

# North Carolina State University

## WINTER ANNUAL BROADLEAF WEED CONTROL WITH PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES (RUN #1)

Trial ID: 01-GH3

Study Dir.: F.H. YELVERTON

Location: NCSU GREENHOUSE

Investigator: Crop Science Department

### GENERAL TRIAL INFORMATION

**Study Director:** F.H. YELVERTON

**Title:** PROFESSOR

**Affiliation:** NORTH CAROLINA STATE UNIVERSITY

**Postal Code:** 27695

**Investigator:** LEON WARREN

**Title:** RESEARCH SPECIALIST

**Affiliation:** NORTH CAROLINA STATE UNIVERSITY

**Postal Code:** 27695

### TRIAL LOCATION

**City:** RALEIGH

**Trial Status:** COMPLETED

**State/Prov.:** NC

**Postal Code:** 27607

**Initiation Date:** 02-01-01

**Country:** USA

### COOPERATOR/LANDOWNER

**Cooperator:** DAVID L. KING

**Country:** USA

**Org:** NORTH CAROLINA DOT

**Phone No:** 919/733-2920

**Address 1:** P.O. BOX 25201

**Fax No:** 919/733-9810

**City:** RALEIGH

**State/Prov:** NC

**Postal Code:** 27611-5201

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

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

**Objective:** TO EVALUATE EFFICACY OF PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES FOR CAROLINA GERANIUM, VIRGINIA PEPPERWEED, SHEPHERDSPURSE AND SPINY SOWTHISTLE CONTROL

### CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	GERCA	GERANIUM, CAROLINA	GERANIUM CAROLINIANUM L.
2.	LEPVI	PEPPERWEED, VIRGINIA	LEPIDIUM VIRGINICUM L.
3.	CAPBP	SHEPHERDSPURSE	CAPSELLA BURSA-PASTORIS (L.) MEDIK.
4.	SONAS	SOWTHISTLE, SPINY	SONCHUS ASPER (L.) HILL

**Crop 1:** NONE

### SITE AND DESIGN

**Plot Width, Unit:** 0.5 FT

**Plot Length, Unit:** 0.5 FT

**Reps:** 3

**Site Type:** GREENHOUSE

**Tillage Type:** N/A

**Study Design:** RANDOMIZED COMPLETE BLOCK

### SOIL DESCRIPTION

**Texture:** GREENHOUSE MIX (SOIL, SAND, METRO-MIX)

**Soil Name:** N/A

**Fert. Level:** GOOD

**Overall Moisture Conditions:** IRRIGATED 2 TO 3X DAILY AT 5 MINUTE INTERVALS

# North Carolina State University

## WINTER ANNUAL BROADLEAF WEED CONTROL WITH PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES (RUN #1)

Trial ID: 01-GH3

Study Dir.: F.H. YELVERTON

Location: NCSU GREENHOUSE

Investigator: Crop Science Department

### APPLICATION DESCRIPTION

	A	B
Application Date:	02-01-01	02-01-01
Time of Day:	2-3:00 PM	3-4:00 PM
Application Method:	SPRAY	SPRAY
Application Timing:	PPI	PRE
Applic. Placement:	BROSOI	BROSOI
Air Temp., Unit:	51 F	51 F
% Relative Humidity:	64	64
Wind Velocity, Unit:	0 MPH	0 MPH
Dew Presence (Y/N):	N	N
Soil Temp., Unit:	60 F	60 F
Soil Moisture:	MOIST	MOIST
% Cloud Cover:	0	0

### CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	NONE	NONE

### WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	GERCA PREPLANT	GERCA SEEDED
Weed 2 Code, Stage:	LEPVI PREPLANT	LEPVI SEEDED
Weed 3 Code, Stage:	CAPBP PREPLANT	CAPBP SEEDED
Weed 4 Code, Stage:	SONAS PREPLANT	SONAS SEEDED

### APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	SPCHAMBER	SPCHAMBER
Operating Pressure:	34	34
Nozzle Type:	EVEN FLAT	EVEN FLAT
Nozzle Size:	XR8001EVS	XR8001EVS
Nozzle Spacing, Unit:	18 IN	18 IN
Band Width, Unit:	18 IN	18 IN
Boom Length, Unit:	18 IN	18 IN
Boom Height, Unit:	12 IN	12 IN
Ground Speed, Unit:	1.5 MPH	1.5 MPH
Incorporation Equip.:	BAGTOSSED	
Hours to Incorp.:	0.1	
Incorp. Depth, Unit:	4.0 IN	
Carrier:	WATER	WATER
Spray Volume, Unit:	20 GPA	20 GPA
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	N	N

