

# University of Georgia

## Weed response to sequential burndown applications using Valor.

Trial ID: C2-06

Study Dir.: Stanley Culpepper

Location: Jones farm

Investigator: Stanley Culpepper

Reps: 4

Plots: 6 by 25 feet

Spray vol: 14.8 gal/ac

Mix size: 1 liters (min .77168)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg	Amt to Measure	Product	Plot No. By Rep			
									1	2	3	4
1	Roundup WeatherMax	5.5	L	22	OZ/A	BD	A	11.61 ml/mx	101	207	303	405
2	Roundup WeatherMax	5.5	L	22	OZ/A	BD	A	11.61 ml/mx	102	201	307	401
	Valor	51	WDG	1	OZ/A	BD+14d	B	0.506 g/mx				
	COC	L	L	1	PT/A	BD+14d	B	8.445 ml/mx				
3	Roundup WeatherMax	5.5	L	22	OZ/A	BD	A	11.61 ml/mx	103	205	306	404
	Valor	51	WDG	2	OZ/A	BD+14d	B	1.012 g/mx				
	COC	L	L	1	PT/A	BD+14d	B	8.445 ml/mx				
4	Roundup WeatherMax	5.5	L	22	OZ/A	BD	A	11.61 ml/mx	104	206	302	406
	Roundup WeatherMax	5.5	L	11	OZ/A	BD+14d	B	5.807 ml/mx				
	Valor	51	WDG	0.5	OZ/A	BD+14d	B	0.253 g/mx				
	COC	L	L	1	PT/A	BD+14d	B	8.445 ml/mx				
5	Roundup WeatherMax	5.5	L	22	OZ/A	BD	A	11.61 ml/mx	105	204	301	403
	Roundup WeatherMax	5.5	L	11	OZ/A	BD+14d	B	5.807 ml/mx				
	Valor	51	WDG	1	OZ/A	BD+14d	B	0.506 g/mx				
	COC	L	L	1	PT/A	BD+14d	B	8.445 ml/mx				
6	Roundup WeatherMax	5.5	L	22	OZ/A	BD	A	11.61 ml/mx	106	203	305	407
	Roundup WeatherMax	5.5	L	11	OZ/A	BD+14d	B	5.807 ml/mx				
	Valor	51	WDG	1.5	OZ/A	BD+14d	B	0.759 g/mx				
	COC	L	L	1	PT/A	BD+14d	B	8.445 ml/mx				
7	Roundup WeatherMax	5.5	L	22	OZ/A	BD	A	11.61 ml/mx	107	202	304	402
	Roundup WeatherMax	5.5	L	11	OZ/A	BD+14d	B	5.807 ml/mx				
	Valor	51	WDG	2	OZ/A	BD+14d	B	1.012 g/mx				
	COC	L	L	1	PT/A	BD+14d	B	8.445 ml/mx				

Sort Order: Treatment

Product quantities required for listed treatments and applications in one trial:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
130.649	ml	Roundup WeatherMax	5.5	L	
5.060	g	Valor	51	WDG	
63.338	ml	COC		L	

\* 'Per area' calculations based on spray volume= 14.8 gal/ac, mix size= 1 liters (mix size basis).

\* Product amount calculations increased 25 % for overage adjustment.

### Trial Comments

OBJECTIVE: Determine primrose response to sequential applications of glyphosate and Valor.

Primrose response:

1. Roundup provided poor control.
2. Valor applied to primrose previously treated with glyphosate provided excellent control 22 d after application. However, regrowth quickly occurred in plots treated with only Valor + COC with control ranging between 77 and 79% at 22 d after Valor was applied.
3. Control was at least 89% when the sequential Valor application included glyphosate.

Red Sorrel:

1. Roundup alone provided excellent control and control was not impacted by Valor.

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Weed Code	RUMAA control	RUMAA control	RUMAA control	OEOLA control	OEOLA control	OEOLA control			
Rating Data Type	%	%	%	%	%	%			
Rating Unit	Apr-29-06	May-12-06	May-25-06	Apr-29-06	May-12-06	May-25-06			
Rating Date	SC	SC	SC	SC	SC	SC			
Assessed By	30 DA-A	43 DA-A	56 DA-A	30 DA-A	43 DA-A	56 DA-A			
Trt-Eval Interval									
Trt No.	Treatment Name	Rate	Unit	1	2	3	4	5	6
1	Roundup WeatherMax	22	OZ/A	100 a	99 a	99 a	71 c	74 c	63 d
2	Roundup WeatherMax Valor COC	22 1 1	OZ/A OZ/A PT/A	100 a	99 a	99 a	89 ab	83 b	77 c
3	Roundup WeatherMax Valor COC	22 2 1	OZ/A OZ/A PT/A	100 a	99 a	99 a	92 a	84 b	79 c
4	Roundup WeatherMax Roundup WeatherMax Valor COC	22 11 0.5 1	OZ/A OZ/A OZ/A PT/A	100 a	99 a	99 a	81 b	94 a	85 b
5	Roundup WeatherMax Roundup WeatherMax Valor COC	22 11 1 1	OZ/A OZ/A OZ/A PT/A	100 a	99 a	99 a	89 ab	95 a	89 b
6	Roundup WeatherMax Roundup WeatherMax Valor COC	22 11 1.5 1	OZ/A OZ/A OZ/A PT/A	100 a	99 a	99 a	88 ab	96 a	95 a
7	Roundup WeatherMax Roundup WeatherMax Valor COC	22 11 2 1	OZ/A OZ/A OZ/A PT/A	100 a	99 a	99 a	92 a	98 a	95 a
LSD (P=.05)				0.0	0.0	0.0	8.3	6.6	4.8
Standard Deviation				0.0	0.0	0.0	5.6	4.4	3.2
CV				0.0	0.0	0.0	6.54	4.98	3.84
Bartlett's X2				0.0	0.0	0.0	10.132	7.528	1.99
P(Bartlett's X2)				.	.	.	0.119	0.275	0.921

