

# University of Georgia

Cotton response to Caparol applied prior to planting.

Trial ID: C7-03

Study Dir.: Stanley Culpepper

Location: Ponder farm (5139)

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:** excellent

**Postal Code:** 31793

**Initiation Date:** Apr-02-03

**Country:** USA

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

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

## CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	.		

**Crop 1:** GOSHI cotton

**Variety:** DP 555 B/RR

**Planting Date:** Apr-02-03

**Planting Method:** strip till/baregrnd

**Rate:** 0.

**Depth:** 0.5 in

**Perennial Age:** 0.

**Row Spacing:** 36 inch

**Spacing Within Row:** 0.

**Seed Bed:** bedded

**Soil Temperature:** 80 F

**Soil Moisture:** irrigated

**Emergence Date:** May-06-03

## SITE AND DESIGN

**Plot Width, Unit:** 6 FT

**Plot Length, Unit:** 25 FT

**Reps:** 4

**Site Type:** FIELD

**Tillage Type:** REDUCED-TILL

**Study Design:** FACTORIAL

## SOIL DESCRIPTION

**% Sand:** 94

**% OM:** 1.3

**Texture:** sandy

**% Silt:** 2

**pH:** 5.9

**Soil Name:** Tifton sandy loam

**% Clay:** 4

**CEC:** 0.

**Overall Moisture Conditions:** fair/wet

## APPLICATION DESCRIPTION

	A	B	C	D
<b>Application Date:</b>	Apr-02-03	Apr-16-03	Apr-26-03	May-01-03
<b>Time of Day:</b>	8 am	8 am	10 am	9 am
<b>Application Method:</b>	broadcast	broadcast	broadcast	broadcast
<b>Application Timing:</b>	28 DBP	14 DBP	7 DBP	0 DBP
<b>Applic. Placement:</b>	on soil	on soil	on soil	on soil
<b>Air Temp., Unit:</b>	66 F	75 F	71 F	79 F
<b>% Relative Humidity:</b>	59	60	59	63
<b>Wind Velocity, Unit:</b>	1 mph	1 mph	1 mph	2 mph
<b>Dew Presence (Y/N):</b>	n	n	n	n
<b>Soil Temp., Unit:</b>	62 F	72 F	63 F	77 F
<b>Soil Moisture:</b>	fair	fair	fair	fair
<b>% Cloud Cover:</b>	0	0	0	0

## CROP STAGE AT EACH APPLICATION

	A	B	C	D
<b>Crop 1 Code, Stage:</b>	GOSHI Before Pl	GOSHI Before Pl	GOSHI Before Pl	GOSHI Before Pl
<b>Stage Scale:</b>	.	.	.	.
<b>Height, Unit:</b>	0.	0.	0.	0.

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## WEED STAGE AT EACH APPLICATION

	A	B	C	D
	.			
<b>Stage Scale:</b>	.			
<b>Density, Unit:</b>	.	.		

## APPLICATION EQUIPMENT

	A	B	C	D
<b>Appl. Equipment:</b>	backpack	backpack	backpack	backpack
<b>Operating Pressure:</b>	23	23	23	23
<b>Nozzle Type:</b>	flat fan	flat fan	flat fan	flat fan
<b>Nozzle Size:</b>	11002	11002	11002	11002
<b>Nozzle Spacing, Unit:</b>	18 inch	18 inch	18 inch	18 inch
<b>Nozzles/Row:</b>	2	2	2	2
<b>Boom Length, Unit:</b>	4.5 feet	4.5 feet	4.5 feet	4.5 feet
<b>Boom Height, Unit:</b>	15 inch	15 inch	15 inch	15 inch
<b>Ground Speed, Unit:</b>	3 mph	3 mph	3 mph	3 mph
<b>Carrier:</b>	water	water	water	water
<b>Spray Volume, Unit:</b>	14.8 GPA	14.8 GPA	14.8 GPA	14.8 GPA
<b>Propellant:</b>	CO2	CO2	CO2	CO2
<b>Tank Mix (Y/N):</b>	Y	Y	Y	Y