# North Carolina State University

## WINTER ANNUAL BROADLEAF WEED CONTROL WITH PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES (RUN #1)

Trial ID: 01-GH3

Study Dir.: F.H. YELVERTON

Location: NCSU GREENHOUSE

Investigator: Crop Science Department

Weed Code						GERCA	SONAS	LEPVI	CAPBP		
Rating Data Type						P-CONTRO	P-CONTRO	P-CONTRO	P-CONTRO		
Rating Unit						PERCENT	PERCENT	PERCENT	PERCENT		
Rating Date						02-22-01	02-22-01	02-22-01	02-22-01		
Trt-Eval Interval						21 DA-A	21 DA-A	21 DA-A	21 DA-A		
ARM Action Codes						P	P	P	P		
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Grow Unit	Appl Stg	Code				
1	EPTAM	7.0	EC	3.06	LB A/A	PPI	A	40.0 ab	0.0 f	0.0 d	3.3 d
2	PREDICT	78.6	DF	0.98	LB A/A	PPI	A	0.0 b	81.7 ab	99.7 a	99.7 a
3	PREFAR	4.0	EC	5.0	LB A/A	PPI	A	0.0 b	33.3 b-f	0.0 d	0.0 d
4	TREFLAN HFP	4.0	EC	0.5	LB A/A	PPI	A	66.7 ab	6.7 def	0.0 d	0.0 d
5	ALANAP-L	2.0	L	2.0	LB A/A	PRE	B	33.0 b	28.3 b-f	51.7 c	41.7 bcd
6	AUTHORITY	75	DF	3.975	OZ A/A	PRE	B	16.7 b	100.0 a	96.7 ab	100.0 a
7	COTORAN	4.0	L	1.0	LB A/A	PRE	B	0.0 b	76.7 abc	65.0 abc	100.0 a
8	CURBIT	3.0	EC	1.125	LB A/A	PRE	B	35.0 b	1.7 f	56.7 bc	66.7 ab
9	DEVIRINOL	50	DF	2.0	LB A/A	PRE	B	10.0 b	18.3 b-f	71.7 abc	45.0 bc
10	FACTOR	65	WG	0.65	LB A/A	PRE	B	5.0 b	36.7 a-f	58.0 bc	25.0 cd
11	GALLERY	75	DF	0.5	LB A/A	PRE	B	100.0 a	100.0 a	99.7 a	100.0 a
12	GOAL XL	2.0	L	0.25	LB A/A	PRE	B	50.0 ab	98.3 a	100.0 a	100.0 a
13	IMAGE LC	1.5	LC	0.375	LB A/A	PRE	B	6.7 b	16.7 c-f	91.7 abc	98.3 a
14	KERB	50	WP	1.0	LB A/A	PRE	B	33.3 b	0.0 f	89.7 abc	91.7 a
15	PENDULUM	60	WG	1.5	LB A/A	PRE	B	33.3 b	6.7 def	86.7 abc	91.7 a
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A	PRE	B	6.7 b	5.0 ef	85.0 abc	91.7 a
17	PLATEAU	2.0	AS	1.0	OZ A/A	PRE	B	6.7 b	38.3 a-f	74.3 abc	75.0 ab
18	SINBAR	80	WP	0.4	LB A/A	PRE	B	0.0 b	70.0 a-d	99.7 a	99.7 a
19	STAPLE	85	SP	0.51	OZ A/A	PRE	B	10.0 b	3.3 ef	83.0 abc	75.0 ab
20	SURFLAN	4.0	AS	2.0	LB A/A	PRE	B	41.7 ab	66.7 a-e	93.3 ab	100.0 a
21	VELPAR	75	DF	0.5	LB A/A	PRE	B	0.0 b	66.7 a-e	95.0 ab	91.7 a

