

University of Georgia

Annual grass response to S-3970 and S-3530.

Trial ID: C31-09
Location: Ponder Farm

Study Director: Stanley Culpepper
Investigator: Stanley Culpepper

Use 1.5 liters(s) per treatment mixture to spray 14.8 gal/ac
Plots: 12 by 25 feet

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	Amt Product to Measure	Plot No. By Rep		
									1	2	3
1	Non-treated								101	206	301
2	S-3970	0.42	EC	0.045	lb ai/a	POST1	A	10.86 ml/mx	102	209	303
	NIS		L	0.25	% v/v	POST1	A	3.75 ml/mx			
	AMS	100	SG	2.5	lb/a	POST1	A	30.36 g/mx			
3	S-3970	0.42	EC	0.089	lb ai/a	POST1	A	21.47 ml/mx	103	201	307
	NIS		L	0.25	% v/v	POST1	A	3.75 ml/mx			
	AMS	100	SG	2.5	lb/a	POST1	A	30.36 g/mx			
4	S-3530	0.42	EC	0.045	lb ai/a	POST1	A	10.86 ml/mx	104	212	302
	NIS		L	0.25	% v/v	POST1	A	3.75 ml/mx			
	AMS	100	SG	2.5	lb/a	POST1	A	30.36 g/mx			
5	S-3530	0.42	EC	0.089	lb ai/a	POST1	A	21.47 ml/mx	105	202	312
	NIS		L	0.25	% v/v	POST1	A	3.75 ml/mx			
	AMS	100	SG	2.5	lb/a	POST1	A	30.36 g/mx			
6	Select Max	1	EC	0.1	lb ai/a	POST 1	A	10.13 ml/mx	106	211	306
	NIS		L	0.25	% v/v	POST1	A	3.75 ml/mx			
	AMS	100	SG	2.5	lb/a	POST1	A	30.36 g/mx			
7	S-3970	0.42	EC	0.089	lb ai/a	POST2	B	21.47 ml/mx	107	204	310
	NIS		L	0.25	% v/v	POST2	B	3.75 ml/mx			
	AMS	100	SG	2.5	lb/a	POST2	B	30.36 g/mx			
8	S-3970	0.42	EC	0.178	lb ai/a	POST2	B	42.95 ml/mx	108	203	305
	NIS		L	0.25	% v/v	POST2	B	3.75 ml/mx			
	AMS	100	SG	2.5	lb/a	POST2	B	30.36 g/mx			
9	S-3530	0.42	EC	0.089	lb ai/a	POST2	B	21.47 ml/mx	109	205	308
	NIS		L	0.25	% v/v	POST2	B	3.75 ml/mx			
	AMS	100	SG	2.5	lb/a	POST2	B	30.36 g/mx			
10	S-3530	0.42	EC	0.178	lb ai/a	POST2	B	42.95 ml/mx	110	207	311
	NIS		L	0.25	% v/v	POST2	B	3.75 ml/mx			
	AMS	100	SG	2.5	lb/a	POST2	B	30.36 g/mx			
11	Select Max	1	EC	0.1	lb ai/a	POST2	B	10.13 ml/mx	111	208	304
	NIS		L	0.25	% v/v	POST2	B	3.75 ml/mx			
	AMS	100	SG	2.5	lb/a	POST2	B	30.36 g/mx			
12	Non-treated								112	210	309

Sort Order: Treatment

Trial Comments

OBJECTIVE: Determine grass and cotton response to S-3530 and S-3970.

VISUAL COTTON RESPONSE:

1. Injury was insignificant throughout the study; although, minor (4 to 5%) chlorosis/whitening was noted with S-3970 after the second application timing.

GOOSEGRASS RESPONSE:

- Select Max applied to 2 or 8 inch tall grass provided complete control.
- S-3970 provided very poor control, regardless of grass being 2 or 8 inches at time of application.
- S-3530 at 0.089 lb provided 80% control at 30 d after treating 2 inch goosegrass. Control from the same treatment to 8 inch grass only provided 37% control at 21 DAT.

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TEXAS PANICUM:

1. Select Max provided complete control of 3 or 10 inch grass.
2. Both S-3970 and S-3530 were more effective on Texas panicum than goosegrass.
3. S-3970 at 0.089 lb controlled 3 inch grass 86% at 30 DAT; control of 10 inch grass was only 48% at 21 DAT.
4. S-3570 at 0.089 lb controlled 3 and 10 inch grass 87 to 90% at 21 to 30 DAT.

CONCLUSIONS:

1. Select Max is more effective than S-3530 or S-3970 in controlling goosegrass and Texas panicum.
2. Neither S compound will effectively control goosegrass.

