

North Carolina State University

CATSEAR DANDELION CONTROL IN COMMON BERMUDAGRASS USING BASTION T 3.1EW AND VISTA 1.5EC

Trial ID: 03-T33
Location: SANDHILLS STATION

Study Director: L.S. WARREN
Investigator: Fred Yelverton

General Trial Information

Study Director: L.S. WARREN **Title:** RESEARCH ASSOCIATE
Affiliation: NORTH CAROLINA STATE UNIVERSITY
Postal Code: 27695 **E-mail:** leon_warren@ncsu.edu
Investigator: Fred Yelverton **Title:** PROFESSOR
Affiliation: NORTH CAROLINA STATE UNIVERSITY
Postal Code: 27695 **E-mail:** fred_yelverton@ncsu.edu

Trial Location

City: JACKSON SPRINGS **Trial Status:** COMPLETED
State/Prov.: NC **Initiation Date:** 5-13-03
Country: USA
Directions:

Objectives:

TO DETERMINE IF BASTION T 3.1EW AND VISTA 1.5EC WILL CONTROL CATSEAR DANDELION IN COMMON BERMUDAGRASS WITHOUT CAUSING UNACCEPTABLE INJURY

Conclusions:

Cooperator/Landowner

Cooperator: MARK THOMPSON **Country:** USA
Organization: SANDHILLS RESEARCH STATION **Phone No:** 910/974-4673
City: JACKSON SPRINGS
State/Prov: NC

Crop Description

Crop 1: CYNDA Cynodon dactylon Bermuda grass
Variety: COMMON
BBCH Scale: BGRM

Pest Description

Pest 1 Type: W **Code:** TARSS Taraxacum sp.
Common Name: CATSEAR DANDELION

Site and Design

Plot Width, Unit: 5 FT **Site Type:** TURF - RESEARCH
Plot Length, Unit: 10 FT **Tillage Type:** NA
Replications: 4 **Study Design:** Randomized Complete Block

Trial Initiation Comments:

Field Prep./Maintenance:

Soil Description

% OM: 1.08
pH: 6.4
CEC: 5.7 **Fert. Level:** FAIR TO GOOD

Moisture Conditions

Overall Moisture Conditions: MAY 7.04"; JUN 5.68 "; JUL 5.40"
Closest Weather Station: JACKSON SPRINGS 5 WNW, NC **Distance:** 5 **Unit:** MI

	Date	Time	Amount	Unit	Type	Interval	Unit
1.	5-4-03		1.12	IN	RAINFALL	9	DBT
2.	5-6-03		1.42	IN	RAINFALL	7	DBT
3.	5-16-03		0.16	IN	RAINFALL	3	DAT
4.	5-19-03		0.75	IN	RAINFALL	6	DAT
5.	5-23-03		0.85	IN	RAINFALL	10	DAT
6.	5-26-03		0.93	IN	RAINFALL	13	DAT
7.	5-27-03		0.86	IN	RAINFALL	14	DAT
8.	6-1-03		1.76	IN	RAINFALL	19	DAT
9.	6-4-03		0.22	IN	RAINFALL	22	DAT
10.	6-8-03		1.16	IN	RAINFALL	26	DAT

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Application Description

	A
Application Date:	5-13-03
Time of Day:	12:30 PM
Application Method:	SPRAY
Application Timing:	POST
Application Placement:	BROFOL
Applied By:	LEON WARREN
Air Temperature, Unit:	78 F
% Relative Humidity:	64
Wind Velocity, Unit:	4.9 MPH
Dew Presence (Y/N):	N
Soil Temperature, Unit:	76 F
Soil Moisture:	MOIST
% Cloud Cover:	5

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	CYNDA BGRM
Stage Scale Used:	DESC
Stage Majority, Percent:	GREEN 100
Height, Unit:	1.5 IN

Pest Stage At Each Application

	A
Pest 1 Code, Disc., Scale:	TARSS W DESC
Stage Majority, Percent:	FLOWER 95
Diameter, Unit:	6 IN
Height, Unit:	1.5 IN
Density, Unit:	3 FT2

