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Transplant Onion Tolerance to Valor Applied at Various Timings

Trial ID: Onion3-05 Study Dir.: Stanley Culpepper
Location: VORF Investigator: Stanley Culpepper

Reps: 4 Plots: 6 by 20 feet
Spray vol: 14.8 gal/ac Mix size: 1 liters (min .61734)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Plot No. By Rep 1	2	3	4
1	Valor	51	WDG	1.5	oz/a		A	0.759 g/mx	101	205	304	403
	NIS		L	0.25	% v/v		A	2.5 ml/mx				
	Day 0					tran	A					
2	Valor	51	WDG	1.5	oz/a		A	0.759 g/mx	102	210	315	404
	NIS		L	0.25	% v/v		A	2.5 ml/mx				
	Day 14					tran+2wk	B					
3	Valor	51	WDG	1.5	oz/a		A	0.759 g/mx	103	215	306	413
	NIS		L	0.25	% v/v		A	2.5 ml/mx				
	Day 28					tran+4wk	C					
4	Valor	51	WDG	1.5	oz/a		A	0.759 g/mx	104	201	311	405
	NIS		L	0.25	% v/v		A	2.5 ml/mx				
	Day 56					tran+8wk	D					
5	Valor	51	WDG	1.5	oz/a		A	0.759 g/mx	105	209	310	411
	NIS		L	0.25	% v/v		A	2.5 ml/mx				
	Day 84					tran+12w	E					
6	Valor	51	WDG	3	oz/a		A	1.518 g/mx	106	213	305	412
	NIS		L	0.25	% v/v		A	2.5 ml/mx				
	Day 0					tran	A					
7	Valor	51	WDG	3	oz/a		A	1.518 g/mx	107	203	302	406
	NIS		L	0.25	% v/v		A	2.5 ml/mx				
	Day 14					tran+2wk	B					
8	Valor	51	WDG	3	oz/a		A	1.518 g/mx	108	204	303	409
	NIS		L	0.25	% v/v		A	2.5 ml/mx				
	Day 28					tran+4wk	C					
9	Valor	51	WDG	3	oz/a		A	1.518 g/mx	109	207	309	415
	NIS		L	0.25	% v/v		A	2.5 ml/mx				
	Day 56					tran+8wk	D					
10	Valor	51	WDG	3	oz/a		A	1.518 g/mx	110	208	314	401
	NIS		L	0.25	% v/v		A	2.5 ml/mx				
	Day 84					tran+12w	E					
11	Valor	51	WDG	1.5	oz/a		A	0.759 g/mx	111	206	307	402
	Prowl H20	3.8	L	1	qt/a		A	16.89 ml/mx				
	NIS		L	0.25	% v/v		A	2.5 ml/mx				
	Day 0					tran	A					
12	Valor	51	WDG	1.5	oz/a		A	0.759 g/mx	112	211	312	408
	Prowl H20	3.8	L	1	qt/a		A	16.89 ml/mx				
	NIS		L	0.25	% v/v		A	2.5 ml/mx				
	Day 14					tran+2wk	B					
13	Valor	51	WDG	1.5	oz/a		A	0.759 g/mx	113	214	301	414
	Prowl H20	3.8	L	1	qt/a		A	16.89 ml/mx				
	NIS		L	0.25	% v/v		A	2.5 ml/mx				
	Day 28					tran+4wk	C					
14	Valor	51	WDG	1.5	oz/a		A	0.759 g/mx	114	202	308	407
	Prowl H20	3.8	L	1	qt/a		A	16.89 ml/mx				
	NIS		L	0.25	% v/v		A	2.5 ml/mx				
	Day 56					tran+8wk	D					
15	Valor	51	WDG	1.5	oz/a		A	0.759 g/mx	115	212	313	410
	Prowl H20	3.8	L	1	qt/a		A	16.89 ml/mx				
	NIS		L	0.25	% v/v		A	2.5 ml/mx				
	Day 84					tran+12w	E					

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Reps: 4 Plots: 6 by 20 feet
Spray vol: 14.8 gal/ac Mix size: 1 liters (min .61734)

Trt No.	Treatment Name	Conc	Form Type	Form Rate	Unit	Rate Stg	Grow Code	Appl to	Amt Measure	Product 1	Plot No. By Rep 2	3	4

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Lot Code
18.976	g	Valor 51 WDG	
46.870	ml	NIS L	
105.563	ml	Prowl H20 3.8 L	

* '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.
* 'Per volume' calculations use spray volume= 14.8 gal/ac, mix size= 1 liters.