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Weed Code		GOSHI	GOSHI	GOSHI	GOSHI	GOSHI	Seed	
Crop Code		injury	injury	injury	number	yield	GOSHI	
Rating Data Type		percent	percent	percent	plant/7'	lb/plot	yield	
Rating Unit							lb/A	
Rating Date		May-12-03	May-15-03	May-25-03	May-13-03	Sep-24-03	Sep-24-03	
Trt-Eval Interval		40 DA-A	43 DA-A	53 DA-A	41 DA-A	175 DA-A	175 DA-A	
ARM Action Codes							TY1	
# Subsamples, Dec.							1	
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	
		Unit	Unit	Unit	Unit	Unit	Unit	
		1	2	3	4	5	6	
1	28 DBP		0.0	0.0	0.0	21.8	8.9	2595.5
	Gramoxone	1.5 pt/a						
	Caparol	1.5 pt/a						
	NIS	0.25 % v/v						
2	28 DBP		0.0	0.0	0.0	21.8	8.9	2584.6
	Gramoxone	1.5 pt/a						
	Caparol	2 pt/a						
	NIS	0.25 % v/v						
3	14 DBP		0.0	0.0	0.0	21.5	8.5	2472.8
	Gramoxone	1.5 pt/a						
	Caparol	1.5 pt/a						
	NIS	0.25 % v/v						
4	14 DBP		0.0	0.0	0.0	21.8	8.7	2532.3
	Gramoxone	1.5 pt/a						
	Caparol	2 pt/a						
	NIS	0.25 % v/v						
5	7 DBP		0.0	0.0	0.0	23.0	9.2	2681.8
	Gramoxone	1.5 pt/a						
	Caparol	1.5 pt/a						
	NIS	0.25 % v/v						
6	7 DBP		0.0	0.0	0.0	21.5	8.9	2575.8
	Gramoxone	1.5 pt/a						
	Caparol	2 pt/a						
	NIS	0.25 % v/v						
7	0 DBP		0.0	0.0	0.0	21.8	9.5	2761.7
	Gramoxone	1.5 pt/a						
	Caparol	1.5 pt/a						
	NIS	0.25 % v/v						
8	0 DBP		0.0	0.0	0.0	21.5	9.1	2632.5
	Gramoxone	1.5 pt/a						
	Caparol	2 pt/a						
	NIS	0.25 % v/v						
9	Graxomone	1.5 pt/a	0.0	0.0	0.0	21.8	9.2	2665.1
	NIS	0.25 % v/v						
	No residual							
	LSD (P=.05)		0.00	0.00	0.00	2.97	1.00	291.27
	Standard Deviation		0.00	0.00	0.00	2.04	0.69	199.57
	CV		0.0	0.0	0.0	9.34	7.64	7.64
	Bartlett's X2		0.0	0.0	0.0	4.233	8.323	8.323
	P(Bartlett's X2)		.	.	.	0.836	0.403	0.403

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

Column 6: TY1 = 290.4\*[5]

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## Trial Comments

GENERAL COMMENTS: Ground was prepared 28 DBP. Thus, treatments were applied to bareground and not weeds to enhance the chance of injury. Gramoxone applied over the entire trial 5 DBP to remove any escaped weeds. Prowl and Roundup applied PRE over then entire trial after planting. Roundup applied ovetop of trial at the 4-leaf stage on May 19. Caparol + MSMA directed over trial to cotton on June 13. Trial was maintained weed free.

OBJECTIVE: Determine if applying Caparol prior to planting poses any threat to cotton development.

### CROP RESPONSE:

#### Visual crop injury:

1) No visual injury was detected at any time throughout the study.

#### Stand counts:

- 1) Plant stands were extremely uniform ranging from 22 to 23 plants per seven row feet.
- 2) Treatments had no effect on plant stand 23 days after planting.

#### Seed cotton yields:

- 1) Seed cotton yields were extremely uniform ranging from 2470 to 2760 with a CV of 7.64.
- 2) Treatments had no effect on cotton yield.