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WEED STAGE AT EACH APPLICATION						
	A	B	C	D	E	F
Weed 1 AMAPA Stage:	PRE	1-leaf	4-leaf	6-leaf		
Stage Scale:	.	2-4"	<2"	none		
Density, Unit:	. .	4 ydsq	. .	. .
Weed 2 DTTAE Stage:	PRE	1-leaf	4-leaf	6-leaf		
Stage Scale:	.	<0.5"	<2"	<3"		
Density, Unit:	. .	12 ydsq	. .	. .
Weed 3 IPOLA Stage:	PRE	1-leaf	4-leaf	6-leaf		
Stage Scale:	.	2-4"	<2"	<3"		
Density, Unit:	. .	2 ydsq	. .	. .
Weed 4 IAQTA Stage:	PRE	1-leaf	4-leaf	6-leaf		
Stage Scale:	.	1-3"	<2"	<3"		
Density, Unit:	. .	5 ydsq	. .	. .
Weed 5 RCHSC Stage:	PRE	PRE	4-leaf	6-leaf		
Stage Scale:	.	1"	<1"	<3"		
Density, Unit:	. .	12 ydsq	. .	. .

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

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Staple PRE and mixed with glyphosate POST.

Trial ID: C32-03

Study Dir.:

Location: Ponder farm

Investigator: Stanley Culpepper

Weed Code				GOSHI	GOSHI	GOSHI	GOSHI	GOSHI	RCHSC	RCHSC
Crop Code				injury	injury	injury	injury	injury	control	control
Rating Data Type				percent	percent	percent	percent	percent	percent	percent
Rating Unit										
Rating Date				May-16-03	May-19-03	Jun-08-03	Jun-15-03	Jun-25-03	May-25-03	Jun-08-03
Trt-Eval Interval				14 DA-A	14 DA-A	34 DA-A	41 DA-A	41 DA-A		
PRM Data Type										
# Subsamples, Dec.										
Trt No.	Treatment Name	Rate	Unit	1	2	3	4	5	6	7
1	Staple	0.04	lb ai/a	0.0	11.8	0.0	0.0	0.0	99.0	99.0
	Staple	0.03	lb ai/a							
	Glyphosate	1.5	pt/a							
	NIS	0.25	% v/v							
2	Staple	0.04	lb ai/a	0.0	14.0	0.0	0.0	0.0	99.0	99.0
	Cotoran	1.25	lb ai/a							
	Staple	0.03	lb ai/a							
	Glyphosate	1.5	pt/a							
	NIS	0.25	% v/v							
3	Staple	0.04	lb ai/a	0.0	13.0	0.0	0.0	0.0	99.0	99.0
	Staple	0.03	lb ai/a							
	Roundup UltraMax	1.5	pt/a							
4	Staple	0.04	lb ai/a	0.0	11.0	0.0	0.0	0.0	99.0	99.0
	Cotoran	1.25	lb ai/a							
	Staple	0.03	lb ai/a							
	Roundup UltraMax	1.5	pt/a							
5	Staple	0.04	lb ai/a	0.0	11.8	0.0	0.0	0.0	99.0	98.0
	Staple	0.03	lb ai/a							
	Roundup WeatherMax	1	pt/a							
6	Staple	0.04	lb ai/a	0.0	10.3	0.0	0.0	0.0	99.0	99.3
	Cotoran	1.25	lb ai/a							
	Staple	0.03	lb ai/a							
	Roundup WeatherMax	1	pt/a							
7	Dual Magnum	1	pt/a	0.0	1.0	8.3	13.5	0.0	99.0	97.8
	Touchdown	1.5	pt/a							
	Envoke	0.007	lb ai/a							
	NIS	0.25	% v/v							
8	Roundup WeatherMax	21.3	oz/a	0.0	1.0	0.0	0.0	0.0	99.0	81.0
	Roundup WeatherMax	21.3	oz/a							
9	Roundup WeatherMax	21.3	oz/a	0.0	10.0	8.3	1.0	0.0	99.0	99.0
	Staple	0.03	lb ai/a							
	Roundup WeatherMax	21.3	oz/a							
	Staple	0.03	lb ai/a							
10	Non-treated			0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LSD (P=.05)			0.00	4.77	1.69	1.68	0.00	0.00	3.24
	Standard Deviation			0.00	3.29	1.16	1.16	0.00	0.00	2.23
	CV			0.0	39.27	70.56	79.97	0.0	0.0	2.56
	Bartlett's X2			0.0	4.687	0.023	0.472	0.0	0.0	16.988
	P(Bartlett's X2)			.	0.79	0.88	0.492	.	.	0.001*

