

University of Georgia

Cotton and weed response to Envoke and Staple systems.

Trial ID: C36-05

Study Dir.: Culpepper

Location: Attapulcus (big)

Investigator: Stanley Culpepper

Reps: 4

Plots: 12 by 25 feet

Spray vol: 14.8 gal/ac

Mix size: 2 liters (min 1.5434)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt to Measure	Product	Plot No. By Rep			
										1	2	3	4
1	Non-treated									101	206	302	408
2	Touchdown Total	4.17	L	0.75	lb ai/a	1-4	If B	24.3	ml/mx	102	212	315	402
	Envoke	75	DF	0.0047	lb ai/a	5-8	If C	0.1015	g/mx				
	NIS		L	0.25	% v/v	5-8	If C	4.999	ml/mx				
	Suprend	80	WG	0.8	lb ai/a		Layby D	16.19	g/mx				
	NIS		L	0.25	% v/v		Layby D	4.999	ml/mx				
3	Touchdown Total	4.17	L	0.75	lb ai/a	1-4	If B	24.3	ml/mx	103	211	318	412
	Staple	85	SP	0.063	lb ai/a	5-8	If C	1.2	g/mx				
	NIS		L	0.25	% v/v	5-8	If C	4.999	ml/mx				
	Suprend	80	WG	0.8	lb ai/a		Layby D	16.19	g/mx				
	NIS		L	0.25	% v/v		Layby D	4.999	ml/mx				
4	Sequence	5.25	L	1.75	lb ai/a	1-4	If B	45.04	ml/mx	104	216	317	409
	Envoke	75	DF	0.0047	lb ai/a	5-8	If C	0.1015	g/mx				
	NIS		L	0.25	% v/v	5-8	If C	4.999	ml/mx				
	Suprend	80	WG	0.8	lb ai/a		Layby D	16.19	g/mx				
	NIS		L	0.25	% v/v		Layby D	4.999	ml/mx				
5	Touchdown Total	4.17	L	0.75	lb ai/a	1-4	If B	24.3	ml/mx	105	204	303	413
	Staple	85	SP	0.063	lb ai/a	1-4	If B	1.2	g/mx				
	Envoke	75	DF	0.0047	lb ai/a	5-8	If C	0.1015	g/mx				
	NIS		L	0.25	% v/v	5-8	If C	4.999	ml/mx				
	Suprend	80	WG	0.8	lb ai/a		Layby D	16.19	g/mx				
	NIS		L	0.25	% v/v		Layby D	4.999	ml/mx				
6	Touchdown Total	4.17	L	0.75	lb ai/a	1-4	If B	24.3	ml/mx	106	208	310	404
	Staple	85	SP	0.0315	lb ai/a	1-4	If B	0.6001	g/mx				
	Envoke	75	DF	0.0047	lb ai/a	5-8	If C	0.1015	g/mx				
	NIS		L	0.25	% v/v	5-8	If C	4.999	ml/mx				
	Suprend	80	WG	0.8	lb ai/a		Layby D	16.19	g/mx				
	NIS		L	0.25	% v/v		Layby D	4.999	ml/mx				
7	Touchdown Total	4.17	L	0.75	lb ai/a	1-4	If B	24.3	ml/mx	107	205	301	414
	Staple	85	SP	0.063	lb ai/a	1-4	If B	1.2	g/mx				
	Envoke	75	DF	0.007	lb ai/a	5-8	If C	0.1511	g/mx				
	NIS		L	0.25	% v/v	5-8	If C	4.999	ml/mx				
	Suprend	80	WG	0.8	lb ai/a		Layby D	16.19	g/mx				
	NIS		L	0.25	% v/v		Layby D	4.999	ml/mx				
8	Touchdown Total	4.17	L	0.75	lb ai/a	1-4	If B	24.3	ml/mx	108	210	314	407
	Staple	85	SP	0.0315	lb ai/a	1-4	If B	0.6001	g/mx				
	Envoke	75	DF	0.007	lb ai/a	5-8	If C	0.1511	g/mx				
	NIS		L	0.25	% v/v	5-8	If C	4.999	ml/mx				
	Suprend	80	WG	0.8	lb ai/a		Layby D	16.19	g/mx				
	NIS		L	0.25	% v/v		Layby D	4.999	ml/mx				
9	Touchdown Total	4.17	L	0.75	lb ai/a	1-4	If B	24.3	ml/mx	109	203	311	401
	Staple	85	SP	0.063	lb ai/a	5-8	If C	1.2	g/mx				
	Envoke	75	DF	0.0047	lb ai/a	5-8	If C	0.1015	g/mx				
	NIS		L	0.25	% v/v	5-8	If C	4.999	ml/mx				
	Suprend	80	WG	0.8	lb ai/a		Layby D	16.19	g/mx				
	NIS		L	0.25	% v/v		Layby D	4.999	ml/mx				
10	Touchdown Total	4.17	L	0.75	lb ai/a	1-4	If B	24.3	ml/mx	110	213	306	403
	Staple	85	SP	0.0315	lb ai/a	5-8	If C	0.6001	g/mx				
	Envoke	75	DF	0.0047	lb ai/a	5-8	If C	0.1015	g/mx				
	NIS		L	0.25	% v/v	5-8	If C	4.999	ml/mx				
	Suprend	80	WG	0.8	lb ai/a		Layby D	16.19	g/mx				
	NIS		L	0.25	% v/v		Layby D	4.999	ml/mx				