# North Carolina State University

**WINTER ANNUAL BROADLEAF WEED CONTROL WITH PREPLANT INCORPORATED AND  
PREEMERGENCE HERBICIDES (RUN #1)**

Trial ID: 01-GH3

Study Dir.: F.H. YELVERTON

Location: NCSU GREENHOUSE

Investigator: Crop Science Department

Weed Code	GERCA	SONAS	LEPVI	CAPBP
Rating Data Type	P-CONTRO	P-CONTRO	P-CONTRO	P-CONTRO
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date	02-22-01	02-22-01	02-22-01	02-22-01
Trt-Eval Interval	21 DA-A	21 DA-A	21 DA-A	21 DA-A
ARM Action Codes	P	P	P	P
Trt Treatment No. Name	Form Form Conc Type Rate	Rate Unit	Grow Appl Stg Code	
22 CHECK	0.0 b	0.0 f	0.0 d	0.0 d
LSD (P=.05)	56.27	54.72	34.75	37.73
Standard Deviation	34.10	33.16	21.06	22.87
CV	151.67	85.32	30.95	33.63
Bartlett's X2	28.726	41.36	68.246	46.412
P(Bartlett's X2)	0.007*	0.001*	0.001*	0.001*
Replicate F	0.655	0.078	2.296	0.264
Replicate Prob(F)	0.5244	0.9255	0.1131	0.7692
Treatment F	1.760	3.670	8.750	8.610
Treatment Prob(F)	0.0589	0.0002	0.0001	0.0001

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

# North Carolina State University

## WINTER ANNUAL BROADLEAF WEED CONTROL WITH PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES (RUN #1)

Trial ID: 01-GH3

Study Dir.: F.H. YELVERTON

Location: NCSU GREENHOUSE

Investigator: Crop Science Department

Weed Code							GERCA	SONAS	LEPVI	CAPBP	
Rating Data Type							P-CONTRO	P-CONTRO	P-CONTRO	P-CONTRO	
Rating Unit							PERCENT	PERCENT	PERCENT	PERCENT	
Rating Date							03-01-01	03-01-01	03-01-01	03-01-01	
Trt-Eval Interval							28 DA-A	28 DA-A	28 DA-A	28 DA-A	
ARM Action Codes							P	P	P	P	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code				
1	EPTAM	7.0	EC	3.06	LB A/A	PPI	A	41.7 ab	6.7 cd	0.0 c	3.3 c
2	PREDICT	78.6	DF	0.98	LB A/A	PPI	A	1.7 b	96.7 a	100.0 a	100.0 a
3	PREFAR	4.0	EC	5.0	LB A/A	PPI	A	0.0 b	0.0 d	0.0 c	0.0 c
4	TREFLAN HFP	4.0	EC	0.5	LB A/A	PPI	A	66.7 ab	6.7 cd	0.0 c	0.0 c
5	ALANAP-L	2.0	L	2.0	LB A/A	PRE	B	16.7 b	20.0 bcd	56.7 b	66.7 b
6	AUTHORITY	75	DF	3.975	OZ A/A	PRE	B	6.7 b	100.0 a	98.3 a	100.0 a
7	COTORAN	4.0	L	1.0	LB A/A	PRE	B	50.0 ab	100.0 a	80.0 a	100.0 a
8	CURBIT	3.0	EC	1.125	LB A/A	PRE	B	33.3 ab	0.0 d	93.3 a	99.7 a
9	DEVTRINOL	50	DF	2.0	LB A/A	PRE	B	10.0 b	51.7 a-d	88.3 a	96.7 a
10	FACTOR	65	WG	0.65	LB A/A	PRE	B	21.7 b	58.3 ab	79.7 a	96.0 a
11	GALLERY	75	DF	0.5	LB A/A	PRE	B	100.0 a	100.0 a	99.7 a	100.0 a
12	GOAL XL	2.0	L	0.25	LB A/A	PRE	B	36.7 ab	100.0 a	100.0 a	100.0 a
13	IMAGE LC	1.5	LC	0.375	LB A/A	PRE	B	10.0 b	45.0 bcd	99.0 a	100.0 a
14	KERB	50	WP	1.0	LB A/A	PRE	B	33.3 ab	0.0 d	100.0 a	100.0 a
15	PENDULUM	60	WG	1.5	LB A/A	PRE	B	28.3 b	11.7 bcd	96.0 a	100.0 a
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A	PRE	B	31.7 b	53.3 abc	98.0 a	98.3 a
17	PLATEAU	2.0	AS	1.0	OZ A/A	PRE	B	10.0 b	39.7 bcd	96.3 a	99.7 a
18	SINBAR	80	WP	0.4	LB A/A	PRE	B	98.3 a	100.0 a	100.0 a	99.7 a
19	STAPLE	85	SP	0.51	OZ A/A	PRE	B	3.3 b	3.3 cd	96.3 a	100.0 a
20	SURFLAN	4.0	AS	2.0	LB A/A	PRE	B	36.7 ab	45.0 bcd	98.3 a	99.7 a
21	VELPAR	75	DF	0.5	LB A/A	PRE	B	99.7 a	100.0 a	100.0 a	100.0 a

