

University of Georgia

Pusley response to burndown herbicide options.

Trial ID: C36-03
Location: Jones farm

Study Director:
Investigator: Stanley Culpepper

General Trial Information

Study Director: Stanley Culpepper **Title:** Ext. weed science
Affiliation: University of Georgia
Postal Code: 31794
Investigator: Stanley Culpepper **Title:** Ext. weed science
Affiliation: University of Georgia
Postal Code: 31794

Trial Location

City: Tifton **Trial Status:** completed
State/Prov.: Ga **Trial Reliability:** good
Postal Code: 31794 **Initiation Date:** May-06-03
Country: U.S.A.
Directions:

Objectives:

Conclusions:

Crop Description

Crop 1: GOSHI *Gossypium hirsutum* Cotton, American upland
Variety: DP 555 B/RR
BBCH Scale: BCOT **Planting Date:** May-06-03
Planting Method: strip tillage **Rate, Unit:** 3 seed/ft
Depth, Unit: 0.5 in
Row Spacing, Unit: 36 inch **Spacing Within Row, Unit:** 4 inch
Seed Bed: flat **Soil Temperature, Unit:** 74 F
Soil Moisture: moist **Emergence Date:** May-11-03

Pest Description

Pest 1 Type: W **Code:** RCHSC *Richardia scabra*
Common Name: Pusley, Florida
Pest 2 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Amaranth, Palmer

Site and Design

Plot Width, Unit: 6 FT **Site Type:** On farm
Plot Length, Unit: 25 FT **Tillage Type:** Strip tillage
Replications: 4 **Study Design:** Randomized Complete Block

Trial Initiation Comments:

Field Prep./Maintenance:

Soil Description

% Sand: 94 **% OM:** 0.59 **Texture:** sand
% Silt: 4 **pH:** 5.8 **Soil Name:** Tifton sandy loam
% Clay: 2

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Application Description

	A	B
Application Date:	May-25-03	May-06-03
Time of Day:	8:30am	9:00am
Application Method:	Broadcast	Broadcast
Application Timing:	PRE	2"RCHSC
Application Placement:	on soil	overtop
Applied By:	Culpepper	Culpepper
Air Temperature, Unit:	79 F	78 F
% Relative Humidity:	76	68
Wind Velocity, Unit:	0 mph	1 mph
Dew Presence (Y/N):	y	n
Soil Temperature, Unit:	74 F	80 F
Soil Moisture:	moist	perfect
% Cloud Cover:	100	70

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GOSHI BCOT	GOSHI BCOT
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	PRE 100	V3 100
Stage Minimum, Percent:	PRE 100	V3 100
Stage Maximum, Percent:	PRE 100	V3 100
Diameter, Unit:	0 in	0. in
Height, Unit:	0 in	4 in
Height Minimum, Maximum:	0 0	3.5 4.5

Pest Stage At Each Application

	A		B	
Pest 1 Code, Disc., Scale:	RCHSC	W DESC	RCHSC	W DESC
Stage Majority, Percent:	PRE	100	2 lf	50
Stage Minimum, Percent:	PRE	100	cot	50
Stage Maximum, Percent:	PRE	100	2 lf	50
Diameter, Unit:	0.	in	0.	in
Height, Unit:	0	in	1	in
Height Minimum, Maximum:	0	0	0.5	1.5
Density, Unit:	0	ydsq	25	ydsq
Coverage, Unit:	75	%	100	%
Pest 2 Code, Disc., Scale:	AMAPA	W	AMAPA	W DESC
Stage Majority, Percent:	PRE	100	9 leaf	25
Stage Minimum, Percent:	PRE	100	7 leaf	25
Stage Maximum, Percent:	PRE	100	12leaf	25
Diameter, Unit:	0.	in	0.	in
Height, Unit:	0	in	7	in
Height Minimum, Maximum:	0	0	5	9
Density, Unit:	0	ydsq	12	ydsq
Coverage, Unit:	75	%	100	%

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Application Equipment

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

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Pest Code		AMAPA	RCHSC			
Crop Code	GOSHI					
BBCH Scale	BCOT					
Rating Date	Jun-04-03	Jun-04-03	Jun-04-03			
Rating Data Type	Injury	control	control			
Rating Unit	percent	percent	percent			
Days After Last Applic.	29	29	29			
Trt-Eval Interval	6 DA-A					
Trt No.	Treatment Name	Rate	Unit	1	2	3
1	Staple	0.8	oz/a	0.0	0.0	0.0
2	Staple	0.8	oz/a	7.5	100.0	100.0
	WeatherMax	21.3	oz/a			
3	Staple	0.8	oz/a	6.5	100.0	100.0
	WeatherMax	32	oz/a			
4	Staple	0.8	oz/a	5.0	100.0	100.0
	WeatherMax	44	oz/a			
5	Staple	0.8	oz/a	98.0	100.0	100.0
	WeatherMax	21.3	oz/a			
	Valor	1	oz/a			
	NIS	0.25	% v/v			
6	Staple	0.8	oz/a	99.0	100.0	98.8
	WeatherMax	21.3	oz/a			
	Aim	1.25	oz/a			
	NIS	0.25	% v/v			
7	Staple	0.8	oz/a	92.8	100.0	96.5
	WeatherMax	21.3	oz/a			
	2,4-d	1.5	pt/a			
8	Staple	0.8	oz/a	8.0	100.0	100.0
	WeatherMax	21.3	oz/a			
LSD (P=.05)		5.75		0.00		3.83
Standard Deviation		3.91		0.00		2.60
CV		9.87		0.0		3.0
Bartlett's X2		5.016		0.0		4.027
P(Bartlett's X2)		0.542		.		0.045*

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

Trial Comments

OBJECTIVE: Determine an effective option for the control of emerged Florida pusley.

GENERAL COMMENTS: Staple applied PRE provided 60 to 70% control of pusley but an intense population was still present. Staple was applied PRE to remove most other weeds. Staple PRE provided greater than 90% control of Palmer.

WEED CONTROL:

- 1) Glyphosate following Staple PRE provided complete control of pusley at 10 d after POST application; thus, the addition of other herbicides with glyphosate could not be detected.
- 2) All systems provided complete control of Palmer at 10 d after the POST application.

COTTON RESPONSE:

- 1) Staple applied PRE stunted cotton growth less than 10% at 29 DAT.
- 2) Aim, Valor, or 2,4-D mixed with glyphosate and applied topically controlled cotton at least 93%.