

University of Georgia

RR cotton response to topical glyphosate applications after the 5th leaf.

Trial ID: C43-03

Study Dir.: Flanders

Location: Grady Co. (Loc 1)

Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Flanders

Title: Extension

Affiliation: UGA

Postal Code: .

Investigator: Stanley Culpepper

Title: Ext. Weed Science

Affiliation: University of Georgia

Postal Code: 31794

TRIAL LOCATION

City: Cairo

Trial Status: completed

State/Prov.: GA

Trial Reliability: good

Postal Code: .

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.	COMBE	Tropical spiderwort	

Crop 1: GOSHI cotton

Variety: DP 555 B/RR

Planting Date: Apr-30-03

Planting Method: conventional

Rate: 2.5 seed/ft

Depth: 0.5 in

Row Spacing: 36 inch

Seed Bed: bed

Soil Temperature: 0. . Soil Moisture: irrigated

Emergence Date: May-05-03

SITE AND DESIGN

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

Site Type: on farm

Tillage Type: conventional

Study Design: RANDOMIZED COMPLETE BLOCK

APPLICATION DESCRIPTION

	A	B	C	D
Application Date:	Apr-30-03	May-24-03	Jun-05-03	Jun-16-03
Time of Day:	1 pm	9 am	10 am	4 pm
Application Method:	broadcast	broadcast	broadcast	broadcast
Application Timing:	PRE	4-leaf	8-leaf	LPD
Applic. Placement:	on soil	overtop	overtop	directed
Air Temp., Unit:	82 F	69 F	72 F	89 F
% Relative Humidity:	39	76	69	47
Wind Velocity, Unit:	2 mph	2 mph	3 mph	2 mph
Dew Presence (Y/N):	n	n	n	n
Soil Temp., Unit:	83 F	70 F	75 F	92 F
Soil Moisture:	fair	perfect	wet	wet
% Cloud Cover:	25	0	25	75

CROP STAGE AT EACH APPLICATION

	A	B	C	D
Crop 1 Code, Stage:	GOSHI PRE	GOSHI 4-leaf	GOSHI 8-leaf	GOSHI LPD
Stage Scale:	.	V4	V8-V9	V12
Height, Unit:	0. .	6.5 inch	15 inch	22 inch

WEED STAGE AT EACH APPLICATION

	A	B	C	D
Weed 1 Code, Stage:	COMBE PRE	COMBE 4-leaf	COMBE 8-leaf	COMBE LPD
Stage Scale:	.	V0-V2	V2	V5
Density, Unit:	. .	1 inch	2 inch	4 inch

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APPLICATION EQUIPMENT

	A	B	C	D
Appl. Equipment:	backpack	backpack	backpack	backpack
Operating Pressure:	22	22	22	18
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	12 inch
Nozzles/Row:	2	2	2	3
Boom Length, Unit:	4.5 feet	4.5 feet	4.5 feet	2 feet
Boom Height, Unit:	15 inch	15 inch	15 inch	12 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

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Crop Code		GOSHI	GOSHI
Rating Data Type		seed yld	seed yld
Rating Unit		lb/plot	lb/A
Rating Date		Nov-04-03	Nov-04-03
ARM Action Codes			TY1
# Subsamples, Dec.			1
Trt	Treatment		
No.	Name	Rate	Unit
		1	2
1	Prowl	2	pt/a
	Roundup WeatherMax	22	oz/a
	Roundup WeatherMax	22	oz/a
2	Prowl	2	pt/a
	Roundup WeatherMax	22	oz/a
	Roundup WeatherMax	22	oz/a
	Roundup WeatherMax	22	oz/a
		1.28	742.22
	LSD (P=.05)	0.57	329.87
	Standard Deviation	12.99	12.99
	CV	1.434	1.434
	Bartlett's X2	0.231	0.231
	P(Bartlett's X2)		

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

Column 2: TY1 = 580.8*[1]

Trial Comments

GENERAL COMMENTS: Evaluate cotton response to glyphosate applied topically after the 5 leaf stage.

Cotton Yield:

1) Glyphosate applied topically at the 8 to 9-leaf stage reduced yields 37% (obviously weed control was greater in treatment 2 than treatment 1 so loss in yield has to be a response to the 8-leaf glyphosate application).

Spiderwort Control:

1) Control ranged from 50 to 75% after the initial glyphosate application was initiated.

OTHER COMMENTS: This trial was also conducted in another location that had absolutely no effect on yield.