

# University of Georgia

## Weed and RR Flex cotton response to Mon 3539 systems.

Trial ID: C33-05

Study Dir.: Culpepper

Location: Sunbelt Expo

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	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		1-2 lf	B	16.89 ml/mx	101	208	302
	Orthene	97 DF		3 oz/a		1-2 lf	B	2.277 g/mx			
	MON 3539	4.5 L		0.75 lb ai/a		5in weed	C	16.89 ml/mx			
	MON 3539	4.5 L		0.75 lb ai/a		5in weed	D	16.89 ml/mx			
2	Prowl	3.3 EC		2 pt/a		PRE	A	25.34 ml/mx	102	210	309
	MON 3539	4.5 L		0.75 lb ai/a		1-2 lf	B	16.89 ml/mx			
	Orthene	97 DF		3 oz/a		1-2 lf	B	2.277 g/mx			
	MON 3539	4.5 L		0.75 lb ai/a		5in weed	C	16.89 ml/mx			
	MON 3539	4.5 L		0.75 lb ai/a		5in weed	D	16.89 ml/mx			
3	MON 3539	4.5 L		0.75 lb ai/a		1-2 lf	B	16.89 ml/mx	103	206	303
	Orthene	97 DF		3 oz/a		1-2 lf	B	2.277 g/mx			
	MON 3539	4.5 L		0.75 lb ai/a		5in weed	C	16.89 ml/mx			
	Staple	85 WP		0.8 oz/a		5in weed	C	0.6072 g/mx			
	MON 3539	4.5 L		0.75 lb ai/a		5in weed	D	16.89 ml/mx			
4	MON 3539	4.5 L		0.75 lb ai/a		1-2 lf	B	16.89 ml/mx	104	209	306
	Orthene	97 DF		3 oz/a		1-2 lf	B	2.277 g/mx			
	MON 3539	4.5 L		0.75 lb ai/a		5in weed	C	16.89 ml/mx			
	Dual Magnum	7.62 L		1 pt/a		5in weed	C	12.67 ml/mx			
	MON 3539	4.5 L		0.75 lb ai/a		5in weed	D	16.89 ml/mx			
5	MON 3539	4.5 L		0.75 lb ai/a		1-2 lf	B	16.89 ml/mx	105	201	305
	Orthene	97 DF		3 oz/a		1-2 lf	B	2.277 g/mx			
	MON 3539	4.5 L		0.75 lb ai/a		5in weed	C	16.89 ml/mx			
	Staple	85 WP		0.8 oz/a		5in weed	D	0.6072 g/mx			
	MON 3539	4.5 L		0.75 lb ai/a		5in weed	D	16.89 ml/mx			
6	MON 3539	4.5 L		0.75 lb ai/a		1-2 lf	B	16.89 ml/mx	106	203	304
	Orthene	97 DF		3 oz/a		1-2 lf	B	2.277 g/mx			
	MON 3539	4.5 L		0.75 lb ai/a		5in weed	C	16.89 ml/mx			
	Dual Magnum	7.62 L		1 pt/a		5in weed	D	12.67 ml/mx			
	MON 3539	4.5 L		0.75 lb ai/a		5in weed	D	16.89 ml/mx			
7	MON 3539	4.5 L		0.75 lb ai/a		1-2 lf	B	16.89 ml/mx	107	202	301
	Orthene	97 DF		3 oz/a		1-2 lf	B	2.277 g/mx			
	MON 3539	4.5 L		0.75 lb ai/a		5in weed	C	16.89 ml/mx			
	Staple	85 WP		0.8 oz/a		5in weed	C	0.6072 g/mx			
	Mepex	L		8 oz/a		5in weed	C	6.334 ml/mx			
	MON 3539	4.5 L		0.75 lb ai/a		5in weed	D	16.89 ml/mx			
8	MON 3539	4.5 L		0.75 lb ai/a		1-2 lf	B	16.89 ml/mx	108	207	308
	Orthene	97 DF		3 oz/a		1-2 lf	B	2.277 g/mx			
	MON 3539	4.5 L		0.75 lb ai/a		5in weed	C	16.89 ml/mx			
	Dual Magnum	7.62 L		1 pt/a		5in weed	C	12.67 ml/mx			
	Mepex	L		8 oz/a		5in weed	C	6.334 ml/mx			
	MON 3539	4.5 L		0.75 lb ai/a		5in weed	D	16.89 ml/mx			
9	MON 3539	4.5 L		0.75 lb ai/a		1-2 lf	B	16.89 ml/mx	109	204	310
	Orthene	97 DF		3 oz/a		1-2 lf	B	2.277 g/mx			
	MON 3539	4.5 L		0.75 lb ai/a		5in weed	C	16.89 ml/mx			
	Staple	85 WP		0.8 oz/a		5in weed	C	0.6072 g/mx			
	Mepex	L		8 oz/a		5in weed	C	6.334 ml/mx			
	MON 3539	4.5 L		0.75 lb ai/a		5in weed	D	16.89 ml/mx			
	Dual Magnum	7.62 L		1 pt/a		5in weed	D	12.67 ml/mx			
	Bidrin	L		8 oz/a		5in weed	D	6.334 ml/mx			

