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Roundup Ready Flex cotton response to various glyphosate formulations and rates.

Trial ID: C22-05

Study Dir.: Culpepper

Location: Ponder (5154)

Investigator: Stanley Culpepper

Reps: 3

Plots: 12 by 25 feet

Spray vol: 14.8 gal/ac

Mix size: 1.5 liters (min 1.1575)

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Plot No. By Rep		
									1	2	3
1	MON 3539	4.5	L	0.75	lb ai/a	1-3	If A	16.89 ml/mx	101	208	301
	MON 3539	4.5	L	0.75	lb ai/a	6-8	If C	16.89 ml/mx			
	MON 3539	4.5	L	0.75	lb ai/a	12	If E	16.89 ml/mx			
2	MON 3539	4.5	L	1.125	lb ai/a	1-3	If A	25.34 ml/mx	102	201	302
	MON 3539	4.5	L	1.125	lb ai/a	6-8	If C	25.34 ml/mx			
	MON 3539	4.5	L	1.125	lb ai/a	12	If E	25.34 ml/mx			
3	MON 3539	4.5	L	0.75	lb ai/a	1-3	If A	16.89 ml/mx	103	206	304
	MON 3539	4.5	L	0.75	lb ai/a	1-3	If B	16.89 ml/mx			
	MON 3539	4.5	L	0.75	lb ai/a	6-8	If C	16.89 ml/mx			
	MON 3539	4.5	L	0.75	lb ai/a	6-8	If D	16.89 ml/mx			
	MON 3539	4.5	L	0.75	lb ai/a	12	If E	16.89 ml/mx			
	MON 3539	4.5	L	0.75	lb ai/a	12	If F	16.89 ml/mx			
4	MON 3539	4.5	L	1.125	lb ai/a	1-3	If A	25.34 ml/mx	104	203	305
	MON 3539	4.5	L	1.125	lb ai/a	1-3	If B	25.34 ml/mx			
	MON 3539	4.5	L	1.125	lb ai/a	6-8	If C	25.34 ml/mx			
	MON 3539	4.5	L	1.125	lb ai/a	6-8	If D	25.34 ml/mx			
	MON 3539	4.5	L	1.125	lb ai/a	12	If E	25.34 ml/mx			
	MON 3539	4.5	L	1.125	lb ai/a	12	If F	25.34 ml/mx			
5	WeatherMax	4.5	L	0.75	lb ai/a	1-3	If A	16.89 ml/mx	105	202	310
	WeatherMax	4.5	L	0.75	lb ai/a	6-8	If C	16.89 ml/mx			
	WeatherMax	4.5	L	0.75	lb ai/a	12	If E	16.89 ml/mx			
6	WeatherMax	4.5	L	1.125	lb ai/a	1-3	If A	25.34 ml/mx	106	205	311
	WeatherMax	4.5	L	1.125	lb ai/a	6-8	If C	25.34 ml/mx			
	WeatherMax	4.5	L	1.125	lb ai/a	12	If E	25.34 ml/mx			
7	WeatherMax	4.5	L	0.75	lb ai/a	1-3	If A	16.89 ml/mx	107	210	306
	WeatherMax	4.5	L	0.75	lb ai/a	1-3	If B	16.89 ml/mx			
	WeatherMax	4.5	L	0.75	lb ai/a	6-8	If C	16.89 ml/mx			
	WeatherMax	4.5	L	0.75	lb ai/a	6-8	If D	16.89 ml/mx			
	WeatherMax	4.5	L	0.75	lb ai/a	12	If E	16.89 ml/mx			
	WeatherMax	4.5	L	0.75	lb ai/a	12	If F	16.89 ml/mx			
8	WeatherMax	4.5	L	1.125	lb ai/a	1-3	If A	25.34 ml/mx	108	211	308
	WeatherMax	4.5	L	1.125	lb ai/a	1-3	If B	25.34 ml/mx			
	WeatherMax	4.5	L	1.125	lb ai/a	6-8	If C	25.34 ml/mx			
	WeatherMax	4.5	L	1.125	lb ai/a	6-8	If D	25.34 ml/mx			
	WeatherMax	4.5	L	1.125	lb ai/a	12	If E	25.34 ml/mx			
	WeatherMax	4.5	L	1.125	lb ai/a	12	If F	25.34 ml/mx			
9	MON 79883	4.5	L	1.125	lb ai/a	1-3	If A	25.34 ml/mx	109	207	303
	MON 79883	4.5	L	1.125	lb ai/a	6-8	If C	25.34 ml/mx			
	MON 79883	4.5	L	1.125	lb ai/a	12	If E	25.34 ml/mx			
10	MON 79845	4.5	L	1.125	lb ai/a	1-3	If A	25.34 ml/mx	110	212	307
	MON 79845	4.5	L	1.125	lb ai/a	6-8	If C	25.34 ml/mx			
	MON 79845	4.5	L	1.125	lb ai/a	12	If E	25.34 ml/mx			
11	MON 79883	4.5	L	2.25	lb ai/a	1-3	If A	50.67 ml/mx	111	204	309
	MON 79883	4.5	L	2.25	lb ai/a	6-8	If C	50.67 ml/mx			
	MON 79883	4.5	L	2.25	lb ai/a	12	If E	50.67 ml/mx			
12	MON 79845	4.5	L	2.25	lb ai/a	1-3	If A	50.67 ml/mx	112	209	312
	MON 79845	4.5	L	2.25	lb ai/a	6-8	If C	50.67 ml/mx			
	MON 79845	4.5	L	2.25	lb ai/a	12	If E	50.67 ml/mx			

Sort Order: Treatment

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Reps: 3 Plots: 12 by 25 feet
 Spray vol: 14.8 gal/ac Mix size: 1.5 liters (min 1.1575)

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Form Unit	Rate Stg	Grow Code	Appl to Measure	Amt Product 1	Plot No. 2	By Rep 3
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Product quantities required for listed treatments and applications in one trial:

Amount*	Unit	Treatment Name	Lot Code
475.034	ml	MON 3539 4.5 L	
475.034	ml	WeatherMax 4.5 L	
285.021	ml	MON 79883 4.5 L	
285.021	ml	MON 79845 4.5 L	

* 'Per area' calculations based on spray volume= 14.8 gal/ac, mix size= 1.5 liters (mix size basis).
 * Product amount calculations increased 25 % for overage adjustment.

