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Primrose response to glyphosate/glufosinate combinations.

Trial ID: C5-03 Study Dir.:
Location: Jones farm Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Culpepper
Affiliation: UGA
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:** Mar-29-03
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.	OEOLA	cutleaf eveningprimrose	
2.	AMAPA	Palmer amaranth	
3.	RCHSC	Florida pusley	

Crop 1: non noncrop **Variety:** .

SITE AND DESIGN

Plot Width, Unit: 9 FT **Plot Length, Unit:** 30 FT **Reps:** 3
Site Type: research station
Tillage Type: none **Study Design:** RANDOMIZED COMPLETE BLOCK

	Previous Crops	Previous Pesticides	Year
1.	cotton		

SOIL DESCRIPTION

% Sand: 92 **% OM:** 1.0 **Texture:** sand
% Silt: 4 **pH:** 5.8 **Soil Name:** Tifton sandy loam
% Clay: 4

Overall Moisture Conditions: wet

APPLICATION DESCRIPTION

	A
Application Date:	Mar-29-03
Time of Day:	12 pm
Application Method:	broadcast
Application Timing:	burndown
Applic. Placement:	overtop
Air Temp., Unit:	76 F
% Relative Humidity:	46
Wind Velocity, Unit:	4 mph
Dew Presence (Y/N):	n
Soil Temp., Unit:	72 F
Soil Moisture:	wet
% Cloud Cover:	25

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	non .
Stage Scale:	.

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WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	OEOLA 10-24" di
Stage Scale:	full bloo
Density, Unit:	7 ydsq
Weed 2 Code, Stage:	AMAPA PRE
Stage Scale:	.
Density, Unit:	. .
Weed 3 Code, Stage:	RCHSC PRE
Stage Scale:	.
Density, Unit:	. .

APPLICATION EQUIPMENT

	A
Appl. Equipment:	backpack
Operating Pressure:	23
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	18 inch
Boom Length, Unit:	4.5 feet
Boom Height, Unit:	15 inch
Ground Speed, Unit:	3 mph

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Trt No.	Treatment Name	Rate	Rate Unit	1	2	3	4	5
	Weed Code			OEOLA	OEOLA	OEOLA	AMAPA	RCHSC
	Rating Data Type			control	control	control	control	control
	Rating Unit			percent	percent	percent	percent	percent
	Rating Date			Apr-11-03	Apr-23-03	May-04-03	May-04-03	May-04-03
	Trt-Eval Interval			13 DA-A	25 DA-A	36 DA-A	36 DA-A	36 DA-A
1	Non-treated			0.0	0.0	0.0	50.0	50.0
2	Liberty	32	oz/a	98.3	97.3	96.7	0.0	0.0
3	Roundup WeatherMax	22	oz/a	36.7	61.7	74.3	0.0	0.0
4	Liberty	32	oz/a	99.0	99.0	99.0	0.0	0.0
	2,4-D	0.75	pt/a					
5	Roundup WeatherMax	22	oz/a	64.7	87.7	96.7	0.0	0.0
	2,4-D	0.75	pt/a					
6	Roundup WeatherMax	22	oz/a	94.0	95.3	93.7	0.0	0.0
	Liberty	16	oz/a					
7	Roundup WeatherMax	11	oz/a	98.3	99.0	98.3	0.0	0.0
	Liberty	32	oz/a					
8	Roundup WeatherMax	11	oz/a	91.7	83.3	83.3	0.0	0.0
	Liberty	16	oz/a					
9	Roundup WeatherMax	11	oz/a	98.0	95.0	98.0	0.0	0.0
	Liberty	24	oz/a					
10	Roundup WeatherMax	22	oz/a	70.7	95.0	91.0	96.3	96.3
	Atrazine	1	qt/a					
11	Roundup WeatherMax	22	oz/a	69.7	97.7	96.0	97.7	96.3
	Atrazine	2	qt/a					
12	Roundup WeatherMax	22	oz/a	58.3	82.0	87.7	78.3	73.3
	Direx	12	oz/a					
13	Roundup WeatherMax	22	oz/a	68.0	93.7	94.3	86.7	83.3
	Direx	24	oz/a					
14	Gramoxone Max	1.5	pt/a	96.0	97.0	96.7	91.7	86.7
	Direx	1.5	pt/a					
	COC	1	% v/v					
	LSD (P=.05)			6.05	7.82	12.45	5.13	3.33
	Standard Deviation			3.60	4.66	7.42	3.05	1.98
	CV			4.83	5.51	8.61	8.54	5.71
	Bartlett's X2			18.488	15.956	24.731	9.191	2.62
	P(Bartlett's X2)			0.071	0.101	0.01*	0.057	0.623

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

Trial Comments

OBJECTIVE: Evaluate primrose response to glyphosate/glufosinate tank mixes.

RESULTS:

Primrose
1) Excellent primrose control was noted with Liberty alone at 32 oz/A and in the following mixtures:
   a) WeatherMax 22 oz plus Liberty 16 oz
   b) WeatherMax 11 oz plus Liberty 32 oz
   c) WeatherMax 11 oz plus Liberty 24 oz
2) WeatherMax alone provided less than 75% control.
3) Mixing Atrazine with WeatherMax improved control 17 to 34%.
4) Mixing Direx with glyphosate improved control 14 to 32%. Direx at 24 oz/A was more effective than 12 oz/A at two ratings.
5) Gramxone plus Direx provided excellent control.

Palmer residual control (36 daysafter application):
1) Atrazine provided excellent residual control.

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2) Direx at 24 oz/A was 9 to 14% more effective than Direx at 12 oz.
3) Fifty percent control was noted in the non-treated control because of competition from primrose.

Pusley residual control
1) Atrazine provided excellent residual control.
2) Direx was less effective than atrazine providing 83 to 87% control at 24 oz and 73% at 12 oz.
3) Fifty percent control was noted in the non-treated control because of competition from primrose.

CONCLUSIONS:
1) Liberty/Roundup mixtures were effective in this trial, additional studies are needed to confirm these results. It is essential that these mixtures be applied to young pre-bloom primrose and again as a post-bloom treatment.
2) The general escapes of radish through the Liberty alone treatments SUGGEST Liberty alone will not likely abe used as a widescale burndown treatment. Thus, mixtures with glyphosate would be essential.

General Comments

Apr-23-03: Liberty alone is missing a sporadic radish.