



# University of Georgia

APPLICATION EQUIPMENT											
	A		B		C		D		E		F
<b>Appl. Equipment:</b>	backpack	backpack	backpack	backpack	backpack	backpack	backpack	backpack	tractor		
<b>Operating Pressure:</b>	22		22		22		22		26		
<b>Nozzle Type:</b>	flat fan		flat fan		flat fan		flat fan		flat fan		
<b>Nozzle Size:</b>	11002		11002		11002		11002		11002		
<b>Nozzle Spacing, Unit:</b>	18	inch	18	inch	18	inch	18	inch	12	inch	
<b>Nozzles/Row:</b>	2		2		2		2		3		
<b>Boom Length, Unit:</b>	4.5	feet	4.5	feet	4.5	feet	4.5	feet	12	feet	
<b>Boom Height, Unit:</b>	15	inch	15	inch	15	inch	15	inch	12	inch	
<b>Ground Speed, Unit:</b>	3	mph	3	mph	3	mph	3	mph	3.5	mph	
<b>Carrier:</b>	water		water		water		water		water		
<b>Spray Volume, Unit:</b>	14.8	GPA	14.8	GPA	14.8	GPA	14.8	GPA	15	GPA	
<b>Propellant:</b>	CO2		CO2		CO2		CO2		CO2		
<b>Tank Mix (Y/N):</b>	Y		Y		Y		Y		Y		

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# University of Georgia

## Roundup Ready cotton response to Staple and Envoke

Trial ID: C39-03

Study Dir.: Amy Davis

Location: Ponder farm

Investigator: Stanley Culpepper

Weed Code			cotton	cotton	cotton	cotton	cotton	cotton	Plant 1
Crop Code			injury	injury	injury	injury	injury	injury	cotton
Rating Data Type			percent	percent	percent	percent	percent	percent	height
Rating Unit									cm
Rating Date			May-06-03	May-14-03	May-26-03	May-31-03	Jun-08-03	Jun-15-03	May-30-03
Trt-Eval Interval			3 DA-A	11 DA-A	23 DA-A	28 DA-A	36 DA-A	43 DA-A	27 DA-A
PRM Data Type									
# Subsamples, Dec.									
Trt No.	Treatment Name	Rate Unit	1	2	3	4	5	6	7
1	Prowl	2 pt/a	0.0	0.0	0.0	0.0	1.8	0.0	21.8
	Cotoran	1.5 pt/a							
	R'up Weathermax	21.3 fl oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
2	Prowl	2 pt/a	0.0	9.7	33.8	25.0	10.3	9.0	19.0
	Cotoran	1.5 pt/a							
	Staple	0.4 oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Staple	0.4 oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
3	Prowl	2 pt/a	0.0	0.0	37.7	26.0	8.8	8.8	20.8
	Cotoran	1.5 pt/a							
	R'up Weathermax	21.3 fl oz/a							
	Staple	0.6 oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
4	Prowl	2 pt/a	0.0	0.0	35.5	26.5	8.5	8.7	19.3
	Cotoran	1.5 pt/a							
	R'up Weathermax	21.3 fl oz/a							
	Staple	0.9 oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
5	Prowl	2 pt/a	0.0	0.8	0.0	13.3	7.3	8.0	22.2
	Cotoran	1.5 pt/a							
	R'up Weathermax	21.3 fl oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Envoke	0.1 oz/a							
	Surfac 820	0.25 % v/v							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
6	Prowl	2 pt/a	0.8	0.0	0.0	0.5	0.3	0.5	21.0
	Staple	0.8 oz/a							
	Cotoran	1.5 pt/a							
	R'up Weathermax	21.3 fl oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							

