

# University of Georgia

**Comparing Telone/Vapam plus a reduced rate of chloropicrin to methyl bromide  
in large acreage on farm trials.**

Trial ID: Veg40-06

Study Dir.: Martin Flora

Location: Southern Valley (A7)

Investigator: Stanley Culpepper

Reps: 3

Plots: 10 by 300 feet

Spray vol: 14.8 gal/ac

Mix size: 1 liters (min 11.575)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Grow Unit	Appl Stg	Amt to Measure	Product	Plot No.	By Rep	
										1	2	3
1	Methyl bromide 400 lb BC									102	202	302
2	Telone 12 G BC Chloropicrn 75 lb BC Vapam 65 Gal BC									101	201	301

Sort Order: Treatment

Product quantities required for listed treatments and applications in one trial:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
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\* 'Per area' calculations based on spray volume= 14.8 gal/ac, mix size= 1 liters (mix size basis).

\* Product amount calculations increased 25 % for overage adjustment.

### Trial Comments

OBJECTIVE: Compare the 3 way (reduced rates) to MB for control of weeds and crop growth on large-acreage on farm trials.

#### WEED CONTROL:

1. The entire plot (3 rows by 300 feet) was counted for weed emergence through the mulch or plant hole.
2. No differences in light infestations of Florida pusley, sicklepod, or pink purslane were noted.

#### PEPPER HEIGHTS

1. In April, 40 pepper plants per plot were measured.
2. No differences in plant height were noted.

#### GENERAL COMMENTS:

1. MB and chloropicrin were applied with the super bedder plastic layer injecting the fumigant 8 inches deep with 3 knives on a 32 inch bedtop. Vapam was injected 4 inches deep into the final bed with the injection knives 4 inches apart. Telone II was injected 10-12 inches deep with a Yetter applicator.

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Weed Code	RCHSC	CASOB	PORPI	plant 1 CPSAN	plant 2 CPSAN	plant 3 CPSAN	plant 4 CPSAN			
Crop Code										
Rating Data Type	ct	ct	ct	ht	ht	ht	ht			
Rating Unit	#/plot	#/plot	#/plot	cm	cm	cm	cm			
Rating Date	Mar-22-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06			
Trt-Eval Interval	48 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A			
ARM Action Codes										
Trt No.	Treatment Name	Rate	Unit	1	2	3	4	5	6	7
1	Methyl bromide 400 lb BC	0	a	0 a	0 a	0 a	20 a	20 a	18 a	19 a
2	Telone 12 G BC Chloropicrn 75 lb BC Vapam 65 Gal BC	0	a	0 a	0 a	0 a	19 a	19 a	18 a	19 a
LSD (P=.05)		1.4		1.4		1.4	2.9	3.8	9.9	5.2
Standard Deviation		0.4		0.4		0.4	0.8	1.1	2.8	1.5
CV		244.95		244.95		244.95	4.22	5.59	15.71	7.82
Bartlett's X2		0.0		0.0		0.0	0.0	0.037	0.31	0.037
P(Bartlett's X2)		.		.		.	.	0.848	0.578	0.848

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

## University of Georgia

Weed Code	plant 5	plant 6	plant 7	plant 8	plant 9	plant 10	plant 11	plant 12			
Crop Code	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN			
Rating Data Type	ht	ht	ht	ht	ht	ht	ht	ht			
Rating Unit	cm	cm	cm	cm	cm	cm	cm	cm			
Rating Date	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06			
Trt-Eval Interval	69 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A			
ARM Action Codes											
Trt No.	Treatment Name	Rate	Unit	8	9	10	11	12	13	14	15
1	Methyl bromide 400 lb BC			19 a	18 a	20 a	15 a	19 a	19 a	18 a	16 a
2	Telone 12 G BC Chloropicrn 75 lb BC Vapam 65 Gal BC			18 a	19 a	17 b	18 a	19 a	19 a	16 a	18 a
LSD (P=.05)		9.9	3.8	1.4	8.7	10.3	5.2	3.8	13.7		
Standard Deviation		2.8	1.1	0.4	2.5	2.9	1.5	1.1	3.9		
CV		15.29	5.89	2.23	14.9	15.36	7.75	6.35	22.91		
Bartlett's X2		0.0	2.238	0.511	0.863	0.004	0.0	1.47	1.47		
P(Bartlett's X2)		1.00	0.135	0.475	0.353	0.947	1.00	0.225	0.225		

