

University of GA Coop Ext Service

Effect of Overseeding Rate on Poa Annu Control with Bispyribac

Trial ID: Turf11-03

Study Dir.: Bill Nutt

Location: Griffin

Investigator: Tim R Murphy

GENERAL TRIAL INFORMATION

Investigator: Tim R Murphy

Title: Weed Scientist

Affiliation: UGA-CAES

Study Director: Bill Nutt

Title: ARCI

Affiliation: UGA-CAES

TRIAL LOCATION

City: Griffin

Trial Status:

ONE-YEAR/FINAL

State/Prov.: GA

Initiation Date:

2-18-2003

COOPERATOR/LANDOWNER

Cooperator: Shawn Askew, Weed Science

Org: VPI&SU

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	POAAN	ANNUAL BLUEGRASS	<i>POA ANNUA</i>

Crop 1: CYNDA BERMUDAGRASS/*CYNODON DACTYLON* Variety: Common Perennial Age: 20 yrs

Crop 2: LOLPE RYEGRASS, PERENNIAL/*LOLIUM PERENNE* Variety: Sunrise Primo

Planting Date: 10-23-2002

Planting Method: Overseeded ryegrass (Sunrise Primo) at

rate according to plot plan. Used Scotts 3 foot drop spreader, setting #9 1/2 to give 200

lbs/A. One time over plots = 200 lbs/A; Two times over plots = 400 lbs/A; Three times over

plots = 600 lbs/A. Raked in lightly with leaf rake.

SITE AND DESIGN

Plot Width, Unit: 6 FT Plot Length, Unit: 10 FT Reps: 4

Site Type: simulated golf course fairway

Study Design: SPLIT-PLOT

Trial Initiation Comments: Irrigated site. Maintained at 0.625 inch.

APPLICATION DESCRIPTION

	A	B
Application Date:	2-18-2003	3-21-2003
Time of Day:	2:00 pm	3:00 pm
Application Method:	Broadcast	Broadcast
Application Timing:	Post	Post
Applic. Placement:	Foliar	Foliar
Air Temp., Unit:	47 F	71 F
% Relative Humidity:	68	53
Wind Velocity, Unit:	2 mph	4.5 mph
Dew Presence (Y/N):	N	N
Soil Temp., Unit:	45 F	68 F
Soil Moisture:	High	High
% Cloud Cover:	0	0

University of GA Coop Ext Service

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	CYNDA Dormant	CYNDA 15% Green
Height, Unit:	.625 inch	.625 inch
Crop 2 Code, Stage:	LOLPE Active	LOLPE Active
Height, Unit:	.625 inch	1.5 inch

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	POAAN Multiple Tillers	POAAN
Stage Scale:	Seedhead emergence just starting (1/4 inch) to emerge from sheath	Seedhead
Density, Unit:	40 %	50 %
Diameter, Unit:	1-3, inch	

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	Backpack	Backpack
Operating Pressure:	26 psi	26 psi
Nozzle Type:	Flat fan	Flat fan
Nozzle Size:	8004vs	8004vs
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

Trial Comments

Data will consist of the following:

% Perennial ryegrass cover (2, 4, 6, and 8 wk after overseeding)

% Poa annua cover (2, 4, 6, 8, and 12 wk after 1st treatment)

% Poa annua control (2, 4, 6, 8, and 12 wk after 1st treatment)

% Perennial ryegrass cover (2, 4, 6, 8, and 12 wk after 1st treatment)

% Perennial ryegrass injury (2, 4, 6, 8, and 12 wk after 1st treatment)

Turfgrass Color (1-9 scale) (2,4, 6, 8, and 12 wk after 1st treatment)

Turfgrass Uniformity (1-9 scale) (2, 4, 6, 8, and 12 wk after 1st treatment)

11-7-02

Broadcast 1 lb N/1000 sq. ft. as 34-0-0 fertilizer over entire test area.

1-28-03

Sprayed entire area for winter broadleaf weeds - Used Trimec Classic at 3.25 pints/A and 0.25% v/v Non ionic surfactant.

