

University of Georgia

Cotton and weed response to Reflex and Caparol applied PRE.

Trial ID: C42-05

Study Dir.: Stanely Culpepper

Location: Attapulgus (new)

Investigator: Stanley Culpepper

Reps: 3

Plots: 9 by 25 feet

Spray vol: 14.8 gal/ac

Mix size: 1 liters (min .86814)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code	Amt Product to Measure	Plot No. By Rep		
									1	2	3
1	Non-treated								101	210	302
2	Caparol	4 L		1 lb ai/a		PRE	A	16.89 ml/mx	102	213	309
3	Caparol	4 L		1.25 lb ai/a		PRE	A	21.11 ml/mx	103	211	310
4	Caparol	4 L		1.5 lb ai/a		PRE	A	25.34 ml/mx	104	207	311
5	Reflex	2 L		0.185 lb ai/a		PRE	A	6.249 ml/mx	105	204	308
6	Reflex	2 L		0.25 lb ai/a		PRE	A	8.445 ml/mx	106	205	314
7	Reflex	2 L		0.37 lb ai/a		PRE	A	12.5 ml/mx	107	206	305
8	Caparol Reflex	4 L 2 L		1 lb ai/a 0.185 lb ai/a		PRE PRE	A A	16.89 ml/mx 6.249 ml/mx	108	203	301
9	Caparol Reflex	4 L 2 L		1 lb ai/a 0.25 lb ai/a		PRE PRE	A A	16.89 ml/mx 8.445 ml/mx	109	216	306
10	Caparol Reflex	4 L 2 L		1 lb ai/a 0.37 lb ai/a		PRE PRE	A A	16.89 ml/mx 12.5 ml/mx	110	208	316
11	Caparol Reflex	4 L 2 L		1.25 lb ai/a 0.185 lb ai/a		PRE PRE	A A	21.11 ml/mx 6.249 ml/mx	111	212	313
12	Caparol Reflex	4 L 2 L		1.25 lb ai/a 0.25 lb ai/a		PRE PRE	A A	21.11 ml/mx 8.445 ml/mx	112	202	304
13	Caparol Reflex	4 L 2 L		1.25 lb ai/a 0.25 lb ai/a		PRE PRE	A A	21.11 ml/mx 8.445 ml/mx	113	214	312
14	Cotoran Prowl H20	4 L 3.8 L		1 lb ai/a 0.93 lb ai/a		PRE PRE	A A	16.89 ml/mx 16.53 ml/mx	114	201	307
15	Cotoran Prowl H20	4 L 3.8 L		1.5 lb ai/a 0.93 lb ai/a		PRE PRE	A A	25.34 ml/mx 16.53 ml/mx	115	209	315
16	Direx Prowl H20	4 L 3.8 L		1 lb ai/a 0.93 lb ai/a		PRE PRE	A A	16.89 ml/mx 16.53 ml/mx	116	215	303

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Lot Code
221.683	ml	Caparol 4 L	
96.907	ml	Reflex 2 L	
52.782	ml	Cotoran 4 L	
62.004	ml	Prowl H20 3.8 L	
21.113	ml	Direx 4 L	

* '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.

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Trial Comments

OBJECTIVE: Evaluate cotton and weed response to Caparol and Reflex applied PRE.

Cotton response:

- 1) Injury was greater than 5% only when Reflex at 0.37 lb ai/A was applied.
- 2) By 25 DAT, no real injury was detected.

WEED RESPONSE:

Palmer amaranth:

- 1) All Reflex programs provided excellent control throughout.
- 2) The data suggest excellent control was also provided by Caparol; however, the very poor grass control offered by Caparol likely impacted these results.

Texas panicum:

- 1) Panicum was by far and away the most dominate weed in the trial.
- 2) Even at only 14 DAT, Caparol provided very poor control regardless of rate.
- 3) Reflex was far more effective than Caparol applied alone; however, control by Reflex was only fair to good for 23 days with Reflex at or above 0.25 lb ai/A.
- 4) Mixing Caparol with Reflex improved control very little when Caparol was applied at 1 lb while control was moderately improved with 1.25 lb.
- 5) Cotoran + Prowl provided excellent control while Direx + Prowl provided good control.

Florida pusley:

- 1) Pusley was not evaluated at the final rating because grasses were so dense pusley could not be seen.
- 2) Reflex + Caparol, Direx + Prowl, and Cotoran + Prowl provided excellent control at 23 DAT.
- 3) Caparol alone provided only 83% with 1.5 lb at 23 DAT.
- 4) Reflex was more effective than Caparol and excellent control was noted with 0.25 lb ai.
- 5) Control by both Caparol and Reflex alone are greater than normal because of the Texas panicum shading out the Florida pusley.

CONCLUSIONS:

- 1) Reflex in cotton would be a wonderful asset to growers.
- 2) Reflex mixed with Cotoran, Direx, or Prowl would likely be a better fit for Georgia growers as compared to Caparol + Reflex.