Application Equipment

	A
Appl. Equipment:	BACSPR
Operating Pressure:	35
Pressure Unit:	PSI
Nozzle Type:	FLAT FAN
Nozzle Size:	XR 8002VS
Nozzle Spacing, Unit:	10 IN
Band Width, Unit:	40 IN
Boom Length, Unit:	40 IN
Boom Height, Unit:	10 IN
Ground Speed, Unit:	3 MPH
Carrier:	WATER
Spray Volume:	32.5
Volume Unit:	GPA
Propellant:	COMCO2
Tank Mix (Y/N):	Y

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								W Weed TARSS 5-13-03 COVERAGE PERCENT L.S. WARREN 0 0 DA-A P	W Weed TARSS 5-13-03 CONTROL PERCENT L.S. WARREN 0 0 DA-A T1	W Weed TARSS 5-26-03 COVERAGE PERCENT L.S. WARREN 13 13 DA-A P			
Trt	Treatment	Form	Form	Rate	Other	Growth	Appl						
No.	Name	Conc	Type	Rate	Rate	Stage	Code						
1	BASTION T	3.1	EW	1.0	pt/a	MAY 13	A	32.5	bcd	13.7	abc	23.8	bcd
2	BASTION T	3.1	EW	1.5	pt/a	MAY 13	A	33.8	bcd	13.8	abc	22.5	bcd
3	BASTION T	3.1	EW	2.0	pt/a	MAY 13	A	23.8	d	38.2	a	16.3	cd
4	BASTION T	3.1	EW	2.5	pt/a	MAY 13	A	36.3	a-d	7.1	bcd	23.8	bcd
5	VISTA	1.5	EC	0.5	pt/a	MAY 13	A	32.5	bcd	18.0	abc	28.8	bc
6	VISTA	1.5	EC	1.0	pt/a	MAY 13	A	32.5	bcd	15.5	abc	17.5	cd
7	VISTA	1.5	EC	1.5	pt/a	MAY 13	A	31.3	bcd	19.5	abc	18.8	cd
8	XDE-638 (GF-443) BCH 889 26 S SURFACTANT	2	SC	0.25	pt/a	MAY 13	A	30.0	cd	19.6	abc	21.3	cd
		L		0.125	% v/v	MAY 13	A						
9	VISTA	1.5	EC	1.0	pt/a	MAY 13	A	48.8	a	-23.2	d	37.5	ab
	XDE-638 (GF-443)	2	SC	0.25	pt/a	MAY 13	A						
10	VISTA	1.5	EC	1.5	pt/a	MAY 13	A	36.3	a-d	5.9	bcd	23.8	bcd
	MANOR	60	WG	0.25	oz wt/a	MAY 13	A						
11	RIV-0403		L	3.0	pt/a	MAY 13	A	26.3	cd	32.6	ab	12.5	d
12	MOMENTUM		L	3.0	pt/a	MAY 13	A	35.0	bcd	11.1	abc	20.0	cd
13	CONFRONT	3	SL	1.0	pt/a	MAY 13	A	43.8	ab	-9.6	cd	26.3	bcd
14	CHECK							38.8	abc	0.0	cd	46.3	a
LSD (P=.05)								12.91		30.87		16.02	
Standard Deviation								9.04		21.60		11.21	
CV								26.29		186.44		46.32	
Grand Mean								34.38		11.59		24.2	
Bartlett's X2								5.511		5.157		9.139	
P(Bartlett's X2)								0.962		0.953		0.762	
Replicate F								15.135		5.619		3.368	
Replicate Prob(F)								0.0001		0.0027		0.0280	
Treatment F								2.034		2.105		2.431	
Treatment Prob(F)								0.0438		0.0366		0.0162	

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.

Column 2: T1 = 100*(1-(C11)/(C1T14))

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CATSEAR DANDELION CONTROL IN COMMON BERMUDAGRASS USING BASTION T 3.1EW AND VISTA 1.5EC

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Study Director: L.S. WARREN
Investigator: Fred Yelverton