# North Carolina State University

**WINTER ANNUAL BROADLEAF WEED CONTROL WITH PREPLANT INCORPORATED AND  
PREEMERGENCE HERBICIDES (RUN #1)**

Trial ID: 01-GH3

Study Dir.: F.H. YELVERTON

Location: NCSU GREENHOUSE

Investigator: Crop Science Department

Weed Code	GERCA	SONAS	LEPVI	CAPBP
Rating Data Type	P-CONTRO	P-CONTRO	P-CONTRO	P-CONTRO
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date	03-01-01	03-01-01	03-01-01	03-01-01
Trt-Eval Interval	28 DA-A	28 DA-A	28 DA-A	28 DA-A
ARM Action Codes	P	P	P	P
Trt Treatment No. Name	Form Form Conc Type Rate	Rate Unit	Grow Appl Stg Code	
22 CHECK	0.0 b	0.0 d	0.0 c	0.0 c
LSD (P=.05)	57.29	43.88	20.08	17.70
Standard Deviation	34.72	26.59	12.17	10.72
CV	103.74	56.36	15.94	13.41
Bartlett's X2	52.26	22.256	46.303	67.903
P(Bartlett's X2)	0.001*	0.022*	0.001*	0.001*
Replicate F	1.162	0.155	1.737	0.842
Replicate Prob(F)	0.3228	0.8568	0.1884	0.4381
Treatment F	2.543	7.182	29.553	39.347
Treatment Prob(F)	0.0050	0.0001	0.0001	0.0001