GENERAL COMMENTS:

1. May 14, 2009: Staple at 1.7 oz/A applied PRE over trial area.

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	ELESS	ELESS	ELESS	ELESS	ELESS	PANTE	PANTE	PANTE	PANTE
Crop Code									
BBCH Scale									
Rating Date	6/20/2009	6/27/2009	7/3/2009	7/11/2009	6/20/2009	6/27/2009	7/3/2009	7/11/2009	
Rating Data Type	control	control	control	control	control	control	control	control	
Rating Unit	%	%	%	%	%	%	%	%	
Days After Last Applic.	0	7	13	21	0	7	13	21	
Trt-Eval Interval	9 DA-A	7 DA-B	13 DA-B	21 DA-B	9 DA-A	7 DA-B	13 DA-B	21 DA-B	

Trt No.	Treatment Name	Rate	Rate Unit	1	2	3	4	5	6	7	8	9	10
1	Non-treated			0.0	f	0.0	h	0.0	h	0.0	f	0.0	e
2	S-3970	0.045	lb ai/a	20.0	e	20.0	g	36.7	g	0.0	f	48.3	d
	NIS	0.25	% v/v										
	AMS	2.5	lb/a										
3	S-3970	0.089	lb ai/a	55.0	c	46.7	cd	50.0	de	46.7	c	75.0	c
	NIS	0.25	% v/v										
	AMS	2.5	lb/a										
4	S-3530	0.045	lb ai/a	36.7	d	26.7	fg	40.0	fg	0.0	f	86.0	b
	NIS	0.25	% v/v										
	AMS	2.5	lb/a										
5	S-3530	0.089	lb ai/a	70.0	b	70.0	b	77.7	b	80.0	b	88.3	b
	NIS	0.25	% v/v										
	AMS	2.5	lb/a										
6	Select Max	0.1	lb ai/a	96.3	a	99.0	a	99.0	a	99.0	a	96.3	a
	NIS	0.25	% v/v										
	AMS	2.5	lb/a										
7	S-3970	0.089	lb ai/a	0.0	f	33.3	ef	41.7	fg	20.0	e	0.0	e
	NIS	0.25	% v/v										
	AMS	2.5	lb/a										
8	S-3970	0.178	lb ai/a	0.0	f	36.7	def	45.0	ef	20.0	e	0.0	e
	NIS	0.25	% v/v										
	AMS	2.5	lb/a										
9	S-3530	0.089	lb ai/a	0.0	f	40.0	de	57.7	cd	36.7	d	0.0	e
	NIS	0.25	% v/v										
	AMS	2.5	lb/a										
10	S-3530	0.178	lb ai/a	0.0	f	55.0	c	61.7	c	43.3	cd	0.0	e
	NIS	0.25	% v/v										
	AMS	2.5	lb/a										
11	Select Max	0.1	lb ai/a	0.0	f	87.7	a	99.0	a	99.0	a	0.0	e
	NIS	0.25	% v/v										
	AMS	2.5	lb/a										
12	Non-treated			0.0	f	0.0	h	0.0	h	0.0	f	0.0	e
LSD (P=.05)				7.14		12.15		8.24		8.29		5.76	
Standard Deviation				4.22		7.17		4.87		4.90		3.40	
CV				18.2		16.72		9.6		13.22		10.37	
Bartlett's X2				3.439		5.263		4.818		1.442		5.443	
P(Bartlett's X2)				0.329		0.628		0.682		0.696		0.245	
Replicate F				1.017		2.887		8.110		1.505		1.950	
Replicate Prob(F)				0.3780		0.0770		0.0023		0.2439		0.1661	
Treatment F				191.876		56.461		128.135		178.764		459.210	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by same letter do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Pest Type	W Weed	W Weed
Pest Code		
Crop Code	GOSHI	GOSHI
BBCH Scale	BCOT	BCOT
Rating Date	6/20/2009	6/27/2009
Rating Data Type	injury	injury
Rating Unit	#	#
Days After Last Applic.	0	7
Trt-Eval Interval	9 DA-A	7 DA-B

Trt	Treatment	Rate	Unit	11	12
1	Non-treated			0.0	a 0.0 a
2	S-3970	0.045	lb ai/a	0.0	a 0.0 a
	NIS	0.25	% v/v		
	AMS	2.5	lb/a		
3	S-3970	0.089	lb ai/a	0.0	a 0.0 a
	NIS	0.25	% v/v		
	AMS	2.5	lb/a		
4	S-3530	0.045	lb ai/a	0.0	a 0.0 a
	NIS	0.25	% v/v		
	AMS	2.5	lb/a		
5	S-3530	0.089	lb ai/a	0.0	a 0.0 a
	NIS	0.25	% v/v		
	AMS	2.5	lb/a		
6	Select Max	0.1	lb ai/a	0.0	a 0.0 a
	NIS	0.25	% v/v		
	AMS	2.5	lb/a		
7	S-3970	0.089	lb ai/a	0.0	a 5.3 a
	NIS	0.25	% v/v		
	AMS	2.5	lb/a		
8	S-3970	0.178	lb ai/a	0.0	a 4.0 a
	NIS	0.25	% v/v		
	AMS	2.5	lb/a		
9	S-3530	0.089	lb ai/a	0.0	a 0.0 a
	NIS	0.25	% v/v		
	AMS	2.5	lb/a		
10	S-3530	0.178	lb ai/a	0.0	a 0.0 a
	NIS	0.25	% v/v		
	AMS	2.5	lb/a		
11	Select Max	0.1	lb ai/a	0.0	a 0.0 a
	NIS	0.25	% v/v		
	AMS	2.5	lb/a		
12	Non-treated			0.0	a 0.0 a
LSD (P=.05)				0.00	3.98
Standard Deviation				0.00	2.35
CV				0.0	302.49
Bartlett's X2				0.0	0.314
P(Bartlett's X2)				.	0.575
Replicate F				0.000	1.526
Replicate Prob(F)				1.0000	0.2396
Treatment F				0.000	1.832
Treatment Prob(F)				1.0000	0.1092

