

University of Georgia

Second crop squash response to Goal applied over mulch prior to transplanting.

Trial ID: Veg73-06
Location: Ponder farm

Study Dir.: Stanley Culpepper
Investigator: Stanley Culpepper

Reps: 4 Plots: 6 by 40 feet
Spray vol: 14.8 gal/ac Mix size: 1.5 liters (min 1.2347)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Form Rate	Grow Unit	Appl Stg	Amt Code	Product to Measure	Plot No.	By Rep			
										1	2	3	4	
1	Goal	4	F		1	PT/A	preplant A	12.67	ml/mx	101	208	302	404	
2	Goal	4	F		0.5	PT/A	preplant A	6.334	ml/mx	102	207	303	405	
3	Dual Magnum	7.62	L		1	PT/A	preplant A	12.67	ml/mx	103	206	304	406	
4	Dual Magnum	7.62	L		0.5	PT/A	preplant A	6.334	ml/mx	104	205	305	407	
5	Dual Magnum	7.62	L		1	PT/A	POST B	12.67	ml/mx	105	204	306	408	
6	Dual Magnum	7.62	L		0.5	PT/A	POST B	6.334	ml/mx	106	203	307	401	
7	Dual Magnum	7.62	L		0.5	PT/A	preplant A	6.334	ml/mx	107	202	308	402	
	Dual Magnum	7.62	L		0.5	PT/A	POST B	6.334	ml/mx					
8	non-treated		L							108	201	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
23.752	ml	Goal	4	F	
63.338	ml	Dual Magnum	7.62	L	

- * 'Per area' calculations based on spray volume= 14.8 gal/ac, mix size= 1.5 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.

Trial Comments

OBJECTIVE: Determine the potential for using Dual or Goal prior to planting a second crop on mulch.

VISUAL INJURY:

- At 2 days after preplant applications and transplanting, injury from Goal was 10 to 11% with no injury from Dual.
- By 13 days after preplant applications injury peaked at 13 to 16% from Goal and quickly recovered.
- POST applications of Dual caused little to no injury.

PLANT HEIGHTS:

- Twenty plants per plot were measured during mid-season after all treatments were applied.
- Herbicide treatments had no impact on plant heights.

CONCLUSIONS:

- Goal and Dual applied in second, third, or fourth crop squash looks promising.
- A study should be conducted looking at Goal applied up to 7 days prior to transplanting. The injury in this study may have been from the initial volatilization.

GENERAL COMMENTS:

- All weeds were controlled 30 days prior to transplanting with glyphosate plus 1 pt of Goal 2 XL.

University of Georgia

Second crop squash response to Goal applied over mulch prior to transplanting.

Trial ID: Veg73-06
Location: Ponder farm

Study Dir.: Stanley Culpepper
Investigator: Stanley Culpepper

Weed Code	CUUPE	CUUPE	CUUPE	CUUPE	plant 1	plant 2	plant 3	plant 4		
Crop Code	CUUPE	CUUPE	CUUPE	CUUPE	CUUPE	CUUPE	CUUPE	CUUPE		
Rating Data Type	injury	injury	injury	injury	ht	ht	ht	ht		
Rating Unit	%	%	%	%	cm	cm	cm	cm		
Rating Date	Sep-27-06	Oct-04-06	Oct-13-06	Oct-31-06	Oct-13-06	Oct-13-06	Oct-13-06	Oct-13-06		
Assessed By	SC	SC	SC	SC	18 DA-A	18 DA-A	18 DA-A	18 DA-A		
Trt-Eval Interval	2 DA-A	9 DA-A	18 DA-A	36 DA-A	18 DA-A	18 DA-A	18 DA-A	18 DA-A		
ARM Action Codes										
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	Rate		
		Unit	Unit	Unit	Unit	Unit	Unit	Unit		
		1	2	3	4	5	6	7		
		8								
1	Goal	1 PT/A	12 a	16 a	7 a	2 ab	17 a	14 a	14 ab	13 a
2	Goal	0.5 PT/A	10 a	13 a	5 ab	2 ab	14 abc	14 a	16 a	13 a
3	Dual Magnum	1 PT/A	2 b	0 b	3 ab	2 ab	11 c	13 a	13 ab	12 a
4	Dual Magnum	0.5 PT/A	1 b	0 b	1 b	0 b	14 bc	15 a	14 ab	15 a
5	Dual Magnum	1 PT/A	2 b	0 b	3 ab	5 a	15 ab	15 a	14 ab	12 a
6	Dual Magnum	0.5 PT/A	1 b	0 b	3 ab	3 ab	12 c	12 a	15 a	13 a
7	Dual Magnum	0.5 PT/A	0 b	0 b	3 ab	1 ab	12 c	15 a	11 b	15 a
	Dual Magnum	0.5 PT/A								
8	non-treated		0 b	0 b	4 ab	0 b	14 bc	13 a	13 ab	13 a
	LSD (P=.05)		3.9	4.2	4.8	3.4	2.9	4.1	3.2	3.5
	Standard Deviation		2.7	2.8	3.2	2.3	2.0	2.8	2.2	2.4
	CV		77.85	78.32	91.69	130.17	14.53	20.32	16.17	18.43
	Bartlett's X2		8.771	0.07	4.991	2.43	13.185	10.137	10.688	6.99
	P(Bartlett's X2)		0.119	0.792	0.661	0.787	0.068	0.181	0.153	0.43

