



# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

### APPLICATION DESCRIPTION

	A	B
Application Date:	12-04-01	12-04-01
Time of Day:	9:00 AM	4:15 PM
Application Method:	SPRAY	SPRAY
Application Timing:	PPI	PRE
Applic. Placement:	BROSOI	BROSOI
Air Temp., Unit:	53 F	69 F
% Relative Humidity:	86	51
Wind Velocity, Unit:	2.3 MPH	0.5 MPH
Dew Presence (Y/N):	Y	N
Soil Temp., Unit:	52 F	61 F
Soil Moisture:	DRY	DRY
% Cloud Cover:	0	0

### CROP STAGE AT EACH APPLICATION

	A	B
	PREPLANT	SEEDED
Stage Scale:	NA	NA
Height, Unit:	0 IN	0 IN

### APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	BACSPR	BACSPR
Operating Pressure:	36	36
Nozzle Type:	FLAT FAN	FLAT FAN
Nozzle Size:	XR11002VS	XR11002VS
Nozzle Spacing, Unit:	18 IN	18 IN
Band Width, Unit:	72 IN	72 IN
Boom Length, Unit:	72 IN	72 IN
Boom Height, Unit:	12 IN	12 IN
Ground Speed, Unit:	3 MPH	3 MPH
Incorporation Equip.:	FIELD CUL	
Hours to Incorp.:	0.25	
Incorp. Depth, Unit:	2.5 IN	
Carrier:	WATER	WATER
Spray Volume, Unit:	20 GPA	20 GPA
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	N	N

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Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							SWAMP	B FLOWER	B SUSAN			
Crop Code							C-INJURY	C-INJURY	C-INJURY			
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE			
Rating Unit							03-18-02	03-18-02	03-18-02			
Rating Date							104 DA-A	104 DA-A	104 DA-A			
Trt-Eval Interval												
ARM Action Codes												
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	6.3 ab	8.7 a	7.3 abc
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	9.0 a	2.7 bcd	1.3 g
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	8.7 a	6.0 ab	9.0 a
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	9.0 a	8.7 a	5.7 b-e
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	9.0 a	8.7 a	9.0 a
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	8.7 a	1.0 d	2.3 fg
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	8.7 a	6.3 ab	5.0 c-f
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	1.0 c	1.0 d	3.3 efg
9	DEVIRINOL	50	DF	2.0	LB A/A			PRE	B	6.0 ab	1.0 d	1.3 g
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	3.7 bc	6.3 ab	6.7 a-d
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	1.0 c	1.0 d	1.0 g
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	1.0 c	1.0 d	1.0 g
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	8.7 a	1.3 d	4.0 d-g
14	KERB	50	WP	1.0	LB A/A			PRE	B	6.0 ab	1.7 cd	5.7 b-e
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	3.7 bc	5.7 abc	4.0 d-g
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	9.0 a	6.0 ab	7.0 a-d
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	3.3 bc	8.3 a	8.3 ab
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	6.0 ab	1.3 d	2.3 fg
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	8.7 a	5.7 abc	7.0 a-d
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	1.0 c	1.0 d	1.0 g
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	6.3 ab	5.7 abc	7.0 a-d

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Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							SWAMP	B FLOWER	B SUSAN	
Crop Code							C-INJURY	C-INJURY	C-INJURY	
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE	
Rating Unit							03-18-02	03-18-02	03-18-02	
Rating Date							104 DA-A	104 DA-A	104 DA-A	
Trt-Eval Interval										
ARM Action Codes										
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate	Grow Unit	Appl Stg	Code
22	CHECK							9.0 a	9.0 a	9.0 a
LSD (P=.05)							4.48	4.05	3.12	
Standard Deviation							2.72	2.46	1.89	
CV							44.69	55.14	38.43	
Bartlett's X2							26.023	33.72	18.317	
P(Bartlett's X2)							0.011*	0.002*	0.246	
Replicate F							0.748	2.923	2.492	
Replicate Prob(F)							0.4795	0.0651	0.0952	
Treatment F							3.849	4.906	6.941	
Treatment Prob(F)							0.0001	0.0001	0.0001	

Means followed by same letter do not significantly differ (P=.05, LSD)

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Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							OX DAISY	PLAINS C	COM SUN			
Crop Code							C-INJURY	C-INJURY	C-INJURY			
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE			
Rating Unit							03-18-02	03-18-02	03-18-02			
Rating Date							104 DA-A	104 DA-A	104 DA-A			
Trt-Eval Interval												
ARM Action Codes												
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	7.0 abc	9.0 a	8.7 a
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	3.3 d-h	6.0 b-f	5.0 bc
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	9.0 a	9.0 a	8.7 a
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	6.3 a-e	8.7 ab	7.3 ab
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	6.7 a-d	7.3 a-d	9.0 a
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	1.0 h	5.7 c-g	8.3 a
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	4.7 c-g	7.0 a-e	8.3 a
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	5.3 b-f	8.0 abc	8.3 a
9	DEVIRINOL	50	DF	2.0	LB A/A			PRE	B	2.3 fgh	2.3 hi	2.3 de
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	8.7 ab	7.7 a-d	8.3 a
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	1.3 gh	1.0 i	3.7 cd
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	1.0 h	4.3 e-h	9.0 a
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	8.3 ab	3.0 ghi	7.7 a
14	KERB	50	WP	1.0	LB A/A			PRE	B	5.7 a-f	8.0 abc	9.0 a
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	3.0 e-h	5.0 d-h	7.7 a
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	9.0 a	7.3 a-d	8.3 a
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	7.3 abc	5.0 d-h	9.0 a
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	8.7 ab	4.0 fgh	8.3 a
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	8.0 abc	7.7 a-d	8.3 a
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	1.0 h	1.0 i	1.0 e
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	2.3 fgh	4.3 e-h	8.7 a

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Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code												
Crop Code								OX DAISY	PLAINS C	COM SUN		
Rating Data Type								C-INJURY	C-INJURY	C-INJURY		
Rating Unit								1-9SCALE	1-9SCALE	1-9SCALE		
Rating Date								03-18-02	03-18-02	03-18-02		
Trt-Eval Interval								104 DA-A	104 DA-A	104 DA-A		
ARM Action Codes												
Trt Treatment No. Name	Form Conc	Form Type	Rate Rate	Unit	Product Rate	Product Rate	Grow Unit	Appl Stg	Code			
22 CHECK										9.0 a	9.0 a	
LSD (P=.05)										3.63	2.98	2.34
Standard Deviation										2.20	1.81	1.42
CV										40.7	30.53	19.05
Bartlett's X2										22.155	18.362	33.306
P(Bartlett's X2)										0.104	0.303	0.004*
Replicate F										0.000	1.005	2.794
Replicate Prob(F)										1.0000	0.3747	0.0726
Treatment F										5.555	5.947	7.798
Treatment Prob(F)										0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

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Weed Code							S FLAX	R ANGEL	P CONE						
Crop Code							C-INJURY	C-INJURY	C-INJURY						
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE						
Rating Unit							03-18-02	03-18-02	03-18-02						
Rating Date							104 DA-A	104 DA-A	104 DA-A						
Trt-Eval Interval															
ARM Action Codes															
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code						
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	8.0	ab	6.3	ab	6.7	ab
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	3.3	def	1.0	d	6.7	ab
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	6.7	abc	1.0	d	8.0	a
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	7.7	ab	1.0	d	6.3	ab
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	9.0	a	4.7	bc	6.0	abc
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	1.0	f	1.0	d	4.7	abc
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	4.3	cde	1.0	d	6.3	ab
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	5.7	bcd	1.0	d	5.3	abc
9	DEVIRINOL	50	DF	2.0	LB A/A			PRE	B	1.0	f	1.0	d	2.7	bc
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	9.0	a	1.0	d	4.7	abc
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	1.0	f	1.0	d	1.0	c
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	1.0	f	1.0	d	2.7	bc
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	1.0	f	1.0	d	5.3	abc
14	KERB	50	WP	1.0	LB A/A			PRE	B	1.0	f	1.0	d	6.3	ab
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	2.0	ef	1.0	d	5.3	abc
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	6.7	abc	9.0	a	8.3	a
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	1.0	f	1.0	d	5.0	abc
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	8.3	ab	3.0	cd	6.7	ab
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	1.0	f	1.0	d	6.0	abc
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	1.0	f	1.0	d	1.7	bc
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	2.3	ef	3.3	cd	6.7	ab

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Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code									
Crop Code						S FLAX	R ANGEL	P CONE	
Rating Data Type						C-INJURY	C-INJURY	C-INJURY	
Rating Unit						1-9SCALE	1-9SCALE	1-9SCALE	
Rating Date						03-18-02	03-18-02	03-18-02	
Trt-Eval Interval						104 DA-A	104 DA-A	104 DA-A	
ARM Action Codes									
Trt Treatment No. Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate	Grow Unit	Appl Stg	Code
22 CHECK									
						9.0 a	9.0 a	9.0 a	
LSD (P=.05)						2.73	2.87	5.03	
Standard Deviation						1.66	1.74	3.05	
CV						40.01	74.41	55.23	
Bartlett's X2						11.376	0.159	15.267	
P(Bartlett's X2)						0.251	0.984	0.644	
Replicate F						0.415	1.392	1.026	
Replicate Prob(F)						0.6631	0.2600	0.3674	
Treatment F						11.897	6.645	1.344	
Treatment Prob(F)						0.0001	0.0001	0.2035	