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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	Rate	Unit	Grow Stg	Appl Code	Amt to Measure	Product	Plot No. By Rep		
										1	2	3
10	MON 3539	4.5	L	0.75	lb ai/a	1-2 lf	B	16.89 ml/mx		110	205	307
	Orthene	97	DF	3	oz/a	1-2 lf	B	2.277 g/mx				
	MON 3539	4.5	L	0.75	lb ai/a	5in weed	C	16.89 ml/mx				
	Dual Magnum	7.62	L	1	pt/a	5in weed	C	12.67 ml/mx				
	Mepex		L	8	oz/a	5in weed	C	6.334 ml/mx				
	MON 3539	4.5	L	0.75	lb ai/a	5in weed	D	16.89 ml/mx				
	Staple	85	WP	0.8	oz/a	5in weed	D	0.6072 g/mx				
	Bidrin		L	8	oz/a	5in weed	D	6.334 ml/mx				

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Lot Code
633.379	ml	MON 3539 4.5 L	
28.464	g	Orthene 97 DF	
31.669	ml	Prowl 3.3 EC	
3.795	g	Staple 85 WP	
79.172	ml	Dual Magnum 7.62 L	
31.672	ml	Mepex L	
15.836	ml	Bidrin 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 MON mixtures.

**COTTON RESPONSE:**

1. PRE and 1-2 leaf applications caused no visual injury.
2. At 6 d after the 7 leaf cotton application: 1) Mon alone caused 3% or less injury; 2) mixing Staple with Mon increased injury about 5%; 3) Mixing Dual Mag. with Mon increased injury about 12%; 4) mixing Mepex with Mon plus Staple or Mon plus Dual Mag. did not impact injury.
3. At 6 d after the 15 leaf cotton application, no visual injury was detectable.

**WEED RESPONSE:**

Large crabgrass:

1. Control was excellent by all programs.

Pitted morningglory:

1. Control was excellent by all programs.

Doveweed:

1. Glyphosate provided little to no control; this is clearly the most tolerant Commelina species to glyphosate in Georgia thus far.
2. When applied prior to doveweed emergence, residual from Staple provided fair control while residual from Dual Magnum provided excellent control.
3. Those programs that had Dual or Staple applied after doveweed emergence provided poor control.

