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Transplant onion and weed response to sequential Chateau applications.

Trial ID: Onion8-05

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	Grow Unit	Appl Stg	Amt Product to Measure	Plot No. By Rep			
								1	2	3	4
1	Chateau	51	DG	1	OZ/A	transpla A	0.506 g/mx	101	202	306	402
2	Chateau	51	DG	1.5	OZ/A	transpla A	0.759 g/mx	102	212	308	407
3	Chateau	51	DG	2	OZ/A	transpla A	1.012 g/mx	103	205	304	403
4	Chateau	51	DG	0.5	OZ/A	transpla A	0.253 g/mx	104	210	307	408
	Chateau	51	DG	0.5	OZ/A	3WATP B	0.253 g/mx				
5	Chateau	51	DG	0.5	OZ/A	transpla A	0.253 g/mx	105	209	303	404
	Chateau	51	DG	0.5	OZ/A	6WATP C	0.253 g/mx				
6	Chateau	51	DG	1	OZ/A	transpla A	0.506 g/mx	106	207	301	410
	Chateau	51	DG	1	OZ/A	3WATP B	0.506 g/mx				
7	Chateau	51	DG	1	OZ/A	transpla A	0.506 g/mx	107	204	312	405
	Chateau	51	DG	1	OZ/A	6WATP C	0.506 g/mx				
8	Chateau	51	DG	1.5	OZ/A	transpla A	0.759 g/mx	108	206	310	401
	Chateau	51	DG	1.5	OZ/A	3WATP B	0.759 g/mx				
9	Chateau	51	DG	1.5	OZ/A	transpla A	0.759 g/mx	109	211	305	406
	Chateau	51	DG	1.5	OZ/A	6WATP C	0.759 g/mx				
10	Chateau	51	DG	1	OZ/A	transpla A	0.506 g/mx	110	208	302	412
	Prowl	3.3	EC	2	PT/A	transpla A	16.89 ml/mx				
11	Chateau	51	DG	0.5	OZ/A	transpla A	0.253 g/mx	111	201	311	409
	Prowl	3.3	EC	1	PT/A	transpla A	8.445 ml/mx				
	Chateau	51	DG	0.5	OZ/A	3WATP B	0.253 g/mx				
	Prowl	3.3	EC	1	PT/A	transpla B	8.445 ml/mx				
12	Non-tretaed							112	203	309	411

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
11.702	g	Chateau	51	DG	
42.225	ml	Prowl	3.3	EC	

* '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: Evaluate Transplant Onion Response to Valor Systems.

VISUAL ONION INJURY:

- Rainfall and irrigation throughout the season were heavy.
- At 10 d after the at transplant applications, visual plant burn was only noted with Prowl/Chateau mixtures.
- At 28 d after the at transplant applications, stunting was greater than 10% with all Chateau alone treatments except when applied at 0.5 oz/A. Interestingly, less stunting was noted with the Prowl/Chateau mixtures than with Chateau alone which may have been in response to earlier foliar injury delaying onion growth.
- By mid and late-season plant stunting and occasional stand loss was severe with all treatments.
- There was a trend for less injury with 0.5 oz of Chateau followed by another 0.5 oz of Chateau applied 6 wks later.
- Injury from a Chateau at 0.5 oz/A alone or with Prowl would have likely been acceptable if no follow up application had been made.

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CONCLUSIONS:

1. A trial studying irrigation/watering must be conducted as injury at this location was far greater than injury on farms.
2. Another trial looking at various combinations of Chateau/Goal/Prowl should be conducted in an effort to reduce the injury potential noted with both Chateau and Goal by slightly reducing the rate of each product in a systems approach.