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

# North Carolina State University

## WINTER ANNUAL BROADLEAF WEED CONTROL WITH PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES (RUN #1)

Trial ID: 01-GH3

Study Dir.: F.H. YELVERTON

Location: NCSU GREENHOUSE

Investigator: Crop Science Department

Weed Code						GERCA	SONAS	LEPVI	CAPBP		
Rating Data Type						P-CONTRO	P-CONTRO	P-CONTRO	P-CONTRO		
Rating Unit						PERCENT	PERCENT	PERCENT	PERCENT		
Rating Date						03-07-01	03-07-01	03-07-01	03-07-01		
Trt-Eval Interval						34 DA-A	34 DA-A	34 DA-A	34 DA-A		
ARM Action Codes						P	P	P	P		
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg	Code				
1	EPTAM	7.0	EC	3.06 LB	A/A	PPI	A	48.3 abc	30.0 def	3.3 c	3.3 b
2	PREDICT	78.6	DF	0.98 LB	A/A	PPI	A	3.3 c	83.3 abc	100.0 a	100.0 a
3	PREFAR	4.0	EC	5.0 LB	A/A	PPI	A	6.7 c	33.3 def	0.0 c	0.0 b
4	TREFLAN HFP	4.0	EC	0.5 LB	A/A	PPI	A	41.7 abc	6.7 def	0.0 c	0.0 b
5	ALANAP-L	2.0	L	2.0 LB	A/A	PRE	B	30.0 bc	25.0 def	75.0 ab	66.7 a
6	AUTHORITY	75	DF	3.975 OZ	A/A	PRE	B	6.7 c	100.0 a	96.7 a	100.0 a
7	COTORAN	4.0	L	1.0 LB	A/A	PRE	B	41.7 abc	100.0 a	88.3 a	100.0 a
8	CURBIT	3.0	EC	1.125 LB	A/A	PRE	B	40.0 abc	0.0 f	89.7 a	99.7 a
9	DEVIRINOL	50	DF	2.0 LB	A/A	PRE	B	73.3 ab	88.3 ab	91.7 a	100.0 a
10	FACTOR	65	WG	0.65 LB	A/A	PRE	B	56.7 abc	48.3 bcd	63.0 b	66.7 a
11	GALLERY	75	DF	0.5 LB	A/A	PRE	B	100.0 a	100.0 a	100.0 a	100.0 a
12	GOAL XL	2.0	L	0.25 LB	A/A	PRE	B	36.7 abc	100.0 a	100.0 a	100.0 a
13	IMAGE LC	1.5	LC	0.375 LB	A/A	PRE	B	33.3 bc	46.7 b-e	97.7 a	100.0 a
14	KERB	50	WP	1.0 LB	A/A	PRE	B	33.3 bc	0.0 f	96.3 a	100.0 a
15	PENDULUM	60	WG	1.5 LB	A/A	PRE	B	55.0 abc	43.3 c-f	94.7 a	100.0 a
16	PENNANT LIQUID	8.0	EC	2.0 LB	A/A	PRE	B	73.3 ab	98.3 a	99.7 a	100.0 a
17	PLATEAU	2.0	AS	1.0 OZ	A/A	PRE	B	33.3 bc	35.0 def	96.3 a	100.0 a
18	SINBAR	80	WP	0.4 LB	A/A	PRE	B	98.3 a	100.0 a	99.7 a	100.0 a
19	STAPLE	85	SP	0.51 OZ	A/A	PRE	B	3.3 c	3.3 ef	96.3 a	100.0 a
20	SURFLAN	4.0	AS	2.0 LB	A/A	PRE	B	75.0 ab	100.0 a	99.7 a	100.0 a
21	VELPAR	75	DF	0.5 LB	A/A	PRE	B	91.7 ab	100.0 a	100.0 a	100.0 a

# North Carolina State University

**WINTER ANNUAL BROADLEAF WEED CONTROL WITH PREPLANT INCORPORATED AND  
PREEMERGENCE HERBICIDES (RUN #1)**

Trial ID: 01-GH3

Study Dir.: F.H. YELVERTON

Location: NCSU GREENHOUSE

Investigator: Crop Science Department

Weed Code	GERCA	SONAS	LEPVI	CAPBP
Rating Data Type	P-CONTRO	P-CONTRO	P-CONTRO	P-CONTRO
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date	03-07-01	03-07-01	03-07-01	03-07-01
Trt-Eval Interval	34 DA-A	34 DA-A	34 DA-A	34 DA-A
ARM Action Codes	P	P	P	P
Trt Treatment No. Name	Form Form Conc Type Rate	Rate Unit	Grow Appl Stg Code	
22 CHECK	0.0 c	0.0 f	0.0 c	0.0 b
LSD (P=.05)	53.52	38.76	22.42	29.07
Standard Deviation	32.43	23.49	13.58	17.61
CV	72.69	41.62	17.7	22.32
Bartlett's X2	38.711	19.934	70.304	21.515
P(Bartlett's X2)	0.005*	0.046*	0.001*	0.001*
Replicate F	1.798	0.750	1.562	0.596
Replicate Prob(F)	0.1782	0.4784	0.2216	0.5554
Treatment F	2.714	8.971	23.087	14.640
Treatment Prob(F)	0.0029	0.0001	0.0001	0.0001