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

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Weed Code			RCHSC	RCHSC	RCHSC	IAQTA	IAQTA	IAQTA	IAQTA	
Crop Code										
Rating Data Type			control	control	control	control	control	control	control	
Rating Unit			percent	percent	percent	percent	percent	percent	percent	
Rating Date			Jun-15-03	Jul-05-03	Sep-06-03	May-25-03	Jun-08-03	Jun-15-03	Jul-05-03	
Trt-Eval Interval										
PRM Data Type										
# Subsamples, Dec.										
Trt No.	Treatment Name	Rate	Unit	8	9	10	11	12	13	14
1	Staple	0.04	lb ai/a	98.5	94.0	83.8	99.0	97.3	98.3	97.5
	Staple	0.03	lb ai/a							
	Glyphosate	1.5	pt/a							
	NIS	0.25	% v/v							
2	Staple	0.04	lb ai/a	97.0	98.5	91.5	99.0	99.0	99.0	98.0
	Cotoran	1.25	lb ai/a							
	Staple	0.03	lb ai/a							
	Glyphosate	1.5	pt/a							
	NIS	0.25	% v/v							
3	Staple	0.04	lb ai/a	97.5	95.0	83.5	99.0	99.0	98.5	96.8
	Staple	0.03	lb ai/a							
	Roundup UltraMax	1.5	pt/a							
4	Staple	0.04	lb ai/a	99.0	97.0	93.5	99.0	98.5	99.0	97.0
	Cotoran	1.25	lb ai/a							
	Staple	0.03	lb ai/a							
	Roundup UltraMax	1.5	pt/a							
5	Staple	0.04	lb ai/a	98.3	94.8	85.8	99.0	99.3	97.8	98.0
	Staple	0.03	lb ai/a							
	Roundup WeatherMax	1	pt/a							
6	Staple	0.04	lb ai/a	99.0	97.5	97.0	99.0	99.3	99.0	97.0
	Cotoran	1.25	lb ai/a							
	Staple	0.03	lb ai/a							
	Roundup WeatherMax	1	pt/a							
7	Dual Magnum	1	pt/a	97.0	95.0	90.3	99.0	86.0	89.5	84.5
	Touchdown	1.5	pt/a							
	Envoke	0.007	lb ai/a							
	NIS	0.25	% v/v							
8	Roundup WeatherMax	21.3	oz/a	80.0	70.0	55.0	99.0	97.0	95.0	83.0
	Roundup WeatherMax	21.3	oz/a							
9	Roundup WeatherMax	21.3	oz/a	98.8	92.8	77.3	99.0	99.0	98.8	98.5
	Staple	0.03	lb ai/a							
	Roundup WeatherMax	21.3	oz/a							
	Staple	0.03	lb ai/a							
10	Non-treated			0.0	0.0	0.0	0.0	0.0	0.0	0.0
LSD (P=.05)				2.89	8.73	10.68	0.00	2.21	3.19	8.96
Standard Deviation				1.99	6.02	7.36	0.00	1.52	2.20	6.18
CV				2.3	7.21	9.72	0.0	1.74	2.51	7.26
Bartlett's X2				21.672	25.908	14.243	0.0	15.856	25.534	52.825
P(Bartlett's X2)				0.001*	0.001*	0.076	.	0.007*	0.001*	0.001*