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

University of Georgia

Weed Code	plant 5	plant 6	plant 7	plant 8	plant 9	plant 10	plant 11	plant 12	plant 13
Crop Code	CUUPE	CUUPE	CUUPE	CUUPE	CUUPE	CUUPE	CUUPE	CUUPE	CUUPE
Rating Data Type	ht	ht	ht	ht	ht	ht	ht	ht	ht
Rating Unit	cm	cm	cm	cm	cm	cm	cm	cm	cm
Rating Date	Oct-13-06	Oct-13-06	Oct-13-06	Oct-13-06	Oct-13-06	Oct-13-06	Oct-13-06	Oct-13-06	Oct-13-06
Assessed By									
Trt-Eval Interval	18 DA-A	18 DA-A	18 DA-A	18 DA-A	18 DA-A	18 DA-A	18 DA-A	18 DA-A	18 DA-A
ARM Action Codes									
Trt No.	9	10	11	12	13	14	15	16	17
Treatment Name									
Rate									
Unit									
1 Goal	14 a	15 ab	11 a	13 a	13 a	12 a	15 a	12 a	14 a
2 Goal	14 a	16 a	12 a	14 a	13 a	13 a	15 a	15 a	15 a
3 Dual Magnum	11 a	12 bc	13 a	13 a	14 a	12 a	10 b	12 a	14 a
4 Dual Magnum	13 a	13 bc	12 a	13 a	14 a	39 a	14 ab	14 a	14 a
5 Dual Magnum	14 a	13 bc	16 a	13 a	12 a	13 a	12 ab	12 a	14 a
6 Dual Magnum	13 a	11 c	14 a	14 a	14 a	14 a	12 ab	14 a	14 a
7 Dual Magnum	14 a	14 abc	14 a	14 a	14 a	14 a	12 ab	14 a	13 a
Dual Magnum	0.5 PT/A								
8 non-treated	14 a	14 bc	16 a	14 a	14 a	14 a	14 ab	14 a	15 a
LSD (P=.05)	4.0	2.5	4.7	2.8	3.2	27.1	4.3	4.0	2.9
Standard Deviation	2.7	1.7	3.2	1.9	2.2	18.4	2.9	2.7	2.0
CV	20.63	12.71	24.1	14.42	16.42	114.19	22.34	20.41	14.2
Bartlett's X2	3.282	12.139	3.567	5.01	5.586	65.178	6.158	11.694	4.705
P(Bartlett's X2)	0.858	0.096	0.828	0.659	0.589	0.001*	0.521	0.111	0.696

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

University of Georgia

Weed Code	plant 14	plant 15	plant 16	plant 17	plant 18	plant 19	plant 20	Avg20pla
Crop Code	CUUPE	CUUPE	CUUPE	CUUPE	CUUPE	CUUPE	CUUPE	CUUPE
Rating Data Type	ht	ht	ht	ht	ht	ht	ht	ht
Rating Unit	cm	cm	cm	cm	cm	cm	cm	cm
Rating Date	Oct-13-06	Oct-13-06	Oct-13-06	Oct-13-06	Oct-13-06	Oct-13-06	Oct-13-06	Oct-13-06
Assessed By								
Trt-Eval Interval	18 DA-A	18 DA-A	18 DA-A	18 DA-A	18 DA-A	18 DA-A	18 DA-A	18 DA-A
ARM Action Codes								T1
Trt No.	18	19	20	21	22	23	24	25
Treatment Name								
Rate								
Unit								
1 Goal	13 a	13 a	13 ab	13 a	13 a	11 a	14 ab	13 ab
2 Goal	13 a	13 a	14 ab	12 a	13 a	13 a	11 ab	14 ab
3 Dual Magnum	13 a	14 a	14 ab	16 a	14 a	12 a	13 ab	13 b
4 Dual Magnum	14 a	16 a	16 a	15 a	15 a	14 a	15 a	15 a
5 Dual Magnum	12 a	13 a	12 ab	15 a	15 a	12 a	11 b	13 ab
6 Dual Magnum	14 a	12 a	12 ab	13 a	13 a	12 a	14 ab	13 ab
7 Dual Magnum	12 a	12 a	11 b	13 a	11 a	11 a	12 ab	13 b
Dual Magnum	0.5 PT/A							
8 non-treated	15 a	14 a	15 ab	13 a	14 a	13 a	13 ab	14 ab
LSD (P=.05)	4.0	3.9	3.6	4.0	3.9	3.7	3.1	2.0
Standard Deviation	2.7	2.6	2.4	2.7	2.6	2.5	2.1	1.4
CV	20.62	19.65	18.22	19.86	19.54	21.03	16.53	10.07
Bartlett's X2	10.168	5.162	6.404	6.419	8.183	7.824	6.624	8.746
P(Bartlett's X2)	0.179	0.64	0.494	0.492	0.317	0.348	0.469	0.271

