

University of Georgia

Winter annual weeds response to various glyphosate formulations.

Trial ID: C1-07

Study Dir.: Culpepper

Location: Small Jones Farm

Investigator: Stanley Culpepper

Reps: 4

Plots: 12 by 30 feet

Spray vol: 14.8 gal/ac

Mix size: 2 liters (min 1.852)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Form Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Plot No. By Rep			
										1	2	3	4
1	MON 76111	4.5		SL	1.125	LB AE/A	Burndown	A	33.78 ml/mx	101	213	307	419
2	MON 76351	4.5		SL	1.125	LB AE/A	Burndown	A	33.78 ml/mx	102	219	304	403
3	MON 76105	4.5		SL	1.125	LB AE/A	Burndown	A	33.78 ml/mx	103	207	314	406
4	MON 76165	4.5		SL	1.125	LB AE/A	Burndown	A	33.78 ml/mx	104	205	303	411
5	MON 79789	4.5		SL	1.125	LB AE/A	Burndown	A	33.78 ml/mx	105	209	310	412
6	MON 76204	4.5		SL	1.125	LB AE/A	Burndown	A	33.78 ml/mx	106	215	305	404
7	MON 79770	4.5		SL	1.125	LB AE/A	Burndown	A	33.78 ml/mx	107	204	313	418
8	MON 79831	4.5		SL	1.125	LB AE/A	Burndown	A	33.78 ml/mx	108	210	308	409
9	MON 76111	4.5		SL	0.75	LB AE/A	Burndown	B	22.52 ml/mx	109	211	315	414
10	MON 76351	4.5		SL	0.75	LB AE/A	Burndown	B	22.52 ml/mx	110	206	316	402
11	MON 76105	4.5		SL	0.75	LB AE/A	Burndown	B	22.52 ml/mx	111	208	317	408
12	MON 76165	4.5		SL	0.75	LB AE/A	Burndown	B	22.52 ml/mx	112	214	319	410
13	MON 79789	4.5		SL	0.75	LB AE/A	Burndown	B	22.52 ml/mx	113	217	302	401
14	MON 76204	4.5		SL	0.75	LB AE/A	Burndown	B	22.52 ml/mx	114	201	309	416
15	MON 79770	4.5		SL	0.75	LB AE/A	Burndown	B	22.52 ml/mx	115	202	318	407
16	MON 79831	4.5		SL	0.75	LB AE/A	Burndown	B	22.52 ml/mx	116	218	301	413
17	MON 79614	5		SL	1.125	LB AE/A	Burndown	B	30.4 ml/mx	117	212	311	405
	LI 700	100 %		AD	0.5	% V/V	Burndown	B	9.999 ml/mx				
18	MON 79616	4.2		SL	1.125	LB AE/A	Burndown	B	36.19 ml/mx	118	203	312	415
19	MON 79685	4		SL	1.125	LB AE/A	Burndown	B	38.0 ml/mx	119	216	306	417
20	Non-treated									120	220	320	420

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
70.375	ml	MON 76111	4.5	SL	
70.375	ml	MON 76351	4.5	SL	
70.375	ml	MON 76105	4.5	SL	
70.375	ml	MON 76165	4.5	SL	
70.375	ml	MON 79789	4.5	SL	
70.375	ml	MON 76204	4.5	SL	
70.375	ml	MON 79770	4.5	SL	
70.375	ml	MON 79831	4.5	SL	
38.003	ml	MON 79614	5	SL	
12.499	ml	LI 700	100	AD	
45.241	ml	MON 79616	4.2	SL	
47.503	ml	MON 79685	4	SL	

* 'Per area' calculations based on spray volume= 14.8 gal/ac, mix size= 2 liters (mix size basis).

* Product amount calculations increased 25 % for overage adjustment.

* 'Per volume' calculations use spray volume= 14.8 gal/ac, mix size= 2 liters.

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Trial Comments

OBJECTIVE: Compare glyphosate formulations for the control of cutleaf eveningprimrose.

Primrose response:

1. At 10 DAT, little differences in glyphosate formulations or rate were noted.
2. By 29 DAT, no real differences were noted with a slight trend for greater control with the higher use rate.

Cudweed and Field Sorrel:

1. All rates and formulations provided excellent control by 10 and 29 DAT.

GENERAL COMMENTS

1. April 9: All weeds greater than 50% pod set.
2. Moisture was fair on the day of treatment but no rainfall occurred for 50 days following the application. By day 30, all weeds including those in the non-treated control were completely killed because of drought.