**GENERAL COMMENTS:**

1. Trial was not harvested.



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Weed Code			GOSHI	GOSHI	GOSHI	GOSHI	DIGSA	DIGSA	DIGSA	IPOLA
Crop Code			injury	injury	injury	injury	control	control	control	control
Rating Data Type			percent	percent	percent	percent	percent	percent	percent	percent
Rating Unit										
Rating Date			May-23-05	Jun-13-05	Jun-27-05	Jul-11-05	Jun-27-05	Jul-11-05	Aug-02-05	Jun-27-05
Trt-Eval Interval				25 DA-A	39 DA-A	53 DA-A	39 DA-A	53 DA-A	75 DA-A	39 DA-A
Trt No.	Treatment Name	Rate	1	2	3	4	5	6	7	8
		Rate Unit								
9	MON 3539	0.75 lb ai/a	0	12	0	0	99	99	99	99
	Orthene	3 oz/a								
	MON 3539	0.75 lb ai/a								
	Staple	0.8 oz/a								
	Mepex	8 oz/a								
	MON 3539	0.75 lb ai/a								
	Dual Magnum	1 pt/a								
	Bidrin	8 oz/a								
10	MON 3539	0.75 lb ai/a	0	16	0	0	99	99	99	99
	Orthene	3 oz/a								
	MON 3539	0.75 lb ai/a								
	Dual Magnum	1 pt/a								
	Mepex	8 oz/a								
	MON 3539	0.75 lb ai/a								
	Staple	0.8 oz/a								
	Bidrin	8 oz/a								
LSD (P=.05)			0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation			0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0
CV			0.0	35.99	0.0	0.0	0.0	0.0	0.0	0.0

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

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Weed Code			IPOLA	IPOLA	MUDNU	MUDNU	MUDNU
Crop Code							
Rating Data Type			control	control	control	control	control
Rating Unit			percent	percent	percent	percent	percent
Rating Date			Aug-02-05	Jul-11-05	Jun-27-05	Jul-11-05	Aug-02-05
Trt-Eval Interval			75 DA-A	53 DA-A	39 DA-A	53 DA-A	75 DA-A
Trt No.	Treatment Name	Rate	9	10	11	12	13
		Rate Unit					
1	MON 3539	0.75 lb ai/a	99	91	7	10	35
	Orthene	3 oz/a					
	MON 3539	0.75 lb ai/a					
	MON 3539	0.75 lb ai/a					
2	Prowl	2 pt/a	99	99	33	35	35
	MON 3539	0.75 lb ai/a					
	Orthene	3 oz/a					
	MON 3539	0.75 lb ai/a					
	MON 3539	0.75 lb ai/a					
3	MON 3539	0.75 lb ai/a	99	99	83	73	75
	Orthene	3 oz/a					
	MON 3539	0.75 lb ai/a					
	Staple	0.8 oz/a					
	MON 3539	0.75 lb ai/a					
4	MON 3539	0.75 lb ai/a	99	96	96	98	92
	Orthene	3 oz/a					
	MON 3539	0.75 lb ai/a					
	Dual Magnum	1 pt/a					
	MON 3539	0.75 lb ai/a					
5	MON 3539	0.75 lb ai/a	99	99	33	38	53
	Orthene	3 oz/a					
	MON 3539	0.75 lb ai/a					
	Staple	0.8 oz/a					
	MON 3539	0.75 lb ai/a					
6	MON 3539	0.75 lb ai/a	99	99	7	0	25
	Orthene	3 oz/a					
	MON 3539	0.75 lb ai/a					
	Dual Magnum	1 pt/a					
	MON 3539	0.75 lb ai/a					
7	MON 3539	0.75 lb ai/a	99	99	73	67	66
	Orthene	3 oz/a					
	MON 3539	0.75 lb ai/a					
	Staple	0.8 oz/a					
	Mepex	8 oz/a					
	MON 3539	0.75 lb ai/a					
8	MON 3539	0.75 lb ai/a	99	90	98	96	96
	Orthene	3 oz/a					
	MON 3539	0.75 lb ai/a					
	Dual Magnum	1 pt/a					
	Mepex	8 oz/a					
	MON 3539	0.75 lb ai/a					
9	MON 3539	0.75 lb ai/a	99	99	71	71	67
	Orthene	3 oz/a					
	MON 3539	0.75 lb ai/a					
	Staple	0.8 oz/a					
	Mepex	8 oz/a					
	MON 3539	0.75 lb ai/a					
	Dual Magnum	1 pt/a					
	Bidrin	8 oz/a					

