University of Georgia

Transplant watermelon response to Dual Magnum and Sandea applied POST in mulch and bareground systems.

Trial ID: Veg23-10 Study Dir.: Tucker Price
Location: Cordele Investigator: Stanley Culpepper

Use 1 liters(s) per treatment mixture to spray 14.8 gal/ac
Plots: 6 by 25 feet

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Plot No. By Rep 1	2	3	4
1	Bareground None						A		101	211	307	403
2	Bareground Dual Magnum	7.64	L	8	oz/a	POST	A A	4.223 ml/mx	103	209	311	409
3	Bareground Dual Magnum	7.64	L	12	oz/a	POST	A A	6.334 ml/mx	105	207	303	401
4	Bareground Dual Magnum	7.64	L	24	oz/a	POST	A A	12.67 ml/mx	107	205	301	411
5	Bareground Dual Magnum	7.64	L	36	oz/a	POST	A A	19.0 ml/mx	109	203	309	405
6	Bareground Sandea	75	DF	0.67	oz/a	POST	A A	0.339 g/mx	111	201	305	407
7	Mulch None						A		102	212	308	404
8	Mulch Dual Magnum	7.64	L	8	oz/a	POST	A A	4.223 ml/mx	104	210	312	410
9	Mulch Dual Magnum	7.64	L	12	oz/a	POST	A A	6.334 ml/mx	106	208	304	402
10	Mulch Dual Magnum	7.64	L	24	oz/a	POST	A A	12.67 ml/mx	108	206	302	412
11	Mulch Dual Magnum	7.64	L	36	oz/a	POST	A A	19.0 ml/mx	110	204	310	406
12	Mulch Sandea	75	DF	0.67	oz/a	POST	A A	0.339 g/mx	112	202	306	408

Sort Order: Treatment

Trial Comments

OBJECTIVE: Determine crop response to POST applications of Dual Magnum.

1. At 12 DAT, injury of 8, 16, 40, and 50% was noted with Dual at 8, 12, 24, and 36 oz/A, respectively, on bareground. Mulch had minimal safening at 8 and 12 oz of Dual.
2. At 19 DAT, injury of 8 , 11, 45, and 60% was noted with Dual on bareground at 8, 12, 24, and 36 oz/A, respectively. Mulch reduced injury significantly with Dual at 24 and 36 oz/A with the greatest level of injury noted being 20%.
3. By mid June, injury was still severe (31 to 32%) with 24 and 36 oz/A of Dual applied to melons grown on bareground. Injury was13 to 20% with the same rate in mulched systems.
4. Injury of less than 10% was noted with 8 oz of Dual on bareground and mulched systems and with 12 oz/A on mulched systems.

MELON GROWTH:
1. Watermelon runner lengths were measured 11 and 21 DAT.
2. At 11 or 21 DAT, the only Dual Magnum treatment that did not reduce growth compared to the relative control was Dual Magnum at 8 or 12 oz/A applied over melons only in the mulched system.

