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Glytol/LL cotton and goosegrass response to glufosinate/glyphosate mixtures.

Trial ID: C42-10 Study Dir.: Stanley Culpepper
Location: Sunbelt Ag Expo Investigator: Stanley Culpepper

Use 1 liters(s) per treatment mixture to spray 14.8 gal/ac
Plots: 6 by 25 feet

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Plot No. By Rep 1	2	3
1	Ignite	2.34	L	0	oz/a	POST	A		101	212	318
	Roundup WeatherMax	4.5	L	0	oz/a	POST	A				
2	Ignite	2.34	L	0	oz/a	POST	A		102	204	302
	Roundup WeatherMax	4.5	L	11	oz/a	POST	A	5.806 ml/mx			
3	Ignite	2.34	L	0	oz/a	POST	A		103	211	314
	Roundup WeatherMax	4.5	L	22	oz/a	POST	A	11.61 ml/mx			
4	Ignite	2.34	L	0	oz/a	POST	A		104	209	319
	Roundup WeatherMax	4.5	L	33	oz/a	POST	A	17.42 ml/mx			
5	Ignite	2.34	L	14.5	oz/a	POST	A	7.653 ml/mx	105	213	301
	Roundup WeatherMax	4.5	L	0	oz/a	POST	A				
6	Ignite	2.34	L	14.5	oz/a	POST	A	7.653 ml/mx	106	216	311
	Roundup WeatherMax	4.5	L	11	oz/a	POST	A	5.806 ml/mx			
7	Ignite	2.34	L	14.5	oz/a	POST	A	7.653 ml/mx	107	218	310
	Roundup WeatherMax	4.5	L	22	oz/a	POST	A	11.61 ml/mx			
8	Ignite	2.34	L	14.5	oz/a	POST	A	7.653 ml/mx	108	215	307
	Roundup WeatherMax	4.5	L	33	oz/a	POST	A	17.42 ml/mx			
9	Ignite	2.34	L	29	oz/a	POST	A	15.31 ml/mx	109	219	315
	Roundup WeatherMax	4.5	L	0	oz/a	POST	A				
10	Ignite	2.34	L	29	oz/a	POST	A	15.31 ml/mx	110	206	317
	Roundup WeatherMax	4.5	L	11	oz/a	POST	A	5.806 ml/mx			
11	Ignite	2.34	L	29	oz/a	POST	A	15.31 ml/mx	111	207	306
	Roundup WeatherMax	4.5	L	22	oz/a	POST	A	11.61 ml/mx			
12	Ignite	2.34	L	29	oz/a	POST	A	15.31 ml/mx	112	203	312
	Roundup WeatherMax	4.5	L	33	oz/a	POST	A	17.42 ml/mx			
13	Ignite	2.34	L	43.5	oz/a	POST	A	22.96 ml/mx	113	214	316
	Roundup WeatherMax	4.5	L	0	oz/a	POST	A				
14	Ignite	2.34	L	43.5	oz/a	POST	A	22.96 ml/mx	114	201	303
	Roundup WeatherMax	4.5	L	11	oz/a	POST	A	5.806 ml/mx			
15	Ignite	2.34	L	43.5	oz/a	POST	A	22.96 ml/mx	115	205	309
	Roundup WeatherMax	4.5	L	22	oz/a	POST	A	11.61 ml/mx			
16	Ignite	2.34	L	43.5	oz/a	POST	A	22.96 ml/mx	116	217	304
	Roundup WeatherMax	4.5	L	33	oz/a	POST	A	17.42 ml/mx			
17	None								117	202	305
18	Ignite	2.34	L	29	oz/a	POST	A	15.31 ml/mx	118	208	313
	Roundup WeatherMax	4.5	L	22	oz/a	POST	A	11.61 ml/mx			
	Staple LX	3.2	L	2	oz/a	POST	A	1.056 ml/mx			
19	Ignite	2.34	L	29	oz/a	POST	A	15.31 ml/mx	119	210	308
	Roundup WeatherMax	4.5	L	22	oz/a	POST	A	11.61 ml/mx			
	Dual Magnum	7.64	L	1	pt/a	POST	A	8.445 ml/mx			
20	Ignite	2.34	L	29	oz/a	POST	A	15.31 ml/mx	120	220	320
	Roundup WeatherMax	4.5	L	22	oz/a	POST	A	11.61 ml/mx			
	MON 63410	3	CS	3	pt/a	POST	A	25.34 ml/mx			

Sort Order: Treatment

University of Georgia

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Trial ID: C42-10 Study Dir.: Stanley Culpepper
Location: Sunbelt Ag Expo Investigator: Stanley Culpepper

Trial Comments

OBJECTIVE: Determine gltyol/LL cotton and goosegrass response to Ignite/Roundup combinations.