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Crop Code	onion injury percent	onion injury percent	onion injury percent	onion injury percent	onion injury percent			
Rating Data Type	Dec-20-05	Jan-08-06	Jan-08-06	Jan-26-06	Mar-04-06			
Rating Unit	AM	SC	AM	AM	SC			
Rating Date	10 DA-A	29 DA-A	29 DA-A	47 DA-A	84 DA-A			
Assessed By	AM	SC	AM	AM	SC			
Trt-Eval Interval	10 DA-A	29 DA-A	29 DA-A	47 DA-A	84 DA-A			
Trt No.	Treatment Name	Rate	Unit	1	2	3	4	5
1	Chateau	1	OZ/A	0 c	12 bc	13 abc	18 b-e	20 e
2	Chateau	1.5	OZ/A	0 c	15 ab	15 ab	19 b-e	24 cde
3	Chateau	2	OZ/A	0 c	19 a	18 a	25 b	30 bc
4	Chateau	0.5	OZ/A	0 c	7 cd	8 cd	11 ef	21 e
	Chateau	0.5	OZ/A					
5	Chateau	0.5	OZ/A	0 c	12 bc	6 d	6 fg	18 e
	Chateau	0.5	OZ/A					
6	Chateau	1	OZ/A	0 c	11 bc	11 bcd	23 bc	29 bcd
	Chateau	1	OZ/A					
7	Chateau	1	OZ/A	0 c	11 bc	9 cd	15 cde	31 b
	Chateau	1	OZ/A					
8	Chateau	1.5	OZ/A	0 c	16 ab	16 ab	59 a	48 a
	Chateau	1.5	OZ/A					
9	Chateau	1.5	OZ/A	0 c	12 bc	15 ab	21 bcd	41 a
	Chateau	1.5	OZ/A					
10	Chateau	1	OZ/A	15 a	5 de	9 cd	14 c-f	21 e
	Prowl	2	PT/A					
11	Chateau	0.5	OZ/A	8 b	4 de	6 d	13 def	23 de
	Prowl	1	PT/A					
	Chateau	0.5	OZ/A					
	Prowl	1	PT/A					
12	Non-tretaed			0 c	0 e	0 e	0 g	0 f
LSD (P=.05)				2.0	5.4	4.7	8.0	6.5
Standard Deviation				1.4	3.7	3.3	5.6	4.5
CV				74.61	36.66	31.45	30.1	17.68
Bartlett's X2				0.349	17.695	6.273	18.777	5.316
P(Bartlett's X2)				0.555	0.039*	0.792	0.043*	0.869

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: 5.9 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 aggressively

Closest Weather Station: _____ Distance: _____ Unit: __

APPLICATION DESCRIPTION

	A	B	C
Application Date:	Dec-10-05	Jan-08-06	Jan-26-06
Time of Day:	9 am	9 am	9 am
Application Method:	broadcast	broadcast	broadcast
Application Timing:	transplan	3WATransp	6WATransp
Applic. Placement:	overtop	overtop	overtop
Air Temp., Unit:	50 F	44 F	43 F
% Relative Humidity:	64	56	23
Wind Velocity, Unit:	0 mph	1 mph	2 mph
Dew Presence (Y/N):	n	n	n
Water Hardness:			
Soil Temp., Unit:	54 F	49 F	48 F
Soil Moisture:	wet	moist	fair
% Cloud Cover:	0	2	0

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	ALLCE .	ALLCE .	ALLCE .
Stage Scale:	transplan	1 new lf	3 new lf
Height, Unit:	4 inch	5 inch	6 inch

WEED STAGE AT EACH APPLICATION

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

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APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	backpack	backpack	backpack
Operating Pressure:	24	24	24
Nozzle Type:	flat fan	flat fan	flat fan
Nozzle Size:	11002	11002	11002
Nozzle Spacing, Unit:	18 in	18 in	18 in
Nozzles/Row:	1	1	1
Band Width, Unit:			
Boom Length, Unit:	4.5 feet	4.5 feet	4.5 feet
Boom Height, Unit:	15 inch	15 inch	15 inch
Ground Speed, Unit:	3 mph	3 mph	3 mph
Incorporation Equip.:			
Hours to Incorp.:			
Incorp. Depth, Unit:			
Carrier:	water	water	water
Spray Volume, Unit:	14.8 GPA	14.8 GPA	14.8 GPA
Spray pH:			
Propellant:	CO2	CO2	CO2
Tank Mix (Y/N):	N	N	N

Trt No	Treatment Application Comment