

# University of Georgia

## Long-Term Effects of Methyl Bromide Alternatives on Weeds, Diseases, & Nematodes. YEAR 3 (crops 5 and 6)

Trial ID: Veg20-06

Study Dir.: Culpepper/Langston

Location: Tifton

Investigator: Stanley Culpepper

Reps: 4

Plots: 12 by 20 feet

Spray vol: 25 gal/ac

Mix size: 3 liters (min 2.0856)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg	Amt to Measure	Product	Plot No. By Rep			
									1	2	3	4
1	No Fumigant No Herbicide								101	211	315	411
2	No Fumigant Command Dual Magnum	3 ME 7.62 L		1	QT/A PT/A	PRE PRE	30.0 ml/mx 15.0 ml/mx		102	212	316	412
3	MEBR 67:33 (400 lb/A) No Herbicide								107	207	311	405
4	MEBR 67:33 (400 lb/A) Command Dual Magnum	3 ME 7.62 L		1	QT/A PT/A	PRE PRE	30.0 ml/mx 15.0 ml/mx		108	208	312	406
5	MIDAS 50:50 (400 lb/A) No Herbicide								109	203	307	401
6	MIDAS 50:50 (400 lb/A) Command Dual Magnum	3 ME 7.62 L		1	QT/A PT/A	PRE PRE	30.0 ml/mx 15.0 ml/mx		110	204	308	402
7	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 No Herbicide								103	209	305	409
8	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 Command Dual Magnum	3 ME 7.62 L		1	QT/A PT/A	PRE PRE	30.0 ml/mx 15.0 ml/mx		104	210	306	410
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide								113	201	309	415
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	3 ME 7.62 L		1	QT/A PT/A	PRE PRE	30.0 ml/mx 15.0 ml/mx		114	202	310	416
11	T-C35 (35 G) No Herbicide								115	213	301	403
12	T-C35 (35 G) Command Dual Magnum	3 ME 7.62 L		1	QT/A PT/A	PRE PRE	30.0 ml/mx 15.0 ml/mx		116	214	302	404
13	T2 (12 G) + Pic (150 lb) No Herbicide								105	205	313	413
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	3 ME 7.62 L		1	QT/A PT/A	PRE PRE	30.0 ml/mx 15.0 ml/mx		106	206	314	414
15	Vapam (75 G) No Herbicide								111	215	303	407
16	Vapam (75 G) Command Dual Magnum	3 ME 7.62 L		1	QT/A PT/A	PRE PRE	30.0 ml/mx 15.0 ml/mx		112	216	304	408

Sort Order: Treatment

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Reps: 4                      Plots: 12 by 20 feet  
 Spray vol: 25 gal/ac              Mix size: 3 liters (min 2.0856)

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Form Unit	Rate Stg	Grow Code	Appl to Measure	Amt Product 1	Plot No. 2	By Rep 3	4
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Product quantities required for listed treatments and applications in one trial:

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

\* 'Per area' calculations based on spray volume= 25 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.

MAIN EFFECTS WERE SIGNIFICANT AND DATA ARE AVERAGED OVER EITHER FUMIGANT OR HERBICIDE OPTIONS

#### RESULTS FROM SPRING PEPPER CROP IN YEAR 3:

##### VISUAL FUMIGANT STUNTING:

1. Only the 3 way fumigant application caused pepper stunting (14%) at 20 days after transplanting. Plant holes and transplanting all occurred simultaneously. This suggest that the plant back interval for the 3 way should be greater than with T2 + Pic or with Vapam alone. Spring conditions were extremely cool increasing plant back interval concern.
2. Herbicide system had no impact.

##### PEPPER GROWTH (20 plants per plot) :

1. Pepper plants were similar in size except for the plots treated with the 3 way. Plants in this treatment were 1.9 cm shorter than plants in other plots. This stunting was likely because of to short of a plant back interval.
2. Herbicide system had no impact.

##### 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 had more plants than all other treatments. Generally, a greater number of plants were noted in the no fumigant, T2 + Pic, or TC35 plots when comparing to other fumigant systems. Nutsedge was also present (at lower levels) in the MB no herbicide system. The herbicide system, when pooled over fumigants, reduced yellow nutsedge levels by 72%.
3. Large crabgrass: Fumigant options and herbicide systems provided excellent control and control was greater than that noted in the non-treated control.
4. No differences were noted with other weed species.

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

1. Main effects were significant and are reported.
2. Although there were no statistical differences within harvest date, there was a clear trend for less fruit and fruit weights in plots treated with the 3 way combination of T2+ Pic + Vapam. This is likely a response to the early season injury noted with the fumigant system.
3. When averaging over harvest dates, generally less fruit number and weight was noted with the 3 way.
4. Herbicide system did not impact yields.

#### RESULTS FROM FALL CUCUMBER CROP IN YEAR 3:

##### WEED RESPONSE:

1. Yellow nutsedge: although no significant difference among fumigant options is noted yet, over 19 plants per plot were noted in the no fumigant, MB, and T2 + Pic systems. Differences will likely be significant in 2007. The herbicide system applied in the spring was having a huge impact on fall nutsedge counts with the herbicide program reducing nutsedge populations 82% by October.
2. Pink purslane: All fumigant options except Vapam alone reduced the number of pink purslane plants noted in October.
3. Carpetweed: Less carpetweed was noted in plots treated with a herbicide system in the spring when compared to plots not receiving the herbicide system. Fumigants options had no impact on this weed in the fall.

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4. Pitted morningglory and Palmer amaranth were not impacted by fumigant option or herbicide option.

## CUCUMBER RUNNER LENGTHS:

1. When averaging 34 plants per plot (17 plants from each bed) and pooling over herbicide system, the non-treated control had shorter plants than all systems except T-C35 or Vapam.
2. Compared to MB, runner lengths were similar by all fumigants except for Vapam alone.

## CUCUMBER YIELDS:

1. Cucumber were harvested 8 times by a hired labor crew.
2. When averaging harvest 1 and 2 and averaging over the herbicide system, fruit number and weight was similar among all fumigated plots.
3. When averaging harvest 1 through 8 and averaging over the herbicide system, yields were similar among all fumigated plots except for Telone fb chloropicrin which produced less fruit number and weights.

## 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 30, 45 gallons of Vapam (broadcast rate) was injected through the drip prior to planting the fall crop.
3. On July 17, Roundup WeatherMax was applied over the entire trial area.
4. On July 25, 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.

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## Long-Term Effects of Methyl Bromide Alternatives on Weeds, Diseases, & Nematodes. YEAR 3 (crops 5 and 6)

Trial ID: Veg20-06

Study Dir.: Culpepper/Langston

Location: Tifton

Investigator: Stanley Culpepper

Weed Code	CPSAN	CYPES	CYPES	IAQTA	IAQTA	PORPI	PORPI	
Crop Code								
Part Rated								
Rating Data Type	injury	#	#	#	#	#	#	
Rating Unit	percent	per plot	per plot	per plot	per plot	per plot	per plot	
Rating Date	Apr-17-06	May-03-06	Jun-27-06	May-03-06	Jun-27-06	May-03-06	Jun-27-06	
Trt-Eval Interval	53 DA-A	69 DA-A	124 DA-A	69 DA-A	124 DA-A	69 DA-A	124 DA-A	
ARM Action Codes								
# Subsamples, Dec.								
Trt Treatment	Rate							
No. Name	Rate Unit	1	2	3	4	5	6	7
1 No Fumigant No Herbicide		0 b	1 b	19 a	0 a	0 ab	0 a	0 b
2 No Fumigant Command Dual Magnum	1 QT/A 1 PT/A	0 b	2 ab	15 a	0 a	0 b	0 b	0 b
3 MEBR 67:33 (400 lb/A) No Herbicide		0 b	0 b	2 b	0 a	2 ab	0 b	0 b
4 MEBR 67:33 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	0 b	0 b	0 b	0 a	1 ab	0 b	0 b
5 MIDAS 50:50 (400 lb/A) No Herbicide		0 b	0 b	0 b	0 a	0 b	0 b	0 b
6 MIDAS 50:50 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	0 b	0 b	0 b	0 a	0 b	0 b	0 b
7 T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 No Herbicide		1 b	0 b	0 b	0 a	0 b	0 b	0 b
8 T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 Command Dual Magnum	1 QT/A 1 PT/A	1 b	0 b	0 b	0 a	0 b	0 b	0 b
9 T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide		14 a	0 b	0 b	0 a	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	14 a	0 b	0 b	0 a	0 b	0 b	0 b
11 T-C35 (35 G) No Herbicide		0 b	1 ab	17 a	0 a	1 ab	0 b	0 b
12 T-C35 (35 G) Command Dual Magnum	1 QT/A 1 PT/A	0 b	0 b	0 b	0 a	0 b	0 b	0 b
13 T2 (12 G) + Pic (150 lb) No Herbicide		0 b	4 a	17 a	0 a	3 a	0 b	0 b
14 T2 (12 G) + Pic (150 lb) Command Dual Magnum	1 QT/A 1 PT/A	0 b	0 b	0 b	0 a	0 b	0 b	0 b
15 Vapam (75 G) No Herbicide		2 b	0 b	0 b	0 a	0 ab	0 b	0 b

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Weed Code		CYPES	CYPES	IAQTA	IAQTA	PORPI	PORPI
Crop Code	CPSAN						
Part Rated							
Rating Data Type	injury	#	#	#	#	#	#
Rating Unit	percent	per plot	per plot	per plot	per plot	per plot	per plot
Rating Date	Apr-17-06	May-03-06	Jun-27-06	May-03-06	Jun-27-06	May-03-06	Jun-27-06
Trt-Eval Interval	53 DA-A	69 DA-A	124 DA-A	69 DA-A	124 DA-A	69 DA-A	124 DA-A
ARM Action Codes							
# Subsamples, Dec.							
Trt Treatment	Rate						
No. Name	Rate Unit	1	2	3	4	5	6
16 Vapam (75 G)		2 b	0 b	0 b	0 a	0 ab	0 a
Command	1 QT/A						
Dual Magnum	1 PT/A						
LSD (P=.05)	1.9	2.7	12.2	0.0	2.3	0.2	0.2
Standard Deviation	1.3	1.9	8.5	0.0	1.6	0.1	0.1
CV	61.36	422.37	197.94	0.0	373.67	800.0	800.0
Bartlett's X2	2.595	20.048	7.394	0.0	31.204	0.0	0.0
P(Bartlett's X2)	0.762	0.001*	0.116	.	0.001*	.	.

