

University of Georgia

Cucumber response to Eptam and Dual Magnum.

Trial ID: Veg20-08

Study Dir.: Stanley Culpepper

Location: TVP

Investigator: Stanley Culpepper

Reps: 4

Plots: 6 by 20 feet

Spray vol: 24.8 gal/ac

Mix size: 1 liters (min 1.0345)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate Rate	Grow Unit	Appl Stg	Amt Product to Measure	Plot No. By Rep			
									1	2	3	4
1	No herbicide								101	203	302	401
2	Eptam	7	L		3 PT/A	preplant A		15.12 ml/mx	102	201	303	402
3	Dual Magnum	7.62	L		12 OZ/A	preplant A		3.78 ml/mx	103	202	301	403

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
18.899	ml	Eptam	7	L	
4.725	ml	Dual Magnum	7.62	L	

* 'Per area' calculations based on spray volume= 24.8 gal/ac, mix size= 1 liters (mix size basis).

* Product amount calculations increased 25 % for overage adjustment.

Trial Comments

OBJECTIVE: Determine cucumber response to Eptam and Dual applied under LDPE mulch.

Cucumber Injury:

1. Eptam caused minor and insignificant stunting and did not impact plant stand.
2. Dual reduced plant growth by at least 25% and reduced cucumber stand 30% beyond natural plant death..
3. Runner lengths of 10 cucumber plants per plot were measured during mid-season. Living plants were 15% shorter when treated with Dual as compared to the non-treated control. Eptam did not impact plant growth.

Conclusions:

1. Cucumbers were sensitive to Dual Magnum.
2. Cucumbers were tolerant to Eptam when applied under LDPE mulch.

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Weed Code	CUMSA	CUMSA	plant 1	plant 2	plant 3	plant 4	plant 5	plant 6		
Crop Code	stunting	dead plants	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA		
Rating Data Type	%	#	ht	ht	ht	ht	ht	ht		
Rating Unit			cm	cm	cm	cm	cm	cm		
Rating Date	Apr-21-08	Apr-21-08	Apr-07-08	Apr-07-08	Apr-07-08	Apr-07-08	Apr-07-08	Apr-07-08		
Trt-Eval Interval	67 DA-A	67 DA-A	53 DA-A	53 DA-A	53 DA-A	53 DA-A	53 DA-A	53 DA-A		
ARM Action Codes										
Trt No.	Treatment Name	Rate	1	2	3	4	5	6	7	8
Rate Unit										
1	No herbicide		0 b	1 b	12 a	11 a	11 a	12 a	11 a	12 a
2	Eptam	3 PT/A	8 b	1 b	11 a	10 ab	13 a	11 a	12 a	10 a
3	Dual Magnum	12 OZ/A	25 a	4 a	9 b	9 b	11 a	10 a	11 a	12 a
LSD (P=.05)			15.0	1.8	1.7	2.3	3.6	3.7	6.1	1.7
Standard Deviation			8.7	1.1	1.0	1.3	2.1	2.1	3.5	1.0
CV			79.94	46.85	9.54	13.23	18.88	19.7	32.28	8.57
Bartlett's X2			0.861	1.83	1.501	0.192	1.711	2.91	5.459	3.553
P(Bartlett's X2)			0.354	0.40	0.472	0.908	0.425	0.233	0.065	0.169

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

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Weed Code	plant 7	plant 8	plant 9	plant 10	Avg10pla
Crop Code	CUMSA	CUMSA	CUMSA	CUMSA	CUMSA
Rating Data Type	ht	ht	ht	ht	ht
Rating Unit	cm	cm	cm	cm	cm
Rating Date	Apr-07-08	Apr-07-08	Apr-07-08	Apr-07-08	Apr-07-08
Trt-Eval Interval	53 DA-A	53 DA-A	53 DA-A	53 DA-A	53 DA-A
ARM Action Codes					T1
Trt No.	9	10	11	12	13
Treatment Name					
Rate					
Unit					
1 No herbicide	11 a	11 a	9 a	12 a	11 a
2 Eptam 3 PT/A	12 a	11 a	11 a	10 a	11 a
3 Dual Magnum 12 OZ/A	7 a	10 a	7 a	10 a	9 b
LSD (P=.05)	6.1	4.6	5.1	4.5	1.0
Standard Deviation	3.5	2.7	3.0	2.6	0.6
CV	35.71	24.95	33.91	24.94	5.75
Bartlett's X2	4.691	1.579	8.802	2.764	7.138
P(Bartlett's X2)	0.096	0.454	0.012*	0.251	0.028*

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

Column 13: T1 = @AVG([3].[12])

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Location: TVP

Study Dir.: Stanley Culpepper
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: TyTy	Trial Status: completed
State/Prov.: GA	Trial Reliability: fair
Postal Code: 31794	Initiation Date: Feb-28-08
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: CUMSA CUCUMBER **Variety:** Thunder
Planting Date: Mar-17-08 **Planting Method:** transplant
Rate: 1 12 inch **Depth:** 1.5 in **Perennial Age:** _____
Row Spacing: 6 feet **Spacing Within Row:** 12 inch **Seed Bed:** mulched
Soil Temperature: 82 F **Soil Moisture:** moist **Emergence Date:** _____

SITE AND DESIGN

Plot Width, Unit: 6 FT **Plot Length, Unit:** 20 FT **Reps:** 4
Site Type: Tifton Vegetable Park (TVP)
Tillage Type: Conventional **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: 90 % OM: 1.0 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

No.	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: drip irrigation

Closest Weather Station: _____ Distance: _____ Unit: __

APPLICATION DESCRIPTION

	A
Application Date:	Feb-28-08
Time of Day:	2:00pm
Application Method:	Band
Application Timing:	preplant
Applic. Placement:	und mulch
Air Temp., Unit:	69 f
% Relative Humidity:	40
Wind Velocity, Unit:	1.3 mph
Dew Presence (Y/N):	n
Water Hardness:	
Soil Temp., Unit:	61.7 F
Soil Moisture:	moist
% Cloud Cover:	0

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	CUMSA A
Stage Scale:	preplant
Height, Unit:	0 inch

WEED STAGE AT EACH APPLICATION

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

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APPLICATION EQUIPMENT

	A
Appl. Equipment:	superbedd
Operating Pressure:	24
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	9 inch
Nozzles/Row:	5
Band Width, Unit:	
Boom Length, Unit:	4.5 ft
Boom Height, Unit:	10 inch
Ground Speed, Unit:	3 mph
Incorporation Equip.:	
Hours to Incorp.:	
Incorp. Depth, Unit:	
Carrier:	water
Spray Volume, Unit:	24.8 GPA
Spray pH:	
Propellant:	CO2
Tank Mix (Y/N):	Y

Trt No	Treatment Application Comment