

University of Georgia

Weed and cotton response to several Sequence formulations.

Trial ID: C5-06

Study Dir.: Stanley Culpepper

Location: Attapulgus (pig fld)

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 Unit	Form Type	Form Rate	Rate Unit	Grow Stg	Appl Code	Amt to Measure	Product	Plot No. By Rep			
											1	2	3	4
1	Non-treated										101	202	307	403
2	Sequence	5.25		EW	2.5	PT/A	PRE	A	42.23 ml/mx		102	201	302	408
	Touchdown Total	4.17		L	24	OZ/A	3 lf	B	25.34 ml/mx					
	Sequence	5.25		EW	2.5	PT/A	8 lf	C	42.23 ml/mx					
3	A13886			EW	2.5	PT/A	PRE	A	42.23 ml/mx		103	206	308	402
	Touchdown Total	4.17		L	24	OZ/A	3 lf	B	25.34 ml/mx					
	A13886			EW	2.5	PT/A	8 lf	C	42.23 ml/mx					
4	A14941			EW	2.5	PT/A	PRE	A	42.23 ml/mx		104	207	303	406
	Touchdown Total	4.17		L	24	OZ/A	3 lf	B	25.34 ml/mx					
	A14941			EW	2.5	PT/A	8 lf	C	42.23 ml/mx					
5	Touchdown Total	4.17		L	24	OZ/A	3 lf	B	25.34 ml/mx		105	204	306	401
	Touchdown Total	4.17		L	24	OZ/A	8 lf	C	25.34 ml/mx					
	Touchdown Total	4.17		L	24	OZ/A	12 lf	D	25.34 ml/mx					
6	Sequence	5.25		EW	2.5	PT/A	3 lf	B	42.23 ml/mx		106	208	301	407
	Sequence	5.25		EW	2.5	PT/A	12 lf	D	42.23 ml/mx					
7	A13886			EW	2.5	PT/A	3 lf	B	42.23 ml/mx		107	205	304	405
	A13886			EW	2.5	PT/A	12 lf	D	42.23 ml/mx					
8	A14941			EW	2.5	PT/A	3 lf	B	42.23 ml/mx		108	203	305	404
	A14941			EW	2.5	PT/A	12 lf	D	42.23 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
211.126	ml	Sequence	5.25	EW	
190.034	ml	Touchdown Total	4.17	L	
211.126	ml	A13886		EW	
211.126	ml	A14941		EW	

* '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.

Trial Comments

OBJECTIVE: Compare several formulations of glyphosate plus S-metolachlor.

COTTON RESPONSE:

- At 18 DAT, PRE applications of Sequence, A14941, and A13866 caused 7 to 9%.
- POST applications of Sequence, A13866, and A14941 injured cotton 15 to 19% at 9 DAT.
- Cotton recovered quickly from all treatments.

WEED RESPONSE:

Carpetweed:

- Excellent early and mid-season control was noted with all programs.
- Late in the season, Sequence PRE and POST was more effective than A14941 PRE and POST. In total POST systems, Sequence was more effective than A13866 or A14941.

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Florida beggarweed, Smallflower morningglory, and Palmer amaranth:

1. Excellent early, mid, and late-season control was noted with all programs.

Florida pusley:

1. Excellent early and mid-season control was noted with all programs.
2. Late in the season with total POST programs, Sequence was more effective than A13886 or A14941.

Texas panicum:

1. Excellent early and mid-season control was noted with all programs.
2. Late in the season with total POST programs, Sequence tended to be more effective than A14941.

Bristly Starbur:

1. Excellent early and mid-season control was noted with all programs.
2. Late in the season with total POST programs, Sequence was more effective than A14941.

COTTON YIELD:

1. With no differences in crop response and only minor differences in weed control, no yield differences were noted with comparing Sequence, A13886, and A14941.

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Weed and cotton response to several Sequence formulations.

Trial ID: C5-06

Study Dir.: Stanley Culpepper

Location: Attapulcus (pig fld)