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

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Weed Code	DIGSA	MOLVE	plant 1	plant 2	plant 3	plant 4	plant 5		
Crop Code			CPSAN	CPSAN	CPSAN	CPSAN	CPSAN		
Part Rated									
Rating Data Type	#	#	ht	ht	ht	ht	ht		
Rating Unit	per plot	per plot	cm	cm	cm	cm	cm		
Rating Date	Jun-27-06	Jun-27-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06		
Trt-Eval Interval	124 DA-A	124 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A		
ARM Action Codes									
# Subsamples, Dec.									
Trt No.	Treatment Name	Rate	8	9	10	11	12	13	14
		Rate Unit							
1	No Fumigant No Herbicide		6 a	0 b	14 a	15 a	15 a	14 ab	15 ab
2	No Fumigant Command Dual Magnum	1 QT/A 1 PT/A	0 b	0 b	14 a	16 a	13 a	15 ab	15 ab
3	MEBR 67:33 (400 lb/A) No Herbicide		0 b	0 b	14 a	14 ab	15 a	15 ab	17 a
4	MEBR 67:33 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	0 b	0 b	14 a	15 a	14 a	14 ab	14 ab
5	MIDAS 50:50 (400 lb/A) No Herbicide		0 b	0 b	15 a	15 a	15 a	15 ab	15 ab
6	MIDAS 50:50 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	0 b	0 b	15 a	15 a	13 a	16 a	17 a
7	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 No Herbicide		0 b	0 b	13 a	12 ab	12 a	13 ab	12 b
8	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 Command Dual Magnum	1 QT/A 1 PT/A	0 b	0 b	13 a	14 ab	14 a	13 ab	14 ab
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide		0 b	0 b	13 a	10 b	12 a	12 b	12 b
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	1 QT/A 1 PT/A	0 b	0 b	12 a	10 b	12 a	14 ab	12 b
11	T-C35 (35 G) No Herbicide		0 b	0 b	14 a	14 ab	14 a	15 ab	14 ab
12	T-C35 (35 G) Command Dual Magnum	1 QT/A 1 PT/A	0 b	0 b	14 a	15 a	15 a	14 ab	15 ab
13	T2 (12 G) + Pic (150 lb) No Herbicide		0 b	0 b	13 a	12 ab	13 a	14 ab	12 b
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	1 QT/A 1 PT/A	0 b	0 b	14 a	13 ab	14 a	14 ab	13 ab
15	Vapam (75 G) No Herbicide		0 b	0 b	15 a	13 ab	14 a	13 ab	15 ab

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Weed Code	DIGSA	MOLVE	plant 1	plant 2	plant 3	plant 4	plant 5	
Crop Code			CPSAN	CPSAN	CPSAN	CPSAN	CPSAN	
Part Rated								
Rating Data Type	#	#	ht	ht	ht	ht	ht	
Rating Unit	per plot	per plot	cm	cm	cm	cm	cm	
Rating Date	Jun-27-06	Jun-27-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06	Apr-13-06	
Trt-Eval Interval	124 DA-A	124 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A	
ARM Action Codes								
# Subsamples, Dec.								
Trt Treatment	Rate							
No. Name	Rate Unit	8	9	10	11	12	13	14
16 Vapam (75 G)		0 b	0 a	14 a	15 a	13 a	14 ab	15 ab
Command	1 QT/A							
Dual Magnum	1 PT/A							
LSD (P=.05)	2.6	0.2	4.0	3.7	3.4	3.5	3.5	
Standard Deviation	1.8	0.1	2.8	2.6	2.4	2.5	2.5	
CV	471.2	800.0	20.6	19.35	17.72	17.71	17.53	
Bartlett's X2	11.871	0.0	30.035	25.462	40.108	22.499	36.569	
P(Bartlett's X2)	0.001*	.	0.012*	0.02*	0.001*	0.095	0.001*	

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

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Weed Code	plant 6 CPSAN	plant 7 CPSAN	plant 8 CPSAN	plant 9 CPSAN	plant 10 CPSAN	plant 11 CPSAN	plant 12 CPSAN
Crop Code							
Part Rated							
Rating Data Type	ht	ht	ht	ht	ht	ht	ht
Rating Unit	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
Trt-Eval Interval	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A
ARM Action Codes							
# Subsamples, Dec.							
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate
		Unit	Unit	Unit	Unit	Unit	Unit
		15	16	17	18	19	20
		21					
1	No Fumigant No Herbicide	16 a	15 ab	16 ab	16 a	14 ab	16 a
2	No Fumigant Command Dual Magnum	14 abc	15 ab	16 ab	15 a	16 a	14 ab
3	MEBR 67:33 (400 lb/A) No Herbicide	15 abc	16 a	16 ab	16 a	15 ab	15 ab
4	MEBR 67:33 (400 lb/A) Command Dual Magnum	14 abc	15 ab	15 ab	16 a	15 ab	14 ab
5	MIDAS 50:50 (400 lb/A) No Herbicide	15 abc	16 ab	16 a	16 a	15 ab	14 ab
6	MIDAS 50:50 (400 lb/A) Command Dual Magnum	15 abc	15 ab	16 ab	16 a	16 ab	14 ab
7	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 No Herbicide	11 c	13 ab	13 ab	14 a	13 ab	14 ab
8	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 Command Dual Magnum	13 abc	14 ab	13 ab	13 a	13 ab	16 a
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide	12 bc	13 ab	12 b	14 a	12 ab	12 ab
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	13 abc	12 b	14 ab	11 a	12 ab	12 b
11	T-C35 (35 G) No Herbicide	14 abc	14 ab	14 ab	13 a	14 ab	13 ab
12	T-C35 (35 G) Command Dual Magnum	16 ab	15 ab	14 ab	13 a	14 ab	15 ab
13	T2 (12 G) + Pic (150 lb) No Herbicide	13 abc	12 b	13 ab	13 a	11 b	14 ab
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	13 abc	14 ab	14 ab	15 a	15 ab	14 ab
15	Vapam (75 G) No Herbicide	15 abc	14 ab	15 ab	15 a	14 ab	12 b



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Weed Code	plant 6	plant 7	plant 8	plant 9	plant 10	plant 11	plant 12
Crop Code	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN
Part Rated							
Rating Data Type	ht	ht	ht	ht	ht	ht	ht
Rating Unit	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
Trt-Eval Interval	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A
ARM Action Codes							
# Subsamples, Dec.							
Trt Treatment							
No. Name							
Rate	15	16	17	18	19	20	21
Rate Unit							
16 Vapam (75 G)	14 abc	15 ab	15 ab	13 a	14 ab	12 ab	12 abc
Command							
Dual Magnum							
LSD (P=.05)	3.5	3.1	3.5	4.0	3.8	2.9	2.9
Standard Deviation	2.4	2.2	2.4	2.8	2.6	2.0	2.0
CV	17.66	15.62	16.98	19.57	18.97	14.85	15.02
Bartlett's X2	21.566	10.688	29.466	32.477	26.2	18.249	25.222
P(Bartlett's X2)	0.12	0.774	0.014*	0.006*	0.036*	0.25	0.047*

