

University of Georgia

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

Trial ID: Veg42-06

Study Dir.: Martin Flora

Location: Southern Valley (E7)

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 Rate	Grow Unit	Appl Stg	Code	Amt to Measure	Plot No.	By Rep	
										1	2	3
1	Methyl bromide 400 lb							A		102	202	302
2	Telone 12 G							A		101	201	301
	Chloropicrn 75 lb							A				
	Vapam 66 G							A				

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 to MB for control of weeds and crop growth on large-acreage on farm trials.

WEED CONTROL:

- The entire plot (3 rows by 300 feet) was counted for weed emergence through the mulch or plant hole.
- No differences in light infestations of smallflower morningglory and Palmer amaranth were noted.

PEPPER HEIGHTS

- In April, 40 pepper plants per plot were measured.
- No differences in plant heights were noted.

GENERAL COMMENTS:

- 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	IAQTA	AMAPA	plant 1 CPSAN	plant 2 CPSAN	plant 3 CPSAN	plant 4 CPSAN	plant 5 CPSAN	plant 6 CPSAN								
Crop Code																
Rating Data Type	ct	ct	ht	ht	ht	ht	ht	ht								
Rating Unit	#/plot	#/plot	cm	cm	cm	cm	cm	cm								
Rating Date	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06								
Trt-Eval Interval	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A								
ARM Action Codes																
Trt No.	Treatment Name	Rate	Unit	1	2	3	4	5	6	7	8					
1	Methyl bromide 400 lb	0	a	0 a	0 a	12 a	12 a	13 a	12 a	14 a	15 a					
2	Telone 12 G Chloropicrn 75 lb Vapam 66 G	1	a	0 a	0 a	11 a	16 a	11 a	11 a	13 a	10 a					
LSD (P=.05)		3.8		1.4		8.0		14.1		16.5		3.8		16.9		8.0
Standard Deviation		1.1		0.4		2.3		4.0		4.7		1.1		4.8		2.3
CV		162.02		244.95		19.48		28.72		39.79		9.53		36.1		18.43
Bartlett's X2		0.0		0.0		0.378		0.304		0.088		0.218		0.354		1.421
P(Bartlett's X2)		.		.		0.539		0.582		0.766		0.641		0.552		0.233

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

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Weed Code	plant 7	plant 8	plant 9	plant 10	plant 11	plant 12	plant 13	plant 14			
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-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06			
Trt-Eval Interval	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A			
ARM Action Codes											
Trt No.	Treatment Name	Rate	Unit	9	10	11	12	13	14	15	16
1	Methyl bromide 400 lb			14 a	15 a	16 a	12 a	16 a	10 a	12 a	14 a
2	Telone 12 G Chloropicrn 75 lb Vapam 66 G			12 a	13 a	13 a	8 a	11 a	12 a	12 a	10 a
LSD (P=.05)		6.3		13.8	5.2	8.7	13.7	12.3	9.4	8.0	
Standard Deviation		1.8		3.9	1.5	2.5	3.9	3.5	2.7	2.3	
CV		13.69		27.47	10.04	25.25	28.5	31.24	22.31	18.68	
Bartlett's X2		0.137		0.731	0.881	3.061	0.31	1.528	4.628	0.101	
P(Bartlett's X2)		0.711		0.393	0.348	0.08	0.578	0.216	0.031*	0.75	

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

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Weed Code	plant 15	plant 16	plant 17	plant 18	plant 19	plant 20	plant 21	plant 22			
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-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06			
Trt-Eval Interval	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A			
ARM Action Codes											
Trt No.	Treatment Name	Rate	Unit	17	18	19	20	21	22	23	24
1	Methyl bromide 400 lb			13 a	8 a	13 a	13 a	14 a	14 a	14 a	14 a
2	Telone 12 G Chloropicrn 75 lb Vapam 66 G			10 a	11 a	13 a	13 a	10 a	12 a	8 b	13 a
LSD (P=.05)				17.9	10.8	3.8	2.5	9.4	8.0	5.2	8.6
Standard Deviation				5.1	3.1	1.1	0.7	2.7	2.3	1.5	2.4
CV				43.09	31.34	8.42	5.58	22.0	17.48	13.18	17.71
Bartlett's X2				1.47	0.53	0.544	0.077	0.0	0.013	0.354	0.137
P(Bartlett's X2)				0.225	0.467	0.461	0.781	.	0.909	0.552	0.711