Means followed by same letter do not significantly differ (P=.05, LSD)

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Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							CAL POP	INDIAN B	L COREOP			
Crop Code							C-INJURY	C-INJURY	C-INJURY			
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE			
Rating Unit							03-18-02	03-18-02	03-18-02			
Rating Date							104 DA-A	104 DA-A	104 DA-A			
Trt-Eval Interval												
ARM Action Codes												
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Product Rate	Product Rate	Grow Stg	Appl Code			
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	9.0 a	3.7 b	5.3 abc
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	4.3 cde	2.7 b	3.0 bcd
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	5.3 bcd	8.0 a	5.7 abc
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	7.3 ab	1.0 b	3.3 bcd
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	8.7 a	3.3 b	3.0 bcd
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	1.7 ef	1.0 b	5.7 abc
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	3.7 def	3.0 b	4.0 bcd
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	8.3 a	1.0 b	5.0 a-d
9	DEVRIKOL	50	DF	2.0	LB A/A			PRE	B	1.0 f	1.0 b	3.3 bcd
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	9.0 a	1.0 b	3.7 bcd
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	2.0 ef	1.0 b	1.7 cd
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	3.7 def	1.0 b	2.7 bcd
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	9.0 a	1.0 b	3.3 bcd
14	KERB	50	WP	1.0	LB A/A			PRE	B	2.0 ef	1.0 b	6.0 ab
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	9.0 a	1.0 b	1.0 d
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	7.0 abc	3.7 b	4.3 bcd
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	8.0 ab	3.0 b	3.0 bcd
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	3.7 def	1.0 b	4.7 bcd
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	7.3 ab	1.0 b	5.7 abc
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	1.3 f	1.0 b	1.7 cd
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	3.7 def	1.0 b	4.7 bcd

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Weed Code							CAL POP	INDIAN B	L COREOP	
Crop Code							C-INJURY	C-INJURY	C-INJURY	
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE	
Rating Unit										
Rating Date							03-18-02	03-18-02	03-18-02	
Trt-Eval Interval							104 DA-A	104 DA-A	104 DA-A	
ARM Action Codes										
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate	Grow Unit	Appl Stg	Code
22	CHECK							9.0 a		9.0 a
	LSD (P=.05)							2.82		3.39
	Standard Deviation							1.71		2.05
	CV							30.28		89.67
	Bartlett's X2							17.819		3.903
	P(Bartlett's X2)							0.272		0.69
	Replicate F							4.743		1.440
	Replicate Prob(F)							0.0139		0.2486
	Treatment F							9.108		3.631
	Treatment Prob(F)							0.0001		0.0002

Means followed by same letter do not significantly differ (P=.05, LSD)

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Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							CORN POP	D ROCKET	SWEET W			
Crop Code							C-INJURY	C-INJURY	C-INJURY			
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE			
Rating Unit							03-18-02	03-18-02	03-18-02			
Rating Date							104 DA-A	104 DA-A	104 DA-A			
Trt-Eval Interval												
ARM Action Codes												
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	8.3 ab	8.7 a	8.7 ab
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	1.7 d	1.0 e	1.7 f
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	1.0 d	9.0 a	8.7 ab
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	1.0 d	8.3 a	5.0 de
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	8.7 ab	9.0 a	8.3 abc
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	1.7 d	6.7 ab	6.3 bcd
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	4.7 c	8.3 a	7.0 a-d
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	1.0 d	8.0 a	2.7 ef
9	DEVIRINOL	50	DF	2.0	LB A/A			PRE	B	1.0 d	4.3 bcd	5.0 de
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	1.0 d	8.7 a	2.0 f
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	1.0 d	2.0 de	1.3 f
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	1.0 d	3.7 b-e	2.0 f
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	9.0 a	6.3 abc	6.3 bcd
14	KERB	50	WP	1.0	LB A/A			PRE	B	1.0 d	4.3 bcd	1.0 f
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	1.0 d	9.0 a	1.7 f
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	8.0 ab	9.0 a	9.0 a
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	9.0 a	3.3 cde	6.0 cd
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	6.7 bc	3.7 b-e	3.0 ef
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	9.0 a	2.7 de	8.0 abc
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	1.0 d	1.0 e	1.3 f
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	8.3 ab	8.3 a	8.0 abc

# North Carolina State University

**TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND  
PREEMERGENCE HERBICIDES**

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code												
Crop Code								CORN POP	D ROCKET	SWEET W		
Rating Data Type								C-INJURY	C-INJURY	C-INJURY		
Rating Unit								1-9SCALE	1-9SCALE	1-9SCALE		
Rating Date								03-18-02	03-18-02	03-18-02		
Trt-Eval Interval								104 DA-A	104 DA-A	104 DA-A		
ARM Action Codes												
Trt Treatment No. Name	Form Conc	Form Type	Rate Rate	Unit	Product Rate	Product Rate	Unit	Grow Stg	Appl Code			
22 CHECK										9.0 a	9.0 a	
LSD (P=.05)										2.00	3.18	2.59
Standard Deviation										1.21	1.93	1.57
CV										28.4	31.54	30.85
Bartlett's X2										13.927	26.918	21.141
P(Bartlett's X2)										0.052	0.02*	0.272
Replicate F										0.957	3.363	0.221
Replicate Prob(F)										0.3923	0.0442	0.8025
Treatment F										27.371	6.956	10.944
Treatment Prob(F)										0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							S SNAP	CHICORY	C CONE						
Crop Code							C-INJURY	C-INJURY	C-INJURY						
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE						
Rating Unit							03-18-02	03-18-02	03-18-02						
Rating Date							104 DA-A	104 DA-A	104 DA-A						
Trt-Eval Interval															
ARM Action Codes															
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code						
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	5.3	cde	7.7	ab	5.0	cd
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	6.0	a-e	8.7	a	2.3	de
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	5.7	b-e	8.7	a	8.3	ab
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	9.0	a	9.0	a	8.0	abc
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	8.7	ab	8.0	a	6.0	abc
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	1.0	f	2.0	e	5.7	bc
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	3.3	ef	4.7	cd	7.7	abc
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	7.3	abc	9.0	a	8.7	ab
9	DEVRIKOL	50	DF	2.0	LB A/A			PRE	B	1.0	f	3.0	cde	2.3	de
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	7.0	a-d	9.0	a	8.3	ab
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	1.0	f	1.3	e	1.0	e
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	1.0	f	5.3	bc	2.0	de
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	4.3	cde	8.7	a	8.3	ab
14	KERB	50	WP	1.0	LB A/A			PRE	B	1.0	f	9.0	a	7.3	abc
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	1.0	f	1.7	e	2.3	de
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	6.3	a-e	9.0	a	7.0	abc
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	1.0	f	8.0	a	7.0	abc
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	9.0	a	4.7	cd	6.7	abc
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	3.3	ef	8.7	a	6.7	abc
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	1.0	f	2.3	de	1.0	e
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	4.0	def	5.0	c	6.3	abc

# North Carolina State University

**TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND  
PREEMERGENCE HERBICIDES**

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code									
Crop Code						S SNAP	CHICORY	C CONE	
Rating Data Type						C-INJURY	C-INJURY	C-INJURY	
Rating Unit						1-9SCALE	1-9SCALE	1-9SCALE	
Rating Date						03-18-02	03-18-02	03-18-02	
Trt-Eval Interval						104 DA-A	104 DA-A	104 DA-A	
ARM Action Codes									
Trt Treatment No. Name	Form Conc	Form Type	Rate Rate	Unit Unit	Product Rate	Product Rate	Grow Unit	Appl Stg	Code
22 CHECK									
						9.0 a	9.0 a	9.0 a	
LSD (P=.05)						3.06	2.44	3.17	
Standard Deviation						1.86	1.48	1.92	
CV						42.37	22.81	33.23	
Bartlett's X2						8.556	26.468	25.175	
P(Bartlett's X2)						0.575	0.023*	0.12	
Replicate F						0.401	1.802	1.643	
Replicate Prob(F)						0.6725	0.1776	0.2057	
Treatment F						8.331	11.305	5.834	
Treatment Prob(F)						0.0001	0.0001	0.0001	

Means followed by same letter do not significantly differ (P=.05, LSD)

