**University of Georgia** 

Cotton response to Caparol applied prior to planting.

Study Dir.: Stanley Culpepper Trial ID: C7-03 Investigator: Stanley Culpepper Location: Ponder farm (5139)

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 completed Trial Status: excellent State/Prov.: GA Trial Reliability: Initiation Date: Postal Code: 31793 Apr-02-03

Country:

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

Soil Name: Tifton sandy loam % Silt: 2 **pH:** 5.9

**CEC:** 0. % Clay: 4

Overall Moisture Conditions: fair/wet

## APPLICATION DESCRIPTION

	AFFEIGHTON DESCRIPTION								
	A	В	С	D					
Application Date:	Apr-02-0	3 Apr-16-03	Apr-26-03	May-01-03					
Time of Day:	8 am	8 am	10 am	9 am					
Application Method:	broadcas	t broadcast	broadcast	broadcast					
Application Timing:	28 DBP	14 DBP	7 DBP	0 DBP					
Applic. Placement:	on soil	on soil	on soil	on soil					
Air Temp., Unit:	66 F	75 F	71 F	79 F					
% Relative Humidity:	59	60	59	63					
Wind Velocity, Unit:	1 mph	1 mph	1 mph	2 mph					
Dew Presence (Y/N):	n	n	n	n					
Soil Temp., Unit:	62 F	72 F	63 F	77 F					
Soil Moisture:	fair	fair	fair	fair					
% Cloud Cover:	0	0	0	0					

## CROP STAGE AT EACH APPLICATION

	A		В		С		D					
Crop 1 Code, Stage:	GOSHI	Before	Pl									
Stage Scale:												
Height, Unit:	0.			0.			0.			0.		

## **University of Georgia**

## WEED STAGE AT EACH APPLICATION

	A	В	С	D
	•			
Stage Scale:				
Density, Unit:				

## APPLICATION EQUIPMENT

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

# University of Georgia Cotton response to Caparol applied prior to planting.

Study Dir.: Stanley Culpepper Investigator: Stanley Culpepper Trial ID: C7-03 Location: Ponder farm (5139)

