

University of Georgia

Transplant onion response to Chateau as a spray or impregnated treatment.

Trial ID: Onion2-06

Study Dir.: Stanley Culpepper

Location: VORF

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	Unit	Grow Stg	Appl Code	Amt Product to Measure	Plot No. By Rep			
									1	2	3	4
1	Non-treated								101	204	301	403
2	Chateau	51	DF	2	OZ/A	2DATran	A	1.012 g/mx	102	201	303	401
3	Chateau IMPREGNATED	51	DF	2	OZ/A	2DATran	A	1.012 g/mx	103	202	304	402
4	Goal	4	F	16	OZ/A	2DATran	A	8.446 ml/mx	104	203	302	404

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
1.265	g	Chateau	51	DF	
1.265	g	Chateau IMPREGNATED	51	DF	
10.557	ml	Goal	4	F	

* '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 if Chateau causes less onion injury when applied impregnated on fertilizer as compared to being sprayed.

VISUAL INJURY:

- At 10 DAT, no injury was visible.
- By 29 DAT, injury was at least 22% greater with Chateau on the fertilizer when compared to a spray treatment.
- By 47 DAT, injury was still 18% greater when applied on the fertilizer when compared to a spray.

CONCLUSION OF ONION1 and ONION2:

- In seeded onion, Chateau injury was severe with both application methods but injury was noted more quickly with the spray which may have been a response to foliar and soil uptake.
- In transplant onion, foliar injury was not noted thus injury was due of soil uptake. This data suggest that the Chateau on the fertilizer gets in the plant more quickly than the spray.

GENERAL COMMENTS:

- Chateau and Goal were applied in water as noted in the application section. The Chateau impregnated treatment was spread over the plot area using glass jars with holes poked in the tops. A minimum of 16 passes per plot was used to provide uniform application.
- In the non-treated control as well as in other plots receiving spray treatments, fertilizer was spread over those plots providing the exact amount of fertilizer over the trial area.

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Crop Code	onion	onion	onion	onion		
Rating Data Type	injury	injury	injury	injury		
Rating Unit	percent	percent	percent	percent		
Rating Date	Dec-20-05	Jan-08-06	Jan-08-06	Jan-26-06		
Assessed By	AM	SC	AM	AM		
Trt-Eval Interval	10 DA-A	29 DA-A	29 DA-A	47 DA-A		
Trt No.	Treatment Name	Rate	1	2	3	4
		Rate Unit				
1	Non-treated		0 a	0 b	0 b	0 b
2	Chateau	2 OZ/A	0 a	3 b	4 b	28 a
3	Chateau IMPREGNATED	2 OZ/A	0 a	28 a	26 a	45 a
4	Goal	16 OZ/A	0 a	8 b	5 b	0 b
LSD (P=.05)			0.0	8.0	10.5	18.1
Standard Deviation			0.0	5.0	6.6	11.3
CV			0.0	52.75	74.99	62.54
Bartlett's X2			0.0	1.666	6.128	1.562
P(Bartlett's X2)			.	0.435	0.047*	0.211

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: 86 % OM: 0.47 Texture: loamy sand
 % Silt: 10 pH: 6.1 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: irrigated often

Closest Weather Station: _____ Distance: _____ Unit: ____

APPLICATION DESCRIPTION

	A
Application Date:	Dec-10-05
Time of Day:	9 am
Application Method:	see comme
Application Timing:	2DATRAN
Applic. Placement:	see comme
Air Temp., Unit:	50 F
% Relative Humidity:	64
Wind Velocity, Unit:	0 mph
Dew Presence (Y/N):	n
Water Hardness:	
Soil Temp., Unit:	54 F
Soil Moisture:	wet
% Cloud Cover:	0

CROP STAGE AT EACH APPLICATION

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

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	. .
Stage Scale:	.
Density, Unit:	. .

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APPLICATION EQUIPMENT

	A
Appl. Equipment:	backpack
Operating Pressure:	24
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	18 in
Nozzles/Row:	1
Band Width, Unit:	
Boom Length, Unit:	4.5 feet
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):	N

Trt No	Treatment Application Comment