

# RESULTS OF WEED CONTROL STUDIES IN VEGETABLE CROPS—1991

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**S. F. GORSKI**

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The Ohio State University  
Ohio Agricultural Research and Development Center  
Wooster, Ohio

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This publication also reports research involving pesticides. It does not contain recommendations for their use, nor does it imply that the uses discussed here have been registered. All uses of pesticides must be registered by appropriate State and Federal agencies before they can be recommended.

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# Results of Field Experiments in Vegetable Crops 1991

Dr. Stanley F. Gorski<sup>1</sup>

## GENERAL MATERIALS AND METHODS

### Abbreviations for herbicide application methods:

PPI -Preplant incorporated  
Pre -Preemergence to the weed and crop  
Del Pre -Delayed preemergence, just prior to crop emergence  
Post -Postemergence to the weed and crop

### Sprayer:

Treatments were applied with a CO<sub>2</sub> backpack type sprayer with a gpa of 29.5. Other volumes used are noted in individual studies.

### Weed Ratings:

Weed counts, for the control plots, were made by counting the number of weeds in a 1 square foot wire frame. Counts were made approximately 30 days after treatment. Comparing to the control, treated plots were visually rated for % (weed) control. All plots were cultivated and hoed regularly after weed counts were taken (except unweeded check).

### Injury rating:

Visual rating was done on a percent injury basis with 0 denoting no injury and 100 indicating plant death.

### Statistical Analysis:

Fishers LSD at the 5% level was performed on all experiments. Plot design was a Randomized Complete Block (RCB) with 3,4, or 5 reps.

### Activated Carbon:

An activated carbon/vermiculite safening system was used on some seeded crops (tomato). 1 lb. activated carbon was mixed with each cubic foot of vermiculite. This mixture was then used to fill the seed furrow. One ft<sup>3</sup> covers approximately 600 ft. of row.

### Spray Additives:

Some postemergence applications were with crop oil concentrate (C.O.C.) or a nonionic surfactant (X-77).

Appreciation is given to the following people for their assistance in conducting these research studies:

Mr. Ken Scaife - Farm Superintendent, Columbus  
Mr. Richard Hassell - Branch Manager, Celeryville  
Mr. Chuck Willer - Branch Manager, Fremont  
Mr. Doug Dunham - Student Computer Asst.  
Mr. Mike Maassel - Student Intern

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1991 Rainfall - Lane Avenue Farm - Columbus

DAY	MAY	JUNE	JULY	AUGUST	SEPT
1					
2		1.34	0.64		
3			0.06		
4	0.09			0.46	0.66
5	0.38				
6					
7				0.02	
8			0.22		
9	0.04		0.01	0.62	
10				0.06	0.38
11		0.44			0.34
12					
13	0.01		0.08		0.07
14				0.02	0.36
15		0.38			
16	0.06				
17					0.31
18	0.12			0.4	
19					0.08
20				0.05	
21		0.04		0.1	
22		0.61			
23					0.44
24			0.14		
25					0.1
26	0.04				
27	1.44				
28					
29					
30	0.18		0.04		
31	0.11				
TOTAL	2.47	2.81	1.19	1.73	2.74

1991 Rainfall - Vegetable Crops Branch - Fremont

DAY	MAY	JUNE	JULY	AUGUST	SEPT
1	0.04		0.21		
2		1.52		0.19	
3				0.16	1.08
4			0.59		
5	0.62				
6	0.01				
7			0.19		
8	0.04			0.51	
9					0.45
10		0.05			
11		0.4			
12			0.24		
13	0.09				
14				0.03	
15		0.6			
16	0.18	0.03			
17	0.03			0.29	
18	0.13				
19				0.21	
20				0.28	
21			1.65		
22		0.03			0.35
23	0.17		0.03		
24					
25	0.36				0.04
26	0.17				
27					
28					
29					
30	0.92			0.12	
31	0.12				
TOTAL	2.88	2.63	2.91	1.79	1.92

1991 Rainfall - Muck Crop Branch - Celeryville

DAY	MAY	JUNE	JULY	AUGUST
1				
2		0.79	0.18	
3		0.01		0.27
4				
5	0.61		0.01	
6	0.1			
7				0.01
8			0.14	0.47
9				0.07
10				0.01
11		0.56		
12		0.01		
13	0.15		0.05	0.45
14	0.01		0.01	0.08
15		0.28	0.09	
16	0.27	0.32		
17	0.02			0.79
18				
19				0.71
20				0.02
21			0.41	
22			0.05	0.03
23	0.03		0.55	0.01
24	0.41			
25	0.63	0.1		
26	0.7			
27	0.14			
28				
29			0.02	0.01
30	1.19			
31	0.2			
TOTAL	4.46	2.07	1.51	2.93

TABLE 1: Chemicals Used in these Studies

<u>TRADE NAME</u>	<u>COMMON NAME</u>
ACA	United Ag Products
Accent	DPX-M6316 + Atrazine
Alanap	Naptalam
Amiben	Chloramben
Beacon	CGA-136872
Command	Clomazone
Curbit	Ethalfluralin
Dacthal	Desmedipham
Devrinol	Napropamide
Dual	Metolachlor
Fusilade 2000	Fluazifop
Goal	Oxyfluorfen
Gramoxone Extra	Paraquat
Kerb	Pronamide
Lentagran	Pyridate
MON-8422	Monsanto
MON-8435	Monsanto
MON-13211	Monsanto
N-Serve 24	Nitrapyrin
Poast	Sethoxydim
Prefar	Bensulide
Pursuit	Imazethapyr
Pyramin	Pyrazon
Ro-Neet	Cycloate
Sencor	Metribuzin
Sonalan	Ethalfuralin
Stinger	Clopyralid
Treflan	Trifluralin
Trific	Trifluralin
Tillam	Pebulate

TABLE 2: Weeds Mentioned in Report

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>WSSA CODE</u>
Barnyard grass	<u>Echinochloa crusgali</u>	ECHOG
Black nightshade	<u>Solanum nigrum</u>	SOLNI
Canada thistle	<u>Cirsium arvense</u>	CIRAR
Common lambquarter	<u>Chenopodium album</u>	CHEAL
Common purslane	<u>Portulaca oleracea</u>	POROL
Common ragweed	<u>Ambrosia artemisiiflora</u>	AMBEL
Fall panicum	<u>Panicum dichoromiflorum</u>	PANDI
Hairy galinsoga	<u>Galinsoga ciliata</u>	GASCI
Johnsongrass	<u>Sorghum halepense</u>	SORHA
Knowweed	<u>Polygonum aviculare</u>	POLAV
Ladysthumb smartweed	<u>Polygonum persicaria</u>	POLPE
Large crabgrass	<u>Digitaria sanguinalis</u>	DIGSA
Livid amaranth	<u>Amaranthus lividis</u>	AMALI
Love grass	<u>Eragristus pilosa</u>	AMACH
Shepardspurse	<u>Capsella bursa-pastoris</u>	CAPBP
Smooth pigweed	<u>Amaranthus retroflexus</u>	AMARE
Velvetleaf	<u>Abutilon theophraste</u>	ABUTH
Venice mallow	<u>Hibiscus trionum</u>	HIBTR
Witchgrass	<u>Panicum capillare</u>	PANCA
Yellow foxtail	<u>Setaria lutescens</u>	SETLU
Yellow nutsedge	<u>Pyperus esulentus</u>	CYPES



## HERBICIDE/VEGETABLE FIELD PLOT STUDIES 1991

### CABBAGE TOLERANCE TO GOAL:

The entire study was treated with Dacthal preemergence. Crop and weed phytotoxicity varied with the different formulations of Goal. The commercially available EC formulation was the most injurious, and provided the best weed control. The DF formulation provided the least amount of phytotoxicity.