1. At 3 DAT, Roundup/Ignite combinations caused less than 5% injury. By 7 DAT, injury with Ignite/Roundup combinations was only greater than 5% when Ignite at 43 oz/A was mixed with 22 or 33 oz of Roundup WeatherMax (10%). No injury was noted by 13 DAT.
2. Ignite (29 oz) plus WeatherMax (22 oz) injured cotton 3% at 3 DAT; the addition of Staple, Dual Magnum or Warrant increased injury to 36, 16, and 24%, respectively.
3. Ignite (29 oz) plus WeatherMax (22 oz) injured cotton 5% at 7 DAT; the addition of Staple, Dual Magnum or Warrant increased injury to 27, 18, and 33%, respectively.
4. Injury was less than 4% with Staple, Dual or Warrant mixtures by 13 DAT.
5. Cotton was destroyed prior to bloom.

WEED RESPONSE:
Goosegrass Response (22 DAT):
1. Roundup at 11, 22, and 33 oz/A provided 86, 92, and 93% control, respectfully.
2. Ignite at 14.5, 29, and 43.5 oz/A provided 51, 80, and 80% control, respectfully.
3. Ignite at 14.5 oz mixed with Roundup at 11, 22, or 33 oz/A provided 63, 78, and 93% control, respectfully. Only the 33 oz/A rate of Roundup plus Ignite was as effective as 22 oz/A of Roundup alone.
4. Ignite at 29 oz mixed with Roundup at 11, 22, or 33 oz/A provided 80, 85, and 84% control, respectfully. Only the Ignite + Roundup at 11 oz provided less control than 22 oz of WeatherMax alone.
5. Ignite at 43 oz mixed with Roundup at 11, 22, or 33 oz/A provided 87, 83, and 86% control, respectfully. Control was similar to WeatherMax at 22 oz/A with all treatments.
6. Mixing Staple with Roundup/Ignite did not impact control. Dual or Warrant tended to improve control when mixed with Roundup/Ignite.

Pick Purslane:
1. Goosegrass was so think, purslane ratings are variable and questionable.
2. Any treatment with 29 oz/A of Ignite or a higher rate provided excellent control.

CONCLUSION:
1. Environmental conditions were ideal for herbicide activity in this experiment.
2. A tendency for antagonism was noted with many Ignite/Roundup mixtures, although grass was large and the loss in control was relatively minor.
3. This study needs to be repeated over numerous locations.

