

# North Carolina State University

## Virginia Buttonweed Control in Bermudagrass

Trial ID: 03-D48  
Location: Echo Farms GC

Study Dir.: Travis Gannon  
Investigator: Fred Yelverton

### GENERAL TRIAL INFORMATION

**Study Director:** Travis Gannon      **Title:** Research Associate  
**Affiliation:** North Carolina State University  
**Postal Code:** 27695  
**Investigator:** Fred Yelverton      **Title:** Professor  
**Affiliation:** North Carolina State University  
**Postal Code:** 27695

### TRIAL LOCATION

**City:** Wilmington      **Trial Status:** Completed  
**State/Prov.:** NC  
**Country:** USA      **Initiation Date:** 7-14-03

### COOPERATOR/LANDOWNER

**Cooperator:** Brian Stackowith      **Country:** USA  
**Org:** Echo Farms Golf & Country Club      **Phone No:** 910.799.7596  
**Address 1:** 4114 Echo Farms Blvd  
**City:** Wilmington  
**State/Prov:** NC  
**Postal Code:** 28412

**Conducted Under GLP (Y/N):** N      **Conducted Under GEP (Y/N):** N

### CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	DIQVI	Buttonweed, Virginia	Diodia virginiana

**Crop 1:** CYNDA bermudagrass

### SITE AND DESIGN

**Plot Width, Unit:** 5 FT      **Plot Length, Unit:** 10 FT      **Reps:** 4  
**Study Design:** RANDOMIZED COMPLETE BLOCK

### APPLICATION DESCRIPTION

	A
<b>Application Date:</b>	7-22-03
<b>Time of Day:</b>	11-12NOON
<b>Application Method:</b>	SPRAY
<b>Application Timing:</b>	JULY 22
<b>Applic. Placement:</b>	FOLIAR
<b>Air Temp., Unit:</b>	87.8 F
<b>% Relative Humidity:</b>	69
<b>Wind Velocity, Unit:</b>	6.9 MPH
<b>Dew Presence (Y/N):</b>	N
<b>Soil Temp., Unit:</b>	84 F
<b>Soil Moisture:</b>	GOOD
<b>% Cloud Cover:</b>	30

### CROP STAGE AT EACH APPLICATION

	A
<b>Crop 1 Code, Stage:</b>	CYNDA MOWED
<b>Height, Unit:</b>	3 INCH

### WEED STAGE AT EACH APPLICATION

	A
<b>Weed 1 Code, Stage:</b>	DIQVI
<b>Stage Scale:</b>	E FLOWER
<b>Density, Unit:</b>	6 FT <sup>2</sup>

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### APPLICATION EQUIPMENT

	A
Appl. Equipment:	CO2 SPRAY
Operating Pressure:	25 PSI
Nozzle Type:	FLAT FAN
Nozzle Size:	VS8002XR
Nozzle Spacing, Unit:	10 INCH
Nozzles/Row:	4
Boom Length, Unit:	40 INCH
Boom Height, Unit:	10 INCH
Ground Speed, Unit:	3 MPH
Carrier:	WATER
Spray Volume, Unit:	32.5 GPA
Propellant:	COMP CO2

