

University of Georgia

Cantaloupe and watermelon response to Curbit under plastic.

Trial ID: Veg25-05 Study Dir.: Stanley Culpepper
Location: Ponder 5161 Investigator: Stanley Culpepper

Reps: 4 Plots: 6 by 25 feet
Spray vol: 14.8 gal/ac Mix size: 2 liters (min .77168)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Stg	Appl Code	Amt Product to Measure	Plot No. 1	Plot No. 2	Plot No. 3	Plot No. 4	By Rep
1	None								101	202	302	401	
2	Sonalan	3 EC		1 pt/a		PREUP A		16.89 ml/mx	102	201	301	402	

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Lot Code
21.113	ml	Sonalan 3 EC	

* 'Per area' calculations based on spray volume= 14.8 gal/ac, mix size= 2 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.

Trial Comments

OBJECTIVE: Determine cantaloupe and watermelon response to Sonalan applied under mulch 14 days prior to transplanting.

VISUAL RESPONSE:

1. Sonalan stunted cantaloupe and watermelon 19 to 27% at 10 and 40 days after transplanting.

Plant Runner Lengths:

- At 12, 30, and 40 days after transplant, Sonalan stunted cantaloupe runner lengths 16, 35, and 42%, respectively.
- At 12, 30, and 40 days after transplant, Sonalan stunted watermelon runner lengths 28, 55, and 47%, respectively.

Plant Biomass:

- Five plants per plot were harvested and weighed 60 days after transplanting.
- Cantaloupe and watermelon plant biomass were reduced over 50% by Sonalan.

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Trial ID: Veg25-05
 Location: Ponder 5161

Study Dir.: Stanley Culpepper
 Investigator: Stanley Culpepper

Weed Code	CUMMC	CUMMC	CITLA	CITLA	plant 1	plant 2	plant 3	plant 4	plant 5			
Crop Code	injury	injury	injury	injury	CUMMC	CUMMC	CUMMC	CUMMC	CUMMC			
Rating Data Type	percent	percent	percent	percent	dt	dt	dt	dt	dt			
Rating Unit	cm	cm	cm	cm	cm	cm	cm	cm	cm			
Rating Date	Apr-12-05	May-16-05	Apr-12-05	May-16-05	Apr-18-05	Apr-18-05	Apr-18-05	Apr-18-05	Apr-18-05			
Trt-Eval Interval	25 DA-A	59 DA-A	25 DA-A	59 DA-A	31 DA-A	31 DA-A	31 DA-A	31 DA-A	31 DA-A			
ARM Action Codes												
# Subsamples, Dec.												
Trt No.	Treatment Name	Rate	Unit	1	2	3	4	5	6	7	8	9
1	None			0	0	0	0	13	12	14	12	13
2	Sonalan	1 pt/a		19	27	21	23	11	11	11	11	11
LSD (P=.05)				7.6	3.5	4.0	8.4	9.2	2.4	3.8	4.6	3.9
Standard Deviation				3.4	1.6	1.8	3.7	4.1	1.1	1.7	2.0	1.7
CV				36.11	11.51	16.64	33.06	34.74	9.53	13.78	18.14	14.43

Means followed by same letter do not significantly differ (P=.05, LSD)

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Weed Code	plant 6	plant 7	Avg7plan	plant 1	plant 2	plant 3	plant 4	plant 5	plant 6
Crop Code	CUMMC	CUMMC	CUMMC	CUMMC	CUMMC	CUMMC	CUMMC	CUMMC	CUMMC
Rating Data Type	dt	dt	dt	dt	dt	dt	dt	dt	dt
Rating Unit	cm	cm	cm	cm	cm	cm	cm	cm	cm
Rating Date	Apr-18-05	Apr-18-05	Apr-18-05	May-02-05	May-02-05	May-02-05	May-02-05	May-02-05	May-02-05
Trt-Eval Interval	31 DA-A	31 DA-A	31 DA-A	45 DA-A	45 DA-A	45 DA-A	45 DA-A	45 DA-A	45 DA-A
ARM Action Codes			T1						
# Subsamples, Dec.			1						
Trt Treatment Rate									
No. Name Rate Unit	10	11	12	13	14	15	16	17	18
1 None	13	13	12.6	20	18	22	21	18	18
2 Sonalan 1 pt/a	12	8	10.6	12	15	14	15	15	14
LSD (P=.05)	2.4	8.3	1.34	20.8	16.3	10.3	2.7	10.6	9.6
Standard Deviation	1.1	3.7	0.60	9.2	7.3	4.6	1.2	4.7	4.3
CV	8.57	34.99	5.15	58.71	43.7	25.36	6.85	28.29	27.25

Means followed by same letter do not significantly differ (P=.05, LSD)

Column 12: T1 = @AVG([C5].[C11])