GENERAL COMMENTS:
May 13: Roundup + 1.0 pt Prowl applied PRE

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Trt No.	Treatment Name	Rate	Rate Unit	1	2	3	4	5	6	7	8	9
Weed Code								ELEIN	ELEIN	ELEIN	ELEIN	
Crop Code				GOSHI	GOSHI	GOSHI						
Rating Data Type				injury	injury	injury		control	control	control	control	
Rating Unit				%	%	%		%	%	%	%	
Rating Date				6/13/2010	6/17/2010	6/23/2010		6/17/2010	6/23/2010	7/2/2010	7/8/2010	
Crop Stage				JS	JS	SC		JS	SC	SC	SC	
Trt-Eval Interval				3 DA-A	7 DA-A	13 DA-A		7 DA-A	13 DA-A	22 DA-A	28 DA-A	
1	Ignite	0	oz/a	0.0 e	1.7 e	0.0 a		0.0 h	0.0 f	0.0 f	0.0 i	
	Roundup WeatherMax	0	oz/a									
2	Ignite	0	oz/a	0.0 e	3.3 e	0.0 a		46.7 g	90.0 abc	86.0 abc	81.3 c-f	
	Roundup WeatherMax	11	oz/a									
3	Ignite	0	oz/a	1.3 de	5.0 de	0.0 a		70.7 e	96.0 ab	92.3 ab	94.0 a	
	Roundup WeatherMax	22	oz/a									
4	Ignite	0	oz/a	3.0 de	5.0 de	0.0 a		80.0 d	97.3 a	93.3 a	93.7 a	
	Roundup WeatherMax	33	oz/a									
5	Ignite	14.5	oz/a	0.0 e	3.3 e	0.0 a		60.0 f	62.0 e	51.0 e	50.0 h	
	Roundup WeatherMax	0	oz/a									
6	Ignite	14.5	oz/a	0.0 e	3.3 e	0.0 a		68.3 e	70.0 de	63.3 d	66.0 g	
	Roundup WeatherMax	11	oz/a									
7	Ignite	14.5	oz/a	0.0 e	3.3 e	0.0 a		73.3 e	80.0 cd	78.3 c	78.3 ef	
	Roundup WeatherMax	22	oz/a									
8	Ignite	14.5	oz/a	0.0 e	1.7 e	0.0 a		85.0 a-d	95.3 ab	93.3 a	91.0 ab	
	Roundup WeatherMax	33	oz/a									
9	Ignite	29	oz/a	3.0 de	5.0 de	0.0 a		83.3 bcd	86.3 bc	80.0 c	82.7 b-f	
	Roundup WeatherMax	0	oz/a									
10	Ignite	29	oz/a	3.0 de	5.0 de	0.0 a		88.3 ab	89.0 abc	80.0 c	83.7 b-f	
	Roundup WeatherMax	11	oz/a									
11	Ignite	29	oz/a	0.0 e	5.0 de	0.0 a		88.3 ab	93.3 ab	85.0 abc	87.7 a-d	
	Roundup WeatherMax	22	oz/a									
12	Ignite	29	oz/a	3.0 de	5.0 de	0.0 a		85.0 a-d	94.3 ab	83.3 bc	86.7 a-e	
	Roundup WeatherMax	33	oz/a									
13	Ignite	43.5	oz/a	1.7 de	1.7 e	0.0 a		81.7 cd	91.0 ab	80.3 c	76.0 f	
	Roundup WeatherMax	0	oz/a									
14	Ignite	43.5	oz/a	1.7 de	5.0 de	0.0 a		86.7 abc	94.3 ab	87.3 abc	81.0 def	
	Roundup WeatherMax	11	oz/a									
15	Ignite	43.5	oz/a	4.7 d	10.0 d	0.0 a		81.7 cd	92.3 ab	83.3 bc	86.7 a-e	
	Roundup WeatherMax	22	oz/a									
16	Ignite	43.5	oz/a	3.0 de	10.0 d	0.0 a		85.0 a-d	93.0 ab	85.7 abc	87.7 a-d	
	Roundup WeatherMax	33	oz/a									
17	None			0.3 de	0.0 e	0.0 a		0.0 h	0.0 f	0.0 f	0.0 i	
18	Ignite	29	oz/a	36.0 a	26.7 b	0.0 a		86.7 abc	91.0 ab	86.7 abc	90.0 abc	
	Roundup WeatherMax	22	oz/a									
	Staple LX	2	oz/a									
19	Ignite	29	oz/a	15.7 c	18.3 c	2.7 a		91.3 a	97.0 ab	92.0 ab	93.0 a	
	Roundup WeatherMax	22	oz/a									
	Dual Magnum	1	pt/a									
20	Ignite	29	oz/a	24.0 b	33.3 a	3.7 a		84.3 bcd	94.7 ab	92.7 ab	95.3 a	
	Roundup WeatherMax	22	oz/a									
	MON 63410	3	pt/a									
LSD (P=.05)				4.48	5.12	2.27	.	6.53	10.92	9.40	8.95	.
Standard Deviation				2.71	3.10	1.38	.	3.96	6.62	5.70	5.43	.
CV				54.09	40.92	434.98	.	5.55	8.24	7.63	7.21	.
Bartlett's X2				17.428	4.191	0.035	.	13.044	39.459	19.663	11.569	.
P(Bartlett's X2)				0.134	0.964	0.851	.	0.67	0.001*	0.236	0.773	.
Replicate F				2.868	0.043	0.852		3.516	5.129	1.370	1.524	
Replicate Prob(F)				0.0692	0.9577	0.4345		0.0397	0.0107	0.2664	0.2309	
Treatment F				36.209	23.551	1.544		136.596	57.291	69.997	78.814	
Treatment Prob(F)				0.0001	0.0001	0.1252		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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Weed Code	POROL
Crop Code	
Rating Data Type	control
Rating Unit	%
Rating Date	6/23/2010
Crop Stage	JS
Trt-Eval Interval	13 DA-A