# University of Georgia

Weed Code			cotton	cotton	cotton	cotton	cotton	cotton	Plant 1
Crop Code			injury	injury	injury	injury	injury	injury	cotton
Rating Data Type			percent	percent	percent	percent	percent	percent	height
Rating Unit									cm
Rating Date			May-06-03	May-14-03	May-26-03	May-31-03	Jun-08-03	Jun-15-03	May-30-03
Trt-Eval Interval			3 DA-A	11 DA-A	23 DA-A	28 DA-A	36 DA-A	43 DA-A	27 DA-A
PRM Data Type									
# Subsamples, Dec.									
Trt No.	Treatment Name	Rate Unit	1	2	3	4	5	6	7
7	Prowl	2 pt/a	0.0	7.8	34.8	27.2	9.8	7.0	18.3
	Staple	0.8 oz/a							
	Cotoran	1.5 pt/a							
	Staple	0.4 oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Staple	0.4 oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
8	Prowl	2 pt/a	0.0	0.0	35.2	27.0	10.5	9.7	17.5
	Staple	0.8 oz/a							
	Cotoran	1.5 pt/a							
	R'up Weathermax	21.3 fl oz/a							
	Staple	0.6 oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
9	Prowl	2 pt/a	0.0	0.0	38.0	31.7	13.0	12.0	16.3
	Staple	0.8 oz/a							
	Cotoran	1.5 pt/a							
	R'up Weathermax	21.3 fl oz/a							
	Staple	0.9 oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
10	Prowl	2 pt/a	0.0	0.0	0.0	13.2	7.3	7.5	23.3
	Staple	0.8 oz/a							
	Cotoran	1.5 pt/a							
	R'up Weathermax	21.3 fl oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Envoke	0.1 oz/a							
	Surfac 820	0.25 % v/v							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
11	Prowl	2 pt/a	0.0	0.0	2.7	0.3	0.0	0.3	20.5
	Touchdown	32 fl oz/a							
	Touchdown	32 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
12	Prowl	2 pt/a	0.0	0.7	37.8	31.3	10.5	10.7	19.3
	Touchdown	32 fl oz/a							
	Staple	0.9 oz/a							
	Touchdown	32 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							

# University of Georgia

Weed Code			cotton	cotton	cotton	cotton	cotton	cotton	Plant 1	
Crop Code			injury	injury	injury	injury	injury	injury	cotton	
Rating Data Type			percent	percent	percent	percent	percent	percent	height	
Rating Unit			May-06-03	May-14-03	May-26-03	May-31-03	Jun-08-03	Jun-15-03	cm	
Rating Date			3 DA-A	11 DA-A	23 DA-A	28 DA-A	36 DA-A	43 DA-A	May-30-03	
Trt-Eval Interval									27 DA-A	
PRM Data Type										
# Subsamples, Dec.										
Trt No.	Treatment Name	Rate	Unit	1	2	3	4	5	6	7
13	Prowl	2	pt/a	0.8	0.0	1.2	0.0	0.5	1.8	21.7
	Glyphomax Plus	32	fl oz/a							
	Glyphomax Plus	32	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
14	Prowl	2	pt/a	0.0	0.0	36.3	29.3	11.3	11.3	18.8
	Glyphomax Plus	32	fl oz/a							
	Staple	0.9	oz/a							
	Glyphomax Plus	32	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
LSD (P=.05)				0.90	2.12	3.17	4.91	3.97	3.46	3.87
Standard Deviation				0.78	1.84	2.75	4.25	3.44	2.99	3.36
CV				653.04	135.22	13.12	23.69	48.09	43.95	16.78
Bartlett's X2				0.0	20.711	16.415	42.031	36.121	37.683	14.541
P(Bartlett's X2)				1.00	0.001*	0.059	0.001*	0.001*	0.001*	0.337

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

# University of Georgia

Weed Code		Plant 2 cotton height cm	Plant 3 cotton height cm	Plant 4 cotton height cm	Plant 5 cotton height cm	Plant 6 cotton height cm	Plant 7 cotton height cm	Plant 8 cotton height cm		
Crop Code		May-30-03	May-30-03	May-30-03	May-30-03	May-30-03	May-30-03	May-30-03		
Rating Data Type		27 DA-A	27 DA-A	27 DA-A	27 DA-A	27 DA-A	27 DA-A	27 DA-A		
Rating Unit										
Trt-Eval Interval										
PRM Data Type										
# Subsamples, Dec.										
Trt No.	Treatment Name	Rate	Unit	8	9	10	11	12	13	14
1	Prowl	2	pt/a	22.5	21.5	24.7	22.2	22.8	22.8	23.7
	Cotoran	1.5	pt/a							
	R'up Weathermax	21.3	fl oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
2	Prowl	2	pt/a	16.7	19.3	16.0	19.8	21.8	22.0	19.3
	Cotoran	1.5	pt/a							
	Staple	0.4	oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Staple	0.4	oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
3	Prowl	2	pt/a	20.2	18.5	19.8	20.3	19.7	20.3	20.2
	Cotoran	1.5	pt/a							
	R'up Weathermax	21.3	fl oz/a							
	Staple	0.6	oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
4	Prowl	2	pt/a	18.5	17.7	18.2	17.3	19.3	19.3	20.7
	Cotoran	1.5	pt/a							
	R'up Weathermax	21.3	fl oz/a							
	Staple	0.9	oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
5	Prowl	2	pt/a	24.0	23.5	22.3	22.8	20.5	22.0	25.2
	Cotoran	1.5	pt/a							
	R'up Weathermax	21.3	fl oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Envoke	0.1	oz/a							
	Surfac 820	0.25	% v/v							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
6	Prowl	2	pt/a	22.0	20.5	20.2	24.3	23.0	22.3	23.7
	Staple	0.8	oz/a							
	Cotoran	1.5	pt/a							
	R'up Weathermax	21.3	fl oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							

