

University of Georgia

Tropical spiderwort response to conventional programs and cultivation.

Trial ID: C28-05
 Location: Grady County

Study Dir.: Stanley Culpepper
 Investigator: Stanley Culpepper

Reps: 4 Plots: 12 by 25 feet
 Spray vol: 14.8 gal/ac Mix size: 1.5 liters (min 1.5434)

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Grow Stg	Appl Code	Amt to Measure	Product	Plot No. By Rep			
										1	2	3	4
1	Prowl	3.3	EC	2	pt/a	PRE	A	25.34 ml/mx		101	207	306	406
	Direx	4	L	2	pt/a	PRE	A	25.34 ml/mx					
	Cotoran	4	L	2	pt/a	EPD	B	25.34 ml/mx					
	MSMA	6	L	2	lb ai/a	EPD	B	33.78 ml/mx					
	NIS		L	0.25	% v/v	EPD	B	3.75 ml/mx					
	Direx	4	L	2	pt/a	LPD	C	25.34 ml/mx					
	MSMA	6	L	2	lb ai/a	LPD	C	33.78 ml/mx					
	NIS		L	0.25	% v/v	LPD	C	3.75 ml/mx					
	NO CULTIVATION												
2	Prowl	3.3	EC	2	pt/a	PRE	A	25.34 ml/mx		102	203	305	405
	Direx	4	L	2	pt/a	PRE	A	25.34 ml/mx					
	Cotoran	4	L	2	pt/a	EPD	B	25.34 ml/mx					
	MSMA	6	L	2	lb ai/a	EPD	B	33.78 ml/mx					
	NIS		L	0.25	% v/v	EPD	B	3.75 ml/mx					
	Direx	4	L	2	pt/a	LPD	C	25.34 ml/mx					
	MSMA	6	L	2	lb ai/a	LPD	C	33.78 ml/mx					
	NIS		L	0.25	% v/v	LPD	C	3.75 ml/mx					
	CULTIVATION (BAND EPD)												
3	Prowl	3.3	EC	2	pt/a	PRE	A	25.34 ml/mx		103	204	303	403
	Cotoran	4	L	2	pt/a	PRE	A	25.34 ml/mx					
	Cotoran	4	L	2	pt/a	EPD	B	25.34 ml/mx					
	MSMA	6	L	2	lb ai/a	EPD	B	33.78 ml/mx					
	NIS		L	0.25	% v/v	EPD	B	3.75 ml/mx					
	Direx	4	L	2	pt/a	LPD	C	25.34 ml/mx					
	MSMA	6	L	2	lb ai/a	LPD	C	33.78 ml/mx					
	NIS		L	0.25	% v/v	LPD	C	3.75 ml/mx					
	NO CULTIVATION												
4	Prowl	3.3	EC	2	pt/a	PRE	A	25.34 ml/mx		104	206	307	407
	Cotoran	4	L	2	pt/a	PRE	A	25.34 ml/mx					
	Cotoran	4	L	2	pt/a	EPD	B	25.34 ml/mx					
	MSMA	6	L	2	lb ai/a	EPD	B	33.78 ml/mx					
	NIS		L	0.25	% v/v	EPD	B	3.75 ml/mx					
	Direx	4	L	2	pt/a	LPD	C	25.34 ml/mx					
	MSMA	6	L	2	lb ai/a	LPD	C	33.78 ml/mx					
	NIS		L	0.25	% v/v	LPD	C	3.75 ml/mx					
	CULTIVATION (BAND EPD)												
5	Prowl	3.3	EC	2	pt/a	PRE	A	25.34 ml/mx		105	202	304	404
	Direx	4	L	2	pt/a	PRE	A	25.34 ml/mx					
	Cotoran	4	L	2	pt/a	EPD	B	25.34 ml/mx					
	MSMA	6	L	2	lb ai/a	EPD	B	33.78 ml/mx					
	NIS		L	0.25	% v/v	EPD	B	3.75 ml/mx					
	Direx	4	L	2	pt/a	LPD	C	25.34 ml/mx					
	MSMA	6	L	2	lb ai/a	LPD	C	33.78 ml/mx					
	Dual Magnum	7.62	L	1	pt/a	LPD	C	12.67 ml/mx					
	NIS		L	0.25	% v/v	LPD	C	3.75 ml/mx					
NO CULTIVATION													