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Trial ID: C42-05

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	GOSHI injury percent May-25-05 14 DA-A	GOSHI injury percent Jun-03-05 23 DA-A	AMAPA control percent May-25-05 14 DA-A	AMAPA control percent Jun-03-05 23 DA-A	AMAPA control percent Jun-24-05 44 DA-A	PANTE control percent May-25-05 14 DA-A	PANTE control percent Jun-03-05 23 DA-A	PANTE control percent Jun-24-05 44 DA-A
Trt No.	Treatment Name	Rate	Rate Unit			1	2	3	4	5	6	7	8
1	Non-treated					0	0	0	0	0	0	0	0
2	Caparol	1 lb ai/a				0	0	99	90	87	42	45	15
3	Caparol	1.25 lb ai/a				0	0	99	92	90	47	52	15
4	Caparol	1.5 lb ai/a				0	0	99	95	100	48	49	12
5	Reflex	0.185 lb ai/a				0	0	99	99	100	75	72	28
6	Reflex	0.25 lb ai/a				4	0	99	98	100	93	88	57
7	Reflex	0.37 lb ai/a				11	0	99	99	100	96	95	67
8	Caparol Reflex	1 lb ai/a 0.185 lb ai/a				3	0	99	99	100	90	85	37
9	Caparol Reflex	1 lb ai/a 0.25 lb ai/a				0	1	99	99	100	95	88	57
10	Caparol Reflex	1 lb ai/a 0.37 lb ai/a				11	0	99	99	100	98	98	82
11	Caparol Reflex	1.25 lb ai/a 0.185 lb ai/a				0	0	99	99	100	88	84	46
12	Caparol Reflex	1.25 lb ai/a 0.25 lb ai/a				2	4	99	99	100	98	97	70
13	Caparol Reflex	1.25 lb ai/a 0.25 lb ai/a				8	3	99	99	100	99	98	87
14	Cotoran Prowl H20	1 lb ai/a 0.93 lb ai/a				0	0	99	99	100	97	95	91
15	Cotoran Prowl H20	1.5 lb ai/a 0.93 lb ai/a				0	0	99	99	100	98	94	91
16	Direx Prowl H20	1 lb ai/a 0.93 lb ai/a				0	0	99	99	100	94	88	83
LSD (P=.05)						2.6	2.7	0.3	3.0	2.4	13.1	14.4	18.8
Standard Deviation						1.6	1.6	0.2	1.8	1.4	7.8	8.6	11.3
CV						65.85	339.64	0.21	1.96	1.56	9.97	11.25	21.47

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

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Weed Code		RCHSC	RCHSC
Crop Code			
Rating Data Type		control	control
Rating Unit		percent	percent
Rating Date		May-25-05	Jun-03-05
Trt-Eval Interval		14 DA-A	23 DA-A
Trt No.	Treatment Name	Rate	Unit
		9	10
1	Non-treated	0	0
2	Caparol	1 lb ai/a	95
3	Caparol	1.25 lb ai/a	99
4	Caparol	1.5 lb ai/a	99
5	Reflex	0.185 lb ai/a	99
6	Reflex	0.25 lb ai/a	99
7	Reflex	0.37 lb ai/a	99
8	Caparol	1 lb ai/a	99
	Reflex	0.185 lb ai/a	97
9	Caparol	1 lb ai/a	99
	Reflex	0.25 lb ai/a	99
10	Caparol	1 lb ai/a	99
	Reflex	0.37 lb ai/a	99
11	Caparol	1.25 lb ai/a	99
	Reflex	0.185 lb ai/a	96
12	Caparol	1.25 lb ai/a	99
	Reflex	0.25 lb ai/a	99
13	Caparol	1.25 lb ai/a	99
	Reflex	0.25 lb ai/a	99
14	Cotoran	1 lb ai/a	99
	Prowl H20	0.93 lb ai/a	99
15	Cotoran	1.5 lb ai/a	99
	Prowl H20	0.93 lb ai/a	99
16	Direx	1 lb ai/a	99
	Prowl H20	0.93 lb ai/a	99
LSD (P=.05)		1.5	10.9
Standard Deviation		0.9	6.6
CV		0.95	7.49

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

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Trial ID: C42-05 Study Dir.: Stanely Culpepper
Location: Attapulgus (new) Investigator: Stanley Culpepper

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: Attapulgus **Trial Status:** completed
State/Prov.: GA **Trial Reliability:** excellent
Postal Code: _____ **Initiation Date:** May-11-05
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.	AMAPA	Palmer amaranth	
2.	PANTE	Texas panicum	
3.	RCHSC	Florida pusley	

Crop 1: GOSHI cotton **Variety:** DP 555 B/RR
Planting Date: May-11-05 **Planting Method:** seeded
Rate: 3 per ft **Depth:** 0.5 in **Perennial Age:** ____
Row Spacing: 36 inch **Spacing Within Row:** 4 inch **Seed Bed:** flat
Soil Temperature: 82 F **Soil Moisture:** irrigated **Emergence Date:** May-15-05

SITE AND DESIGN

Plot Width, Unit: 9 FT **Plot Length, Unit:** 25 FT **Reps:** 3
Site Type: research station
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: 84	% OM: 1.3	Texture: loamy sand
% Silt: 8	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
Application Date:	May-11-05
Time of Day:	11 am
Application Method:	broadcast
Application Timing:	PRE
Applic. Placement:	on soil
Air Temp., Unit:	82 F
% Relative Humidity:	57
Wind Velocity, Unit:	3 mph
Dew Presence (Y/N):	n
Water Hardness:	
Soil Temp., Unit:	84 F
Soil Moisture:	irrigated
% Cloud Cover:	0

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	GOSHI PRE
Stage Scale:	not up
Height, Unit:	0 inch

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WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	AMAPA PRE
Stage Scale:	not up
Density, Unit:	6 ydsq
Weed 2 Code, Stage:	PANTE PRE
Stage Scale:	not up
Density, Unit:	22 ydsq
Weed 3 Code, Stage:	RCHSC PRE
Stage Scale:	not up
Density, Unit:	8 ydsq

APPLICATION EQUIPMENT

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

Trt No	Treatment Application Comment