# University of Georgia

Weed Code		Plant 2 cotton height cm	Plant 3 cotton height cm	Plant 4 cotton height cm	Plant 5 cotton height cm	Plant 6 cotton height cm	Plant 7 cotton height cm	Plant 8 cotton height cm		
Crop Code		May-30-03	May-30-03	May-30-03	May-30-03	May-30-03	May-30-03	May-30-03		
Rating Data Type		27 DA-A	27 DA-A	27 DA-A	27 DA-A	27 DA-A	27 DA-A	27 DA-A		
Rating Unit										
Trt-Eval Interval										
PRM Data Type										
# Subsamples, Dec.										
Trt No.	Treatment Name	Rate	Unit	8	9	10	11	12	13	14
7	Prowl	2	pt/a	20.2	19.8	19.3	18.2	19.5	20.5	19.2
	Staple	0.8	oz/a							
	Cotoran	1.5	pt/a							
	Staple	0.4	oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Staple	0.4	oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
8	Prowl	2	pt/a	17.7	18.2	18.0	20.3	18.8	18.8	18.3
	Staple	0.8	oz/a							
	Cotoran	1.5	pt/a							
	R'up Weathermax	21.3	fl oz/a							
	Staple	0.6	oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
9	Prowl	2	pt/a	19.0	17.3	19.3	18.2	17.3	19.2	18.8
	Staple	0.8	oz/a							
	Cotoran	1.5	pt/a							
	R'up Weathermax	21.3	fl oz/a							
	Staple	0.9	oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
10	Prowl	2	pt/a	24.3	22.3	23.3	24.0	23.3	19.2	22.5
	Staple	0.8	oz/a							
	Cotoran	1.5	pt/a							
	R'up Weathermax	21.3	fl oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Envoke	0.1	oz/a							
	Surfac 820	0.25	% v/v							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
11	Prowl	2	pt/a	22.5	23.0	23.3	21.0	22.8	23.5	24.5
	Touchdown	32	fl oz/a							
	Touchdown	32	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
12	Prowl	2	pt/a	18.2	19.8	18.7	18.7	16.7	17.5	18.7
	Touchdown	32	fl oz/a							
	Staple	0.9	oz/a							
	Touchdown	32	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							

## University of Georgia

Weed Code		Plant 2	Plant 3	Plant 4	Plant 5	Plant 6	Plant 7	Plant 8		
Crop Code		cotton	cotton	cotton	cotton	cotton	cotton	cotton		
Rating Data Type		height	height	height	height	height	height	height		
Rating Unit		cm	cm	cm	cm	cm	cm	cm		
Rating Date		May-30-03	May-30-03	May-30-03	May-30-03	May-30-03	May-30-03	May-30-03		
Trt-Eval Interval		27 DA-A	27 DA-A	27 DA-A	27 DA-A	27 DA-A	27 DA-A	27 DA-A		
PRM Data Type										
# Subsamples, Dec.										
Trt No.	Treatment Name	Rate	Unit	8	9	10	11	12	13	14
13	Prowl	2	pt/a	23.7	21.3	24.2	23.8	23.2	23.2	21.7
	Glyphomax Plus	32	fl oz/a							
	Glyphomax Plus	32	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
14	Prowl	2	pt/a	18.3	19.8	20.3	17.8	18.7	21.3	18.0
	Glyphomax Plus	32	fl oz/a							
	Staple	0.9	oz/a							
	Glyphomax Plus	32	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
LSD (P=.05)				4.17	4.83	4.08	3.50	4.39	4.28	3.98
Standard Deviation				3.61	4.18	3.53	3.03	3.80	3.71	3.45
CV				17.57	20.71	17.19	14.69	18.51	17.77	16.4
Bartlett's X2				15.834	38.539	21.416	28.274	48.084	31.271	24.721
P(Bartlett's X2)				0.258	0.001*	0.065	0.008*	0.001*	0.003*	0.025*

