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Herbicide tolerance for Roundup Ready Flex cotton

Trial ID: C24-05
 Location: Ponder

Study Dir.: Culpepper
 Investigator: Stanley Culpepper

Reps: 4 Plots: 12 by 30 feet
 Spray vol: 14.8 gal/ac Mix size: 2 liters (min 1.852)

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	4
1	No Roundup PHY425RF								101	206	308	408
2	No Roundup PHY475WRF								102	204	305	403
3	No Roundup PHY485WRF								105	203	301	406
4	No Roundup Monsanto V.								106	205	302	402
5	WeatherMax	4.5 L		1.125 lb ai/a		2 lf	A	33.78 ml/mx	103	208	306	407
	WeatherMax	4.5 L		1.125 lb ai/a		6 lf	B	33.78 ml/mx				
	WeatherMax	4.5 L		1.125 lb ai/a		10 lf	C	33.78 ml/mx				
	WeatherMax	4.5 L		1.125 lb ai/a		14 lf	D	33.78 ml/mx				
6	WeatherMax	4.5 L		1.125 lb ai/a		2 lf	A	33.78 ml/mx	104	202	307	404
	WeatherMax	4.5 L		1.125 lb ai/a		6 lf	B	33.78 ml/mx				
	WeatherMax	4.5 L		1.125 lb ai/a		10 lf	C	33.78 ml/mx				
	WeatherMax	4.5 L		1.125 lb ai/a		14 lf	D	33.78 ml/mx				
7	WeatherMax	4.5 L		1.125 lb ai/a		2 lf	A	33.78 ml/mx	107	201	303	405
	WeatherMax	4.5 L		1.125 lb ai/a		6 lf	B	33.78 ml/mx				
	WeatherMax	4.5 L		1.125 lb ai/a		10 lf	C	33.78 ml/mx				
	WeatherMax	4.5 L		1.125 lb ai/a		14 lf	D	33.78 ml/mx				
8	WeatherMax	4.5 L		1.125 lb ai/a		2 lf	A	33.78 ml/mx	108	207	304	401
	WeatherMax	4.5 L		1.125 lb ai/a		6 lf	B	33.78 ml/mx				
	WeatherMax	4.5 L		1.125 lb ai/a		10 lf	C	33.78 ml/mx				
	WeatherMax	4.5 L		1.125 lb ai/a		14 lf	D	33.78 ml/mx				
	Monsanto V.											

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Lot Code
675.604	ml	WeatherMax 4.5 L	

* 'Per area' calculations based on spray volume= 14.8 gal/ac, mix size= 2 liters (mix size basis).
 * Product amount calculations increased 25 % for overage adjustment.

Trial Comments

OBJECTIVE: Compare stand counts, yield, and cotton boll set of several RR Flex cultivars treated and not treated with glyphosate.

Results (main effects were significant and are reported):

Stand Count:

1. PHY475WFR was slow to emerged compared to other cultivars.
2. By 11 or 22 DAP, no differences in stand was noted.

Fiber Samples:

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1. 25 bolls per plot were sampled and weighed.
2. No differences in boll sample weights were noted.

Field seed yield:

1. Pooled over herbicide programs, yield from the "Monsanto V." was less than that of all other cultivars.

Total seed yield (contains plot yield and fiber samples):

1. Pooled over herbicide programs, yield from the "Monsanto V." was less than that of all other cultivars.

Plant Mapping:

1. 10 plants per plot have been mapped. Data is not reported.

GENERAL COMMENTS:

1. May 1: Prowl + Cotoran applied PRE over the trial to minimize weed emergence.
2. May 24: Select + Crop Oil applied topically over entire trial area.
3. June 24: Direx + MSMA applied as a directed spray over the entire trial area.