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

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Trial ID: C2-06 Study Dir.: Stanley Culpepper  
 Location: Jones farm Investigator: Stanley Culpepper

### GENERAL TRIAL INFORMATION

**Study Director:** Stanley Culpepper **Title:** Ext. Weed Science  
**Affiliation:** Univ. of Georgia  
**Postal Code:** 31794  
**Investigator:** Stanley Culpepper **Title:** Ext. Weed Science  
**Affiliation:** Univ. of Georgia  
**Postal Code:** 31794

### TRIAL LOCATION

**City:** Tifton **Trial Status:** completed  
**State/Prov.:** GA **Trial Reliability:** good  
**Postal Code:** 31794 **Initiation Date:** Mar-30-06  
**Country:** USA **Planned Completion Date:** \_\_\_\_\_  
**E-Longitude of LL Corner °:** \_\_\_\_\_ **N-Latitude of LL Corner °:** \_\_\_\_\_  
**Altitude of LL Corner:** \_\_\_\_\_ **Unit:** \_\_\_\_\_ **Angle y-axis to North °:** \_\_\_\_\_  
**Directions:**

### COOPERATOR/LANDOWNER

**Cooperator:** \_\_\_\_\_ **Country:** \_\_\_\_\_  
**Org:** \_\_\_\_\_ **Phone No:** \_\_\_\_\_  
**Address 1:** \_\_\_\_\_ **Fax No:** \_\_\_\_\_  
**Address 2:** \_\_\_\_\_  
**City:** \_\_\_\_\_  
**State/Prov:** \_\_\_\_\_  
**Postal Code:** \_\_\_\_\_

**Conducted Under GLP (Y/N):** N **Conducted Under GEP (Y/N):** N  
**Guidelines:** \_\_\_\_\_ **Guideline Description:** \_\_\_\_\_

**Objective:**

**Conclusions:**

### CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	OEOLA	cutleaf eveningprimrose	
2.	RUMMA	red sorrel	

**Crop 1:** none non crop **Variety:** .  
**Planting Date:** Sep-05-06 **Planting Method:** .  
**Rate:** 0. . **Depth:** 0. . **Perennial Age:** 0. .  
**Row Spacing:** 0. . **Spacing Within Row:** 0. . **Seed Bed:** .  
**Soil Temperature:** \_\_\_\_ \_ **Soil Moisture:** \_\_\_\_\_ **Emergence Date:** \_\_\_\_\_

### SITE AND DESIGN

**Plot Width, Unit:** 6 FT **Plot Length, Unit:** 25 FT **Reps:** 4  
**Site Type:** Jones Farm  
**Tillage Type:** none **Study Design:** RANDOMIZED COMPLETE BLOCK

**Trial Initiation Comments:**

	Previous Crops	Previous Pesticides	Year
1.			

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## MAINTENANCE

Field Prep./Maintenance:

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

### SOIL DESCRIPTION

% Sand: 95	% OM: 0.67	Texture: sand	
% Silt: 2	pH: 5.8	Soil Name: Tifton sandy loam	
% Clay: 3	CEC: _____	Fert. Level: _____	

### ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

### MOISTURE CONDITIONS

No.	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: wet

Closest Weather Station: \_\_\_\_\_ Distance: \_\_\_\_\_ Unit: \_\_\_\_

### APPLICATION DESCRIPTION

	A	B
Application Date:	Mar-30-06	Apr-20-06
Time of Day:	7:30 am	7:00am
Application Method:	braodcast	broadcast
Application Timing:	BD	BD+14
Applic. Placement:	overtop	overtop
Air Temp., Unit:	64 F	75 F
% Relative Humidity:	71	66
Wind Velocity, Unit:	0 mph	0 mph
Dew Presence (Y/N):	y	Y
Water Hardness:		
Soil Temp., Unit:	61 F	74 F
Soil Moisture:	dry	fair
% Cloud Cover:	100	0

### CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	none .	none .
Stage Scale:	.	.
Height, Unit:	0. .	0. .

### WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	OEOLA BD	OEOLA BD+14d
Stage Scale:	2-8"	8-16"blom
Density, Unit:	4 ydsq	4 ydsq
Weed 2 Code, Stage:	RUMMA BD	RUMMA BD+14d
Stage Scale:	15 inch	18-20"
Density, Unit:	6 ydsq	6 ydsq

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## APPLICATION EQUIPMENT

	A	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>Nozzles/Row:</b>		
<b>Band Width, Unit:</b>		
<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
<b>Incorporation Equip.:</b>		
<b>Hours to Incorp.:</b>		
<b>Incorp. Depth, Unit:</b>		
<b>Carrier:</b>	water	water
<b>Spray Volume, Unit:</b>	14.8 GPA	14.8 GPA
<b>Spray pH:</b>		
<b>Propellant:</b>	CO2	CO2
<b>Tank Mix (Y/N):</b>	y	y

Trt No	Treatment Application Comment