Weed Code	Location: Po	onder farm (	5139)	tigator: S	tanley Cul	.pepper		
Rating Data Type   Injury	Weed Code							Seed
Rating Unit	Crop Code		GOSHI	GOSHI	GOSHI	GOSHI	GOSHI	GOSHI
Rating Date   May-12-03   May-15-03   May-25-03   May-13-03   Sep-24-03   Sep-24-03   Trt-Eval Interval   Ad DA-A   Ad DA-A	Rating Data Ty	rpe	injury	injury	injury	number	yield	yield
Trt-Eval Interval	Rating Unit		percent	percent	percent	plant/7'	lb/plot	lb/A
ARM Action Codes	Rating Date		May-12-03	May-15-03	May-25-03	May-13-03	Sep-24-03	Sep-24-03
# Subsamples, Dec.  Trt Treatment No. Name Rate Unit  1 2 3 4 5 6  Rate Unit  1 28 DBP Gramoxone 1.5 pt/a NIS 0.25 % v/v  2 28 DBP Gramoxone 1.5 pt/a NIS 0.25 % v/v  3 14 DBP Gramoxone 1.5 pt/a Caparol 1.5 pt/a NIS 0.25 % v/v  4 14 DBP Gramoxone 1.5 pt/a Caparol 2 pt/a NIS 0.25 % v/v  4 14 DBP Gramoxone 1.5 pt/a Caparol 2 pt/a NIS 0.25 % v/v  6 7 DBP Gramoxone 1.5 pt/a Caparol 1.5 pt/a Caparol 1.5 pt/a Caparol 2 pt/a NIS 0.25 % v/v  7 0 DBP Gramoxone 1.5 pt/a Caparol 1.5 pt/a Caparol 1.5 pt/a Caparol 1.5 pt/a NIS 0.25 % v/v  7 0 DBP Gramoxone 1.5 pt/a Caparol 1.5 pt/a NIS 0.25 % v/v  7 0 DBP Gramoxone 1.5 pt/a Caparol 1.5 pt/a NIS 0.25 % v/v  7 0 DBP Gramoxone 1.5 pt/a Caparol 1.5 pt/a NIS 0.25 % v/v  7 0 DBP Gramoxone 1.5 pt/a Caparol 1.5 pt/a NIS 0.25 % v/v  7 0 DBP Gramoxone 1.5 pt/a Caparol 1.5 pt/a NIS 0.25 % v/v  7 0 DBP Gramoxone 1.5 pt/a Caparol 1.5 pt/a NIS 0.25 % v/v  7 0 DBP Gramoxone 1.5 pt/a Caparol 1.5 pt/a NIS 0.25 % v/v  9 Gramoxone 1.5 pt/a Caparol 1.5 pt/a NIS 0.25 % v/v  8 0 DBP Gramoxone 1.5 pt/a Caparol 2 pt/a NIS 0.25 % v/v  9 Graxomone 1.5 pt/a Caparol 1.5 pt/a Caparol 2 pt/a NIS 0.25 % v/v  9 Graxomone 1.5 pt/a Caparol 1.5 pt/a Caparol 2 pt/a NIS 0.25 % v/v  9 Graxomone 1.5 pt/a NIS 0.25 % v/v  No residual	Trt-Eval Interva	al	40 DA-A	43 DA-A	53 DA-A	41 DA-A	175 DA-A	175 DA-A
Trt   Treatment   Rate   No.   Name   Rate   Unit   1   2   3   4   5   6	ARM Action Co	odes						TY1
Trt   Treatment   Rate   No.   Name   Rate   Unit   1   2   3   4   5   6	# Subsamples,	Dec.						1
1 28 DBP								
Gramoxone   1.5 pt/a   Caparol   1.5 pt/a   NIS   0.25 % v/v	No. Name	Rate Unit	1	2	3	4	5	6
Caparol   1.5 pt/a   NIS   0.25 % v/v     O.0   O.0	1 28 DBP		0.0	0.0	0.0	21.8	8.9	2595.5
NIS	Gramoxor	ne 1.5 pt/a						
2 28 DBP	Caparol	1.5 pt/a						
Gramoxone	NIS	0.25 % v/v						
Caparol   2 pt/s   NIS   0.25 % v/v	2 28 DBP		0.0	0.0	0.0	21.8	8.9	2584.6
Caparol   2 pt/s   NIS   0.25 % v/v	Gramoxor	ne 1.5 pt/a						
NIS	Caparol							
Gramoxone		0.25 % v/v						
Caparol   1.5 pt/a   NIS   0.25 % v/v	3 14 DBP		0.0	0.0	0.0	21.5	8.5	2472.8
Caparol   1.5 pt/a   NIS   0.25 % v/v	Gramoxor	ne 1.5 pt/a						
NIS								
Gramoxone   1.5 pt/a   Caparol   2 pt/a   NIS   0.25 % v/v		0.25 % v/v						
Caparol NIS         2 pt/a 0.25 % v/v         Description	4 14 DBP		0.0	0.0	0.0	21.8	8.7	2532.3
NIS	Gramoxor	ne 1.5 pt/a						
NIS	Caparol	2 pt/a						
Gramoxone 1.5 pt/a Caparol 1.5 pt/a NIS 0.25 % v/v  6 7 DBP Gramoxone 1.5 pt/a Caparol 2 pt/a NIS 0.25 % v/v  7 0 DBP Gramoxone 1.5 pt/a Caparol 1.5 pt/a Caparol 1.5 pt/a Caparol 1.5 pt/a NIS 0.25 % v/v  8 0 DBP Gramoxone 1.5 pt/a Caparol 2 pt/a NIS 0.25 % v/v  9 Graxomone 1.5 pt/a NIS 0.25 % v/v  0.0 0.0 0.0 21.8 9.1 2632.5  2 665.1								
Caparol       1.5 pt/a         NIS       0.25 % v/v         6 7 DBP       0.0         Gramoxone       1.5 pt/a         Caparol       2 pt/a         NIS       0.25 % v/v         7 0 DBP       0.0         Gramoxone       1.5 pt/a         Caparol       1.5 pt/a         NIS       0.25 % v/v         8 0 DBP       0.0         Gramoxone       1.5 pt/a         Caparol       2 pt/a         NIS       0.25 % v/v         9 Graxomone       1.5 pt/a         NIS       0.25 % v/v         NIS       0.25 % v/v         No residual       0.0	5 7 DBP		0.0	0.0	0.0	23.0	9.2	2681.8
NIS   0.25 % v/v     0.0   0.0   0.0   21.5   8.9   2575.8	Gramoxor	ne 1.5 pt/a						