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Reps: 4 Plots: 12 by 25 feet
 Spray vol: 14.8 gal/ac Mix size: 2 liters (min 1.5434)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt to Measure	Product	Plot No. By Rep			
										1	2	3	4
11	Touchdown Total	4.17	L	0.75	lb ai/a	1-4	If B	24.3	ml/mx	111	217	304	417
	Staple	85	SP	0.063	lb ai/a	5-8	If C	1.2	g/mx				
	Envoke	75	DF	0.007	lb ai/a	5-8	If C	0.1511	g/mx				
	NIS		L	0.25	% v/v	5-8	If C	4.999	ml/mx				
	Suprend	80	WG	0.8	lb ai/a	Layby	D	16.19	g/mx				
	NIS		L	0.25	% v/v	Layby	D	4.999	ml/mx				
12	Touchdown Total	4.17	L	0.75	lb ai/a	1-4	If B	24.3	ml/mx	112	209	316	415
	Staple	85	SP	0.0315	lb ai/a	5-8	If C	0.6001	g/mx				
	Envoke	75	DF	0.007	lb ai/a	5-8	If C	0.1511	g/mx				
	NIS		L	0.25	% v/v	5-8	If C	4.999	ml/mx				
	Suprend	80	WG	0.8	lb ai/a	Layby	D	16.19	g/mx				
	NIS		L	0.25	% v/v	Layby	D	4.999	ml/mx				
13	WeatherMax	4.5	L	0.75	lb ai/a	1-4	If B	22.52	ml/mx	113	207	305	411
	WeatherMax	4.5	L	0.75	lb ai/a	5-8	If C	22.52	ml/mx				
	Direx	4	L	1	lb ai/a	Layby	D	33.78	ml/mx				
	NIS		L	0.25	% v/v	Layby	D	4.999	ml/mx				
14	WeatherMax	4.5	L	0.75	lb ai/a	1-4	If B	22.52	ml/mx	114	202	313	416
	Staple	85	SP	0.0315	lb ai/a	1-4	If B	0.6001	g/mx				
	Staple	85	SP	0.0315	lb ai/a	5-8	If C	0.6001	g/mx				
	NIS		L	0.25	% v/v	5-8	If C	4.999	ml/mx				
	Direx	4	L	1	lb ai/a	Layby	D	33.78	ml/mx				
	NIS		L	0.25	% v/v	Layby	D	4.999	ml/mx				
15	Prowl	3.3	EC	1	qt/a	PRE	A	33.78	ml/mx	115	201	309	405
	Cotoran	4	L	1	qt/a	PRE	A	33.78	ml/mx				
	Staple	85	SP	0.0315	lb ai/a	5-8	If C	0.6001	g/mx				
	Envoke	75	DF	0.0047	lb ai/a	5-8	If C	0.1015	g/mx				
	NIS		L	0.25	% v/v	5-8	If C	4.999	ml/mx				
	Direx	4	L	1	lb ai/a	Layby	D	33.78	ml/mx				
	NIS		L	0.25	% v/v	Layby	D	4.999	ml/mx				
	MSMA		L	2	lb ai/a	Layby	D	No Form Conc					
16	Prowl	3.3	EC	1	qt/a	PRE	A	33.78	ml/mx	116	215	307	418
	Direx	4	L	1	qt/a	PRE	A	33.78	ml/mx				
	Staple	85	SP	0.0315	lb ai/a	5-8	If C	0.6001	g/mx				
	Envoke	75	DF	0.0047	lb ai/a	5-8	If C	0.1015	g/mx				
	NIS		L	0.25	% v/v	5-8	If C	4.999	ml/mx				
	Direx	4	L	1	lb ai/a	Layby	D	33.78	ml/mx				
	NIS		L	0.25	% v/v	Layby	D	4.999	ml/mx				
	MSMA	6	L	2	lb ai/a	Layby	D	45.04	ml/mx				
17	Touchdown Total	4.17	L	0.75	lb ai/a	1-4	If B	24.3	ml/mx	117	218	312	406
	Staple	85	SP	0.0315	lb ai/a	5-8	If C	0.6001	g/mx				
	Envoke	75	DF	0.0035	lb ai/a	5-8	If C	.07557	g/mx				
	NIS		L	0.25	% v/v	5-8	If C	4.999	ml/mx				
	Suprend	80	WG	0.8	lb ai/a	Layby	D	16.19	g/mx				
	NIS		L	0.25	% v/v	Layby	D	4.999	ml/mx				
18	non-treated									118	214	308	410