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

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Weed Code				IAQTA	AMAPA	AMAPA	AMAPA	AMAPA	AMAPA	DTTAE
Crop Code										
Rating Data Type				control	control	control	control	control	control	control
Rating Unit				percent	percent	percent	percent	percent	percent	percent
Rating Date				Sep-06-03	May-25-03	Jun-08-03	Jun-15-03	Jul-05-03	Sep-06-03	May-25-03
Trt-Eval Interval										
PRM Data Type										
# Subsamples, Dec.										
Trt No.	Treatment Name	Rate	Unit	15	16	17	18	19	20	21
1	Staple	0.04	lb ai/a	94.5	99.0	99.0	99.0	96.5	86.8	99.0
	Staple	0.03	lb ai/a							
	Glyphosate	1.5	pt/a							
	NIS	0.25	% v/v							
2	Staple	0.04	lb ai/a	97.8	99.0	99.0	99.0	99.0	87.8	99.0
	Cotoran	1.25	lb ai/a							
	Staple	0.03	lb ai/a							
	Glyphosate	1.5	pt/a							
	NIS	0.25	% v/v							
3	Staple	0.04	lb ai/a	98.0	99.0	99.0	99.0	97.3	89.0	99.0
	Staple	0.03	lb ai/a							
	Roundup UltraMax	1.5	pt/a							
4	Staple	0.04	lb ai/a	98.0	99.0	99.0	99.0	97.0	95.8	99.0
	Cotoran	1.25	lb ai/a							
	Staple	0.03	lb ai/a							
	Roundup UltraMax	1.5	pt/a							
5	Staple	0.04	lb ai/a	98.5	99.0	99.0	99.0	98.0	87.0	99.0
	Staple	0.03	lb ai/a							
	Roundup WeatherMax	1	pt/a							
6	Staple	0.04	lb ai/a	98.3	99.0	99.0	99.0	98.0	97.0	99.0
	Cotoran	1.25	lb ai/a							
	Staple	0.03	lb ai/a							
	Roundup WeatherMax	1	pt/a							
7	Dual Magnum	1	pt/a	75.8	99.0	99.0	99.0	99.0	97.5	99.0
	Touchdown	1.5	pt/a							
	Envoke	0.007	lb ai/a							
	NIS	0.25	% v/v							
8	Roundup WeatherMax	21.3	oz/a	87.3	99.0	99.0	99.0	94.5	90.5	99.0
	Roundup WeatherMax	21.3	oz/a							
9	Roundup WeatherMax	21.3	oz/a	97.8	99.0	99.0	99.0	98.5	97.0	99.0
	Staple	0.03	lb ai/a							
	Roundup WeatherMax	21.3	oz/a							
	Staple	0.03	lb ai/a							
10	Non-treated			0.0	0.0	0.0	0.0	0.0	0.0	0.0
LSD (P=.05)				10.27	0.00	0.00	0.00	2.77	7.24	0.00
Standard Deviation				7.07	0.00	0.00	0.00	1.91	4.99	0.00
CV				8.37	0.0	0.0	0.0	2.17	6.02	0.0
Bartlett's X2				59.707	0.0	0.0	0.0	9.056	26.847	0.0
P(Bartlett's X2)				0.001*	.	.	.	0.17	0.001*	.

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

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Weed Code Crop Code Rating Data Type Rating Unit Rating Date Trt-Eval Interval PRM Data Type # Subsamples, Dec.				DTTAE	DTTAE	DTTAE	DTTAE	IPOLA	IPOLA	GOSHI yield lb/plot Sep-24-03
				control percent Jun-08-03	control percent Jun-15-03	control percent Jul-05-03 61 DA-A	control percent Sep-06-03	control percent Jul-05-03	control percent Sep-06-03	
Trt No.	Treatment Name	Rate	Unit	22	23	24	25	26	27	28
1	Staple	0.04	lb ai/a	96.8	88.5	79.8	60.0	94.8	95.5	7.5
	Staple	0.03	lb ai/a							
	Glyphosate	1.5	pt/a							
	NIS	0.25	% v/v							
2	Staple	0.04	lb ai/a	99.0	97.3	95.5	82.3	95.8	97.0	8.7
	Cotoran	1.25	lb ai/a							
	Staple	0.03	lb ai/a							
	Glyphosate	1.5	pt/a							
	NIS	0.25	% v/v							
3	Staple	0.04	lb ai/a	98.0	91.3	84.3	65.3	92.5	97.5	8.8
	Staple	0.03	lb ai/a							
	Roundup UltraMax	1.5	pt/a							
4	Staple	0.04	lb ai/a	99.0	95.5	90.8	88.3	97.3	95.0	9.0
	Cotoran	1.25	lb ai/a							
	Staple	0.03	lb ai/a							
	Roundup UltraMax	1.5	pt/a							
5	Staple	0.04	lb ai/a	96.5	90.3	83.0	63.5	91.5	94.3	8.6
	Staple	0.03	lb ai/a							
	Roundup WeatherMax	1	pt/a							
6	Staple	0.04	lb ai/a	99.0	96.0	94.5	92.0	94.3	97.0	8.4
	Cotoran	1.25	lb ai/a							
	Staple	0.03	lb ai/a							
	Roundup WeatherMax	1	pt/a							
7	Dual Magnum	1	pt/a	96.8	96.5	90.0	87.0	97.8	97.5	8.7
	Touchdown	1.5	pt/a							
	Envoke	0.007	lb ai/a							
	NIS	0.25	% v/v							
8	Roundup WeatherMax	21.3	oz/a	99.0	96.0	77.0	77.5	77.5	71.3	7.5
	Roundup WeatherMax	21.3	oz/a							
9	Roundup WeatherMax	21.3	oz/a	99.0	98.8	85.0	77.3	92.8	97.0	8.6
	Staple	0.03	lb ai/a							
	Roundup WeatherMax	21.3	oz/a							
	Staple	0.03	lb ai/a							
10	Non-treated			0.0	0.0	0.0	0.0	0.0	0.0	0.9
LSD (P=.05)				2.72	4.38	5.43	9.08	6.39	4.18	1.32
Standard Deviation				1.87	3.02	3.74	6.26	4.40	2.88	0.77
CV				2.12	3.55	4.8	9.03	5.28	3.42	10.04
Bartlett's X2				1.772	14.403	16.836	5.706	6.566	24.885	12.285
P(Bartlett's X2)				0.621	0.072	0.032*	0.68	0.584	0.002*	0.198