### CABBAGE POSTEMERGENCE WEED CONTROL:

Injury from Lentagran appeared as a light green mottling on the leaves. Injury was confined to those leaves that were sprayed. Goal caused twisting and misshapen leaves. Injury did not appear on new growth. See "Cabbage tolerance to Goal" study for weed data.

### CABBAGE PREEMERGENCE WEED CONTROL:

Due to the poor weather conditions, germination and early growth of the cabbage was slow and in some cases poor. With the exception of Command, injury was in the form of plant stunting. Cabbage treated with Command had varying degrees of bleached leaves. Weed density was approximately 2 weeds of each species per square foot.

### LETTUCE POSTEMERGENCE WEED CONTROL:

The entire plot area was treated with Amiben preemergence. The initial lettuce stand was poor due to extremely high soil temperatures. Postemergence treatments were so injurious that the study was discontinued after the June 20 rating. Of the group of postemergence herbicides Pursuit was the only one that potentially could be used on lettuce.

### LETTUCE PREEMERGENCE WEED CONTROL:

Kerb provided good control of most annual weeds. However, it provided little or no control of livid amaranth. MON 13211 provided better (but not acceptable) control of livid amaranth, it was also more injurious to the lettuce.

#### **ONION WEED CONTROL:**

There was little difference between the three formulations of Goal in terms of onion phytotoxicity. Lentagran tank mixed with Fusilade was very injurious. Yields from this tank mix were significantly lower than the high yielding treatments. Onion germination and emergence was poor due to early season high temperatures. Onion plants were stressed all season long.

#### **PEPPER TOLERANCE TO COMMAND:**

There was no injury from any of the treatments. Yields were average for the hot dry weather conditions during this season.

#### **PICKLE POSTEMERGENCE WEED CONTROL:**

The entire study was treated with Curbit preemergence. Postemergence applications of Stinger were made on July 1 (P1) and July 15 (P2) and were evaluated for crop injury and yield reduction. Pickle injury appeared as some curling of the leaves and runners. In addition there was some chlorosis/necrosis of the foliage. Injury ranged from 5% at the low rate to 20% at the high rate. Those plants that received 2 applications of Stinger were more severely injured by the second application.

#### **PICKLE PREEMERGENCE WEED CONTROL:**

All treatments were non phytotoxic to the pickle plants and provided acceptable yields. Poor weed germination due to hot dry weather resulted in small and variable weed populations. Therefore, no weed data was reported in this study.

#### **POPCORN RESPONSE TO ACA:**

There was no yield response from ACA on popcorn this season. Crop growth was reduced due to hot dry weather conditions.

#### **PUMPKIN TOLERANCE TO COMMAND:**

There was no injury from any of the treatments. Yields were average for the hot dry weather conditions during this season.

#### **SNAPBEAN TOLERANCE TO COMMAND:**

Weed control and crop safety was excellent with all treatments tested.

#### **TOMATO PLUG SIZE STUDY:**

There was no difference in tomato yield from any of the herbicide treatments. However, there was a significant difference in tomato yield due to tomato transplant cell sizes.

#### **TOMATO POSTEMERGENCE WEED CONTROL:**

The treatments tested did not significantly affect tomato yield. Lentagran did not cause significant foliar injury to the tomato plants this year. This may be due to the applications being made when the tomato plants were larger than in 1990.

#### **TOMATO PREEMERGENCE WEED CONTROL:**

Command caused minimal foliar injury to the tomatoes. However, this early season injury did not cause a yield reduction. Tomato plants treated with Dual or Dual plus Sencor produced yields which were significantly higher than the controls. All treatments produced acceptable yields with varying degrees of weed control.

Chemical analysis of the whole tomatoes as well as tomato paste was performed for both the 2 and 4 lb ai Dual treatments. Dual was undetectable with a lower detection limit of 0.1 ppm.

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Ohio State Univ. Dept. Horticulture  
Cabbage Tolerance to Goal  
Conducted at Columbus by Dr. Stanley F. Gorski  
with cooperators K. Scaife

TITLE: CABBAGE TOLERANCE TO GOAL

LOCATION: COLUMBUS  
PERSONNEL: S.F. GORSKI, K. SCAIFE

PLOT INFORMATION:  
SOIL TYPE: BROOKSTON SILTY CLAY LOAM  
CULTIVAR: MARKET PRIZE

DATE PLANTED: MAY 16, 1991  
RATING DATE: JUNE 18, 1991  
HARVEST DATE: AUGUST 26, 1991  
PLOT SIZE: 5 FT. X 25 FT.  
PLOT DESIGN: RCB w/ 3 REPS

HERBICIDE APPLICATION DATA:

DATE:	5-16	6-14	
TIME OF DAY:	11 am	10 am	
TYPE:	PRE	POST	
SOIL SURFACE:	DRY	MOIST	
SOIL TEMP:	80 F	71 F	
RELATIVE HUMIDITY:	75%	68%	
WEATHER:			
WIND, mph:	CALM	CALM	
SKY COVER:	CLEAR	SUNNY	
AIR TEMP:	85 F	81 F	
GROWTH STAGE:			
CROP:	PRE	4 LEAF	
WEED:	PRE	POROL-	coty- 2"
		CHEAL-	coty- 2"
		AMARE-	coty- 2"
		PANDI-	1"-3"
		HIBTR-	coty- 2"

HERBICIDE APPLICATION EQUIPMENT:

SPRAYER: CO2 BACKPACK  
GPA: 25  
PSI: 30  
TIPS: 8002  
HEIGHT: 18"  
NOZZLE SPACING: 18"

INCORPORATION EQUIPMENT: NONE

Ohio State Univ. Dept. Horticulture  
 Cabbage Tolerance to Goal  
 Conducted at Columbus by Dr. Stanley F. Gorski  
 with cooperater K. Scaife  
 All rates are specified as lb/A