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







# University of Georgia

Weed Code	Plant 9 cotton height cm	Plant 10 cotton height cm	AVERAGE cotton height cm	Plant 1 cotton height cm	Plant 2 cotton height cm	Plant 3 cotton height cm	Plant 4 cotton height cm	Plant 5 cotton height cm	
Crop Code									
Rating Data Type									
Rating Unit									
Rating Date	May-30-03	May-30-03	May-30-03	Jun-05-03	Jun-05-03	Jun-05-03	Jun-05-03	Jun-05-03	
Trt-Eval Interval	27 DA-A	27 DA-A	27 DA-A	33 DA-A	33 DA-A	33 DA-A	33 DA-A	33 DA-A	
PRM Data Type			T1						
# Subsamples, Dec.									
Trt Treatment									
No. Name	Rate Unit	15	16	17	18	19	20	21	22
13 Prowl	2 pt/a	23.5	22.8	22.9	29.0	35.0	33.3	33.7	31.2
Glyphomax Plus	32 fl oz/a								
Glyphomax Plus	32 fl oz/a								
Caparol	2 pt/a								
MSMA 6.6	2.4 pt/a								
Surfac 820	0.25 % v/v								
14 Prowl	2 pt/a	18.5	18.7	19.0	26.7	22.0	26.8	28.2	26.5
Glyphomax Plus	32 fl oz/a								
Staple	0.9 oz/a								
Glyphomax Plus	32 fl oz/a								
Caparol	2 pt/a								
MSMA 6.6	2.4 pt/a								
Surfac 820	0.25 % v/v								
LSD (P=.05)		3.49	3.49	2.43	4.25	4.64	4.14	4.96	4.27
Standard Deviation		3.02	3.02	2.10	3.68	4.02	3.58	4.30	3.70
CV		14.8	14.62	10.23	13.51	14.27	12.57	14.64	12.55
Bartlett's X2		18.076	16.41	24.159	12.8	15.5	27.449	23.186	18.825
P(Bartlett's X2)		0.155	0.228	0.03*	0.463	0.277	0.011*	0.04*	0.129

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

Column 17: T1 = ([C7]+[C8]+[C9]+[C10]+[C11]+[C12]+[C13]+[C14]+[C15]+[C16])/10





# University of Georgia

Weed Code	Plant 6 cotton height cm	Plant 7 cotton height cm	Plant 8 cotton height cm	Plant 9 cotton height cm	Plant 10 cotton height cm	AVERAGE cotton height cm	Plant 1 cotton height cm	Plant 2 cotton height cm	
Crop Code	Jun-05-03	Jun-05-03	Jun-05-03	Jun-05-03	Jun-05-03	Jun-05-03	Jul-10-03	Jul-10-03	
Rating Data Type	33 DA-A	33 DA-A	33 DA-A	33 DA-A	33 DA-A	33 DA-A	68 DA-A		
Rating Unit									
Rating Date									
Trt-Eval Interval									
PRM Data Type						T2			
# Subsamples, Dec.									
Trt Treatment									
No. Name	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	
	Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit	
13 Prowl	2 pt/a	23	24	25	26	27	28	29	30
Glyphomax Plus	32 fl oz/a	30.5	32.5	32.3	30.7	34.7	32.3	87.5	89.5
Glyphomax Plus	32 fl oz/a								
Caparol	2 pt/a								
MSMA 6.6	2.4 pt/a								
Surfac 820	0.25 % v/v								
14 Prowl	2 pt/a	29.2	28.3	27.2	27.7	26.2	26.9	80.3	76.7
Glyphomax Plus	32 fl oz/a								
Staple	0.9 oz/a								
Glyphomax Plus	32 fl oz/a								
Caparol	2 pt/a								
MSMA 6.6	2.4 pt/a								
Surfac 820	0.25 % v/v								
LSD (P=.05)		4.17	4.33	4.13	4.81	4.83	2.66	12.26	11.05
Standard Deviation		3.61	3.75	3.58	4.16	4.18	2.30	10.62	9.57
CV		12.46	12.7	12.21	14.57	14.62	8.0	13.57	12.15
Bartlett's X2		10.644	31.122	23.468	23.131	30.366	27.946	9.936	10.924
P(Bartlett's X2)		0.641	0.003*	0.036*	0.04*	0.004*	0.009*	0.699	0.617

