

University of Georgia

Watermelon response to Sinbar and Valor applied over mulch prior to transplant

Trial ID: Veg12-05(melons) Study Dir.: Stanley Culpepper
 Location: Ponder 5139 Investigator: Stanley Culpepper

Reps: 3 Plots: 6 by 20 feet
 Spray vol: 14.8 gal/ac Mix size: 1 liters (min .46301)

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Grow Stg	Appl Code	Amt to Measure	Plot No. By Rep		
									1	2	3
1	Valor	51	WDG	1.5	oz/a		A	0.759 g/mx	101	202	303
2	Valor	51	WDG	3	oz/a		A	1.518 g/mx	102	203	304
3	Non-treated								103	204	301
4	Valor	51	WDG	4.5	oz/a		A	2.277 g/mx	104	206	305
5	Sinbar	97	DF	2.5	oz/a		A	1.265 g/mx	105	201	306
6	Sinbar	97	DF	5	oz/a		A	2.53 g/mx	106	205	302

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Lot Code
5.693	g	Valor 51 WDG	
4.744	g	Sinbar 97 DF	

* 'Per area' calculations based on spray volume= 14.8 gal/ac, mix size= 1 liters (mix size basis).
 * Product amount calculations increased 25 % for overage adjustment.

Trial Comments

OBJECTIVE: Evaluate the potential for Sinbar or Valor to be applied over mulch prior to watermelon transplant.

CROP RESPONSE:

1. Treatments did not visually impact the crop.
2. Watermelon runner lengths were not affected by treatments taken at 3 different timings.
3. Treatments did not affect the number of small, medium, or large fruit produced. Also, treatments did not impact total fruit production.

GENERAL COMMENTS:

1. On Feb 16 methyl bromide was applied followed immediately by laying mulch. Mulch was standard LDPE black on black.
2. Herbicides were applied on March 18 followed by 1.2 inch of rain on March 22. The crop was transplanted on March 24 followed by 0.1 inch of rain on March 25 and 2.85 inch of rain on March 28.

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Weed Code	watermel	watermel	watermel	watermel	plant 1	plant 2	plant 3	plant 4	plant 5		
Crop Code	watermel	watermel	watermel	watermel	watermel	watermel	watermel	watermel	watermel		
Rating Data Type	injury	injury	injury	injury	dt	dt	dt	dt	dt		
Rating Unit	percent	percent	percent	percent	cm	cm	cm	cm	cm		
Rating Date	Apr-05-05	Apr-15-05	Apr-27-05	May-24-05	Apr-18-05	Apr-18-05	Apr-18-05	Apr-18-05	Apr-18-05		
Trt-Eval Interval	18 DA-A	28 DA-A	40 DA-A	67 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	Rate	Rate	Rate	Rate	Rate	Rate	Rate		
		Unit									
			1	2	3	4	5	6	7	8	9
1	Valor	1.5 oz/a	3	0	0	3	17	20	20	27	22
2	Valor	3 oz/a	0	0	0	0	22	22	25	28	24
3	Non-treated		0	0	0	0	24	22	22	20	20
4	Valor	4.5 oz/a	0	0	0	0	21	23	22	24	25
5	Sinbar	2.5 oz/a	3	3	0	0	23	18	23	23	26
6	Sinbar	5 oz/a	0	0	0	0	26	26	20	20	21
LSD (P=.05)			6.4	4.3	0.0	4.3	9.8	9.7	7.7	7.9	7.2
Standard Deviation			3.5	2.4	0.0	2.4	5.4	5.3	4.2	4.4	4.0
CV			314.64	424.26	0.0	424.26	24.27	24.6	19.34	18.36	17.07

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

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Weed Code	Avg5plan	plant 1	plant 2	plant 3	plant 4	plant 5	Avg10pla	Harv 1			
Crop Code	watermel	watermel	watermel	watermel	watermel	watermel	watermel	watermel			
Rating Data Type	dt	dt	dt	dt	dt	dt	dt	fruit			
Rating Unit	cm	cm	cm	cm	cm	cm	cm	<10			
Rating Date	Apr-18-05	May-11-05	May-11-05	May-11-05	May-11-05	May-11-05	May-11-05	Jun-27-05			
Trt-Eval Interval	31 DA-A	54 DA-A	54 DA-A	54 DA-A	54 DA-A	54 DA-A	54 DA-A	101 DA-A			
ARM Action Codes	T1						T2				
# Subsamples, Dec.							1				
Trt No.	Treatment Name	Rate	Unit	10	11	12	13	14	15	16	17
1	Valor	1.5	oz/a	21	111	128	113	128	128	121.5	6
2	Valor	3	oz/a	24	114	127	122	116	130	121.9	9
3	Non-treated			22	153	126	135	120	107	128.3	8
4	Valor	4.5	oz/a	23	148	146	131	124	130	135.7	8
5	Sinbar	2.5	oz/a	23	126	121	143	117	136	128.5	9
6	Sinbar	5	oz/a	23	130	118	114	134	129	124.9	6
LSD (P=.05)				5.5	44.8	44.7	35.8	49.5	23.3	18.35	3.6
Standard Deviation				3.0	24.6	24.5	19.7	27.2	12.8	10.09	2.0
CV				13.41	18.89	19.26	15.58	22.09	10.1	7.96	26.36