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

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Trial ID: C31-09
Location: Ponder Farm

Study Director: Stanley Culpepper
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: 31795

Trial Location

City: TyTy **Trial Status:** completed
State/Prov.: GA **Trial Reliability:** good
Postal Code: 31795 **Initiation Date:** 5/14/2009
Country: USA
Directions:

Objectives:

Conclusions:

Crop Description

Crop 1: GOSHI *Gossypium hirsutum* Cotton, American upland
Variety: PHY 375 WRF
BBCH Scale: BCOT **Planting Date:** 5/14/2009
Planting Method: seeded **Rate, Unit:** 4 ft
Depth, Unit: 0.5 in
Row Spacing, Unit: 36 in **Spacing Within Row, Unit:** 4 in
Seed Bed: bedded **Soil Temperature, Unit:** 75 F
Soil Moisture: moist **Emergence Date:** 5/19/2009

Pest Description

Pest 1 Type: W **Code:** ELESS *Eleusine sp.*
Common Name: Goosegrass
Pest 2 Type: W **Code:** PANTE *Panicum texanum*
Common Name: Texas panicum

Site and Design

Plot Width, Unit: 12 FT **Site Type:** Ponder research farm
Plot Length, Unit: 25 FT **Tillage Type:** Conventional
Replications: 3 **Study Design:** Randomized Complete Block

Trial Initiation Comments:

Field Prep./Maintenance:

Soil Description

% Sand: 90 **% OM:** 1.3 **Texture:** loamy sand
% Silt: 4 **pH:** 6.1
% Clay: 6

Moisture Conditions

Overall Moisture Conditions: moist, irrigated
Closest Weather Station: on site **Distance:** 250 **Unit:** yd

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Application Description

	A	B
Application Date:	6/11/2009	6/20/2009
Time of Day:	8:00 am	8:30 am
Application Method:	broadcast	broadcast
Application Timing:	POST 1	POST 2
Application Placement:	overtop	overtop
Applied By:	Culpepper	Culpepper
Air Temperature, Unit:	80 F	82 F
% Relative Humidity:	66	66
Wind Velocity, Unit:	3 mph	2 mph
Dew Presence (Y/N):	Y	Y
Soil Temperature, Unit:	81 F	82 F
Soil Moisture:	moist	moist
% Cloud Cover:	0	0

Crop Stage At Each Application

	A		B	
Crop 1 Code, BBCH Scale:	GOSHI	BCOT	GOSHI	BCOT
Stage Scale Used:	BBCH		BBCH	
Stage Majority, Percent:	5 lf	100	9 lf	100
Stage Minimum, Percent:	5 lf	100	9 lf	100
Stage Maximum, Percent:	5	5	9	10
Height, Unit:	8	in	13	in
Height Minimum, Maximum:	7	10	12	15

Pest Stage At Each Application

	A		B	
Pest 1 Code, Disc., Scale:	ELESS	W .	ELESS	W .
Stage Majority, Percent:	2 inch	100	8 inch	100
Stage Minimum, Percent:	2 inch	100	8 inch	100
Stage Maximum, Percent:	2 inch	100	8	8
Height, Unit:	2	in	8	in
Height Minimum, Maximum:	1	2	7	10
Density, Unit:	5	ydsq	5	ydsq
Coverage, Unit:	100	%	90	%
Pest 2 Code, Disc., Scale:	PANTE	W .	PANTE	W .
Stage Majority, Percent:	3 inch	100	10inch	100
Stage Minimum, Percent:	3 inch	100	10inch	100
Stage Maximum, Percent:	3 inch	100	10inch	100
Height, Unit:	3	in	10	in
Height Minimum, Maximum:	2	4	9	10
Density, Unit:	8	ydsq	8	ydsq
Coverage, Unit:	100	%	100	%

Application Equipment

	A	B
Appl. Equipment:	backpack	backpack
Operating Pressure:	24	24
Pressure Unit:	psi	psi
Nozzle Type:	flat fan	flat fan
Nozzle Size:	11002	11002
Nozzle Spacing, Unit:	18 in	18 in
Nozzles/Row:	2	2
Boom Length, Unit:	4.5 ft	4.5 ft
Boom Height, Unit:	15 in	15 in
Ground Speed, Unit:	3 mph	3 mph
Carrier:	water	water
Spray Volume:	15	15
Volume Unit:	GAL/AC	GAL/AC
Propellant:	CO2	CO2
Tank Mix (Y/N):	Y	Y