Trt No.	Treatment Name	Rate	Rate Unit	10	
1	Ignite	0	oz/a	0.0	e
	Roundup WeatherMax	0	oz/a		
2	Ignite	0	oz/a	60.0	d
	Roundup WeatherMax	11	oz/a		
3	Ignite	0	oz/a	73.3	c
	Roundup WeatherMax	22	oz/a		
4	Ignite	0	oz/a	83.3	bc
	Roundup WeatherMax	33	oz/a		
5	Ignite	14.5	oz/a	75.0	c
	Roundup WeatherMax	0	oz/a		
6	Ignite	14.5	oz/a	83.3	bc
	Roundup WeatherMax	11	oz/a		
7	Ignite	14.5	oz/a	94.3	ab
	Roundup WeatherMax	22	oz/a		
8	Ignite	14.5	oz/a	89.3	ab
	Roundup WeatherMax	33	oz/a		
9	Ignite	29	oz/a	99.0	a
	Roundup WeatherMax	0	oz/a		
10	Ignite	29	oz/a	99.0	a
	Roundup WeatherMax	11	oz/a		
11	Ignite	29	oz/a	99.0	a
	Roundup WeatherMax	22	oz/a		
12	Ignite	29	oz/a	96.7	a
	Roundup WeatherMax	33	oz/a		
13	Ignite	43.5	oz/a	96.0	a
	Roundup WeatherMax	0	oz/a		
14	Ignite	43.5	oz/a	99.0	a
	Roundup WeatherMax	11	oz/a		
15	Ignite	43.5	oz/a	99.0	a
	Roundup WeatherMax	22	oz/a		
16	Ignite	43.5	oz/a	96.0	a
	Roundup WeatherMax	33	oz/a		
17	None			0.0	e
18	Ignite	29	oz/a	99.0	a
	Roundup WeatherMax	22	oz/a		
	Staple LX	2	oz/a		
19	Ignite	29	oz/a	99.0	a
	Roundup WeatherMax	22	oz/a		
	Dual Magnum	1	pt/a		
20	Ignite	29	oz/a	96.0	a
	Roundup WeatherMax	22	oz/a		
	MON 63410	3	pt/a		

LSD (P=.05)	11.30
Standard Deviation	6.85
CV	8.37
Bartlett's X2	13.874
P(Bartlett's X2)	0.179
Replicate F	12.813
Replicate Prob(F)	0.0001
Treatment F	57.501
Treatment Prob(F)	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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Trial ID: C42-10 Study Dir.: Stanley Culpepper
Location: Sunbelt Ag Expo Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Stanley Culpepper **Title:** Ext. Weed Science
Affiliation: University of Georgia
Postal Code: 31793
Investigator: Stanley Culpepper **Title:** Ext. Weed Science
Affiliation: University of Georgia
Postal Code: 31793

TRIAL LOCATION

City: Moultrie **Trial Status:** completed
State/Prov.: Georgia **Trial Reliability:** good
Initiation Date: 5/13/2010
Country: USA

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

CROP AND WEED DESCRIPTION

Weed Code	Common Name	Scientific Name
1.	ELEIN Bullgrass	Eleusine indica
2.	PORPI Pink purslane	Portulaca pilosa

Crop 1: GOSHI COTTON, SHORT STAPLE **Variety:** FM 9250GTLL
Planting Date: 5/13/2010 **Planting Method:** hill drop
Rate: 2 8 in **Depth:** 0.5 in
Row Spacing: 36 in **Seed Bed:** flat
Soil Temperature: 74 F **Soil Moisture:** moist **Emergence Date:** 5/17/2010

SITE AND DESIGN

Plot Width, Unit: 6 FT **Plot Length, Unit:** 25 FT **Reps:** 3
Site Type: Sunbelt Ag Expo
Tillage Type: Strip Tillage **Study Design:** FACTORIAL

SOIL DESCRIPTION

% Sand: 88 **% OM:** 1.2 **Texture:** loamy sand
% Silt: 12 **pH:** 6.0
% Clay: 0

Overall Moisture Conditions: irrigated
Closest Weather Station: on site **Distance:** 200 **Unit:** yd

APPLICATION DESCRIPTION

	A
Application Date:	6/10/2010
Time of Day:	7:30 am
Application Method:	broadcast
Application Timing:	POST
Applic. Placement:	overtop
Air Temp., Unit:	76.8 F
% Relative Humidity:	72
Wind Velocity, Unit:	1 mph
Dew Presence (Y/N):	Y
Soil Temp., Unit:	77.9 F
Soil Moisture:	moist
% Cloud Cover:	0

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	GOSHI POST
Stage Scale:	7-8 lf
Height, Unit:	10 in

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	ELEIN POST
Stage Scale:	8 in
Density, Unit:	10 ydsq
Weed 2 Code, Stage:	PORPI POST
Stage Scale:	4 inch
Density, Unit:	2 ydsq

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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
Boom Length, Unit:	4.5 ft
Boom Height, Unit:	15 in
Ground Speed, Unit:	3 mph
Carrier:	water
Spray Volume, Unit:	15 GPA
Propellant:	CO2
Tank Mix (Y/N):	Y