Trial Comments

OBJECTIVE: Evaluate onion and weed response to Valor mixtures applied in transplant onion.

Visual Response (main effects were significant and will be reported):
1. When pooled over application date, Valor at 3 oz/A was approximately twice as injurious as 1.5 oz/A of Valor.
2. Prowl mixed with Valor did not impact onion response.
3. Application timing did not appear to have much effect on onion response except for the last application which tended to cause more initial injury after application.

Onion Stand and Yield:
1. Applications timing did not impact stand.
2. Valor at 3 oz/A reduced onion stand at least 16% compared to systems with Valor at 1.5 oz/A, when pooled over application date
3. Yield followed trends noted in weed control. Yields among herbicide programs were similar. Yields among application dates were similar except with less yields noted with the transplant + 12 wk application (early season competition likely the issue).

Weed Response (main effects were significant and will be reported):
Primrose:
1. Excellent control was noted with all programs and all applications dates with the exception of transplant + 12 wk applications.

Henbit:
1. Excellent control was noted with all programs and all applications dates up until the transplant + 12 wk applications. At the transplant + 12 wk application, primrose was clearly choking out the henbit, thus, later ratings were not possible.

Bittercress:
1. Excellent control was noted with all programs and all applications dates up until the transplant + 12 wk applications. At the transplant + 12 wk application, primrose was clearly choking out the bittercress, thus, later ratings were not possible.

CONCLUSIONS:
1. Valor applied through approximately 50 days after transplant appears effective; however, the need for sequential applications to use lower rates of Valor at any given time to reduce visual injury is needed if data supports!!!!

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Transplant Onion Tolerance to Valor Applied at Various Timings

Trial ID: Onion3-05 Study Dir.: Stanley Culpepper
Location: VORF Investigator: Stanley Culpepper

Trt No.	Treatment Name	Rate	Rate Unit	1	2	3	4	5	6	7	8
Weed Code										OEOLA	OEOLA
Crop Code				onion	onion	onion	onion	onion	onion		
Rating Data Type				injury	injury	injury	injury	injury	injury	control	control
Rating Unit				percent	percent	percent	percent	percent	percent	percent	percent
Rating Date				Dec-21-04	Dec-27-04	Jan-08-05	Jan-23-05	Feb-25-05	Mar-31-05	Feb-25-05	Mar-31-05
Trt-Eval Interval				14 DA-A	20 DA-A	-334 DA-					
1	Valor	1.5	oz/a	14	13	3	3	11	11	99	100
	NIS	0.25	% v/v								
	Day 0										
2	Valor	1.5	oz/a	0	14	2	5	13	10	100	100
	NIS	0.25	% v/v								
	Day 14										
3	Valor	1.5	oz/a	0	0	9	9	16	16	99	100
	NIS	0.25	% v/v								
	Day 28										
4	Valor	1.5	oz/a	0	0	2	0	20	12	100	100
	NIS	0.25	% v/v								
	Day 56										
5	Valor	1.5	oz/a	0	0	1	0	0	29	0	55
	NIS	0.25	% v/v								
	Day 84										
6	Valor	3	oz/a	14	13	9	13	36	41	99	99
	NIS	0.25	% v/v								
	Day 0										
7	Valor	3	oz/a	0	11	5	10	36	38	99	100
	NIS	0.25	% v/v								
	Day 14										
8	Valor	3	oz/a	0	0	5	2	13	14	99	100
	NIS	0.25	% v/v								
	Day 28										
9	Valor	3	oz/a	0	0	0	0	14	21	100	100
	NIS	0.25	% v/v								
	Day 56										
10	Valor	3	oz/a	0	0	1	0	0	45	0	71
	NIS	0.25	% v/v								
	Day 84										
11	Valor	1.5	oz/a	15	12	5	4	6	8	99	100
	Prowl H20	1	qt/a								
	NIS	0.25	% v/v								
	Day 0										
12	Valor	1.5	oz/a	0	12	7	4	13	14	99	100
	Prowl H20	1	qt/a								
	NIS	0.25	% v/v								
	Day 14										
13	Valor	1.5	oz/a	0	0	12	9	11	11	99	100
	Prowl H20	1	qt/a								
	NIS	0.25	% v/v								
	Day 28										
14	Valor	1.5	oz/a	0	0	0	0	18	21	100	100
	Prowl H20	1	qt/a								
	NIS	0.25	% v/v								
	Day 56										