.2-25-03

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

University of GA Coop Ext Service

Weed Code						LOLPE	LOLPE	LOLPE	LOLPE	LOLPE	LOLPE
Crop Code						Density	Density	Density	Density	Density	Injury
Rating Data Type						0-100	0-100	0-100	0-100	0-100	0-100
Rating Unit											
Rating Date						3-3-2003	3-18-2003	3-31-2003	4-16-2003	5-16-2003	3-3-2003
Trt-Eval Interval						13 DA-A	28 DA-A	41 DA-A	57 DA-A	87 DA-A	13 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Appl Unit Code						
12	Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80	SP	400 lb/a 60 g ai/a	B			91 a	100 a	88 a	
13	Overseeded Treat at 1st bloom Nontreated			600 lb/a		86 a	88 b	90 a	90 bc	88 a	0 b
14	Overseeded Treat at 1st bloom Velocity (Bispyribac)	80	SP	600 lb/a 60 g ai/a	A	84 a	98 a	91 a	87 c	86 a	11 a
15	Overseeded Trt 1 Mo After 1st bloom Nontreated			600 lb/a				88 ab	90 bc	88 a	
16	Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80	SP	600 lb/a 60 g ai/a	B			91 a	98 ab	88 a	
LSD (P=.05)						4.8	6.8	8.7	8.3	9.0	2.2
Standard Deviation						3.2	4.5	6.0	5.8	6.2	1.5
CV						4.27	5.28	7.12	6.67	7.37	27.52

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

University of GA Coop Ext Service

Weed Code						LOLPE	LOLPE	LOLPE	LOLPE	LOLPE
Crop Code						Injury	Injury	Injury	Injury	Color
Rating Data Type						0-100	0-100	0-100	0-100	1-9
Rating Unit										
Rating Date						3-18-2003	3-31-2003	4-16-2003	5-16-2003	3-3-2003
Trt-Eval Interval						28 DA-A	41 DA-A	57 DA-A	87 DA-A	13 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Appl Unit	Code				
1	Not Overseeded Treat at 1st bloom Nontreated			0 lb/a						
2	Not Overseeded Treat at 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	A					
3	Not Overseeded Trt 1 Mo After 1st bloom Nontreated			0 lb/a						
4	Not Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	B					
5	Overseeded Treat at 1st bloom Nontreated			200 lb/a		0 a	0 c	0 b	0 a	8.0 a
6	Overseeded Treat at 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	A	0 a	0 c	0 b	0 a	7.0 c
7	Overseeded Trt 1 Mo After 1st bloom Nontreated			200 lb/a			0 c	0 b	0 a	
8	Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	B		25 b	5 a	0 a	
9	Overseeded Treat at 1st bloom Nontreated			400 lb/a		0 a	0 c	0 b	0 a	8.0 a
10	Overseeded Treat at 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	A	0 a	0 c	0 b	0 a	7.0 c
11	Overseeded Trt 1 Mo After 1st bloom Nontreated			400 lb/a			0 c	0 b	0 a	
12	Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	B		25 b	5 a	0 a	

University of GA Coop Ext Service

Weed Code						LOLPE	LOLPE	LOLPE	LOLPE	LOLPE
Crop Code						Injury	Injury	Injury	Injury	Color
Rating Data Type						0-100	0-100	0-100	0-100	1-9
Rating Unit										
Rating Date						3-18-2003	3-31-2003	4-16-2003	5-16-2003	3-3-2003
Trt-Eval Interval						28 DA-A	41 DA-A	57 DA-A	87 DA-A	13 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Appl Unit Code					
13	Overseeded Treat at 1st bloom Nontreated			600 lb/a		0 a	0 c	0 b	0 a	8.1 a
14	Overseeded Treat at 1st bloom Velocity (Bispyribac)	80 SP		60 g ai/a	A	0 a	0 c	0 b	0 a	7.3 b
15	Overseeded Trt 1 Mo After 1st bloom Nontreated			600 lb/a			0 c	0 b	0 a	
16	Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80 SP		60 g ai/a	B		26 a	5 a	0 a	
LSD (P=.05)						0.0	1.0	0.0	0.0	0.22
Standard Deviation						0.0	0.7	0.0	0.0	0.15
CV						0.0	11.36	0.0	0.0	1.94