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							MIX POP	G DAISY	CATCHFLY			
Crop Code							C-INJURY	C-INJURY	C-INJURY			
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE			
Rating Unit							03-18-02	03-18-02	03-18-02			
Rating Date							104 DA-A	104 DA-A	104 DA-A			
Trt-Eval Interval												
ARM Action Codes												
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	8.7 ab	9.0 a	6.3 ab
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	1.3 c	7.0 abc	1.0 c
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	1.0 c	5.7 a-d	1.0 c
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	1.3 c	6.3 a-d	1.0 c
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	6.7 ab	3.7 b-e	3.7 bc
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	1.0 c	5.3 a-e	1.0 c
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	6.7 ab	5.7 a-d	1.0 c
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	1.7 c	8.7 a	1.7 c
9	DEVRIKOL	50	DF	2.0	LB A/A			PRE	B	1.3 c	1.0 e	1.0 c
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	1.0 c	6.0 a-d	1.0 c
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	1.0 c	1.0 e	1.0 c
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	1.3 c	1.0 e	1.0 c
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	9.0 a	8.0 ab	1.0 c
14	KERB	50	WP	1.0	LB A/A			PRE	B	1.0 c	6.3 a-d	1.0 c
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	1.0 c	2.0 de	1.0 c
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	7.7 ab	9.0 a	6.3 ab
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	9.0 a	6.3 a-d	1.0 c
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	7.0 ab	3.3 cde	1.0 c
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	6.3 b	6.0 a-d	1.0 c
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	1.0 c	1.0 e	1.0 c
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	8.7 ab	8.3 a	6.0 ab

# North Carolina State University

**TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND  
PREEMERGENCE HERBICIDES**

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							MIX POP	G DAISY	CATCHFLY		
Crop Code							C-INJURY	C-INJURY	C-INJURY		
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE		
Rating Unit											
Rating Date							03-18-02	03-18-02	03-18-02		
Trt-Eval Interval							104 DA-A	104 DA-A	104 DA-A		
ARM Action Codes											
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate	Grow Unit	Appl Stg	Code	
22	CHECK								9.0 a	9.0 a	9.0 a
LSD (P=.05)							2.33	4.43	3.29		
Standard Deviation							1.41	2.68	1.99		
CV							33.58	49.33	89.46		
Bartlett's X2							32.697	14.929	3.307		
P(Bartlett's X2)							0.001*	0.383	0.508		
Replicate F							4.324	0.709	0.240		
Replicate Prob(F)							0.0196	0.4979	0.7874		
Treatment F							18.320	3.317	4.329		
Treatment Prob(F)							0.0001	0.0005	0.0001		

Means followed by same letter do not significantly differ (P=.05, LSD)

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							MARIGOLD	OEOLA		
Crop Code							C-INJURY	P-CONTROL		
Rating Data Type							1-9SCALE	PERCENT		
Rating Unit							03-18-02	04-08-02		
Rating Date							104 DA-A	125 DA-A		
Trt-Eval Interval										
ARM Action Codes										
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Product Rate	Product Rate Unit	Grow Stg	Appl Code		
1	EPTAM	7.0	EC	3.06	LB A/A		PPI	A	9.0 a	0.0 h
2	PREDICT	78.6	DF	0.98	LB A/A		PPI	A	8.0 a-d	0.0 h
3	PREFAR	4.0	EC	5.0	LB A/A		PPI	A	9.0 a	0.0 h
4	TREFLAN HFP	4.0	EC	0.5	LB A/A		PPI	A	8.3 abc	0.0 h
5	ALANAP-L	2.0	L	2.0	LB A/A		PRE	B	7.7 a-d	0.0 h
6	AUTHORITY	75	DF	3.975	OZ A/A		PRE	B	9.0 a	73.3 abc
7	COTORAN	4.0	L	1.0	LB A/A		PRE	B	8.0 a-d	6.7 gh
8	CURBIT	3.0	EC	1.125	LB A/A		PRE	B	9.0 a	8.3 fgh
9	DEVTRINOL	50	DF	2.0	LB A/A		PRE	B	7.0 cd	100.0 a
10	FACTOR	65	WG	0.65	LB A/A		PRE	B	9.0 a	0.0 h
11	GALLERY	75	DF	0.5	LB A/A		PRE	B	7.3 bcd	81.7 ab
12	GOAL XL	2.0	L	0.25	LB A/A		PRE	B	8.0 a-d	60.0 bcd
13	IMAGE	70	WG	0.375	LB A/A		PRE	B	8.0 a-d	45.0 cde
14	KERB	50	WP	1.0	LB A/A		PRE	B	9.0 a	68.3 bc
15	PENDULUM	60	WG	1.5	LB A/A		PRE	B	8.7 ab	0.0 h
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A		PRE	B	8.3 abc	0.0 h
17	PLATEAU	2.0	AS	1.0	OZ A/A		PRE	B	9.0 a	51.7 cd
18	SINBAR	80	WP	0.4	LB A/A		PRE	B	7.7 a-d	31.7 d-g
19	STAPLE	85	SP	0.51	OZ A/A		PRE	B	9.0 a	36.7 def
20	SURFLAN	4.0	AS	2.0	LB A/A		PRE	B	6.7 d	100.0 a
21	VELPAR	75	DF	0.5	LB A/A		PRE	B	7.7 a-d	16.7 e-h

# North Carolina State University

**TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND  
PREEMERGENCE HERBICIDES**

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code		OEOLA
Crop Code	MARIGOLD	
Rating Data Type	C-INJURY	P-CONTROL
Rating Unit	1-9SCALE	PERCENT
Rating Date	03-18-02	04-08-02
Trt-Eval Interval	104 DA-A	125 DA-A
ARM Action Codes		
Trt Treatment No. Name	Form Form Conc Type Rate	Rate Unit
	Product Product Rate Rate	Product Product Rate Rate
	Grow Appl Unit Stg Code	
22 CHECK		
	9.0 a	0.0 h
LSD (P=.05)	1.43	29.93
Standard Deviation	0.87	18.14
CV	10.46	58.67
Bartlett's X2	5.163	6.907
P(Bartlett's X2)	0.923	0.734
Replicate F	2.499	0.055
Replicate Prob(F)	0.0943	0.9463
Treatment F	2.166	11.611
Treatment Prob(F)	0.0164	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							SPRAR	ARBTH			
Crop Code							P-CONTROL	P-CONTROL			
Rating Data Type							PERCENT	PERCENT			
Rating Unit							04-08-02	04-08-02			
Rating Date							125 DA-A	125 DA-A			
Trt-Eval Interval											
ARM Action Codes											
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Product Rate	Product Rate	Grow Stg	Appl Code		
1	EPTAM	7.0	EC	3.06	LB	A/A		PPI	A	0.0	c
2	PREDICT	78.6	DF	0.98	LB	A/A		PPI	A	100.0	a
3	PREFAR	4.0	EC	5.0	LB	A/A		PPI	A	99.3	a
4	TREFLAN HFP	4.0	EC	0.5	LB	A/A		PPI	A	83.3	ab
5	ALANAP-L	2.0	L	2.0	LB	A/A		PRE	B	0.0	c
6	AUTHORITY	75	DF	3.975	OZ	A/A		PRE	B	100.0	a
7	COTORAN	4.0	L	1.0	LB	A/A		PRE	B	100.0	a
8	CURBIT	3.0	EC	1.125	LB	A/A		PRE	B	100.0	a
9	DEVRIKOL	50	DF	2.0	LB	A/A		PRE	B	100.0	a
10	FACTOR	65	WG	0.65	LB	A/A		PRE	B	100.0	a
11	GALLERY	75	DF	0.5	LB	A/A		PRE	B	100.0	a
12	GOAL XL	2.0	L	0.25	LB	A/A		PRE	B	100.0	a
13	IMAGE	70	WG	0.375	LB	A/A		PRE	B	100.0	a
14	KERB	50	WP	1.0	LB	A/A		PRE	B	100.0	a
15	PENDULUM	60	WG	1.5	LB	A/A		PRE	B	100.0	a
16	PENNANT LIQUID	8.0	EC	2.0	LB	A/A		PRE	B	96.7	a
17	PLATEAU	2.0	AS	1.0	OZ	A/A		PRE	B	91.3	a
18	SINBAR	80	WP	0.4	LB	A/A		PRE	B	65.7	b
19	STAPLE	85	SP	0.51	OZ	A/A		PRE	B	100.0	a
20	SURFLAN	4.0	AS	2.0	LB	A/A		PRE	B	100.0	a
21	VELPAR	75	DF	0.5	LB	A/A		PRE	B	99.7	a

# North Carolina State University

**TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND  
PREEMERGENCE HERBICIDES**

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

							SPRAR	ARBTH		
Weed Code										
Crop Code										
Rating Data Type							P-CONTROL	P-CONTROL		
Rating Unit							PERCENT	PERCENT		
Rating Date							04-08-02	04-08-02		
Trt-Eval Interval							125 DA-A	125 DA-A		
ARM Action Codes										
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate	Grow Unit	Appl Stg	Code
	22 CHECK								0.0 c	0.0 c
LSD (P=.05)							22.70	35.42		
Standard Deviation							13.76	21.46		
CV							16.49	27.04		
Bartlett's X2							34.546	16.31		
P(Bartlett's X2)							0.001*	0.003*		
Replicate F							1.738	1.649		
Replicate Prob(F)							0.1882	0.2045		
Treatment F							19.261	8.644		
Treatment Prob(F)							0.0001	0.0001		

Means followed by same letter do not significantly differ (P=.05, LSD)

