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V-10204 applied PRE in RR cotton.

Trial ID: C46-07 Study Dir.: Stanley Culpepper
Location: Ponder Farm Investigator: Stanley Culpepper

Reps: 3 Plots: 6 by 25 feet
Spray vol: 14.8 gal/ac Mix size: 1 liters (min .57876)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Plot No. By Rep 1	2	3
1	Non-treated									101	202	303
2	V-10206	80		WG	0.053	LB A/A	PRE	A	0.5364 g/mx	102	208	302
3	V-10206	80		WG	0.106	LB A/A	PRE	A	1.073 g/mx	103	205	308
4	V-10206	80		WG	0.159	LB A/A	PRE	A	1.609 g/mx	104	207	306
5	V-10206	80		WG	0.213	LB A/A	PRE	A	2.156 g/mx	105	204	307
6	Prowl H20	3.8		L	1	LB A/A	PRE	A	17.78 ml/mx	106	209	309
7	Reflex	2		L	0.25	LB A/A	PRE	A	8.445 ml/mx	107	203	301
8	Staple	3.2		L	0.043	LB A/A	PRE	A	0.9078 ml/mx	108	201	304
9	Dual Magnum	7.64		L	0.95	LB A/A	PRE	A	8.401 ml/mx	109	206	305

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
6.717	g	V-10206	80	WG	
22.224	ml	Prowl H20	3.8	L	
10.556	ml	Reflex	2	L	
1.135	ml	Staple	3.2	L	
10.501	ml	Dual Magnum	7.64	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.

Trial Comments

OBJECTIVE: Determine cotton response to soil applied herbicides.

Note: Irrigation at 0.5 in was applied over the trial immediately after planting. Three days after planting 2.4 inches of natural rainfall occurred while the cotton was beginning to push thorough the soil surface.

VISUAL COTTON RESPONSE:
1. At 7 DAT, severe injury (28 to 43%) was noted with all rates of V-10206 with moderate (17%) stunting from Dual Magnum.
2. By 20 DAT, severe injury was still noted with all rates of V-10206.
3. At 43 DAT, cotton injury still ranged from 13 to 62% injury by V-10206. Injury from other herbicides was insignificant.
4. Late in the season, cotton did visually recover but there were obvious trends in maturity differences.

WEED RESPONSE:
1. With the heavy rainfall and a high level of cotton injury, weed control was exceptional.
2. All herbicides provided excellent control of carpetweed, crabgrass, and Palmer amaranth.
3. Almost unbelievable control was noted with smallflower morningglory with excellent control noted with Reflex, Staple, and the high rate of V-10206. Fair control was even noted with Prowl and Dual which does not occur very often.

COTTON YIELD:
1. V-10206 applied at 0.053 and 0.106 lb ai/A did not impact cotton yield; however, 0.16 and 0.21 lb ai V-10206 reduced yield at least 21%.
2. Prowl, Reflex, and Staple did not impact cotton injury.
3. Dual Magnum did not impact yield. This is rare and was likely a response to the dry growing season after the initial heavy rain.

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CONCLUSION:

1. Heavy rains within 5 days of applying V-10206 to cotton poses a serious threat to cotton produced in Georgia on sandy loam or loamy sand soils.

GENERAL COMMENTS:

1. Roundup WeatherMax was applied over the trial area on July 18 controlling any weeds not controlled by herbicide treatments.
2. Roundup WeatherMax was applied over the trial again on August 6.

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Trt No.	Treatment Name	Rate	Rate Unit	1	2	3	4	5	6	7	8
Weed Code								IAQTA	MOLVE	DIGSA	AMAPA
Crop Code				cotton	cotton	cotton	cotton				
Rating Data Type				%	%	%	%	%	%	%	%
Rating Unit				injury	injury	injury	injury	control	control	control	control
Rating Date				Jul-05-07	Jul-18-07	Aug-10-07	Oct-04-07	Jul-18-07	Jul-18-07	Jul-18-07	Jul-18-07
Trt-Eval Interval				7 DA-A	20 DA-A	43 DA-A	98 DA-A	20 DA-A	20 DA-A	20 DA-A	20 DA-A
ARM Action Codes											
# Subsamples, Dec.											
1	Non-treated			0 d	0 e	0 e	0 a	0 b	0 b	0 b	0 b
2	V-10206	0.053	LB A/A	28 ab	31 d	13 d	0 a	75 a	99 a	95 a	99 a
3	V-10206	0.106	LB A/A	40 a	47 c	25 c	0 a	86 a	99 a	99 a	99 a
4	V-10206	0.159	LB A/A	43 a	65 b	43 b	0 a	85 a	99 a	99 a	99 a
5	V-10206	0.213	LB A/A	43 a	80 a	62 a	0 a	98 a	99 a	99 a	99 a
6	Prowl H20	1	LB A/A	11 cd	6 e	0 e	0 a	78 a	99 a	99 a	99 a
7	Reflex	0.25	LB A/A	3 cd	3 e	3 de	0 a	93 a	99 a	99 a	99 a
8	Staple	0.043	LB A/A	8 cd	6 e	7 de	0 a	98 a	99 a	99 a	99 a
9	Dual Magnum	0.95	LB A/A	17 bc	7 e	3 de	0 a	81 a	99 a	97 a	99 a
LSD (P=.05)				14.8	11.6	9.6	0.0	22.6	0.0	4.5	0.0
Standard Deviation				8.6	6.7	5.5	0.0	13.1	0.0	2.6	0.0
CV				39.7	24.73	31.92	0.0	16.96	0.0	2.95	0.0
Bartlett's X2				16.68	4.202	7.596	0.0	20.385	0.0	0.385	0.0
P(Bartlett's X2)				0.011*	0.756	0.269	.	0.005*	.	0.535	.

