

# University of Georgia

Primrose response to burndown programs in March and April.

Trial ID: C2-03  
Location: Jones farm

Study Dir.: Stanley Culpepper  
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:** excellent  
**Postal Code:** 31794 **Initiation Date:** Mar-07-03  
**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	

Crop 1: none non-crop fallow

Variety: .

## SITE AND DESIGN

**Plot Width, Unit:** 6 FT **Plot Length, Unit:** 25 FT **Reps:** 4  
**Site Type:** research station  
**Tillage Type:** stale seedbed **Study Design:** SPLIT-PLOT

## SOIL DESCRIPTION

**% Sand:** 92 **% OM:** 1 **Texture:** sand  
**% Silt:** 4 **pH:** 5.8 **Soil Name:** Tifton sandy loam  
**% Clay:** 4

Overall Moisture Conditions: wet

## APPLICATION DESCRIPTION

	A	B
<b>Application Date:</b>	Mar-07-03	Mar-29-03
<b>Time of Day:</b>	10 am	10 am
<b>Application Method:</b>	broadcast	broadcast
<b>Application Timing:</b>	burndown	burndown
<b>Applic. Placement:</b>	overtop	overtop
<b>Air Temp., Unit:</b>	69 F	74 F
<b>% Relative Humidity:</b>	35	44
<b>Wind Velocity, Unit:</b>	2 mph	2 mph
<b>Dew Presence (Y/N):</b>	n	n
<b>Soil Temp., Unit:</b>	62 F	74 F
<b>Soil Moisture:</b>	wet	wet
<b>% Cloud Cover:</b>	90	85

## CROP STAGE AT EACH APPLICATION

	A	B
<b>Crop 1 Code, Stage:</b>	none .	none
<b>Stage Scale:</b>	.	

## WEED STAGE AT EACH APPLICATION

	A	B
<b>Weed 1 Code, Stage:</b>	OEOLA 6-9"diam	OEOLA 12-20"dia
<b>Stage Scale:</b>	pre-bloom	fullbloom
<b>Density, Unit:</b>	12 ydsq	. .

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## APPLICATION EQUIPMENT

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



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Weed Code	OEOLA	OEOLA	OEOLA	OEOLA	OEOLA	OEOLA
Rating Data Type	control	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent
Rating Date	Mar-16-03	Mar-24-03	Apr-02-03	Apr-11-03	Apr-23-03	Apr-30-03
Trt-Eval Interval	9 DA-A	17 DA-A	26 DA-A	35 DA-A	47 DA-A	47 DA-A
Trt No.	1	2	3	4	5	6
19 Roundup WeatherMax 2,4-D early March application	41.3	71.0	87.0	96.8	99.3	100.0
20 Roundup WeatherMax 2,4-D early April application	0.0	0.0	37.5	63.8	81.3	100.0
21 Roundup WeatherMax 2,4-D early March application	37.5	68.3	75.3	91.0	99.3	100.0
22 Roundup WeatherMax 2,4-D early April application	0.0	0.0	26.3	55.8	77.5	100.0
23 Roundup WeatherMax Valor early March application	83.3	90.3	88.5	85.8	80.3	78.3
24 Roundup WeatherMax Valor early April application	0.0	0.0	43.8	79.0	87.5	91.0
25 Roundup WeatherMax Valor 2,4-D early March application	87.0	95.0	99.0	99.0	98.0	100.0
26 Roundup WeatherMax Valor 2,4-D early April application	0.0	0.0	45.0	80.8	98.5	100.0
27 Liberty early March application	91.5	91.3	90.3	90.8	82.5	80.0
28 Liberty early April application	0.0	0.0	55.0	98.0	98.8	99.0
29 Liberty early March application	96.3	95.3	98.3	93.3	98.0	95.3
30 Liberty early April application	0.0	0.0	63.8	97.8	99.0	100.0
LSD (P=.05)	4.25	7.68	8.24	11.60	10.59	4.81
Standard Deviation	3.00	5.43	5.83	8.20	7.49	3.40
CV	10.07	14.14	9.04	10.16	8.63	3.74
Bartlett's X2	19.314	44.431	43.823	112.02	159.875	49.494
P(Bartlett's X2)	0.153	0.001*	0.016*	0.001*	0.001*	0.001*

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

### Trial Comments

OBJECTIVE: Determine primrose response to various burndown herbicide treatments at two timings.

#### RESULTS:

- 1) Primrose was completely controlled by all rates of 2,4-D when applied in early spring. Control was also excellent with the late application and a 100% control from each treatment would have likely been noted if an additional rating had been conducted. The lowest rate, 0.25 pt/A took at least 10 days longer than other rate to achieve complete control in early spring. A 0.5 pt/A rate alone is satisfactory for primrose control regardless of application timing.
- 2) Roundup plus 0.25 or 0.5 pt/A of 2,4-D provided complete primrose control.
- 3) Roundup alone provided poor control.
- 4) Mixing Direx or Caparol with Gramoxone and applied prebloom improved control by 6 to 40% compared to Gramoxone alone. Mixtures with Direx tended to be more effective than those with Caparol in early spring. These treatments applied post-bloom were much more effective providing complete control.

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- 5) Roundup plus Valor, without an adjuvant provided good control with 86% control at one month after the early timing. Similar results were noted with the late timing.
- 6) Liberty at 32 oz/A provided excellent control of primrose regardless of timing.
- 7) Liberty at 28 oz/A provided better control when applied post-bloom compared to prebloom.
- 8) Mixing 0.25 pt/A of 2,4-D with any other combination provided complete control of primrose.

## CONCLUSIONS:

- 1) Apply Gramoxone combinations after bloom.
- 2) Liberty will be more effective after bloom.
- 3) The addition of an adjuvant with Valor plus Roundup is recommended.
- 4) 0.5 pt/A of 2,4-D alone or 0.25 pt/A of 2,4-D mixed with any tank mix partner will provide complete primrose control regardless of application timing.

## GENERAL COMMENTS:

Liberty provided only suppression of cudweed, oxalis, geranium, red sorrel. Little to no control of radish.