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

University of GA Coop Ext Service

Weed Code						LOLPE	LOLPE	LOLPE	LOLPE	LOLPE
Crop Code						Color	Color	Color	Color	Uniformity
Rating Data Type						1-9	1-9	1-9	1-9	1-9
Rating Unit										
Rating Date						3-18-2003	3-31-2003	4-16-2003	5-16-2003	3-3-2003
Trt-Eval Interval						28 DA-A	41 DA-A	57 DA-A	87 DA-A	13 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Appl Code					
1	Not Overseeded Treat at 1st bloom Nontreated			0 lb/a						
2	Not Overseeded Treat at 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	A					
3	Not Overseeded Trt 1 Mo After 1st bloom Nontreated			0 lb/a						
4	Not Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	B					
5	Overseeded Treat at 1st bloom Nontreated			200 lb/a		9 a	9 a	9.0 a	9.0 a	5.9 c
6	Overseeded Treat at 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	A	9 a	9 a	9.0 a	9.0 a	6.4 c
7	Overseeded Trt 1 Mo After 1st bloom Nontreated			200 lb/a			9 a	8.8 ab	9.0 a	
8	Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	B		7 b	8.6 bc	9.0 a	
9	Overseeded Treat at 1st bloom Nontreated			400 lb/a		9 a	9 a	9.0 a	9.0 a	7.1 b
10	Overseeded Treat at 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	A	9 a	9 a	9.0 a	9.0 a	7.5 ab
11	Overseeded Trt 1 Mo After 1st bloom Nontreated			400 lb/a			9 a	9.0 a	9.0 a	
12	Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	B		7 b	8.5 c	9.0 a	

University of GA Coop Ext Service

Weed Code						LOLPE	LOLPE	LOLPE	LOLPE	LOLPE
Crop Code						Color	Color	Color	Color	Uniformity
Rating Data Type						1-9	1-9	1-9	1-9	1-9
Rating Unit										
Rating Date						3-18-2003	3-31-2003	4-16-2003	5-16-2003	3-3-2003
Trt-Eval Interval						28 DA-A	41 DA-A	57 DA-A	87 DA-A	13 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Appl Unit Code					
13	Overseeded Treat at 1st bloom Nontreated			600 lb/a		9 a	9 a	9.0 a	9.0 a	7.9 a
14	Overseeded Treat at 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	A	9 a	9 a	9.0 a	9.0 a	8.1 a
15	Overseeded Trt 1 Mo After 1st bloom Nontreated			600 lb/a			9 a	9.0 a	9.0 a	
16	Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	B		7 c	8.5 c	9.0 a	
LSD (P=.05)						0.0	0.2	0.23	0.00	0.65
Standard Deviation						0.0	0.1	0.16	0.00	0.43
CV						0.0	1.7	1.8	0.0	6.07

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

University of GA Coop Ext Service

Weed Code						LOLPE	LOLPE	LOLPE	LOLPE	POAAN
Crop Code						Uniformity	Uniformity	Uniformity	Uniformity	Density
Rating Data Type						1-9	1-9	1-9	1-9	0-100
Rating Unit										
Rating Date						3-18-2003	3-31-2003	4-16-2003	5-16-2003	3-3-2003
Trt-Eval Interval						28 DA-A	41 DA-A	57 DA-A	87 DA-A	13 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Appl Unit Code					
1	Not Overseeded Treat at 1st bloom Nontreated			0 lb/a						53 a
2	Not Overseeded Treat at 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	A					43 b
3	Not Overseeded Trt 1 Mo After 1st bloom Nontreated			0 lb/a						
4	Not Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	B					
5	Overseeded Treat at 1st bloom Nontreated			200 lb/a		5.8 d	6 f	6.0 d	6.4 b	26 c
6	Overseeded Treat at 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	A	6.5 cd	7 def	6.0 d	6.3 b	18 d
7	Overseeded Trt 1 Mo After 1st bloom Nontreated			200 lb/a			6 f	7.0 cd	6.3 b	
8	Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	B		6 ef	8.1 abc	5.8 b	
9	Overseeded Treat at 1st bloom Nontreated			400 lb/a		6.8 c	7 cde	7.5 bc	7.5 a	14 de
10	Overseeded Treat at 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	A	8.1 ab	8 abc	7.5 bc	7.5 a	6 f
11	Overseeded Trt 1 Mo After 1st bloom Nontreated			400 lb/a			7 b-e	7.5 bc	7.6 a	
12	Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	B		8 ab	8.9 a	7.8 a	

