

University of Georgia

Long-Term Effects of Methyl Bromide Alternatives on Weeds, Diseases, & Nematodes

YEAR 4 (crops 7 and 8)

Trial ID: Veg23-07(fall)

Study Dir.: Culpepper/Langston/Davis

Location: Tifton

Investigator: Stanley Culpepper

Reps: 4

Plots: 12 by 25 feet

Spray vol: 24 gal/ac

Mix size: 3 liters (min 2.5027)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg	Rate	Product Code	Amt to Measure	Plot No. By Rep			
										1	2	3	4
1	No Fumigant No Herbicide							A B		101	211	315	411
2	No Fumigant Command Dual Magnum	3 7.62	ME L	1	QT/A PT/A	PRE PRE		B B	31.25 ml/mx 15.62 ml/mx	102	212	316	412
3	MEBR 67:33 (350 lb/A) No Herbicide							A B		107	207	311	405
4	MEBR 67:33 (350 lb/A) Command Dual Magnum	3 7.62	ME L	1	QT/A PT/A	PRE PRE		B B	31.25 ml/mx 15.62 ml/mx	108	208	312	406
5	MIDAS 50:50 (175 lb/A)VIF No Herbicide							A B		109	203	307	401
6	MIDAS 50:50 (175 lb/A)VIF Command Dual Magnum	3 7.62	ME L	1	QT/A PT/A	PRE PRE		B B	31.25 ml/mx 15.62 ml/mx	110	204	308	402
7	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3, No Herbicide							A A B		103	209	305	409
8	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3 Command Dual Magnum	3 7.62	ME L	1	QT/A PT/A	PRE PRE		B B	31.25 ml/mx 15.62 ml/mx	104	210	306	410
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide							A A B		113	201	309	415
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	3 7.62	ME L	1	QT/A PT/A	PRE PRE		B B	31.25 ml/mx 15.62 ml/mx	114	202	310	416
11	T-C35 (35 G) (8" inject) No Herbicide							A B		115	213	301	403
12	T-C35 (35 G) (8"inject) Command Dual Magnum	3 7.62	ME L	1	QT/A PT/A	PRE PRE		B B	31.25 ml/mx 15.62 ml/mx	116	214	302	404
13	T2 (12 G) + Pic (150 lb) No Herbicide							A B		105	205	313	413
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	3 7.62	ME L	1	QT/A PT/A	PRE PRE		B B	31.25 ml/mx 15.62 ml/mx	106	206	314	414
15	Vapam (75 G) No Herbicide							A B		111	215	303	407
16	Vapam (75 G) Command Dual Magnum	3 7.62	ME L	1	QT/A PT/A	PRE PRE		B B	31.25 ml/mx 15.62 ml/mx	112	216	304	408

Sort Order: Treatment

University of Georgia

Reps: 4 Plots: 12 by 25 feet
 Spray vol: 24 gal/ac Mix size: 3 liters (min 2.5027)

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Form Unit	Rate Stg	Grow Code	Appl to Measure	Amt Product 1	Plot No. By Rep			
										2	3	4	

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
312.467	ml	Command	3	ME	
156.234	ml	Dual Magnum	7.62	L	

* 'Per area' calculations based on spray volume= 24 gal/ac, mix size= 3 liters (mix size basis).

* Product amount calculations increased 25 % for overage adjustment.

Trial Comments

OBJECTIVE: Determine weed, disease, and nematode shifts when applying the same fumigant on the same area for at least 5 years.

RESULTS FROM SPRING PEPPER CROP IN YEAR 4 (See Veg23-07TVP):

PEPPER STAND AND GROWTH (20 to 80 plants per plot measured):

1. Pepper stand was not impacted by treatments (fumigant or herbicide).
2. Crops were planted 21 day after fumigating. The 3-WAY, MIDAS and Vapam stunted early season pepper growth. Stunting was greatest with MIDAS and then the 3-WAY.

WEED RESPONSE:

1. Weed emergence was extremely low, this may have been due to an extremely cool spring followed by a rapidly growing pepper crop once the temperature warmed.
2. Yellow nutsedge: The non-treated control, Telone C35, and the T2 + Pic systems had more plants than all other treatments.
3. Large crabgrass: Greatest populations were noted in the non-treated control and in the Telone C35 system when no herbicide was applied.
4. Purslane: all fumigant systems or herbicides reduced pink purslane similarly compared to the non-treated control.
5. No differences were noted with other weed species.

Pepper Yield (entire plot harvested 4 times for Jumbo fruit only):

1. Main effects were significant.
2. Harvest 1: Lower yields were produced in MIDAS plots because of early season stunting (pooled over herbicide).
3. Harvest 2: Lower yields were produced in the no fumigant, MIDAS and Vapam alone (pooled over herbicide).
4. Harvest 3: Lower yields were produced in the no fumigant systems (pooled over herbicide).
5. Harvest 4: Highest yields were produced in the MIDAS, likely recovering from lower yields earlier. (pooled over herbicides)
6. Harvest 1-4: Yields were similar to MB by all fumigant systems except the no fumigant control. (pooled over herbicides)
7. When pooled over fumigants, the herbicide system improved yields during harvest 1, harvest 3, and cumulative harvests.

RESULTS FROM FALL CUCUMBER CROP IN YEAR 4:

WEED RESPONSE:

1. No differences in morningglory, pigweed, and crabgrass control were noted (trial treated with Select to remove grasses).
2. Yellow nutsedge: the no fumigant with or without herbicides and T2 + Pic without herbicides had the most nutsedge plants. TC35 and Vapam without herbicides also had significant nutsedge infestations.
3. Purslane: all fumigant systems or herbicides reduced pink purslane compared to the non-treated control.

CUCUMBER RUNNER LENGTHS (MAIN EFFECTS SIGNIFICANT):

1. Cucumber growth was not impacted by fumigant although smallest plants were generally in the non-treated and the Vapam alone systems.
2. The herbicide programs statistically reduced cucumber growth. This is likely carryover from Dual applied in the pepper crop since it was an extremely dry season.

CUCUMBER YIELDS (MAIN EFFECTS SIGNIFICANT):

1. Cucumber harvested 8 times for Select or Super fruit.
2. Herbicide carryover reduced cucumber production in harvest 1 and when adding harvest 1 and 2 together.

University of Georgia

3. No differences in yield were noted when adding Harvests 1-4 or 1-8 together. Although not statistical, clear trends for less yields in the no fumigant control were noted. No other trends were evident.

