

University of Georgia

Cotton response to Valor/Dual Magnum mixtures directed at layby.

Trial ID: C14-06

Study Dir.: Stanley Culpepper

Location: Ponder (5155)

Investigator: Stanley Culpepper

Reps: 4

Plots: 6 by 30 feet

Spray vol: 14.8 gal/ac

Mix size: 1 liters (min .92602)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate Rate	Grow Unit	Stg	Appl Code	Amt to Measure	Product	Plot No. By Rep			
											1	2	3	4
1	No layby										101	207	304	414
2	Roundup WeatherMax	4.5		L	22 OZ/A	16"	GOSHI	A	11.61 ml/mx		102	206	307	404
3	Roundup WeatherMax Valor	4.5		L	22 OZ/A	16"	GOSHI	A	11.61 ml/mx		103	208	301	407
		51		WDG	1 OZ/A	16"	GOSHI	A	0.506 g/mx					
4	Roundup WeatherMax Valor	4.5		L	22 OZ/A	16"	GOSHI	A	11.61 ml/mx		104	201	305	403
		51		WDG	1.5 OZ/A	16"	GOSHI	A	0.759 g/mx					
5	Roundup WeatherMax Valor	4.5		L	22 OZ/A	16"	GOSHI	A	11.61 ml/mx		105	212	306	410
		51		WDG	2 OZ/A	16"	GOSHI	A	1.012 g/mx					
6	Roundup WeatherMax Valor Dual Magnum	4.5		L	22 OZ/A	16"	GOSHI	A	11.61 ml/mx		106	202	308	409
		51		WDG	1 OZ/A	16"	GOSHI	A	0.506 g/mx					
		7.62		L	8 OZ/A	16"	GOSHI	A	4.223 ml/mx					
7	Roundup WeatherMax Valor Dual Magnum	4.5		L	22 OZ/A	16"	GOSHI	A	11.61 ml/mx		107	210	303	411
		51		WDG	1 OZ/A	16"	GOSHI	A	0.506 g/mx					
		7.62		L	12 OZ/A	16"	GOSHI	A	6.334 ml/mx					
8	Roundup WeatherMax Valor Dual Magnum	4.5		L	22 OZ/A	16"	GOSHI	A	11.61 ml/mx		108	209	302	413
		51		WDG	1 OZ/A	16"	GOSHI	A	0.506 g/mx					
		7.62		L	16 OZ/A	16"	GOSHI	A	8.446 ml/mx					
9	Roundup WeatherMax Valor Dual Magnum	4.5		L	22 OZ/A	16"	GOSHI	A	11.61 ml/mx		109	213	310	405
		51		WDG	1.5 OZ/A	16"	GOSHI	A	0.759 g/mx					
		7.62		L	8 OZ/A	16"	GOSHI	A	4.223 ml/mx					
10	Roundup WeatherMax Valor Dual Magnum	4.5		L	22 OZ/A	16"	GOSHI	A	11.61 ml/mx		110	205	312	402
		51		WDG	1.5 OZ/A	16"	GOSHI	A	0.759 g/mx					
		7.62		L	12 OZ/A	16"	GOSHI	A	6.334 ml/mx					
11	Roundup WeatherMax Valor Dual Magnum	4.5		L	22 OZ/A	16"	GOSHI	A	11.61 ml/mx		111	204	311	406
		51		WDG	1.5 OZ/A	16"	GOSHI	A	0.759 g/mx					
		7.62		L	16 OZ/A	16"	GOSHI	A	8.446 ml/mx					
12	Roundup WeatherMax Valor Dual Magnum	4.5		L	22 OZ/A	16"	GOSHI	A	11.61 ml/mx		112	203	309	412
		51		WDG	2 OZ/A	16"	GOSHI	A	1.012 g/mx					
		7.62		L	8 OZ/A	16"	GOSHI	A	4.223 ml/mx					
13	Roundup WeatherMax Valor Dual Magnum	4.5		L	22 OZ/A	16"	GOSHI	A	11.61 ml/mx		113	214	313	401
		51		WDG	2 OZ/A	16"	GOSHI	A	1.012 g/mx					
		7.62		L	12 OZ/A	16"	GOSHI	A	6.334 ml/mx					
14	Roundup WeatherMax Valor Dual Magnum	4.5		L	22 OZ/A	16"	GOSHI	A	11.61 ml/mx		114	211	314	408
		51		WDG	2 OZ/A	16"	GOSHI	A	1.012 g/mx					
		7.62		L	16 OZ/A	16"	GOSHI	A	8.446 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
188.715	ml	Roundup WeatherMax	4.5	L	
11.386	g	Valor	51	WDG	
71.263	ml	Dual Magnum	7.62	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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Study Dir.: Stanley Culpepper

Location: Ponder (5155)

Investigator: Stanley Culpepper

Trial Comments

OBJECTIVE: Determine cotton response to Valor/Dual mixtures at layby.