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

Column 28: T2 = ((C18)+[C19]+[C20]+[C21]+[C22]+[C23]+[C24]+[C25]+[C26]+[C27])/10







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Weed Code	Plant 3 cotton height cm	Plant 4 cotton height cm	Plant 5 cotton height cm	Plant 6 cotton height cm	Plant 7 cotton height cm	Plant 8 cotton height cm	Plant 9 cotton height cm	Plant 10 cotton height cm			
Crop Code	Jul-10-03	Jul-10-03	Jul-10-03	Jul-10-03	Jul-10-03	Jul-10-03	Jul-10-03	Jul-10-03			
Rating Data Type											
Rating Unit											
Rating Date											
Trt-Eval Interval											
PRM Data Type											
# Subsamples, Dec.											
Trt No.	Treatment Name	Rate	Unit	31	32	33	34	35	36	37	38
13	Prowl	2	pt/a	88.2	88.5	88.2	86.3	85.7	85.2	86.0	87.2
	Glyphomax Plus	32	fl oz/a								
	Glyphomax Plus	32	fl oz/a								
	Caparol	2	pt/a								
	MSMA 6.6	2.4	pt/a								
	Surfac 820	0.25	% v/v								
14	Prowl	2	pt/a	77.0	78.0	80.3	80.0	81.2	76.5	79.3	82.0
	Glyphomax Plus	32	fl oz/a								
	Staple	0.9	oz/a								
	Glyphomax Plus	32	fl oz/a								
	Caparol	2	pt/a								
	MSMA 6.6	2.4	pt/a								
	Surfac 820	0.25	% v/v								
LSD (P=.05)				10.35	9.92	9.92	9.53	9.81	9.30	9.16	9.03
Standard Deviation				8.96	8.59	8.59	8.25	8.50	8.06	7.93	7.82
CV				11.21	10.71	10.78	10.34	10.66	10.07	9.94	9.75
Bartlett's X2				15.106	6.315	10.879	8.246	11.35	18.016	16.527	16.411
P(Bartlett's X2)				0.301	0.934	0.621	0.827	0.582	0.157	0.222	0.228

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

# University of Georgia

Weed Code			AVERAGE	seed	seed	5-9	5-9	10-14	10-14	
Crop Code			cotton	GOSHI	GOSHI	cotton	cotton	cotton	cotton	
Rating Data Type			height	yield	yield	boll	boll	boll	boll	
Rating Unit			cm	lb/plot	lb/A	1st pos	2nd pos	1st pos	2nd pos	
Rating Date			Jul-10-03	Sep-24-03	Sep-24-03	Sep-10-03	Sep-10-03	Sep-10-03	Sep-10-03	
Trt-Eval Interval										
PRM Data Type			T3		TY4					
# Subsamples, Dec.					1					
Trt No.	Treatment Name	Rate	Unit	39	40	41	42	43	44	45
1	Prowl	2	pt/a	81.5	11.2	3261.2	3.3	0.7	2.6	0.5
	Cotoran	1.5	pt/a							
	R'up Weathermax	21.3	fl oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
2	Prowl	2	pt/a	81.6	11.0	3207.0	2.9	0.9	2.8	0.7
	Cotoran	1.5	pt/a							
	Staple	0.4	oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Staple	0.4	oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
3	Prowl	2	pt/a	77.4	10.6	3090.8	3.3	0.9	2.3	0.8
	Cotoran	1.5	pt/a							
	R'up Weathermax	21.3	fl oz/a							
	Staple	0.6	oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
4	Prowl	2	pt/a	75.9	9.8	2836.2	3.1	0.7	2.3	0.3
	Cotoran	1.5	pt/a							
	R'up Weathermax	21.3	fl oz/a							
	Staple	0.9	oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
5	Prowl	2	pt/a	76.7	10.6	3087.0	3.1	0.7	2.6	0.4
	Cotoran	1.5	pt/a							
	R'up Weathermax	21.3	fl oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Envoke	0.1	oz/a							
	Surfac 820	0.25	% v/v							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
6	Prowl	2	pt/a	82.4	10.9	3173.1	3.1	1.0	2.9	0.7
	Staple	0.8	oz/a							
	Cotoran	1.5	pt/a							
	R'up Weathermax	21.3	fl oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							