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Lot Code
334.157	ml	Touchdown Total 4.17 L	
1.865	g	Envoke 75 DF	
193.730	ml	NIS L	

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Reps: 4 Plots: 12 by 25 feet
 Spray vol: 14.8 gal/ac Mix size: 2 liters (min 1.5434)

Trt No.	Tr> N>	Form Conc	Form Type	Plot No. By Rep
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Product quantities required for listed treatments and applications in one trial:

Amount*	Unit	Treatment Name	Lot Code
242.891	g	Suprend 80 WG	
14.252	g	Staple 85 SP	
56.300	ml	Sequence 5.25 L	
84.451	ml	WeatherMax 4.5 L	
211.126	ml	Direx 4 L	
84.451	ml	Prowl 3.3 EC	
42.225	ml	Cotoran 4 L	
56.300	ml	MSMA 6 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.
- * 'Per volume' calculations use spray volume= 14.8 gal/ac, mix size= 2 liters.

Trial Comments

OBJECTIVE: Evaluate cotton and weed response to Envoke and Staple programs.

Cotton Response:

1. Soil applied herbicides did not injure crop.
2. Glyphosate plus Staple or Sequence caused minor speckling with less than 8% injury noted at 8 DAT. As. the rate of Staple increased in the glyphosate mixtures so did cotton injury.
3. Envoke, Staple and Envoke plus Staple mixtures caused minor chlorosis and stunting. Cotton recovered very quickly.

Weed Response:

Texas panicum:

1. At layby, sequential glyphosate applications were more effective than a glyphosate mixture followed by Staple or Envoke.
2. After layby, programs with sequential early season glyphosate applications were more effective than programs with glyphosate followed by Staple or Envoke.
3. The Cotoran PRE program was generally the second most effective program following the sequential early season glyphosate program.

Smallflower morningglory:

1. At layby, glyphosate followed by Envoke provided poor control while glyphosate plus Staple applied to 2-leaf cotton followed by Envoke provided good control. Excellent control was noted with all programs containing Staple applied to 8-9 leaf cotton. The sequential early season applications of glyphosate also provided excellent control.
2. After the TIMELY layby application, all programs provided excellent control.

Common cocklebur:

1. Just before the layby as well as late into the season all programs provided excellent control.

Sicklepod:

1. Just before and after the layby application, all treatments including Envoke POT or sequential early POT glyphosate applications provided excellent control. The only two programs that provided poor control contained glyphosate at 2-leaf cotton followed by only Staple plus NIS at 8 leaf cotton.