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

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Weed Code	plant 13 CPSAN	plant 14 CPSAN	plant 15 CPSAN	plant 16 CPSAN	plant 17 CPSAN	plant 18 CPSAN	plant 19 CPSAN		
Crop Code									
Part Rated									
Rating Data Type	ht	ht	ht	ht	ht	ht	ht		
Rating Unit	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		
Trt-Eval Interval	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A		
ARM Action Codes									
# Subsamples, Dec.									
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate		
		Unit	Unit	Unit	Unit	Unit	Unit		
		22	23	24	25	26	27		
		28							
1	No Fumigant No Herbicide		15 abc	15 b	15 a	15 a	14 ab	14 ab	14 a
2	No Fumigant Command Dual Magnum	1 QT/A 1 PT/A	13 abc	13 b	14 abc	15 a	13 ab	15 a	14 a
3	MEBR 67:33 (400 lb/A) No Herbicide		14 abc	14 b	14 abc	16 a	15 ab	14 ab	15 a
4	MEBR 67:33 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	15 ab	15 b	15 a	16 a	16 a	14 ab	14 a
5	MIDAS 50:50 (400 lb/A) No Herbicide		15 abc	14 b	14 abc	14 abc	14 ab	15 a	14 a
6	MIDAS 50:50 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	15 abc	39 a	15 abc	14 abc	14 ab	14 ab	15 a
7	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 No Herbicide		13 abc	14 b	14 abc	14 ab	13 ab	15 a	16 a
8	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 Command Dual Magnum	1 QT/A 1 PT/A	14 abc	14 b	15 abc	15 a	15 a	14 ab	15 a
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide		12 bc	12 b	12 bc	11 bc	12 b	11 bc	11 bc
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	1 QT/A 1 PT/A	11 c	12 b	12 c	11 c	12 b	10 c	10 c
11	T-C35 (35 G) No Herbicide		15 abc	14 b	16 a	14 ab	14 ab	14 ab	14 a
12	T-C35 (35 G) Command Dual Magnum	1 QT/A 1 PT/A	15 a	14 b	16 a	14 a	15 a	15 a	14 a
13	T2 (12 G) + Pic (150 lb) No Herbicide		14 abc	15 b	15 ab	14 a	15 a	15 a	15 a
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	1 QT/A 1 PT/A	13 abc	15 b	15 abc	14 a	14 ab	15 a	15 a
15	Vapam (75 G) No Herbicide		14 abc	14 b	14 abc	16 a	13 ab	15 a	15 a

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Weed Code	plant 13 CPSAN	plant 14 CPSAN	plant 15 CPSAN	plant 16 CPSAN	plant 17 CPSAN	plant 18 CPSAN	plant 19 CPSAN
Crop Code							
Part Rated							
Rating Data Type	ht	ht	ht	ht	ht	ht	ht
Rating Unit	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
Trt-Eval Interval	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A
ARM Action Codes							
# Subsamples, Dec.							
Trt Treatment							
No. Name	22	23	24	25	26	27	28
Rate							
Unit							
16 Vapam (75 G)	13 abc	14 b	14 abc	14 abc	14 ab	13 ab	13 ab
Command							
Dual Magnum							
LSD (P=.05)	2.9	18.6	2.7	2.6	2.9	3.2	2.4
Standard Deviation	2.1	13.0	1.9	1.8	2.0	2.2	1.7
CV	15.05	84.6	13.43	12.83	14.69	16.26	11.99
Bartlett's X2	37.157	173.388	17.699	24.289	23.631	13.638	22.293
P(Bartlett's X2)	0.001*	0.001*	0.279	0.06	0.072	0.553	0.10

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

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# University of Georgia

Weed Code	plant 20 CPSAN	Avg20pla CPSAN	harv 1 CPSAN	harv 1 CPSAN	harv 2 CPSAN	harv 2 CPSAN	harv 3 CPSAN	
Crop Code								
Part Rated								
Rating Data Type	ht	ht	#/plot	lb/plot	#/plot	lb/plot	#/plot	
Rating Unit	cm	cm	jumbofru	jumbofru	jumbofru	jumbofru	jumbofru	
Rating Date	Apr-13-06	Apr-13-06	May-24-06	May-24-06	May-30-06	May-30-06	Jun-06-06	
Trt-Eval Interval	49 DA-A	49 DA-A	90 DA-A	90 DA-A	96 DA-A	96 DA-A	103 DA-A	
ARM Action Codes		T1						
# Subsamples, Dec.		1						
Trt Treatment	Rate							
No. Name	Rate Unit	29	30	31	32	33	34	35
1 No Fumigant No Herbicide		14 ab	14.7 a	56 ab	29 ab	93 ab	40 ab	136 a
2 No Fumigant Command Dual Magnum	1 QT/A 1 PT/A	15 ab	14.4 ab	67 ab	33 ab	117 a	49 a	132 a
3 ME BR 67:33 (400 lb/A) No Herbicide		15 ab	14.7 a	58 ab	27 ab	97 ab	38 ab	85 a
4 ME BR 67:33 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	15 ab	14.7 a	59 ab	27 ab	95 ab	40 ab	102 a
5 MIDAS 50:50 (400 lb/A) No Herbicide		14 ab	14.5 ab	54 ab	25 ab	62 b	27 b	89 a
6 MIDAS 50:50 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	14 ab	15.9 a	59 ab	27 ab	60 b	26 b	94 a
7 T2(12 G)+Pic(150lb) yr1,3 ME BR 67:33 (400lb) yr2,4 No Herbicide		15 ab	13.1 abc	63 ab	30 ab	78 ab	34 ab	95 a
8 T2(12 G)+Pic(150lb) yr1,3 ME BR 67:33 (400lb) yr2,4 Command Dual Magnum	1 QT/A 1 PT/A	14 ab	13.8 abc	63 ab	28 ab	75 ab	34 ab	126 a
9 T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide		11 bc	11.8 bc	43 b	20 b	82 ab	35 ab	114 a
10 T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	1 QT/A 1 PT/A	9 c	11.5 c	47 ab	22 ab	69 ab	28 ab	126 a
11 T-C35 (35 G) No Herbicide		14 ab	14.0 abc	48 ab	22 ab	118 a	49 a	105 a
12 T-C35 (35 G) Command Dual Magnum	1 QT/A 1 PT/A	15 ab	14.6 ab	49 ab	21 ab	107 ab	45 ab	122 a
13 T2 (12 G) + Pic (150 lb) No Herbicide		14 ab	13.4 abc	57 ab	25 ab	81 ab	34 ab	123 a
14 T2 (12 G) + Pic (150 lb) Command Dual Magnum	1 QT/A 1 PT/A	16 a	14.1 abc	57 ab	25 ab	90 ab	39 ab	120 a
15 Vapam (75 G) No Herbicide		16 a	14.2 abc	75 a	34 a	85 ab	36 ab	127 a

## University of Georgia

Weed Code	plant 20	Avg20pla	harv 1	harv 1	harv 2	harv 2	harv 3	
Crop Code	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN	CPSAN	
Part Rated								
Rating Data Type	ht	ht	#/plot	lb/plot	#/plot	lb/plot	#/plot	
Rating Unit	cm	cm	jumbofru	jumbofru	jumbofru	jumbofru	jumbofru	
Rating Date	Apr-13-06	Apr-13-06	May-24-06	May-24-06	May-30-06	May-30-06	Jun-06-06	
Trt-Eval Interval	49 DA-A	49 DA-A	90 DA-A	90 DA-A	96 DA-A	96 DA-A	103 DA-A	
ARM Action Codes		T1						
# Subsamples, Dec.		1						
Trt Treatment	Rate							
No. Name	Rate Unit	29	30	31	32	33	34	35
16 Vapam (75 G)		13 ab	13.6 abc	67 ab	30 ab	89 ab	39 ab	120 a
Command	1 QT/A							
Dual Magnum	1 PT/A							
LSD (P=.05)		3.4	2.45	25.8	10.9	43.0	17.7	50.4
Standard Deviation		2.4	1.71	18.1	7.6	30.1	12.4	35.3
CV		16.91	12.29	31.43	28.78	34.53	33.39	31.11
Bartlett's X2		18.302	44.728	14.567	14.225	15.5	12.786	25.482
P(Bartlett's X2)		0.247	0.001*	0.483	0.509	0.416	0.619	0.044*

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

Column 30: T1 = @AVG([C10].[C29])