GENERAL COMMENTS:

1. Fumigants were applied, beds were formed and mulch was laid. MB, MIDAS, and PIC were applied with super bedder plastic layer injected 8 inches deep with 3 knives on a 32 inch bedtop. Vapam was injected 4 inches deep with the injection knives 4 inches on the final bed just prior to covering with mulch. Telone II and Telone C35 were injected 10-12 inches deep with a Yetter applicator.
2. On June 25, 45 gallons of Vapam (broadcast rate) was injected through the drip prior to planting the fall crop.
3. On July 24, Roundup WeatherMax was applied over the entire trial area.
4. On July 24, row middle herbicide applications were made for the fall pepper crop.
5. On Aug 24, the entire trail was sprayed with Select to remove annual grasses.

University of Georgia

Long-Term Effects of Methyl Bromide Alternatives on Weeds, Diseases, & Nematodes

YEAR 4 (crops 7 and 8)

Trial ID: Veg23-07(fall)

Study Dir.: Culpepper/Langston/Davis

Location: Tifton

Investigator: Stanley Culpepper

Weed Code	CYPES CUMSA	CYPES CUMSA	CYPES CUMSA	IAQTA CUMSA	IAQTA CUMSA	IAQTA CUMSA	IPOLA CUMSA	
Rating Data Type	#	#	#	#	#	#	#	
Rating Unit	per plot	per plot	per plot	per plot	per plot	per plot	per plot	
Rating Date	Aug-31-07	Sep-25-07	Oct-29-07	Aug-31-07	Sep-25-07	Oct-29-07	Aug-31-07	
Trt-Eval Interval	185 DA-A	210 DA-A	244 DA-A	185 DA-A	210 DA-A	244 DA-A	185 DA-A	
ARM Action Codes								
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	
		Unit						
			1	2	3	4	5	
			6	7				
1	No Fumigant No Herbicide		34 ab	84 a	151 a	0 a	0 b	0 b
2	No Fumigant Command Dual Magnum	1 QT/A 1 PT/A	43 ab	24 b	119 ab	1 a	1 ab	0 b
3	MEBR 67:33 (350 lb/A) No Herbicide		0 b	1 b	4 b	1 a	1 ab	1 a
4	MEBR 67:33 (350 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	0 b	0 b	0 b	1 a	4 a	0 ab
5	MIDAS 50:50 (175 lb/A)VIF No Herbicide		0 b	0 b	0 b	1 a	1 b	0 b
6	MIDAS 50:50 (175 lb/A)VIF Command Dual Magnum	1 QT/A 1 PT/A	0 b	0 b	0 b	2 a	0 b	0 b
7	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3, No Herbicide		1 b	0 b	0 b	0 a	0 b	1 ab
8	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3 Command Dual Magnum	1 QT/A 1 PT/A	0 b	0 b	0 b	0 a	0 b	1 b
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide		0 b	0 b	0 b	1 a	0 b	2 ab
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	1 QT/A 1 PT/A	0 b	0 b	0 b	1 a	1 b	0 b
11	T-C35 (35 G) (8" inject) No Herbicide		16 b	14 b	23 b	0 a	0 b	1 b
12	T-C35 (35 G) (8"inject) Command Dual Magnum	1 QT/A 1 PT/A	0 b	0 b	0 b	1 a	1 ab	0 b
13	T2 (12 G) + Pic (150 lb) No Herbicide		68 a	71 a	171 a	2 a	0 b	1 ab
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	1 QT/A 1 PT/A	5 b	5 b	7 b	4 a	1 b	0 b
15	Vapam (75 G) No Herbicide		11 b	15 b	23 b	1 a	1 b	2 ab

University of Georgia

Weed Code	CYPES	CYPES	CYPES	IAQTA	IAQTA	IAQTA	IPOLA
Crop Code	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA
Part Rated							
Rating Data Type	#	#	#	#	#	#	#
Rating Unit	per plot	per plot	per plot	per plot	per plot	per plot	per plot
Rating Date	Aug-31-07	Sep-25-07	Oct-29-07	Aug-31-07	Sep-25-07	Oct-29-07	Aug-31-07
Trt-Eval Interval	185 DA-A	210 DA-A	244 DA-A	185 DA-A	210 DA-A	244 DA-A	185 DA-A
ARM Action Codes							
Trt Treatment	Rate						
No. Name	Rate Unit	1	2	3	4	5	6
16 Vapam (75 G)		0 b	0 b	0 b	2 a	2 ab	2 ab
Command	1 QT/A						
Dual Magnum	1 PT/A						0 b
LSD (P=.05)	39.0	43.2	106.7	3.4	2.3	2.4	0.6
Standard Deviation	27.3	30.3	74.7	2.4	1.6	1.7	0.4
CV	248.22	226.26	240.54	248.69	220.66	178.49	533.87
Bartlett's X2	30.238	37.002	40.173	31.741	40.689	39.766	5.009
P(Bartlett's X2)	0.001*	0.001*	0.001*	0.001*	0.001*	0.001*	0.082

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

University of Georgia

Weed Code	IPOLA CUMSA	AMAPA CUMSA	AMAPA CUMSA	AMAPA CUMSA	POROL CUMSA	POROL CUMSA	POROL CUMSA		
Crop Code									
Part Rated									
Rating Data Type	#	#	#	#	#	#	#		
Rating Unit	per plot	per plot	per plot	per plot	per plot	per plot	per plot		
Rating Date	Sep-25-07	Aug-31-07	Sep-25-07	Oct-29-07	Aug-31-07	Sep-25-07	Oct-29-07		
Trt-Eval Interval	210 DA-A	185 DA-A	210 DA-A	244 DA-A	185 DA-A	210 DA-A	244 DA-A		
ARM Action Codes									
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate		
		Unit	8	9	10	11	12	13	14
1	No Fumigant No Herbicide		0 a	0 a	4 a	2 b	2 ab	5 a	6 a
2	No Fumigant Command Dual Magnum	1 QT/A 1 PT/A	0 a	1 a	2 a	1 b	5 a	0 b	0 b
3	MEBR 67:33 (350 lb/A) No Herbicide		0 a	0 a	0 a	0 b	0 b	0 b	0 b
4	MEBR 67:33 (350 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	0 a	0 a	2 a	0 b	0 b	0 b	0 b
5	MIDAS 50:50 (175 lb/A)VIF No Herbicide		0 a	1 a	1 a	5 ab	0 b	0 b	0 b
6	MIDAS 50:50 (175 lb/A)VIF Command Dual Magnum	1 QT/A 1 PT/A	0 a	2 a	5 a	13 a	0 b	0 b	0 b
7	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3, No Herbicide		0 a	0 a	0 a	0 b	0 b	0 b	0 b
8	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3 Command Dual Magnum	1 QT/A 1 PT/A	0 a	0 a	3 a	2 b	0 b	0 b	1 b
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide		0 a	0 a	0 a	1 b	0 b	0 b	0 b
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	1 QT/A 1 PT/A	0 a	0 a	0 a	3 b	0 b	1 b	0 b
11	T-C35 (35 G) (8" inject) No Herbicide		0 a	1 a	0 a	0 b	1 b	1 b	0 b
12	T-C35 (35 G) (8"inject) Command Dual Magnum	1 QT/A 1 PT/A	0 a	1 a	0 a	1 b	0 b	0 b	0 b
13	T2 (12 G) + Pic (150 lb) No Herbicide		0 a	1 a	3 a	1 b	0 b	0 b	0 b
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	1 QT/A 1 PT/A	0 a	2 a	3 a	6 ab	0 b	0 b	0 b
15	Vapam (75 G) No Herbicide		0 a	2 a	4 a	3 b	0 b	0 b	2 b