TREATMENT	AI	GROW		% BURN DOWN				% CROP	YIELD		
NAME	#/gal	FD	RATE	STGE	CHEAL	AMARE	POROL	GRASS	INJURY	NUMBER	WEIGHT
CONTROL					0.0	0.0	0.0	0.0	0.0	15.7	28.37
GOAL	1.6	EC	0.12	POST	30.0	31.7	93.3	11.7	40.0	18.7	30.80
GOAL	2.0	EC	0.12	POST	13.3	30.0	85.0	10.0	26.7	16.0	35.37
GOAL	75	DF	0.12	POST	6.7	6.7	11.7	5.0	6.7	17.0	33.80
LSD (.05)	=				8.0	7.3	5.5	2.9	8.8	3.7	18.38
Standard Dev. =					3.9965	3.6324	2.7638	1.4433	4.4095	1.8333	9.1994
CV	=				31.97	21.26	5.82	21.65	24.05	10.89	28.67

Ohio State Univ. Dept. Horticulture  
Cabbage Postemergence Weed Control  
Conducted at Fremont by Dr. Stanley F. Gorski  
with cooperators C. Willer

TITLE: CABBAGE POSTEMERGENCE WEED CONTROL

LOCATION: FREMONT  
PERSONNEL: S.F. GORSKI, C. WILLER

PLOT INFORMATION:  
SOIL TYPE: SILTY LOAM  
CULTIVAR: ROUNDUP  
  
DATE PLANTED: MAY 8, 1991  
RATING DATE: JUNE 20, 1991  
HARVEST DATE: SEPTEMBER 11, 1991  
PLOT SIZE: 5 FT. X 30 FT.  
PLOT DESIGN: RCB w/ 3 reps

HERBICIDE APPLICATION DATA:

DATE:	5/8	6/13
TIME OF DAY:	3:00 pm	10:00 am
TYPE:	PPI	POST
SOIL SURFACE:	MOIST	MODERATE
SOIL TEMP:	62 F	64 F
RELATIVE HUMIDITY:	53%	55%
WEATHER:		
WIND, mph:	2	2-3
SKY COVER:	P CLOUDY	SUNNY
AIR TEMP:	72 F	70 F
GROWTH STAGE:		
CROP:	PPI	COTY - 8 LEAF
WEED:	PPI	NONE

HERBICIDE APPLICATION EQUIPMENT:

SPRAYER:	CO2 BACKPACK
GPA:	25
PSI:	30
TIPS:	8002
HEIGHT:	18"
NOZZLE SPACING:	18"

INCORPORATION EQUIPMENT: ROTOTILLER, 1"-1.5" DEEP

Ohio State Univ. Dept. Horticulture  
 Cabbage Postemergence Weed Control  
 Conducted at Fremont by Dr. Stanley F. Gorski  
 with cooperater C. Willer  
 All rates are specified as lb/A

TREATMENT NAME	AI #/gal	FD	RATE	GROW STGE	% CROP INJURY	---YIELD NUMBER	----- WEIGHT
CONTROL					0.0	16.0	121.93
LENTAGRAN	45	WP	0.9	POST	18.3	14.0	102.93
LENTAGRAN POAST	45 1.5	WP L	0.9 0.2	POST POST	50.0	14.7	118.93
GOAL	1.6	E	.12	POST	75.0	15.7	109.97
GOAL	2	E	.12	POST	72.3	17.3	117.53
GOAL	75	DF	.12	POST	11.7	17.3	129.97
LSD (.05)	=				8.1	2.9	27.87
Standard Dev.	=				4.4409	1.5705	15.321
CV	=				11.72	9.92	13.11



Ohio State Univ. Dept. Horticulture  
Cabbage Preemergence Weed Control  
Conducted at Fremont by Dr. Stanley F. Gorski  
with cooperater C. Willer

TITLE: CABBAGE PREEMERGENCE WEED CONTROL

LOCATION: FREMONT

PERSONNEL: S.F. GORSKI, C. WILLER

PLOT INFORMATION:

SOIL TYPE: SILTY LOAM

CULTIVAR: ROUNDUP

DATE PLANTED: MAY 8, 1991

RATING DATE: JUNE 6, 1991

HARVEST DATE: SEPTEMBER 11, 1991

PLOT SIZE: 5 FT. x 30 FT.

PLOT DESIGN: RCB w/3 reps

HERBICIDE APPLICATION DATA:

DATE: 5/8

TIME OF DAY: 3:00 pm

TYPE: PPI

SOIL SURFACE: MOIST

SOIL TEMP: 62 F

RELATIVE HUMIDITY: 53%

WEATHER:

WIND, mph: 2

SKY COVER: P CLOUDY

AIR TEMP: 72 F

GROWTH STAGE:

CROP: PPI

WEED: PPI

HERBICIDE APPLICATION EQUIPMENT:

SPRAYER: CO2 BACKPACK

GPA: 25

PSI: 30

TIPS: 8002

HEIGHT: 18"

NOZZLE SPACING: 18"

INCORPORATION EQUIPMENT: ROTOTILLER, 1"-1.5" DEEP

Ohio State Univ. Dept. Horticulture  
 Cabbage Preemergence Weed Control  
 Conducted at Fremont by Dr. Stanley F. Gorski  
 with cooperater C. Willer  
 All rates are specified as lb/A

TREATMENT NAME	AI #/gal	FD	RATE	GROW STGE	% CONTROL					% CROP INJURY	YIELD NUMBER	WEIGHT
					AMARE	POROL	CHEAL	ECHCG	DIGSA			
WEEDY					0.0	0.0	0.0	0.0	0.0	0.0	17.0	112.60
WEEDED					99.0	99.0	99.0	99.0	99.0	0.0	15.7	116.33
COMMAND DACTHAL	4 75	E W	0.5 8.0	PPI PPI	97.7	99.0	99.0	98.7	99.0	11.7	11.7	107.07
COMMAND DEVRINOL	4 50	E WP	0.5 1.5	PPI PPI	96.3	99.0	99.0	98.7	99.0	13.3	14.0	126.77
COMMAND TREFLAN	4 4	E L	0.5 0.75	PPI PPI	97.7	99.0	99.0	99.0	99.0	13.3	15.7	143.57
DEVRINOL	50	WP	2.0	PPI	78.3	78.0	97.7	85.0	97.7	6.7	18.0	146.40
TREFLAN	4	L	1.0	PPI	95.7	94.7	94.3	97.3	98.7	6.7	17.3	152.47
COMMAND	4	E	0.5	PPI	85.0	99.0	98.7	98.3	97.7	15.0	13.3	123.10
DACTHAL	75	W	8.0	PPI	97.7	95.7	93.0	91.7	96.3	6.7	16.0	121.93
LSD (.05)	=				9.7	11.3	5.7	8.0	2.4	11.6	4.1	34.36
Standard Dev.=					5.6083	6.5326	3.278	4.6198	1.4076	6.684	2.3736	19.847
CV	=				6.75	7.70	3.78	5.42	1.61	82.03	15.41	15.53

Ohio State Univ. Dept. Horticulture  
Lettuce Postemergence Weed Control  
Conducted at Celeryville by Dr. Stanley F. Gorski  
with cooperators R. Hassell

