

# University of Georgia

## Transplant Onion Tolerance to Various Herbicides.

Trial ID: Onion5-05  
 Location: VORF

Study Dir.: Stanley Culpepper  
 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	Unit	Grow Stg	Appl Code	Amt to Measure	Plot No. By Rep			
									1	2	3	4
1	Before transplant Valor	51	WDG	2	oz/a		A	1.012 g/mx	101	209	304	406
2	Before transplant Cadre	70	DG	1	oz/a		A	0.506 g/mx	102	211	301	405
3	Before transplant Sulfentrazone	4	F	0.2	lb ai/a		A	3.378 ml/mx	103	207	302	401
4	Before transplant Direx	4	L	2	pt/a		A	16.89 ml/mx	104	210	306	403
5	Before transplant V10146	3.3	EC	0.02	lb ai/a		A	0.4095 ml/mx	105	212	305	402
6	Before transplant Goal	2	L	1	qt/a		A	16.89 ml/mx	106	208	303	404
	Prowl H20	3.8	L	1	qt/a		A	16.89 ml/mx				
7	After transplant Valor	51	WDG	2	oz/a		A	1.012 g/mx	107	206	308	408
8	After transplant Cadre	70	DG	1	oz/a		A	0.506 g/mx	108	203	311	407
9	After transplant Sulfentrazone	4	F	0.2	lb ai/a		A	3.378 ml/mx	109	202	310	409
10	After transplant Direx	4	L	2	pt/a		A	16.89 ml/mx	110	204	309	410
11	After transplant V10146	3.3	EC	0.02	lb ai/a		A	0.4095 ml/mx	111	205	312	411
12	After transplant Goal	2	L	1	qt/a		A	16.89 ml/mx	112	201	307	412
	Prowl H20	3.8	L	1	qt/a		A	16.89 ml/mx				

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Lot Code
2.530	g	Valor 51 WDG	
1.265	g	Cadre 70 DG	
8.445	ml	Sulfentrazone 4 F	
42.225	ml	Direx 4 L	
1.024	ml	V10146 3.3 EC	
42.225	ml	Goal 2 L	
42.225	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.

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### Trial Comments

**OBJECTIVE:** Compare onion response to herbicides applied immediately before or after transplanting.

**Onion Response:**

1. Cadre, sulfentrazone, and V10146 (extremely low rate) caused severe late-season onion injury regardless of application method.
2. Injury from Goal + Prowl was minor regardless of application method.
3. Results from Valor and Direx were interesting. When these products were applied before transplanting late-season injury was severe. However, these herbicides applied immediately after transplant caused much less injury.

**Onion Stands:**

1. Compared to the standard of Goal plus Prowl, stand counts were reduced except when Valor or Direx were applied after transplant.

**Primrose response:**

1. Primrose populations were extremely light in this trial. However, late-season control was greater than 90% except with Cadre applied before or after transplant and V10146 applied prior to transplant

**CONCLUSIONS:**

1. Look at Valor at 1 to 1.5 oz/A plus Direx at 1 to 1.5 pt/A next year.

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Weed Code		onion injury percent	onion injury percent	onion injury percent	onion injury percent	onion injury percent	onion injury percent	OEOLA control percent	onion stand cts #	
Crop Code		Dec-21-04	Dec-27-04	Jan-08-04	Jan-23-04	Feb-25-05	Mar-31-05	Mar-31-05	Mar-31-05	
Rating Data Type		14 DA-A	20 DA-A	-334 DA-	-319 DA-	80 DA-A	114 DA-A	114 DA-A	114 DA-A	
Rating Unit										
Rating Date										
Trt-Eval Interval										
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	Before transplant Valor	2 oz/a	7	11	47	54	75	65	100	20
2	Before transplant Cadre	1 oz/a	5	4	18	83	100	100	87	2
3	Before transplant Sulfentrazone	0.2 lb ai/a	50	84	99	99	100	100	100	0
4	Before transplant Direx	2 pt/a	5	6	10	28	48	38	99	27
5	Before transplant V10146	0.02 lb ai/a	6	4	14	30	59	58	89	33
6	Before transplant Goal Prowl H20	1 qt/a 1 qt/a	6	7	10	1	0	0	100	39
7	After transplant Valor	2 oz/a	20	17	10	15	29	16	100	35
8	After transplant Cadre	1 oz/a	12	12	59	90	100	100	84	2
9	After transplant Sulfentrazone	0.2 lb ai/a	33	55	86	99	100	100	100	1
10	After transplant Direx	2 pt/a	10	6	2	3	16	5	100	39
11	After transplant V10146	0.02 lb ai/a	8	6	21	28	58	56	98	32
12	After transplant Goal Prowl H20	1 qt/a 1 qt/a	8	8	7	3	4	0	100	38
LSD (P=.05)			11.8	16.9	20.6	16.3	15.4	16.4	8.6	5.3
Standard Deviation			8.2	11.7	14.2	11.3	10.6	11.3	5.9	3.7
CV			58.63	63.86	44.85	25.36	18.62	21.31	6.17	16.59

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

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## Transplant Onion Tolerance to Various Herbicides.

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 Location: VORF Investigator: Stanley Culpepper

### GENERAL TRIAL INFORMATION

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

Investigator: Stanley Culpepper Title: Ex. weed science  
 Affiliation: University of Georgia  
 Postal Code: 31973

### TRIAL LOCATION

City: Vidalia Trial Status: completed  
 State/Prov.: GA Trial Reliability: excellent  
 Postal Code: . Initiation Date: Dec-07-04  
 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	

Crop 1: ALLCE ONION Variety: Sweet Advantage  
 Planting Date: Dec-03-04 Planting Method: conventional  
 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: SPLIT-PLOT

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: 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**

No.	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: .

Closest Weather Station: \_\_\_\_\_ Distance: \_\_\_\_\_ Unit: \_\_\_\_

**APPLICATION DESCRIPTION**

	A
Application Date:	Dec-07-04
Time of Day:	9 am
Application Method:	Broadcast
Application Timing:	at transp
Applic. Placement:	various
Air Temp., Unit:	72 F
% Relative Humidity:	64
Wind Velocity, Unit:	4 mph
Dew Presence (Y/N):	
Water Hardness:	
Soil Temp., Unit:	66 F
Soil Moisture:	moist
% Cloud Cover:	100

**CROP STAGE AT EACH APPLICATION**

	A
Crop 1 Code, Stage:	ALLCE at trans
Stage Scale:	transplan
Height, Unit:	3 inch

**WEED STAGE AT EACH APPLICATION**

	A
Weed 1 Code, Stage:	OEOLA transpl
Stage Scale:	not up
Density, Unit:	0 inch

# University of Georgia

## APPLICATION EQUIPMENT

	A
Appl. Equipment:	backpack
Operating Pressure:	23
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	18 inch
Nozzles/Row:	
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):	Y

Trt No	Treatment Application Comment