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							ERPVE	SWAMP	B FLOWER			
Crop Code							P-CONTROL	C-INJURY	C-INJURY			
Rating Data Type							PERCENT	1-9SCALE	1-9SCALE			
Rating Unit							04-08-02	04-09-02	04-09-02			
Rating Date							125 DA-A	126 DA-A	126 DA-A			
Trt-Eval Interval												
ARM Action Codes												
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate	Grow Stg	Appl Code			
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	0.0 e	7.3 abc	6.3 abc
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	100.0 a	6.3 abc	1.0 d
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	31.7 d	7.0 abc	8.7 a
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	71.7 bc	6.7 abc	5.7 a-d
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	0.0 e	8.7 ab	3.7 bcd
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	99.3 a	7.3 abc	3.0 bcd
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	95.7 ab	5.0 cd	7.7 ab
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	100.0 a	5.0 cd	3.3 bcd
9	DEVIRINOL	50	DF	2.0	LB A/A			PRE	B	100.0 a	7.3 abc	3.0 bcd
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	96.7 ab	2.7 de	7.3 abc
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	100.0 a	2.0 e	1.0 d
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	100.0 a	6.3 abc	2.7 cd
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	98.3 a	7.7 abc	1.0 d
14	KERB	50	WP	1.0	LB A/A			PRE	B	99.7 a	6.0 bc	1.0 d
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	100.0 a	3.0 de	2.7 cd
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	53.3 cd	8.3 ab	6.0 abc
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	100.0 a	6.0 bc	5.3 a-d
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	98.3 a	7.3 abc	3.7 bcd
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	100.0 a	8.3 ab	6.3 abc
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	100.0 a	1.0 e	1.0 d
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	95.0 ab	7.0 abc	5.3 a-d

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

							ERPVE	SWAMP	B FLOWER	
							P-CONTROL	C-INJURY	C-INJURY	
							PERCENT	1-9SCALE	1-9SCALE	
							04-08-02	04-09-02	04-09-02	
							125 DA-A	126 DA-A	126 DA-A	
Weed Code										
Crop Code										
Rating Data Type										
Rating Unit										
Rating Date										
Trt-Eval Interval										
ARM Action Codes										
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate	Grow Unit	Appl Stg	Code
22	CHECK								0.0 e	
									9.0 a	
									9.0 a	
LSD (P=.05)							26.46	2.71	4.84	
Standard Deviation							16.04	1.64	2.94	
CV							20.28	26.71	68.21	
Bartlett's X2							55.396	18.672	13.21	
P(Bartlett's X2)							0.001*	0.478	0.586	
Replicate F							1.366	1.588	3.299	
Replicate Prob(F)							0.2661	0.2164	0.0467	
Treatment F							15.598	5.404	2.351	
Treatment Prob(F)							0.0001	0.0001	0.0091	

Means followed by same letter do not significantly differ (P=.05, LSD)

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							B SUSAN	OX DAISY	PLAINS C			
Crop Code							C-INJURY	C-INJURY	C-INJURY			
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE			
Rating Unit							04-09-02	04-09-02	04-09-02			
Rating Date							126 DA-A	126 DA-A	126 DA-A			
Trt-Eval Interval												
ARM Action Codes												
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	8.33 a	8.33 abc	8.7 ab
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	1.17 d	2.00 d	6.0 a-d
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	8.33 a	9.00 a	9.0 a
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	4.67 bc	6.00 c	8.7 ab
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	9.00 a	8.67 ab	9.0 a
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	6.33 ab	2.00 d	8.3 ab
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	7.67 ab	6.67 abc	6.7 a-d
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	6.00 ab	9.00 a	8.3 ab
9	DEVRIKOL	50	DF	2.0	LB A/A			PRE	B	1.00 d	2.33 d	2.7 ef
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	7.00 ab	8.00 abc	9.0 a
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	1.00 d	2.00 d	1.0 f
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	2.00 cd	1.33 d	5.7 b-e
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	6.67 ab	9.00 a	3.7 def
14	KERB	50	WP	1.0	LB A/A			PRE	B	7.00 ab	9.00 a	8.7 ab
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	7.00 ab	6.33 bc	6.3 a-d
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	9.00 a	9.00 a	7.7 abc
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	9.00 a	9.00 a	8.7 ab
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	6.67 ab	9.00 a	4.3 de
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	6.33 ab	8.00 abc	8.3 ab
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	1.00 d	1.50 d	1.0 f
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	9.00 a	7.33 abc	4.7 cde

# North Carolina State University

**TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND  
PREEMERGENCE HERBICIDES**

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code									
Crop Code						B SUSAN	OX DAISY	PLAINS C	
Rating Data Type						C-INJURY	C-INJURY	C-INJURY	
Rating Unit						1-9SCALE	1-9SCALE	1-9SCALE	
Rating Date						04-09-02	04-09-02	04-09-02	
Trt-Eval Interval						126 DA-A	126 DA-A	126 DA-A	
ARM Action Codes									
Trt Treatment No. Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate	Grow Unit	Appl Stg	Code
22 CHECK									
						9.00 a	9.00 a	9.0 a	
LSD (P=.05)						3.401	2.615	3.10	
Standard Deviation						2.061	1.585	1.88	
CV						34.05	24.47	28.41	
Bartlett's X2						17.56	24.518	25.987	
P(Bartlett's X2)						0.175	0.017*	0.038*	
Replicate F						3.654	1.524	0.856	
Replicate Prob(F)						0.0344	0.2295	0.4322	
Treatment F						6.014	10.995	5.971	
Treatment Prob(F)						0.0001	0.0001	0.0001	

Means followed by same letter do not significantly differ (P=.05, LSD)

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							COM SUN	S FLAX	R ANGEL			
Crop Code							C-INJURY	C-INJURY	C-INJURY			
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE			
Rating Unit							04-09-02	04-09-02	04-09-02			
Rating Date							126 DA-A	126 DA-A	126 DA-A			
Trt-Eval Interval												
ARM Action Codes												
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	8.3 a	8.0 ab	5.67 b
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	3.7 c	5.0 cd	1.17 e
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	8.7 a	7.0 abc	1.00 e
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	7.7 ab	7.7 abc	1.00 e
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	9.0 a	8.7 a	4.67 bc
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	8.3 a	1.3 e	1.17 e
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	8.3 a	5.7 bc	1.00 e
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	8.0 a	6.3 abc	1.00 e
9	DEVIRINOL	50	DF	2.0	LB A/A			PRE	B	3.3 c	1.0 e	1.00 e
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	8.7 a	8.7 a	1.00 e
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	4.0 c	1.0 e	1.00 e
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	9.0 a	1.0 e	1.00 e
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	6.0 b	1.0 e	1.83 de
14	KERB	50	WP	1.0	LB A/A			PRE	B	9.0 a	1.0 e	1.00 e
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	8.7 a	1.3 e	1.00 e
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	8.3 a	7.7 abc	8.33 a
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	9.0 a	1.0 e	1.00 e
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	8.3 a	8.7 a	2.50 cde
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	8.0 a	1.0 e	1.00 e
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	1.0 d	1.0 e	1.00 e
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	8.0 a	2.7 de	3.67 bcd

# North Carolina State University

**TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND  
PREEMERGENCE HERBICIDES**

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code									
Crop Code						COM SUN	S FLAX	R ANGEL	
Rating Data Type						C-INJURY	C-INJURY	C-INJURY	
Rating Unit						1-9SCALE	1-9SCALE	1-9SCALE	
Rating Date						04-09-02	04-09-02	04-09-02	
Trt-Eval Interval						126 DA-A	126 DA-A	126 DA-A	
ARM Action Codes									
Trt Treatment No. Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate	Grow Unit	Appl Stg	Code
22 CHECK									
						9.0 a	9.0 a	9.00 a	
LSD (P=.05)						1.98	2.69	2.449	
Standard Deviation						1.20	1.63	1.484	
CV						16.3	37.54	64.01	
Bartlett's X2						21.891	26.547	21.437	
P(Bartlett's X2)						0.111	0.009*	0.003*	
Replicate F						0.199	0.142	3.220	
Replicate Prob(F)						0.8203	0.8679	0.0500	
Treatment F						10.672	12.695	8.102	
Treatment Prob(F)						0.0001	0.0001	0.0001	

Means followed by same letter do not significantly differ (P=.05, LSD)

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							P CONE	CAL POP	INDIAN B			
Crop Code							C-INJURY	C-INJURY	C-INJURY			
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE			
Rating Unit							04-09-02	04-09-02	04-09-02			
Rating Date							126 DA-A	126 DA-A	126 DA-A			
Trt-Eval Interval												
ARM Action Codes												
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	9.0 a	9.00 a	3.7 bcd
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	7.7 ab	4.33 c-f	1.7 cd
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	6.3 abc	3.00 efg	6.0 ab
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	8.3 ab	7.00 ab	1.0 d
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	7.7 ab	9.00 a	3.0 bcd
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	8.3 ab	3.33 efg	3.0 bcd
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	7.7 ab	6.00 bcd	3.7 bcd
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	6.3 abc	7.00 ab	5.7 abc
9	DEVRIKOL	50	DF	2.0	LB A/A			PRE	B	6.0 abc	1.50 g	1.7 cd
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	5.3 bc	9.00 a	1.0 d
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	3.7 cd	2.00 fg	1.0 d
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	3.3 cd	4.00 d-g	3.0 bcd
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	8.0 ab	9.00 a	1.0 d
14	KERB	50	WP	1.0	LB A/A			PRE	B	8.0 ab	2.33 efg	6.3 ab
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	7.7 ab	8.67 a	1.0 d
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	8.7 a	8.67 a	1.0 d
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	6.3 abc	8.67 a	5.7 abc
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	8.7 a	4.67 b-e	1.0 d
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	7.3 ab	8.67 a	5.0 a-d
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	1.0 d	1.50 g	1.0 d
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	8.7 a	6.67 abc	1.0 d