TITLE: LETTUCE POSTEMERGENCE WEED CONTROL

LOCATION: CELERYVILLE  
PERSONNEL: S.F.GORSKI, R. HASSELL

PLOT INFORMATION:  
SOIL TYPE: CARLISLE MUCK  
CULTIVAR: SALAD BIBB  
  
DATE PLANTED: MAY 21, 1991  
RATING DATE: JUNE 20, 1991  
HARVEST DATE: NONE  
PLOT SIZE: 5 FT. x 18 FT.  
PLOT DESIGN: RCB w/ 3 REPS

HERBICIDE APPLICATION DATA:

DATE:	5-21	6-13
TIME OF DAY:	11:00 am	2:00 pm
TYPE:	PRE	POST
SOIL SURFACE:	DRY	DRY
SOIL TEMP:	70 F	71 F
RELATIVE HUMIDITY:	55%	55%
WEATHER:		
WIND, mph:	CALM	2-3
SKY COVER:	SUNNY	SUNNY
AIR TEMP:	85 F	81 F
GROWTH STAGE:		
CROP:	PRE	1"-2" or 4-5 LEAF
WEED:	PRE	1"-2"

HERBICIDE APPLICATION EQUIPMENT:

SPRAYER: CO2 BACKPACK  
GPA: 25  
PSI: 30  
TIPS: 8002  
HEIGHT: 18"  
NOZZLE SPACING: 18"

INCORPORATION EQUIPMENT: NONE

Ohio State Univ. Dept. Horticulture  
 Lettuce Postemergence Weed Control  
 Conducted at Celeryville by Dr. Stanley F. Gorski  
 with cooperater R. Hassell

TREATMENT NAME	AI #/gal	FD	RATE	RATE UNIT	GROW STGE	%CONTROL POROL	% CROP INJURY
CONTROL						0.0	0.0
PURSUIT X-77	2	EC P	0.024 0.25	lb/A % v/v	POST POST	70.0	3.3
PURSUIT X-77	2	EC P	0.032 0.25	lb/A % v/v	POST POST	86.7	5.0
PURSUIT X-77	2	EC P	0.040 0.25	lb/A % v/v	POST POST	93.3	15.0
BEACON X-77	75	WG P	0.036 0.25	lb/A % v/v	POST POST	94.7	91.3
BEACON X-77	75	WG P	0.027 0.25	lb/A % v/v	POST POST	90.0	94.7
ACCENT X-77	75	DF P	0.031 0.25	lb/A % v/v	POST POST	68.3	96.3
ACCENT X-77	75	DF P	0.023 0.25	lb/A % v/v	POST POST	75.0	86.7
PINNACLE X-77	25	DF P	.0039 0.25	lb/A % v/v	POST POST	91.7	91.7
PINNACLE X-77	25	DF P	.0029 0.25	lb/A % v/v	POST POST	88.3	91.7
LSD (.05)	=					26.1	10.5
Standard Dev.	=					15.212	6.1454
CV	=					20.07	10.68

Ohio State Univ. Dept. Horticulture  
Lettuce Preemergence Weed Control  
Conducted at Celeryville by Dr. Stanley F. Gorski  
with cooperater Rich Hassell

TITLE: LETTUCE PREEMERGENCE WEED CONTROL

LOCATION: CELERYVILLE  
PERSONNEL: S.F. GORSKI, R. HASSELL

PLOT INFORMATION:  
SOIL TYPE: CARLISLE MUCK  
CULTIVAR: SALAD BIBB  
  
DATE PLANTED: MAY 21, 1991  
RATING DATE: JUNE 6, 1991  
HARVEST DATE: JULY 17, 1991  
PLOT SIZE: 5 FT. x 18 FT.  
PLOT DESIGN: RCB w/ 4 REPS

HERBICIDE APPLICATION DATA:  
DATE: 5-21  
TIME OF DAY: 11:00 am  
TYPE: PRE  
SOIL SURFACE: DRY  
SOIL TEMP: 70 F  
RELATIVE HUMIDITY: 55 %  
WEATHER:  
WIND, mph: CALM  
SKY COVER: SUNNY  
AIR TEMP: 85 F  
GROWTH STAGE:  
CROP: PRE  
  
WEED: PRE

HERBICIDE APPLICATION EQUIPMENT:  
SPRAYER: CO2 BACKPACK  
GPA: 25  
PSI: 30  
TIPS: 8002  
HEIGHT: 18"  
NOZZLE SPACING: 18"

INCORPORATION EQUIPMENT: NONE

Ohio State Univ. Dept. Horticulture  
 Lettuce Preemergence Weed Control  
 Conducted at Celeryville by Dr. Stanley F. Gorski  
 with cooperator Rich Hassell  
 All rates are specified as lb/A

TREATMENT NAME	AI		GROW STGE	% CONTROL				% CROP INJURY	YIELD
	#/gal	FD RATE		POROL	AMARE	DIGSA	AMALI		
WEEDY				0.0	0.0	0.0	0.0	0.0	0.00
WEDED				99.0	99.0	99.0	99.0	0.0	12.05
MON 13211	2	EC 0.25	PRE	41.3	50.0	93.8	12.5	89.5	10.95
MON 13211	2	EC 0.38	PRE	83.8	68.5	97.0	18.8	94.3	10.38
MON 13211	2	EC 0.5	PRE	89.8	77.3	96.8	37.5	99.0	3.53
KERB	50	WP 4.0	PRE	98.0	92.3	97.0	0.0	0.0	11.77
KERB	50	WP 6.0	PRE	99.0	97.0	98.0	0.0	0.0	12.67
LSD (.05)	=			9.7	16.2	3.2	36.0	8.5	4.11
Standard Dev.=				6.5349	10.896	2.1629	24.244	5.74	2.7687
CV	=			8.96	15.76	2.60	101.17	14.21	31.59

Ohio State Univ. Dept. Horticulture  
Onion Weed Control  
Conducted at Celeryville by Dr. Stanley F. Gorski  
with cooperater Rich Hassell

TITLE: ONION WEED CONTROL  
LOCATION: CELERYVILLE  
PERSONNEL: S.F. GORSKI, R. HASSELL

PLOT INFORMATION:  
SOIL TYPE: CARLISLE MUCK  
CULTIVAR: SPARTAN BANNER 80  
DATE PLANTED: MAY 21, 1991  
RATING DATE: JUNE 20, 1991  
HARVEST DATE: SEPTEMBER 20, 1991  
PLOT SIZE: 5 FT. X 18 FT.  
PLOT DESIGN: RCB w/ 4 reps

HERBICIDE APPLICATION DATA:

DATE:	5/21	6/13
TIME OF DAY:	NOON	2:00 pm
TYPE:	PRE	POST
SOIL SURFACE:	DRY	DRY
SOIL TEMP:	70 F	71 F
RELATIVE HUMIDITY:	55%	55%
WEATHER:		
WIND, mph:	CALM	2-3
SKY COVER:	SUNNY	SUNNY
AIR TEMP:	85 F	81 F
GROWTH STAGE:		
CROP:	PRE	1-2 LEAF
WEED:	PRE	1"-2"