# University of Georgia

Weed Code	harv 3 CPSAN	harv 4 CPSAN	harv 4 CPSAN	har1-2 CPSAN	har1-2 CPSAN	har1-4 CPSAN	har1-4 CPSAN
Crop Code							
Part Rated							
Rating Data Type	lb/plot	#/plot	lb/plot	#/plot	lb/plot	#/plot	lb/plot
Rating Unit	jumbofru	jumbofru	jumbofru	jumbofru	jumbofru	jumbofru	jumbofru
Rating Date	Jun-06-06	Jun-13-06	Jun-13-06	Jun-13-06	Jun-13-06	Jun-13-06	Jun-13-06
Trt-Eval Interval	103 DA-A	110 DA-A	110 DA-A	110 DA-A	110 DA-A	110 DA-A	110 DA-A
ARM Action Codes				T4	T5	T2	T3
# Subsamples, Dec.					0	1	1
Trt Treatment							
No. Name							
Rate							
Rate Unit							
	36	37	38	39	40	41	42
1 No Fumigant No Herbicide	57 a	62 cd	23 bcd	149 ab	69 ab	347.0 ab	148.6 abc
2 No Fumigant Command Dual Magnum	56 a	58 cd	25 bcd	183 a	82 a	372.5 a	162.9 a
3 MEBR 67:33 (400 lb/A) No Herbicide	36 a	62 cd	22 cd	155 ab	65 ab	301.0 abc	123.2 bcd
4 MEBR 67:33 (400 lb/A) Command Dual Magnum	40 a	62 cd	21 cd	154 ab	66 ab	316.5 abc	128.1 a-d
5 MIDAS 50:50 (400 lb/A) No Herbicide	35 a	45 d	16 d	117 b	52 b	250.3 c	103.2 d
6 MIDAS 50:50 (400 lb/A) Command Dual Magnum	36 a	48 cd	16 d	120 ab	53 b	261.3 bc	104.7 d
7 T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 No Herbicide	38 a	63 cd	23 bcd	140 ab	64 ab	297.5 abc	124.5 a-d
8 T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 Command Dual Magnum	53 a	61 cd	22 cd	138 ab	62 ab	324.3 abc	136.7 a-d
9 T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide	40 a	59 cd	20 cd	125 ab	55 b	297.5 abc	114.4 cd
10 T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	43 a	49 cd	16 d	116 b	50 b	291.3 abc	109.9 d
11 T-C35 (35 G) No Herbicide	41 a	73 a-d	26 a-d	165 ab	71 ab	342.8 ab	138.9 a-d
12 T-C35 (35 G) Command Dual Magnum	48 a	65 bcd	24 bcd	156 ab	66 ab	342.8 ab	138.7 a-d
13 T2 (12 G) + Pic (150 lb) No Herbicide	51 a	76 abc	28 abc	138 ab	59 ab	336.3 abc	138.2 a-d
14 T2 (12 G) + Pic (150 lb) Command Dual Magnum	54 a	97 a	36 a	147 ab	64 ab	363.5 a	153.8 ab
15 Vapam (75 G) No Herbicide	57 a	69 bcd	27 a-d	159 ab	70 ab	355.0 a	153.6 ab

## University of Georgia

Weed Code	harv 3 CPSAN	harv 4 CPSAN	harv 4 CPSAN	har1-2 CPSAN	har1-2 CPSAN	har1-4 CPSAN	har1-4 CPSAN
Crop Code							
Part Rated							
Rating Data Type	lb/plot	#/plot	lb/plot	#/plot	lb/plot	#/plot	lb/plot
Rating Unit	jumbofru	jumbofru	jumbofru	jumbofru	jumbofru	jumbofru	jumbofru
Rating Date	Jun-06-06	Jun-13-06	Jun-13-06	Jun-13-06	Jun-13-06	Jun-13-06	Jun-13-06
Trt-Eval Interval	103 DA-A	110 DA-A	110 DA-A	110 DA-A	110 DA-A	110 DA-A	110 DA-A
ARM Action Codes				T4	T5	T2	T3
# Subsamples, Dec.					0	1	1
Trt Treatment							
No. Name	Rate						
	Rate Unit	36	37	38	39	40	41
16 Vapam (75 G)		50 a	91 ab	34 ab	156 ab	69 ab	367.0 a
Command	1 QT/A						
Dual Magnum	1 PT/A						
LSD (P=.05)	22.4	24.1	9.7	54.4	22.1	74.64	33.03
Standard Deviation	15.7	16.8	6.8	38.1	15.4	52.23	23.11
CV	34.08	25.98	28.68	26.32	24.3	16.18	17.34
Bartlett's X2	27.471	15.522	16.487	20.114	15.987	12.736	12.252
P(Bartlett's X2)	0.025*	0.415	0.35	0.168	0.383	0.623	0.66

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

Column 39: T4 = [C31]+[C33]

Column 40: T5 = [C32]+[C34]

Column 41: T2 = [C31]+[C33]+[C35]+[C37]

Column 42: T3 = [C32]+[C34]+[C36]+[C38]

# University of Georgia

Weed Code	CYPZZ	CYPZZ	IAQTA	IAQTA	IPOLA	IPOLA	PORPI
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	Aug-22-06	Oct-03-06	Aug-22-06	Oct-03-06	Aug-22-06	Oct-03-06	Aug-22-06
Trt-Eval Interval	180 DA-A	222 DA-A	180 DA-A	222 DA-A	180 DA-A	222 DA-A	180 DA-A
ARM Action Codes							
# Subsamples, Dec.							
Trt Treatment							
No. Name							
Rate							
Rate Unit							
	43	44	45	46	47	48	49
1 No Fumigant No Herbicide	11 ab	15 b	1 a	2 a	0 a	0 b	0 a
2 No Fumigant Command Dual Magnum	19 ab	24 ab	1 a	2 a	0 a	0 b	0 a
3 MEHR 67:33 (400 lb/A) No Herbicide	24 ab	47 ab	3 a	4 a	0 a	0 b	0 a
4 MEHR 67:33 (400 lb/A) Command Dual Magnum	0 b	0 b	3 a	3 a	0 a	0 b	0 a
5 MIDAS 50:50 (400 lb/A) No Herbicide	0 b	5 b	3 a	3 a	0 a	0 b	0 a
6 MIDAS 50:50 (400 lb/A) Command Dual Magnum	0 b	0 b	2 a	1 a	0 a	0 b	0 a
7 T2(12 G)+Pic(150lb) yr1,3 MEHR 67:33 (400lb) yr2,4 No Herbicide	0 b	0 b	2 a	2 a	0 a	0 b	0 a
8 T2(12 G)+Pic(150lb) yr1,3 MEHR 67:33 (400lb) yr2,4 Command Dual Magnum	0 b	0 b	3 a	2 a	0 a	0 b	0 a
9 T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide	0 b	0 b	0 a	1 a	0 a	0 b	0 a
10 T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	0 b	0 b	1 a	1 a	0 a	0 b	0 a
11 T-C35 (35 G) No Herbicide	0 b	2 b	2 a	1 a	0 a	2 a	0 a
12 T-C35 (35 G) Command Dual Magnum	0 b	0 b	2 a	1 a	0 a	1 ab	0 a
13 T2 (12 G) + Pic (150 lb) No Herbicide	39 a	65 a	4 a	4 a	0 a	0 b	0 a
14 T2 (12 G) + Pic (150 lb) Command Dual Magnum	0 b	0 b	2 a	3 a	0 a	0 b	0 a
15 Vapam (75 G) No Herbicide	0 b	3 b	4 a	3 a	0 a	0 b	1 a



## University of Georgia

Weed Code	CYPZZ	CYPZZ	IAQTA	IAQTA	IPOLA	IPOLA	PORPI
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	Aug-22-06	Oct-03-06	Aug-22-06	Oct-03-06	Aug-22-06	Oct-03-06	Aug-22-06
Trt-Eval Interval	180 DA-A	222 DA-A	180 DA-A	222 DA-A	180 DA-A	222 DA-A	180 DA-A
ARM Action Codes							
# Subsamples, Dec.							
Trt Treatment							
No. Name	43	44	45	46	47	48	49
Rate							
Unit							
16 Vapam (75 G)	0 b	0 b	2 a	2 a	0 a	0 b	0 a
Command							
Dual Magnum							
Rate							
Unit							
1 QT/A							
1 PT/A							
LSD (P=.05)	26.4	45.4	3.9	3.4	0.0	1.2	0.4
Standard Deviation	18.5	31.8	2.7	2.4	0.0	0.8	0.3
CV	317.43	320.08	139.16	119.5	0.0	580.17	484.42
Bartlett's X2	25.014	37.666	26.481	36.129	0.0	1.325	2.042
P(Bartlett's X2)	0.001*	0.001*	0.022*	0.002*	.	0.25	0.36

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

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# University of Georgia

Weed Code	PORPI	MOLVE	MOLVE	AMAPA	AMAPA	CUMSA left row	CUMSA rightrow		
Crop Code						left	right		
Part Rated						left	right		
Rating Data Type	#	#	#	#	#	# plants	# plants		
Rating Unit	per plot	per plot	per plot	per plot	per plot	per plot	per plot		
Rating Date	Oct-03-06	Aug-22-06	Oct-03-06	Aug-22-06	Oct-03-06	Aug-31-06	Aug-31-06		
Trt-Eval Interval	222 DA-A	180 DA-A	222 DA-A	180 DA-A	222 DA-A	189 DA-A	189 DA-A		
ARM Action Codes									
# Subsamples, Dec.									
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate		
		Unit							
			50	51	52	53	54	55	56
1	No Fumigant No Herbicide		3 a	1 a	3 a	0 b	0 a	19 a	19 a
2	No Fumigant Command Dual Magnum	1 QT/A 1 PT/A	0 c	0 b	2 abc	0 b	0 a	19 a	19 a
3	MEBR 67:33 (400 lb/A) No Herbicide		0 c	0 b	0 c	0 b	0 a	19 a	19 a
4	MEBR 67:33 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	0 c	0 b	1 abc	0 b	0 a	19 a	20 a
5	MIDAS 50:50 (400 lb/A) No Herbicide		1 bc	0 b	0 bc	0 b	0 a	19 a	19 a
6	MIDAS 50:50 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	0 c	0 b	1 abc	0 b	3 a	19 a	18 a
7	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 No Herbicide		1 bc	0 b	0 bc	0 b	0 a	19 a	18 a
8	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 Command Dual Magnum	1 QT/A 1 PT/A	0 c	0 b	1 bc	0 b	0 a	19 a	19 a
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide		1 bc	0 b	0 c	0 b	0 a	19 a	19 a
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	1 QT/A 1 PT/A	1 bc	0 b	0 bc	0 b	2 a	19 a	19 a
11	T-C35 (35 G) No Herbicide		1 bc	0 b	0 c	0 b	0 a	19 a	19 a
12	T-C35 (35 G) Command Dual Magnum	1 QT/A 1 PT/A	1 bc	0 b	1 bc	0 b	0 a	19 a	19 a
13	T2 (12 G) + Pic (150 lb) No Herbicide		1 bc	0 b	0 c	0 b	0 a	19 a	19 a
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	1 QT/A 1 PT/A	1 bc	0 b	1 bc	1 a	3 a	19 a	19 a
15	Vapam (75 G) No Herbicide		1 bc	1 ab	0 bc	0 b	1 a	19 a	19 a

