

University of Georgia

Clover response to postemergence herbicides labeled in pecans.

Trial ID: Veg8-07

Study Dir.: Davis, Wells

Location: Albany

Investigator: Stanley Culpepper

Reps: 4

Plots: 6 by 30 feet

Spray vol: 14.8 gal/ac

Mix size: 1.5 liters (min .92602)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Form Rate	Rate Unit	Grow Stg	Appl Code	Amt to Measure	Product	Plot No. By Rep			
											1	2	3	4
1	Sandea NIS	75		DF L	0.5 0.25	OZ/A % V/V	POST	A	0.3795 g/mx 3.75 ml/mx		101	213	303	409
2	Sandea NIS	75		DF L	1 0.25	OZ/A % V/V	POST	A	0.759 g/mx 3.75 ml/mx		102	207	314	407
3	Ignite	2.34		L	22	OZ/A	POST	A	17.42 ml/mx		103	211	312	405
4	Aim NIS	2		EC L	1 0.25	OZ/A % V/V	POST	A	0.7918 ml/mx 3.75 ml/mx		104	208	307	403
5	Direx NIS	4		L L	2 0.25	QT/A % V/V	POST	A	50.67 ml/mx 3.75 ml/mx		105	214	304	401
6	Non-treated										106	212	305	411
7	Simizine NIS	4		L L	2 0.25	QT/A % V/V	POST	A	50.67 ml/mx 3.75 ml/mx		107	209	302	413
8	Basagran NIS	4		L L	2 0.25	PT/A % V/V	POST	A	25.34 ml/mx 3.75 ml/mx		108	210	301	402
9	2,4-D	4		L	2	PT/A	POST	A	25.34 ml/mx		109	206	310	404
10	Surflan	4		L	1.5	QT/A	POST	A	38.0 ml/mx		110	205	308	406
11	Prowl H20	3.8		L	1.5	QT/A	POST	A	38.0 ml/mx		111	204	306	408
12	Chateau NIS	51		WDG L	3 0.25	OZ/A % V/V	POST	A	2.277 g/mx 3.75 ml/mx		112	203	313	410
13	Chateau NIS	51		WDG L	6 0.25	OZ/A % V/V	POST	A	4.554 g/mx 3.75 ml/mx		113	202	311	412
14	Non-treated										114	201	309	414

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
1.423	g	Sandea	75	DF	
37.496	ml	NIS		L	
21.775	ml	Ignite	2.34	L	
0.990	ml	Aim	2	EC	
63.338	ml	Direx	4	L	
63.338	ml	Simizine	4	L	
31.669	ml	Basagran	4	L	
31.669	ml	2,4-D	4	L	
47.503	ml	Surflan	4	L	
47.503	ml	Prowl H20	3.8	L	
8.539	g	Chateau	51	WDG	

* 'Per area' calculations based on spray volume= 14.8 gal/ac, mix size= 1.5 liters (mix size basis).

* Product amount calculations increased 25 % for overage adjustment.

* 'Per volume' calculations use spray volume= 14.8 gal/ac, mix size= 1.5 liters.

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Trial Comments

OBJECTIVE: Determine potential herbicides that could be used in pecans to control weeds without hurting Durana clover.

Clover Response:

1. Severe injury was noted from Ignite, Aim, 2,4-D, and Chateau. Clover did eventually recover from the Aim, 2,4-D, and Chateau treatments.
2. Basagran, Surflan, and Prowl caused little to no injury.
3. Sandea and Simazine caused up to 15% stunting but appear to be valid options.
4. Moderate injury was noted with Direx with up to 31% stunting and chlorosis. The clover did recover but further efforts are needed to address this potential issue.

Carolina Geranium Response:

1. By 3 wk after treatment, only 2,4-D and Ignite provided greater than 70% control.
2. By 3 months after treatment, only Ignite provided greater than 70% control.