# North Carolina State University

**TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND  
PREEMERGENCE HERBICIDES**

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							P CONE	CAL POP	INDIAN B			
Crop Code							C-INJURY	C-INJURY	C-INJURY			
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE			
Rating Unit												
Rating Date							04-09-02	04-09-02	04-09-02			
Trt-Eval Interval							126 DA-A	126 DA-A	126 DA-A			
ARM Action Codes												
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate	Grow Unit	Appl Stg	Code		
22	CHECK							9.0 a		9.00 a		9.0 a
LSD (P=.05)							3.07	2.640	4.16			
Standard Deviation							1.86	1.600	2.52			
CV							26.77	26.46	83.66			
Bartlett's X2							29.311	27.419	6.118			
P(Bartlett's X2)							0.045*	0.026*	0.865			
Replicate F							1.311	4.108	5.295			
Replicate Prob(F)							0.2802	0.0235	0.0089			
Treatment F							3.685	9.516	2.577			
Treatment Prob(F)							0.0002	0.0001	0.0045			

Means followed by same letter do not significantly differ (P=.05, LSD)

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							L COREOP	CORN POP	D ROCKET						
Crop Code							C-INJURY	C-INJURY	C-INJURY						
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE						
Rating Unit							04-09-02	04-09-02	04-09-02						
Rating Date							126 DA-A	126 DA-A	126 DA-A						
Trt-Eval Interval															
ARM Action Codes															
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code						
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	6.00	a-e	8.33	ab	8.3	ab
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	2.00	fgh	1.50	d	1.0	f
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	8.67	ab	1.00	d	9.0	a
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	5.00	b-g	1.17	d	9.0	a
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	3.00	d-h	9.00	a	8.3	ab
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	6.33	a-d	2.00	d	7.0	abc
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	8.00	abc	6.00	c	8.7	ab
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	4.67	c-h	1.00	d	8.3	ab
9	DEVIRINOL	50	DF	2.0	LB A/A			PRE	B	3.33	d-h	1.00	d	5.7	cd
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	4.00	d-h	1.00	d	8.3	ab
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	1.33	gh	1.00	d	1.3	f
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	2.33	e-h	1.00	d	4.0	de
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	1.17	gh	9.00	a	5.7	cd
14	KERB	50	WP	1.0	LB A/A			PRE	B	9.00	a	1.00	d	8.3	ab
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	1.67	gh	1.00	d	9.0	a
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	8.33	abc	7.33	abc	8.7	ab
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	6.00	a-e	9.00	a	2.0	ef
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	4.00	d-h	6.67	bc	6.7	bc
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	6.67	a-d	8.33	ab	1.7	f
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	1.00	h	1.00	d	1.3	f
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	5.67	a-f	8.67	ab	9.0	a

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code												
Crop Code								L COREOP	CORN POP	D ROCKET		
Rating Data Type								C-INJURY	C-INJURY	C-INJURY		
Rating Unit								1-9SCALE	1-9SCALE	1-9SCALE		
Rating Date								04-09-02	04-09-02	04-09-02		
Trt-Eval Interval								126 DA-A	126 DA-A	126 DA-A		
ARM Action Codes												
Trt Treatment No. Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate	Grow Unit	Appl Stg	Code			
22 CHECK										9.00 a	9.00 a	
										9.0 a		
LSD (P=.05)										3.974	2.022	2.03
Standard Deviation										2.408	1.225	1.23
CV										49.44	28.38	19.32
Bartlett's X2										33.089	17.578	25.457
P(Bartlett's X2)										0.016*	0.025*	0.03*
Replicate F										6.146	1.642	0.279
Replicate Prob(F)										0.0046	0.2057	0.7578
Treatment F										3.755	26.505	18.078
Treatment Prob(F)										0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							SWEET W	S SNAP	CHICORY						
Crop Code							C-INJURY	C-INJURY	C-INJURY						
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE						
Rating Unit							04-09-02	04-09-02	04-09-02						
Rating Date							126 DA-A	126 DA-A	126 DA-A						
Trt-Eval Interval															
ARM Action Codes															
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code						
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	8.67	a	8.7	ab	8.33	ab
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	2.00	e-h	6.3	bc	7.00	a-d
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	8.67	a	4.7	cde	9.00	a
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	3.67	d-h	9.0	a	9.00	a
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	9.00	a	9.0	a	7.67	abc
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	7.00	abc	1.3	fg	1.83	f
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	8.67	a	4.7	cde	3.33	ef
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	1.67	fgh	6.0	cd	9.00	a
9	DEVIRINOL	50	DF	2.0	LB A/A			PRE	B	4.33	c-f	1.0	g	2.33	f
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	2.00	e-h	4.7	cde	9.00	a
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	1.17	gh	1.0	g	1.17	f
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	3.83	d-g	1.0	g	3.00	ef
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	4.67	cde	3.7	def	6.33	bcd
14	KERB	50	WP	1.0	LB A/A			PRE	B	1.00	h	1.3	fg	9.00	a
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	1.00	h	1.0	g	2.00	f
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	9.00	a	6.3	bc	8.33	ab
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	4.67	cde	3.0	efg	7.00	a-d
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	5.33	bcd	9.0	a	5.00	de
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	8.00	ab	4.7	cde	9.00	a
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	1.67	fgh	1.0	g	2.17	f
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	8.00	ab	4.3	cde	5.17	cde

# North Carolina State University

**TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND  
PREEMERGENCE HERBICIDES**

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code									
Crop Code						SWEET W	S SNAP	CHICORY	
Rating Data Type						C-INJURY	C-INJURY	C-INJURY	
Rating Unit						1-9SCALE	1-9SCALE	1-9SCALE	
Rating Date						04-09-02	04-09-02	04-09-02	
Trt-Eval Interval						126 DA-A	126 DA-A	126 DA-A	
ARM Action Codes									
Trt Treatment	Form Form	Rate	Product	Product	Grow	Appl			
No. Name	Conc Type	Rate	Rate	Rate	Unit	Stg	Code		
22 CHECK								9.00 a	9.0 a
									9.00 a
LSD (P=.05)								2.686	2.45
Standard Deviation								1.628	1.48
CV								31.69	32.41
Bartlett's X2								28.427	14.911
P(Bartlett's X2)								0.028*	0.246
Replicate F								0.519	0.214
Replicate Prob(F)								0.5988	0.8086
Treatment F								10.827	12.442
Treatment Prob(F)								0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							C CONE	MIX POP	G DAISY						
Crop Code							C-INJURY	C-INJURY	C-INJURY						
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE						
Rating Unit							04-09-02	04-09-02	04-09-02						
Rating Date							126 DA-A	126 DA-A	126 DA-A						
Trt-Eval Interval															
ARM Action Codes															
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code						
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	8.67	ab	8.00	ab	8.33	abc
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	2.00	ef	2.00	d	5.67	cde
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	6.33	abc	1.17	d	5.67	cde
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	5.67	a-d	1.00	d	8.67	ab
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	4.67	cde	7.67	abc	4.67	ef
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	5.67	a-d	1.33	d	8.33	abc
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	7.00	abc	6.33	bc	8.00	abc
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	8.33	ab	1.33	d	9.00	a
9	DEVRIKOL	50	DF	2.0	LB A/A			PRE	B	2.17	def	1.17	d	1.00	g
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	5.67	a-d	1.00	d	9.00	a
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	1.00	f	1.00	d	1.33	g
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	2.00	ef	1.17	d	1.83	fg
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	8.67	ab	8.67	ab	7.67	a-d
14	KERB	50	WP	1.0	LB A/A			PRE	B	6.00	abc	1.00	d	8.33	abc
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	2.00	ef	1.00	d	7.33	a-e
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	7.67	abc	6.67	abc	8.67	ab
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	7.00	abc	9.00	a	6.00	b-e
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	7.67	abc	6.67	abc	5.00	de
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	7.33	abc	5.33	c	5.00	de
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	1.00	f	1.00	d	1.00	g
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	5.33	b-e	8.67	ab	8.67	ab

