

# University of Georgia

## Roundup Ready cotton tolerance to Dual Magnum mixed with several glyphosate formulations.

Trial ID: C44-03  
Location: Ponder farm

Study Director:  
Investigator: Stanley Culpepper

### General Trial Information

**Study Director:** Stanley Culpepper **Title:** Ext. Weed Scienc  
**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:** . **Initiation Date:** Apr-29-03  
**Country:** .  
**Directions:**

**Objectives:**

**Conclusions:**

### Crop Description

**Crop 1:** GOSHI *Gossypium hirsutum* Cotton, American upland  
**Variety:** BP 555 B/RR  
**BBCH Scale:** BCOT **Planting Date:** Apr-29-03  
**Planting Method:** strip till **Rate, Unit:** 3 seed/ft  
**Depth, Unit:** 0.5 in  
**Row Spacing, Unit:** 36 inch **Spacing Within Row, Unit:** 4 inch  
**Seed Bed:** flat **Soil Temperature, Unit:** 70 F  
**Soil Moisture:** moist **Emergence Date:** May-06-03

### Site and Design

**Plot Width, Unit:** 12 FT **Site Type:** Research station  
**Plot Length, Unit:** 25 FT **Tillage Type:** strip tillage  
**Replications:** 4 **Study Design:** Randomized Complete Block

**Trial Initiation Comments:**

**Field Prep./Maintenance:**

### Soil Description

**% Sand:** 94 **% OM:** 1.1 **Texture:** sand  
**% Silt:** 2 **pH:** 5.9 **Soil Name:** Tifton sandy loam  
**% Clay:** 4

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## Application Description

A	
Application Date:	May-12-03
Time of Day:	10 am
Application Method:	broadcast
Application Timing:	POST
Application Placement:	overtop
Applied By:	Culpepper
Air Temperature, Unit:	79 F
% Relative Humidity:	55
Wind Velocity, Unit:	2 mph
Dew Presence (Y/N):	n
Soil Temperature, Unit:	77 F
Soil Moisture:	moist
% Cloud Cover:	50

## Crop Stage At Each Application

A		
Crop 1 Code, BBCH Scale:	GOSHI BCOT	
Stage Scale Used:	BBCH	
Stage Majority, Percent:	V2	50
Stage Minimum, Percent:	V1	50
Stage Maximum, Percent:	V2	50
Diameter, Unit:	0.	.
Height, Unit:	3	in
Height Minimum, Maximum:	2	4

## Application Equipment

A	
Appl. Equipment:	backpack
Operating Pressure:	22
Pressure Unit:	PSI
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	36 inch
Nozzles/Row:	2
Boom Length, Unit:	4.5 feet
Boom Height, Unit:	15 inch
Ground Speed, Unit:	3 mph
Carrier:	water
Spray Volume:	14.8
Volume Unit:	GPA
Propellant:	CO2
Tank Mix (Y/N):	Y

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Crop Code	GOSHI BCOT	GOSHI BCOT	GOSHI BCOT	GOSHI BCOT	GOSHI BCOT	GOSHI BCOT			
BBCH Scale	May-14-03	May-19-03	May-26-03	Jun-13-03	Sep-16-03	Sep-16-03			
Rating Date	INJURY	injury	INJURY	INJURY	seed/yld	seed/yld			
Rating Data Type	PERCENT	percent	PERCENT	PERCENT	lb/plot	lb/A			
Rating Unit	2	7	14	32	127	127			
Days After Last Applic.					127 DA-A	127 DA-A			
Trt-Eval Interval						TY1			
ARM Action Codes						1			
Number of Decimals									
Trt No.	Treatment Name	Rate	Unit	1	2	3	4	5	6
1	A13886	1.75	lb ae/a	8.8	4.8	4.3	0.0	9.8	2835.0
2	Roundup WeatherMax	0.75	lb ae/a	0.0	0.0	0.0	0.0	9.2	2670.2
3	Roundup WeatherMax Dual Magnum	0.75 1.2	lb ae/a pt/a	10.3	2.8	4.5	0.0	9.0	2620.9
4	Touchdown Dual Magnum	0.75 1.2	lb ae/a pt/a	9.8	6.0	4.3	0.0	9.7	2822.7
5	Glyphomax Plus Dual Magnum	0.75 1.2	lb ae/a pt/a	10.8	5.5	4.5	0.0	9.0	2603.4
6	A13013M Dual Magnum	0.75 1.2	lb ae/a pt/a	7.0	5.5	3.8	0.0	9.3	2702.2
LSD (P=.05)				5.73	6.18	2.23	0.00	2.13	618.81
Standard Deviation				3.80	4.10	1.48	0.00	1.41	410.67
CV				49.06	100.38	41.75	0.0	15.16	15.16
Bartlett's X2				2.59	1.332	10.365	0.0	8.832	8.834
P(Bartlett's X2)				0.629	0.856	0.035*	.	0.116	0.116

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

Column 6: TY1 = 290.4\*[5]

### Trial Comments

OBJECTIVE: Evaluate cotton response to various S-metolachlor and glyphosate mixtures.

## RESULTS:

- 1) Injury ranged from 7 to 11% at 2 DAT. Injury was a measure of necrotic speckling.
- 2) Injury was less than 7% at 7 DAT.
- 3) By 14 DAT, injury was less than 5%.
- 4) No injury was noted at 32 DAT.

## COTTON YIELD:

- 1) Treatments did not affect yield.

## GENERAL:

- 1) Caparol + MSMA was directed over the entire trial on June 15.