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Cotton tolerance to topical applications of WeatherMax plus 69430 or 58425.

Trial ID: C43-07 Study Dir.: Stanley Culpepper
Location: Ponder Farm Investigator: Stanley Culpepper

Reps: 4 Plots: 6 by 25 feet
Spray vol: 14.8 gal/ac Mix size: 1 liters (min .77168)

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	4
1	WeatherMax	4.5		L	0.75	LB A/A	4 lf	A	11.26 ml/mx	101	202	303	404
	WeatherMax	4.5		L	0.75	LB A/A	9 lf	B	11.26 ml/mx				
2	WeatherMax	4.5		L	0.75	LB A/A	4 lf	A	11.26 ml/mx	102	201	304	405
	MON 58425	7		L	1.5	LB A/A	4 lf	A	14.48 ml/mx				
	WeatherMax	4.5		L	0.75	LB A/A	9 lf	B	11.26 ml/mx				
	MON 58425	7		L	1.5	LB A/A	9 lf	B	14.48 ml/mx				
3	WeatherMax	4.5		L	0.75	LB A/A	4 lf	A	11.26 ml/mx	103	205	301	402
	Dual Magnum	7.64		L	1	LB A/A	4 lf	A	8.843 ml/mx				
	WeatherMax	4.5		L	0.75	LB A/A	9 lf	B	11.26 ml/mx				
	Dual Magnum	7.64		L	1	LB A/A	9 lf	B	8.843 ml/mx				
4	WeatherMax	4.5		L	0.75	LB A/A	4 lf	A	11.26 ml/mx	104	203	302	401
	MON 69492	3.8		L	1.5	LB A/A	4 lf	A	26.67 ml/mx				
	WeatherMax	4.5		L	0.75	LB A/A	9 lf	B	11.26 ml/mx				
	MON 69492	3.8		L	1.5	LB A/A	9 lf	B	26.67 ml/mx				
5	WeatherMax	4.5		L	0.75	LB A/A	4 lf	A	11.26 ml/mx	105	204	305	403
	MON 69492	3.8		L	3	LB A/A	4 lf	A	53.34 ml/mx				
	WeatherMax	4.5		L	0.75	LB A/A	9 lf	B	11.26 ml/mx				
	MON 69492	3.8		L	3	LB A/A	9 lf	B	53.34 ml/mx				

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
140.751	ml	WeatherMax	4.5	L	
36.193	ml	MON 58425	7	L	
22.107	ml	Dual Magnum	7.64	L	
200.014	ml	MON 69492	3.8	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 topical applications of MON 58425 and MON 69492 mixed with glyphosate.

Note: Cotton was produced in a irrigated production system.

VISUAL COTTON RESPONSE:
1. At 14 d after the 4 leaf application, injury from MON 58425 plus WeatherMax was no greater than that noted with Dual Magnum plus WeatherMax. MON 69492 mixed with WeatherMax was more injurious than WeatherMax + Dual.
2. After the sequential application made to 9 leaf cotton, injury by WeatherMax + Dual or MON 58425 ranged from 20 to 22%. Sequential applications of MON 69492 + WeatherMax caused at least twice as much injury.

SEED COTTON YIELD:
1. Compared to WeatherMax applied alone, WeatherMax plus either rate of MON 69492 reduced cotton yield at least 16%.
2. Statistically, MON 58425 or Dual Magnum mixed with glyphosate did not impact yield but there was a slight trend for a negative yield impact. Conditions during application were specifically selected to enhance injury, in addition, sequential applications were made therefore the hint for yield impact would be expected.