VISUAL COTTON RESPONSE:

1. Roundup alone caused no crop injury.
2. At 5 and 14 DAT, injury from Roundup plus Valor was less than 10%. Injury was at least 77% greater with all Dual/Valor mixtures.
3. Neither the rate of Valor nor the rate of Dual impacted crop injury.
4. Late in the season, little to no injury was detectable.

YIELD:

1. Yields were extremely consistent with a CV of only 7.
2. No treatment impacted seed cotton yield.

GENERAL COMMENTS:

1. Roundup WeatherMax was applied overtop of 1 and 7 leaf cotton to remove weeds.

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Weed Code		GOSHI	GOSHI	GOSHI	Seed Yld	Seed Yld
Crop Code		injury	injury	injury	GOSHI	GOSHI
Rating Data Type		%	%	%	wt	YIELD
Rating Unit					lb/plot	LB/A
Rating Date		Jun-16-06	Jun-25-06	Jul-28-06	Sep-05-06	Sep-05-06
Assessed By		AD	SC	SC		
Trt-Eval Interval		5 DA-A	14 DA-A	47 DA-A	86 DA-A	86 DA-A
ARM Action Codes						TY1
# Subsamples, Dec.						1
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate
		Unit	Unit	Unit	Unit	Unit
		1	2	3	4	5
1	No layby	0 e	0 c	0 a	13 a	3773.7 a
2	Roundup WeatherMax	22 OZ/A	0 e	0 c	0 a	13 a
3	Roundup WeatherMax Valor	22 OZ/A 1 OZ/A	9 d	7 b	0 a	14 a
4	Roundup WeatherMax Valor	22 OZ/A 1.5 OZ/A	9 cd	5 b	0 a	13 a
5	Roundup WeatherMax Valor	22 OZ/A 2 OZ/A	9 cd	6 b	0 a	12 a
6	Roundup WeatherMax Valor Dual Magnum	22 OZ/A 1 OZ/A 8 OZ/A	21 ab	15 a	0 a	13 a
7	Roundup WeatherMax Valor Dual Magnum	22 OZ/A 1 OZ/A 12 OZ/A	19 ab	13 a	1 a	13 a
8	Roundup WeatherMax Valor Dual Magnum	22 OZ/A 1 OZ/A 16 OZ/A	24 a	14 a	1 a	13 a
9	Roundup WeatherMax Valor Dual Magnum	22 OZ/A 1.5 OZ/A 8 OZ/A	19 ab	14 a	1 a	14 a
10	Roundup WeatherMax Valor Dual Magnum	22 OZ/A 1.5 OZ/A 12 OZ/A	16 b	12 a	2 a	13 a
11	Roundup WeatherMax Valor Dual Magnum	22 OZ/A 1.5 OZ/A 16 OZ/A	19 ab	13 a	1 a	13 a
12	Roundup WeatherMax Valor Dual Magnum	22 OZ/A 2 OZ/A 8 OZ/A	15 bc	15 a	1 a	14 a
13	Roundup WeatherMax Valor Dual Magnum	22 OZ/A 2 OZ/A 12 OZ/A	15 bcd	12 a	1 a	13 a
14	Roundup WeatherMax Valor Dual Magnum	22 OZ/A 2 OZ/A 16 OZ/A	18 ab	15 a	1 a	12 a
LSD (P=.05)		5.8	3.0	1.4	1.2	355.98
Standard Deviation		4.1	2.1	1.0	0.9	249.10
CV		29.85	21.44	196.12	6.57	6.57
Bartlett's X2		25.862	10.627	3.198	17.961	17.96
P(Bartlett's X2)		0.007*	0.475	0.866	0.159	0.159

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

SOIL DESCRIPTION

% Sand: 94 % OM: 1.3 Texture: Sand
 % Silt: 2 pH: 6.4 Soil Name: Tifton sandy loam
 % Clay: 4 CEC: _____ Fert. Level: _____

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

No.	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: _____

Closest Weather Station: _____ Distance: _____ Unit: _____

APPLICATION DESCRIPTION

	A
Application Date:	Jun-11-06
Time of Day:	8 am
Application Method:	Broadcast
Application Timing:	layby
Applic. Placement:	directed
Air Temp., Unit:	78 F
% Relative Humidity:	63
Wind Velocity, Unit:	2 mph
Dew Presence (Y/N):	y
Water Hardness:	
Soil Temp., Unit:	76 F
Soil Moisture:	moist
% Cloud Cover:	100

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	GOSHI layby
Stage Scale:	10 leaf
Height, Unit:	16 inch

WEED STAGE AT EACH APPLICATION

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

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APPLICATION EQUIPMENT

	A
Appl. Equipment:	backpack
Operating Pressure:	24
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	18 inch
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