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

Column 10: T1 = @AVG([C5].[C9])

Column 16: T2 = @AVG([C11].[C15])

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Weed Code									
Crop Code	watermel	watrmel	watermel	watermel	watermel	watermel	watermel	watermel	watermel
Rating Data Type	fruit	fruit	fruit	fruit	fruit	fruit	fruit	fruit	fruit
Rating Unit	<10	<10	<10	<10	<10	<10	<10	<10	<10
Rating Date	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05
Trt-Eval Interval	101 DA-A	101 DA-A	101 DA-A	101 DA-A	101 DA-A	101 DA-A	101 DA-A	101 DA-A	101 DA-A
ARM Action Codes									
# Subsamples, Dec.									
Trt No.	18	19	20	21	22	23	24	25	
Treatment Name									
Rate									
Unit									
1 Valor	1.5 oz/a	6	8	6	3	0	0	0	0
2 Valor	3 oz/a	7	7	5	5	4	0	0	0
3 Non-treated		8	8	8	7	3	2	0	0
4 Valor	4.5 oz/a	7	6	4	0	0	0	0	0
5 Sinbar	2.5 oz/a	8	5	6	6	2	3	3	3
6 Sinbar	5 oz/a	7	3	3	0	0	0	0	0
LSD (P=.05)		4.5	6.6	6.5	5.0	5.8	5.3	4.0	4.3
Standard Deviation		2.5	3.6	3.6	2.8	3.2	2.9	2.2	2.3
CV		34.59	58.91	68.29	78.48	195.96	320.41	424.26	424.26

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

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Weed Code	Har1Tota	Har1Tota	Harv 1	Harv 1	Harv 1	Harv 1	Harv 1	Harv 1
Crop Code	watermel	watermel	watermel	watermel	watermel	watermel	watermel	watermel
Rating Data Type	fruit<10lb	<10lb melon	10-20lb	10-20lb	10-20lb	10-20lb	10-20lb	10-20lb
Rating Unit	#	lbs	lbs	lbs	lbs	lbs	lbs	lbs
Rating Date	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05
Trt-Eval Interval	101 DA-A	101 DA-A	101 DA-A	101 DA-A	101 DA-A	101 DA-A	101 DA-A	101 DA-A
ARM Action Codes		T3						
# Subsamples, Dec.		1						
Trt Treatment	Rate							
No. Name	Rate Unit	26	27	28	29	30	31	32
1 Valor	1.5 oz/a	4	28.6	15	13	12	15	15
2 Valor	3 oz/a	5	37.1	15	12	14	12	15
3 Non-treated		6	43.5	14	18	14	15	17
4 Valor	4.5 oz/a	3	24.0	13	15	13	16	12
5 Sinbar	2.5 oz/a	5	46.3	15	11	16	15	13
6 Sinbar	5 oz/a	3	18.9	15	14	14	11	15
LSD (P=.05)		2.8	26.46	5.0	4.4	4.0	6.2	4.9
Standard Deviation		1.5	14.55	2.8	2.4	2.2	3.4	2.7
CV		35.5	44.0	19.22	17.31	15.62	24.63	18.84

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

Column 27: T3 = [C17]+[C18]+[C19]+[C20]+[C21]+[C22]+[C23]+[C24]+[C25]

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Weed Code									
Crop Code	Harv 1 watermel	Harv 1 watermel	Harv 1 watermel	Harv 1 watermel	Harv 1 watermel	Harv 1 watermel	Harv 1 watermel	Harv 1 watermel	Harv 1 watermel
Rating Data Type	10-20lb	10-20lb	10-20lb	10-20lb	10-20lb	10-20lb	10-20lb	10-20lb	10-20lb
Rating Unit	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs
Rating Date	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05
Trt-Eval Interval	101 DA-A	101 DA-A	101 DA-A	101 DA-A	101 DA-A	101 DA-A	101 DA-A	101 DA-A	101 DA-A
ARM Action Codes									
# Subsamples, Dec.									
Trt No.	34	35	36	37	38	39	40	41	
Treatment Name									
Rate									
Unit									
1 Valor	1.5 oz/a	16	7	9	8	8	4	6	4
2 Valor	3 oz/a	16	15	12	15	13	14	14	0
3 Non-treated		8	10	11	8	5	5	0	0
4 Valor	4.5 oz/a	14	13	15	14	13	13	10	11
5 Sinbar	2.5 oz/a	13	7	12	9	11	8	4	6
6 Sinbar	5 oz/a	15	15	13	14	13	11	9	0
LSD (P=.05)		5.4	9.8	11.7	10.2	11.8	10.3	13.2	13.1
Standard Deviation		2.9	5.4	6.4	5.6	6.5	5.7	7.3	7.2
CV		21.53	47.65	53.16	49.41	62.8	62.87	100.07	205.22