# University of Georgia

Weed Code			AVERAGE	seed	seed	5-9	5-9	10-14	10-14
Crop Code			cotton	GOSHI	GOSHI	cotton	cotton	cotton	cotton
Rating Data Type			height	yield	yield	boll	boll	boll	boll
Rating Unit			cm	lb/plot	lb/A	1st pos	2nd pos	1st pos	2nd pos
Rating Date			Jul-10-03	Sep-24-03	Sep-24-03	Sep-10-03	Sep-10-03	Sep-10-03	Sep-10-03
Trt-Eval Interval									
PRM Data Type			T3		TY4				
# Subsamples, Dec.					1				
Trt No.	Treatment Name	Rate Unit	39	40	41	42	43	44	45
7	Prowl	2 pt/a	83.2	11.6	3363.8	3.0	0.9	2.5	0.7
	Staple	0.8 oz/a							
	Cotoran	1.5 pt/a							
	Staple	0.4 oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Staple	0.4 oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
8	Prowl	2 pt/a	75.3	9.8	2839.1	3.0	0.6	2.4	0.4
	Staple	0.8 oz/a							
	Cotoran	1.5 pt/a							
	R'up Weathermax	21.3 fl oz/a							
	Staple	0.6 oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
9	Prowl	2 pt/a	77.7	10.6	3070.5	3.1	0.6	2.2	0.5
	Staple	0.8 oz/a							
	Cotoran	1.5 pt/a							
	R'up Weathermax	21.3 fl oz/a							
	Staple	0.9 oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
10	Prowl	2 pt/a	78.7	11.0	3202.1	3.2	1.3	2.7	1.2
	Staple	0.8 oz/a							
	Cotoran	1.5 pt/a							
	R'up Weathermax	21.3 fl oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Envoke	0.1 oz/a							
	Surfac 820	0.25 % v/v							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
11	Prowl	2 pt/a	79.3	10.6	3069.5	3.4	0.6	2.1	0.5
	Touchdown	32 fl oz/a							
	Touchdown	32 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
12	Prowl	2 pt/a	79.0	11.4	3313.5	2.9	0.7	2.4	0.6
	Touchdown	32 fl oz/a							
	Staple	0.9 oz/a							
	Touchdown	32 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							

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Weed Code	AVERAGE	seed	seed	5-9	5-9	10-14	10-14		
Crop Code	cotton	GOSHI	GOSHI	cotton	cotton	cotton	cotton		
Rating Data Type	height	yield	yield	boll	boll	boll	boll		
Rating Unit	cm	lb/plot	lb/A	1st pos	2nd pos	1st pos	2nd pos		
Rating Date	Jul-10-03	Sep-24-03	Sep-24-03	Sep-10-03	Sep-10-03	Sep-10-03	Sep-10-03		
Trt-Eval Interval									
PRM Data Type	T3		TY4						
# Subsamples, Dec.			1						
Trt Treatment									
No. Name	Rate	Unit	39	40	41	42	43	44	45
13 Prowl	2	pt/a	87.2	10.1	2924.8	3.5	1.1	2.7	0.6
Glyphomax Plus	32	fl oz/a							
Glyphomax Plus	32	fl oz/a							
Caparol	2	pt/a							
MSMA 6.6	2.4	pt/a							
Surfac 820	0.25	% v/v							
14 Prowl	2	pt/a	79.1	10.2	2957.2	2.8	0.8	2.7	0.5
Glyphomax Plus	32	fl oz/a							
Staple	0.9	oz/a							
Glyphomax Plus	32	fl oz/a							
Caparol	2	pt/a							
MSMA 6.6	2.4	pt/a							
Surfac 820	0.25	% v/v							
LSD (P=.05)			8.94	1.51	439.81	0.55	0.51	0.65	0.46
Standard Deviation			7.74	1.31	380.89	0.47	0.45	0.56	0.40
CV			9.72	12.29	12.29	15.2	54.11	22.46	67.99
Bartlett's X2			12.883	7.647	7.647	17.417	19.069	7.013	26.35
P(Bartlett's X2)			0.457	0.866	0.866	0.181	0.121	0.901	0.015*

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

Column 39: T3 =  $([C29]+[C30]+[C31]+[C32]+[C33]+[C34]+[C35]+[C36]+[C37]+[C38])/10$