Florida beggarweed:

1. All programs provided excellent control.

Bristly starbur:

1. All programs provided good to excellent control.
2. Envoke was more effective than Staple in controlling starbur when applied alone (some regrowth occurred on larger plants treated only with Staple).

Florida pusley:

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1. Before the layby, excellent control was noted with programs including Sequence, Direx, or Cotoran. Control was also excellent with sequential glyphosate applications and when Envoke was applied at 0.007 lb following glyphosate early POT. There also appeared to be a boost in control when Staple was applied with glyphosate at the 2 leaf timing likely providing residual control.
2. Similar trends were noted after the layby application.

Tropic croton:

1. Croton was sporadic and variable. Only a late season rating was taken when the weed was large enough to see.
2. Effective residual control from Staple, Direx, and Cotoran was evident.
3. Glyphosate provided excellent control of emerged plants.
4. Staple or Envoke POT provided only suppression. Envoke at 0.007 lb was clearly more effective than at 0.0047 lb.
5. Tank mixtures of Staple plus Envoke were no more effective than Envoke alone.

Cotton yield:

1. Trial will be harvested.

GENERAL COMMENTS:

- 1) June 24: At time of the 8-9 leaf application, weeds following POT treatments were less than 6 inches; however, when no POT was previously applied cocklebur was up to 15 inches while other weeds were up to 8 inches.

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Weed Code				PANTE	PANTE	PANTE	PANTE	IAQTA			
Crop Code											
Rating Data Type				control	control	control	control	control			
Rating Unit				percent	percent	percent	percent	percent			
Rating Date				Jul-07-05	Jul-18-05	Aug-03-05	Sep-05-05	Jul-07-05			
Trt-Eval Interval				57 DA-A	68 DA-A	84 DA-A	117 DA-A	57 DA-A			
Trt No.	Treatment Name	Rate	Unit	1	2	3	4	5	6	7	8
18	non-treated			0	0	0	0	0	0	0	0
LSD (P=.05)				2.0	7.5	0.0	10.5	13.6	11.6	14.8	2.7
Standard Deviation				1.4	5.3	0.0	7.4	9.6	8.2	10.5	1.9
CV				70.75	73.9	0.0	9.65	12.66	10.53	14.94	2.37

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

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Weed Code		IAQTA	IAQTA	IAQTA	XANST	XANST	XANST	CASOB	CASOB		
Crop Code											
Rating Data Type		control	control	control	control	control	control	control	control		
Rating Unit		percent	percent	percent	percent	percent	percent	percent	percent		
Rating Date		Jul-18-05	Aug-03-05	Sep-05-05	Jul-18-05	Aug-03-05	Sep-05-05	Jul-07-05	Jul-18-05		
Trt-Eval Interval		68 DA-A	84 DA-A	117 DA-A	68 DA-A	84 DA-A	117 DA-A	57 DA-A	68 DA-A		
Trt No.	Treatment Name	Rate	Unit	9	10	11	12	13	14	15	16
11	Touchdown Total	0.75	lb ai/a	99	99	99	99	99	99	99	99
	Staple	0.063	lb ai/a								
	Envoke	0.007	lb ai/a								
	NIS	0.25	% v/v								
	Suprend	0.8	lb ai/a								
	NIS	0.25	% v/v								
12	Touchdown Total	0.75	lb ai/a	99	99	99	99	99	99	98	99
	Staple	0.0315	lb ai/a								
	Envoke	0.007	lb ai/a								
	NIS	0.25	% v/v								
	Suprend	0.8	lb ai/a								
	NIS	0.25	% v/v								
13	WeatherMax	0.75	lb ai/a	99	99	99	99	99	99	99	99
	WeatherMax	0.75	lb ai/a								
	Direx	1	lb ai/a								
	NIS	0.25	% v/v								
14	WeatherMax	0.75	lb ai/a	99	99	99	99	99	99	73	92
	Staple	0.0315	lb ai/a								
	Staple	0.0315	lb ai/a								
	NIS	0.25	% v/v								
	Direx	1	lb ai/a								
	NIS	0.25	% v/v								
15	Prowl	1	qt/a	99	99	99	99	99	99	99	99
	Cotoran	1	qt/a								
	Staple	0.0315	lb ai/a								
	Envoke	0.0047	lb ai/a								
	NIS	0.25	% v/v								
	Direx	1	lb ai/a								
	NIS	0.25	% v/v								
	MSMA	2	lb ai/a								
16	Prowl	1	qt/a	99	99	99	99	99	99	99	99
	Direx	1	qt/a								
	Staple	0.0315	lb ai/a								
	Envoke	0.0047	lb ai/a								
	NIS	0.25	% v/v								
	Direx	1	lb ai/a								
	NIS	0.25	% v/v								
	MSMA	2	lb ai/a								
17	Touchdown Total	0.75	lb ai/a	99	99	99	99	99	99	98	99
	Staple	0.0315	lb ai/a								
	Envoke	0.0035	lb ai/a								
	NIS	0.25	% v/v								
	Suprend	0.8	lb ai/a								
	NIS	0.25	% v/v								
18	non-treated			0	0	0	0	0	0	0	0
LSD (P=.05)				4.4	5.2	3.6	0.0	0.0	0.0	5.7	3.5
Standard Deviation				3.1	3.7	2.5	0.0	0.0	0.0	4.1	2.5
CV				3.54	4.28	2.87	0.0	0.0	0.0	4.84	2.86