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

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Trt No.	Treatment Name	Rate	Rate Unit	9	10
	Weed Code			Seed	Seed
	Crop Code			Cotton	Cotton
	Rating Data Type			yield	YIELD
	Rating Unit			lb/plot	lb/A
	Rating Date			Nov-26-07	Nov-26-07
	Trt-Eval Interval			76 DA-A	76 DA-A
	ARM Action Codes				TY1
	# Subsamples, Dec.				1
1	Non-treated			5 a	2996.9 a
2	V-10206	0.053	LB A/A	5 a	3039.5 a
3	V-10206	0.106	LB A/A	5 a	2915.6 a
4	V-10206	0.159	LB A/A	4 bc	2344.5 bc
5	V-10206	0.213	LB A/A	3 c	2019.2 c
6	Prowl H20	1	LB A/A	5 ab	2694.9 ab
7	Reflex	0.25	LB A/A	5 a	2760.7 a
8	Staple	0.043	LB A/A	5 a	2954.3 a
9	Dual Magnum	0.95	LB A/A	5 ab	2729.8 ab
	LSD (P=.05)			0.7	382.14
	Standard Deviation			0.4	220.76
	CV			8.12	8.12
	Bartlett's X2			4.577	4.576
	P(Bartlett's X2)			0.802	0.802

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

Column 10: TY1 = 580.8*[C9]

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Trial ID: C46-07 Study Dir.: Stanley Culpepper
Location: Ponder Farm Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Culpepper, Davis **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: TyTy **Trial Status:** completed
State/Prov.: GA **Trial Reliability:** excellent
Postal Code: 31794 **Initiation Date:** Jun-28-07
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.	IAQTA	smallflower morningglory	
2.	MOLVE	carpetweed	
3.	DIGSA	large crabgrass	
4.	AMAPA	Palmer amaranth	

Crop 1: GOSHI COTTON, SHORT STAPLE **Variety:** DP 143 B RP FLX
Planting Date: Jun-28-07 **Planting Method:** seeded
Rate: 1 4 inch **Depth:** 0.75 in **Perennial Age:** ____ _____
Row Spacing: 36 in **Spacing Within Row:** 4 inch **Seed Bed:** bedded
Soil Temperature: 88 F **Soil Moisture:** moist **Emergence Date:** Jul-01-07

SITE AND DESIGN

Plot Width, Unit: 6 FT **Plot Length, Unit:** 25 FT **Reps:** 3
Site Type: Ponder farm
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: 94 **% OM:** 1.3 **Texture:** Loamy sand
% Silt: 2 **pH:** 6.4 **Soil Name:** _____
% Clay: 4 **CEC:** _____ **Fert. Level:** _____

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: _____
Closest Weather Station: _____ **Distance:** _____ **Unit:** __

APPLICATION DESCRIPTION

	A
Application Date:	Jun-28-07
Time of Day:	3:00 pm
Application Method:	broadcast
Application Timing:	PRE
Applic. Placement:	on soil
Air Temp., Unit:	93 F
% Relative Humidity:	39
Wind Velocity, Unit:	3 mph
Dew Presence (Y/N):	N
Water Hardness:	
Soil Temp., Unit:	95 F
Soil Moisture:	moist
% Cloud Cover:	0

CROP STAGE AT EACH APPLICATION

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

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WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	IAQTA PRE
Stage Scale:	not up
Density, Unit:	1 ydsq
Weed 2 Code, Stage:	MOLVE PRE
Stage Scale:	not up
Density, Unit:	2 ydsq
Weed 3 Code, Stage:	DIGSA PRE
Stage Scale:	not up
Density, Unit:	0.5 ydsq
Weed 4 Code, Stage:	AMAPA PRE
Stage Scale:	not up
Density, Unit:	0.3 ydsq

APPLICATION EQUIPMENT

	A
Appl. Equipment:	backpack
Operating Pressure:	24
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	18 in
Nozzles/Row:	2
Band Width, Unit:	
Boom Length, Unit:	4.5 ft
Boom Height, Unit:	15 in
Ground Speed, Unit:	3 mph
Incorporation Equip.:	
Hours to Incorp.:	
Incorp. Depth, Unit:	
Carrier:	water
Spray Volume, Unit:	15 GPA
Spray pH:	
Propellant:	CO2
Tank Mix (Y/N):	

Trt No	Treatment Application Comment