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Weed Code										DIQVI	DIQVI	DIQVI	DIQVI	
Rating Data Type										CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit										%	%	%	%	
Rating Date										7-23-03	7-25-03	7-29-03	8-5-03	
Trt-Eval Interval										1 DA-A	3 DA-A	7 DA-A	14 DA-A	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	Spray Volume				
1	Quicksilver	1.9	EW	1.3	oz/a			JULY 22	A		10.0 a	56.3 a	87.5 a	43.8 de
2	Quicksilver Trimec Classic	1.9	EW L	1.3 2.5	oz/a pt/a			JULY 22 JULY 22	A A		10.0 a	52.5 a	80.0 a	55.0 bcd
3	Quicksilver Trimec Classic X-77	1.9	EW L L	1.3 2.5 0.25	oz/a pt/a % v/v			JULY 22 JULY 22 JULY 22	A A A		12.5 a	52.5 a	80.0 a	67.5 ab
4	Quicksilver Horsepower	1.9	EW L	1.3 2	oz/a pt/a			JULY 22 JULY 22	A A		10.0 a	52.5 a	75.0 a	66.3 ab
5	Quicksilver Chaser 2 Amine	1.9	EW L	1.3 2.5	oz/a pt/a			JULY 22 JULY 22	A A		11.3 a	53.8 a	75.0 a	66.3 ab
6	Quicksilver Millenium Ultra	1.9	EW L	1.3 2	oz/a pt/a			JULY 22 JULY 22	A A		12.5 a	51.3 a	82.5 a	73.8 a
7	Trimec Classic		L	3.5	pt/a			JULY 22	A		3.8 b	20.0 bc	28.8 bc	48.8 de
8	Horsepower	4.56	L	2	pt/a			JULY 22	A		3.8 b	17.5 bcd	21.3 c	38.8 e
9	Chaser 2 Amine	3.85	L	2.5	pt/a			JULY 22	A		2.5 b	23.8 b	26.3 bc	62.5 abc
10	Millenium Ultra	3.75	L	2	pt/a			JULY 22	A		3.8 b	12.5 cd	38.8 b	66.3 ab
11	Confront		L	1	pt/a			JULY 22	A		1.3 b	15.0 bcd	22.5 c	47.5 de
12	Monument X-77	75	WG L	12.5 0.25	g ai/a % v/v			JULY 22 JULY 22	A A		0.0 b	10.0 d	23.8 c	50.0 cde
13	Nontreated										0.0 b	0.0 e	0.0 d	0.0 f
LSD (P=.05)											4.80	9.41	14.39	13.41
Standard Deviation											3.36	6.58	10.07	9.38
CV											53.72	20.49	20.42	17.78
Grand Mean											6.25	32.12	49.33	52.79
Bartlett's X2											2.942	8.477	19.7	9.529
P(Bartlett's X2)											0.938	0.582	0.05*	0.573
Replicate F											1.863	1.080	2.191	6.382
Replicate Prob(F)											0.1534	0.3698	0.1059	0.0014
Treatment F											8.318	40.716	37.528	16.716
Treatment Prob(F)											0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Weed Code										DIQVI	DIQVI	DIQVI	DIQVI	
Rating Data Type										CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit										%	%	%	%	
Rating Date										8-12-03	8-20-03	9-3-03	9-24-03	
Trt-Eval Interval										21 DA-A	29 DA-A	43 DA-A	64 DA-A	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	Spray Volume				
1	Quicksilver	1.9	EW	1.3	oz/a			JULY 22	A		5.0 e	0.0 f	0.0 f	0.0 e
2	Quicksilver Trimec Classic	1.9	EW L	1.3 2.5	oz/a pt/a			JULY 22 JULY 22	A A		70.0 ab	60.0 b-e	42.5 cd	30.0 c
3	Quicksilver Trimec Classic X-77	1.9	EW L L	1.3 2.5 0.25	oz/a pt/a % v/v			JULY 22 JULY 22 JULY 22	A A A		63.8 abc	52.5 cde	50.0 bc	27.5 cd
4	Quicksilver Horsepower	1.9	EW L	1.3 2	oz/a pt/a			JULY 22 JULY 22	A A		56.3 bc	42.5 e	51.3 bc	41.3 bc
5	Quicksilver Chaser 2 Amine	1.9	EW L	1.3 2.5	oz/a pt/a			JULY 22 JULY 22	A A		70.0 ab	70.0 a-d	37.5 cde	11.3 de
6	Quicksilver Millenium Ultra	1.9	EW L	1.3 2	oz/a pt/a			JULY 22 JULY 22	A A		72.5 ab	72.3 abc	72.5 ab	70.0 a
7	Trimec Classic		L	3.5	pt/a			JULY 22	A		60.0 bc	45.0 de	53.8 bc	53.8 ab
8	Horsepower	4.56	L	2	pt/a			JULY 22	A		33.8 d	16.3 f	17.5 ef	0.0 e
9	Chaser 2 Amine	3.85	L	2.5	pt/a			JULY 22	A		76.3 ab	81.3 ab	58.8 bc	65.0 a
10	Millenium Ultra	3.75	L	2	pt/a			JULY 22	A		83.8 a	87.5 a	83.8 a	68.8 a
11	Confront		L	1	pt/a			JULY 22	A		48.8 cd	57.5 b-e	52.5 bc	38.8 bc
12	Monument X-77	75	WG L	12.5 0.25	g ai/a % v/v			JULY 22 JULY 22	A A		48.8 cd	56.3 b-e	23.8 def	35.0 c
13	Nontreated										0.0 e	0.0 f	0.0 f	0.0 e
LSD (P=.05)											20.46	25.49	24.35	17.57
Standard Deviation											14.32	17.84	17.04	12.30
CV											27.02	36.17	40.74	36.23
Grand Mean											52.98	49.31	41.83	33.94
Bartlett's X2											6.255	13.643	16.735	7.939
P(Bartlett's X2)											0.856	0.19	0.08	0.54
Replicate F											2.811	13.702	4.663	3.030
Replicate Prob(F)											0.0531	0.0001	0.0075	0.0418
Treatment F											13.238	10.158	8.990	17.577
Treatment Prob(F)											0.0001	0.0001	0.0001	0.0001

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### Trial Comments

7-22-03 - Trial initiated.

8-12-03 -

Plot 112 - dinged up bahiagrass

Plot 303 - severely injured carpetgrass

Plot 306 - carpetgrass stunted but OK

Plot 413 - carpetgrass stunted but OK