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Weed Code	plant 7	Avg.7pla	plant 1	plant 2	plant 3	Avg3plan	biomass	biomass
Crop Code	CUMMC	CUMMC	CUMMC	CUMMC	CUMMC	CUMMC	CUMMC	CUMMC
Rating Data Type	dt	dt	dt	dt	dt	dt	total wt	total wt
Rating Unit	cm	cm	cm	cm	cm	cm	kg	g
Rating Date	May-02-05	May-02-05	May-11-05	May-11-05	May-11-05	May-11-05	May-03-05	May-03-05
Trt-Eval Interval	45 DA-A	45 DA-A	54 DA-A	54 DA-A	54 DA-A	54 DA-A	46 DA-A	46 DA-A
ARM Action Codes		T2				T3		T8
# Subsamples, Dec.						1		1
Trt Treatment Rate								
No. Name Rate Unit	19	20	21	22	23	24	25	26
1 None	22	20	43	37	39	39.6	0	70.0
2 Sonalan 1 pt/a	10	13	20	24	25	23.0	0	31.3
LSD (P=.05)	12.1	5.6	26.7	5.5	21.5	11.34	0.0	28.59
Standard Deviation	5.4	2.5	11.9	2.4	9.5	5.04	0.0	12.71
CV	33.56	14.96	37.48	8.16	29.58	16.11	25.1	25.1

Means followed by same letter do not significantly differ (P=.05, LSD)

Column 20: T2 = @AVG([C13].[C19])

Column 24: T3 = @AVG([C21].[C23])

Column 26: T8 = [25]*1000

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Weed Code	biomass	biomass	plant 1	plant 2	plant 3	plant 4	plant 5	plant 6	plant 7
Crop Code	CUMMC	CUMMC	CITLA	CITLA	CITLA	CITLA	CITLA	CITLA	CITLA
Rating Data Type	shoot wt	root wt	dt	dt	dt	dt	dt	dt	dt
Rating Unit	kg	kg	cm	cm	cm	cm	cm	cm	cm
Rating Date	May-03-05	May-03-05	Apr-18-05	Apr-18-05	Apr-18-05	Apr-18-05	Apr-18-05	Apr-18-05	Apr-18-05
Trt-Eval Interval	46 DA-A	46 DA-A	31 DA-A	31 DA-A	31 DA-A	31 DA-A	31 DA-A	31 DA-A	31 DA-A
ARM Action Codes									
# Subsamples, Dec.									
Trt Treatment Rate									
No. Name Rate Unit	27	28	29	30	31	32	33	34	35
1 None	0	0	16	16	16	14	14	15	15
2 Sonalan 1 pt/a	0	0	12	10	10	11	9	11	12
LSD (P=.05)	0.0	0.0	3.4	3.8	3.5	4.9	2.9	5.7	8.5
Standard Deviation	0.0	0.0	1.5	1.7	1.6	2.2	1.3	2.5	3.8
CV	22.5	77.37	11.32	13.23	12.18	17.69	10.99	19.74	28.63

Means followed by same letter do not significantly differ (P=.05, LSD)

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Weed Code	Avg.7pla	plant 1	plant 2	plant 3	plant 4	plant 5	plant 6	plant 7
Crop Code	CITLA	CITLA	CITLA	CITLA	CITLA	CITLA	CITLA	CITLA
Rating Data Type	dt	dt	dt	dt	dt	dt	dt	dt
Rating Unit	cm	cm	cm	cm	cm	cm	cm	cm
Rating Date	Apr-18-05	May-02-05	May-02-05	May-02-05	May-02-05	May-02-05	May-02-05	May-02-05
Trt-Eval Interval	31 DA-A	45 DA-A	45 DA-A	45 DA-A	45 DA-A	45 DA-A	45 DA-A	45 DA-A
ARM Action Codes	T4							
# Subsamples, Dec.	1							
Trt Treatment Rate								
No. Name Rate Unit	36	37	38	39	40	41	42	43
1 None	14.8	43	54	54	51	54	49	52
2 Sonalan 1 pt/a	10.6	24	19	24	22	19	28	25
LSD (P=.05)	3.54	29.3	16.6	11.4	23.8	34.0	39.0	25.8
Standard Deviation	1.57	13.0	7.4	5.0	10.6	15.1	17.3	11.5
CV	12.37	38.97	20.54	12.95	28.84	41.65	44.77	29.79

Means followed by same letter do not significantly differ (P=.05, LSD)

Column 36: T4 = @AVG([C29].[C35])