University of Georgia

Weed Code	IPOLA	AMAPA	AMAPA	AMAPA	POROL	POROL	POROL		
Crop Code	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA		
Part Rated									
Rating Data Type	#	#	#	#	#	#	#		
Rating Unit	per plot	per plot	per plot	per plot	per plot	per plot	per plot		
Rating Date	Sep-25-07	Aug-31-07	Sep-25-07	Oct-29-07	Aug-31-07	Sep-25-07	Oct-29-07		
Trt-Eval Interval	210 DA-A	185 DA-A	210 DA-A	244 DA-A	185 DA-A	210 DA-A	244 DA-A		
ARM Action Codes									
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate		
		Unit							
8			9	10	11	12	13	14	
16	Vapam (75 G)		0 a	1 a	2 a	6 ab	0 b	1 b	0 b
	Command	1 QT/A							
	Dual Magnum	1 PT/A							
LSD (P=.05)	0.0	2.2	5.9	8.5	3.5	1.9	2.5		
Standard Deviation	0.0	1.6	4.2	5.9	2.4	1.3	1.8		
CV	0.0	234.1	237.69	219.57	535.37	267.55	332.24		
Bartlett's X2	0.0	25.358	51.663	64.33	19.303	27.119	15.37		
P(Bartlett's X2)	.	0.005*	0.001*	0.001*	0.001*	0.001*	0.002*		

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

University of Georgia

Weed Code	DIGSA	DIGSA	DIGSA	MOLVE	MOLVE	MOLVE	plant 1		
Crop Code	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA		
Part Rated							left		
Rating Data Type	#	#	#	#	#	#	ht		
Rating Unit	per plot	per plot	per plot	per plot	per plot	per plot	cm		
Rating Date	Aug-31-07	Sep-25-07	Oct-29-07	Aug-31-07	Sep-25-07	Oct-29-07	Sep-06-07		
Trt-Eval Interval	185 DA-A	210 DA-A	244 DA-A	185 DA-A	210 DA-A	244 DA-A	191 DA-A		
ARM Action Codes									
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate		
		Unit	15	16	17	18	19	20	21
1	No Fumigant No Herbicide		1 b	2 a	4 ab	1 ab	1 b	1 a	27 ab
2	No Fumigant Command Dual Magnum	1 QT/A 1 PT/A	6 ab	2 a	2 ab	2 a	2 a	1 a	17 b
3	MEBR 67:33 (350 lb/A) No Herbicide		10 a	3 a	7 a	0 b	0 b	0 a	29 ab
4	MEBR 67:33 (350 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	1 b	1 a	2 b	0 b	0 b	0 a	25 ab
5	MIDAS 50:50 (175 lb/A)VIF No Herbicide		5 ab	3 a	5 ab	0 b	0 b	0 a	25 ab
6	MIDAS 50:50 (175 lb/A)VIF Command Dual Magnum	1 QT/A 1 PT/A	3 ab	2 a	4 ab	0 b	0 b	0 a	21 ab
7	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3, No Herbicide		3 ab	2 a	3 ab	0 b	0 b	0 a	25 ab
8	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3 Command Dual Magnum	1 QT/A 1 PT/A	2 b	1 a	1 b	0 b	0 b	0 a	26 ab
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide		8 ab	3 a	4 ab	0 b	0 b	4 a	29 ab
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	1 QT/A 1 PT/A	2 b	1 a	2 b	0 b	0 b	5 a	34 a
11	T-C35 (35 G) (8" inject) No Herbicide		4 ab	3 a	3 ab	0 b	0 b	0 a	22 ab
12	T-C35 (35 G) (8"inject) Command Dual Magnum	1 QT/A 1 PT/A	1 b	0 a	1 b	0 b	0 b	0 a	25 ab
13	T2 (12 G) + Pic (150 lb) No Herbicide		7 ab	3 a	2 b	0 b	0 b	0 a	29 ab
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	1 QT/A 1 PT/A	3 ab	5 a	2 b	0 b	0 b	4 a	28 ab
15	Vapam (75 G) No Herbicide		4 ab	2 a	4 ab	0 b	0 b	1 a	30 ab

University of Georgia

Weed Code	DIGSA	DIGSA	DIGSA	MOLVE	MOLVE	MOLVE	plant 1
Crop Code	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA
Part Rated							left
Rating Data Type	#	#	#	#	#	#	ht
Rating Unit	per plot	per plot	per plot	per plot	per plot	per plot	cm
Rating Date	Aug-31-07	Sep-25-07	Oct-29-07	Aug-31-07	Sep-25-07	Oct-29-07	Sep-06-07
Trt-Eval Interval	185 DA-A	210 DA-A	244 DA-A	185 DA-A	210 DA-A	244 DA-A	191 DA-A
ARM Action Codes							
Trt Treatment							
No. Name							
Rate	15	16	17	18	19	20	21
Rate Unit							
16 Vapam (75 G)	3 ab	1 a	2 b	0 b	0 b	1 a	25 ab
Command	1 QT/A						
Dual Magnum	1 PT/A						
LSD (P=.05)	5.9	4.4	4.2	1.0	0.8	4.9	12.8
Standard Deviation	4.1	3.1	2.9	0.7	0.6	3.5	8.9
CV	108.41	156.22	104.56	456.93	321.06	356.74	34.59
Bartlett's X2	26.094	28.138	19.909	5.435	8.14	57.751	17.072
P(Bartlett's X2)	0.037*	0.014*	0.175	0.066	0.087	0.001*	0.315