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

# North Carolina State University

## WINTER ANNUAL BROADLEAF WEED CONTROL WITH PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES (RUN #1)

Trial ID: 01-GH3

Study Dir.: F.H. YELVERTON

Location: NCSU GREENHOUSE

Investigator: Crop Science Department

Weed Code						GERCA	SONAS	LEPVI	CAPBP		
Rating Data Type						P-CONTRO	P-CONTRO	P-CONTRO	P-CONTRO		
Rating Unit						PERCENT	PERCENT	PERCENT	PERCENT		
Rating Date						03-15-01	03-15-01	03-15-01	03-15-01		
Trt-Eval Interval						42 DA-A	42 DA-A	42 DA-A	42 DA-A		
ARM Action Codes						P	P	P	P		
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Grow Unit	Appl Stg	Code				
1	EPTAM	7.0	EC	3.06	LB A/A	PPI	A	53.3 a-d	20.0 def	0.0 d	3.3 b
2	PREDICT	78.6	DF	0.98	LB A/A	PPI	A	3.3 d	88.0 ab	100.0 a	100.0 a
3	PREFAR	4.0	EC	5.0	LB A/A	PPI	A	3.3 d	36.7 c-f	0.0 d	0.0 b
4	TREFLAN HFP	4.0	EC	0.5	LB A/A	PPI	A	8.3 d	3.3 ef	0.0 d	0.0 b
5	ALANAP-L	2.0	L	2.0	LB A/A	PRE	B	8.3 d	41.7 cde	66.7 c	98.3 a
6	AUTHORITY	75	DF	3.975	OZ A/A	PRE	B	0.0 d	100.0 a	98.3 a	100.0 a
7	COTORAN	4.0	L	1.0	LB A/A	PRE	B	45.0 bcd	100.0 a	76.7 bc	99.7 a
8	CURBIT	3.0	EC	1.125	LB A/A	PRE	B	43.3 bcd	0.0 f	91.3 ab	99.7 a
9	DEVIRINOL	50	DF	2.0	LB A/A	PRE	B	55.0 a-d	100.0 a	99.7 a	100.0 a
10	FACTOR	65	WG	0.65	LB A/A	PRE	B	55.0 a-d	55.0 bcd	64.7 c	96.7 a
11	GALLERY	75	DF	0.5	LB A/A	PRE	B	100.0 a	100.0 a	100.0 a	100.0 a
12	GOAL XL	2.0	L	0.25	LB A/A	PRE	B	33.3 cd	100.0 a	100.0 a	100.0 a
13	IMAGE LC	1.5	LC	0.375	LB A/A	PRE	B	26.7 d	41.7 cde	98.0 a	99.7 a
14	KERB	50	WP	1.0	LB A/A	PRE	B	33.3 cd	0.0 f	99.7 a	98.3 a
15	PENDULUM	60	WG	1.5	LB A/A	PRE	B	41.7 bcd	66.7 abc	98.0 a	100.0 a
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A	PRE	B	83.3 abc	91.7 ab	98.3 a	99.7 a
17	PLATEAU	2.0	AS	1.0	OZ A/A	PRE	B	36.7 cd	25.0 def	99.7 a	99.7 a
18	SINBAR	80	WP	0.4	LB A/A	PRE	B	100.0 a	100.0 a	100.0 a	100.0 a
19	STAPLE	85	SP	0.51	OZ A/A	PRE	B	0.0 d	6.7 ef	98.0 a	100.0 a
20	SURFLAN	4.0	AS	2.0	LB A/A	PRE	B	91.7 ab	100.0 a	100.0 a	100.0 a
21	VELPAR	75	DF	0.5	LB A/A	PRE	B	100.0 a	100.0 a	100.0 a	100.0 a

# North Carolina State University

**WINTER ANNUAL BROADLEAF WEED CONTROL WITH PREPLANT INCORPORATED AND  
PREEMERGENCE HERBICIDES (RUN #1)**

Trial ID: 01-GH3

Study Dir.: F.H. YELVERTON

Location: NCSU GREENHOUSE

Investigator: Crop Science Department

Weed Code	GERCA	SONAS	LEPVI	CAPBP
Rating Data Type	P-CONTRO	P-CONTRO	P-CONTRO	P-CONTRO
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date	03-15-01	03-15-01	03-15-01	03-15-01
Trt-Eval Interval	42 DA-A	42 DA-A	42 DA-A	42 DA-A
ARM Action Codes	P	P	P	P
Trt Treatment No. Name	Form Form Conc Type Rate	Rate Unit	Grow Appl Stg Code	
22 CHECK	0.0 d	0.0 f	0.0 d	0.0 b
LSD (P=.05)	47.01	34.32	17.58	3.24
Standard Deviation	28.49	20.80	10.65	1.96
CV	68.0	35.85	13.88	2.4
Bartlett's X2	23.684	23.519	63.313	27.073
P(Bartlett's X2)	0.071	0.005*	0.001*	0.001*
Replicate F	1.222	0.342	1.876	1.099
Replicate Prob(F)	0.3050	0.7126	0.1658	0.3426
Treatment F	4.525	11.715	39.186	1185.028
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001