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Weed Code	Avg7plan	plant 1	plant 2	plant 3	Avg3plan	biomass	biomass	biomass
Crop Code	CITLA	CITLA	CITLA	CITLA	CITLA	CITLA	CITLA	CITLA
Rating Data Type	dt	dt	dt	dt	dt	total wt	total wt	shoot wt
Rating Unit	cm	cm	cm	cm	cm	kg	g	kg
Rating Date	May-02-05	May-11-05	May-11-05	May-11-05	May-11-05	May-03-05	May-03-05	May-03-05
Trt-Eval Interval	45 DA-A	54 DA-A	54 DA-A	54 DA-A	54 DA-A	46 DA-A	46 DA-A	46 DA-A
ARM Action Codes	T5				T6		T7	
# Subsamples, Dec.	1				1		1	
Trt Treatment Rate								
No. Name Rate Unit	44	45	46	47	48	49	50	51
1 None	50.9	104	104	110	106.0	0	228.8	0
2 Sonalan 1 pt/a	23.0	57	65	50	57.3	0	57.5	0
LSD (P=.05)	17.14	49.1	24.1	39.9	23.53	0.1	100.07	0.1
Standard Deviation	7.62	21.8	10.7	17.7	10.46	0.0	44.48	0.0
CV	20.61	27.09	12.72	22.12	12.81	31.07	31.08	31.35

Means followed by same letter do not significantly differ (P=.05, LSD)

Column 44: T5 = @AVG([C37].[C43])

Column 48: T6 = @AVG([C45].[C47])

Column 50: T7 = [C49]*1000

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Weed Code	biomass
Crop Code	CITLA
Rating Data Type	root wt
Rating Unit	kg
Rating Date	May-03-05
Trt-Eval Interval	46 DA-A
ARM Action Codes	
# Subsamples, Dec.	
Trt Treatment Rate	
No. Name Rate Unit	52
1 None	0
2 Sonalan 1 pt/a	0
LSD (P=.05)	0.0
Standard Deviation	0.0
CV	25.71

Means followed by same letter do not significantly differ (P=.05, LSD)

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Trial ID: Veg25-05 Study Dir.: Stanley Culpepper
 Location: Ponder 5161 Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Stanley Culpepper **Title:** Ext. Weed Science
Affiliation: Univ. of Georgia
Postal Code: 31794
Investigator: Stanley Culpepper **Title:** Ext. Weed Science
Affiliation: Univ. of Georgia
Postal Code: 31794

TRIAL LOCATION

City: TyTy **Trial Status:** completed
State/Prov.: GA **Trial Reliability:** excellent
Postal Code: 31794 **Initiation Date:** Mar-18-05
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.	none	weed free	

Crop 1: CUMMC cantaloupe **Variety:** Athena
Planting Date: Apr-02-05 **Planting Method:** transplant
Rate: 1 3 ft **Depth:** 1 in **Perennial Age:** _____
Row Spacing: 6 feet **Spacing Within Row:** 3 ft **Seed Bed:** mulch
Soil Temperature: 67 F **Soil Moisture:** moist **Emergence Date:** _____

Crop 2: CITLA watermelon **Variety:** Millionaire
Planting Date: Apr-02-05 **Planting Method:** transplant
Rate: 1 3 ft **Depth:** 1 in **Perennial Age:** _____
Row Spacing: 6 feet **Spacing Within Row:** 3 ft **Seed Bed:** mulch
Soil Temperature: 67 F **Soil Moisture:** moist **Emergence Date:** _____

SITE AND DESIGN

Plot Width, Unit: 6 FT **Plot Length, Unit:** 25 FT **Reps:** 4
Site Type: research station
Tillage Type: conventional **Study Design:** RANDOMIZED COMPLETE BLOCK

Trial Initiation Comments:

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	Previous Crops	Previous Pesticides	Year
1.			

MAINTENANCE

Field Prep./Maintenance:

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

SOIL DESCRIPTION

% Sand: 94	% OM: 1.1	Texture: loamy sand
% Silt: 2	pH: 6.3	Soil Name: Tifton loamy sand
% Clay: 4	CEC: _____	Fert. Level: _____

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: _____

Closest Weather Station: _____ Distance: _____ Unit: _____

APPLICATION DESCRIPTION

	A
Application Date:	Mar-18-05
Time of Day:	10 am
Application Method:	broadcast
Application Timing:	preplant
Applic. Placement:	und.mulch
Air Temp., Unit:	76 F
% Relative Humidity:	54
Wind Velocity, Unit:	2 mph
Dew Presence (Y/N):	n
Water Hardness:	
Soil Temp., Unit:	67 F
Soil Moisture:	drip
% Cloud Cover:	90

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	CUMMC preplant
Stage Scale:	not trans
Height, Unit:	0 in
Crop 2 Code, Stage:	CITLA preplant
Stage Scale:	not trans
Height, Unit:	0 in

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WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	none
Stage Scale:	
Density, Unit:	

APPLICATION EQUIPMENT

	A
Appl. Equipment:	backpack
Operating Pressure:	23
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	18 inch
Nozzles/Row:	2
Band Width, Unit:	
Boom Length, Unit:	4.5 feet
Boom Height, Unit:	15 inch
Ground Speed, Unit:	3 mph
Incorporation Equip.:	
Hours to Incorp.:	
Incorp. Depth, Unit:	
Carrier:	water
Spray Volume, Unit:	14.8 GPA
Spray pH:	
Propellant:	CO2
Tank Mix (Y/N):	Y

Trt No	Treatment Application Comment