

University of Georgia

Large tropical spiderwort response to lay-by herbicide treatments.

Trial ID: C57-03
Location: Cairo

Study Dir.:
Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Tim Flanders **Title:** Ext. Agent
Affiliation: University of Georgia
Postal Code: 31794
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:** fair
Postal Code: . **Initiation Date:** Oct-31-03
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: none no crop **Variety:** .
Planting Date: Oct-31-03 **Planting Method:** .
Rate: 0. **Depth:** 0. **Perennial Age:** 0.
Row Spacing: 0. **Spacing Within Row:** 0. **Seed Bed:** .
Soil Temperature: 0. **Soil Moisture:** .

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

SOIL DESCRIPTION

% Sand: 84 **% OM:** 1.88 **Texture:** Loamy Sand
% Silt: 8 **pH:** 6.0
% Clay: 8

APPLICATION DESCRIPTION

A	
Application Date:	Oct-31-03
Time of Day:	10 am
Application Method:	broadcast
Application Timing:	POST
Applic. Placement:	overtop
Air Temp., Unit:	64 F
% Relative Humidity:	0.
Wind Velocity, Unit:	2 mph
Dew Presence (Y/N):	y
Soil Temp., Unit:	66 F
Soil Moisture:	wet
% Cloud Cover:	85

CROP STAGE AT EACH APPLICATION

A	
Crop 1 Code, Stage:	none .
Stage Scale:	.
Height, Unit:	0. .

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WEED STAGE AT EACH APPLICATION

A	
Weed 1 Code, Stage:	COMBE POST
Stage Scale:	up to 6"
Density, Unit:	25 ydsq

APPLICATION EQUIPMENT

A	
Appl. Equipment:	backpack
Operating Pressure:	22
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	18 inch
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		COMBE	COMBE
Rating Data Type		control	control
Rating Unit		percent	percent
Rating Date		Nov-07-03	Nov-14-03
Trt-Eval Interval		7 DA-A	14 DA-A
Trt No.	Treatment Name	Rate	Unit
		1	2
1	Non-treated	0.0	0.0
2	WeatherMax	22 oz/a	26.8
3	WeatherMax Aim	22 oz/a 0.75 oz/a	93.3
4	WeatherMax ET751	22 oz/a 0.75 oz/a	51.3
5	WeatherMax Valor	22 oz/a 1 oz/a	66.0
6	Direx MSMA	2 pt/a 2.5 pt/a	64.5
7	Caparol MSMA	2 pt/a 2.5 pt/a	67.5
8	Linex MSMA	2 pt/a 2.5 pt/a	67.0
9	Direx MSMA Aim	2 pt/a 2.5 pt/a 1 oz/a	83.0
10	Direx MSMA ET751	2 pt/a 2.5 pt/a 0.75 oz/a	68.3
11	Aim COC	1.5 oz/a 1 % v/v	91.3
12	ET751 COC	1.5 oz/a 1 % v/v	49.3
13	Cobra COC	12 oz/a 1 % v/v	79.3
14	Liberty	32 oz/a	76.0
15	MSMA	2.5 pt/a	58.3
16	2,4-D	1 pt/a	37.5
17	MCPA	1 pt/a	42.5
18	WeatherMax	44 oz/a	36.3
19	AEF130060 01 MSO	18.22 g ai/a 4 pt/a	30.8
20	Goal COC	1.5 pt/a 1 % v/v	69.0
	LSD (P=.05)	9.27	11.95
	Standard Deviation	6.56	8.45
	CV	11.33	14.01
	Bartlett's X2	34.115	30.74
	P(Bartlett's X2)	0.012*	0.031*

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

Trial Comments

OBJECTIVE: Determine the most effective cotton herbicide options for controlling 6 inch spiderwort.

1) At 1 WAT, the top three treatments included either Aim alone or mixed with glyphosate or Direx + MSMA. No differences between Linex, Direx, and Caparol were noted. Control by WeatherMax, ET 751 combinations, RU + Valor, MSMA, 2,4-D, MCPA, and Goal were poor at this time. Fair control by Liberty was noted at this time.

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2) At 2 WAT, Aim treatments and MSMA + Direx, Caparol, or Linex treatments were generally the most effective options. Poor control was noted with most other treatments.

CONCLUSIONS:

- 1) Aim was extremely effective.
- 2) ET 751 was much less effective than Aim.
- 3) MSMA mixed with Direx, Linex, or Caparol provided good control.
- 4) Liberty provided a significant "burn" at 5 to 7 DAT but regrowth occurs within 10 days of application.
- 5) Control by 2,4-D and MCPA can not be judged in this trial as other work has shown that it takes at least 4 wks for these products to control spiderwort.

GENERAL COMMENTS:

- 1) A light frost occurred on Oct 14 and the study was destroyed.