University of GA Coop Ext Service

Weed Code						LOLPE	LOLPE	LOLPE	LOLPE	POAAN
Crop Code						Uniformity	Uniformity	Uniformity	Uniformity	Density
Rating Data Type						1-9	1-9	1-9	1-9	0-100
Rating Unit										
Rating Date						3-18-2003	3-31-2003	4-16-2003	5-16-2003	3-3-2003
Trt-Eval Interval						28 DA-A	41 DA-A	57 DA-A	87 DA-A	13 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Appl Unit Code					
13	Overseeded Treat at 1st bloom Nontreated			600 lb/a		7.8 b	8 a-d	8.3 ab	7.9 a	9 ef
14	Overseeded Treat at 1st bloom Velocity (Bispyribac)	80 SP		60 g ai/a	A	9.0 a	9 a	8.1 abc	7.6 a	4 f
15	Overseeded Trt 1 Mo After 1st bloom Nontreated			600 lb/a			8 abc	8.4 ab	7.9 a	
16	Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80 SP		60 g ai/a	B		8 ab	9.0 a	7.9 a	
LSD (P=.05)						0.90	1.1	1.01	0.67	6.2
Standard Deviation						0.60	0.7	0.70	0.46	4.2
CV						8.21	10.38	9.09	6.44	19.68

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

University of GA Coop Ext Service

Weed Code						POAAN	POAAN	POAAN	POAAN	POAAN
Crop Code						Density	Density	Density	Density	Control
Rating Data Type						0-100	0-100	0-100	0-100	0-100
Rating Unit						3-18-2003	3-31-2003	4-16-2003	5-16-2003	3-3-2003
Rating Date						28 DA-A	41 DA-A	57 DA-A	87 DA-A	13 DA-A
Trt-Eval Interval										
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Appl Unit Code					
1	Not Overseeded Treat at 1st bloom Nontreated			0 lb/a		76 a	80 a	89 a	70 a	0 d
2	Not Overseeded Treat at 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	A	43 b	55 c	78 b	68 a	30 c
3	Not Overseeded Trt 1 Mo After 1st bloom Nontreated			0 lb/a			73 ab	81 ab	66 a	
4	Not Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	B		61 bc	58 c	38 b	
5	Overseeded Treat at 1st bloom Nontreated			200 lb/a		28 c	29 d	24 de	13 c	0 d
6	Overseeded Treat at 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	A	6 d	20 d-g	26 d	14 c	70 b
7	Overseeded Trt 1 Mo After 1st bloom Nontreated			200 lb/a			25 de	23 def	11 c	
8	Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	B		23 def	5 gh	15 c	
9	Overseeded Treat at 1st bloom Nontreated			400 lb/a		26 c	18 d-g	14 efg	5 c	0 d
10	Overseeded Treat at 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	A	3 d	11 efg	14 efg	5 c	85 a
11	Overseeded Trt 1 Mo After 1st bloom Nontreated			400 lb/a			14 efg	13 fg	6 c	
12	Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	B		9 fg	1 h	6 c	