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

University of Georgia

Weed Code	plant 2 CUMSA	plant 3 CUMSA	plant 4 CUMSA	plant 5 CUMSA	plant 6 CUMSA	plant 7 CUMSA	plant 8 CUMSA			
Crop Code	left	left	left	left	left	left	left			
Part Rated	ht	ht	ht	ht	ht	ht	ht			
Rating Data Type	cm	cm	cm	cm	cm	cm	cm			
Rating Unit	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07			
Rating Date	191 DA-A	191 DA-A	191 DA-A	191 DA-A	191 DA-A	191 DA-A	191 DA-A			
Trt-Eval Interval										
ARM Action Codes										
Trt No.	Treatment Name	Rate	Unit	22	23	24	25	26	27	28
1	No Fumigant No Herbicide			31 a-d	30 abc	30 bc	26 bcd	26 a-d	30 a	35 a-d
2	No Fumigant Command Dual Magnum	1 QT/A 1 PT/A		23 cd	23 c	23 c	22 d	20 cd	23 a	26 cd
3	MEBR 67:33 (350 lb/A) No Herbicide			43 ab	41 abc	36 abc	36 a-d	37 ab	30 a	33 a-d
4	MEBR 67:33 (350 lb/A) Command Dual Magnum	1 QT/A 1 PT/A		37 a-d	30 abc	29 bc	29 a-d	27 a-d	28 a	27 bcd
5	MIDAS 50:50 (175 lb/A)VIF No Herbicide			45 a	46 ab	37 abc	43 ab	41 a	39 a	37 a-d
6	MIDAS 50:50 (175 lb/A)VIF Command Dual Magnum	1 QT/A 1 PT/A		26 a-d	25 c	28 bc	28 a-d	33 a-d	23 a	28 bcd
7	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3, No Herbicide			41 abc	37 abc	40 ab	43 ab	39 a	39 a	36 a-d
8	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3 Command Dual Magnum	1 QT/A 1 PT/A		36 a-d	28 bc	33 abc	31 a-d	21 cd	33 a	32 a-d
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide			39 a-d	46 a	47 a	45 a	40 a	32 a	41 abc
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	1 QT/A 1 PT/A		25 bcd	31 abc	27 bc	31 a-d	38 a	37 a	42 ab
11	T-C35 (35 G) (8" inject) No Herbicide			26 a-d	27 c	25 bc	22 cd	19 d	31 a	30 bcd
12	T-C35 (35 G) (8"inject) Command Dual Magnum	1 QT/A 1 PT/A		36 a-d	29 abc	37 abc	40 abc	39 a	32 a	36 a-d
13	T2 (12 G) + Pic (150 lb) No Herbicide			36 a-d	29 abc	30 bc	31 a-d	36 abc	30 a	47 a
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	1 QT/A 1 PT/A		37 a-d	33 abc	32 abc	33 a-d	31 a-d	35 a	29 bcd
15	Vapam (75 G) No Herbicide			31 a-d	28 abc	27 bc	32 a-d	27 a-d	35 a	33 a-d

University of Georgia

Weed Code	plant 2	plant 3	plant 4	plant 5	plant 6	plant 7	plant 8
Crop Code	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA
Part Rated	left	left	left	left	left	left	left
Rating Data Type	ht	ht	ht	ht	ht	ht	ht
Rating Unit	cm	cm	cm	cm	cm	cm	cm
Rating Date	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07
Trt-Eval Interval	191 DA-A	191 DA-A	191 DA-A	191 DA-A	191 DA-A	191 DA-A	191 DA-A
ARM Action Codes							
Trt Treatment							
No. Name	Rate Unit						
16 Vapam (75 G)	22 d	23 c	23 c	25 bcd	21 bcd	24 a	22 d
Command	1 QT/A						
Dual Magnum	1 PT/A						
LSD (P=.05)	16.0	15.5	13.7	15.2	13.6	16.3	13.1
Standard Deviation	11.2	10.8	9.6	10.7	9.5	11.4	9.2
CV	33.77	34.48	30.43	33.13	30.86	36.63	27.62
Bartlett's X2	13.947	21.411	20.708	9.328	16.204	18.994	8.537
P(Bartlett's X2)	0.53	0.124	0.146	0.86	0.369	0.214	0.90

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

University of Georgia

Weed Code	plant 9 CUMSA	plant 10 CUMSA	Avg10pla CUMSA	plant 1 CUMSA	plant 2 CUMSA	plant 3 CUMSA	plant 4 CUMSA		
Crop Code									
Part Rated	left	left	left	right	right	right	right		
Rating Data Type	ht	ht	ht	ht	ht	ht	ht		
Rating Unit	cm	cm	cm	cm	cm	cm	cm		
Rating Date	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07		
Trt-Eval Interval	191 DA-A	191 DA-A	191 DA-A	191 DA-A	191 DA-A	191 DA-A	191 DA-A		
ARM Action Codes			T1						
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate		
		Unit							
29			30	31	32	33	34		
35									
1	No Fumigant No Herbicide		38 a	37 a	31 a-e	34 ab	33 ab	34 ab	
2	No Fumigant Command Dual Magnum	1 QT/A 1 PT/A	20 b	20 b	22 e	29 ab	32 ab	27 b	26 ab
3	MEBR 67:33 (350 lb/A) No Herbicide		34 ab	29 ab	35 abc	42 a	39 a	32 ab	32 ab
4	MEBR 67:33 (350 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	25 ab	29 ab	29 a-e	30 ab	30 ab	34 ab	34 ab
5	MIDAS 50:50 (175 lb/A)VIF No Herbicide		27 ab	39 a	38 ab	39 ab	40 a	44 a	37 a
6	MIDAS 50:50 (175 lb/A)VIF Command Dual Magnum	1 QT/A 1 PT/A	31 ab	27 ab	27 cde	22 b	28 ab	23 b	23 ab
7	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3, No Herbicide		35 ab	31 ab	36 abc	37 ab	32 ab	29 ab	33 ab
8	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3 Command Dual Magnum	1 QT/A 1 PT/A	35 ab	25 ab	30 a-e	21 b	28 ab	30 ab	32 ab
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide		34 ab	36 ab	39 a	32 ab	32 ab	30 ab	35 ab
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	1 QT/A 1 PT/A	34 ab	25 ab	32 a-d	25 ab	28 ab	33 ab	32 ab
11	T-C35 (35 G) (8" inject) No Herbicide		35 ab	38 a	27 b-e	43 a	33 ab	32 ab	27 ab
12	T-C35 (35 G) (8"inject) Command Dual Magnum	1 QT/A 1 PT/A	28 ab	36 ab	34 abc	25 ab	32 ab	32 ab	19 b
13	T2 (12 G) + Pic (150 lb) No Herbicide		34 ab	40 a	34 abc	34 ab	32 ab	33 ab	34 ab
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	1 QT/A 1 PT/A	31 ab	29 ab	32 a-e	28 ab	26 ab	33 ab	33 ab
15	Vapam (75 G) No Herbicide		33 ab	30 ab	31 a-e	29 ab	26 ab	30 ab	28 ab

