

University of Georgia

Transplant squash response to Dual Magnum and Prowl.

Trial ID: Veg71-06

Study Dir.: Stanley Culpepper

Location: LTF-Grass farm

Investigator: Stanley Culpepper

Reps: 4

Plots: 6 by 50 feet

Spray vol: 14.8 gal/ac

Mix size: 2 liters (min 1.5434)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Grow Unit	Appl Stg	Amt Product to Measure	Plot No. By Rep			
									1	2	3	4
1	None 1 d after transplant								101	205	302	403
2	None 5 d after transplant								102	206	303	401
3	Prowl H20 1 d after transplant	4	EC		2 PT/A			33.78 ml/mx	103	202	304	406
4	Prowl H20 5 d after transplant	4	EC		2 PT/A			33.78 ml/mx	104	203	306	402
5	Dual Magnum 1 d after transplant	7.62	EC		1.33 PT/A			22.46 ml/mx	105	201	305	404
6	Dual Magnum 5 d after transplant	7.62	EC		1.33 PT/A			22.46 ml/mx	106	204	301	405

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
84.451	ml	Prowl H20	4	EC	
56.160	ml	Dual Magnum	7.62	EC	

* '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.

Trial Comments

OBJECTIVE: Determine squash response to Prowl H20 and Dual Magnum applied overtop of squash growing on mulch.

VISUAL INJURY:

1. Injury from Prowl H20 overtop of squash the same day of planting was severe.
2. Injury from Prowl H20 overtop of squash 5 d after transplanting ranged from 27 to 56% with injury increasing overtime.
3. Squash response to Dual Magnum was more positive. Injury did not appear to be impacted by application timing. Injury was up to 19% but this rate of Dual Magnum is 2.66 times that desired in the squash crop. Additionally, squash did recover from all injury issues.

PINK PURSLANE:

1. Populations were light and rainfall occurred after each herbicide application.
2. Control was excellent during early to mid-season.

CONCLUSIONS: Further research is needed to address the potential for Dual Magnum in squash at a rate of 0.5 to 0.66 pt/A.

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Weed Code	Crop Code	CUUPE	CUPPE	CUPPE	CUPPE	PORPI	
Rating Data Type	Rating Unit	injury %	injury %	injury %	injury %	injury %	
Rating Date	Assessed By	Sep-06-06	Sep-11-06	Sep-18-06	Sep-27-06	Sep-18-06	
Trt-Eval Interval		11 DA-A	16 DA-A	23 DA-A	32 DA-A	23 DA-A	
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	
		Unit	1	2	3	4	5
1	None 1 d after transplant		0 b	0 d	0 d	0 b	0 b
2	None 5 d after transplant		0 b	0 d	10 cd	0 b	0 b
3	Prowl H20 1 d after transplant	2 PT/A	68 a	73 a	80 a	70 a	99 a
4	Prowl H20 5 d after transplant	2 PT/A	19 b	27 b	33 b	56 a	98 a
5	Dual Magnum 1 d after transplant	1.33 PT/A	6 b	13 c	13 cd	0 b	97 a
6	Dual Magnum 5 d after transplant	1.33 PT/A	8 b	14 c	19 c	6 b	96 a
LSD (P=.05)			17.5	11.9	11.9	16.5	4.7
Standard Deviation			11.6	7.9	7.9	11.0	3.1
CV			70.02	37.46	30.81	49.61	4.85
Bartlett's X2			8.642	6.856	11.57	2.743	2.629
P(Bartlett's X2)			0.034*	0.077	0.021*	0.254	0.269

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

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

SOIL DESCRIPTION

% Sand: 94 % OM: 1.1 Texture: sand
 % Silt: 2 pH: 6.4 Soil Name: _____
 % Clay: 4 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	B
Application Date:	Aug-26-06	Aug-31-06
Time of Day:	1 pm	9 am
Application Method:	broadcast	broadcast
Application Timing:	1 d	5 d
Applic. Placement:	overtop	overtop
Air Temp., Unit:	96 F	80 F
% Relative Humidity:	44	70
Wind Velocity, Unit:	0 mph	0 mph
Dew Presence (Y/N):	n	n
Water Hardness:		
Soil Temp., Unit:	104 F	84 F
Soil Moisture:	moist	moist
% Cloud Cover:	50	0

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	CUUPE 1 d	CUUPE 5 d
Stage Scale:	3 lf	1 new lf
Height, Unit:	3 in	3.5 in

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	PORPI preplant	PORPI preplant
Stage Scale:	not up	not up
Density, Unit:	5 ydsq	5 ydsq

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APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	backpack	backpack
Operating Pressure:	23	23
Nozzle Type:	flat fan	flat fan
Nozzle Size:	11002	11002
Nozzle Spacing, Unit:	18 in	18 in
Nozzles/Row:		
Band Width, Unit:		
Boom Length, Unit:	4.5 feet	4.5 feet
Boom Height, Unit:	15 inch	15 inch
Ground Speed, Unit:	3 mph	3 mph
Incorporation Equip.:		
Hours to Incorp.:		
Incorp. Depth, Unit:		
Carrier:	water	water
Spray Volume, Unit:	14.8 GPA	14.8 GPA
Spray pH:		
Propellant:	CO2	CO2
Tank Mix (Y/N):	Y	Y

Trt No	Treatment Application Comment