

University of Georgia

Measuring tropical spiderwort emergence patterns with and without PRE herbicides

Trial ID: C9-03
Location: Grady Co Loc 1

Study Dir.: Flanders, Webster, Culpepper
Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Webster, Culpepper **Title:** ext.weed science
Affiliation: University of Georgia
Postal Code: 31794
Investigator: Tim Flanders **Title:** extension agent/Cairo
Affiliation: University of Georgia

TRIAL LOCATION

City: Cairo **Trial Status:** completed
State/Prov.: Ga **Trial Reliability:** fair
Postal Code: . **Initiation Date:** Apr-30-03
Country: U.S.A.

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: 3 seed/ft **Depth:** 0.5 in
Row Spacing: 36 inch **Seed Bed:** bedded
Soil Temperature: 83 F **Soil Moisture:** moist **Emergence Date:** May-06-03

SITE AND DESIGN

Plot Width, Unit: 12 FT **Plot Length, Unit:** 25 FT **Reps:** 4
Site Type: FIELD
Tillage Type: CONVENTIONAL-TILL **Study Design:** RANDOMIZED COMPLETE BLOCK

SOIL DESCRIPTION

% Sand: 84 **% OM:** 1.97 **Texture:** Loamy sand
% Silt: 8 **pH:** 6.4 **Soil Name:** .
% Clay: 8 **CEC:** 0.

APPLICATION DESCRIPTION

	A
Application Date:	Apr-30-03
Time of Day:	12:00pm
Application Method:	Broadcast
Application Timing:	PRE
Applic. Placement:	on soil
Air Temp., Unit:	82 F
% Relative Humidity:	39
Wind Velocity, Unit:	3 mph
Dew Presence (Y/N):	n
Soil Temp., Unit:	83 F
Soil Moisture:	moist
% Cloud Cover:	20

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	GOSHI PRE
Stage Scale:	.
Height, Unit:	0. .

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WEED STAGE AT EACH APPLICATION

A	
Weed 1 Code, Stage:	COMBE PRE
Stage Scale:	.
Density, Unit:	. .

APPLICATION EQUIPMENT

A	
Appl. Equipment:	backpack
Operating Pressure:	23
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	18 inch
Nozzles/Row:	2
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	GOSHI	GOSHI	COMBE	COMBE	COMBE		
Crop Code		injury	injury	injury	control	control	control		
Rating Data Type		percent	percent	percent	percent	percent	percent		
Rating Unit									
Rating Date		May-23-03	Jun-05-03	Jun-26-03	May-23-03	Jun-05-03	Jun-26-03		
Trt-Eval Interval		23 DA-A	36 DA-A	57 DA-A	23 DA-A	36 DA-A	57 DA-A		
Trt	Treatment	Rate	Unit	1	2	3	4	5	6
1	Non-treated			0.0	0.0	0.0	0.0	0.0	0.0
2	Dual Magnum	1	pt/a	0.0	0.0	0.0	80.5	74.3	68.0
3	Dual Magnum	1.5	pt/a	0.0	0.0	0.0	94.5	93.8	84.0
4	Zorial	1.75	lb/a	0.0	0.0	0.0	10.0	12.5	12.5
5	Cotoran	2	pt/a	0.0	0.0	0.0	60.0	55.0	41.8
6	Direx	2	pt/a	0.0	0.0	0.0	30.0	36.3	20.8
7	Caparol	2	pt/a	0.0	0.0	0.0	31.3	41.3	30.0
8	Valor	1	oz/a	0.0	0.0	0.0	37.5	58.0	31.3
9	Valor	2	oz/a	0.0	0.0	0.0	41.0	72.0	43.8
10	Command	2	pt/a	0.0	0.0	0.0	60.0	76.3	66.8
11	Staple	0.8	oz/a	0.0	0.0	0.0	20.0	21.3	20.0
12	Cotoran	2	pt/a	0.0	0.0	0.0	55.0	68.8	48.8
	Zorial	1.25	lb/a						
	LSD (P=.05)			0.00	0.00	0.00	10.58	10.40	9.10
	Standard Deviation			0.00	0.00	0.00	7.33	7.20	6.30
	CV			0.0	0.0	0.0	16.91	14.19	16.17
	Bartlett's X2			0.0	0.0	0.0	17.827	9.138	8.854
	P(Bartlett's X2)			.	.	.	0.023*	0.519	0.546

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

Trial Comments

OBJECTIVE: Determine which cotton herbicides have the most effective residual activity on spiderwort.

RESULTS:

Visual cotton response:

1. No treatment visually injured cotton at any time throughout the study.

Spiderwort response:

1. Dual Magnum was clearly the most effective treatment. Additionally the 1.5 pt/A of Dual Mag was 14 to 16% more effective than 1 pt/A.
2. Following Dual, Command, Cotoran, Cotoran + Zorial and Valor at 2 oz/aprovided 41 to 67% control throughout the season.
3. Staple or Zorial PRE were the least effective treatments.