University of Georgia

Weed Code	plant 9	plant 10	Avg10pla	plant 1	plant 2	plant 3	plant 4
Crop Code	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA
Part Rated	left	left	left	right	right	right	right
Rating Data Type	ht	ht	ht	ht	ht	ht	ht
Rating Unit	cm	cm	cm	cm	cm	cm	cm
Rating Date	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07
Trt-Eval Interval	191 DA-A	191 DA-A	191 DA-A	191 DA-A	191 DA-A	191 DA-A	191 DA-A
ARM Action Codes			T1				
Trt Treatment	Rate						
No. Name	Rate Unit	29	30	31	32	33	34
16 Vapam (75 G)		20 b	25 ab	23 de	24 ab	22 b	20 b
Command	1 QT/A						
Dual Magnum	1 PT/A						
LSD (P=.05)		13.9	13.8	9.0	15.3	13.3	14.2
Standard Deviation		9.7	9.7	6.3	10.7	9.3	10.0
CV		31.64	31.3	20.14	34.92	30.28	32.44
Bartlett's X2		17.418	17.631	10.179	20.495	13.374	11.554
P(Bartlett's X2)		0.294	0.283	0.808	0.154	0.573	0.712

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

Column 31: T1 = @AVG([C21].[C30])

University of Georgia

Weed Code	plant 5 CUMSA	plant 6 CUMSA	plant 7 CUMSA	plant 8 CUMSA	plant 9 CUMSA	plant 10 CUMSA	AVG10Pla CUMSA		
Crop Code	right	right	right	right	right	right	right		
Part Rated	ht	ht	ht	ht	ht	ht	ht		
Rating Data Type	cm	cm	cm	cm	cm	cm	cm		
Rating Unit	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07		
Rating Date	191 DA-A	191 DA-A	191 DA-A	191 DA-A	191 DA-A	191 DA-A	191 DA-A		
Trt-Eval Interval									
ARM Action Codes							T2		
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate		
		Unit							
36			37	38	39	40	41	42	
1	No Fumigant No Herbicide		36 ab	38 a	35 ab	33 ab	30 a	31 a-d	33 a
2	No Fumigant Command Dual Magnum	1 QT/A 1 PT/A	18 b	24 a	27 ab	23 b	23 a	24 b-e	25 abc
3	MEBR 67:33 (350 lb/A) No Herbicide		30 ab	42 a	37 ab	37 ab	29 a	33 a-d	35 a
4	MEBR 67:33 (350 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	19 b	23 a	27 ab	30 ab	32 a	33 a-d	29 abc
5	MIDAS 50:50 (175 lb/A)VIF No Herbicide		36 ab	35 a	39 ab	34 ab	22 a	22 cde	35 a
6	MIDAS 50:50 (175 lb/A)VIF Command Dual Magnum	1 QT/A 1 PT/A	21 b	26 a	23 b	23 b	24 a	22 de	23 bc
7	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3, No Herbicide		36 ab	37 a	44 a	32 ab	29 a	37 abc	34 a
8	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3 Command Dual Magnum	1 QT/A 1 PT/A	40 a	28 a	39 ab	34 ab	34 a	32 a-d	32 ab
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide		39 a	33 a	31 ab	38 ab	38 a	34 a-d	34 a
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	1 QT/A 1 PT/A	34 ab	30 a	33 ab	29 ab	24 a	26 a-e	29 abc
11	T-C35 (35 G) (8" inject) No Herbicide		27 ab	30 a	35 ab	29 ab	27 a	29 a-e	31 abc
12	T-C35 (35 G) (8"inject) Command Dual Magnum	1 QT/A 1 PT/A	31 ab	37 a	33 ab	26 b	30 a	37 a-d	30 abc
13	T2 (12 G) + Pic (150 lb) No Herbicide		29 ab	34 a	39 ab	45 a	37 a	40 a	36 a
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	1 QT/A 1 PT/A	29 ab	33 a	33 ab	39 ab	25 a	39 ab	32 ab
15	Vapam (75 G) No Herbicide		24 ab	27 a	25 b	31 ab	26 a	27 a-e	27 abc

University of Georgia

Weed Code	plant 5	plant 6	plant 7	plant 8	plant 9	plant 10	AVG10Pla
Crop Code	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA
Part Rated	right	right	right	right	right	right	right
Rating Data Type	ht	ht	ht	ht	ht	ht	ht
Rating Unit	cm	cm	cm	cm	cm	cm	cm
Rating Date	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07	Sep-06-07
Trt-Eval Interval	191 DA-A	191 DA-A	191 DA-A	191 DA-A	191 DA-A	191 DA-A	191 DA-A
ARM Action Codes							T2
Trt Treatment							
No. Name	Rate	Rate	Rate	Rate	Rate	Rate	Rate
	Unit	Unit	Unit	Unit	Unit	Unit	Unit
16 Vapam (75 G)	36	37	38	39	40	41	42
Command	1 QT/A						
Dual Magnum	1 PT/A						
LSD (P=.05)	18 b	25 a	24 b	22 b	21 a	15 e	21 c
Standard Deviation	15.5	16.6	14.9	14.0	14.9	12.9	8.7
CV	10.8	11.6	10.4	9.8	10.4	9.1	6.1
Bartlett's X2	37.36	36.99	31.93	31.12	37.16	30.32	20.02
P(Bartlett's X2)	29.092	27.667	12.759	11.495	8.828	13.933	16.194
	0.016*	0.024*	0.621	0.717	0.886	0.531	0.369

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

Column 42: T2 = @AVG([C32].[C41])