Pest Type								W Weed	W Weed	W Weed	
Pest Code								TARSS	TARSS	TARSS	
Rating Date								5-26-03	6-10-03	6-10-03	
Rating Data Type								CONTROL	COVERAGE	CONTROL	
Rating Unit								PERCENT	PERCENT	PERCENT	
Assessed By								L.S. WARREN	L.S. WARREN	L.S. WARREN	
Days After Last Applic.								13	28	28	
Trt-Eval Interval								13 DA-A	28 DA-A	28 DA-A	
ARM Action Codes								T3	P	T4	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate Unit	Growth Stage	Appl Code			
1	BASTION T	3.1	EW	1.0	pt/a		MAY 13 A		43.8 abc	18.8 c	62.9 c
2	BASTION T	3.1	EW	1.5	pt/a		MAY 13 A		52.5 abc	12.5 cd	75.8 bc
3	BASTION T	3.1	EW	2.0	pt/a		MAY 13 A		55.8 ab	8.3 de	81.7 b
4	BASTION T	3.1	EW	2.5	pt/a		MAY 13 A		46.7 abc	8.0 de	85.2 ab
5	VISTA	1.5	EC	0.5	pt/a		MAY 13 A		34.6 bc	32.5 b	36.8 d
6	VISTA	1.5	EC	1.0	pt/a		MAY 13 A		57.9 ab	20.0 c	61.3 c
7	VISTA	1.5	EC	1.5	pt/a		MAY 13 A		54.6 ab	5.0 de	89.9 ab
8	XDE-638 (GF-443)	2	SC	0.25	pt/a		MAY 13 A		48.3 abc	12.5 cd	75.1 bc
	BCH 889 26 S SURFACTANT		L	0.125	% v/v		MAY 13 A				
9	VISTA	1.5	EC	1.0	pt/a		MAY 13 A		22.1 cd	11.3 cd	79.0 b
	XDE-638 (GF-443)	2	SC	0.25	pt/a		MAY 13 A				
10	VISTA	1.5	EC	1.5	pt/a		MAY 13 A		44.2 abc	1.3 e	97.7 a
	MANOR	60	WG	0.25	oz wt/a		MAY 13 A				
11	RIV-0403		L	3.0	pt/a		MAY 13 A		70.4 a	0.3 e	99.6 a
12	MOMENTUM		L	3.0	pt/a		MAY 13 A		56.7 ab	0.8 e	98.7 a
13	CONFRONT	3	SL	1.0	pt/a		MAY 13 A		42.9 abc	5.8 de	90.3 ab
14	CHECK								0.0 d	52.5 a	0.0 e
LSD (P=.05)								31.86	9.84	15.92	
Standard Deviation								22.29	6.88	11.14	
CV								49.51	50.93	15.08	
Grand Mean								45.03	13.52	73.86	
Bartlett's X2								8.316	43.229	47.477	
P(Bartlett's X2)								0.76	0.001*	0.001*	
Replicate F								6.455	3.918	2.771	
Replicate Prob(F)								0.0012	0.0154	0.0543	
Treatment F								2.411	17.123	24.048	
Treatment Prob(F)								0.0170	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.

Column 4: T3 = 100*(1-((C3)/(C3T14)))

Column 6: T4 = 100*(1-((C5)/(C5T14)))

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Study Director: L.S. WARREN
Investigator: Fred Yelverton

Pest Type								W Weed	W Weed	W Weed	
Pest Code								TARSS	TARSS	TARSS	
Rating Date								6-23-03	6-23-03	7-8-03	
Rating Data Type								COVERAGE	CONTROL	COVERAGE	
Rating Unit								PERCENT	PERCENT	PERCENT	
Assessed By								L.S. WARREN	L.S. WARREN	L.S. WARREN	
Days After Last Applic.								41	41	56	
Trt-Eval Interval								41 DA-A	41 DA-A	56 DA-A	
ARM Action Codes								P	T5	P	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate Unit	Growth Stage	Appl Code			
1	BASTION T	3.1	EW	1.0	pt/a		MAY 13 A		22.5 cd	56.3 de	27.5 bc
2	BASTION T	3.1	EW	1.5	pt/a		MAY 13 A		17.5 d	68.5 cd	22.5 bcd
3	BASTION T	3.1	EW	2.0	pt/a		MAY 13 A		13.3 de	72.4 cd	18.8 cde
4	BASTION T	3.1	EW	2.5	pt/a		MAY 13 A		13.8 de	76.2 bcd	18.5 cde
5	VISTA	1.5	EC	0.5	pt/a		MAY 13 A		40.0 b	28.3 f	35.0 ab
6	VISTA	1.5	EC	1.0	pt/a		MAY 13 A		33.8 bc	36.6 ef	27.5 bc
7	VISTA	1.5	EC	1.5	pt/a		MAY 13 A		10.0 def	80.7 abc	10.3 def
8	XDE-638 (GF-443)	2	SC	0.25	pt/a		MAY 13 A		16.3 d	68.2 cd	20.0 b-e
	BCH 889 26 S SURFACTANT		L	0.125	% v/v		MAY 13 A				
9	VISTA	1.5	EC	1.0	pt/a		MAY 13 A		20.0 d	65.8 cd	27.5 bc
	XDE-638 (GF-443)	2	SC	0.25	pt/a		MAY 13 A				
10	VISTA	1.5	EC	1.5	pt/a		MAY 13 A		2.3 ef	96.0 ab	5.3 ef
	MANOR	60	WG	0.25	oz wt/a		MAY 13 A				
11	RIV-0403		L	3.0	pt/a		MAY 13 A		0.0 f	100.0 a	0.0 f
12	MOMENTUM		L	3.0	pt/a		MAY 13 A		0.0 f	100.0 a	0.3 f
13	CONFRONT	3	SL	1.0	pt/a		MAY 13 A		2.0 ef	96.1 ab	2.3 f
14	CHECK								57.5 a	0.0 g	50.0 a
LSD (P=.05)								13.20	20.19	15.02	
Standard Deviation								9.23	14.13	10.51	
CV								51.97	20.93	55.48	
Grand Mean								17.77	67.49	18.95	
Bartlett's X2								28.293	24.54	41.953	
P(Bartlett's X2)								0.003*	0.006*	0.001*	
Replicate F								3.813	5.817	5.943	
Replicate Prob(F)								0.0173	0.0022	0.0019	
Treatment F								12.904	17.265	7.536	
Treatment Prob(F)								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.