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Trt No.	Treatment Name	Rate	Rate Unit	1	2	3	4	5
	Weed Code			INJURY	INJURY	INJURY	SEED	SEED
	Crop Code			cotton	cotton	cotton	cotton	cotton
	Rating Data Type			%	%	%	yield	yield
	Rating Unit			control	control	control	lb/plot	lb/acre
	Rating Date			Jun-10-07	Jun-16-07	Jun-24-07	Aug-01-07	Aug-01-07
	Trt-Eval Interval			14 DA-A	5 DA-B	13 DA-B	51 DA-B	51 DA-B
	ARM Action Codes							TY1
	# Subsamples, Dec.							1
1	WeatherMax	0.75	LB A/A	0 d	9 d	6 d	10 a	2761.7 a
	WeatherMax	0.75	LB A/A					
2	WeatherMax	0.75	LB A/A	8 c	20 c	16 c	9 ab	2549.7 ab
	MON 58425	1.5	LB A/A					
	WeatherMax	0.75	LB A/A					
	MON 58425	1.5	LB A/A					
3	WeatherMax	0.75	LB A/A	9 c	22 c	15 c	9 ab	2626.7 ab
	Dual Magnum	1	LB A/A					
	WeatherMax	0.75	LB A/A					
	Dual Magnum	1	LB A/A					
4	WeatherMax	0.75	LB A/A	15 b	49 b	33 b	8 bc	2323.2 bc
	MON 69492	1.5	LB A/A					
	WeatherMax	0.75	LB A/A					
	MON 69492	1.5	LB A/A					
5	WeatherMax	0.75	LB A/A	21 a	60 a	44 a	7 c	2022.6 c
	MON 69492	3	LB A/A					
	WeatherMax	0.75	LB A/A					
	MON 69492	3	LB A/A					
	LSD (P=.05)			5.8	10.6	6.2	1.3	389.46
	Standard Deviation			3.7	6.9	4.0	0.9	252.76
	CV			35.58	21.71	17.9	10.29	10.29
	Bartlett's X2			2.21	10.729	6.673	4.539	4.539
	P(Bartlett's X2)			0.53	0.03*	0.154	0.338	0.338

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

Column 5: TY1 = 290.4*[4]

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Trial ID: C43-07 Study Dir.: Stanley Culpepper
Location: Ponder Farm 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: Ponder **Trial Status:** completed
State/Prov.: GA **Trial Reliability:** good
Postal Code: _____ **Initiation Date:** May-02-07
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.	.		

Crop 1: GOSHI COTTON, SHORT STAPLE **Variety:** DP 143 B2RF
Planting Date: May-02-07 **Planting Method:** conventional
Rate: 2 8 in **Depth:** 0.5 in **Perennial Age:** ____ _____
Row Spacing: 36 in **Spacing Within Row:** ____ _____ **Seed Bed:** bedded
Soil Temperature: 87 F **Soil Moisture:** moist **Emergence Date:** May-07-07

SITE AND DESIGN

Plot Width, Unit: 6 FT **Plot Length, Unit:** 25 FT **Reps:** 4
Site Type: Ponder Farm
Tillage Type: Conventional **Study Design:** RANDOMIZED COMPLETE BLOCK

Trial Initiation Comments:

	Previous Crops	Previous Pesticides	Year
1.			

MAINTENANCE

Field Prep./Maintenance:

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

SOIL DESCRIPTION

% Sand: 94 **% OM:** 6.4 **Texture:** sand
% Silt: 2 **pH:** 1.3 **Soil Name:** Tifton loamy sand
% Clay: 4 **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
Application Date:	May-27-07	Jun-11-07
Time of Day:	8:00 am	6:00 pm
Application Method:	broadcast	broadcast
Application Timing:	4 leaf	cot 9 lea
Applic. Placement:	overtop	overtop
Air Temp., Unit:	69 F	94 F
% Relative Humidity:	73	39
Wind Velocity, Unit:	0 mph	3 mph
Dew Presence (Y/N):	Y	N
Water Hardness:		
Soil Temp., Unit:	70 F	95 F
Soil Moisture:	fair	fair
% Cloud Cover:	0	10

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	GOSHI 4 lf	GOSHI 9 lf
Stage Scale:	4 leaf	9 leaf
Height, Unit:	4 inch	13 in

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	.	
Stage Scale:	.	
Density, Unit:	. .	

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APPLICATION EQUIPMENT

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

Trt No	Treatment Application Comment