University of Georgia

Weed Code	harv 1 CUMSA fruit	harv 1 CUMSA fruit	harv 2 CUMSA fruit	harv 2 CUMSA fruit	harv 3 CUMSA fruit	harv 3 CUMSA fruit	harv 4 CUMSA fruit						
Crop Code													
Part Rated													
Rating Data Type	# Select/Su	wt/lb	# Select/Su	wt/lb	# Select/Su	wt/lb	# Select/Su						
Rating Unit	per plot	per plot	per plot	per plot	per plot	per plot	per plot						
Rating Date	Sep-18-07	Sep-18-07	Sep-21-07	Sep-21-07	Sep-24-07	Sep-24-07	Sep-26-07						
Trt-Eval Interval	203 DA-A	203 DA-A	206 DA-A	206 DA-A	209 DA-A	209 DA-A	211 DA-A						
ARM Action Codes													
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate						
		Unit	Unit	Unit	Unit	Unit	Unit						
43			44		45		46		47		48		49
1	No Fumigant No Herbicide		5 bcd	3 abc	2 c	1 c	4 b	2 a	7 a				
2	No Fumigant Command Dual Magnum	1 QT/A 1 PT/A	3 cd	1 c	8 ab	4 ab	5 ab	3 a	10 a				
3	MEBR 67:33 (350 lb/A) No Herbicide		5 a-d	3 abc	9 a	4 abc	8 ab	4 a	10 a				
4	MEBR 67:33 (350 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	2 d	1 c	5 bc	2 abc	7 ab	4 a	6 a				
5	MIDAS 50:50 (175 lb/A)VIF No Herbicide		9 a	5 a	7 ab	4 abc	9 ab	4 a	8 a				
6	MIDAS 50:50 (175 lb/A)VIF Command Dual Magnum	1 QT/A 1 PT/A	3 cd	1 c	8 ab	4 ab	11 a	5 a	7 a				
7	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3, No Herbicide		6 a-d	3 abc	5 bc	3 abc	7 ab	3 a	12 a				
8	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3 Command Dual Magnum	1 QT/A 1 PT/A	3 cd	2 bc	5 abc	3 abc	8 ab	4 a	8 a				
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide		7 abc	4 ab	8 ab	5 a	9 ab	4 a	10 a				
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	1 QT/A 1 PT/A	3 cd	2 bc	5 abc	3 abc	5 ab	2 a	10 a				
11	T-C35 (35 G) (8" inject) No Herbicide		4 bcd	2 bc	6 abc	4 abc	7 ab	3 a	9 a				
12	T-C35 (35 G) (8"inject) Command Dual Magnum	1 QT/A 1 PT/A	8 ab	4 ab	7 ab	4 abc	7 ab	4 a	12 a				
13	T2 (12 G) + Pic (150 lb) No Herbicide		5 a-d	3 abc	8 ab	4 abc	5 ab	3 a	8 a				
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	1 QT/A 1 PT/A	5 bcd	2 bc	8 ab	5 ab	7 ab	3 a	11 a				
15	Vapam (75 G) No Herbicide		6 a-d	3 abc	7 ab	4 abc	8 ab	3 a	11 a				

University of Georgia

Weed Code	harv 1	harv 1	harv 2	harv 2	harv 3	harv 3	harv 4
Crop Code	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA
Part Rated	fruit	fruit	fruit	fruit	fruit	fruit	fruit
Rating Data Type	# Select/Su	wt/lb	# Select/Su	wt/lb	# Select/Su	wt/lb	# Select/Su
Rating Unit	per plot	per plot	per plot	per plot	per plot	per plot	per plot
Rating Date	Sep-18-07	Sep-18-07	Sep-21-07	Sep-21-07	Sep-24-07	Sep-24-07	Sep-26-07
Trt-Eval Interval	203 DA-A	203 DA-A	206 DA-A	206 DA-A	209 DA-A	209 DA-A	211 DA-A
ARM Action Codes							
Trt Treatment	Rate						
No. Name	Rate Unit	43	44	45	46	47	48
16 Vapam (75 G)		4 bcd	2 bc	5 abc	2 bc	7 ab	3 a
Command	1 QT/A						
Dual Magnum	1 PT/A						
LSD (P=.05)		3.4	1.9	3.6	2.3	6.1	2.9
Standard Deviation		2.4	1.3	2.5	1.6	4.3	2.0
CV		50.59	52.39	40.23	46.26	60.74	60.09
Bartlett's X2		22.004	19.62	27.822	33.039	24.029	12.515
P(Bartlett's X2)		0.108	0.187	0.023*	0.005*	0.065	0.64

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

University of Georgia

Weed Code	harv 4 CUMSA fruit wt/lb # Select/Su per plot Rating Date Trt-Eval Interval ARM Action Codes	harv 5 CUMSA fruit wt/lb # Select/Su per plot Rating Date Trt-Eval Interval ARM Action Codes	harv 5 CUMSA fruit wt/lb # Select/Su per plot Rating Date Trt-Eval Interval ARM Action Codes	harv 6 CUMSA fruit wt/lb # Select/Su per plot Rating Date Trt-Eval Interval ARM Action Codes	harv 6 CUMSA fruit wt/lb # Select/Su per plot Rating Date Trt-Eval Interval ARM Action Codes	harv 7 CUMSA fruit wt/lb # Select/Su per plot Rating Date Trt-Eval Interval ARM Action Codes	harv 7 CUMSA fruit wt/lb # Select/Su per plot Rating Date Trt-Eval Interval ARM Action Codes
Trt Treatment	50	51	52	53	54	55	56
Crop Code							
Part Rated							
Rating Data Type							
Rating Unit							
Rating Date	Sep-26-07	Sep-28-07	Sep-28-07	Oct-01-07	Oct-01-07	Oct-03-07	Oct-03-07
Trt-Eval Interval	211 DA-A	213 DA-A	213 DA-A	216 DA-A	216 DA-A	218 DA-A	218 DA-A
ARM Action Codes							
Rate							
Rate Unit							
1 No Fumigant No Herbicide	3 a	11 a	5 a	13 b	6 b	11 a	5 a
2 No Fumigant Command Dual Magnum	4 a	16 a	7 a	16 b	8 b	11 a	4 a
	1 QT/A 1 PT/A						
3 MEBR 67:33 (350 lb/A) No Herbicide	5 a	17 a	8 a	23 b	12 ab	15 a	7 a
4 MEBR 67:33 (350 lb/A) Command Dual Magnum	3 a	21 a	8 a	46 a	11 ab	11 a	6 a
	1 QT/A 1 PT/A						
5 MIDAS 50:50 (175 lb/A)VIF No Herbicide	4 a	18 a	8 a	14 b	7 b	13 a	7 a
6 MIDAS 50:50 (175 lb/A)VIF Command Dual Magnum	3 a	18 a	7 a	21 b	9 ab	16 a	8 a
	1 QT/A 1 PT/A						
7 T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3, No Herbicide	5 a	16 a	7 a	18 b	9 ab	14 a	8 a
8 T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3 Command Dual Magnum	4 a	14 a	6 a	21 b	10 ab	14 a	6 a
	1 QT/A 1 PT/A						
9 T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide	5 a	16 a	7 a	25 b	15 a	20 a	9 a
10 T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	5 a	16 a	7 a	20 b	12 ab	15 a	10 a
	1 QT/A 1 PT/A						
11 T-C35 (35 G) (8" inject) No Herbicide	4 a	14 a	6 a	21 b	12 ab	15 a	9 a
12 T-C35 (35 G) (8"inject) Command Dual Magnum	6 a	16 a	8 a	24 b	12 ab	13 a	6 a
	1 QT/A 1 PT/A						
13 T2 (12 G) + Pic (150 lb) No Herbicide	4 a	11 a	5 a	18 b	8 b	13 a	8 a
14 T2 (12 G) + Pic (150 lb) Command Dual Magnum	5 a	17 a	7 a	19 b	9 ab	17 a	8 a
	1 QT/A 1 PT/A						
15 Vapam (75 G) No Herbicide	5 a	20 a	9 a	17 b	9 ab	17 a	10 a