HERBICIDE APPLICATION EQUIPMENT:

SPRAYER:	CO2 BACKPACK
GPA:	25
PSI:	30
TIPS:	8002
HEIGHT:	18"
NOZZLE SPACING:	18"

INCORPORATION EQUIPMENT: NONE

Ohio State Univ. Dept. Horticulture  
 Onion Weed Control  
 Conducted at Celeryville by Dr. Stanley F. Gorski  
 with cooperater Rich Hassell  
 All rates are specified as lb/A

TREATMENT NAME	AI #/gal	FD	RATE	GROW STGE	% CROP INJURY	YIELD
CONTROL					0.0	10.375
GOAL	1.6	EC	0.12	POST	13.8	10.688
GOAL	2.0	EC	0.12	POST	16.3	9.275
GOAL	75	DF	0.12	POST	12.5	10.625
LENTAGRAN	45	WP	0.9	POST	18.8	8.500
LENTAGRAN	45	WP	0.9	POST	78.8	7.137
FUSILADE2000	1	EC	0.2	POST		
GOAL	1.6	EC	0.06	POST	11.3	11.550
GOAL	2.0	EC	0.06	POST	10.0	9.925
GOAL	75	DF	0.06	POST	7.5	11.750
LSD (.05)	=				13.1	3.399
Standard Dev.=					8.9688	2.3286
CV	=				47.83	23.33



Ohio State Univ. Dept. Horticulture  
Pepper Tolerance to Command  
Conducted at Columbus by Dr. Stanley F. Gorski  
with cooperater K. Scaife

TITLE: PEPPER TOLERANCE TO COMMAND  
LOCATION: COLUMBUS  
PERSONNEL: S. F. GORSKI, K. SCAIFE  
PLOT INFORMATION:  
SOIL TYPE: BROOKSTON SILTY CLAY LOAM  
CULTIVAR: MERCED  
DATE PLANTED: TRANSPLANTED MAY 23, 1991  
RATING DATE: JUNE 14, 1991  
HARVEST DATE: MULTIPLE: AUGUST 26 - OCTOBER 8, 1991  
PLOT SIZE: 5 FT. x 25 FT.  
PLOT DESIGN: RCB w/ 3 REPS

HERBICIDE APPLICATION DATA:

DATE: 5-23  
TIME OF DAY: 9:00 am  
TYPE: PPI  
SOIL SURFACE: DRY  
SOIL TEMP: 71 F  
RELATIVE HUMIDITY: 82%  
WEATHER:  
WIND, mph: CALM  
SKY COVER: SUNNY  
AIR TEMP: 77 F  
GROWTH STAGE:  
CROP: PRE  
WEED: PRE

HERBICIDE APPLICATION EQUIPMENT:

SPRAYER: CO2 BACKPACK  
GPA: 25  
PSI: 30  
TIPS: 8002  
HEIGHT: 18"  
NOZZLE SPACING: 18"

INCORPORATION EQUIPMENT: ROTOTILLER, 1" - 1.5" DEEP

Ohio State Univ. Dept. Horticulture  
 Pepper Tolerance to Command  
 Conducted at Columbus by Dr. Stanley F. Gorski  
 with cooperator K. Scaife  
 All rates are specified as lb/A

TREATMENT NAME	AI #/gal	FD	RATE	GROW STGE	AMARE	-----% MALIE	CONTROL POROL	-----% DIGSA	% CROP INJURY	YIELD
TREFLAN	4	L	1.0	PPI	96.3	90.0	95.0	97.3	0.0	78.53
COMMAND	4	E	0.5	PPI	78.3	96.3	97.7	94.7	0.0	59.97
COMMAND	4	E	0.75	PPI	76.7	97.7	97.7	96.3	0.0	56.70
LSD (.05)	=				12.1	11.9	3.0	4.7	0	39.80
Standard Dev.=					5.3333	5.2599	1.3334	2.0681	0	17.558
CV	=				6.37	5.56	1.38	2.15	0	26.99

Ohio State Univ. Dept. Horticulture  
Pickle Postemergence Weed Control  
Conducted at Fremont by Dr. Stanley F. Gorski  
with cooperater C. Willer

TITLE: PICKLE POSTEMERGENCE WEED CONTROL  
LOCATION: FREMONT  
PERSONNEL: S.F. GORSKI, C. WILLER  
PLOT INFORMATION:  
SOIL TYPE: SILTY LOAM  
CULTIVAR: CALYPSO  
DATE PLANTED: JUNE 6, 1991  
RATING DATE: JULY 8 AND JULY 17, 1991  
HARVEST DATE: MULTIPLE: JULY 15 - JULY 29, 1991  
PLOT SIZE: 5 FT. X 30 FT.  
PLOT DESIGN: RCB w/3 reps

HERBICIDE APPLICATION DATA:

DATE:	6/6	7/1	7/15
TIME OF DAY:	11:00 am	11:00 am	9:00 am
TYPE:	PRE	P 1	P 2
SOIL SURFACE:	MOIST	MODERATE	MODERATE
SOIL TEMP:	72 F	81 F	70 F
RELATIVE HUMIDITY:	53%	55%	50%
WEATHER:			
WIND, mph:	2-3	CALM	CALM
SKY COVER:	CLEAR	CLOUDY	P CLOUDY
AIR TEMP:	75 F	83 F	75 F
GROWTH STAGE:			
CROP:	PRE	4-6 LEAF	FIRST HARVEST
WEED:	PRE	NONE	NONE

HERBICIDE APPLICATION EQUIPMENT:

SPRAYER: CO2 BACKPACK  
GPA: 25  
PSI: 30  
TIPS: 8002  
HEIGHT: 18"  
NOZZLE SPACING: 18"

INCORPORATION EQUIPMENT: NONE

Ohio State Univ. Dept. Horticulture  
 Pickle Postemergence Weed Control  
 Conducted at Fremont by Dr. Stanley F. Gorski  
 with cooperater C. Willer  
 All rates are specified as lb/A

TREATMENT NAME	AI #/gal	FD	RATE	GROW STGE	YIELD 7/15/91	YIELD 7/18/91	YIELD 7/22/91	YIELD 7/25/91	YIELD 7/29/91	TOTAL YIELD
CONTROL					2.30	6.50	12.30	4.73	8.60	34.43
STINGER	3	EC	0.06	P1	1.80	5.23	12.37	4.00	8.87	32.27
STINGER	3	EC	0.125	P1	3.47	4.50	14.00	3.37	10.00	35.33
STINGER	3	EC	0.25	P1	4.03	5.87	11.60	3.37	11.17	36.03
STINGER	3	EC	0.125	P1&2	2.03	3.73	12.60	3.53	8.17	30.07
STINGER	3	EC	0.06	P1&2	3.90	5.10	10.20	5.23	6.30	30.73
LSD (.05)	=				4.62	1.90	4.98	2.09	3.58	8.02
Standard Dev. =					2.5389	1.0455	2.7394	1.1482	1.9663	4.4077
CV	=				86.88	20.28	22.50	28.43	22.22	13.30

