

# University of Georgia

Cotton and morningglory response to various glyphosate formulations.

Trial ID: C44-07

Study Dir.: Culpepper

Location: Sunbelt Expo

Investigator: Stanley Culpepper

Reps: 3

Plots: 6 by 25 feet

Spray vol: 14.8 gal/ac

Mix size: 1 liters (min .57876)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Form Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Plot No. 1	Plot No. 2	Plot No. 3
1	MON 76111	4.5		SL	1.125	LB AE/A	POT	A	16.89 ml/mx	101	213	320
2	MON 76351	4.5		SL	1.125	LB AE/A	POT	A	16.89 ml/mx	102	219	304
3	MON 76105	4.5		SL	1.125	LB AE/A	POT	A	16.89 ml/mx	103	207	314
4	MON 76165	4.5		SL	1.125	LB AE/A	POT	A	16.89 ml/mx	104	205	303
5	MON 79789	4.5		SL	1.125	LB AE/A	POT	A	16.89 ml/mx	105	209	310
6	MON 76204	4.5		SL	1.125	LB AE/A	POT	A	16.89 ml/mx	106	220	305
7	MON 79770	4.5		SL	1.125	LB AE/A	POT	A	16.89 ml/mx	107	204	313
8	MON 79831	4.5		SL	1.125	LB AE/A	POT	A	16.89 ml/mx	108	210	308
9	MON 76111	4.5		SL	0.75	LB AE/A	POT	A	11.26 ml/mx	109	211	315
10	MON 76351	4.5		SL	0.75	LB AE/A	POT	A	11.26 ml/mx	110	206	316
11	MON 76105	4.5		SL	0.75	LB AE/A	POT	A	11.26 ml/mx	111	208	317
12	MON 76165	4.5		SL	0.75	LB AE/A	POT	A	11.26 ml/mx	112	214	319
13	MON 79789	4.5		SL	0.75	LB AE/A	POT	A	11.26 ml/mx	113	217	302
14	MON 76204	4.5		SL	0.75	LB AE/A	POT	A	11.26 ml/mx	114	201	309
15	MON 79770	4.5		SL	0.75	LB AE/A	POT	A	11.26 ml/mx	115	202	318
16	MON 79831	4.5		SL	0.75	LB AE/A	POT	A	11.26 ml/mx	116	218	301
17	MON 79614	5		SL	1.125	LB AE/A	POT	A	15.2 ml/mx	117	212	311
	LI 700	100 %		AD	0.5	% V/V	POT	A	4.999 ml/mx			
18	MON 79616	4.2		SL	1.125	LB AE/A	POT	A	18.1 ml/mx	118	215	312
19	MON 79685	4		SL	1.125	LB AE/A	POT	A	19.0 ml/mx	119	216	306
20	Non-treated									120	203	307

Sort Order: Treatment

Product quantities required for listed treatments and applications in one trial:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
35.188	ml	MON 76111	4.5	SL	
35.188	ml	MON 76351	4.5	SL	
35.188	ml	MON 76105	4.5	SL	
35.188	ml	MON 76165	4.5	SL	
35.188	ml	MON 79789	4.5	SL	
35.188	ml	MON 76204	4.5	SL	
35.188	ml	MON 79770	4.5	SL	
35.188	ml	MON 79831	4.5	SL	
19.001	ml	MON 79614	5	SL	
6.249	ml	LI 700	100	AD	
22.621	ml	MON 79616	4.2	SL	
23.752	ml	MON 79685	4	SL	

\* 'Per area' calculations based on spray volume= 14.8 gal/ac, mix size= 1 liters (mix size basis).

\* Product amount calculations increased 25 % for overage adjustment.

\* 'Per volume' calculations use spray volume= 14.8 gal/ac, mix size= 1 liters.

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## Cotton and morningglory response to various glyphosate formulations.

Trial ID: C44-07

Study Dir.: Culpepper

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Investigator: Stanley Culpepper

### Trial Comments

OBJECTIVE: Compare glyphosate formulations for the control of pitted morningglory in Roundup Ready cotton.