Column 8: T5 = 100*(1-((C7)/(C7T14)))

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Location: SANDHILLS STATION

Study Director: L.S. WARREN
Investigator: Fred Yelverton

Pest Type					W Weed				
Pest Code					TARSS				
Rating Date					7-8-03				
Rating Data Type					CONTROL				
Rating Unit					PERCENT				
Assessed By					L.S. WARREN				
Days After Last Applic.					56				
Trt-Eval Interval					56 DA-A				
ARM Action Codes					T6				
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate Unit	Growth Stage	Appl Code	
1	BASTION T	3.1	EW	1.0	pt/a		MAY 13 A		40.4 de
2	BASTION T	3.1	EW	1.5	pt/a		MAY 13 A		56.3 cd
3	BASTION T	3.1	EW	2.0	pt/a		MAY 13 A		59.6 cd
4	BASTION T	3.1	EW	2.5	pt/a		MAY 13 A		65.4 bcd
5	VISTA	1.5	EC	0.5	pt/a		MAY 13 A		27.1 ef
6	VISTA	1.5	EC	1.0	pt/a		MAY 13 A		48.3 de
7	VISTA	1.5	EC	1.5	pt/a		MAY 13 A		78.3 abc
8	XDE-638 (GF-443)	2	SC	0.25	pt/a		MAY 13 A		59.6 cd
	BCH 889 26 S SURFACTANT		L	0.125	% v/v		MAY 13 A		
9	VISTA	1.5	EC	1.0	pt/a		MAY 13 A		46.7 de
	XDE-638 (GF-443)	2	SC	0.25	pt/a		MAY 13 A		
10	VISTA	1.5	EC	1.5	pt/a		MAY 13 A		90.2 ab
	MANOR	60	WG	0.25	oz wt/a		MAY 13 A		
11	RIV-0403		L	3.0	pt/a		MAY 13 A		100.0 a
12	MOMENTUM		L	3.0	pt/a		MAY 13 A		99.6 a
13	CONFRONT	3	SL	1.0	pt/a		MAY 13 A		95.3 a
14	CHECK								0.0 f
LSD (P=.05)									27.41
Standard Deviation									19.18
CV									30.98
Grand Mean									61.9
Bartlett's X2									36.969
P(Bartlett's X2)									0.001*
Replicate F									2.988
Replicate Prob(F)									0.0427
Treatment F									9.226
Treatment Prob(F)									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.
Column 10: T6 = 100*(1-([C9]/[C9T14]))

Trial Comments

05-13-03: CATSEAR DANDELION IN TEST AREA IN FULL FLOWER BEFORE MOWED TO 1.5 INCHES

05-26-03, 06-10-03, 06-23-03: CYNDA PHYTO WAS NOT OBSERVED IN ANY OF THE PLOTS