GENERAL COMMENTS:
23/4/10: OVERSPRAY ENTIRE TRIAL WITH ROUNDUP AND 1 PT/ACRE OF REFLEX

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Trt No.	Treatment Name	Rate	Rate Unit	1		2		3		16		29	
Weed Code										AVG10PLA		AVG10PLA	
Crop Code				CITLA		CITLA		CITLA		CITLA		CITLA	
Rating Data Type				INJURY		INJURY		INJURY		HEIGHTS		HEIGHTS	
Rating Unit				%		%		%		CM		CM	
Rating Date				5/13/2010		5/20/2010		6/14/2010		5/12/2010		5/22/2010	
Crop Stage										AVERAGE		AVERAGE	
Trt-Eval Interval				12 DA-A		19 DA-A		44 DA-A		11 DA-A		21 DA-A	
ARM Action Codes										T1		T2	
1	Bareground None			0.0	f	0.0	e	0.0	c	18.65	b	51.85	bc
2	Bareground Dual Magnum	8	oz/a	7.5	ef	7.5	de	2.5	c	15.55	c	42.58	de
3	Bareground Dual Magnum	12	oz/a	15.5	d	11.3	d	1.3	c	14.08	cd	38.93	e
4	Bareground Dual Magnum	24	oz/a	40.0	b	45.0	b	32.5	a	12.13	de	29.53	f
5	Bareground Dual Magnum	36	oz/a	50.0	a	60.0	a	31.3	a	10.93	e	25.15	f
6	Bareground Sandea	0.67	oz/a	13.3	de	9.5	d	7.5	bc	12.03	de	46.85	cd
7	Mulch None			0.0	f	0.0	e	0.0	c	23.33	a	73.95	a
8	Mulch Dual Magnum	8	oz/a	8.0	de	5.8	de	1.3	c	21.20	ab	73.30	a
9	Mulch Dual Magnum	12	oz/a	9.5	de	7.5	de	6.3	c	21.83	a	74.38	a
10	Mulch Dual Magnum	24	oz/a	27.5	c	13.0	cd	13.0	bc	13.80	cde	56.75	b
11	Mulch Dual Magnum	36	oz/a	32.5	bc	20.3	c	20.0	ab	14.28	cd	53.45	bc
12	Mulch Sandea	0.67	oz/a	14.8	de	9.0	d	6.3	c	14.33	cd	70.43	a
LSD (P=.05)				7.79		8.42		13.25		2.946		7.400	
Standard Deviation				5.40		5.83		9.17		2.041		5.125	
CV				29.65		37.09		90.42		12.75		9.65	
Bartlett's X2				12.561		9.665		24.128		13.863		6.571	
P(Bartlett's X2)				0.128		0.378		0.004*		0.241		0.833	
Replicate F				0.969		0.471		2.613		1.518		1.205	
Replicate Prob(F)				0.4189		0.7048		0.0677		0.2281		0.3232	
Treatment F				34.660		39.301		6.526		16.832		45.660	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Location: Cordele Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Stanley Culpepper **Title:** Ext. Weed Science
Affiliation: University of Georgia
Postal Code: 31794
Investigator: Stanley Culpepper **Title:** EXT WEED SCIENCE
Affiliation: UNIVERSITY OF GEORGIA
Postal Code: 31794`

TRIAL LOCATION

City: CORDELE **Trial Status:** COMPLETED
State/Prov.: GEORGIA **Trial Reliability:** good
Postal Code: 31010 **Initiation Date:** 4/23/2010
Country: USA

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

Crop 1: CITLA WATERMELON **Variety:** REVOLUTION
Planting Date: 4/30/2010 **Planting Method:** TRANSPLANT-HAND
Rate: 1 2 FT` **Depth:** 2 IN
Row Spacing: 12 FT **Spacing Within Row:** 24 IN **Seed Bed:** RAISED, MULCH
Soil Temperature: 75 F **Soil Moisture:** MOIST

SITE AND DESIGN

Plot Width, Unit: 6 FT **Plot Length, Unit:** 25 FT **Reps:** 4
Site Type: Cordele Research Farm
Tillage Type: Conventional **Study Design:** FACTORIAL

SOIL DESCRIPTION

% Sand: 86 **% OM:** 2.1 **Texture:** loamy sand
% Silt: 6 **pH:** 5.3
% Clay: 8

Overall Moisture Conditions: overhead irrigation

APPLICATION DESCRIPTION

	A
Application Date:	5/1/2010
Time of Day:	7:00 AM
Application Method:	BROADCAST
Application Timing:	POST
Applic. Placement:	OVERTOP
Air Temp., Unit:	71 F
% Relative Humidity:	74
Wind Velocity, Unit:	0 MPH
Dew Presence (Y/N):	Y
Soil Temp., Unit:	68 F
Soil Moisture:	MOIST
% Cloud Cover:	100

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	CITLA POST
Stage Scale:	5 d old
Height, Unit:	4 inch

APPLICATION EQUIPMENT

	A
Appl. Equipment:	BACKPACK
Operating Pressure:	26 PSI
Nozzle Type:	FLAT FAN
Nozzle Size:	11002
Nozzle Spacing, Unit:	18 IN
Nozzles/Row:	2
Boom Length, Unit:	4.5 FT
Boom Height, Unit:	15 IN
Ground Speed, Unit:	3 MPH
Carrier:	H2O
Spray Volume, Unit:	15 GPA
Propellant:	CO2
Tank Mix (Y/N):	Y