6 7 DBP Gramoxone         1.5 pt/a 2 pt/a NIS         0.0         0.0         0.0         21.5         8.9         2575.8           7 0 DBP Gramoxone         0.25 % v/v         0.0         0.0         0.0         21.8         9.5         2761.7           8 0 DBP Gramoxone         1.5 pt/a NIS         0.0         0.0         0.0         21.5         9.1         2632.5           9 Gramoxone         1.5 pt/a NIS         0.25 % v/v         0.0         0.0         0.0         21.8         9.2         2665.1           NIS         0.25 % v/v No residual         0.0         0.0         0.0         21.8         9.2         2665.1	Caparol	1.5 pt/a						
Gramoxone   1.5 pt/a   Caparol   2 pt/a   NIS   0.25 % v/v	NIS	0.25 % v/v						
Caparol         2 pt/a NIS         0.25 % v/v         0.0         0.0         0.0         0.0         21.8         9.5         2761.7           7 0 DBP         0.0         0.0         0.0         21.8         9.5         2761.7           Gramoxone         1.5 pt/a         0.25 % v/v         0.0         0.0         21.5         9.1         2632.5           Gramoxone         1.5 pt/a         0.25 % v/v         0.0         0.0         21.8         9.2         2665.1           NIS         0.25 % v/v         0.25 % v/v         0.0         0.0         21.8         9.2         2665.1           NIS         0.25 % v/v         0.0         0.0         0.0         21.8         9.2         2665.1           NIS         0.25 % v/v         0.0	6 7 DBP		0.0	0.0	0.0	21.5	8.9	2575.8
NIS   0.25 % v/v	Gramoxor	ne 1.5 pt/a						
7 0 DBP Gramoxone         0.0         0.0         0.0         21.8         9.5         2761.7           Caparol NIS         1.5 pt/a Caparol Gramoxone         0.0         0.0         0.0         21.8         9.5         2761.7           8 0 DBP Gramoxone         0.25 % v/v         0.0         0.0         21.5         9.1         2632.5           Caparol NIS         2 pt/a 0.25 % v/v         0.0         0.0         0.0         21.8         9.2         2665.1           NIS         0.25 % v/v No residual         0.0         0.0         0.0         21.8         9.2         2665.1	Caparol	2 pt/a						
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	NIS	0.25 % v/v						
Caparol 1.5 pt/a NIS 0.25 % v/v  8 0 DBP	7 0 DBP		0.0	0.0	0.0	21.8	9.5	2761.7
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 NIS 0.25 % v/v         2 pt/a NIS 0.25 % v/v         0.0         0.0         21.8         9.2         2665.1           NIS 0.25 % v/v No residual         0.0         0.0         0.0         21.8         9.2         2665.1	Gramoxor	ne 1.5 pt/a						
8 0 DBP       0.0       0.0       0.0       21.5       9.1       2632.5         Gramoxone 1.5 pt/a Caparol NIS 0.25 % v/v       2 pt/a NIS 0.25 % v/v       0.0       0.0       0.0       21.5       9.1       2632.5         9 Graxomone 1.5 pt/a NIS 0.25 % v/v No residual       0.0       0.0       0.0       21.8       9.2       2665.1	Caparol	1.5 pt/a						
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	NIS	0.25 % v/v						
Caparol 2 pt/a NIS 0.25 % v/v  9 Graxomone 1.5 pt/a NIS 0.25 % v/v No residual  0.0 0.0 0.0 21.8 9.2 2665.1	8 0 DBP		0.0	0.0	0.0	21.5	9.1	2632.5
Caparol 2 pt/a NIS 0.25 % v/v  9 Graxomone 1.5 pt/a NIS 0.25 % v/v No residual  0.0 0.0 0.0 21.8 9.2 2665.1	Gramoxor	ne 1.5 pt/a						
NIS         0.25 % v/v           9 Graxomone         1.5 pt/a         0.0         0.0         21.8         9.2         2665.1           NIS         0.25 % v/v         0.0         0	Caparol							
NIS 0.25 % v/v No residual								
NIS 0.25 % v/v No residual	9 Graxomor	ne 1.5 pt/a	0.0	0.0	0.0	21.8	9.2	2665.1
	NIS	0.25 % v/v						
LSD (P=.05) 0.00 0.00 0.00 2.97 1.00 291.27	No residu	al	1					
			0.00	0.00		2.97	1.00	291.27
Standard Deviation         0.00         0.00         0.00         2.04         0.69         199.57		ation						
CV         0.0         0.0         0.0         9.34         7.64         7.64	CV			0.0		9.34	7.64	7.64
Bartlett's X2 0.0 0.0 0.0 4.233 8.323 8.323			0.0	0.0	0.0		8.323	
P(Bartlett's X2) 0.836 0.403 0.403	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]

## Mar-02-04 (C7-03) Trial Comments Page 4 of 4

**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

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 overtop 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 Caparolprior 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.