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

## University of Georgia

Weed Code	plant 13	plant 14	plant 15	plant 16	plant 17	plant 18	plant 19	plant 20
Crop Code	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN
Rating Data Type	ht	ht	ht	ht	ht	ht	ht	ht
Rating Unit	cm	cm	cm	cm	cm	cm	cm	cm
Rating Date	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06
Trt-Eval Interval	69 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A
ARM Action Codes								
Trt No.	16	17	18	19	20	21	22	23
Treatment Name								
Rate								
Unit								
1 Methyl bromide 400 lb BC	19 a	19 a	19 a	19 a	18 a	16 a	19 a	18 a
2 Telone 12 G BC Chloropicrn 75 lb BC Vapam 65 Gal BC	20 a	20 a	20 a	19 a	19 a	18 a	20 a	18 a
LSD (P=.05)	1.4	9.0	10.0	9.4	8.7	6.6	10.3	14.3
Standard Deviation	0.4	2.5	2.9	2.7	2.5	1.9	2.9	4.1
CV	2.08	12.85	14.66	14.21	13.3	10.79	14.97	22.89
Bartlett's X2	0.028	0.168	1.607	0.004	0.128	0.168	0.037	0.067
P(Bartlett's X2)	0.867	0.682	0.205	0.947	0.721	0.682	0.848	0.796

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

## University of Georgia

Weed Code	plant 21	plant 22	plant 23	plant 24	plant 25	plant 26	plant 27	plant 28	
Crop Code	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN	
Rating Data Type	ht	ht	ht	ht	ht	ht	ht	ht	
Rating Unit	cm	cm	cm	cm	cm	cm	cm	cm	
Rating Date	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	
Trt-Eval Interval	69 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A	
ARM Action Codes									
Trt Treatment	Rate								
No. Name	Rate Unit	24	25	26	27	28	29	30	31
1 Methyl bromide 400 lb BC		17 a	19 a	20 a	21 a	19 a	18 a	19 a	21 a
2 Telone 12 G BC Chloropicrn 75 lb BC Vapam 65 Gal BC		19 a	19 a	20 a	21 a	21 a	19 a	18 a	19 a
LSD (P=.05)		8.6	5.2	0.0	5.7	3.8	10.0	5.2	2.9
Standard Deviation		2.4	1.5	0.0	1.6	1.1	2.9	1.5	0.8
CV		13.61	7.82	0.0	7.78	5.4	15.45	7.96	4.05
Bartlett's X2		0.511	1.816	0.0	0.0	0.793	0.793	1.112	0.31
P(Bartlett's X2)		0.475	0.178	1.00	1.00	0.373	0.373	0.292	0.578

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

## University of Georgia

Weed Code	plant 29	plant 30	plant 31	plant 32	plant 33	plant 34	plant 35	plant 36
Crop Code	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN
Rating Data Type	ht	ht	ht	ht	ht	ht	ht	ht
Rating Unit	cm	cm	cm	cm	cm	cm	cm	cm
Rating Date	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06
Trt-Eval Interval	69 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A
ARM Action Codes								
Trt No.	32	33	34	35	36	37	38	39
Treatment Name								
Rate								
Unit								
1 Methyl bromide 400 lb BC	19 a	18 a	19 a	20 a	18 a	17 a	19 a	20 a
2 Telone 12 G BC	20 a	19 a	20 a	20 a	19 a	18 a	15 a	18 a
Chloropicrn 75 lb BC								
Vapam 65 Gal BC								
LSD (P=.05)	3.8	14.1	6.6	1.4	5.2	16.0	6.3	8.7
Standard Deviation	1.1	4.0	1.9	0.4	1.5	4.5	1.8	2.5
CV	5.54	21.54	9.76	2.04	7.96	25.98	10.57	13.07
Bartlett's X2	0.0	3.419	2.359	0.0	1.47	0.035	1.442	3.584
P(Bartlett's X2)	1.00	0.064	0.125	1.00	0.225	0.852	0.23	0.058

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

## University of Georgia

Weed Code	plant 37	plant 38	plant 39	plant 40	Avg.40pl
Crop Code	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN
Rating Data Type	ht	ht	ht	ht	ht
Rating Unit	cm	cm	cm	cm	cm
Rating Date	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06	Apr-12-06
Trt-Eval Interval	69 DA-A	69 DA-A	69 DA-A	69 DA-A	69 DA-A
ARM Action Codes					T1
Trt No.	40	41	42	43	44
Treatment Name					
1 Methyl bromide 400 lb BC	19 a	19 a	20 a	20 a	19 a
2 Telone 12 G BC Chloropicrn 75 lb BC Vapam 65 Gal BC	20 a	17 a	17 a	17 a	19 a
LSD (P=.05)	10.3	2.5	5.2	10.0	1.8
Standard Deviation	2.9	0.7	1.5	2.9	0.5
CV	14.97	3.86	8.03	15.31	2.8
Bartlett's X2	0.755	0.137	1.176	3.213	1.933
P(Bartlett's X2)	0.385	0.711	0.278	0.073	0.164

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

Column 44: T1 = @AVG([4].[43])

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Trial ID: Veg40-06

Study Dir.: Martin Flora

Location: Southern Valley (A7)

Investigator: Stanley Culpepper

## GENERAL TRIAL INFORMATION

Study Director: Martin Flora

Title: Southern Valley

Affiliation: Southern Valley Produce

Postal Code: \_\_\_\_\_

Investigator: Stanley Culpepper

Title: Ext. Weed Science

Affiliation: Univ. of Georgia

Postal Code: 31794

## TRIAL LOCATION

City: Colquit Co.