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

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Weed Code				GOSHI yield lb/A Sep-24-03 TY1 1
Crop Code				
Rating Data Type				
Rating Unit				
Rating Date				
Trt-Eval Interval				
PRM Data Type				
# Subsamples, Dec.				
Trt No.	Treatment Name	Rate	Rate Unit	29
1	Staple	0.04	lb ai/a	1089.5
	Staple	0.03	lb ai/a	
	Glyphosate	1.5	pt/a	
	NIS	0.25	% v/v	
2	Staple	0.04	lb ai/a	1265.2
	Cotoran	1.25	lb ai/a	
	Staple	0.03	lb ai/a	
	Glyphosate	1.5	pt/a	
	NIS	0.25	% v/v	
3	Staple	0.04	lb ai/a	1272.0
	Staple	0.03	lb ai/a	
	Roundup UltraMax	1.5	pt/a	
4	Staple	0.04	lb ai/a	1300.0
	Cotoran	1.25	lb ai/a	
	Staple	0.03	lb ai/a	
	Roundup UltraMax	1.5	pt/a	
5	Staple	0.04	lb ai/a	1243.9
	Staple	0.03	lb ai/a	
	Roundup WeatherMax	1	pt/a	
6	Staple	0.04	lb ai/a	1220.6
	Cotoran	1.25	lb ai/a	
	Staple	0.03	lb ai/a	
	Roundup WeatherMax	1	pt/a	
7	Dual Magnum	1	pt/a	1264.2
	Touchdown	1.5	pt/a	
	Envoke	0.007	lb ai/a	
	NIS	0.25	% v/v	
8	Roundup WeatherMax	21.3	oz/a	1082.2
	Roundup WeatherMax	21.3	oz/a	
9	Roundup WeatherMax	21.3	oz/a	1254.5
	Staple	0.03	lb ai/a	
	Roundup WeatherMax	21.3	oz/a	
	Staple	0.03	lb ai/a	
10	Non-treated			137.5
LSD (P=.05)				191.72
Standard Deviation				111.76
CV				10.04
Bartlett's X2				12.284
P(Bartlett's X2)				0.198

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

Column 29: TY1 = 145.2*[C28]

Trial Comments

OBJECTIVE: Evaluate early season control with Staple applied PRE and or early POST.

Cotton Injury:

1) Soil applied treatments did not affect cotton development.

2) At 2 DAT, Dual + Touchdown or Roundup WeatherMax only caused 1% visual injury when applied to 1 leaf cotton. Staple plus glyphosate was more injurious ranging from 10 to 14%. Formulation of glyphosate applied with Staple at this timing did not impact injury.

3) Injury quickly recovered from Staple plus glyphosate applied POT.

4) Envoke caused 8% chlorosis at 3 DAT and 14% chlorosis with minor stunting at 10 DAT. No injury was detectable by 20 DAT.

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Weed Control:

Florida pusley:

- 1) All systems provided excellent control for at least 1 month after the last POT treatments were applied except for glyphosate applied alone.
- 2) Glyphosate applied alone was the least effective system throughout the season.
- 3) By late-season without a layby treatment, 90% or greater control was noted when Cotoran or Dual were used in the system. Greater control in Dual and Cotoran systems was because of residual activity. A trend for residual control from Staple was less than that of Dual or Cotoran.

Smallflower morningglory:

- 1) All programs provided excellent season long control except the system utilizing Envoke.
- 2) All 1-leaf applications provided excellent control but a small amount of smallflower emerged after the 1-leaf applications in all plots without Staple in the system.
- 3) Less than 90% late-season control was noted with glyphosate only (no residual) and Touchdown + Dual fb Envoke (no residual and poor POST control with Envoke).

Palmer amaranth:

- 1) Greater than 90% control was noted at least 1 month after the last POT application was made.
- 2) Little to no Palmer emerged during late-season.
- 3) At harvest, control was at least 87% with all treatments even without a layby application.

Crowfootgrass:

- 1) Excellent control by 1-leaf applications was noted. Crowfootgrass continued to emerge. 4-leaf applications also provided excellent control.
- 2) Excellent mid- and late-season control was noted in only systems with Cotoran or Dual. Residual activity from these two herbicides was clearly beneficial.

Pitted morningglory:

- 1) Pitted morningglory control was excellent in all systems except when a glyphosate only system was utilized.

Cotton Yields:

- 1) As expected with excellent early season weed control, yields were statistically similar among most herbicide treatments.