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Weed Code										OEOLA	OEOLA
Crop Code				onion	onion	onion	onion	onion	onion		
Rating Data Type				injury	injury	injury	injury	injury	injury	control	control
Rating Unit				percent	percent	percent	percent	percent	percent	percent	percent
Rating Date				Dec-21-04	Dec-27-04	Jan-08-05	Jan-23-05	Feb-25-05	Mar-31-05	Feb-25-05	Mar-31-05
Trt-Eval Interval				14 DA-A	20 DA-A	-334 DA-					
Trt No.	Treatment Name	Rate	Rate Unit	1	2	3	4	5	6	7	8
15	Valor	1.5	oz/a	0	0	4	0	0	26	0	58
	Prowl H20	1	qt/a								
	NIS	0.25	% v/v								
	Day 84										
LSD (P=.05)				2.5	4.5	5.3	5.9	14.7	17.9	0.4	9.6
Standard Deviation				1.8	3.1	3.7	4.1	10.3	12.5	0.3	6.7
CV				62.64	62.49	87.83	106.74	75.36	59.6	0.37	7.31

Means followed by same letter do not significantly differ (P=.05, LSD)

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Trt No.	Treatment Name	Rate	Rate Unit	9	10	11	12	13	14
	Weed Code			OEOLA	LAMAM	COPSS	CARSS		harvest
	Crop Code							onion	onion
	Rating Data Type			control	control	control	control	stand cts	wt
	Rating Unit			percent	percent	percent	percent	#/8'	lb/5'
	Rating Date			May-17-05	Feb-25-05	Feb-25-05	Mar-31-05	Mar-31-05	May-18-05
	Trt-Eval Interval								
1	Valor	1.5	oz/a	100	99	99	100	27	5
	NIS	0.25	% v/v						
	Day 0								
2	Valor	1.5	oz/a	100	100	100	100	27	4
	NIS	0.25	% v/v						
	Day 14								
3	Valor	1.5	oz/a	100	99	99	100	26	4
	NIS	0.25	% v/v						
	Day 28								
4	Valor	1.5	oz/a	100	100	95	96	29	5
	NIS	0.25	% v/v						
	Day 56								
5	Valor	1.5	oz/a	10	0	0	54	26	2
	NIS	0.25	% v/v						
	Day 84								
6	Valor	3	oz/a	100	99	99	100	20	3
	NIS	0.25	% v/v						
	Day 0								
7	Valor	3	oz/a	100	99	99	100	20	3
	NIS	0.25	% v/v						
	Day 14								
8	Valor	3	oz/a	100	99	99	100	22	5
	NIS	0.25	% v/v						
	Day 28								
9	Valor	3	oz/a	100	100	97	100	23	3
	NIS	0.25	% v/v						
	Day 56								
10	Valor	3	oz/a	6	0	0	96	27	2
	NIS	0.25	% v/v						
	Day 84								
11	Valor	1.5	oz/a	100	99	99	100	26	4
	Prowl H20	1	qt/a						
	NIS	0.25	% v/v						
	Day 0								
12	Valor	1.5	oz/a	100	99	99	100	27	6
	Prowl H20	1	qt/a						
	NIS	0.25	% v/v						
	Day 14								
13	Valor	1.5	oz/a	100	99	99	100	27	4
	Prowl H20	1	qt/a						
	NIS	0.25	% v/v						
	Day 28								
14	Valor	1.5	oz/a	100	100	100	100	28	3
	Prowl H20	1	qt/a						
	NIS	0.25	% v/v						
	Day 56								

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Weed Code				OEOLA	LAMAM	COPSS	CARSS		harvest
Crop Code								onion	onion
Rating Data Type				control	control	control	control	stand cts	wt
Rating Unit				percent	percent	percent	percent	#/8'	lb/5'
Rating Date				May-17-05	Feb-25-05	Feb-25-05	Mar-31-05	Mar-31-05	May-18-05
Trt-Eval Interval									
Trt No.	Treatment Name	Rate	Rate Unit	9	10	11	12	13	14
15	Valor	1.5	oz/a	16	0	0	88	25	2
	Prowl H20	1	qt/a						
	NIS	0.25	% v/v						
	Day 84								
LSD (P=.05)				8.4	0.4	4.3	16.9	5.3	2.1
Standard Deviation				5.9	0.3	3.0	11.8	3.7	1.5
CV				7.13	0.37	3.82	12.35	14.68	41.02