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

# North Carolina State University

## WINTER ANNUAL BROADLEAF WEED CONTROL WITH PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES (RUN #1)

Trial ID: 01-GH3

Study Dir.: F.H. YELVERTON

Location: NCSU GREENHOUSE

Investigator: Crop Science Department

Weed Code						GERCA	SONAS	LEPVI	CAPBP		
Rating Data Type						P-CONTRO	P-CONTRO	P-CONTRO	P-CONTRO		
Rating Unit						PERCENT	PERCENT	PERCENT	PERCENT		
Rating Date						03-21-01	03-21-01	03-21-01	03-21-01		
Trt-Eval Interval						48 DA-A	48 DA-A	48 DA-A	48 DA-A		
ARM Action Codes						P	P	P	P		
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Grow Unit	Appl Stg	Code				
1	EPTAM	7.0	EC	3.06	LB A/A	PPI	A	48.3 bcd	43.3 c	3.3 d	35.0 b
2	PREDICT	78.6	DF	0.98	LB A/A	PPI	A	6.7 d	93.3 a	100.0 a	100.0 a
3	PREFAR	4.0	EC	5.0	LB A/A	PPI	A	3.3 d	36.7 cd	0.0 d	0.0 c
4	TREFLAN HFP	4.0	EC	0.5	LB A/A	PPI	A	1.7 d	3.3 d	0.0 d	0.0 c
5	ALANAP-L	2.0	L	2.0	LB A/A	PRE	B	3.3 d	55.0 bc	41.7 c	50.0 b
6	AUTHORITY	75	DF	3.975	OZ A/A	PRE	B	0.0 d	100.0 a	96.7 a	100.0 a
7	COTORAN	4.0	L	1.0	LB A/A	PRE	B	81.7 abc	100.0 a	75.0 ab	100.0 a
8	CURBIT	3.0	EC	1.125	LB A/A	PRE	B	44.7 bcd	0.0 d	84.7 a	100.0 a
9	DEVRIKOL	50	DF	2.0	LB A/A	PRE	B	92.3 ab	95.7 a	94.0 a	100.0 a
10	FACTOR	65	WG	0.65	LB A/A	PRE	B	66.7 abc	83.3 ab	59.7 bc	98.3 a
11	GALLERY	75	DF	0.5	LB A/A	PRE	B	100.0 a	100.0 a	100.0 a	100.0 a
12	GOAL XL	2.0	L	0.25	LB A/A	PRE	B	33.3 cd	99.7 a	100.0 a	100.0 a
13	IMAGE LC	1.5	LC	0.375	LB A/A	PRE	B	33.3 cd	43.0 c	94.0 a	100.0 a
14	KERB	50	WP	1.0	LB A/A	PRE	B	33.3 cd	0.0 d	98.0 a	100.0 a
15	PENDULUM	60	WG	1.5	LB A/A	PRE	B	88.3 ab	89.7 ab	98.3 a	100.0 a
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A	PRE	B	90.0 ab	91.3 ab	99.7 a	100.0 a
17	PLATEAU	2.0	AS	1.0	OZ A/A	PRE	B	71.7 abc	63.3 abc	98.0 a	99.7 a
18	SINBAR	80	WP	0.4	LB A/A	PRE	B	100.0 a	100.0 a	100.0 a	100.0 a
19	STAPLE	85	SP	0.51	OZ A/A	PRE	B	0.0 d	6.7 d	96.3 a	100.0 a
20	SURFLAN	4.0	AS	2.0	LB A/A	PRE	B	98.0 a	100.0 a	100.0 a	100.0 a
21	VELPAR	75	DF	0.5	LB A/A	PRE	B	100.0 a	100.0 a	100.0 a	100.0 a