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Weed Code	OEOLA	OEOLA	GNASS	GNASS	RUMAA	RUMAA				
Rating Data Type	%	%	%	%	%	%				
Rating Unit	control	control	control	control	control	control				
Rating Date	Apr-19-07	May-08-07	Apr-19-07	May-08-07	Apr-19-07	May-08-07				
Trt-Eval Interval	10 DA-A	29 DA-A	10 DA-A	29 DA-A	10 DA-A	29 DA-A				
Trt No.	Treatment Name	Rate	Rate	Unit	1	2	3	4	5	6
1	MON 76111	1.125 LB AE/A	80 ab	93 abc	99 a	99 a	99 a	99 a	99 a	99 a
2	MON 76351	1.125 LB AE/A	79 ab	96 ab	99 a	99 a	99 a	99 a	99 a	99 a
3	MON 76105	1.125 LB AE/A	82 ab	94 abc	99 a	99 a	99 a	99 a	99 a	99 a
4	MON 76165	1.125 LB AE/A	81 ab	95 abc	99 a	99 a	99 a	99 a	99 a	99 a
5	MON 79789	1.125 LB AE/A	84 a	97 a	99 a	99 a	99 a	99 a	99 a	99 a
6	MON 76204	1.125 LB AE/A	78 ab	96 ab	99 a	99 a	99 a	99 a	99 a	99 a
7	MON 79770	1.125 LB AE/A	81 ab	97 a	99 a	99 a	99 a	99 a	99 a	99 a
8	MON 79831	1.125 LB AE/A	85 a	94 abc	99 a	99 a	99 a	99 a	99 a	99 a
9	MON 76111	0.75 LB AE/A	78 ab	90 bc	99 a	99 a	99 a	99 a	99 a	99 a
10	MON 76351	0.75 LB AE/A	79 ab	89 bc	99 a	99 a	99 a	99 a	99 a	99 a
11	MON 76105	0.75 LB AE/A	79 ab	93 abc	99 a	99 a	99 a	99 a	99 a	99 a
12	MON 76165	0.75 LB AE/A	78 ab	94 abc	99 a	99 a	99 a	99 a	99 a	99 a
13	MON 79789	0.75 LB AE/A	75 ab	91 abc	99 a	99 a	99 a	99 a	99 a	99 a
14	MON 76204	0.75 LB AE/A	78 ab	90 abc	99 a	99 a	99 a	99 a	99 a	99 a
15	MON 79770	0.75 LB AE/A	76 ab	89 c	99 a	99 a	99 a	99 a	99 a	99 a
16	MON 79831	0.75 LB AE/A	73 b	90 abc	99 a	99 a	99 a	99 a	99 a	99 a
17	MON 79614	1.125 LB AE/A	75 ab	93 abc	99 a	99 a	99 a	99 a	99 a	99 a
	LI 700	0.5 % V/V								
18	MON 79616	1.125 LB AE/A	79 ab	96 abc	99 a	99 a	99 a	99 a	99 a	99 a
19	MON 79685	1.125 LB AE/A	78 ab	95 abc	99 a	99 a	99 a	99 a	99 a	99 a
20	Non-treated		0 c	0 d	0 b	0 b	0 b	0 b	0 b	0 b
LSD (P=.05)			8.4	5.8	0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation			5.9	4.1	0.0	0.0	0.0	0.0	0.0	0.0
CV			7.9	4.62	0.0	0.0	0.0	0.0	0.0	0.0
Bartlett's X2			20.667	32.947	0.0	0.0	0.0	0.0	0.0	0.0
P(Bartlett's X2)			0.297	0.017*

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

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 Location: Small 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:** in progress
State/Prov.: GA **Trial Reliability:** fair
Postal Code: 31794 **Initiation Date:** Apr-09-07
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.	RUMAA	field sorrel	
3.	GNASS	cudweed	

Crop 1: _____ **Variety:** .
Planting Date: Sep-17-07 **Planting Method:** _____
Rate: _____ **Depth:** _____ **Perennial Age:** _____
Row Spacing: _____ **Spacing Within Row:** _____ **Seed Bed:** _____
Soil Temperature: _____ **Soil Moisture:** _____ **Emergence Date:** _____

SITE AND DESIGN

Plot Width, Unit: 12 FT **Plot Length, Unit:** 30 FT **Reps:** 4
Site Type: Research Station
Tillage Type: Conservation tillage **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: 5.8	Texture: sand	
% Silt: 2	pH: 0.67	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: dry

Closest Weather Station: _____ Distance: _____ Unit: ____

APPLICATION DESCRIPTION

	A
Application Date:	Apr-09-07
Time of Day:	2 pm
Application Method:	broadcast
Application Timing:	burndown
Applic. Placement:	overtop
Air Temp., Unit:	68 F
% Relative Humidity:	39
Wind Velocity, Unit:	2 mph
Dew Presence (Y/N):	n
Water Hardness:	
Soil Temp., Unit:	74 F
Soil Moisture:	fair
% Cloud Cover:	100

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	. .
Stage Scale:	.
Height, Unit:	

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WEED STAGE AT EACH APPLICATION

A	
Weed 1 Code, Stage:	OEOLA burndown
Stage Scale:	10-20 in
Density, Unit:	8 ydsq
Weed 2 Code, Stage:	RUMAA burndown
Stage Scale:	16-24 in
Density, Unit:	12 ydsq
Weed 3 Code, Stage:	GNASS burndown
Stage Scale:	6-8 inch
Density, Unit:	3 ydsq

APPLICATION EQUIPMENT

A	
Appl. Equipment:	backpack
Operating Pressure:	24
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	18 in
Nozzles/Row:	
Band Width, Unit:	
Boom Length, Unit:	4.5 ft
Boom Height, Unit:	15 inch
Ground Speed, Unit:	3 mph
Incorporation Equip.:	
Hours to Incorp.:	
Incorp. Depth, Unit:	
Carrier:	water
Spray Volume, Unit:	14.8 GPA
Spray pH:	
Propellant:	CO2
Tank Mix (Y/N):	Y

Trt No	Treatment Application Comment