# North Carolina State University

**TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND  
PREEMERGENCE HERBICIDES**

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code												
Crop Code								C CONE	MIX POP	G DAISY		
Rating Data Type								C-INJURY	C-INJURY	C-INJURY		
Rating Unit								1-9SCALE	1-9SCALE	1-9SCALE		
Rating Date								04-09-02	04-09-02	04-09-02		
Trt-Eval Interval								126 DA-A	126 DA-A	126 DA-A		
ARM Action Codes												
Trt Treatment No. Name	Form Conc	Form Type	Rate Rate	Unit	Product Rate	Product Rate	Unit	Grow Stg	Appl Code			
22 CHECK										9.00 a	9.00 a	
LSD (P=.05)										3.508	2.627	2.932
Standard Deviation										2.126	1.592	1.777
CV										38.71	38.84	28.29
Bartlett's X2										22.099	37.303	28.391
P(Bartlett's X2)										0.181	0.001*	0.028*
Replicate F										1.917	2.378	0.563
Replicate Prob(F)										0.1598	0.1051	0.5739
Treatment F										4.668	13.558	7.449
Treatment Prob(F)										0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							CATCHFLY	MARIGOLD	SWAMP				
Crop Code							C-INJURY	C-INJURY	C-INJURY				
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE				
Rating Unit							04-09-02	04-09-02	05-16-02				
Rating Date							126 DA-A	126 DA-A	23 WAT				
Trt-Eval Interval									B				
ARM Action Codes													
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code				
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	6.0	ab	3.3	bc
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	1.0	c	6.7	a-d
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	1.0	c	8.7	a
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	1.0	c	8.7	a
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	3.7	bc	7.7	ab
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	3.3	bc	8.3	ab
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	3.7	bc	6.7	a-d
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	1.0	c	8.0	ab
9	DEVRIKOL	50	DF	2.0	LB A/A			PRE	B	1.0	c	4.3	d
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	1.0	c	7.3	ab
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	1.0	c	4.3	d
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	1.0	c	7.0	abc
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	1.0	c	6.7	a-d
14	KERB	50	WP	1.0	LB A/A			PRE	B	1.0	c	8.3	ab
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	1.0	c	7.3	ab
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	6.0	ab	6.0	bcd
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	1.0	c	8.0	ab
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	1.0	c	4.3	d
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	1.0	c	7.7	ab
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	1.0	c	4.7	cd
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	8.7	a	7.0	abc

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							CATCHFLY	MARIGOLD	SWAMP		
Crop Code							C-INJURY	C-INJURY	C-INJURY		
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE		
Rating Unit											
Rating Date							04-09-02	04-09-02	05-16-02		
Trt-Eval Interval							126 DA-A	126 DA-A	23 WAT		
ARM Action Codes									B		
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate	Grow Unit	Appl Stg	Code	
22	CHECK								8.7 a	9.0 a	9.0 a
LSD (P=.05)							3.55	2.59	3.63		
Standard Deviation							2.15	1.57	2.20		
CV							86.02	22.36	89.03		
Bartlett's X2							11.111	19.133	1.944		
P(Bartlett's X2)							0.085	0.513	0.992		
Replicate F							0.118	5.708	4.234		
Replicate Prob(F)							0.8890	0.0064	0.0211		
Treatment F							4.254	2.620	2.447		
Treatment Prob(F)							0.0001	0.0039	0.0067		

Means followed by same letter do not significantly differ (P=.05, LSD)

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							B FLOWER	B SUSAN	OX DAISY						
Crop Code							C-INJURY	C-INJURY	C-INJURY						
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE						
Rating Unit							05-16-02	05-16-02	05-16-02						
Rating Date							23 WAT	23 WAT	23 WAT						
Trt-Eval Interval							B	B	B						
ARM Action Codes															
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Product Rate	Product Rate	Grow Stg	Appl Code						
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	3.3	bc	6.3	abc	6.3	a-d
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	1.0	c	1.0	f	3.0	e-h
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	5.7	ab	6.7	abc	7.7	abc
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	5.0	abc	4.3	cde	4.7	d-g
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	3.3	bc	5.7	bc	4.7	d-g
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	6.3	ab	7.0	abc	1.0	h
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	5.3	abc	5.0	cd	5.3	c-f
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	3.0	bc	6.3	abc	8.3	ab
9	DEVRIKOL	50	DF	2.0	LB A/A			PRE	B	3.3	bc	2.0	def	3.0	e-h
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	7.0	ab	6.0	abc	7.7	abc
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	1.0	c	1.0	f	2.7	fgh
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	5.3	abc	1.7	ef	1.7	h
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	3.0	bc	5.0	cd	8.7	a
14	KERB	50	WP	1.0	LB A/A			PRE	B	4.7	abc	6.7	abc	8.7	a
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	1.0	c	6.0	abc	5.7	b-e
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	2.7	bc	8.3	ab	8.7	a
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	2.7	bc	9.0	a	9.0	a
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	5.0	abc	5.0	cd	9.0	a
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	6.7	ab	6.0	abc	8.3	ab
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	1.0	c	1.0	f	2.0	gh
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	6.7	ab	9.0	a	6.3	a-d



# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							PLAINS C	COM SUN	S FLAX			
Crop Code							C-INJURY	C-INJURY	C-INJURY			
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE			
Rating Unit												
Rating Date							05-16-02	05-16-02	05-16-02			
Trt-Eval Interval							23 WAT	23 WAT	23 WAT			
ARM Action Codes							B	B	B			
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	7.3 ab	8.3 ab	1.0 d
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	6.0 abc	4.7 cde	3.0 bcd
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	8.3 a	7.3 abc	3.3 bcd
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	8.7 a	8.0 abc	3.7 bcd
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	7.3 ab	5.0 b-e	3.3 bcd
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	9.0 a	9.0 a	1.0 d
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	8.3 a	8.3 ab	3.0 bcd
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	7.0 ab	7.0 a-d	5.3 abc
9	DEVIRINOL	50	DF	2.0	LB A/A			PRE	B	8.0 a	8.7 a	1.0 d
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	8.3 a	9.0 a	6.0 ab
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	1.0 d	7.3 abc	1.0 d
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	9.0 a	9.0 a	1.0 d
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	3.3 cd	4.7 cde	1.0 d
14	KERB	50	WP	1.0	LB A/A			PRE	B	9.0 a	9.0 a	1.0 d
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	7.0 ab	8.3 ab	2.7 bcd
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	8.0 a	6.3 a-e	6.3 ab
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	7.0 ab	3.0 e	1.0 d
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	6.0 abc	7.7 abc	9.0 a
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	9.0 a	8.7 a	1.7 cd
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	1.0 d	3.7 de	1.0 d
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	4.3 bc	8.7 a	3.7 bcd

# North Carolina State University

**TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND  
PREEMERGENCE HERBICIDES**

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code						PLAINS C	COM SUN	S FLAX		
Crop Code						C-INJURY	C-INJURY	C-INJURY		
Rating Data Type						1-9SCALE	1-9SCALE	1-9SCALE		
Rating Unit										
Rating Date						05-16-02	05-16-02	05-16-02		
Trt-Eval Interval						23 WAT	23 WAT	23 WAT		
ARM Action Codes						B	B	B		
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate	Grow Unit	Appl Stg	Code
22	CHECK									
						9.0 a	9.0 a	9.0 a		
LSD (P=.05)						3.20	3.46	3.95		
Standard Deviation						1.94	2.10	2.39		
CV						28.05	28.7	76.36		
Bartlett's X2						11.481	20.736	3.577		
P(Bartlett's X2)						0.571	0.145	0.964		
Replicate F						0.738	0.024	5.445		
Replicate Prob(F)						0.4841	0.9762	0.0079		
Treatment F						4.742	2.464	3.391		
Treatment Prob(F)						0.0001	0.0064	0.0004		

Means followed by same letter do not significantly differ (P=.05, LSD)

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							R ANGEL	P CONE	CAL POP						
Crop Code							C-INJURY	C-INJURY	C-INJURY						
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE						
Rating Unit															
Rating Date							05-16-02	05-16-02	05-16-02						
Trt-Eval Interval							23 WAT	23 WAT	23 WAT						
ARM Action Codes							B	B	B						
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code						
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	1.0	c	1.0	d	4.7	d-i
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	1.0	c	2.7	cd	7.0	a-d
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	1.0	c	1.0	d	1.7	ij
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	1.0	c	3.0	cd	4.0	d-j
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	1.0	c	1.0	d	7.0	a-d
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	1.0	c	1.0	d	5.7	b-g
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	1.0	c	3.7	bcd	5.0	c-h
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	1.0	c	3.3	cd	6.7	a-e
9	DEVTRINOL	50	DF	2.0	LB A/A			PRE	B	1.0	c	1.0	d	1.0	j
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	1.0	c	3.0	cd	8.7	ab
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	1.0	c	3.3	cd	2.7	g-j
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	1.0	c	6.0	abc	3.7	e-j
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	1.0	c	3.0	cd	8.0	abc
14	KERB	50	WP	1.0	LB A/A			PRE	B	1.0	c	3.0	cd	2.3	hij
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	1.0	c	5.3	a-d	8.0	abc
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	6.3	b	3.7	bcd	6.3	a-f
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	1.0	c	1.0	d	3.7	e-j
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	1.0	c	8.0	ab	1.3	j
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	1.0	c	3.0	cd	6.0	a-f
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	1.0	c	1.3	d	1.0	j
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	1.0	c	3.3	cd	3.3	f-j