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

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Weed Code	Harv 1	Har1Tota	Har1Tota	Harv 1	Harv 1	Har1Tota	Har1Tota	Total			
Crop Code	watermel	watermel	watermel	watermel	watermel	watermel	watermel	watermel			
Rating Data Type	10-20lb	10-20lb	10-20lb	>20lbfruit	>20lbfruit	>20lbfruit	>20lbfruit	all fruit			
Rating Unit	lbs	lbs	lbs	lbs	lbs	lbs	lbs	#			
Rating Date	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05	Jun-27-05			
Trt-Eval Interval	101 DA-A	101 DA-A	101 DA-A	101 DA-A	101 DA-A	101 DA-A	101 DA-A	101 DA-A			
ARM Action Codes				T4			T5	T6			
# Subsamples, Dec.				1			1	1			
Trt No.	Treatment Name	Rate	Rate Unit	42	43	44	45	46	47	48	49
1	Valor	1.5	oz/a	4	11	143.8	14	7	1	20.4	16.3
2	Valor	3	oz/a	0	13	182.6	7	7	1	14.6	18.3
3	Non-treated			0	9	140.6	7	0	0	6.8	15.3
4	Valor	4.5	oz/a	6	14	184.3	8	0	0	7.9	17.3
5	Sinbar	2.5	oz/a	0	11	156.4	14	8	1	21.7	17.3
6	Sinbar	5	oz/a	0	13	174.0	22	7	1	29.5	16.7
LSD (P=.05)				9.7	4.7	61.36	15.7	20.0	1.5	33.27	3.90
Standard Deviation				5.4	2.6	33.73	8.6	11.0	0.8	18.29	2.14
CV				323.62	22.12	20.61	71.67	228.88	109.26	108.73	12.68

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

Column 44: T4 = [28]+[29]+[30]+[31]+[32]+[33]+[34]+[35]+[36]+[37]+[38]+[39]+[40]+[41]

Column 48: T5 = [45]+[46]

Column 49: T6 = [26]+[43]+[47]

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Weed Code		Total
Crop Code		watermel
Rating Data Type		all fruit
Rating Unit		lbs
Rating Date		Jun-27-05
Trt-Eval Interval		101 DA-A
ARM Action Codes		T7
# Subsamples, Dec.		1
Trt No.	Treatment Name	Rate
		Unit
		50
1	Valor	1.5 oz/a
		192.9
2	Valor	3 oz/a
		234.2
3	Non-treated	
		190.9
4	Valor	4.5 oz/a
		216.2
5	Sinbar	2.5 oz/a
		224.4
6	Sinbar	5 oz/a
		222.4
LSD (P=.05)		45.44
Standard Deviation		24.98
CV		11.7

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

Column 50: T7 = [27]+[44]+[48]

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Trial ID: Veg12-05(melons) Study Dir.: Stanley Culpepper
 Location: Ponder 5139 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.	.		

Crop 1: CITLA watermelon **Variety:** Millionaire
Planting Date: Mar-24-05 **Planting Method:** transplant
Rate: 1 3 ft **Depth:** 1 in **Perennial Age:** _____
Row Spacing: 12 foot **Spacing Within Row:** 3 feet **Seed Bed:** bedded
Soil Temperature: 53 F **Soil Moisture:** moist **Emergence Date:** _____

SITE AND DESIGN

Plot Width, Unit: 6 FT **Plot Length, Unit:** 20 FT **Reps:** 3
Site Type: research station
Tillage Type: plasticulture **Study Design:** RANDOMIZED COMPLETE BLOCK

Trial Initiation Comments:

	Previous Crops	Previous Pesticides	Year
1.			

MAINTENANCE

Field Prep./Maintenance:

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

SOIL DESCRIPTION

% Sand: 94 % OM: 1.1 Texture: sand
 % Silt: 2 pH: 6.4 Soil Name: Tifton sandy loam
 % Clay: 4 CEC: _____ Fert. Level: _____

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

No.	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: drip irrigation

Closest Weather Station: _____ Distance: _____ Unit: __

APPLICATION DESCRIPTION

	A
Application Date:	Mar-18-05
Time of Day:	3 pm
Application Method:	broadcast
Application Timing:	preplant
Applic. Placement:	overmulch
Air Temp., Unit:	49 F
% Relative Humidity:	44
Wind Velocity, Unit:	2 mph
Dew Presence (Y/N):	n
Water Hardness:	
Soil Temp., Unit:	53 F
Soil Moisture:	wet
% Cloud Cover:	100

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	CITLA preplant
Stage Scale:	not plant
Height, Unit:	0 in

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	.
Stage Scale:	.
Density, Unit:	.

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APPLICATION EQUIPMENT

	A
Appl. Equipment:	backpack
Operating Pressure:	23
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	18 inch
Nozzles/Row:	4
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):	N

Trt No	Treatment Application Comment