# North Carolina State University

**WINTER ANNUAL BROADLEAF WEED CONTROL WITH PREPLANT INCORPORATED AND  
PREEMERGENCE HERBICIDES (RUN #1)**

Trial ID: 01-GH3

Study Dir.: F.H. YELVERTON

Location: NCSU GREENHOUSE

Investigator: Crop Science Department

Weed Code	GERCA	SONAS	LEPVI	CAPBP
Rating Data Type	P-CONTRO	P-CONTRO	P-CONTRO	P-CONTRO
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date	03-21-01	03-21-01	03-21-01	03-21-01
Trt-Eval Interval	48 DA-A	48 DA-A	48 DA-A	48 DA-A
ARM Action Codes	P	P	P	P
Trt Treatment No. Name	Form Form Conc Type Rate	Rate Unit	Grow Appl Stg Code	
22 CHECK	0.0 d	0.0 d	0.0 d	0.0 c
LSD (P=.05)	42.99	33.32	21.39	24.13
Standard Deviation	26.05	20.19	12.97	14.62
CV	52.26	31.64	17.4	18.04
Bartlett's X2	56.674	44.47	50.01	22.811
P(Bartlett's X2)	0.001*	0.001*	0.001*	0.001*
Replicate F	1.094	0.523	2.051	0.550
Replicate Prob(F)	0.3443	0.5966	0.1413	0.5811
Treatment F	7.020	11.785	26.391	19.254
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001

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

# North Carolina State University

## WINTER ANNUAL BROADLEAF WEED CONTROL WITH PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES (RUN #1)

Trial ID: 01-GH3

Study Dir.: F.H. YELVERTON

Location: NCSU GREENHOUSE

Investigator: Crop Science Department

### Trial Comments

11-03-00: POTTED RATIO OF 25 SCOOPS SANDY LOAM, 10 SCOOPS SAND, 0.33 BAG METRO-MIX AND WATERED THOROUGHLY

11-06-00: IRRIGATION TIMER SET FOR 6:00 AM, 11:00 AM AND 4:00 PM AT 5 MINUTE INTERVALS EACH DAY  
- GREENHOUSE ENVIRONMENT ADJUSTED TO FALL CONDITIONS (LIGHTS FROM 6:30 - 8:00 PM)

02-01-01: CALIBRATED SPRAY CHAMBER FOR 1.5 MPH (6 FT IN 2.73 SEC) AND 20 GPA (87 ML IN 15 SEC)  
USING TEEJET XR 8001EVS NOZZLE 12 INCHES ABOVE SOIL SURFACE  
- APPLIED PPI TREATMENTS, INCORPORATED IN PLASTIC BAGS, POTTED, SET IN GREENHOUSE, WATERED FOR 5 MINUTES AFTER ALL PRE TREATMENTS WERE RETURNED TO GREENHOUSE, SEEDED  
- SEEDED, THEN APPLIED PRE TREATMENTS, SET IN GREENHOUSE, WATERED FOR 5 MINUTES  
- IRRIGATION TIMER SET FOR 6:00 AM AND 1:00 PM EACH DAY AT 5 MINUTE INTERVALS

02-15-01: WEEDS BEGINNING TO GERMINATE BUT SPORADICALLY  
GERCA: COTYLEDON, 0.25 INCH, VERY SPORADIC  
SONAS: COTYLEDON, 0.25 INCH, SPORADIC  
LEPVI: COTYLEDON, 0.25 INCH, 10 - 20 /ROWFT  
CAPBP: COTYLEDON - 2 LEAVES, 0.25 INCH, VERY SPORADIC

02-22-01: 1ST EVALUATION  
GERCA: COTYLEDON, 0.5 INCH  
SONAS: COTYLEDON - 1 LEAF, 0.25 INCH  
LEPVI: 2 - 3 LEAVES, 0.25 INCH  
CAPBP: 2 - 4 LEAVES, 0.25 INCH

02-23-01: 1ST FERTILIZATION

03-01-01: 2ND EVALUATION AND 2ND FERTILIZATION  
GERCA: COTYLEDON - 1 LEAF, 0.5 - 1 INCH  
SONAS: COTYLEDON - 2 LEAVES, 0.25 - 0.5 INCH  
LEPVI: 2 - 4 LEAVES, 0.5 INCH  
CAPBP: 2 - 6 LEAVES, 0.5 INCH

03-07-01: 3RD EVALUATION AND 3RD FERTILIZATION  
GERCA: 2 LEAVES, 1 - 1.5 INCHES  
SONAS: 2 - 3 LEAVES, 0.5 INCH  
LEPVI: 4 - 6 LEAVES, 0.75 INCH  
CAPBP: 4 - 6 LEAVES, 0.75 INCH

03-15-01: 4TH EVALUATION AND 4TH FERTILIZATION FOR PHOTOS TO BE TAKEN AT A LATER DATE

03-21-01: 5TH AND FINAL EVALUATION  
- PHOTOGRAPHED REP 3