# North Carolina State University

**TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND  
PREEMERGENCE HERBICIDES**

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code									
Crop Code						R ANGEL	P CONE	CAL POP	
Rating Data Type						C-INJURY	C-INJURY	C-INJURY	
Rating Unit						1-9SCALE	1-9SCALE	1-9SCALE	
Rating Date						05-16-02	05-16-02	05-16-02	
Trt-Eval Interval						23 WAT	23 WAT	23 WAT	
ARM Action Codes						B	B	B	
Trt Treatment No. Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate	Grow Unit	Appl Stg	Code
22 CHECK									
						9.0 a	9.0 a	9.0 a	
LSD (P=.05)						1.62	4.50	3.04	
Standard Deviation						0.98	2.73	1.84	
CV						61.31	84.95	38.0	
Bartlett's X2						0.0	8.795	19.535	
P(Bartlett's X2)						0.00*	0.844	0.299	
Replicate F						1.000	5.142	4.623	
Replicate Prob(F)						0.3765	0.0101	0.0153	
Treatment F						12.429	1.968	5.785	
Treatment Prob(F)						0.0001	0.0307	0.0001	

Means followed by same letter do not significantly differ (P=.05, LSD)

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							L COREOP	SWEET W	S SNAP			
Crop Code							C-INJURY	C-INJURY	C-INJURY			
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE			
Rating Unit							05-16-02	05-16-02	05-16-02			
Rating Date							23 WAT	23 WAT	23 WAT			
Trt-Eval Interval							B	B	B			
ARM Action Codes												
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	6.3 a-d	7.7 ab	6.3 b-e
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	3.0 de	1.3 d	5.3 de
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	8.3 ab	6.0 b	4.3 ef
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	6.7 a-d	1.3 d	7.7 a-d
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	4.3 cde	7.7 ab	8.3 abc
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	9.0 a	7.3 ab	1.0 g
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	5.0 b-e	7.0 ab	6.3 b-e
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	6.3 a-d	2.0 d	6.3 b-e
9	DEVRIKOL	50	DF	2.0	LB A/A			PRE	B	6.7 a-d	2.0 d	2.0 fg
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	6.7 a-d	1.0 d	2.7 fg
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	4.7 b-e	1.3 d	1.0 g
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	5.7 a-d	3.3 cd	1.3 g
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	1.3 e	2.0 d	4.3 ef
14	KERB	50	WP	1.0	LB A/A			PRE	B	9.0 a	1.0 d	1.3 g
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	4.3 cde	1.0 d	1.0 g
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	9.0 a	8.0 ab	5.3 de
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	7.0 abc	1.3 d	1.3 g
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	5.7 a-d	5.7 bc	8.7 ab
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	9.0 a	6.7 ab	6.3 b-e
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	4.3 cde	1.3 d	1.0 g
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	8.0 abc	7.0 ab	6.0 cde

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							L COREOP	SWEET W	S SNAP	
Crop Code							C-INJURY	C-INJURY	C-INJURY	
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE	
Rating Unit							05-16-02	05-16-02	05-16-02	
Rating Date							23 WAT	23 WAT	23 WAT	
Trt-Eval Interval							B	B	B	
ARM Action Codes										
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate	Grow Unit	Appl Stg	Code
22	CHECK							9.0 a		9.0 a
								9.0 a		9.0 a
								3.93		2.44
								2.38		1.48
								37.61		35.81
								16.109		21.474
								0.445		0.206
								4.089		0.269
								0.0239		0.7652
								2.434		12.077
								0.0070		0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							CHICORY	G DAISY	CATCHFLY			
Crop Code							C-INJURY	C-INJURY	C-INJURY			
Rating Data Type							1-9SCALE	1-9SCALE	1-9SCALE			
Rating Unit												
Rating Date							05-16-02	05-16-02	05-16-02			
Trt-Eval Interval							23 WAT	23 WAT	23 WAT			
ARM Action Codes							B	B	B			
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code			
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	5.7 a-d	8.0 ab	3.7 bc
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	6.3 a-d	6.7 a-d	1.0 c
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	8.3 ab	6.0 a-d	1.0 c
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	7.7 ab	7.3 abc	1.0 c
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	7.0 abc	6.0 a-d	2.7 c
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	1.3 f	3.7 de	1.0 c
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	3.7 c-f	8.3 ab	3.3 c
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	7.7 ab	8.0 ab	1.0 c
9	DEVRIKOL	50	DF	2.0	LB A/A			PRE	B	1.7 ef	3.7 de	1.0 c
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	8.7 a	8.3 ab	1.0 c
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	1.3 f	1.3 e	1.0 c
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	6.3 a-d	4.3 cde	1.0 c
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	3.3 c-f	5.3 bcd	1.0 c
14	KERB	50	WP	1.0	LB A/A			PRE	B	9.0 a	8.7 ab	1.0 c
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	1.7 ef	5.3 bcd	1.0 c
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	8.7 a	9.0 a	8.0 a
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	5.3 a-e	6.0 a-d	1.0 c
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	4.7 b-f	3.7 de	1.0 c
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	8.7 a	7.0 a-d	1.0 c
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	3.0 def	1.0 e	1.0 c
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	5.3 a-e	9.0 a	6.3 ab

# North Carolina State University

**TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND  
PREEMERGENCE HERBICIDES**

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code									
Crop Code						CHICORY	G DAISY	CATCHFLY	
Rating Data Type						C-INJURY	C-INJURY	C-INJURY	
Rating Unit						1-9SCALE	1-9SCALE	1-9SCALE	
Rating Date						05-16-02	05-16-02	05-16-02	
Trt-Eval Interval						23 WAT	23 WAT	23 WAT	
ARM Action Codes						B	B	B	
Trt Treatment No. Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate	Grow Unit	Appl Stg	Code
22 CHECK									
						9.0 a	9.0 a	9.0 a	
LSD (P=.05)						3.72	3.40	2.97	
Standard Deviation						2.26	2.06	1.80	
CV						39.94	33.43	80.8	
Bartlett's X2						35.579	21.706	3.938	
P(Bartlett's X2)						0.012*	0.196	0.414	
Replicate F						0.984	2.592	0.098	
Replicate Prob(F)						0.3821	0.0874	0.9066	
Treatment F						4.328	4.115	5.454	
Treatment Prob(F)						0.0001	0.0001	0.0001	

Means followed by same letter do not significantly differ (P=.05, LSD)

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code							MARIGOLD			
Crop Code							C-INJURY			
Rating Data Type							1-9SCALE			
Rating Unit							05-16-02			
Rating Date							23 WAT			
Trt-Eval Interval							B			
ARM Action Codes										
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	
1	EPTAM	7.0	EC	3.06	LB A/A			PPI	A	6.3 a-d
2	PREDICT	78.6	DF	0.98	LB A/A			PPI	A	6.0 a-d
3	PREFAR	4.0	EC	5.0	LB A/A			PPI	A	7.3 abc
4	TREFLAN HFP	4.0	EC	0.5	LB A/A			PPI	A	5.7 bcd
5	ALANAP-L	2.0	L	2.0	LB A/A			PRE	B	7.3 abc
6	AUTHORITY	75	DF	3.975	OZ A/A			PRE	B	9.0 a
7	COTORAN	4.0	L	1.0	LB A/A			PRE	B	7.7 abc
8	CURBIT	3.0	EC	1.125	LB A/A			PRE	B	7.7 abc
9	DEVRIKOL	50	DF	2.0	LB A/A			PRE	B	8.7 ab
10	FACTOR	65	WG	0.65	LB A/A			PRE	B	6.7 abc
11	GALLERY	75	DF	0.5	LB A/A			PRE	B	8.7 ab
12	GOAL XL	2.0	L	0.25	LB A/A			PRE	B	9.0 a
13	IMAGE	70	WG	0.375	LB A/A			PRE	B	3.3 d
14	KERB	50	WP	1.0	LB A/A			PRE	B	9.0 a
15	PENDULUM	60	WG	1.5	LB A/A			PRE	B	7.0 abc
16	PENNANT LIQUID	8.0	EC	2.0	LB A/A			PRE	B	6.7 abc
17	PLATEAU	2.0	AS	1.0	OZ A/A			PRE	B	4.7 cd
18	SINBAR	80	WP	0.4	LB A/A			PRE	B	5.7 bcd
19	STAPLE	85	SP	0.51	OZ A/A			PRE	B	7.0 abc
20	SURFLAN	4.0	AS	2.0	LB A/A			PRE	B	9.0 a
21	VELPAR	75	DF	0.5	LB A/A			PRE	B	7.3 abc

# North Carolina State University

**TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND  
PREEMERGENCE HERBICIDES**

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

Weed Code										MARIGOLD
Crop Code										C-INJURY
Rating Data Type										1-9SCALE
Rating Unit										05-16-02
Rating Date										23 WAT
Trt-Eval Interval										B
ARM Action Codes										
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Product Rate	Product Rate	Grow Unit	Appl Stg	Code
22	CHECK									9.0 a
LSD (P=.05)										3.02
Standard Deviation										1.83
CV										25.42
Bartlett's X2										20.926
P(Bartlett's X2)										0.181
Replicate F										3.305
Replicate Prob(F)										0.0464
Treatment F										2.122
Treatment Prob(F)										0.0189