University of Georgia

Weed Code	harv 4	harv 5	harv 5	harv 6	harv 6	harv 7	harv 7
Crop Code	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA
Part Rated	fruit	fruit	fruit	fruit	fruit	fruit	fruit
Rating Data Type	wt/lb	# Select/Su	wt/lb	# Select/Su	wt/lb	# Select/Su	wt/lb
Rating Unit	per plot	per plot	per plot	per plot	per plot	per plot	per plot
Rating Date	Sep-26-07	Sep-28-07	Sep-28-07	Oct-01-07	Oct-01-07	Oct-03-07	Oct-03-07
Trt-Eval Interval	211 DA-A	213 DA-A	213 DA-A	216 DA-A	216 DA-A	218 DA-A	218 DA-A
ARM Action Codes							
Trt Treatment							
No. Name							
Rate	50	51	52	53	54	55	56
Rate Unit							
16 Vapam (75 G)	3 a	16 a	6 a	17 b	8 b	15 a	8 a
Command	1 QT/A						
Dual Magnum	1 PT/A						
LSD (P=.05)	2.7	8.4	4.0	20.2	5.3	7.5	5.2
Standard Deviation	1.9	5.9	2.8	14.1	3.7	5.2	3.7
CV	44.15	36.82	40.44	68.65	37.88	36.86	48.91
Bartlett's X2	15.653	11.808	15.691	65.226	21.25	11.878	19.335
P(Bartlett's X2)	0.406	0.693	0.403	0.001*	0.129	0.688	0.199

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

University of Georgia

Weed Code	harv 8 CUMSA fruit	harv 8 CUMSA fruit	harv 1-2 CUMSA fruit	harv 1-2 CUMSA fruit	harv 1-4 CUMSA fruit	harv 1-4 CUMSA fruit	harv 1-8 CUMSA fruit
Part Rated							
Rating Data Type	# Select/Su	wt/lb	# Select/Su	wt/lb	# Select/Su	wt/lb	# Select/Su
Rating Unit	per plot	per plot	per plot	per plot	per plot	per plot	per plot
Rating Date	Oct-05-07	Oct-05-07	Jan-06-08	Jan-06-08	Jan-06-08	Jan-06-08	Jan-06-08
Trt-Eval Interval	220 DA-A	220 DA-A					
ARM Action Codes			T3	T4	T5	T6	T7
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate
Unit		Unit	Unit	Unit	Unit	Unit	Unit
57		58		59		60	
61		62		63			
1	No Fumigant No Herbicide	21 a	10 a	7 e	4 bc	18 c	9 d
2	No Fumigant Command Dual Magnum	29 a	12 a	11 a-e	5 abc	26 abc	12 a-d
3	MEBR 67:33 (350 lb/A) No Herbicide	27 a	13 a	14 a-d	7 abc	32 a	16 abc
4	MEBR 67:33 (350 lb/A) Command Dual Magnum	22 a	9 a	7 e	4 c	20 bc	11 cd
5	MIDAS 50:50 (175 lb/A)VIF No Herbicide	34 a	14 a	15 a	9 a	32 a	17 ab
6	MIDAS 50:50 (175 lb/A)VIF Command Dual Magnum	27 a	12 a	11 a-e	6 abc	28 abc	14 a-d
7	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3, No Herbicide	34 a	15 a	10 a-e	6 abc	28 abc	14 a-d
8	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3 Command Dual Magnum	29 a	14 a	8 cde	5 bc	24 abc	12 a-d
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide	20 a	10 a	15 ab	9 a	33 a	18 a
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	24 a	11 a	8 de	4 bc	23 abc	11 bcd
11	T-C35 (35 G) (8" inject) No Herbicide	21 a	10 a	10 a-e	6 abc	26 abc	13 a-d
12	T-C35 (35 G) (8"inject) Command Dual Magnum	32 a	14 a	14 abc	7 ab	33 a	17 ab
13	T2 (12 G) + Pic (150 lb) No Herbicide	22 a	11 a	13 a-d	6 abc	26 abc	14 a-d
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	22 a	12 a	13 a-e	7 ab	30 ab	16 abc
15	Vapam (75 G) No Herbicide	31 a	14 a	13 a-e	7 abc	32 a	15 a-d

University of Georgia

Weed Code	harv 8 CUMSA	harv 8 CUMSA	harv 1-2 CUMSA	harv 1-2 CUMSA	harv 1-4 CUMSA	harv 1-4 CUMSA	harv 1-8 CUMSA
Crop Code	fruit	fruit	fruit	fruit	fruit	fruit	fruit
Part Rated	# Select/Su	wt/lb	# Select/Su	wt/lb	# Select/Su	wt/lb	# Select/Su
Rating Data Type	per plot	per plot	per plot	per plot	per plot	per plot	per plot
Rating Unit	Oct-05-07	Oct-05-07	Jan-06-08	Jan-06-08	Jan-06-08	Jan-06-08	Jan-06-08
Rating Date	220 DA-A	220 DA-A					
Trt-Eval Interval			T3	T4	T5	T6	T7
ARM Action Codes							
Trt Treatment	Rate						
No. Name	Rate Unit	57	58	59	60	61	62
16 Vapam (75 G)		25 a	11 a	9 b-e	4 bc	24 abc	10 cd
Command	1 QT/A						
Dual Magnum	1 PT/A						
LSD (P=.05)	13.5	5.9	5.1	2.9	9.4	5.1	29.1
Standard Deviation	9.5	4.1	3.6	2.0	6.6	3.5	20.4
CV	36.13	34.56	32.5	33.63	24.32	25.86	19.61
Bartlett's X2	9.562	11.564	18.404	12.571	9.349	11.733	14.626
P(Bartlett's X2)	0.846	0.712	0.242	0.635	0.859	0.699	0.479

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

Column 59: T3 = ([C43]+[C45])

Column 60: T4 = ([C44]+[C46])

Column 61: T5 = ([C43]+[C45]+[C47]+[C49])

Column 62: T6 = ([C44]+[C46]+[C48]+[C50])

Column 63: T7 = ([C61]+[C51]+[C53]+[C55]+[C57])