## University of Georgia

Weed Code	PORPI	MOLVE	MOLVE	AMAPA	AMAPA	CUMSA	CUMSA
Crop Code						left row	right row
Part Rated						left	right
Rating Data Type	#	#	#	#	#	# plants	# plants
Rating Unit	per plot	per plot	per plot	per plot	per plot	per plot	per plot
Rating Date	Oct-03-06	Aug-22-06	Oct-03-06	Aug-22-06	Oct-03-06	Aug-31-06	Aug-31-06
Trt-Eval Interval	222 DA-A	180 DA-A	222 DA-A	180 DA-A	222 DA-A	189 DA-A	189 DA-A
ARM Action Codes							
# Subsamples, Dec.							
Trt Treatment							
No. Name	Rate						
	Rate Unit	50	51	52	53	54	55
16 Vapam (75 G)		2 ab	0 ab	2 ab	0 b	3 a	19 a
Command	1 QT/A						
Dual Magnum	1 PT/A						
LSD (P=.05)	1.3	0.5	1.7	0.9	3.3	1.1	1.4
Standard Deviation	0.9	0.4	1.2	0.6	2.3	0.8	1.0
CV	136.65	395.53	147.02	800.0	361.02	4.17	5.36
Bartlett's X2	13.839	1.464	22.518	0.0	16.109	11.598	20.305
P(Bartlett's X2)	0.385	0.481	0.021*	.	0.007*	0.478	0.161

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

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# University of Georgia

Weed Code	CUMSA	plant 1	plant 2	plant 3	plant 4	plant 5	plant 6		
Crop Code	bothrows	left row	left row	left row	left row	left row	left row		
Part Rated		left	left	left	left	left	left		
Rating Data Type	#plants	ht	ht	ht	ht	ht	ht		
Rating Unit	per plot	cm	cm	cm	cm	cm	cm		
Rating Date	Aug-31-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06		
Trt-Eval Interval	189 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A		
ARM Action Codes	T10								
# Subsamples, Dec.									
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate		
		Unit	57	58	59	60	61	62	63
1	No Fumigant No Herbicide		19 a	23 d	30 c	20 c	23 d	45 abc	40 abc
2	No Fumigant Command Dual Magnum	1 QT/A 1 PT/A	19 a	26 cd	29 c	33 abc	30 cd	33 c	29 c
3	MEBR 67:33 (400 lb/A) No Herbicide		19 a	42 abc	40 abc	37 abc	31 cd	32 c	30 c
4	MEBR 67:33 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	19 a	36 a-d	45 abc	36 abc	39 a-d	35 bc	39 bc
5	MIDAS 50:50 (400 lb/A) No Herbicide		19 a	53 a	49 ab	48 a	56 a	43 abc	56 a
6	MIDAS 50:50 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	19 a	46 ab	42 abc	44 ab	41 a-d	48 abc	50 ab
7	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 No Herbicide		18 a	47 ab	49 ab	45 ab	47 abc	54 a	49 ab
8	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 Command Dual Magnum	1 QT/A 1 PT/A	19 a	46 abc	45 abc	37 abc	39 a-d	43 abc	40 abc
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide		19 a	44 abc	39 bc	40 ab	43 a-d	46 abc	36 bc
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	1 QT/A 1 PT/A	19 a	45 abc	55 a	47 a	52 ab	40 abc	56 a
11	T-C35 (35 G) No Herbicide		19 a	37 a-d	31 c	33 abc	28 cd	31 c	31 c
12	T-C35 (35 G) Command Dual Magnum	1 QT/A 1 PT/A	19 a	30 bcd	37 bc	28 bc	35 bcd	29 c	28 c
13	T2 (12 G) + Pic (150 lb) No Herbicide		19 a	35 a-d	43 abc	42 ab	35 bcd	53 ab	42 abc
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	1 QT/A 1 PT/A	19 a	28 bcd	37 bc	32 abc	33 bcd	41 abc	41 abc
15	Vapam (75 G) No Herbicide		19 a	42 abc	39 bc	34 abc	35 bcd	31 c	35 bc

## University of Georgia

Weed Code	CUMSA	plant 1	plant 2	plant 3	plant 4	plant 5	plant 6
Crop Code	bothrows	left row	left row	left row	left row	left row	left row
Part Rated		left	left	left	left	left	left
Rating Data Type	#plants	ht	ht	ht	ht	ht	ht
Rating Unit	per plot	cm	cm	cm	cm	cm	cm
Rating Date	Aug-31-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06
Trt-Eval Interval	189 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A
ARM Action Codes	T10						
# Subsamples, Dec.							
Trt Treatment	Rate						
No. Name	Rate Unit	57	58	59	60	61	62
16 Vapam (75 G)		19 a	36 a-d	30 c	35 abc	36 bcd	39 abc
Command	1 QT/A						
Dual Magnum	1 PT/A						
LSD (P=.05)		0.7	16.6	13.9	15.6	16.7	16.5
Standard Deviation		0.5	11.6	9.7	10.9	11.7	11.6
CV		2.58	30.07	24.37	29.66	31.01	28.88
Bartlett's X2		13.612	6.935	18.356	13.061	9.031	19.994
P(Bartlett's X2)		0.555	0.959	0.244	0.598	0.876	0.172

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

Column 57: T10 =  $([C55]+[C56])/2$

# University of Georgia

Weed Code	plant 7 left row	plant 8 left row	plant 9 left row	plant 10 left row	plant 11 left row	plant 12 left row	plant 13 left row	
Crop Code								
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	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	
Trt-Eval Interval	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	
ARM Action Codes								
# Subsamples, Dec.								
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	
Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit	
		64	65	66	67	68	69	70
1	No Fumigant No Herbicide	26 cd	23 c	35 b-e	32 a	40 a	36 a	34 bcd
2	No Fumigant Command Dual Magnum	28 bcd	29 bc	27 de	27 a	35 a	30 a	23 d
3	MEBR 67:33 (400 lb/A) No Herbicide	34 a-d	40 ab	41 a-d	45 a	37 a	38 a	37 bcd
4	MEBR 67:33 (400 lb/A) Command Dual Magnum	25 d	42 ab	37 b-e	36 a	45 a	39 a	27 cd
5	MIDAS 50:50 (400 lb/A) No Herbicide	41 a-d	46 a	48 abc	40 a	40 a	44 a	54 a
6	MIDAS 50:50 (400 lb/A) Command Dual Magnum	36 a-d	35 abc	44 a-d	39 a	48 a	38 a	34 bcd
7	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 No Herbicide	38 a-d	45 a	49 ab	47 a	45 a	49 a	48 ab
8	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 Command Dual Magnum	43 abc	46 a	41 a-d	46 a	43 a	40 a	37 bcd
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide	36 a-d	28 bc	35 b-e	32 a	32 a	35 a	45 abc
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	47 a	46 a	56 a	41 a	42 a	51 a	37 bcd
11	T-C35 (35 G) No Herbicide	28 bcd	26 bc	31 cde	29 a	40 a	41 a	25 d
12	T-C35 (35 G) Command Dual Magnum	30 a-d	29 bc	35 b-e	34 a	31 a	32 a	33 bcd
13	T2 (12 G) + Pic (150 lb) No Herbicide	43 ab	36 abc	43 a-d	46 a	36 a	42 a	34 bcd
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	31 a-d	32 abc	48 abc	39 a	44 a	38 a	37 bcd
15	Vapam (75 G) No Herbicide	32 a-d	32 abc	35 b-e	35 a	28 a	36 a	27 cd

## University of Georgia

Weed Code	plant 7	plant 8	plant 9	plant 10	plant 11	plant 12	plant 13
Crop Code	left row	left row	left row	left row	left row	left row	left row
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	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06
Trt-Eval Interval	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A
ARM Action Codes							
# Subsamples, Dec.							
Trt Treatment	Rate						
No. Name	Rate Unit	64	65	66	67	68	69
16 Vapam (75 G)		40 a-d	29 bc	20 e	34 a	34 a	39 a
Command	1 QT/A						
Dual Magnum	1 PT/A						
LSD (P=.05)		14.8	13.4	15.3	17.7	19.6	20.3
Standard Deviation		10.3	9.4	10.7	12.4	13.7	14.2
CV		29.74	26.74	27.35	33.02	35.48	36.29
Bartlett's X2		25.159	15.794	16.526	17.881	19.263	13.821
P(Bartlett's X2)		0.048*	0.396	0.348	0.269	0.202	0.539