University of Georgia

Reps: 4 Plots: 12 by 25 feet
 Spray vol: 14.8 gal/ac Mix size: 1.5 liters (min 1.5434)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt to Measure	Product	Plot No. By Rep				
										1	2	3	4	
6	Prowl	3.3	EC	2	pt/a	PRE	A	25.34 ml/mx		106	205	301	401	
	Direx	4	L	2	pt/a	PRE	A	25.34 ml/mx						
	Cotoran	4	L	2	pt/a	EPD	B	25.34 ml/mx						
	MSMA	6	L	2	lb ai/a	EPD	B	33.78 ml/mx						
	NIS		L	0.25	% v/v	EPD	B	3.75 ml/mx						
	Direx	4	L	2	pt/a	LPD	C	25.34 ml/mx						
	MSMA	6	L	2	lb ai/a	LPD	C	33.78 ml/mx						
	Dual Magnum	7.62	L	0.5	pt/a	LPD	C	6.334 ml/mx						
	NIS		L	0.25	% v/v	LPD	C	3.75 ml/mx						
	CULTIVATION (BAND EPD)													
7	Prowl	3.3	EC	2	pt/a	PRE	A	25.34 ml/mx		107	201	302	402	
	Roundup WeatherMax	4.5	L	22	oz/a	EPOST	B	17.42 ml/mx						
	Dual Magnum	7.62	L	12	oz/a	EPOST	B	9.502 ml/mx						
	Roundup WeatherMax	4.5	L	22	oz/a	LPD	C	17.42 ml/mx						
	Dual Magnum	7.62	L	12	oz/a	LPD	C	9.502 ml/mx						
	Direx	4	L	1.5	pt/a	LPD	C	19.0 ml/mx						
	NO CULTIVATION													

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Lot Code
221.683	ml	Prowl 3.3 EC	
340.441	ml	Direx 4 L	
253.352	ml	Cotoran 4 L	
506.703	ml	MSMA 6 L	
56.244	ml	NIS L	
47.506	ml	Dual Magnum 7.62 L	
43.550	ml	Roundup WeatherMax 4.5 L	

- * 'Per area' calculations based on spray volume= 14.8 gal/ac, mix size= 1.5 liters (mix size basis).
- * Product amount calculations increased 25 % for overage adjustment.
- * 'Per volume' calculations use spray volume= 14.8 gal/ac, mix size= 1.5 liters.

Trial Comments

OBJECTIVE: Compare herbicides plus cultivation to broadcast herbicides for the control of tropical spiderwort.

Spiderwort Response:

1. Prior to the layby application, there were no real differences when comparing Direx vs. Cotoran applied PRE as well as cultivated vs. not cultivated at the early directed application.
2. At 6 d after the layby application, control was excellent with all programs.
3. Late in the season, control was excellent by all programs except for one which included Direx PRE with cultivation at early POST and no Dual Magnum at layby.
4. The glyphosate + metolachlor program provided excellent season long control.

CONCLUSION:

1. If one wants to cultivate, then either Cotoran PRE or Dual Magnum at layby will be beneficial in a conventional program.

GENERAL COMMENTS:

1. Banded application with cultivation was implemented by banding the herbicide application followed immediately by cultivation.

University of Georgia

Tropical spiderwort response to conventional programs and cultivation.

Trial ID: C28-05

Study Dir.: Stanley Culpepper

Location: Grady County

Investigator: Stanley Culpepper

Weed Code		COMBE	COMBE	COMBE	COMBE	COMBE	
Rating Data Type		control	control	control	control	control	
Rating Unit		percent	percent	percent	percent	percent	
Rating Date		Jun-24-05	Jul-06-05	Jul-12-05	Aug-03-05	Sep-05-05	
Trt-Eval Interval		43 DA-A	55 DA-A	61 DA-A	83 DA-A	116 DA-A	
Trt No.	Treatment Name	Rate					
		Rate Unit	1	2	3	4	5
1	Prowl	2 pt/a	96	80	95	94	94
	Direx	2 pt/a					
	Cotoran	2 pt/a					
	MSMA	2 lb ai/a					
	NIS	0.25 % v/v					
	Direx	2 pt/a					
	MSMA	2 lb ai/a					
	NIS	0.25 % v/v					
	NO CULTIVATION						
2	Prowl	2 pt/a	88	70	99	91	82
	Direx	2 pt/a					
	Cotoran	2 pt/a					
	MSMA	2 lb ai/a					
	NIS	0.25 % v/v					
	Direx	2 pt/a					
	MSMA	2 lb ai/a					
	NIS	0.25 % v/v					
	CULTIVATION (BAND EPD)						
3	Prowl	2 pt/a	97	86	99	95	97
	Cotoran	2 pt/a					
	Cotoran	2 pt/a					
	MSMA	2 lb ai/a					
	NIS	0.25 % v/v					
	Direx	2 pt/a					
	MSMA	2 lb ai/a					
	NIS	0.25 % v/v					
	NO CULTIVATION						
4	Prowl	2 pt/a	93	77	99	92	97
	Cotoran	2 pt/a					
	Cotoran	2 pt/a					
	MSMA	2 lb ai/a					
	NIS	0.25 % v/v					
	Direx	2 pt/a					
	MSMA	2 lb ai/a					
	NIS	0.25 % v/v					
	CULTIVATION (BAND EPD)						
5	Prowl	2 pt/a	93	74	99	99	99
	Direx	2 pt/a					
	Cotoran	2 pt/a					
	MSMA	2 lb ai/a					
	NIS	0.25 % v/v					
	Direx	2 pt/a					
	MSMA	2 lb ai/a					
	Dual Magnum	1 pt/a					
	NIS	0.25 % v/v					
	NO CULTIVATION						