#### Morningglory response:

1. At 9 DAT, little differences in glyphosate formulations or rate were noted. The lowest numerical control at 1.125 lb ae was noted with MON7611 and MON 79614 plus LI 700.
2. By 23 DAT, the only product providing less than 90% control at 1.125 lb was MON 79614 plus LI 700.

#### Large crabgrass:

1. Control was perfect will all rates and formulations.

#### Cotton Response:

1. Visual cotton injury was not detectable at 9 d after treatment.

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Weed Code		IPOLA	IPOLA	IPOLA	DIGSA	DIGSA		
Crop Code	cotton							
Rating Data Type	%	%	%	%	%	%		
Rating Unit	injury	control	control	control	control	control		
Rating Date	Jun-10-07	Jun-10-07	Jun-16-07	Jun-24-07	Jun-10-07	Jun-16-07		
Trt-Eval Interval	9 DA-A	9 DA-A	15 DA-A	23 DA-A	9 DA-A	15 DA-A		
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate		
		Unit						
			1	2	3	4	5	6
1	MON 76111	1.125 LB AE/A	0 a	84 de	94 abc	96 a	99 a	99 a
2	MON 76351	1.125 LB AE/A	0 a	88 a-e	95 ab	94 a	99 a	99 a
3	MON 76105	1.125 LB AE/A	0 a	95 a	96 ab	97 a	99 a	99 a
4	MON 76165	1.125 LB AE/A	0 a	92 ab	97 a	96 a	99 a	99 a
5	MON 79789	1.125 LB AE/A	0 a	89 a-e	96 ab	96 a	99 a	99 a
6	MON 76204	1.125 LB AE/A	0 a	91 abc	96 ab	95 a	99 a	99 a
7	MON 79770	1.125 LB AE/A	0 a	92 ab	95 ab	96 a	99 a	99 a
8	MON 79831	1.125 LB AE/A	0 a	90 a-e	95 ab	97 a	99 a	99 a
9	MON 76111	0.75 LB AE/A	0 a	86 b-e	95 ab	92 ab	99 a	99 a
10	MON 76351	0.75 LB AE/A	0 a	87 b-e	91 bc	91 ab	99 a	99 a
11	MON 76105	0.75 LB AE/A	0 a	83 e	92 abc	86 ab	99 a	99 a
12	MON 76165	0.75 LB AE/A	0 a	86 b-e	94 abc	90 ab	99 a	99 a
13	MON 79789	0.75 LB AE/A	0 a	86 b-e	92 bc	87 ab	99 a	99 a
14	MON 76204	0.75 LB AE/A	0 a	88 a-e	92 abc	87 ab	99 a	99 a
15	MON 79770	0.75 LB AE/A	0 a	90 a-d	94 abc	95 a	99 a	99 a
16	MON 79831	0.75 LB AE/A	0 a	84 cde	92 bc	88 ab	99 a	99 a
17	MON 79614	1.125 LB AE/A	0 a	84 de	90 c	83 b	99 a	99 a
	LI 700	0.5 % V/V						
18	MON 79616	1.125 LB AE/A	0 a	91 a-d	93 abc	92 ab	99 a	99 a
19	MON 79685	1.125 LB AE/A	0 a	91 abc	95 ab	90 ab	99 a	99 a
20	Non-treated		0 a	0 f	0 d	0 c	0 b	0 b
LSD (P=.05)			0.0	6.1	3.6	9.2	0.0	0.0
Standard Deviation			0.0	3.7	2.2	5.5	0.0	0.0
CV			0.0	4.43	2.47	6.36	0.0	0.0
Bartlett's X2			0.0	31.779	7.265	38.271	0.0	0.0
P(Bartlett's X2)			.	0.023*	0.98	0.004*	.	.