Ohio State Univ. Dept. Horticulture  
Pickle Preemergence Weed Control  
Conducted at Fremont by Dr. Stanley F. Gorski  
with cooperators C. Willer

TITLE: PICKLE PREEMERGENCE WEED CONTROL  
LOCATION: FREMONT  
PERSONNEL: S.F. GORSKI, C. WILLER  
PLOT INFORMATION:  
SOIL TYPE: SILTY LOAM  
CULTIVAR: CALYPSO  
DATE PLANTED: JUNE 6, 1991  
RATING DATE: JULY 1, 1991  
HARVEST DATE: MULTIPLE: JULY 15 - JULY 29, 1991  
PLOT SIZE: 5 FT. x 30 FT.  
PLOT DESIGN: RCB w/ 4 reps

HERBICIDE APPLICATION DATA:

DATE: 6/6  
TIME OF DAY: 11:00 am  
TYPE: PPI  
SOIL SURFACE: MOIST  
SOIL TEMP: 72 F  
RELATIVE HUMIDITY: 53%  
WEATHER:  
WIND, mph: 2-3  
SKY COVER: CLEAR  
AIR TEMP: 75 F  
GROWTH STAGE:  
CROP: PRE  
WEED: PRE

HERBICIDE APPLICATION EQUIPMENT:

SPRAYER: CO2 BACKPACK  
GPA: 25  
PSI: 30  
TIPS: 8002  
HEIGHT: 18"  
NOZZLE SPACING: 18"

INCORPORATION EQUIPMENT: ROTOTILLER, 1"-1.5" DEEP

Ohio State Univ. Dept. Horticulture  
 Pickle Preemergence Weed Control  
 Conducted at Fremont by Dr. Stanley F. Gorski  
 with cooperator C. Willer  
 All rates are specified as lb/A

TREATMENT NAME	AI #/gal	FD	RATE	GROW STGE	YIELD 7/15/91	YIELD 7/18/91	YIELD 7/22/91	YIELD 7/25/91	YIELD 7/29/91	TOTAL YIELD
WEDED					1.18	5.60	13.60	4.15	9.85	34.38
COMMAND	4	EC	0.25	PPI	2.02	6.53	14.35	4.47	9.35	36.72
COMMAND	4	EC	0.25	PPI	1.88	6.58	16.15	3.85	11.00	39.45
CURBIT	3	EC	1.5	PPI						
CURBIT	3	EC	1.5	PPI	2.22	6.28	12.60	4.18	8.70	33.97
MON 13211	3	EC	0.25	PPI	1.25	4.95	13.40	5.22	10.08	34.90
PREFAR	4	EC	4.0	PPI	1.80	7.00	18.00	4.13	12.45	43.38
ALANAP	2	EC	2.0	PRE						
MON 13211	2	EC	0.50	PRE	1.05	4.82	12.77	4.40	9.85	32.90
LSD (.05)	=				0.86	2.50	5.38	1.57	3.63	10.64
Standard Dev.	=				.58084	1.6836	3.6246	1.057	2.4451	7.1637
CV	=				35.67	28.23	25.15	24.34	24.01	19.61

Ohio State Univ. Dept. Horticulture  
ACA Popcorn Study - 1991  
Conducted at Columbus by Dr. Stanley F. Gorski  
with cooperater K. Scaife

TITLE: ACA POPCORN STUDY- 1991  
LOCATION: COLUMBUS  
PERSONNEL: S.F. GORSKI, K. SCAIFE  
PLOT INFORMATION:  
SOIL TYPE: BROOKSTON SILTY CLAY LOAM  
CULTIVAR: P 410  
DATE PLANTED: MAY 3, 1991  
RATING DATE: MULTIPLE  
HARVEST DATE: SEPTEMBER 17, 1991  
PLOT SIZE: 6 FT. x 25 FT.  
PLOT DESIGN: 4 x 4 LATIN SQUARE

HERBICIDE APPLICATION DATA:

DATE: 5-8  
TIME OF DAY: 3:00 pm  
TYPE: PRE  
SOIL SURFACE: MOIST  
SOIL TEMP: 60 F  
RELATIVE HUMIDITY: 55 %  
WEATHER:  
WIND, mph: 2  
SKY COVER: P CLOUDY  
AIR TEMP: 75 F  
GROWTH STAGE:  
CROP: PRE  
WEED: PRE

HERBICIDE APPLICATION EQUIPMENT:

SPRAYER: TRACTOR MOUNTED  
GPA: 25  
PSI: 30  
TIPS: 8002  
HEIGHT: 18"  
NOZZLE SPACING: 18"

INCORPORATION EQUIPMENT: NONE

Ohio State Univ. Dept. Horticulture  
 ACA Popcorn Study - 1991  
 Conducted at Columbus by Dr. Stanley F. Gorski  
 with cooperater K. Scaife

TREATMENT NAME	AI #/gal	FD RATE	GROW STGE	GRAIN WT
UNTREATED				2.78
1/3 pt/A				2.80
1/2 pt/A				2.58
2/3 pt/A				3.08
LSD (.05)	=			0.97
Standard Dev.=				.60833
CV	=			21.68



Ohio State Univ. Dept. Horticulture  
Pumpkin Tolerance to Command  
Conducted at Columbus by Dr. Stanley F. Gorski  
with cooperater K. Scaife

TITLE: PUMPKIN TOLERANCE TO COMMAND

LOCATION: COLUMBUS  
PERSONNEL: S.F. GORSKI, K. SCAIFE

PLOT INFORMATION:  
SOIL TYPE: BROOKSTON SILTY CLAY LOAM  
CULTIVAR: HOWDEN, BIG MAX

DATE PLANTED: MAY 23, 1991  
RATING DATE: JULY 18, 1991  
HARVEST DATE: OCTOBER 16, 1991  
PLOT SIZE: 10 FT. x 25 FT.  
PLOT DESIGN: RCB w/ 3 REPS

HERBICIDE APPLICATION DATA:

DATE: 5-23  
TIME OF DAY: 10:30 am  
TYPE: PPI  
SOIL SURFACE: DRY  
SOIL TEMP: 73 F  
RELATIVE HUMIDITY: 80%  
WEATHER:  
    WIND, mph: CALM  
    SKY COVER: SUNNY  
    AIR TEMP: 77 F  
GROWTH STAGE:  
    CROP: PRE  
    WEED: PRE

HERBICIDE APPLICATION EQUIPMENT:

SPRAYER: CO2 BACKPACK  
GPA: 25  
PSI: 30  
TIPS: 8002  
HEIGHT: 18"  
NOZZLE SPACING: 18"

INCORPORATION EQUIPMENT: ROTOTILLER, 1" - 1.5" DEEP

Ohio State Univ. Dept. Horticulture  
Pumpkin Tolerance to Command  
Conducted at Columbus by Dr. Stanley F. Gorski  
with cooperator K. Scaife  
All rates are specified as lb/A

