

# University of Georgia

Cotton and weed response to Aim mixtures applied at preplant.

Trial ID: C8-03

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:** good

**Postal Code:** 31794

**Initiation Date:** Apr-30-03

**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.	PANTE	Texas panicum	

**Crop 1:** GOSHI cotton

**Variety:** DP 555 B/RR

**Planting Date:** May-01-03

**Planting Method:** conventional

**Rate:** 3 seed/ft

**Depth:** 0.7 in

**Row Spacing:** 36 inch **Spacing Within Row:** 4 inch **Seed Bed:** bedded

**Soil Temperature:** 80 F **Soil Moisture:** moist

**Emergence Date:** May-07-03

## SITE AND DESIGN

**Plot Width, Unit:** 6 FT **Plot Length, Unit:** 25 FT **Reps:** 4

**Site Type:** research station

**Tillage Type:** conventional

**Study Design:** RANDOMIZED COMPLETE BLOCK

## SOIL DESCRIPTION

**% Sand:** 94 **% OM:** 1.2 **Texture:** sand

**% Silt:** 2 **pH:** 5.5 **Soil Name:** Tifton sandy loam

**% Clay:** 4

**Overall Moisture Conditions:** wet

## APPLICATION DESCRIPTION

	A
<b>Application Date:</b>	Apr-30-03
<b>Time of Day:</b>	9 am
<b>Application Method:</b>	broadcast
<b>Application Timing:</b>	Burndown
<b>Applic. Placement:</b>	1 d prior
<b>Air Temp., Unit:</b>	60 F
<b>% Relative Humidity:</b>	68
<b>Wind Velocity, Unit:</b>	2 mph
<b>Dew Presence (Y/N):</b>	n
<b>Soil Temp., Unit:</b>	74 F
<b>Soil Moisture:</b>	moist
<b>% Cloud Cover:</b>	60

## CROP STAGE AT EACH APPLICATION

	A
<b>Crop 1 Code, Stage:</b>	GOSHI preplant
<b>Stage Scale:</b>	.
<b>Height, Unit:</b>	0. .

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## WEED STAGE AT EACH APPLICATION

A	
Weed 1 Code, Stage:	PANTE prelant
Stage Scale:	1-3 inch
Density, Unit:	9 ydsq

## APPLICATION EQUIPMENT

A	
Appl. Equipment:	backpack
Operating Pressure:	22
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	18 inch
Nozzles/Row:	4
Boom Length, Unit:	4.5 feet
Boom Height, Unit:	15 inch
Ground Speed, Unit:	3 mph
Carrier:	water
Spray Volume, Unit:	14.8 GPA
Propellant:	CO2
Tank Mix (Y/N):	Y

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Weed Code	GOSHI herbicid	GOSHI weed com	GOSHI weed	GOSHI weed	PANTE	PANTE	PANTE			
Crop Code	stunting	stunting	stunting	stunting	control	control	control			
Rating Data Type	percent	percent	percent	percent	percent	percent	percent			
Rating Unit										
Rating Date	May-13-03	May-19-03	May-28-03	Jun-10-03	May-19-03	May-28-03	Jun-06-03			
Trt-Eval Interval	19 DA-A	19 DA-A	23 DA-A	23 DA-A	19 DA-A	23 DA-A	23 DA-A			
ARM Action Codes										
# Subsamples, Dec.										
Trt No.	Treatment Name	Rate	Unit	1	2	3	4	5	6	7
1	Aim COC	0.0125 1	lb ai/a % v/v	0.0	27.0	14.0	0.0	17.5	100.0	100.0
2	Aim COC	0.016 1	lb ai/a % v/v	0.0	27.5	15.3	0.0	15.5	100.0	100.0
3	Aim COC	0.025 1	lb ai/a % v/v	0.0	10.3	7.0	0.0	36.3	100.0	100.0
4	Aim COC Direx	0.0125 1 0.75	lb ai/a % v/v lb ai/a	0.0	11.8	3.8	0.0	52.5	100.0	100.0
5	Aim COC Cotoran	0.016 1 0.75	lb ai/a % v/v lb ai/a	0.0	13.8	5.0	0.0	46.3	100.0	100.0
6	Aim COC Roundup WeatherMax	0.0125 1 21.3	lb ai/a % v/v oz/a	0.0	0.5	0.0	0.0	100.0	100.0	100.0
7	Non-treated			0.0	30.3	17.8	0.0	0.0	100.0	100.0
8	Aim COC Staple	0.0125 1 0.043	lb ai/a % v/v lb ai/a	15.0	33.0	14.3	0.0	13.0	100.0	100.0
9	Aim COC Staple Cotoran	0.0125 1 0.043 0.75	lb ai/a % v/v lb ai/a lb ai/a	15.5	17.3	8.5	0.0	46.3	100.0	100.0
LSD (P=.05)				2.93	12.78	4.11	0.00	5.61	0.00	0.00
Standard Deviation				2.00	8.75	2.82	0.00	3.84	0.00	0.00
CV				59.15	46.01	29.68	0.0	10.57	0.0	0.0
Bartlett's X2				0.006	21.584	6.089	0.0	2.428	0.0	0.0
P(Bartlett's X2)				0.939	0.006*	0.413	.	0.876	.	.

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



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Cotton Yield:

1. Yield was extremely interesting and was clearly a response to early season weed competition and not a crop response to the application of Aim.
2. Greatest numerical yield was noted with glyphosate plus Aim which is the only treatment that provided adequate early season control of Texas panicum.
3. In plots where treatments obtained at least 46% control of panicum during early season, yields were similar to the glyphosate + Aim treatment. For treatments obtaining 36% or less panicum control, yields were reduced 11 to 20% when compared to the glyphosate + Aim treatment.

CONCLUSION:

- 1) Aim applied immediately prior to planting does not appear to pose a threat for cotton injury.
- 2) Probably should look at Aim as a PRE treatment mixed with glyphosate for the control of morningglory in strip till cotton.