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

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### GENERAL TRIAL INFORMATION

Study Director: Stanley Culpepper

Title: Ext. Weed Science

Affiliation: Univ. of Georgia

Postal Code: 31794

Investigator: Stanley Culpepper

Title: Ext. Weed Science

Affiliation: Univ. of Georgia

Postal Code: 31794

### TRIAL LOCATION

City: Moultrie

Trial Status: completed

State/Prov.: GA

Trial Reliability: good

Postal Code: 31768

Initiation Date: May-08-07

Country: USA

Planned Completion Date: \_\_\_\_\_

E-Longitude of LL Corner °: \_\_\_\_\_

N-Latitude of LL Corner °: \_\_\_\_\_

Altitude of LL Corner: \_\_\_\_\_ Unit: \_\_\_\_\_ Angle y-axis to North °: \_\_\_\_\_

Directions:

### COOPERATOR/LANDOWNER

Cooperator: \_\_\_\_\_

Country: \_\_\_\_\_

Org: \_\_\_\_\_

Phone No: \_\_\_\_\_

Address 1: \_\_\_\_\_

Fax No: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_

State/Prov: \_\_\_\_\_

Postal Code: \_\_\_\_\_

Conducted Under GLP (Y/N): N

Conducted Under GEP (Y/N): N

Guidelines: \_\_\_\_\_ Guideline Description: \_\_\_\_\_

Objective:

Conclusions:

### CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	DIGSA	Digitaria sanguinalis	Digitaria sanguinalis
2.	IPOLA	Morningglory, pitted	Ipomoea lacunosa

Crop 1: GOSHI COTTON, SHORT STAPLE

Variety: DP 143 BR Flex

Planting Date: May-08-07

Planting Method: seeded

Rate: 1 4 in

Depth: 0.5 in

Perennial Age: \_\_\_\_\_

Row Spacing: 36 inch Spacing Within Row: 4 inch Seed Bed: flat

Soil Temperature: 88 F Soil Moisture: moist

Emergence Date: May-13-07

### SITE AND DESIGN

Plot Width, Unit: 6 FT

Plot Length, Unit: 25 FT Reps: 3

Site Type: Sunbelt Expo

Tillage Type: Conventional

Study Design: RANDOMIZED COMPLETE BLOCK

Trial Initiation Comments:

	Previous Crops	Previous Pesticides	Year
1.			

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## MAINTENANCE

Field Prep./Maintenance:

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit
1.							

### SOIL DESCRIPTION

% Sand: 88	% OM: 1.2	Texture: loamy sand
% Silt: 12	pH: 6	Soil Name: _____
% Clay: 0	CEC: _____	Fert. Level: _____

### ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

### MOISTURE CONDITIONS

No.	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: moist

Closest Weather Station: \_\_\_\_\_ Distance: \_\_\_\_\_ Unit: \_\_\_\_

### APPLICATION DESCRIPTION

	A
Application Date:	Jun-01-07
Time of Day:	8:00 am
Application Method:	broadcast
Application Timing:	post
Applic. Placement:	overtop
Air Temp., Unit:	73 F
% Relative Humidity:	77
Wind Velocity, Unit:	4 mph
Dew Presence (Y/N):	N
Water Hardness:	
Soil Temp., Unit:	74 F
Soil Moisture:	moist
% Cloud Cover:	100

### CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	GOSHI POST
Stage Scale:	3 leaf
Height, Unit:	5 in

### WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	DIGSA POST
Stage Scale:	4-10 inch
Density, Unit:	4 sqft
Weed 2 Code, Stage:	IPOLA POST
Stage Scale:	6-10 inch
Density, Unit:	2 sqft

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## APPLICATION EQUIPMENT

	A
Appl. Equipment:	backpack
Operating Pressure:	24
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	18 in
Nozzles/Row:	2
Band Width, Unit:	
Boom Length, Unit:	4.5 ft
Boom Height, Unit:	15 in
Ground Speed, Unit:	3 mph
Incorporation Equip.:	
Hours to Incorp.:	
Incorp. Depth, Unit:	
Carrier:	water
Spray Volume, Unit:	15 GPA
Spray pH:	
Propellant:	CO2
Tank Mix (Y/N):	n

Trt No	Treatment Application Comment