

University of Georgia

Tropical spiderwort response to RR Flex programs.

Trial ID: C14-03
Location: Grady Co Loc 2

Study Dir.: Culpepper, York
Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Culpepper **Title:** ext. weed science
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 (location 2) **Trial Status:** completed
State/Prov.: Ga **Trial Reliability:** good
Postal Code: . **Initiation Date:** May-06-03
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	Wanderingjew, Bengal	Commelina benghalensis
2.	DEDTO	Florida beggarweed	Desmodium tortuosum
3.	ACNHI	Starbur, bristly	Acanthospermum hispidum

Crop 1: GOSHI cotton **Variety:** DP 5690 RR
Planting Date: May-06-03 **Planting Method:** conventional
Rate: 3 seed/ft **Depth:** 0.5 in
Row Spacing: 36 inch **Spacing Within Row:** 4 inch **Seed Bed:** bedded
Soil Temperature: 72 F **Soil Moisture:** fair **Emergence Date:** May-11-03

SITE AND DESIGN

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

SOIL DESCRIPTION

% Sand: 0. **% OM:** 0. **Texture:** .
% Silt: 0. **pH:** 0. **Soil Name:** .
% Clay: 0. **CEC:** 0. **Fert. Level:** .

Overall Moisture Conditions: wet

APPLICATION DESCRIPTION

	A	B	C	D
Application Date:	May-06-03	May-25-03	Jun-10-03	Jun-21-03
Time of Day:	3 pm	2 pm	1 pm	12 pm
Application Method:	broadcast	broadcast	broadcast	brodcast
Application Timing:	PRE	POT 1	POT 2	SPDIR
Applic. Placement:	on soil	overtop	overtop	directed
Air Temp., Unit:	75 F	85 F	89 F	84 F
% Relative Humidity:	35	44	47	57
Wind Velocity, Unit:	2 mph	2 mph	1 mph	2 mph
Dew Presence (Y/N):	n	n	n	n
Soil Temp., Unit:	71 F	84 F	88 F	86 F
Soil Moisture:	fair	moist	wet	moist
% Cloud Cover:	70	25	25	0

CROP STAGE AT EACH APPLICATION

	A	B	C	D
Crop 1 Code, Stage:	GOSHI PRE	GOSHI POT1	GOSHI POT2	GOSHI SPDIR
Stage Scale:	.	V1-V2	V5-V7	V9-V10
Height, Unit:	0. .	3 inch	8.5 inch	20 inch

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WEED STAGE AT EACH APPLICATION

	A	B	C	D
Weed 1 Code, Stage:	COMBE PRE	COMBE POT1	COMBE POT2	COMBE SPDIR
Stage Scale:	.	<1 inch	3-5 inch	<6 inch
Density, Unit:	. .	25 ydsq	40 ydsq	40 ydsq
Weed 2 Code, Stage:	DEDTO PRE	DEDTO POT1	DEDTO POT2	DEDTO SPDIR
Stage Scale:	.	<1 inch	3-4 inch	<2 inch
Density, Unit:	. .	2 ydsq	2 ydsq	2 ydsq
Weed 3 Code, Stage:	ACNHI PRE	ACNHI POT1	ACNHI POT2	ACNHI SPDIR
Stage Scale:	.	<1 inch	3-4 inch	<2 inch
Density, Unit:	. .	5 ydsq	6 ydsq	2 ydsq

APPLICATION EQUIPMENT

	A	B	C	D
Appl. Equipment:	backpack	backpack	backpack	backpack
Operating Pressure:	22	22	22	18
Nozzle Type:	flat	flat	flat	flat
Nozzle Size:	fan	fan	fan	fan
Nozzle Spacing, Unit:	18 inch	18 inch	18 inch	12 inch
Nozzles/Row:	2	2	2	3
Boom Length, Unit:	4.5 feet	4.5 feet	4.5 feet	2 feet
Boom Height, Unit:	15 inch	15 inch	15 inch	12 inch
Ground Speed, Unit:	3 mph	3 mph	3 mph	3 mph
Carrier:	water	water	water	water
Spray Volume, Unit:	14.8 GPA	14.8 GPA	14.8 GPA	14.8 GPA
Propellant:	CO2	CO2	CO2	CO2
Tank Mix (Y/N):	Y	Y	Y	Y

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Study Dir.: Culpepper, York

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Weed Code			GOSHI	GOSHI	GOSHI	COMBE	COMBE	COMBE	COMBE
Crop Code			injury	injury	injury	control	control	control	control
Rating Data Type			percent	percent	percent	percent	percent	percent	percent
Rating Unit			Jun-10-03	Jun-21-03	Jul-11-03	Jun-21-03	Jun-26-03	Jul-27-03	Oct-04-03
Rating Date						11 DA-A	16 DA-A	47 DA-A	47 DA-A
Trt-Eval Interval									
Trt Treatment	Rate	Rate							
No. Name	Rate	Unit	1	2	3	4	5	6	7
1 Prowl	2	pt/a	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2 Prowl	2	pt/a	0.0	0.0	0.0	76.0	79.7	78.3	56.7
Roundup WeatherMax	0.75	lb ai/a							
Roundup WeatherMax	0.75	lb ai/a							
Roundup WeatherMax	0.75	lb ai/a							
3 Prowl	2	pt/a	0.0	0.0	0.0	76.0	81.0	78.0	87.3
Roundup WeatherMax	1.125	lb ai/a							
Roundup WeatherMax	1.125	lb ai/a							
Roundup WeatherMax	1.125	lb ai/a							
4 Prowl	2	pt/a	0.0	0.0	0.0	83.3	88.0	90.0	94.3
Roundup WeatherMax	1.5	lb ai/a							
Roundup WeatherMax	1.5	lb ai/a							
Roundup WeatherMax	1.5	lb ai/a							
5 Prowl	2	pt/a	0.0	0.0	0.0	94.3	90.7	90.3	98.7
Roundup WeatherMax	3	lb ai/a							
Roundup WeatherMax	3	lb ai/a							
Roundup WeatherMax	3	lb ai/a							
LSD (P=.05)			0.00	0.00	0.00	9.66	4.27	8.12	40.06
Standard Deviation			0.00	0.00	0.00	5.13	2.27	4.31	21.28
CV			0.0	0.0	0.0	7.78	3.34	6.41	31.57
Bartlett's X2			0.0	0.0	0.0	3.758	0.99	2.728	20.672
P(Bartlett's X2)			.	.	.	0.289	0.804	0.435	0.001*