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

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# University of Georgia

Weed Code	plant 14 left row	plant 15 left row	plant 16 left row	plant 17 left row	Avg17pla left row	plant 1 rightrow	plant 2 rightrow		
Crop Code									
Part Rated									
Rating Data Type	left	left	left	left	left row	right	right		
Rating Unit	ht	ht	ht	ht	ht	ht	ht		
Rating Date	cm	cm	cm	cm	cm	cm	cm		
Trt-Eval Interval	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06		
ARM Action Codes	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A		
# Subsamples, Dec.					T11 1				
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate		
		Unit							
			71	72	73	74	75	76	77
1	No Fumigant No Herbicide		44 abc	28 c	27 b	31 ab	31.5 ef	42 a	33 bc
2	No Fumigant Command Dual Magnum	1 QT/A 1 PT/A	28 c	36 bc	29 b	28 b	29.3 f	37 a	34 bc
3	MEBR 67:33 (400 lb/A) No Herbicide		44 abc	36 bc	43 b	44 ab	37.7 b-f	46 a	45 abc
4	MEBR 67:33 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	40 abc	37 abc	39 b	33 ab	37.3 b-f	31 a	43 abc
5	MIDAS 50:50 (400 lb/A) No Herbicide		53 a	46 ab	40 b	45 ab	47.2 a	45 a	52 ab
6	MIDAS 50:50 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	49 a	42 abc	43 b	42 ab	42.3 abc	35 a	46 abc
7	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 No Herbicide		46 ab	35 bc	39 b	46 ab	45.5 ab	49 a	47 abc
8	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 Command Dual Magnum	1 QT/A 1 PT/A	36 abc	40 abc	35 b	33 ab	41.0 a-d	43 a	48 abc
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide		42 abc	54 a	58 a	45 ab	40.1 a-e	36 a	46 abc
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	1 QT/A 1 PT/A	46 ab	41 abc	44 ab	49 a	46.5 a	37 a	35 abc
11	T-C35 (35 G) No Herbicide		31 bc	38 abc	32 b	37 ab	32.0 ef	31 a	45 abc
12	T-C35 (35 G) Command Dual Magnum	1 QT/A 1 PT/A	30 bc	36 bc	37 b	32 ab	32.0 ef	42 a	41 abc
13	T2 (12 G) + Pic (150 lb) No Herbicide		38 abc	46 ab	40 b	33 ab	40.9 a-d	36 a	42 abc
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	1 QT/A 1 PT/A	43 abc	36 bc	40 b	31 ab	37.4 b-f	42 a	57 a
15	Vapam (75 G) No Herbicide		31 bc	31 bc	32 b	34 ab	33.4 def	38 a	44 abc



## University of Georgia

Weed Code	plant 14	plant 15	plant 16	plant 17	Avg17pla	plant 1	plant 2
Crop Code	left row	left row	left row	left row	left row	rightrow	rightrow
Part Rated	left	left	left	left		right	right
Rating Data Type	ht	ht	ht	ht	ht	ht	ht
Rating Unit	cm	cm	cm	cm	cm	cm	cm
Rating Date	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06
Trt-Eval Interval	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A
ARM Action Codes					T11		
# Subsamples, Dec.					1		
Trt Treatment	Rate						
No. Name	Rate Unit	71	72	73	74	75	76
16 Vapam (75 G)		37 abc	37 abc	42 b	49 a	34.8 c-f	35 a
Command	1 QT/A						
Dual Magnum	1 PT/A						
LSD (P=.05)		14.8	14.6	14.2	17.3	7.60	19.4
Standard Deviation		10.4	10.3	9.9	12.1	5.32	13.6
CV		26.03	26.56	25.73	31.73	13.97	34.84
Bartlett's X2		18.615	11.662	19.592	18.3	33.495	21.089
P(Bartlett's X2)		0.232	0.704	0.188	0.247	0.004*	0.134

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

Column 75: T11 = @AVG([C58].[C73])

# University of Georgia

Weed Code	plant 3 rightrow	plant 4 rightrow	plant 5 rightrow	plant 6 rightrow	plant 7 rightrow	plant 8 rightrow	plant 9 rightrow	
Crop Code								
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	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	
Trt-Eval Interval	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	
ARM Action Codes								
# Subsamples, Dec.								
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	
Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit	
		78	79	80	81	82	83	84
1	No Fumigant No Herbicide	32 a	41 ab	38 a	42 a	33 ab	32 a	36 a
2	No Fumigant Command Dual Magnum	33 a	26 b	37 a	27 a	35 ab	36 a	30 a
3	MEBR 67:33 (400 lb/A) No Herbicide	46 a	45 ab	40 a	42 a	52 a	28 a	43 a
4	MEBR 67:33 (400 lb/A) Command Dual Magnum	32 a	39 ab	42 a	42 a	40 ab	36 a	38 a
5	MIDAS 50:50 (400 lb/A) No Herbicide	40 a	44 ab	38 a	41 a	48 a	43 a	40 a
6	MIDAS 50:50 (400 lb/A) Command Dual Magnum	34 a	48 a	49 a	35 a	40 ab	45 a	44 a
7	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 No Herbicide	42 a	49 a	48 a	31 a	41 ab	32 a	38 a
8	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 Command Dual Magnum	42 a	43 ab	48 a	41 a	24 b	41 a	37 a
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide	30 a	50 a	48 a	41 a	37 ab	42 a	40 a
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	41 a	41 ab	43 a	34 a	26 b	25 a	35 a
11	T-C35 (35 G) No Herbicide	39 a	44 ab	53 a	44 a	43 ab	36 a	39 a
12	T-C35 (35 G) Command Dual Magnum	37 a	35 ab	44 a	42 a	41 ab	44 a	45 a
13	T2 (12 G) + Pic (150 lb) No Herbicide	43 a	41 ab	42 a	31 a	34 ab	40 a	38 a
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	49 a	37 ab	45 a	42 a	42 ab	43 a	52 a
15	Vapam (75 G) No Herbicide	34 a	32 ab	37 a	42 a	41 ab	41 a	41 a

## University of Georgia

Weed Code	plant 3	plant 4	plant 5	plant 6	plant 7	plant 8	plant 9
Crop Code	rightrow	rightrow	rightrow	rightrow	rightrow	rightrow	rightrow
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	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06
Trt-Eval Interval	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A
ARM Action Codes							
# Subsamples, Dec.							
Trt Treatment	Rate						
No. Name	Rate Unit	78	79	80	81	82	83
16 Vapam (75 G)		38 a	41 ab	38 a	37 a	31 ab	35 a
Command	1 QT/A						
Dual Magnum	1 PT/A						
LSD (P=.05)		18.6	16.9	14.9	18.4	18.1	19.2
Standard Deviation		13.0	11.8	10.4	12.9	12.7	13.4
CV		34.08	28.99	24.11	33.67	33.56	35.91
Bartlett's X2		13.015	7.377	14.716	15.135	14.415	20.835
P(Bartlett's X2)		0.601	0.946	0.472	0.442	0.494	0.033*

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

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# University of Georgia

Weed Code	plant 10 rightrow	plant 11 rightrow	plant 12 rightrow	plant 13 rightrow	plant 14 rightrow	plant 15 rightrow	plant 16 rightrow
Crop Code							
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	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06
Trt-Eval Interval	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A
ARM Action Codes							
# Subsamples, Dec.							
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate
		Unit	Unit	Unit	Unit	Unit	Unit
1	No Fumigant No Herbicide						
2	No Fumigant Command Dual Magnum	1 QT/A 1 PT/A					
3	MEBR 67:33 (400 lb/A) No Herbicide						
4	MEBR 67:33 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A					
5	MIDAS 50:50 (400 lb/A) No Herbicide						
6	MIDAS 50:50 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A					
7	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 No Herbicide						
8	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 Command Dual Magnum	1 QT/A 1 PT/A					
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide						
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	1 QT/A 1 PT/A					
11	T-C35 (35 G) No Herbicide						
12	T-C35 (35 G) Command Dual Magnum	1 QT/A 1 PT/A					
13	T2 (12 G) + Pic (150 lb) No Herbicide						
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	1 QT/A 1 PT/A					
15	Vapam (75 G) No Herbicide						

## University of Georgia

Weed Code	plant 10	plant 11	plant 12	plant 13	plant 14	plant 15	plant 16
Crop Code	rightrow	rightrow	rightrow	rightrow	rightrow	rightrow	rightrow
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	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06	Aug-28-06
Trt-Eval Interval	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A	186 DA-A
ARM Action Codes							
# Subsamples, Dec.							
Trt Treatment	Rate						
No. Name	Rate Unit	85	86	87	88	89	90
16 Vapam (75 G)		42 a	27 b	31 ab	36 a	28 b	42 ab
Command	1 QT/A						
Dual Magnum	1 PT/A						
LSD (P=.05)		19.0	18.3	17.8	14.5	17.7	14.4
Standard Deviation		13.3	12.8	12.5	10.2	12.4	10.1
CV		32.9	32.25	32.92	25.91	32.14	23.11
Bartlett's X2		7.046	15.172	16.536	12.057	19.201	12.151
P(Bartlett's X2)		0.956	0.439	0.347	0.675	0.205	0.668