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

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Weed Code			CASOB	CASOB	DEDTO	DEDTO	DEDTO	ACNHI	ACNHI	ACNHI	
Crop Code											
Rating Data Type			control	control	control	control	control	control	control	control	
Rating Unit			percent	percent	percent	percent	percent	percent	percent	percent	
Rating Date			Aug-03-05	Sep-05-05	Jul-18-05	Aug-03-05	Sep-05-05	Jul-07-05	Jul-18-05	Aug-03-05	
Trt-Eval Interval			84 DA-A	117 DA-A	68 DA-A	84 DA-A	117 DA-A	57 DA-A	68 DA-A	84 DA-A	
Trt No.	Treatment Name	Rate	Unit	17	18	19	20	21	22	23	24
11	Touchdown Total	0.75	lb ai/a	99	99	99	99	99	95	99	99
	Staple	0.063	lb ai/a								
	Envoke	0.007	lb ai/a								
	NIS	0.25	% v/v								
	Suprend	0.8	lb ai/a								
	NIS	0.25	% v/v								
12	Touchdown Total	0.75	lb ai/a	99	99	99	99	99	95	99	99
	Staple	0.0315	lb ai/a								
	Envoke	0.007	lb ai/a								
	NIS	0.25	% v/v								
	Suprend	0.8	lb ai/a								
	NIS	0.25	% v/v								
13	WeatherMax	0.75	lb ai/a	99	99	99	99	99	95	99	99
	WeatherMax	0.75	lb ai/a								
	Direx	1	lb ai/a								
	NIS	0.25	% v/v								
14	WeatherMax	0.75	lb ai/a	88	86	99	99	99	89	99	99
	Staple	0.0315	lb ai/a								
	Staple	0.0315	lb ai/a								
	NIS	0.25	% v/v								
	Direx	1	lb ai/a								
	NIS	0.25	% v/v								
15	Prowl	1	qt/a	99	99	99	99	99	97	99	99
	Cotoran	1	qt/a								
	Staple	0.0315	lb ai/a								
	Envoke	0.0047	lb ai/a								
	NIS	0.25	% v/v								
	Direx	1	lb ai/a								
	NIS	0.25	% v/v								
	MSMA	2	lb ai/a								
16	Prowl	1	qt/a	99	99	99	99	99	94	99	99
	Direx	1	qt/a								
	Staple	0.0315	lb ai/a								
	Envoke	0.0047	lb ai/a								
	NIS	0.25	% v/v								
	Direx	1	lb ai/a								
	NIS	0.25	% v/v								
	MSMA	2	lb ai/a								
17	Touchdown Total	0.75	lb ai/a	99	99	99	99	99	94	99	99
	Staple	0.0315	lb ai/a								
	Envoke	0.0035	lb ai/a								
	NIS	0.25	% v/v								
	Suprend	0.8	lb ai/a								
	NIS	0.25	% v/v								
18	non-treated			0	0	0	0	0	0	0	0
LSD (P=.05)				7.8	12.5	0.0	0.0	0.0	4.4	0.3	0.0
Standard Deviation				5.5	8.8	0.0	0.0	0.0	3.1	0.2	0.0
CV				6.38	10.32	0.0	0.0	0.0	3.69	0.27	0.0