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

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Weed Code	plant 23	plant 24	plant 25	plant 26	plant 27	plant 28	plant 29	plant 30			
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-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06			
Trt-Eval Interval	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A			
ARM Action Codes											
Trt No.	Treatment Name	Rate	Unit	25	26	27	28	29	30	31	32
1	Methyl bromide 400 lb			12 a	10 a	10 a	14 a	12 a	13 a	12 b	15 a
2	Telone 12 G Chloropicrn 75 lb Vapam 66 G			14 a	14 a	15 a	15 a	14 a	14 a	14 a	13 a
LSD (P=.05)				9.0	10.0	5.2	4.3	6.3	16.2	1.4	12.3
Standard Deviation				2.5	2.9	1.5	1.2	1.8	4.6	0.4	3.5
CV				19.61	23.81	11.78	8.45	13.69	34.51	3.18	24.91
Bartlett's X2				0.037	1.47	0.187	0.0	0.328	1.781	0.128	0.187
P(Bartlett's X2)				0.848	0.225	0.666	1.00	0.567	0.182	0.721	0.666

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

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Weed Code	plant 31	plant 32	plant 33	plant 34	plant 35	plant 36	plant 37	plant 38			
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-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06			
Trt-Eval Interval	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A	70 DA-A			
ARM Action Codes											
Trt No.	Treatment Name	Rate	Unit	33	34	35	36	37	38	39	40
1	Methyl bromide 400 lb			12 a	12 a	11 a	13 a	15 a	15 a	15 a	14 a
2	Telone 12 G Chloropicrn 75 lb Vapam 66 G			13 a	12 a	12 a	13 a	10 a	11 a	13 a	15 a
LSD (P=.05)				6.3	8.7	14.1	8.7	9.0	14.1	6.3	4.3
Standard Deviation				1.8	2.5	4.0	2.5	2.5	4.0	1.8	1.2
CV				14.24	20.99	35.48	19.1	20.95	30.54	12.56	8.26
Bartlett's X2				1.299	0.234	0.0	0.019	0.985	3.419	0.141	0.426
P(Bartlett's X2)				0.254	0.628	.	0.89	0.321	0.064	0.708	0.514

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

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Weed Code	plant 39	plant 40	Avg40pla
Crop Code	CPSAN	CPSAN	CPSAN
Rating Data Type	ht	ht	ht
Rating Unit	cm	cm	cm
Rating Date	Apr-13-06	Apr-13-06	Apr-13-06
Trt-Eval Interval	70 DA-A	70 DA-A	70 DA-A
ARM Action Codes			T1
Trt No.			
Treatment Name			
Rate			
Unit			
	41	42	43
1 Methyl bromide 400 lb	14 a	15 a	13 a
2 Telone 12 G Chloropicrn 75 lb Vapam 66 G	13 a	12 a	12 a
LSD (P=.05)	7.2	12.7	3.6
Standard Deviation	2.0	3.6	1.0
CV	15.12	27.21	8.03
Bartlett's X2	0.0	0.225	0.907
P(Bartlett's X2)	1.00	0.635	0.341

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

Column 43: T1 = @AVG([C3],[C42])

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Location: Southern Valley (E7)

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: _____

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.	IAQTA	smallflower mg	
2.	AMAPA	Palmer amaranth	

Crop 1: CPSAN bell pepper **Variety:** Heritage
Planting Date: Mar-07-06 **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
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: 0. Texture: _____
 % Silt: _____ pH: 0. 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:	

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	IAQTA preplant
Stage Scale:	not up
Density, Unit:	. .
Weed 2 Code, Stage:	AMAPA preplant
Stage Scale:	not up
Density, Unit:	. .

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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