University of Georgia

Weed Code	harv 1-8			
Crop Code	CUMSA			
Part Rated	fruit			
Rating Data Type	wt/lb			
Rating Unit	per plot			
Rating Date	Jan-06-08			
Trt-Eval Interval				
ARM Action Codes	T8			
Trt No.	Treatment Name	Rate	Unit	64
1	No Fumigant No Herbicide			36 b
2	No Fumigant Command Dual Magnum	1 1	QT/A PT/A	44 ab
3	MEBR 67:33 (350 lb/A) No Herbicide			55 a
4	MEBR 67:33 (350 lb/A) Command Dual Magnum	1 1	QT/A PT/A	45 ab
5	MIDAS 50:50 (175 lb/A)VIF No Herbicide			53 a
6	MIDAS 50:50 (175 lb/A)VIF Command Dual Magnum	1 1	QT/A PT/A	50 ab
7	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3, No Herbicide			53 a
8	T2(12 G)+Pic(150lb) yr2,4 MEBR 67:33 (350lb) yr1,3 Command Dual Magnum	1 1	QT/A PT/A	49 ab
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide			58 a
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	1 1	QT/A PT/A	51 ab
11	T-C35 (35 G) (8" inject) No Herbicide			50 ab
12	T-C35 (35 G) (8"inject) Command Dual Magnum	1 1	QT/A PT/A	57 a
13	T2 (12 G) + Pic (150 lb) No Herbicide			47 ab
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	1 1	QT/A PT/A	52 ab
15	Vapam (75 G) No Herbicide			56 a

University of Georgia

Weed Code	harv 1-8
Crop Code	CUMSA
Part Rated	fruit
Rating Data Type	wt/lb
Rating Unit	per plot
Rating Date	Jan-06-08
Trt-Eval Interval	
ARM Action Codes	T8
Trt Treatment	Rate
No. Name	Rate Unit
	64
16 Vapam (75 G)	43 ab
Command	1 QT/A
Dual Magnum	1 PT/A
LSD (P=.05)	13.9
Standard Deviation	9.7
CV	19.5
Bartlett's X2	18.239
P(Bartlett's X2)	0.25

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

Column 64: T8 = ([C62]+[C52]+[C54]+[C56]+[C58])

University of Georgia

Long-Term Effects of Methyl Bromide Alternatives on Weeds, Diseases, & Nematodes

YEAR 4 (crops 7 and 8)

Trial ID: Veg23-07(fall)

Study Dir.: Culpepper/Langston/Davis

Location: Tifton

Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Culpepper/Langston

Title: UGA Extension

Affiliation: University of Georgia

Postal Code: 31794

Investigator: Stanley Culpepper

Title: Ext. Weed Science

Affiliation: University of Georgia

Postal Code: 31794

TRIAL LOCATION

City: Tifton

Trial Status: completed

State/Prov.: GA

Trial Reliability: excellent

Postal Code: 31794

Initiation Date: Feb-27-07

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.	DIGSA	large crabgrass	
2.	PORPI	pink purslane	
3.	CYPES	yellow nutsedge	
4.	IAQTA	smallflower morningglory	
5.	MOLVE	carpetweed	
6.	AMAVI	livid amaranth	

Crop 1: CPSAN bell pepper

Variety: Heritage

Planting Date: Mar-19-07

Planting Method: transplant

Rate: 1 per ft

Depth: 1 in

Perennial Age: _____

Row Spacing: 15 inch **Spacing Within Row:** 12 inch **Seed Bed:** mulch

Soil Temperature: 74 F **Soil Moisture:** drip **Emergence Date:** _____

Crop 2: CUMSA CUCUMBER

Variety: Thunder

Planting Date: Aug-16-07

Planting Method: transplant

Rate: 1 ft

Depth: 1 in

Perennial Age: _____

Row Spacing: 6 feet **Spacing Within Row:** 12 inch **Seed Bed:** mulch

Soil Temperature: 108 F **Soil Moisture:** drip **Emergence Date:** _____

University of Georgia

SITE AND DESIGN

Plot Width, Unit: 12 FT Plot Length, Unit: 25 FT Reps: 4
 Site Type: Tifton Vegetable Park
 Tillage Type: conventional Study Design: FACTORIAL

Trial Initiation Comments:

	Previous Crops	Previous Pesticides	Year
1.			

MAINTENANCE

Field Prep./Maintenance: Fumigant plots are 12 feet wide and 60 feet long. Soil is only moved within a plot with a ripper and a roto-tiller.

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

SOIL DESCRIPTION

% Sand: 90 % OM: 1.1 Texture: sand
 % Silt: 8 pH: 6.1 Soil Name: Tifton sandy loam
 % Clay: 2 CEC: _____ Fert. Level: _____

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: drip

Closest Weather Station: _____ Distance: _____ Unit: ____

APPLICATION DESCRIPTION

	A	B
Application Date:	Feb-27-07	Feb-27-07
Time of Day:	1 pm	1 pm
Application Method:	band	band
Application Timing:	preplant	under mul
Applic. Placement:	shank inj	broadcast
Air Temp., Unit:	77 f	77 f
% Relative Humidity:	35	35
Wind Velocity, Unit:	5 MPH	5 MPH
Dew Presence (Y/N):	N	N
Water Hardness:		
Soil Temp., Unit:	60 f	60 f
Soil Moisture:	moist	moist
% Cloud Cover:	0	0

University of Georgia

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	CPSAN preplant	CPSAN preplant
Stage Scale:	not up	not up
Height, Unit:	0 inch	0 inch
Crop 2 Code, Stage:	CUMSA preplant	CUMSA preplant
Stage Scale:	not up	not up
Height, Unit:	0 inch	0 inch

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	DIGSA preplant	DIGSA preplant
Stage Scale:	not up	not up
Density, Unit:	see data	see data
Weed 2 Code, Stage:	PORPI preplant	PORPI preplant
Stage Scale:	not up	not up
Density, Unit:	see data	see data
Weed 3 Code, Stage:	CYPES preplant	CYPES preplant
Stage Scale:	not up	not up
Density, Unit:	see data	see data
Weed 4 Code, Stage:	IAQTA preplant	IAQTA preplant
Stage Scale:	not up	not up
Density, Unit:	see data	see data
Weed 5 Code, Stage:	MOLVE preplant	MOLVE preplant
Stage Scale:	not up	not up
Density, Unit:	see data	see data
Weed 6 Code, Stage:	AMAVI preplant	AMAVI preplant
Stage Scale:	not up	not up
Density, Unit:	see data	see data

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	see	boom
Operating Pressure:	comments	26
Nozzle Type:		flat fan
Nozzle Size:		11002
Nozzle Spacing, Unit:		12 inch
Nozzles/Row:		5
Band Width, Unit:		
Boom Length, Unit:		6 feet
Boom Height, Unit:		15 inch
Ground Speed, Unit:		3 mph
Incorporation Equip.:		
Hours to Incorp.:		
Incorp. Depth, Unit:		
Carrier:		water
Spray Volume, Unit:		24 GPA
Spray pH:		
Propellant:		CO2
Tank Mix (Y/N):		Y

University of Georgia

Trt No	Treatment Application Comment