Column 41: TY4 =  $290.4*[40]$

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Weed Code		15-19	15-19	20-24	20-24				
Crop Code		cotton	cotton	cotton	cotton	cotton	cotton	cotton	
Rating Data Type		boll	boll	boll	boll	node	total	plant	
Rating Unit		1st pos	2nd pos	1st pos	2nd pos	1st boll	node	ht	
Rating Date		Sep-10-03	Sep-10-03	Sep-10-03	Sep-10-03	Sep-10-03	Sep-10-03	Sep-10-03	
Trt-Eval Interval									
PRM Data Type									
# Subsamples, Dec.									
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	Rate	
		Unit	Unit	Unit	Unit	Unit	Unit	Unit	
1	Prowl	2 pt/a	0.4	0.0	0.0	0.0	5.6	15.1	89.4
	Cotoran	1.5 pt/a							
	R'up Weathermax	21.3 fl oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
2	Prowl	2 pt/a	0.8	0.2	0.1	0.0	6.3	17.0	88.3
	Cotoran	1.5 pt/a							
	Staple	0.4 oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Staple	0.4 oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
3	Prowl	2 pt/a	0.8	0.1	0.0	0.0	5.9	16.3	89.9
	Cotoran	1.5 pt/a							
	R'up Weathermax	21.3 fl oz/a							
	Staple	0.6 oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
4	Prowl	2 pt/a	0.7	0.1	0.0	0.0	7.5	15.2	86.1
	Cotoran	1.5 pt/a							
	R'up Weathermax	21.3 fl oz/a							
	Staple	0.9 oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
5	Prowl	2 pt/a	0.5	0.1	0.0	0.0	6.1	15.6	85.3
	Cotoran	1.5 pt/a							
	R'up Weathermax	21.3 fl oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Envoke	0.1 oz/a							
	Surfac 820	0.25 % v/v							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							
6	Prowl	2 pt/a	0.6	0.1	0.1	0.0	6.1	15.7	90.8
	Staple	0.8 oz/a							
	Cotoran	1.5 pt/a							
	R'up Weathermax	21.3 fl oz/a							
	R'up Weathermax	21.3 fl oz/a							
	Caparol	2 pt/a							
	MSMA 6.6	2.4 pt/a							
	Surfac 820	0.25 % v/v							

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Weed Code		15-19	15-19	20-24	20-24					
Crop Code		cotton	cotton	cotton	cotton	cotton	cotton	cotton		
Rating Data Type		boll	boll	boll	boll	node	total	plant		
Rating Unit		1st pos	2nd pos	1st pos	2nd pos	1st boll	node	ht		
Rating Date		Sep-10-03	Sep-10-03	Sep-10-03	Sep-10-03	Sep-10-03	Sep-10-03	Sep-10-03		
Trt-Eval Interval										
PRM Data Type										
# Subsamples, Dec.										
Trt No.	Treatment Name	Rate	Unit	46	47	48	49	50	51	52
7	Prowl	2	pt/a	0.7	0.1	0.1	0.0	6.3	16.6	92.0
	Staple	0.8	oz/a							
	Cotoran	1.5	pt/a							
	Staple	0.4	oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Staple	0.4	oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
8	Prowl	2	pt/a	0.7	0.1	0.0	0.0	6.2	17.1	85.5
	Staple	0.8	oz/a							
	Cotoran	1.5	pt/a							
	R'up Weathermax	21.3	fl oz/a							
	Staple	0.6	oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
9	Prowl	2	pt/a	0.5	0.0	0.0	0.0	6.2	15.6	83.8
	Staple	0.8	oz/a							
	Cotoran	1.5	pt/a							
	R'up Weathermax	21.3	fl oz/a							
	Staple	0.9	oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
10	Prowl	2	pt/a	0.9	0.2	0.1	0.0	6.1	17.1	86.4
	Staple	0.8	oz/a							
	Cotoran	1.5	pt/a							
	R'up Weathermax	21.3	fl oz/a							
	R'up Weathermax	21.3	fl oz/a							
	Envoke	0.1	oz/a							
	Surfac 820	0.25	% v/v							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
11	Prowl	2	pt/a	0.6	0.1	0.0	0.0	5.9	16.1	88.7
	Touchdown	32	fl oz/a							
	Touchdown	32	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
12	Prowl	2	pt/a	0.7	0.1	0.0	0.0	6.4	17.0	87.0
	Touchdown	32	fl oz/a							
	Staple	0.9	oz/a							
	Touchdown	32	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							