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Weed Code	GOSHI stand count	GOSHI stand count	GOSHI stand count	25 boll sample lbs	25 boll sample lbs	Seed Yield lb plot	Total Seed Yld lb/plot	Total Seed Yld lb/A			
Crop Code	#/20ft	#/20ft	#/20ft	lbs	lbs	plot	lb/plot	lb/A			
Rating Data Type	May-06-05	May-09-05	May-20-05	Sep-23-05	Sep-23-05	Sep-21-05	Sep-21-05	Sep-21-05			
Rating Unit	-10 DA-A	-7 DA-A	4 DA-A	130 DA-A	130 DA-A	128 DA-A	128 DA-A	128 DA-A			
Rating Date											
Trt-Eval Interval											
ARM Action Codes					T1		T2	TY3			
# Subsamples, Dec.					3		1	1			
Trt No.	Treatment Name	Rate	Unit	1	2	3	4	5	6	7	8
1	No Roundup PHY425RF			14	38	59	0	0.173	16	16.0	3879.9
2	No Roundup PHY475WRF			4	32	56	0	0.179	16	15.7	3803.9
3	No Roundup PHY485WRF			11	34	56	0	0.170	16	16.3	3938.6
4	No Roundup Monsanto V.			7	37	56	0	0.178	15	15.0	3635.4
5	WeatherMax 1.125 lb ai/a WeatherMax 1.125 lb ai/a WeatherMax 1.125 lb ai/a WeatherMax 1.125 lb ai/a PHY425RF			12	36	60	0	0.176	17	16.7	4046.5
6	WeatherMax 1.125 lb ai/a WeatherMax 1.125 lb ai/a WeatherMax 1.125 lb ai/a WeatherMax 1.125 lb ai/a PHY475WRF			5	34	49	0	0.181	15	15.7	3792.4
7	WeatherMax 1.125 lb ai/a WeatherMax 1.125 lb ai/a WeatherMax 1.125 lb ai/a WeatherMax 1.125 lb ai/a PHY485WRF			10	34	54	0	0.174	16	15.7	3801.5
8	WeatherMax 1.125 lb ai/a WeatherMax 1.125 lb ai/a WeatherMax 1.125 lb ai/a WeatherMax 1.125 lb ai/a Monsanto V.			11	41	56	0	0.184	14	14.1	3422.8
LSD (P=.05)				8.3	7.2	11.9	0.0	0.0343	1.5	1.50	363.86
Standard Deviation				5.6	4.9	8.1	0.0	0.0233	1.0	1.02	247.39
CV				61.61	13.79	14.59	13.2	13.2	6.54	6.53	6.53

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

Column 5: T1 = [C4]+0
 Column 7: T2 = [C5]+[C6]
 Column 8: TY3 = 242.0*[7]

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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: 1.2	Texture: sand	
% Silt: 2	pH: 5.9	Soil Name: Tifton sandy loam	
% 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	C	D
Application Date:	May-18-05	Jun-01-05	Jun-13-05	Jun-19-05
Time of Day:	10 am	10 am	11 am	2 pm
Application Method:	broadcast	broadcast	broadcast	broadcast
Application Timing:	2 lf	6 lf	10 lf	14 lf
Applic. Placement:	overtop	overtop	overtop	overtop
Air Temp., Unit:	78 F	76 F	88 F	85 F
% Relative Humidity:	51	42	54	50
Wind Velocity, Unit:	2 mph	3 mph	0 mph	2 mph
Dew Presence (Y/N):	y	n	n	n
Water Hardness:				
Soil Temp., Unit:	76 F	77 F	85 F	84 F
Soil Moisture:	irrigated	wet/irrig	irrigated	irrigated
% Cloud Cover:	0	0	45	80

CROP STAGE AT EACH APPLICATION

	A	B	C	D
Crop 1 Code, Stage:	GOSHI 2 lf	GOSHI 6 lf	GOSHI 10 lf	GOSHI 14 lf
Stage Scale:	2 lf	6 leaf	10-11 lf	13-14 lf
Height, Unit:	2.5 inch	7 inch	13 inch	18 inch

WEED STAGE AT EACH APPLICATION

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

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APPLICATION EQUIPMENT

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

Trt No	Treatment Application Comment