Trial Comments

OBJECTIVE: Evaluate cotton response to various rates and formulations of glyphosate.

VISUAL COTTON INJURY:

1. Injury from all treatments was 5% or less and insignificant.

SEED COTTON YIELD PER ACRE:

1. Yields were similar among all treatments.
2. Yields were fairly consistent with a CV of only 9.31.

MORNINGGLORY RESPONSE:

1. After the 1-3 and 6-8 leaf applications control was poor with two applications of 0.75 lbs of glyphosate (67-70%), fair with 1.125 lbs (77 to 83%), and good with 2.25 lbs (92%).
2. After the third application, control was excellent with all systems.

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Weed Code	GOSHI	GOSHI	GOSHI	GOSHI	IPOLA	IPOLA	Seed Yld	Seed Yld
Crop Code	GOSHI	GOSHI	GOSHI	GOSHI	IPOLA	IPOLA	GOSHI	GOSHI
Rating Data Type	injury	injury	injury	injury	control	control	wt	wt
Rating Unit	percent	percent	percent	percent	percent	percent	lb/plot	lb/A
Rating Date	May-19-05	Jun-07-05	Jun-14-05	Jun-22-05	Jun-14-05	Jul-28-05	Sep-28-05	Sep-28-05
Trt-Eval Interval	3 DA-A	22 DA-A	29 DA-A	37 DA-A	29 DA-A		135 DA-A	135 DA-A
ARM Action Codes								TY1
# Subsamples, Dec.								1
Trt Treatment								
No. Name Rate Unit	1	2	3	4	5	6	7	8
12 MON 79845 2.25 lb ai/a	3	0	0	0	92	99	11	3231.2
MON 79845 2.25 lb ai/a								
MON 79845 2.25 lb ai/a								
LSD (P=.05)	1.4	4.0	0.0	2.0	8.6	2.5	1.9	549.83
Standard Deviation	0.8	2.4	0.0	1.2	5.1	1.5	1.1	324.69
CV	27.83	406.99	0.0	309.05	6.07	1.54	9.31	9.31

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

Column 8: TY1 = 290.4*[C7]

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

SOIL DESCRIPTION

% Sand: 94 % OM: 1.1 Texture: sand
 % Silt: 4 pH: 6.1 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: _____
 Closest Weather Station: _____ Distance: _____ Unit: ____

APPLICATION DESCRIPTION

	A	B	C	D	E	F
Application Date:	May-16-05	May-16-05	Jun-04-05	Jun-04-05	Jun-19-05	Jun-19-05
Time of Day:	9 am	9 am	11 am	11 am	3 pm	3 pm
Application Method:	broadcast	broadcast	broadcast	broadcast	broadcast	broadcast
Application Timing:	1-3 lf	1-3 lf	6-8 lf	6-8 lf	12 lf	12 lf
Applic. Placement:	overtop	overtop	overtop	overtop	overtop	overtop
Air Temp., Unit:	72 F	72 F	84 F	84 F	86 F	86 F
% Relative Humidity:	56	56	70	70	50	50
Wind Velocity, Unit:	3 mph	3 mph	0 mph	0 mph	3 mph	3 mph
Dew Presence (Y/N):	n	n	n	n	n	n
Water Hardness:						
Soil Temp., Unit:	74 F	74 F	78 F	78 F	84 F	84 F
Soil Moisture:	fair	fair	wet	wet	moist	moist
% Cloud Cover:	25	25	100	100	50	50

CROP STAGE AT EACH APPLICATION

	A	B	C	D	E
Crop 1 Code, Stage:	GOSHI 1-3 lf	GOSHI 1-3 lf	GOSHI 6-8 lf	GOSHI 6-8 lf	GOSHI 12 leaf
Stage Scale:	1-2 leaf	1-2 leaf	7 leaf	7 leaf	12-13 lf
Height, Unit:	2 inch	2 inch	11 inch	11 inch	12.5 inch
	F				
Crop 1 Code, Stage:	GOSHI 12 leaf				
Stage Scale:	12-13 lf				
Height, Unit:	12.5 inch				

WEED STAGE AT EACH APPLICATION

	A	B	C	D	E
Weed 1 Code, Stage:	IPOLA 1-3 lf	IPOLA 1-3 lf	IPOLA 6-8 lf	IPOLA 6-8 lf	IPOLA 12 lf
Stage Scale:	< 4 inch	< 4 inch	< 4 inch	< 4 inch	< 4 inch
Density, Unit:	6 ydsq	6 ydsq	6 ydsq	6 ydsq	6 ydsq

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	F
Weed 1 Code, Stage:	IPOLA 12 lf
Stage Scale:	< 4 inch
Density, Unit:	6 ydsq

APPLICATION EQUIPMENT

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

Trt No	Treatment Application Comment