79 abc
	Velocity fb	80	SP	30	g ai/a	+ 21 days	B					
	Velocity	80	SP	30	g ai/a	+14 days	C					
3	Velocity fb	80	SP	60	g ai/a	1st Seedhead	A	23 a	13 a	13 a	75 ab	83 ab
	Velocity fb	80	SP	60	g ai/a	+ 21 days	B					
	Velocity	80	SP	60	g ai/a	+14 days	C					
4	Velocity fb	80	SP	30	g ai/a	1st Seedhead	A	20 ab	14 a	15 a	83 ab	80 abc
	Velocity fb	80	SP	30	g ai/a	+ 21 days	B					
	Velocity	80	SP	60	g ai/a	+14 days	C					
5	Velocity	80	SP	30	g ai/a	1st Seedhead	A	1 e	0 c	15 a	83 ab	78 bc
	Velocity fb	80	SP	30	g ai/a	+ 21 days	B					
6	Velocity	80	SP	30	g ai/a	1st Seedhead	A	9 d	14 a	15 a	83 ab	75 c
	Velocity fb	80	SP	60	g ai/a	+ 35 days	C					
7	Velocity	80	SP	60	g ai/a	1st Seedhead	A	14 cd	10 ab	13 a	80 ab	80 abc
	Velocity fb	80	SP	60	g ai/a	+ 35 days	C					
8	Velocity	80	SP	120	g ai/a	1st Seedhead	A	10 cd	10 ab	18 a	85 a	84 a
	Velocity fb	80	SP	120	g ai/a	+ 35 days	C					
9	Velocity	80	SP	60	g ai/a	1st Seedhead	A	0 e	0 c	15 a	68 b	79 abc
10	Velocity	80	SP	60	g ai/a		C	15 bc	10 ab	0 b	0 c	
LSD (P=.05)							4.9	4.9	4.7	13.6	5.4	
Standard Deviation							3.4	3.4	3.3	9.4	3.7	
CV							30.2	43.37	27.58	14.61	5.18	

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

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Weed Code							POAAN	POAAN	POAAN	POAAN	POAAN	
Crop Code												
Part Rated											Seedhd	
Rating Data Type							Control	Control	Control	Control	Suppressn	
Rating Unit							0-100	0-100	0-100	0-100	0-100	
Rating Date							3-18-2003	3-31-2003	4-16-2003	5-5-2003	3-3-2003	
Trt-Eval Interval							28 DA-A	41 DA-A	57 DA-A	76 DA-A	13 DA-A	
# Subsamples, Dec.							0	0	0	0	0	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Stg	Appl Code	11	12	13	14	15
1	Untreated Check							0 e	0 f	0 e	0 e	0 b
2	Velocity fb	80	SP	30	g ai/a	1st Seedhead	A	76 bc	84 ab	99 ab	75 abc	95 a
	Velocity fb	80	SP	30	g ai/a	+ 21 days	B					
	Velocity	80	SP	30	g ai/a	+14 days	C					
3	Velocity fb	80	SP	60	g ai/a	1st Seedhead	A	90 ab	93 a	100 a	96 a	93 a
	Velocity fb	80	SP	60	g ai/a	+ 21 days	B					
	Velocity	80	SP	60	g ai/a	+14 days	C					
4	Velocity fb	80	SP	30	g ai/a	1st Seedhead	A	75 bc	91 a	99 ab	89 ab	93 a
	Velocity fb	80	SP	30	g ai/a	+ 21 days	B					
	Velocity	80	SP	60	g ai/a	+14 days	C					
5	Velocity	80	SP	30	g ai/a	1st Seedhead	A	79 bc	86 ab	58 c	64 bc	94 a
	Velocity fb	80	SP	30	g ai/a	+ 21 days	B					
6	Velocity	80	SP	30	g ai/a	1st Seedhead	A	48 d	38 d	61 c	29 de	95 a
	Velocity fb	80	SP	60	g ai/a	+ 35 days	C					
7	Velocity	80	SP	60	g ai/a	1st Seedhead	A	76 bc	71 bc	88 b	50 cd	94 a
	Velocity fb	80	SP	60	g ai/a	+ 35 days	C					
8	Velocity	80	SP	120	g ai/a	1st Seedhead	A	98 a	90 a	98 ab	91 ab	95 a
	Velocity fb	80	SP	120	g ai/a	+ 35 days	C					
9	Velocity	80	SP	60	g ai/a	1st Seedhead	A	70 c	62 c	15 d	16 e	92 a
10	Velocity	80	SP	60	g ai/a		C		20 e	61 c	28 de	0 b
LSD (P=.05)							15.7	15.6	11.0	26.6	3.8	
Standard Deviation							10.7	10.8	7.5	18.3	2.6	
CV							15.8	16.96	11.12	34.16	3.53	

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