Means followed by same letter do not significantly differ (P=.05, LSD)

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Transplant Onion Tolerance to Valor Applied at Various Timings

Trial ID: Onion3-05 Study Dir.: Stanley Culpepper
Location: VORF Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Stanley Culpepper **Title:** Ext. weed science
Affiliation: University of Georgia
Postal Code: 31793

Investigator: Stanley Culpepper **Title:** Ext. weed science
Affiliation: University of Georgia
Postal Code: 31793

TRIAL LOCATION

City: Vidalia **Trial Status:** completed
State/Prov.: GA **Trial Reliability:** good
Postal Code: . **Initiation Date:** Dec-03-04
Country: U.S.A. **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.	LAMAM	henbit	
3.	COPSS	bittercress	

Crop 1: ALLCE ONION **Variety:** Grannex 33 PRR
Planting Date: Dec-03-04 **Planting Method:** transplant
Rate: 3 ft **Depth:** 1 in **Perennial Age:** ____ _____
Row Spacing: 15 inch **Spacing Within Row:** 4 inch **Seed Bed:** flat
Soil Temperature: 66 F **Soil Moisture:** irrigated **Emergence Date:** _____

SITE AND DESIGN

Plot Width, Unit: 6 FT **Plot Length, Unit:** 20 FT **Reps:** 4
Site Type: research station
Tillage Type: conventional **Study Design:** FACTORIAL

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: 86 **% OM:** 0.47 **Texture:** loamy sand
% Silt: 10 **pH:** 5.8 **Soil Name:** _____
% Clay: 4 **CEC:** _____ **Fert. Level:** _____

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: .
Closest Weather Station: _____ **Distance:** _____ **Unit:** __

APPLICATION DESCRIPTION

	A	B	C	D	E
Application Date:	Dec-07-04	Dec-21-04	Jan-06-05	Feb-01-05	Mar-10-05
Time of Day:	9 am	9 am	9 am	10 am	9 am
Application Method:	Broadcast	Broadcast	Broadcast	Broadcast	Broadcast
Application Timing:	tran	tran +2wk	tran +4wk	tran+8wk	tran+12wk
Applic. Placement:	overtop	overtop	overtop	overtop	overtop
Air Temp., Unit:	62 F	62 F	69 F	45 F	47 F
% Relative Humidity:	20	20	18	66	65
Wind Velocity, Unit:	1 mph	1 mph	2 mph	3 mph	3 mph
Dew Presence (Y/N):	n	n	n	n	n
Water Hardness:					
Soil Temp., Unit:	66 F	52 F	62 F	46 F	45 F
Soil Moisture:	wet	wet	fair	moist	moist
% Cloud Cover:	0	0	20	100	0

CROP STAGE AT EACH APPLICATION

	A	B	C	D	E
Crop 1 Code, Stage:	ALLCE trans	ALLCE +2 wk	ALLCE +4 wk	ALLCE +8 wk	ALLCE +12 wk
Stage Scale:	transplan	1 new lf	2 new lf	2 new lf	3 new lf
Height, Unit:	3 inch	4 inch	7 inch	8 inch	10 inch

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WEED STAGE AT EACH APPLICATION

	A	B	C	D	E
Weed 1 Code, Stage:	OEOLA trans	OEOLA +2 wk	OEOLA +4 wk	OEOLA +8 wk	OEOLA +12 wk
Stage Scale:	none	0.12 inch	0.5 inch	1 inch	5 inch
Density, Unit:	0 ydsq	12 ydsq	12 ydsq	14 ydsq	18 ydsq
Weed 2 Code, Stage:	LAMAM trans	LAMAM +2 wk	LAMAM +4 wk	LAMAM +8 wk	LAMAM +12 wk
Stage Scale:	none	0.12 inch	0.5 inch	2 inch	4 inch
Density, Unit:	0 ydsq	1 ydsq	1 ydsq	1 ydsq	1 ydsq
Weed 3 Code, Stage:	COPSS trans	COPSS +2 wk	COPSS +4 wk	COPSS +8 wk	COPSS +12 wk
Stage Scale:	none	0.12 inch	0.5 inch	1 inch	4 inch
Density, Unit:	0 ydsq	1 ydsq	1 ydsq	1 ydsq	1 ydsq

APPLICATION EQUIPMENT

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

Trt No	Treatment Application Comment