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Weed Code	15-19	15-19	20-24	20-24						
Crop Code	cotton	cotton	cotton	cotton	cotton	cotton	cotton			
Rating Data Type	boll	boll	boll	boll	node	total	plant			
Rating Unit	1st pos	2nd pos	1st pos	2nd pos	1st boll	node	ht			
Rating Date	Sep-10-03	Sep-10-03	Sep-10-03	Sep-10-03	Sep-10-03	Sep-10-03	Sep-10-03			
Trt-Eval Interval										
PRM Data Type										
# Subsamples, Dec.										
Trt No.	Treatment Name	Rate	Unit	46	47	48	49	50	51	52
13	Prowl	2	pt/a	0.7	0.1	0.0	0.0	6.0	16.8	88.8
	Glyphomax Plus	32	fl oz/a							
	Glyphomax Plus	32	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
14	Prowl	2	pt/a	0.8	0.1	0.1	0.0	6.4	16.9	88.6
	Glyphomax Plus	32	fl oz/a							
	Staple	0.9	oz/a							
	Glyphomax Plus	32	fl oz/a							
	Caparol	2	pt/a							
	MSMA 6.6	2.4	pt/a							
	Surfac 820	0.25	% v/v							
LSD (P=.05)				0.51	0.17	0.09	0.03	1.15	2.07	10.77
Standard Deviation				0.44	0.15	0.08	0.02	0.99	1.80	9.33
CV				67.58	156.49	253.22	661.78	15.98	11.03	10.61
Bartlett's X2				8.21	29.454	8.048	2.216	89.82	37.862	12.196
P(Bartlett's X2)				0.83	0.006*	0.328	0.137	0.001*	0.001*	0.512

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

## Trial Comments

GENERAL COMMENTS: Trial was maintained weed free. POST Applications were made when conditions were most favorable to cause crop injury. Study was not irrigated although little irrigation was needed for the 2003 crop.

OBJECTIVE: Determine cotton response to Staple + glyphosate or Envoke applied topically.

### CROP RESPONSE:

#### Early and Mid-season:

- 1) Pre herbicides did not affect cotton growth. Pre herbicide systems did not affect injury from POST treatments.
- 2) Staple plus glyphosate applied to 1 leaf cotton caused 8 to 10% chlorosis and necrosis. Injury was minor and of no concern.
- 3) Staple plus glyphosate applied to 4 leaf cotton caused severe injury at 3 DAT. Cotton was wet from dew and soils were wet from prior day rain when the application was made. Injury was not acceptable and ranged between 34 to 38%. Neither Staple rate nor glyphosate product impacted the degree of injury. At 9 DAT, injury was still severe ranging from 25 to 31%. Plant stunting was being detected thus height measurements were taken. At 17 DAT, visual injury was predominately stunting and ranged from 8 to 13%. By 25 DAT, visual estimates of stunting ranged from 7 to 11%.
- 4) Envoke at 4 DAT caused visual chlorosis in the terminal of the plant. Injury was 13%. By 12 to 19 DAT, injury was an estimate of stunting and ranged from 7 to 8%.

#### PLANT HEIGHTS (10 plants per plot were measured).

- 1) Staple, Cotoran, or Staple plus Cotoran applied PRE did not reduce plant height throughout the season.
- 2) Using Prowl PRE, two shots of glyphosate POST followed by a layby as the control the following occurred:
  - a) Staple mixed with glyphosate applied once, sequentially, or at various rates reduced plant height 13 to 22 % similarly at 7 day after POST 2.
  - b) At 14 DAT, Staple mixed with glyphosate applied once, sequentially, or at various rates reduced plant height 13 to 19%.
  - c) At 10 day after Envoke treatment, plant heights were reduced 10%.
  - d) By early July no stunting was detectable.
  - e) At time of plant mapping, no stunting was detectable

#### PLANT MAPPING (10 plants per plot were measured).

- 1) No significance was noted with any plant map data except on the number of bolls noted on nodes 10-14. However compared to the "check", all treatments had similar or more bolls on these fruiting positions.
- 2) Treatments did not affect node of 1st boll set.

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3) Treatments did not affect total nodes produced.

**SEED YIELDS:**

- 1) Yields ranged from 2924 to 3363 lb/A with a CV of 12.3.
- 2) Treatments did not affect yields.