TREATMENT	AI		GROW	-----	-----%	CONTROL	-----	% CROP	-BIG MAX YIELD---	--HOWDEN YIELD---			
NAME	#/gal	FD	RATE	STGE	AMARE	POROL	CHEAL	PANDI	INJURY	NUMBER	WEIGHT	NUMBER	WEIGHT
PREFAR	4	EC	4.0	PPI	88.3	73.3	76.7	78.3	0.0	10.0	151.37	17.3	153.03
COMMAND	4	E	0.75	PPI	85.0	99.0	99.0	99.0	0.0	11.7	209.47	18.7	167.97
COMMAND	4	E	1.0	PPI	88.0	99.0	99.0	99.0	0.0	12.7	179.13	19.3	159.63
LSD (.05)	=				13.3	7.6	10.0	10.0	0	4.7	88.40	7.1	69.48
Standard Dev.=					5.8546	3.3334	4.4096	4.4095	0	2.0682	38.999	3.1269	30.655
CV	=				6.72	3.69	4.82	4.79	0	18.07	21.67	16.95	19.13

Ohio State Univ. Dept. Horticulture  
Snapbean Tolerance to Command  
Conducted at Columbus by Dr. Stanley F. Gorski  
with cooperators K. Scaife

TITLE: SNAPBEAN TOLERANCE TO COMMAND  
LOCATION: COLUMBUS  
PERSONNEL: S. F. GORSKI, K. SCAIFE  
PLOT INFORMATION:  
SOIL TYPE: BROOKSTON SILTY CLAY LOAM  
CULTIVAR: PROVIDER  
DATE PLANTED: MAY 23, 1991  
RATING DATE: JUNE 18, 1991  
HARVEST DATE: MULTIPLE: JULY 7 - JULY 23, 1991  
PLOT SIZE: 5 FT. x 25 FT.  
PLOT DESIGN: RCB w/ 3 REPS

HERBICIDE APPLICATION DATA:

DATE: 5-23  
TIME OF DAY: 9:30 am  
TYPE: PPI  
SOIL SURFACE: DRY  
SOIL TEMP: 71 F  
RELATIVE HUMIDITY: 82%  
WEATHER:  
WIND, mph: CALM  
SKY COVER: SUNNY  
AIR TEMP: 77 F  
GROWTH STAGE:  
CROP: PRE  
WEED: PRE

HERBICIDE APPLICATION EQUIPMENT:

SPRAYER: CO2 BACKPACK  
GPA: 25  
PSI: 30  
TIPS: 8002  
HEIGHT: 18"  
NOZZLE SPACING: 18"

INCORPORATION EQUIPMENT: ROTOTILLER, 1" TO 1.5" DEEP

Ohio State Univ. Dept. Horticulture  
 Snapbean Tolerance to Command  
 Conducted at Columbus by Dr. Stanley F. Gorski  
 with cooperater K. Scaife  
 All rates are specified as lb/A

TREATMENT NAME	AI #/gal	FD	RATE	GROW STGE	----- % POROL	CONTROL CHEAL	----- PANDI	% CROP INJURY	YIELD
TREFLAN	4	L	0.75	PPI	97.0	99.0	99.0	0.0	8.13
COMMAND	4	E	0.25	PPI	99.0	95.0	99.0	0.0	8.73
COMMAND	4	E	0.5	PPI	99.0	99.0	99.0	0.0	7.57
LSD (.05)	=				2.6	0	0	0	5.05
Standard Dev.=					1.1547	0	0	0	2.2281
CV	=				1.17	0	0	0	27.36

Ohio State Univ. Dept. Horticulture  
Tomato Plug Size Study  
Conducted at Fremont by Dr. Stanley F. Gorski  
with cooperater C. Willer

TITLE: TOMATO PLUG SIZE STUDY

LOCATION: FREMONT  
PERSONNEL: S.F. GORSKI, C. WILLER

PLOT INFORMATION:  
SOIL TYPE: SILTY LOAM  
CULTIVAR: 7190  
  
DATE PLANTED: MAY 9, 1991  
RATING DATE: JUNE 8, 1991  
HARVEST DATE: AUGUST 8, 1991  
PLOT SIZE: 5 FT. x 30 FT.  
PLOT DESIGN: RCB w/ 3 reps

HERBICIDE APPLICATION DATA:

DATE: 5/8  
TIME OF DAY: NOON  
TYPE: PPI  
SOIL SURFACE: MOIST  
SOIL TEMP: 62 F  
RELATIVE HUMIDITY: 53%  
WEATHER:  
WIND, mph: 2  
SKY COVER: P CLOUDY  
AIR TEMP: 70 F  
GROWTH STAGE:  
CROP: PPI  
WEED: PPI

HERBICIDE APPLICATION EQUIPMENT:

SPRAYER: CO2 BACKPACK  
GPA: 25  
PSI: 30  
TIPS: 8002  
HEIGHT: 18"  
NOZZLE SPACING: 18"

INCORPORATION EQUIPMENT: ROTOTILLER, 1"-2" DEEP

Ohio State Univ. Dept. Horticulture  
 Tomato Plug Size Study  
 Conducted at Freemont by Dr. Stanley F. Gorski  
 with cooperater C. Willer  
 All rates are specified as lb/A

TREATMENT NAME	AI #/gal	FD	RATE	GROW STGE	-----288 RED	YIELD--- TOTAL	-----406 RED	YIELD--- TOTAL
TREFLAN SENCOR	4 75	L DF	1.0 0.375	PPI PPI	216.67	239.83	161.83	190.17
DEVRI SENCOR	50 75	WP DF	2.0 0.375	PPI PPI	227.67	248.67	143.33	168.83
TILLAM SENCOR	6 75	EC DF	5.0 0.375	PPI PPI	213.50	237.17	148.50	182.17
DUAL SENCOR	8 75	EC DF	2.0 0.375	PPI PPI	223.50	249.33	175.00	208.17
SONALAN	3	EC	2.0	PPI	237.17	263.33	163.83	191.17
LSD (.05)	=				36.20	39.53	33.96	34.43
Standard Dev.	=				19.226	20.995	18.038	18.285
CV	=				8.59	8.48	11.38	9.72

Ohio State Univ. Dept. Horticulture  
 Tomato Plug Size Study  
 Conducted at Freemont by Dr. Stanley F. Gorski  
 with cooperater C. Willer

TREATMENT NAME	AI #/gal	FD RATE	GROW STGE	RED	TOTAL
288 CELL SIZE				223.67	247.67
406 CELL SIZE				158.50	188.13
LSD (.05)	=			10.53	11.14
Standard Dev.=				13.448	14.221
CV	=			7.04	6.53

Ohio State Univ. Dept. Horticulture  
Tomato Postemergence Weed Control  
Conducted at Fremont by Dr. Stanley F. Gorski  
with cooperater C. Willer