Investigator: Stanley Culpepper

Weed Code		GOSHI	GOSHI	GOSHI	GOSHI	MOLVE	MOLVE	MOLVE	MOLVE
Crop Code		injury	injury	injury	injury	control	control	control	control
Rating Data Type		%	%	%	%	%	%	%	%
Rating Unit									
Rating Date		Jun-06-06	Jun-15-06	Jun-27-06	Jul-10-06	Jun-06-06	Jun-27-06	Jun-15-06	Jul-10-06
Assessed By		SC	SC	AD	SC	SC	AD	SC	SC
Trt-Eval Interval		18 DA-A	27 DA-A	39 DA-A	52 DA-A	18 DA-A	39 DA-A	27 DA-A	52 DA-A
ARM Action Codes									
# Subsamples, Dec.									
Trt Treatment	Rate								
No. Name	Rate Unit	1	2	3	4	5	6	7	8
1 Non-treated		0 b	0 b	0 c	0 c	0 b	0 c	0 b	0 e
2 Sequence	2.5 PT/A	8 a	3 b	7 ab	2 abc	99 a	100 a	99 a	99 a
Touchdown Total	24 OZ/A								
Sequence	2.5 PT/A								
3 A13886	2.5 PT/A	8 a	2 b	11 a	2 abc	99 a	99 a	99 a	99 a
Touchdown Total	24 OZ/A								
A13886	2.5 PT/A								
4 A14941	2.5 PT/A	9 a	4 b	5 abc	0 c	99 a	96 a	99 a	94 b
Touchdown Total	24 OZ/A								
A14941	2.5 PT/A								
5 Touchdown Total	24 OZ/A	0 b	2 b	2 bc	0 c	0 b	100 a	99 a	99 a
Touchdown Total	24 OZ/A								
Touchdown Total	24 OZ/A								
6 Sequence	2.5 PT/A	0 b	19 a	4 bc	5 a	0 b	95 a	99 a	90 c
Sequence	2.5 PT/A								
7 A13886	2.5 PT/A	0 b	15 a	4 bc	4 ab	0 b	88 b	99 a	83 d
A13886	2.5 PT/A								
8 A14941	2.5 PT/A	0 b	16 a	3 bc	1 bc	0 b	87 b	99 a	81 d
A14941	2.5 PT/A								
LSD (P=.05)		3.0	5.2	5.8	3.3	0.0	5.2	0.0	3.6
Standard Deviation		2.1	3.5	4.0	2.2	0.0	3.6	0.0	2.5
CV		68.72	46.94	90.37	141.65	0.0	4.29	0.0	3.07
Bartlett's X2		1.47	3.177	5.202	4.621	0.0	9.206	0.0	13.761
P(Bartlett's X2)		0.48	0.786	0.518	0.328	.	0.056	.	0.008*

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

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Weed Code	DEDTO	DEDTO	DEDTO	DEDTO	IAQTA	IAQTA	IAQTA	IAQTA
Crop Code								
Rating Data Type	control	control	control	control	control	control	control	control
Rating Unit	%	%	%	%	%	%	%	%
Rating Date	Jun-06-06	Jun-15-06	Jun-27-06	Aug-02-06	Jun-06-06	Jun-15-06	Jun-27-06	Jul-10-06
Assessed By	SC	SC	AD	AD	SC	SC	AD	SC
Trt-Eval Interval	18 DA-A	27 DA-A	39 DA-A	75 DA-A	18 DA-A	27 DA-A	39 DA-A	52 DA-A
ARM Action Codes								
# Subsamples, Dec.								
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	Rate
		Unit	Unit	Unit	Unit	Unit	Unit	Unit
		9	10	11	12	13	14	15
1	Non-treated	0 c	0 b	0 c	0 b	0 c	0 d	0 b
2	Sequence	2.5 PT/A	85 a	99 a	100 a	100 a	58 ab	96 a
	Touchdown Total	24 OZ/A						
	Sequence	2.5 PT/A						
3	A13886	2.5 PT/A	91 a	99 a	100 a	100 a	60 a	99 a
	Touchdown Total	24 OZ/A						
	A13886	2.5 PT/A						
4	A14941	2.5 PT/A	71 b	99 a	100 a	99 a	46 b	99 a
	Touchdown Total	24 OZ/A						
	A14941	2.5 PT/A						
5	Touchdown Total	24 OZ/A	0 c	99 a	100 a	100 a	0 c	96 a
	Touchdown Total	24 OZ/A						
	Touchdown Total	24 OZ/A						
6	Sequence	2.5 PT/A	0 c	99 a	99 b	97 a	0 c	91 b
	Sequence	2.5 PT/A						
7	A13886	2.5 PT/A	0 c	99 a	100 a	100 a	0 c	88 bc
	A13886	2.5 PT/A						
8	A14941	2.5 PT/A	0 c	99 a	100 a	100 a	0 c	86 c
	A14941	2.5 PT/A						
LSD (P=.05)		9.2	0.0	0.5	3.0	11.3	4.0	0.5
Standard Deviation		6.2	0.0	0.3	2.1	7.7	2.7	0.4
CV		20.18	0.0	0.39	2.37	37.66	3.31	0.4
Bartlett's X2		0.804	0.0	0.0	25.34	1.93	2.893	0.0
P(Bartlett's X2)		0.669	.	.	0.001*	0.381	0.576	.