Means followed by same letter do not significantly differ (P=.05, LSD)

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

### Trial Comments

11-29-01: LIME AND FERTILIZER BROADCAST AND CUT IN WITH FIELD CULTIVATOR

12-04-01: PPI TREATMENTS APPLIED AND INCORPORATED 2X WITH FIELD CULTIVATOR AT 2 TO 3 INCHES  
- RAN 6 FEET GRAIN DRILL WITH 7 INCH SPACINGS ACROSS PLOTS TO CREATE FURROWS FOR INDIVIDUAL WILDFLOWER SPECIES SEEDBEDS  
- SEEDED ALL SPECIES EXCEPT FOR NARROWLEAF SUNFLOWER AND BUR-MARIGOLD  
- SEEDED BUTTERFLYWEED ONLY IN PPI/PRE TRIAL BECAUSE OF SHORT SUPPLY  
- TEST AREA LIGHTLY SMOOTHED WITH HAND RAKES TO KNOCK DOWN FURROWS AND PROVIDE SOIL/SEED CONTACT  
- PRE TREATMENTS APPLIED  
- TEST AREA VERY DRY

12-06-02: SEEDED NARROWLEAF SUNFLOWER AND BUR-MARIGOLD (RECEIVED SUPPLY FROM DAVID KING)

02-08-02:

SWAMP MILKWEED: SPORADIC, COTYLEDON - 1 LEAF, 0.75 INCH  
BLANKETFLOWER: SPORADIC, COTYLEDON - 1 LEAF, 0.25 INCH  
BLACK-EYED SUSAN: SPORADIC, COTYLEDON - 1 LEAF, 0.125 INCH  
OX-EYED DAISY: UNIFORM, COTYLEDON - 2 LEAVES, 0.25 INCH  
PLAINS COREOPSIS: UNIFORM, COTYLEDON, 0.25 INCH  
COMMON SUNFLOWER: NONE  
COMMON MILKWEED: SPORADIC, COTYLEDON, 0.25 INCH  
SCARLET FLAX: UNIFORM, 2 - 6 LEAF PAIRS, 0.5 - 1 INCH  
BUTTERFLYWEED: SPORADIC, COTYLEDON, 0.25 INCH  
ROSE ANGEL: UNIFORM, 1 - 2 LEAF PAIRS, 0.5 INCH  
PURPLE CONEFLOWER: SPORADIC, COTYLEDON, 0.125 INCH  
CALIFORNIA POPPY: UNIFORM, 6 LEAFLETS, 0.75 INCH  
INDIAN BLANKET: SPORADIC, COTYLEDON, 0.125 INCH  
LANCE-LEAF COREOPSIS: SPORADIC, COTYLEDON, 0.125 INCH  
CORN POPPY: UNIFORM, UP TO 6 LEAFLETS, 0.25 INCH  
DAMES ROCKET: UNIFORM, COTYLEDON - 2 LEAVES, 0.5 INCH  
SWEET WILLIAM: SPORADIC, COTYLEDON - 2 LEAVES, 0.5 INCH  
SPURRED SNAPDRAGON: SPORADIC, COTYLEDON - 2 LEAF PAIRS, 0.75 INCH  
CHICORY: UNIFORM, COTYLEDON - 2 LEAVES, 0.5 INCH  
CLASPING CONEFLOWER: SPORADIC, COTYLEDON - 1 LEAF, 0.25 INCH  
MIXED POPPY: UNIFORM, COTYLEDON - 2 LEAVES, 0.25 INCH  
GLORIOSA DAISY: SPORADIC, COTYLEDON - 2 LEAVES, 0.25 INCH  
CATCHFLY: SPORADIC, COTYLEDON, 0.25 INCH  
NAR.LEAF SUNFLOWER: NONE  
BUR-MARIGOLD: NONE

03-15-02:

34-0-0 BROADCAST OVER TEST AREA AT 1 LB N/1000'

### WILDFLOWER GROWTH STAGES

SWAMP MILKWEED: COTYLEDON, 0.5 INCH  
BLANKETFLOWER: SPORADIC, 2 - 4 LEAVES, 0.25 INCH  
BLACK-EYED SUSAN: 1 - 3 LEAVES, 0.25 - 0.5 INCH  
OX-EYED DAISY: 2 - 6 LEAVES, 0.25 - 0.75 INCH  
PLAINS COREOPSIS: 4 - 8 LEAVES, 0.5 - 0.75 INCH  
COMMON SUNFLOWER: COTYLEDON - 2 LEAVES, 0.5 TO 0.75 INCH  
COMMON MILKWEED: SPORADIC, COTYLEDON, 0.5 INCH  
SCARLET FLAX: 10+ LEAF PAIRS, 1 - 3 INCHES  
BUTTERFLYWEED: SEEDED  
ROSE ANGEL: 2 - 5 LEAF PAIRS, 0.5 - 1 INCH  
PURPLE CONEFLOWER: 1 LEAF, 0.25 INCH  
CALIFORNIA POPPY: 8+ LEAFLETS, 1 - 2 INCHES

# North Carolina State University

## TOLERANCE OF VARIOUS WILDFLOWER SPECIES TO PREPLANT INCORPORATED AND PREEMERGENCE HERBICIDES

Trial ID: 02-WF2

Study Dir.: L.S. WARREN

Location: CENTRAL CROPS STA. Investigator: Crop Science Department

INDIAN BLANKET: SPORADIC, 2 LEAVES, 0.25 INCH  
LANCE-LEAF COREOPSIS: COTYLEDON, 2 LEAVES, 0.25 INCH  
CORN POPPY: 8+ LEAFLETS, 0.25 - 1 INCH  
DAMES ROCKET: 2 - 4 LEAVES, 0.25 - 0.75 INCH  
SWEET WILLIAM: 4 - 8 LEAVES, 0.5 - 1 INCH  
SPURRED SNAPDRAGON: 4+ LEAF PAIRS, 1 - 3 INCHES  
CHICORY: 2 - 6 LEAVES, 0.5 - 2 INCHES  
CLASPING CONEFLOWER: COTYLEDON - 1 LEAF, 0.25 INCH  
MIXED POPPY: 8+ LEAFLETS, 0.25 - 1 INCH  
GLORIOSA DAISY: COTYLEDON - 2 LEAVES, 0.25 - 0.5 INCH  
CATCHFLY: 4 - 8 LEAVES, 0.25 - 0.75 INCH  
NAR.LEAF SUNFLOWER: NONE  
BUR-MARIGOLD: COTYLEDON - 2 LEAVES, 0.5 - 0.75 INCH

04-02-02:

### WILDFLOWER GROWTH STAGES

SWAMP MILKWEED: COTYLEDON - 2 LEAVES, 0.5 INCH  
BLANKETFLOWER: SPORADIC, 4 - 8 LEAVES, 2 INCHES  
BLACK-EYED SUSAN: 4 - 6 LEAVES, 1 - 2.5 INCHES  
OX-EYED DAISY: 10+ LEAVES, 1 - 2.5 INCHES  
PLAINS COREOPSIS: 10+ LEAVES, 2 INCHES  
COMMON SUNFLOWER: 4 - 8 LEAVES, 2 - 3 INCHES  
COMMON MILKWEED: SPORADIC, COTYLEDON - 4 LEAVES, 0.5 - 1 INCH  
SCARLET FLAX: 10+ LEAF PAIRS, 2 - 4 INCHES  
BUTTERFLYWEED: NONE  
ROSE ANGEL: 5+ LEAF PAIRS, 1 - 2.5 INCHES  
PURPLE CONEFLOWER: 1 - 2 LEAVES, 0.5 - 0.75 INCH  
CALIFORNIA POPPY: 10+ LEAFLETS, 5 INCHES  
INDIAN BLANKET: SPORADIC, 2 - 4 LEAVES, 1 INCH  
LANCE-LEAF COREOPSIS: 2 - 8 LEAVES, 1 - 2 INCHES  
CORN POPPY: 10+ LEAFLETS, 3 - 5 INCHES  
DAMES ROCKET: 4 - 8 LEAVES, 3 INCHES  
SWEET WILLIAM: 6 - 10 LEAVES, 1 - 2.5 INCHES  
SPURRED SNAPDRAGON: EARLY FLOWER, 6 - 12 INCHES  
CHICORY: 6 - 10+ LEAVES, 3 - 4 INCHES  
CLASPING CONEFLOWER: 2 - 4 LEAVES, 0.5 - 1 INCH  
MIXED POPPY: 10+ LEAFLETS, 2 - 4 INCHES  
GLORIOSA DAISY: 2 - 4 LEAVES, 1 - 2 INCHES  
CATCHFLY: 10+ LEAVES, 1 - 2.5 INCHES  
NAR.LEAF SUNFLOWER: NONE  
BUR-MARIGOLD: 2 - 6 LEAVES, 1 - 3 INCHES

### WEED GROWTH STAGES

SPRAR: FLOWERING, 4 - 6 INCH STEMS, <1 - 5/FT2  
OEOLA: 2 - 6 INCH DIAMETER ROSETTE, 8 - 20+ LEAVES, <1 - 5/FT2