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

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# University of Georgia

Weed Code	plant 17 rightrow	Avg17pla rightrow	Avg34pla both row	harv 1 CUMSA	harv 1 CUMSA	harv 2 CUMSA	harv 2 CUMSA
Crop Code							
Part Rated	right						
Rating Data Type	ht	ht	ht	#	wt/lb	#	wt/lb
Rating Unit	cm	cm	cm	per plot	per plot	per plot	per plot
Rating Date	Aug-28-06	Aug-28-06	Aug-28-06	Sep-11-06	Sep-11-06	Sep-14-06	Sep-14-06
Trt-Eval Interval	186 DA-A	186 DA-A	186 DA-A	200 DA-A	200 DA-A	200 DA-A	200 DA-A
ARM Action Codes		T12	T13				
# Subsamples, Dec.		1					
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate
92	93	94	95	96	97	98	98
1	No Fumigant No Herbicide						
2	No Fumigant Command Dual Magnum	1 QT/A 1 PT/A					
3	MEBR 67:33 (400 lb/A) No Herbicide						
4	MEBR 67:33 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A					
5	MIDAS 50:50 (400 lb/A) No Herbicide						
6	MIDAS 50:50 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A					
7	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 No Herbicide						
8	T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 Command Dual Magnum	1 QT/A 1 PT/A					
9	T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide						
10	T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	1 QT/A 1 PT/A					
11	T-C35 (35 G) No Herbicide						
12	T-C35 (35 G) Command Dual Magnum	1 QT/A 1 PT/A					
13	T2 (12 G) + Pic (150 lb) No Herbicide						
14	T2 (12 G) + Pic (150 lb) Command Dual Magnum	1 QT/A 1 PT/A					
15	Vapam (75 G) No Herbicide						

## University of Georgia

Weed Code	plant 17 rightrow	Avg17pla rightrow	Avg34pla both row	harv 1 CUMSA	harv 1 CUMSA	harv 2 CUMSA	harv 2 CUMSA	
Part Rated	right							
Rating Data Type	ht	ht	ht	#	wt/lb	#	wt/lb	
Rating Unit	cm	cm	cm	per plot	per plot	per plot	per plot	
Rating Date	Aug-28-06	Aug-28-06	Aug-28-06	Sep-11-06	Sep-11-06	Sep-14-06	Sep-14-06	
Trt-Eval Interval	186 DA-A	186 DA-A	186 DA-A	200 DA-A	200 DA-A	200 DA-A	200 DA-A	
ARM Action Codes		T12	T13					
# Subsamples, Dec.		1						
Trt Treatment	Rate							
No. Name	Rate Unit	92	93	94	95	96	97	98
16 Vapam (75 G)		35 ab	34.9 a	35 bcd	24 ab	12 ab	13 a	6 ab
Command	1 QT/A							
Dual Magnum	1 PT/A							
LSD (P=.05)		16.4	9.53	5.5	9.7	5.7	7.7	4.6
Standard Deviation		11.5	6.67	3.8	6.8	4.0	5.4	3.2
CV		28.53	16.77	9.83	26.69	30.24	43.9	47.98
Bartlett's X2		12.872	17.652	20.046	16.132	16.214	10.126	12.385
P(Bartlett's X2)		0.612	0.281	0.17	0.373	0.368	0.812	0.65

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

Column 93: T12 = @AVG([C76].[C92])

Column 94: T13 = ([75]+[93])/2

# University of Georgia

Weed Code	harv 3 CUMSA	harv 3 CUMSA	harv 4 CUMSA	harv 4 CUMSA	harv 5 CUMSA	harv 5 CUMSA	harv 6 CUMSA
Crop Code							
Part Rated							
Rating Data Type	#	wt/lb	#	wt/lb	#	wt/lb	#
Rating Unit	per plot	per plot	per plot	per plot	per plot	per plot	per plot
Rating Date	Sep-16-06	Sep-16-06	Sep-18-06	Sep-18-06	Sep-20-06	Sep-20-06	Sep-22-06
Trt-Eval Interval	203 DA-A	203 DA-A	205 DA-A	205 DA-A	205 DA-A	205 DA-A	205 DA-A
ARM Action Codes							
# Subsamples, Dec.							
Trt Treatment							
No. Name	99	100	101	102	103	104	105
Rate							
Rate Unit							
1 No Fumigant No Herbicide	10 a	5 a	10 ab	6 bc	15 a	8 b	19 bcd
2 No Fumigant Command 1 QT/A Dual Magnum 1 PT/A	9 a	5 a	12 ab	6 abc	16 a	8 b	18 cd
3 MEBR 67:33 (400 lb/A) No Herbicide	10 a	6 a	10 b	6 abc	21 a	12 ab	20 a-d
4 MEBR 67:33 (400 lb/A) Command 1 QT/A Dual Magnum 1 PT/A	12 a	7 a	12 ab	8 abc	22 a	14 a	16 d
5 MIDAS 50:50 (400 lb/A) No Herbicide	7 a	4 a	15 ab	9 abc	18 a	10 ab	31 a
6 MIDAS 50:50 (400 lb/A) Command 1 QT/A Dual Magnum 1 PT/A	9 a	5 a	8 b	5 c	18 a	9 ab	25 a-d
7 T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 No Herbicide	11 a	7 a	19 a	11 a	15 a	8 ab	31 a
8 T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 Command 1 QT/A Dual Magnum 1 PT/A	8 a	5 a	16 ab	10 ab	15 a	9 ab	25 a-d
9 T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide	13 a	7 a	12 ab	7 abc	19 a	11 ab	22 a-d
10 T2 (12 G) + Vapam(75 G) + Pic 150 lb Command 1 QT/A Dual Magnum 1 PT/A	11 a	6 a	11 ab	6 abc	24 a	13 ab	25 a-d
11 T-C35 (35 G) No Herbicide	12 a	6 a	9 b	5 bc	18 a	10 ab	28 abc
12 T-C35 (35 G) Command 1 QT/A Dual Magnum 1 PT/A	12 a	7 a	13 ab	7 abc	18 a	10 ab	30 ab
13 T2 (12 G) + Pic (150 lb) No Herbicide	7 a	3 a	13 ab	7 abc	19 a	10 ab	25 a-d
14 T2 (12 G) + Pic (150 lb) Command 1 QT/A Dual Magnum 1 PT/A	7 a	4 a	14 ab	8 abc	21 a	11 ab	24 a-d
15 Vapam (75 G) No Herbicide	8 a	5 a	13 ab	7 abc	14 a	7 b	30 ab



## University of Georgia

Weed Code	harv 3	harv 3	harv 4	harv 4	harv 5	harv 5	harv 6
Crop Code	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA
Part Rated							
Rating Data Type	#	wt/lb	#	wt/lb	#	wt/lb	#
Rating Unit	per plot	per plot	per plot	per plot	per plot	per plot	per plot
Rating Date	Sep-16-06	Sep-16-06	Sep-18-06	Sep-18-06	Sep-20-06	Sep-20-06	Sep-22-06
Trt-Eval Interval	203 DA-A	203 DA-A	205 DA-A	205 DA-A	205 DA-A	205 DA-A	205 DA-A
ARM Action Codes							
# Subsamples, Dec.							
Trt Treatment	Rate						
No. Name	Rate Unit	99	100	101	102	103	104
16 Vapam (75 G)		9 a	5 a	14 ab	8 abc	18 a	9 ab
Command	1 QT/A						
Dual Magnum	1 PT/A						30 ab
LSD (P=.05)	6.4	3.7	7.6	4.1	9.4	4.8	9.4
Standard Deviation	4.5	2.6	5.3	2.9	6.6	3.3	6.5
CV	47.02	47.63	42.29	40.39	36.35	33.51	26.38
Bartlett's X2	17.895	16.895	14.58	14.58	18.354	24.584	11.08
P(Bartlett's X2)	0.268	0.325	0.482	0.482	0.245	0.056	0.747