University of Georgia

Weed Code			COMBE	COMBE	COMBE	COMBE	COMBE
Rating Data Type			control	control	control	control	control
Rating Unit			percent	percent	percent	percent	percent
Rating Date			Jun-24-05	Jul-06-05	Jul-12-05	Aug-03-05	Sep-05-05
Trt-Eval Interval			43 DA-A	55 DA-A	61 DA-A	83 DA-A	116 DA-A
Trt No.	Treatment Name	Rate Rate Unit	1	2	3	4	5
6	Prowl	2 pt/a	99	82	99	99	99
	Direx	2 pt/a					
	Cotoran	2 pt/a					
	MSMA	2 lb ai/a					
	NIS	0.25 % v/v					
	Direx	2 pt/a					
	MSMA	2 lb ai/a					
	Dual Magnum	0.5 pt/a					
	NIS	0.25 % v/v					
	CULTIVATION (BAND EPD)						
7	Prowl	2 pt/a	99	94	99	99	99
	Roundup WeatherMax	22 oz/a					
	Dual Magnum	12 oz/a					
	Roundup WeatherMax	22 oz/a					
	Dual Magnum	12 oz/a					
	Direx	1.5 pt/a					
	NO CULTIVATION						
LSD (P=.05)			5.5	12.4	4.8	7.5	6.5
Standard Deviation			3.7	8.3	3.2	5.0	4.4
CV			3.93	10.4	3.27	5.28	4.58

Means followed by same letter do not significantly differ (P=.05, LSD)

University of Georgia

Tropical spiderwort response to conventional programs and cultivation.

Trial ID: C28-05 Study Dir.: Stanley Culpepper
Location: Grady County Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Stanley Culpepper **Title:** Ext. Weed Science
Affiliation: Univ. of Georgia
Postal Code: 31794
Investigator: Tim Flanders **Title:** Extension
Affiliation: Univ. of Georgia
Postal Code: 31794

TRIAL LOCATION

City: Grady County **Trial Status:** completed
State/Prov.: GA **Trial Reliability:** excellent
Postal Code: 31794 **Initiation Date:** May-12-05
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.	COMBE	tropical spiderwort	

Crop 1: GOSHI cotton **Variety:** DP 555 B/RR
Planting Date: May-12-05 **Planting Method:** seeded
Rate: 3 14inch **Depth:** 0.5 in **Perennial Age:** _____
Row Spacing: 36 inch **Spacing Within Row:** 3 14 in **Seed Bed:** bedded
Soil Temperature: 97 F **Soil Moisture:** fair **Emergence Date:** May-17-05

SITE AND DESIGN

Plot Width, Unit: 12 FT **Plot Length, Unit:** 25 FT **Reps:** 4
Site Type: research station
Tillage Type: conventional **Study Design:** RANDOMIZED COMPLETE BLOCK

Trial Initiation Comments:

	Previous Crops	Previous Pesticides	Year
1.			

MAINTENANCE

Field Prep./Maintenance:

University of Georgia

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

SOIL DESCRIPTION

% Sand: 80 % OM: 2.1 Texture: loamy sand
 % Silt: 12 pH: 5.9 Soil Name: _____
 % Clay: 8 CEC: _____ Fert. Level: _____

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: irrigated

Closest Weather Station: _____ Distance: _____ Unit: __

APPLICATION DESCRIPTION

	A	B	C
Application Date:	May-12-05	Jun-06-05	Jul-06-05
Time of Day:	2 pm	9 am	10 am
Application Method:	broadcast	broadcast	broadcast
Application Timing:	PRE	EPD/EPOST	LPD
Applic. Placement:	on soil	dir/overt	directed
Air Temp., Unit:	86 F	88 F	78 F
% Relative Humidity:	49	48	72
Wind Velocity, Unit:	4 mph	3 mph	2 mph
Dew Presence (Y/N):	n	y	n
Water Hardness:			
Soil Temp., Unit:	97 F	92 F	90 F
Soil Moisture:	fair	moist	wet
% Cloud Cover:	0	20	100

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	GOSHI PRE	GOSHI EP	GOSHI LPD
Stage Scale:	not up	5 leaf	12-14 lf
Height, Unit:	0 inch	5 inch	24 inch

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code, Stage:	COMBE PRE	COMBE EP	COMBE LPD
Stage Scale:	not up	< 1 inch	<6 inch
Density, Unit:	0 ydsq	50 ydsq	100 ydsq

University of Georgia

APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	backpack	backpack	backpack
Operating Pressure:	23	23/18	18
Nozzle Type:	flat fan	flat fan	flat fan
Nozzle Size:	11002	11002	11002
Nozzle Spacing, Unit:	18 inch		12 inch
Nozzles/Row:	2		3
Band Width, Unit:			
Boom Length, Unit:	4.5 feet		2 feet
Boom Height, Unit:	15 inch		12 inch
Ground Speed, Unit:	3 mph	3 mph	3 mph
Incorporation Equip.:			
Hours to Incorp.:			
Incorp. Depth, Unit:			
Carrier:	water	water	water
Spray Volume, Unit:	14.8 GPA	14.8 GPA	14.8 GPA
Spray pH:			
Propellant:	CO2	CO2	CO2
Tank Mix (Y/N):	Y	Y	Y

Trt No	Treatment Application Comment