

University of Georgia

Cotton response to mixtures of Staple, Sequence, and glyphosate. (08/903)

Trial ID: C30-08

Study Dir.: Stanley Culpepper

Location: Ponder Farm

Investigator: Stanley Culpepper

Trial Comments

OBJECTIVE: Determine cotton response to Staple/Dual mixtures.

Visual Cotton Response:

1. Injury was at its greatest 4 d after treatment (DAT).
2. Roundup and Touchdown caused minimal injury.
3. Sequence and Roundup or Touchdown plus Dual Magnum mixtures caused less injury than normal (5% or less).
4. At 4 DAT, Roundup or Touchdown plus Staple injured cotton up to 21%.
5. At 4 DAT, all combinations of Staple and Dual caused 32 to 35% injury.
6. Cotton recovered rapidly.

Weed Response:

1. Palmer amaranth and Texas panicum were present in the study. All herbicide treatments provided excellent control of both species.
2. The trial was maintained weed free after June 23.

Cotton Response:

1. Herbicide treatments had no impact on seed cotton yield.
2. The study was conducted under a pivot and cotton was not stressed throughout the season.

GENERAL COMMENTS:

1. Trial was oversprayed with Roundup on June 23 and July 10.

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Weed Code		GOSHI	GOSHI	GOSHI	AMAPA	PANTE	Seed Yld	Seed Yld	
Crop Code		injury	injury	injury	GOSHI	GOSHI	GOSHI	GOSHI	
Rating Data Type		%	%	%	control	control	yield	yield	
Rating Unit					%	%	lb/2rowp	lb/acre	
Rating Date		Jun-11-08	Jun-23-08	Jul-03-08	Jun-23-08	Jun-23-08	Sep-15-08	Sep-15-08	
Trt-Eval Interval		4 DA-A	16 DA-A	26 DA-A	16 DA-A	16 DA-A	100 DA-A	100 DA-A	
ARM Action Codes								TY1	
# Subsamples, Dec.								1	
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	Rate	
		Unit	Unit	Unit	Unit	Unit	Unit	Unit	
1	Roundup PowerMax	22 OZ/A	0 e	0 e	0 a	97 a	99 a	8 a	2243.3 a
2	Touchdown Total	24 OZ/A	0 e	0 e	0 a	93 a	99 a	7 a	1920.3 a
3	Sequence (GBL6A20T99)	2.5 PT/A	5 d	2 cde	0 a	95 a	99 a	7 a	2021.9 a
4	Roundup PowerMax Dual Magnum	22 OZ/A 16 OZ/A	4 de	0 e	0 a	96 a	99 a	7 a	1891.2 a
5	Touchdown Total Dual Magnum	24 OZ/A 16 OZ/A	0 e	1 e	0 a	96 a	99 a	7 a	2047.3 a
6	Sequence (GBL6A20T99) Staple LX	2.5 PT/A 1.7 OZ/A	35 a	6 ab	0 a	99 a	99 a	7 a	1913.0 a
7	Roundup PowerMax Dual Magnum Staple LX	22 OZ/A 16 OZ/A 1.7 OZ/A	33 a	5 abc	0 a	96 a	99 a	7 a	2098.1 a
8	Touchdown Total Dual Magnum Staple LX	24 OZ/A 16 OZ/A 1.7 OZ/A	35 a	3 b-e	0 a	99 a	99 a	8 a	2250.6 a
9	Roundup PowerMax Staple LX	22 OZ/A 1.7 OZ/A	18 bc	1 de	0 a	96 a	99 a	7 a	2138.1 a
10	Roundup PowerMax Staple LX	22 OZ/A 2.7 OZ/A	16 c	3 b-e	0 a	99 a	99 a	7 a	1996.5 a
11	Touchdown Total Staple LX	24 OZ/A 1.7 OZ/A	21 b	1 de	0 a	99 a	99 a	7 a	1916.6 a
12	Touchdown Total Dual Magnum Staple LX	24 OZ/A 16 OZ/A 1.7 OZ/A	35 a	5 a-d	0 a	99 a	99 a	7 a	2011.0 a
13	Non-treated		0 e	0 e	0 a	0 b	0 b	7 a	2087.3 a
14	Sequence (GBL4FO2TD2) Staple LX	2.5 PT/A 1.7 OZ/A	35 a	7 a	0 a	99 a	99 a	7 a	2000.1 a
LSD (P=.05)			3.2	3.2	0.0	6.0	0.0	1.7	487.25
Standard Deviation			2.3	2.2	0.0	4.2	0.0	1.2	340.96
CV			13.41	93.19	0.0	4.63	0.0	16.73	16.73
Bartlett's X2			11.639	7.001	0.0	18.117	0.0	24.395	24.395
P(Bartlett's X2)			0.04*	0.637	.	0.02*	.	0.028*	0.028*

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

Column 7: TY1 = 290.4*[6]

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

SOIL DESCRIPTION

% Sand: 94 % OM: 1.3 Texture: sandy loam
 % Silt: 2 pH: 5.8 Soil Name: _____
 % Clay: 4 CEC: _____ Fert. Level: _____

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

No.	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: irrigated

Closest Weather Station: _____ Distance: _____ Unit: ____

APPLICATION DESCRIPTION

	A
Application Date:	Jun-07-08
Time of Day:	11 am
Application Method:	broadcat
Application Timing:	3 lf
Applic. Placement:	overtop
Air Temp., Unit:	88 F
% Relative Humidity:	55
Wind Velocity, Unit:	2 mph
Dew Presence (Y/N):	n
Water Hardness:	
Soil Temp., Unit:	88 F
Soil Moisture:	moist
% Cloud Cover:	25

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	GOSHI A
Stage Scale:	3 leaf
Height, Unit:	5 inch

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	. .
Stage Scale:	.
Density, Unit:	. .

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APPLICATION EQUIPMENT

	A
Appl. Equipment:	backpack
Operating Pressure:	24
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	18 in
Nozzles/Row:	2
Band Width, Unit:	
Boom Length, Unit:	4.5 ft
Boom Height, Unit:	15 in
Ground Speed, Unit:	3 mph
Incorporation Equip.:	
Hours to Incorp.:	
Incorp. Depth, Unit:	
Carrier:	water
Spray Volume, Unit:	15 GPA
Spray pH:	
Propellant:	CO2
Tank Mix (Y/N):	y

Trt No	Treatment Application Comment