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

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Weed Code			ACNHI	RCHSC	RCHSC	RCHSC	RCHSC	CVNGL	
Crop Code									
Rating Data Type			control	control	control	control	control	control	
Rating Unit			percent	percent	percent	percent	percent	percent	
Rating Date			Sep-05-05	Sep-05-05	Jul-18-05	Aug-03-05	Sep-05-05	Sep-05-05	
Trt-Eval Interval			117 DA-A	117 DA-A	68 DA-A	84 DA-A	117 DA-A	117 DA-A	
Trt No.	Treatment Name	Rate	Unit	25	26	27	28	29	30
1	Non-treated			0	0	0	0	0	0
2	Touchdown Total	0.75	lb ai/a	99	76	80	83	75	70
	Envoke	0.0047	lb ai/a						
	NIS	0.25	% v/v						
	Suprend	0.8	lb ai/a						
	NIS	0.25	% v/v						
3	Touchdown Total	0.75	lb ai/a	99	81	79	78	74	84
	Staple	0.063	lb ai/a						
	NIS	0.25	% v/v						
	Suprend	0.8	lb ai/a						
	NIS	0.25	% v/v						
4	Sequence	1.75	lb ai/a	98	96	97	98	95	90
	Envoke	0.0047	lb ai/a						
	NIS	0.25	% v/v						
	Suprend	0.8	lb ai/a						
	NIS	0.25	% v/v						
5	Touchdown Total	0.75	lb ai/a	99	89	93	97	92	84
	Staple	0.063	lb ai/a						
	Envoke	0.0047	lb ai/a						
	NIS	0.25	% v/v						
	Suprend	0.8	lb ai/a						
	NIS	0.25	% v/v						
6	Touchdown Total	0.75	lb ai/a	99	88	94	91	90	94
	Staple	0.0315	lb ai/a						
	Envoke	0.0047	lb ai/a						
	NIS	0.25	% v/v						
	Suprend	0.8	lb ai/a						
	NIS	0.25	% v/v						
7	Touchdown Total	0.75	lb ai/a	99	98	99	99	97	91
	Staple	0.063	lb ai/a						
	Envoke	0.007	lb ai/a						
	NIS	0.25	% v/v						
	Suprend	0.8	lb ai/a						
	NIS	0.25	% v/v						
8	Touchdown Total	0.75	lb ai/a	99	93	97	97	90	96
	Staple	0.0315	lb ai/a						
	Envoke	0.007	lb ai/a						
	NIS	0.25	% v/v						
	Suprend	0.8	lb ai/a						
	NIS	0.25	% v/v						
9	Touchdown Total	0.75	lb ai/a	99	88	83	90	69	57
	Staple	0.063	lb ai/a						
	Envoke	0.0047	lb ai/a						
	NIS	0.25	% v/v						
	Suprend	0.8	lb ai/a						
	NIS	0.25	% v/v						
10	Touchdown Total	0.75	lb ai/a	99	81	82	83	71	61
	Staple	0.0315	lb ai/a						
	Envoke	0.0047	lb ai/a						
	NIS	0.25	% v/v						
	Suprend	0.8	lb ai/a						
	NIS	0.25	% v/v						