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

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Weed Code				ACHNI	ACHNI	ACHNI	ACHNI	DEDTO	DEDTO	DEDTO
Crop Code										
Rating Data Type				control	control	control	control	control	control	control
Rating Unit				percent	percent	percent	percent	percent	percent	percent
Rating Date				Jun-21-03	Jun-26-03	Jul-27-03	Oct-04-03	Jun-21-03	Jun-26-03	Jul-27-03
Trt-Eval Interval										
Trt No.	Treatment Name	Rate	Unit	8	9	10	11	12	13	14
1	Prowl	2	pt/a	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Prowl	2	pt/a	93.3	100.0	100.0	93.3	100.0	100.0	100.0
	Roundup WeatherMax	0.75	lb ai/a							
	Roundup WeatherMax	0.75	lb ai/a							
	Roundup WeatherMax	0.75	lb ai/a							
3	Prowl	2	pt/a	93.3	100.0	100.0	93.3	100.0	100.0	100.0
	Roundup WeatherMax	1.125	lb ai/a							
	Roundup WeatherMax	1.125	lb ai/a							
	Roundup WeatherMax	1.125	lb ai/a							
4	Prowl	2	pt/a	96.7	100.0	100.0	96.7	100.0	100.0	100.0
	Roundup WeatherMax	1.5	lb ai/a							
	Roundup WeatherMax	1.5	lb ai/a							
	Roundup WeatherMax	1.5	lb ai/a							
5	Prowl	2	pt/a	96.3	100.0	100.0	96.3	100.0	100.0	100.0
	Roundup WeatherMax	3	lb ai/a							
	Roundup WeatherMax	3	lb ai/a							
	Roundup WeatherMax	3	lb ai/a							
LSD (P=.05)				9.04	0.00	0.00	9.04	0.00	0.00	0.00
Standard Deviation				4.80	0.00	0.00	4.80	0.00	0.00	0.00
CV				6.32	0.0	0.0	6.32	0.0	0.0	0.0
Bartlett's X2				1.396	0.0	0.0	1.396	0.0	0.0	0.0
P(Bartlett's X2)				0.707	.	.	0.707	.	.	.

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

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Weed Code	DEDTO		
Crop Code			
Rating Data Type	control		
Rating Unit	percent		
Rating Date	Oct-04-03		
Trt-Eval Interval			
Trt No.	Treatment Name	Rate	Unit
			15
1	Prowl	2	pt/a
			0.0
2	Prowl	2	pt/a
	Roundup WeatherMax	0.75	lb ai/a
	Roundup WeatherMax	0.75	lb ai/a
	Roundup WeatherMax	0.75	lb ai/a
			100.0
3	Prowl	2	pt/a
	Roundup WeatherMax	1.125	lb ai/a
	Roundup WeatherMax	1.125	lb ai/a
	Roundup WeatherMax	1.125	lb ai/a
			100.0
4	Prowl	2	pt/a
	Roundup WeatherMax	1.5	lb ai/a
	Roundup WeatherMax	1.5	lb ai/a
	Roundup WeatherMax	1.5	lb ai/a
			100.0
5	Prowl	2	pt/a
	Roundup WeatherMax	3	lb ai/a
	Roundup WeatherMax	3	lb ai/a
	Roundup WeatherMax	3	lb ai/a
			100.0
LSD (P=.05)			0.00
Standard Deviation			0.00
CV			0.0
Bartlett's X2			0.0
P(Bartlett's X2)			.

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

Trial Comments

OBJECTIVE: Evaluate Roundup Ready Flex programs for the control of tropical spiderwort.

CROP TOLERANCE:

1) No visual injury was detected by any herbicide treatment.

WEED CONTROL:

Tropical spiderwort:

- 1) Control was 11 to 18% greater with 3 lb ai/A of glyphosate than with 1.5, 1.125, or 0.75 lb ai of glyphosate at 11 days after the POT 2 application.
- 2) By mid-season (36 d after SPDIR), control with the 1.5 or 3 lb ai glyphosate program was greater than that of the 0.75 or 1.125 lb ai glyphosate program.
- 3) In contrast to C13-03, excellent late-season control was noted with the 1.5 or 3 lb ai glyphosate programs. For some unknown reason spiderwort did not continue to emerge after the SPDIR application. This is interesting and quite contrary to normal spiderwort emergence patterns.
- 4) Cotton was not picked because it was not Flex technology.
- 5) Flex technology will not be the answer to controlling this pest; HOWEVER, the ability to use higher rates of glyphosate with greater weed coverage later in the season in combination with residual herbicides will be beneficial

Bristly Starbur:

1) Excellent control was noted throughout the season.

Florida Beggarweed:

1) Excellent control was noted throughout the season.