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Weed Code	IAQTA	RCHSC	RCHSC	RCHSC	RCHSC	RCHSC	AMAPA	AMAPA			
Crop Code											
Rating Data Type	control	control	control	control	control	control	control	control			
Rating Unit	%	%	%	%	%	%	%	%			
Rating Date	Aug-02-06	Jun-06-06	Jun-15-06	Jun-27-06	Jul-10-06	Aug-02-06	Jun-27-06	Jul-10-06			
Assessed By	AD	SC	SC	AD	SC	AD	AD	SC			
Trt-Eval Interval	75 DA-A	18 DA-A	27 DA-A	39 DA-A	52 DA-A	75 DA-A	39 DA-A	52 DA-A			
ARM Action Codes											
# Subsamples, Dec.											
Trt No.	Treatment Name	Rate	Unit	17	18	19	20	21	22	23	24
1	Non-treated			0 b	0 b	0 d	0 c	0 d	0 e	0 b	0 c
2	Sequence	2.5	PT/A	92 a	98 a	96 a	100 a	99 a	100 a	100 a	99 a
	Touchdown Total	24	OZ/A								
	Sequence	2.5	PT/A								
3	A13886	2.5	PT/A	94 a	99 a	99 a	100 a	99 a	100 a	100 a	99 a
	Touchdown Total	24	OZ/A								
	A13886	2.5	PT/A								
4	A14941	2.5	PT/A	91 a	99 a	99 a	100 a	98 a	100 a	100 a	98 ab
	Touchdown Total	24	OZ/A								
	A14941	2.5	PT/A								
5	Touchdown Total	24	OZ/A	98 a	0 b	94 a	99 a	99 a	99 a	100 a	99 a
	Touchdown Total	24	OZ/A								
	Touchdown Total	24	OZ/A								
6	Sequence	2.5	PT/A	96 a	0 b	88 b	96 a	88 b	88 b	100 a	99 a
	Sequence	2.5	PT/A								
7	A13886	2.5	PT/A	93 a	0 b	83 c	96 a	80 c	79 c	100 a	98 ab
	A13886	2.5	PT/A								
8	A14941	2.5	PT/A	91 a	0 b	83 c	87 b	74 c	53 d	100 a	95 b
	A14941	2.5	PT/A								
LSD (P=.05)				7.5	1.0	5.1	5.0	6.1	6.8	0.7	2.7
Standard Deviation				5.1	0.7	3.5	3.4	4.1	4.6	0.5	1.8
CV				6.28	1.9	4.35	3.98	5.18	6.02	0.52	2.13
Bartlett's X2				10.991	4.43	0.695	5.129	23.887	4.577	1.642	7.905
P(Bartlett's X2)				0.089	0.035*	0.952	0.163	0.001*	0.205	0.44	0.048*

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Weed Code	AMAPA	PANTE	PANTE	ACHNI	ACHNI	Seed YLD	Seed YLD
Crop Code							
Rating Data Type	control	control	control	control	control	weight	YIELD
Rating Unit	%	%	%	%	%	lb/plot	LB
Rating Date	Aug-02-06	Jul-10-06	Aug-02-06	Jul-10-06	Aug-02-06	Oct-24-06	Oct-24-06
Assessed By	AD	SC	AD	AD	SC		
Trt-Eval Interval	75 DA-A	52 DA-A	75 DA-A	52 DA-A	75 DA-A		
ARM Action Codes							TY1
# Subsamples, Dec.							1
Trt Treatment							
No. Name	25	26	27	28	29	30	31
Rate							
Rate Unit							
1 Non-treated	0 b	0 e	0 b	0 b	0 e	0 b	122.0 b
2 Sequence	100 a	99 ab	99 a	100 a	99 ab	11 a	3319.3 a
Touchdown Total	24 OZ/A						
Sequence	2.5 PT/A						
3 A13886	100 a	99 a	98 a	100 a	99 a	11 a	3068.1 a
Touchdown Total	24 OZ/A						
A13886	2.5 PT/A						
4 A14941	100 a	97 abc	85 a	100 a	97 abc	11 a	3233.6 a
Touchdown Total	24 OZ/A						
A14941	2.5 PT/A						
5 Touchdown Total	100 a	99 a	99 a	100 a	99 a	12 a	3580.6 a
Touchdown Total	24 OZ/A						
Touchdown Total	24 OZ/A						
6 Sequence	100 a	96 bc	99 a	100 a	96 bc	12 a	3628.5 a
Sequence	2.5 PT/A						
7 A13886	100 a	94 cd	98 a	100 a	94 cd	12 a	3436.9 a
A13886	2.5 PT/A						
8 A14941	100 a	93 d	89 a	100 a	93 d	11 a	3126.2 a
A14941	2.5 PT/A						
LSD (P=.05)	0.0	2.9	13.4	0.0	2.9	2.0	573.05
Standard Deviation	0.0	1.9	9.1	0.0	1.9	1.3	389.62
CV	0.0	2.31	10.91	0.0	2.31	13.26	13.26
Bartlett's X2	0.0	5.757	35.21	0.0	5.757	20.251	20.251
P(Bartlett's X2)	.	0.218	0.001*	.	0.218	0.005*	0.005*