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

Column 25: T1 = @AVG([C5].[C24])

University of Georgia

Second crop squash response to Goal applied over mulch prior to transplanting.

Trial ID: Veg73-06
Location: Ponder farm

Study Dir.: Stanley Culpepper
Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Stanley Culpepper
Affiliation: Univ. of Georgia
Postal Code: 31794

Title: Ext. Weed Science

Investigator: Stanley Culpepper
Affiliation: Univ. of Georgia
Postal Code: 31794

Title: Ext. Weed Science

TRIAL LOCATION

City: TyTy
State/Prov.: GA
Postal Code: 31793
Country: USA

Trial Status: completed
Trial Reliability: excellent
Initiation Date: Sep-25-06
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: _____
Org: _____
Address 1: _____
Address 2: _____
City: _____
State/Prov: _____
Postal Code: _____

Country: _____
Phone No: _____
Fax No: _____

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: CUUPE yellow squash **Variety:** Prelude II
Planting Date: Sep-25-06 **Planting Method:** transplant
Rate: 1 ft **Depth:** 1 in **Perennial Age:** _____
Row Spacing: 5 ft **Spacing Within Row:** 12 in **Seed Bed:** raised/mulch/crop2
Soil Temperature: 77 F **Soil Moisture:** moist **Emergence Date:** _____

SITE AND DESIGN

Plot Width, Unit: 6 FT **Plot Length, Unit:** 40 FT **Reps:** 4
Site Type: Lewis Taylor Farm
Tillage Type: conventional **Study Design:** RANDOMIZED COMPLETE BLOCK

Trial Initiation Comments:

	Previous Crops	Previous Pesticides	Year
1.			

MAINTENANCE

Field Prep./Maintenance:

University of Georgia

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

SOIL DESCRIPTION

% Sand: _____ % OM: 0. Texture: _____
 % Silt: _____ pH: 0. Soil Name: _____
 % Clay: _____ CEC: _____ Fert. Level: _____

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

No.	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: fair

Closest Weather Station: _____ Distance: _____ Unit: ____

APPLICATION DESCRIPTION

	A	B
Application Date:	Sep-25-06	Oct-04-06
Time of Day:	8 am	8 am
Application Method:	broadcast	broadcast
Application Timing:	preplant	POST
Applic. Placement:	overtop	overtop
Air Temp., Unit:	74 F	70 F
% Relative Humidity:	74	57
Wind Velocity, Unit:	2 mph	0 mph
Dew Presence (Y/N):	y	n
Water Hardness:		
Soil Temp., Unit:	77 F	76 F
Soil Moisture:	drip	drip
% Cloud Cover:	100	0

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	CUUPE preplant	CUUPE POST
Stage Scale:	preplant	4-5 lf
Height, Unit:	0 in	4 inch

WEED STAGE AT EACH APPLICATION

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

University of Georgia

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	backpack	backpack
Operating Pressure:	24	24
Nozzle Type:	flat fan	flat fan
Nozzle Size:	11002	11002
Nozzle Spacing, Unit:	18 inch	18 inch
Nozzles/Row:	2	2
Band Width, Unit:		
Boom Length, Unit:	4.5 ft	4.5 ft
Boom Height, Unit:	15 inch	15 inch
Ground Speed, Unit:	3 mph	3 mph
Incorporation Equip.:		
Hours to Incorp.:		
Incorp. Depth, Unit:		
Carrier:	water	water
Spray Volume, Unit:	14.8 GPA	14.8 GPA
Spray pH:		
Propellant:	CO2	CO2
Tank Mix (Y/N):	Y	Y

Trt No	Treatment Application Comment