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Weed Code			ACNHI	RCHSC	RCHSC	RCHSC	RCHSC	CVNGL	
Crop Code									
Rating Data Type			control	control	control	control	control	control	
Rating Unit			percent	percent	percent	percent	percent	percent	
Rating Date			Sep-05-05	Sep-05-05	Jul-18-05	Aug-03-05	Sep-05-05	Sep-05-05	
Trt-Eval Interval			117 DA-A	117 DA-A	68 DA-A	84 DA-A	117 DA-A	117 DA-A	
Trt No.	Treatment Name	Rate	Unit	25	26	27	28	29	30
11	Touchdown Total	0.75	lb ai/a	97	81	96	90	86	69
	Staple	0.063	lb ai/a						
	Envoke	0.007	lb ai/a						
	NIS	0.25	% v/v						
	Suprend	0.8	lb ai/a						
	NIS	0.25	% v/v						
12	Touchdown Total	0.75	lb ai/a	99	79	84	79	71	84
	Staple	0.0315	lb ai/a						
	Envoke	0.007	lb ai/a						
	NIS	0.25	% v/v						
	Suprend	0.8	lb ai/a						
	NIS	0.25	% v/v						
13	WeatherMax	0.75	lb ai/a	99	99	99	99	99	99
	WeatherMax	0.75	lb ai/a						
	Direx	1	lb ai/a						
	NIS	0.25	% v/v						
14	WeatherMax	0.75	lb ai/a	99	84	94	95	94	45
	Staple	0.0315	lb ai/a						
	Staple	0.0315	lb ai/a						
	NIS	0.25	% v/v						
	Direx	1	lb ai/a						
	NIS	0.25	% v/v						
15	Prowl	1	qt/a	99	99	99	99	97	87
	Cotoran	1	qt/a						
	Staple	0.0315	lb ai/a						
	Envoke	0.0047	lb ai/a						
	NIS	0.25	% v/v						
	Direx	1	lb ai/a						
	NIS	0.25	% v/v						
	MSMA	2	lb ai/a						
16	Prowl	1	qt/a	99	99	99	99	99	89
	Direx	1	qt/a						
	Staple	0.0315	lb ai/a						
	Envoke	0.0047	lb ai/a						
	NIS	0.25	% v/v						
	Direx	1	lb ai/a						
	NIS	0.25	% v/v						
	MSMA	2	lb ai/a						
17	Touchdown Total	0.75	lb ai/a	99	80	83	85	76	72
	Staple	0.0315	lb ai/a						
	Envoke	0.0035	lb ai/a						
	NIS	0.25	% v/v						
	Suprend	0.8	lb ai/a						
	NIS	0.25	% v/v						
18	non-treated			0	0	0	0	0	0
LSD (P=.05)				1.8	8.5	7.5	8.7	12.0	27.5
Standard Deviation				1.3	6.0	5.3	6.2	8.5	19.4
CV				1.43	7.63	6.57	7.62	11.09	27.58

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

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Cotton and weed response to Envoke and Staple systems.

Trial ID: C36-05 Study Dir.: Culpepper
Location: Attapulgus (big) Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Stanley Culpepper **Title:** Ext. Weed Science
Affiliation: Univ. of Georgia
Postal Code: 31794
Investigator: Stanley Culpepper **Title:** Ext. Weed Science
Affiliation: Univ. of Georgia
Postal Code: 31794

TRIAL LOCATION

City: Attapulgus **Trial Status:** in progress
State/Prov.: GA **Trial Reliability:** excellent
Postal Code: 31794 **Initiation Date:** May-11-05
Country: USA **Planned Completion Date:** _____
E-Longitude of LL Corner °: _____ **N-Latitude of LL Corner °:** _____
Altitude of LL Corner: _____ **Unit:** _____ **Angle y-axis to North °:** _____
Directions:

COOPERATOR/LANDOWNER

Cooperator: _____ **Country:** _____
Org: _____ **Phone No:** _____
Address 1: _____ **Fax No:** _____
Address 2: _____
City: _____
State/Prov: _____
Postal Code: _____

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N
Guidelines: _____ **Guideline Description:** _____

Objective:

Conclusions:

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	PANTE	Texas panicum	
2.	IAQTA	smallflower morningglory	
3.	XANST	common cocklebur	
4.	CASOB	sicklepod	
5.	DEDTO	Florida beggarweed	
6.	ACNHI	bristly starbur	
7.	RCHSC	Florida pusley	
8.	CVNGL	tropic croton	

Crop 1: GOSHI cotton **Variety:** DP 555 B/RR
Planting Date: May-11-05 **Planting Method:** seeded
Rate: 1 4 inch **Depth:** 0.5 in **Perennial Age:** _____
Row Spacing: 36 inch **Spacing Within Row:** 3 ft **Seed Bed:** flat
Soil Temperature: 84 F **Soil Moisture:** moist **Emergence Date:** May-10-05

SITE AND DESIGN

Plot Width, Unit: 12 FT **Plot Length, Unit:** 25 FT **Reps:** 4
Site Type: reserach station
Tillage Type: conventional **Study Design:** RANDOMIZED COMPLETE BLOCK

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Trial Initiation Comments:

	Previous Crops	Previous Pesticides	Year
1.			