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Weed Code		clover injury %	clover injury %	clover injury %	clover injury %	clover injury %	GERCA control %	GERCA control %	GERCA control %	
Crop Code										
Rating Data Type										
Rating Unit										
Rating Date		Dec-20-06	Jan-03-07	Jan-09-07	Feb-14-07	Mar-20-07	Dec-20-06	Jan-03-07	Jan-09-07	
Assessed By		AD	AD	SC	AD	AD	AD	AD	SC	
Trt-Eval Interval		1 DA-A	15 DA-A	21 DA-A	57 DA-A	91 DA-A	1 DA-A	15 DA-A	21 DA-A	
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	
		Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit	
			1	2	3	4	5	6	7	8
1	Sandea NIS	0.5 OZ/A 0.25 % V/V	0 b	0 d	10 de	8 bcd	0 b	0 b	88 bc	41 c
2	Sandea NIS	1 OZ/A 0.25 % V/V	0 b	5 d	13 de	10 bc	5 b	0 b	77 c	43 c
3	Ignite	22 OZ/A	0 b	95 a	88 a	99 a	99 a	0 b	99 a	78 a
4	Aim NIS	1 OZ/A 0.25 % V/V	0 b	73 bc	18 cd	10 bc	0 b	0 b	23 e	8 e
5	Direx NIS	2 QT/A 0.25 % V/V	0 b	13 d	31 bc	13 b	5 b	0 b	10 f	56 b
6	Non-treated		0 b	0 d	0 e	0 d	0 b	0 b	0 f	0 e
7	Simizine NIS	2 QT/A 0.25 % V/V	0 b	11 d	14 de	7 bcd	0 b	0 b	5 f	25 d
8	Basagran NIS	2 PT/A 0.25 % V/V	0 b	6 d	4 de	3 cd	8 b	0 b	55 d	65 b
9	2,4-D	2 PT/A	48 a	99 a	75 a	8 bcd	9 b	48 a	90 ab	85 a
10	Surflan	1.5 QT/A	0 b	0 d	5 de	4 cd	4 b	0 b	5 f	3 e
11	Prowl H20	1.5 QT/A	0 b	0 d	4 de	5 bcd	4 b	0 b	5 f	5 e
12	Chateau NIS	3 OZ/A 0.25 % V/V	0 b	52 c	31 bc	5 bcd	0 b	0 b	64 d	38 c
13	Chateau NIS	6 OZ/A 0.25 % V/V	0 b	87 ab	40 b	13 b	5 b	0 b	80 bc	59 b
14	Non-treated		0 b	0 d	0 e	0 d	0 b	0 b	0 f	0 e
LSD (P=.05)			5.7	21.1	13.4	6.5	8.4	5.7	10.9	10.4
Standard Deviation			4.0	14.8	9.4	4.5	5.9	4.0	7.6	7.3
CV			118.16	46.96	39.52	34.66	59.83	118.16	17.83	20.21
Bartlett's X2			0.0	49.568	40.061	2.813	0.622	0.0	11.545	12.459
P(Bartlett's X2)			.	0.001*	0.001*	0.946	0.996	.	0.173	0.33

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

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Weed Code	GERCA		
Crop Code			
Rating Data Type	control		
Rating Unit	%		
Rating Date	Mar-20-07		
Assessed By	AD		
Trt-Eval Interval	91 DA-A		
Trt No.	Treatment Name	Rate	Unit
		Rate	Unit
9			
1	Sandea NIS	0.5 0.25	OZ/A % V/V
0			c
2	Sandea NIS	1 0.25	OZ/A % V/V
0			c
3	Ignite	22	OZ/A
85			a
4	Aim NIS	1 0.25	OZ/A % V/V
0			c
5	Direx NIS	2 0.25	QT/A % V/V
0			c
6	Non-treated		
0			c
7	Simizine NIS	2 0.25	QT/A % V/V
5			c
8	Basagran NIS	2 0.25	PT/A % V/V
0			c
9	2,4-D	2	PT/A
23			b
10	Surflan	1.5	QT/A
0			c
11	Prowl H20	1.5	QT/A
0			c
12	Chateau NIS	3 0.25	OZ/A % V/V
0			c
13	Chateau NIS	6 0.25	OZ/A % V/V
0			c
14	Non-treated		
0			c
LSD (P=.05)	6.4		
Standard Deviation	4.5		
CV	55.57		
Bartlett's X2	4.892		
P(Bartlett's X2)	0.087		

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

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 Location: Albany Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Stanley Culpepper	Title: Ext. Weed Science
Affiliation: University of Georgia	
Postal Code: 31794	
Investigator: Amy Davis	Title: Ext. Weed Science
Affiliation: University of Georgia	
Postal Code: 31794	

TRIAL LOCATION

City: Dawson	Trial Status: completed
State/Prov.: GA	Trial Reliability: good
Postal Code: _____	Initiation Date: Dec-19-06
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.	GERCA	Geranium, Carolina	Geranium carolinianum

Crop 1: clove clover Variety: Durana
 Planting Date: Nov-01-06 Planting Method: seeded
 Rate: _____ Depth: _____ Perennial Age: _____
 Row Spacing: _____ Spacing Within Row: _____ Seed Bed: _____
 Soil Temperature: _____ Soil Moisture: _____ Emergence Date: _____

SITE AND DESIGN

Plot Width, Unit: 6 FT Plot Length, Unit: 30 FT Reps: 4
 Site Type: On farm
 Tillage Type: Orchard Study Design: RANDOMIZED COMPLETE BLOCK

Trial Initiation Comments:

	Previous Crops	Previous Pesticides	Year
1.			

MAINTENANCE

Field Prep./Maintenance:

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

SOIL DESCRIPTION

% Sand: _____ % OM: 0. Texture: _____
 % Silt: _____ pH: 0. Soil Name: _____
 % Clay: _____ CEC: _____ Fert. Level: _____

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

No.	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: .

Closest Weather Station: _____ Distance: _____ Unit: ____

APPLICATION DESCRIPTION

	A
Application Date:	Dec-19-06
Time of Day:	10:00am
Application Method:	Broadcast
Application Timing:	A-post
Applic. Placement:	overtop
Air Temp., Unit:	72 F
% Relative Humidity:	69
Wind Velocity, Unit:	1 mph
Dew Presence (Y/N):	y
Water Hardness:	
Soil Temp., Unit:	57.6 F
Soil Moisture:	moist
% Cloud Cover:	0

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	clove .
Stage Scale:	.
Height, Unit:	3.5 in

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	GERCA .
Stage Scale:	6 inch
Density, Unit:	15 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 inch
Nozzles/Row:	2
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