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Weed Code	IPOLA	IPOLA	MUDNU	MUDNU	MUDNU			
Crop Code								
Rating Data Type	control	control	control	control	control			
Rating Unit	percent	percent	percent	percent	percent			
Rating Date	Aug-02-05	Jul-11-05	Jun-27-05	Jul-11-05	Aug-02-05			
Trt-Eval Interval	75 DA-A	53 DA-A	39 DA-A	53 DA-A	75 DA-A			
Trt No.	Treatment Name	Rate	Unit	9	10	11	12	13
10	MON 3539	0.75	lb ai/a	94	99	99	98	96
	Orthene	3	oz/a					
	MON 3539	0.75	lb ai/a					
	Dual Magnum	1	pt/a					
	Mepex	8	oz/a					
	MON 3539	0.75	lb ai/a					
	Staple	0.8	oz/a					
	Bidrin	8	oz/a					
LSD (P=.05)				4.4	8.7	19.1	15.0	17.4
Standard Deviation				2.6	5.1	11.2	8.7	10.1
CV				2.59	5.23	18.6	14.89	15.81

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



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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: 88	% OM: 1.3	Texture: loamy sand
% Silt: 12	pH: 5.9	Soil Name: _____
% Clay: 0	CEC: _____	Fert. Level: _____

### ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

### MOISTURE CONDITIONS

	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: wet

Closest Weather Station: \_\_\_\_\_ Distance: \_\_\_\_\_ Unit: \_\_\_\_

### APPLICATION DESCRIPTION

	A	B	C	D
Application Date:	May-04-05	May-19-05	Jun-07-05	Jul-06-05
Time of Day:	11 am	11 am	10 am	9 am
Application Method:	broadcast	broadcast	broadcast	broadcast
Application Timing:	PRE	1-2 lf	5inweed	5inweed
Applic. Placement:	on soil	overtop	overtop	overtop
Air Temp., Unit:	74 F	83 F	78 F	77 F
% Relative Humidity:	30	40	67	74
Wind Velocity, Unit:	4 mph	3 mph	0 mph	0 mph
Dew Presence (Y/N):	n	n	n	n
Water Hardness:				
Soil Temp., Unit:	76 F	85 F	77 F	77 F
Soil Moisture:	moist	fair	wet	wet
% Cloud Cover:	0	25	0	0

### CROP STAGE AT EACH APPLICATION

	A	B	C	D
Crop 1 Code, Stage:	GOSHI PRE	GOSHI 1-2lf	GOSHI 5inweed	GOSHI 5inweed
Stage Scale:	not up	1 leaf	7 leaf	15 leaf
Height, Unit:	0 inch	1.5 inch	9 inch	22 inch

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## WEED STAGE AT EACH APPLICATION

	A	B	C	D
<b>Weed 1 Code, Stage:</b>	IPOLA PRE	IPOLA 1-2lf	IPOLA 5inweed	IPOLA 5inweed
<b>Stage Scale:</b>	not up	<1 inch	<5 inch	<6 inch
<b>Density, Unit:</b>	0 ydsq	4 ydsq	8 ydsq	8 ydsq
<b>Weed 2 Code, Stage:</b>	DIGSA PRE	DIGSA 1-2lf	DIGSA 5inweed	DIGSA 5inweed
<b>Stage Scale:</b>	not up	<1 inch	<5 inch	<6 inch
<b>Density, Unit:</b>	0 ydsq	20 ydsq	20 ydsq	20 ydsq
<b>Weed 3 Code, Stage:</b>	MUDNU PRE	MUDNU 1-2lf	MUDNU 5inweed	MUDNU 5inweed
<b>Stage Scale:</b>	not up	not up	not up	<3 inch
<b>Density, Unit:</b>	0 ydsq	0 ydsq	0 ydsq	150 ydsq

## APPLICATION EQUIPMENT

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

Trt No	Treatment Application Comment