TITLE: TOMATO POSTEMERGENCE WEED CONTROL

LOCATION: FREMONT  
PERSONNEL: S.F. GORSKI, C. WILLER

PLOT INFORMATION:  
SOIL TYPE: SILTY CLAY  
CULTIVAR: 7155  
  
DATE PLANTED: MAY 5, 1991  
RATING DATE: JUNE 20, 1991  
HARVEST DATE: AUGUST 15, 1991  
PLOT SIZE: 5 FT. x 30 FT.  
PLOT DESIGN: RCB w/3 reps

HERBICIDE APPLICATION DATA:

DATE:	5/8	6/13
TIME OF DAY:	11:00 am	11:00 am
TYPE:	PPI	POST
SOIL SURFACE:	MOIST	MODERATE
SOIL TEMP:	62 F	65 F
RELATIVE HUMIDITY:	53%	55%
WEATHER:		
WIND, mph:	2	CALM
SKY COVER:	P CLOUDY	CLEAR
AIR TEMP:	69 F	75 F
GROWTH STAGE:		
CROP:	PPI	12"-15"
WEED:	PPI	NONE

HERBICIDE APPLICATION EQUIPMENT:

SPRAYER:	CO2 BACKPACK
GPA:	25
PSI:	30
TIPS:	8002
HEIGHT:	18"
NOZZLE SPACING:	18"

INCORPORATION EQUIPMENT: ROTOTILLER, 1"-2" DEEP



Ohio State Univ. Dept. Horticulture  
 Tomato Postemergence Weed Control  
 Conducted at Fremont by Dr. Stanley F. Gorski  
 with cooperater C. Willer

TREATMENT NAME	AI #/gal	FD	RATE	RATE UNIT	GROW STGE	---YIELD RED	----- TOTAL
CONTROL						280.17	325.83
LENTAGRAN	45	WP	0.45	lb/A	POST	234.83	291.17
LENTAGRAN	45	WP	0.45	lb/A	POST	227.17	288.83
FUSILADE2000	1	EC	0.2	lb/A	POST		
LENTAGRAN	45	WP	0.45	lb/A	POST	239.83	283.67
POAST	1.5	L	0.2	lb/A	POST		
LENTAGRAN	45	WP	0.45	lb/A	POST	276.00	310.33
SEVIN	50	WP	1.5	lb/A	POST		
LENTAGRAN	45	WP	0.45	lb/A	POST	288.67	318.83
DYRENE	50	WP	3.0	lb/A	POST		
LENTAGRAN	45	WP	0.45	lb/A	POST	278.33	321.50
BRAVO 500	4.17	F	2.0	lb/A	POST		
GRAMOX EX	2.5	EC	0.5	lb/A	POST	282.00	318.00
X-77		P	0.25	% v/v	POST		
LSD (.05)	=					41.36	50.02
Standard Dev.	=					23.616	28.557
CV	=					8.97	9.29

Ohio State Univ. Dept. Horticulture  
Tomato Preemergence Weed Control  
Conducted at Fremont by Dr. Stanley F. Gorski  
with cooperater C. Willer

TITLE: TOMATO PREEMERGENCE WEED CONTROL

LOCATION: FREMONT

PERSONNEL: S.F. GORSKI, C. WILLER

PLOT INFORMATION:

SOIL TYPE: SILTY LOAM  
CULTIVAR: 7155 - 288 CELL SIZE

DATE PLANTED: MAY 9, 1991  
RATING DATE: JUNE 8, 1991  
HARVEST DATE: AUGUST 15, 1991  
PLOT SIZE: 5 FT. x 30 FT.  
PLOT DESIGN: RCB w/ 3 reps

HERBICIDE APPLICATION DATA:

DATE: 5/8  
TIME OF DAY: 11:00 am  
TYPE: PPI  
SOIL SURFACE: MOIST  
SOIL TEMP: 62 F  
RELATIVE HUMIDITY: 53%  
WEATHER:  
WIND, mph: 2  
SKY COVER: P CLOUDY  
AIR TEMP: 69 F  
GROWTH STAGE:  
CROP: PPI  
WEED: PPI

HERBICIDE APPLICATION EQUIPMENT:

SPRAYER: CO2 BACKPACK  
GPA: 25  
PSI: 30  
TIPS: 8002  
HEIGHT: 18"  
NOZZLE SPACING: 18"

INCORPORATION EQUIPMENT: ROTOTILLER, 1"-2" DEEP

Ohio State Univ. Dept. Horticulture  
 Tomato Preemergence Weed Control  
 Conducted at Fremont by Dr. Stanley F. Gorski  
 with cooperater C. Willer  
 All rates are specified as lb/A

TREATMENT NAME	AI #/gal	FD	RATE	GROW STGE	POROL	CHEAL	ECHCG	DIGSA	SOLNI	% INJURY	TOMATO YIELD RED	% CONTROL	TOTAL
WEEDY					0.0	0.0	0.0	0.0	0.0	0.0	259.00		291.67
WEEDED					99.0	99.0	99.0	99.0	99.0	0.0	263.67		295.00
DUAL	8	EC	2.00	PP1	99.0	91.3	95.0	95.0	95.0	0.0	325.33		356.83
DUAL	8	EC	4.00	PP1	99.0	97.7	97.7	97.7	97.7	0.0	333.00		366.67
DUAL SENCOR	8 75	EC DF	2.00 0.375	PP1 PP1	99.0	96.3	97.7	95.7	94.0	0.0	312.67		347.50
SOWALAN	3	EC	2.00	PP1	99.0	88.0	91.7	91.7	88.0	0.0	316.67		345.83
TRIFIC SENCOR	60 75	DF DF	1.00 0.375	PP1 PP1	99.0	80.0	76.7	76.7	6.7	0.0	322.67		361.50
TREFLAN SENCOR	4 75	EC DF	1.00 0.375	PP1 PP1	99.0	85.0	80.0	80.0	6.7	0.0	326.50		358.83
TILLAM SENCOR	6 75	EC DF	5.0 0.375	PP1 PP1	99.0	99.0	88.0	88.0	20.0	0.0	327.83		357.67
DEVRIKOL SENCOR	50 75	W DF	2.00 0.375	PP1 PP1	94.3	93.3	73.3	73.3	13.3	0.0	328.33		362.67
DEVRIKOL COMMAND SENCOR	50 4 75	W EC DF	1.5 0.25 0.375	PP1 PP1 PP1	99.0	65.0	93.3	93.3	68.3	3.3	290.17		325.00
COMMAND SENCOR	4 75	EC DF	0.25 0.375	PP1 PP1	99.0	78.3	96.3	96.3	80.0	5.0	292.50		329.00
COMMAND SENCOR	4 75	EC DF	0.375 0.375	PP1 PP1	99.0	88.0	96.0	96.0	83.3	5.0	302.50		337.67
LSD (.05) =					3.8	23.3	14.5	14.3	19.2	4.4	39.21		41.37
Standard Dev. =					2.2418	13.817	8.5776	8.492	11.387	2.5943	23.265		24.546
CV =					2.46	16.93	10.28	10.20	19.69	252.95	7.56		7.19

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Agrolinz  
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Dick Zeller

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