University of GA Coop Ext Service

Weed Code						POAAN	POAAN	POAAN	POAAN	POAAN	
Crop Code						Density	Density	Density	Density	Control	
Rating Data Type						0-100	0-100	0-100	0-100	0-100	
Rating Unit						3-18-2003	3-31-2003	4-16-2003	5-16-2003	3-3-2003	
Rating Date						28 DA-A	41 DA-A	57 DA-A	87 DA-A	13 DA-A	
Trt-Eval Interval											
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code					
13	Overseeded Treat at 1st bloom Nontreated			600 lb/a			20 c	10 fg	9 gh	5 c	0 d
14	Overseeded Treat at 1st bloom Velocity (Bispyribac)	80 SP		60 g ai/a	A		3 d	8 g	13 fg	4 c	91 a
15	Overseeded Trt 1 Mo After 1st bloom Nontreated			600 lb/a				13 efg	9 gh	6 c	
16	Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80 SP		60 g ai/a	B			9 fg	0 h	4 c	
LSD (P=.05)							9.2	12.1	9.7	10.8	8.2
Standard Deviation							6.3	8.5	6.8	7.5	5.6
CV							24.62	29.75	23.95	35.88	16.24

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

University of GA Coop Ext Service

Weed Code						POAAN	POAAN	POAAN	POAAN	POAAN
Crop Code						Control	Control	Control	Control	Suppression
Rating Data Type						0-100	0-100	0-100	0-100	0-100
Rating Unit						3-18-2003	3-31-2003	4-16-2003	5-16-2003	3-18-2003
Rating Date						28 DA-A	41 DA-A	57 DA-A	87 DA-A	28 DA-A
Trt-Eval Interval										
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Appl Unit Code					
1	Not Overseeded Treat at 1st bloom Nontreated			0 lb/a		0 d	0 d	0 c	5 c	0 d
2	Not Overseeded Treat at 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	A	50 c	16 cd	3 c	3 c	83 c
3	Not Overseeded Trt 1 Mo After 1st bloom Nontreated			0 lb/a			0 d	0 c	0 c	
4	Not Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	B		28 c	43 b	33 abc	
5	Overseeded Treat at 1st bloom Nontreated			200 lb/a		0 d	0 d	0 c	0 c	0 d
6	Overseeded Treat at 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	A	90 b	48 b	5 c	13 bc	91 b
7	Overseeded Trt 1 Mo After 1st bloom Nontreated			200 lb/a			0 d	0 c	13 bc	
8	Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	B		61 b	85 a	13 bc	
9	Overseeded Treat at 1st bloom Nontreated			400 lb/a		0 d	0 d	0 c	50 ab	0 d
10	Overseeded Treat at 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	A	97 a	61 b	8 c	50 ab	96 a
11	Overseeded Trt 1 Mo After 1st bloom Nontreated			400 lb/a			0 d	0 c	38 abc	
12	Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80	SP	60 g ai/a	B		86 a	99 a	38 abc	

University of GA Coop Ext Service

Weed Code						POAAN	POAAN	POAAN	POAAN	POAAN
Crop Code						Control	Control	Control	Control	Suppression
Rating Data Type						0-100	0-100	0-100	0-100	0-100
Rating Unit						3-18-2003	3-31-2003	4-16-2003	5-16-2003	3-18-2003
Rating Date						28 DA-A	41 DA-A	57 DA-A	87 DA-A	28 DA-A
Trt-Eval Interval										
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Appl Unit Code					
13	Overseeded Treat at 1st bloom Nontreated			600 lb/a		0 d	0 d	0 c	55 a	0 d
14	Overseeded Treat at 1st bloom Velocity (Bispyribac)	80 SP		60 g ai/a	A	97 a	80 a	24 bc	59 a	97 a
15	Overseeded Trt 1 Mo After 1st bloom Nontreated			600 lb/a			0 d	0 c	38 abc	
16	Overseeded Trt 1 Mo After 1st bloom Velocity (Bispyribac)	80 SP		60 g ai/a	B		79 a	100 a	60 a	
LSD (P=.05)						4.4	14.7	20.1	33.9	4.9
Standard Deviation						3.0	10.3	14.0	23.7	3.3
CV						7.14	35.88	61.57	81.84	7.26

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