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

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## University of Georgia

Weed Code	harv 6	harv 7	harv 7	harv 8	harv 8	harv1&2	harv1&2	
Crop Code	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	
Part Rated								
Rating Data Type	wt/lb	#	wt/lb	#	wt/lb	#	wt/lb	
Rating Unit	per plot	per plot	per plot	per plot	per plot	per plot	per plot	
Rating Date	Sep-22-06	Sep-25-06	Sep-25-06	Sep-25-06	Sep-25-06	Jan-18-07	Jan-18-07	
Trt-Eval Interval	205 DA-A	211 DA-A	211 DA-A	214 DA-A	214 DA-A			
ARM Action Codes						T6	T7	
# Subsamples, Dec.								
Trt Treatment	Rate							
No. Name	Rate Unit	106	107	108	109	110	111	
1 No Fumigant No Herbicide		10 bcd	35 bc	21 bc	14 ab	8 bc	32 c	17 a
2 No Fumigant Command Dual Magnum	1 QT/A 1 PT/A	9 cd	33 c	19 c	17 ab	9 abc	32 c	16 a
3 ME BR 67:33 (400 lb/A) No Herbicide		11 a-d	52 a	33 a	11 b	6 c	40 abc	22 a
4 ME BR 67:33 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	9 d	50 ab	30 ab	17 ab	7 bc	34 abc	17 a
5 MIDAS 50:50 (400 lb/A) No Herbicide		17 a	36 abc	24 abc	18 ab	11 ab	44 ab	23 a
6 MIDAS 50:50 (400 lb/A) Command Dual Magnum	1 QT/A 1 PT/A	14 a-d	31 c	19 c	20 a	12 a	45 a	23 a
7 T2(12 G)+Pic(150lb) yr1,3 ME BR 67:33 (400lb) yr2,4 No Herbicide		16 a	39 abc	25 abc	12 b	6 c	42 abc	23 a
8 T2(12 G)+Pic(150lb) yr1,3 ME BR 67:33 (400lb) yr2,4 Command Dual Magnum	1 QT/A 1 PT/A	13 a-d	42 abc	27 abc	12 b	6 c	40 abc	22 a
9 T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide		12 a-d	52 a	31 ab	12 b	6 c	40 abc	23 a
10 T2 (12 G) + Vapam(75 G) + Pic 150 lb Command Dual Magnum	1 QT/A 1 PT/A	14 a-d	45 abc	27 abc	12 b	6 c	41 abc	24 a
11 T-C35 (35 G) No Herbicide		15 abc	39 abc	24 abc	16 ab	8 bc	37 abc	20 a
12 T-C35 (35 G) Command Dual Magnum	1 QT/A 1 PT/A	16 a	41 abc	23 abc	16 ab	8 bc	35 abc	19 a
13 T2 (12 G) + Pic (150 lb) No Herbicide		13 a-d	30 c	19 c	12 b	6 c	33 bc	16 a
14 T2 (12 G) + Pic (150 lb) Command Dual Magnum	1 QT/A 1 PT/A	12 a-d	35 bc	21 bc	13 b	7 c	38 abc	17 a
15 Vapam (75 G) No Herbicide		16 ab	45 abc	26 abc	12 b	6 c	36 abc	17 a

## University of Georgia

Weed Code	harv 6	harv 7	harv 7	harv 8	harv 8	harv1&2	harv1&2
Crop Code	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA
Part Rated							
Rating Data Type	wt/lb	#	wt/lb	#	wt/lb	#	wt/lb
Rating Unit	per plot	per plot	per plot	per plot	per plot	per plot	per plot
Rating Date	Sep-22-06	Sep-25-06	Sep-25-06	Sep-25-06	Sep-25-06	Jan-18-07	Jan-18-07
Trt-Eval Interval	205 DA-A	211 DA-A	211 DA-A	214 DA-A	214 DA-A		
ARM Action Codes						T6	T7
# Subsamples, Dec.							
Trt Treatment	Rate						
No. Name	Rate Unit	106	107	108	109	110	111
16 Vapam (75 G)		16 a	39 abc	23 bc	11 b	6 c	37 abc
Command	1 QT/A						
Dual Magnum	1 PT/A						
LSD (P=.05)		5.0	14.1	8.7	6.1	3.5	10.2
Standard Deviation		3.5	9.9	6.1	4.3	2.4	7.2
CV		26.32	24.6	24.96	30.85	32.83	19.01
Bartlett's X2		10.014	17.062	13.876	14.73	12.146	13.564
P(Bartlett's X2)		0.819	0.315	0.535	0.471	0.668	0.559

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

Column 111: T6 = [C95]+[C97]

Column 112: T7 = [C96]+[C98]

# University of Georgia

Weed Code	harv1-8	harv1-8
Crop Code	CUMSA	CUMSA
Part Rated		
Rating Data Type	#	wt/lb
Rating Unit	per plot	per plot
Rating Date	Jan-18-07	Jan-18-07
Trt-Eval Interval		
ARM Action Codes	T8	T9
# Subsamples, Dec.		
Trt Treatment		
No. Name	Rate Unit	
	113	114
1 No Fumigant No Herbicide	134 c	74 cd
2 No Fumigant Command 1 QT/A Dual Magnum 1 PT/A	136 c	73 d
3 MEBR 67:33 (400 lb/A) No Herbicide	163 ab	97 ab
4 MEBR 67:33 (400 lb/A) Command 1 QT/A Dual Magnum 1 PT/A	163 ab	92 ab
5 MIDAS 50:50 (400 lb/A) No Herbicide	169 a	98 a
6 MIDAS 50:50 (400 lb/A) Command 1 QT/A Dual Magnum 1 PT/A	156 abc	88 a-d
7 T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 No Herbicide	168 a	96 ab
8 T2(12 G)+Pic(150lb) yr1,3 MEBR 67:33 (400lb) yr2,4 Command 1 QT/A Dual Magnum 1 PT/A	158 abc	91 ab
9 T2 (12 G) + Vapam(75 G) + Pic (150 lb) No Herbicide	170 a	96 ab
10 T2 (12 G) + Vapam(75 G) + Pic 150 lb Command 1 QT/A Dual Magnum 1 PT/A	168 a	96 ab
11 T-C35 (35 G) No Herbicide	158 abc	88 a-d
12 T-C35 (35 G) Command 1 QT/A Dual Magnum 1 PT/A	165 a	90 abc
13 T2 (12 G) + Pic (150 lb) No Herbicide	137 bc	75 cd
14 T2 (12 G) + Pic (150 lb) Command 1 QT/A Dual Magnum 1 PT/A	152 abc	81 bcd
15 Vapam (75 G) No Herbicide	157 abc	85 a-d

## University of Georgia

Weed Code	harv1-8	harv1-8
Crop Code	CUMSA	CUMSA
Part Rated		
Rating Data Type	#	wt/lb
Rating Unit	per plot	per plot
Rating Date	Jan-18-07	Jan-18-07
Trt-Eval Interval		
ARM Action Codes	T8	T9
# Subsamples, Dec.		
Trt Treatment	Rate	
No. Name	Rate Unit	
	113	114
16 Vapam (75 G)		
Command	1 QT/A	
Dual Magnum	1 PT/A	
	157 abc	85 a-d
LSD (P=.05)	23.2	14.0
Standard Deviation	16.3	9.8
CV	10.37	11.19
Bartlett's X2	15.8	20.048
P(Bartlett's X2)	0.395	0.17

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

Column 113: T8 = [C95]+[C97]+[C99]+[C101]+[C103]+[C105]+[C107]+[C109]

Column 114: T9 = [C96]+[C98]+[C100]+[C102]+[C104]+[C106]+[C108]+[C110]

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# University of Georgia

## Long-Term Effects of Methyl Bromide Alternatives on Weeds, Diseases, & Nematodes. YEAR 3 (crops 5 and 6)

Trial ID: Veg20-06 Study Dir.: Culpepper/Langston  
 Location: Tifton Investigator: Stanley Culpepper

### GENERAL TRIAL INFORMATION

**Study Director:** Culpepper/Langston/Seebold **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:** TyTy **Trial Status:** completed  
**State/Prov.:** GA **Trial Reliability:** excellent  
**Postal Code:** 31794 **Initiation Date:** Feb-23-06  
**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.	DIGSA	large crabgrass	
2.	PORPI	pink purslane	
3.	CYPES	yellow nutsedge	
4.	IAQTA	smallflower morningglory	
5.	MOLVE	carpetweed	

**Crop 1:** CPSAN bell pepper **Variety:** Heritage  
**Planting Date:** Mar-15-06 **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-14-06 **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:** \_\_\_\_\_ **Soil Moisture:** drip **Emergence Date:** \_\_\_\_\_

# University of Georgia

### SITE AND DESIGN

Plot Width, Unit: 12 FT Plot Length, Unit: 20 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-23-06	Feb-23-06
Time of Day:	all day	all day
Application Method:	in bed	in bed
Application Timing:	preplant	pre onbed
Applic. Placement:	in/onsoil	in/onsoil
Air Temp., Unit:	60 F	60 F
% Relative Humidity:	48	48
Wind Velocity, Unit:	6 mph	6 mph
Dew Presence (Y/N):	n	n
Water Hardness:		
Soil Temp., Unit:	60 F	60 F
Soil Moisture:	moist	moist
% Cloud Cover:	0	0

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### CROP STAGE AT EACH APPLICATION

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

### WEED STAGE AT EACH APPLICATION

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

### APPLICATION EQUIPMENT

	A	B
<b>Appl. Equipment:</b>	see	boom
<b>Operating Pressure:</b>	comments	26
<b>Nozzle Type:</b>		flat fan
<b>Nozzle Size:</b>		11002
<b>Nozzle Spacing, Unit:</b>		12 inch
<b>Nozzles/Row:</b>		5
<b>Band Width, Unit:</b>		
<b>Boom Length, Unit:</b>		6 feet
<b>Boom Height, Unit:</b>		15 inch
<b>Ground Speed, Unit:</b>		3 mph
<b>Incorporation Equip.:</b>		
<b>Hours to Incorp.:</b>		
<b>Incorp. Depth, Unit:</b>		
<b>Carrier:</b>		water
<b>Spray Volume, Unit:</b>		25 GPA
<b>Spray pH:</b>		
<b>Propellant:</b>		CO2
<b>Tank Mix (Y/N):</b>		Y

Trt No	Treatment Application Comment