Trial Status: completed

State/Prov.: GA

Trial Reliability: good

Postal Code: \_\_\_\_\_

Initiation Date: Feb-02-06

Country: USA

Planned Completion Date: \_\_\_\_\_

E-Longitude of LL Corner °: \_\_\_\_\_

N-Latitude of LL Corner °: \_\_\_\_\_

Altitude of LL Corner: \_\_\_\_\_ Unit: \_\_\_\_\_ Angle y-axis to North °: \_\_\_\_\_

Directions:

## COOPERATOR/LANDOWNER

Cooperator: \_\_\_\_\_

Country: \_\_\_\_\_

Org: \_\_\_\_\_

Phone No: \_\_\_\_\_

Address 1: \_\_\_\_\_

Fax No: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_

State/Prov: \_\_\_\_\_

Postal Code: \_\_\_\_\_

Conducted Under GLP (Y/N): N

Conducted Under GEP (Y/N): N

Guidelines: \_\_\_\_\_ Guideline Description: \_\_\_\_\_

Objective:

Conclusions:

## CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	RCHSC	Florida pusley	
2.	CASOB	sicklepod	
3.	PORPI	pink purslane	

Crop 1: CPSAN bell pepper

Variety: Heritage

Planting Date: Feb-15-06

Planting Method: conventional

Rate: 1 ft

Depth: 1 in

Perennial Age: \_\_\_\_\_

Row Spacing: 5 ft

Spacing Within Row: 12 inch

Seed Bed: raised/mulch

Soil Temperature: \_\_\_\_\_

Soil Moisture: drip

Emergence Date: \_\_\_\_\_

## SITE AND DESIGN

Plot Width, Unit: 10 FT

Plot Length, Unit: 300 FT

Reps: 3

Site Type: Southern Valley Produce

Tillage Type: Conventional

Study Design: RANDOMIZED COMPLETE BLOCK

Trial Initiation Comments:

	Previous Crops	Previous Pesticides	Year
1.			



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## MAINTENANCE

Field Prep./Maintenance:

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit
1.							

### SOIL DESCRIPTION

% Sand: \_\_\_\_\_ % OM: \_\_\_\_\_ Texture: \_\_\_\_\_  
 % Silt: \_\_\_\_\_ pH: \_\_\_\_\_ Soil Name: \_\_\_\_\_  
 % Clay: \_\_\_\_\_ CEC: \_\_\_\_\_ Fert. Level: \_\_\_\_\_

### ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

### MOISTURE CONDITIONS

No.	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: \_\_\_\_\_

Closest Weather Station: \_\_\_\_\_ Distance: \_\_\_\_\_ Unit: \_\_\_\_\_

### APPLICATION DESCRIPTION

	A
Application Date:	Feb-02-06
Time of Day:	all day
Application Method:	in bed
Application Timing:	preplant
Applic. Placement:	in bed
Air Temp., Unit:	60 F
% Relative Humidity:	48
Wind Velocity, Unit:	3 mph
Dew Presence (Y/N):	n
Water Hardness:	
Soil Temp., Unit:	58 F
Soil Moisture:	moist
% Cloud Cover:	25

### CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	CPSAN preplant
Stage Scale:	not up
Height, Unit:	0 inch

# University of Georgia

## WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	RCHSC preplant
Stage Scale:	not up
Density, Unit:	
Weed 2 Code, Stage:	CASOB preplant
Stage Scale:	not up
Density, Unit:	
Weed 3 Code, Stage:	PORPI preplant
Stage Scale:	not up
Density, Unit:	

## APPLICATION EQUIPMENT

	A
Appl. Equipment:	see
Operating Pressure:	comment
Nozzle Type:	section
Nozzle Size:	
Nozzle Spacing, Unit:	
Nozzles/Row:	
Band Width, Unit:	
Boom Length, Unit:	
Boom Height, Unit:	
Ground Speed, Unit:	
Incorporation Equip.:	
Hours to Incorp.:	
Incorp. Depth, Unit:	
Carrier:	
Spray Volume, Unit:	
Spray pH:	
Propellant:	
Tank Mix (Y/N):	

Trt No	Treatment Application Comment