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

Column 31: TY1 = 290.4*[30]

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	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: 6.0	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: _____

Closest Weather Station: _____ Distance: _____ Unit: _____

APPLICATION DESCRIPTION

	A	B	C	D
Application Date:	May-19-06	Jun-06-06	Jun-22-06	Jul-07-06
Time of Day:	10 am	2 pm	3 pm	10 am
Application Method:	broadcast	broadcast	broadcast	broadcast
Application Timing:	PRE	3 leaf	8 leaf	12 leaf
Applic. Placement:	on soil	overtop	overtop	overtop
Air Temp., Unit:	81 F	86 F	99 F	88 F
% Relative Humidity:	49	49	39	69
Wind Velocity, Unit:	2 mph	4 mph	3 mph	3 mph
Dew Presence (Y/N):	n	n	n	n
Water Hardness:				
Soil Temp., Unit:	85 F	92 F	101 F	97 F
Soil Moisture:	fair	moist	moist	moist
% Cloud Cover:	0	0	0	0

CROP STAGE AT EACH APPLICATION

	A	B	C	D
Crop 1 Code, Stage:	GOSHI PRE	GOSHI 3 leaf	GOSHI 8 leaf	GOSHI 12 leaf
Stage Scale:	not up	3 leaf	8 leaf	12 leaf
Height, Unit:	0 inch	3.5 inch	12 inch	22 inch

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WEED STAGE AT EACH APPLICATION

	A	B	C	D
Weed 1 Code, Stage:	MOLVE PRE	MOLVE 3 leaf	MOLVE 8 leaf	MOLVE 12 leaf
Stage Scale:	not up	2-3 inch	3 inch	< 4 inch
Density, Unit:	0 ydsq	8 ydsq	8 ydsq	8 ydsq
Weed 2 Code, Stage:	DEDTO PRE	DEDTO 3 leaf	DEDTO 8 leaf	DEDTO 12 leaf
Stage Scale:	not up	2-3 inch	3 inch	< 4 inch
Density, Unit:	0 ydsq	1 ydsq	1 ydsq	1 ydsq
Weed 3 Code, Stage:	IAQTA PRE	IAQTA 3 leaf	IAQTA 8 leaf	IAQTA 12 leaf
Stage Scale:	not up	2-3 inch	3 inch	< 4 inch
Density, Unit:	0 ydsq	2 ydsq	2 ydsq	2 ydsq
Weed 4 Code, Stage:	RCHSC PRE	RCHSC 3 leaf	RCHSC 8 leaf	RCHSC 12 leaf
Stage Scale:	not up	2-3 inch	3 inch	< 4 inch
Density, Unit:	0 ydsq	5 ydsq	5 ydsq	5 ydsq
Weed 5 Code, Stage:	AMAPA PRE	AMAPA 3 leaf	AMAPA 8 leaf	AMAPA 12 leaf
Stage Scale:	not up	2-3 inch	3 inch	< 4 inch
Density, Unit:	0 ydsq	2 ydsq	2 ydsq	2 ydsq
Weed 6 Code, Stage:	PANTE PRE	PANTE 3 leaf	PANTE 8 leaf	PANTE 12 leaf
Stage Scale:	not up	2-3 inch	3 inch	< 4 inch
Density, Unit:	0 ydsq	8 ydsq	8 ydsq	8 ydsq
Weed 7 Code, Stage:	ACHNI PRE	ACHNI 3 leaf	ACHNI 8 leaf	ACHNI 12 leaf
Stage Scale:	not up	2-3 inch	3 inch	< 4 inch
Density, Unit:	0 ydsq	2 ydsq	2 ydsq	2 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	18 inch
Nozzles/Row:	2	2	2	2
Band Width, Unit:				
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
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