MAINTENANCE

Field Prep./Maintenance:

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

SOIL DESCRIPTION

% Sand: 84 % OM: 1.3 Texture: loamy sand
 % Silt: 8 pH: 5.9 Soil Name: _____
 % Clay: 8 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-11-05	May-25-05	Jun-24-05	Jul-07-05
Time of Day:	11 am	1 pm	7 am	8 am
Application Method:	broadcast	broadcast	broadcast	broadcast
Application Timing:	PRE	1-4 lf	5-8 lf	LPD
Applic. Placement:	on soil	overtop	overtop	directed
Air Temp., Unit:	82 F	76 F	74 F	89 F
% Relative Humidity:	34	49	69	59
Wind Velocity, Unit:	2 mph	1 mph	1 mph	2 mph
Dew Presence (Y/N):	n	n	n	n
Water Hardness:				
Soil Temp., Unit:	84 F	80 F	77 F	88 F
Soil Moisture:	irrigated	moist	wet	moist
% Cloud Cover:	0	0	0	10

CROP STAGE AT EACH APPLICATION

	A	B	C	D
Crop 1 Code, Stage:	GOSHI PRE	GOSHI 1-4 lf	GOSHI 5-8 lf	GOSHI LPD
Stage Scale:	not up	2 leaf	9 leaf	14 leaf
Height, Unit:	0 inch	2 inch	12 inch	24 inch

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WEED STAGE AT EACH APPLICATION

	A	B	C	D
Weed 1 Code, Stage:	PANTE PRE	PANTE 1-4 lf	PANTE 6-8 lf	PANTE LPD
Stage Scale:	not up	< 2 inch	see comme	< 5 inch
Density, Unit:	0 ydsq	8 ydsq	. .	. .
Weed 2 Code, Stage:	IAQTA PRE	IAQTA 1-4 lf	IAQTA 6-8 lf	IAQTA LPD
Stage Scale:	not up	< 2 inch	see comme	< 5 inch
Density, Unit:	0 ydsq	3 ydsq	. .	. .
Weed 3 Code, Stage:	XANST PRE	XANST 1-4 lf	XANST 6-8 lf	XANST LPD
Stage Scale:	not up	< 2 inch	see comme	< 5 inch
Density, Unit:	0 ydsq	1 ydsq	. .	. .
Weed 4 Code, Stage:	CASOB PRE	CASOB 1-4 lf	CASOB 6-8 lf	CASOB LPD
Stage Scale:	not up	< 2 inch	see comme	< 5 inch
Density, Unit:	0 ydsq	3 ydsq	. .	. .
Weed 5 Code, Stage:	DEDTO PRE	DEDTO 1-4 lf	DEDTO 6-8 lf	DEDTO LPD
Stage Scale:	not up	< 2 inch	see comme	< 5 inch
Density, Unit:	0 ydsq	3 ydsq	. .	. .
Weed 6 Code, Stage:	ACNHI PRE	ACNHI 1-4 lf	ACNHI 6-8 lf	ACNHI LPD
Stage Scale:	not up	< 2 inch	see comme	< 5 inch
Density, Unit:	0 ydsq	5 ydsq	. .	. .
Weed 7 Code, Stage:	RCHSC PRE	RCHSC 1-4 lf	RCHSC 6-8 lf	RCHSC LPD
Stage Scale:	not up	< 2 inch	see comme	< 5 inch
Density, Unit:	0 ydsq	8 ydsq	. .	. .
Weed 8 Code, Stage:	CVNGL PRE	CVNGL 1-4 lf	CVNGL 6-8 lf	CVNGL LPD
Stage Scale:	not up	< 2 inch	see comme	< 3 inch
Density, Unit:	0 ydsq	0.25 ydsq	. .	. .

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	12 inch
Nozzles/Row:	2	2	2	3
Band Width, Unit:				
Boom Length, Unit:	4.5 feet	4.5 feet	4.5 feet	2 feet
Boom Height, Unit:	15 inch	15 inch	15 inch	12 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