	2	seedeo	1 ON10	on and	weea d	control	by me	tam/nerbicide	e sys	cems.			
Tri	al ID: Onion1-05			S	Study 1	Dir.: St	anley	v Culpepper					
Loc	ation: VORF			Inv	vestiga	ator: St	anley	⁷ Culpepper					
Rep	s: 4 Plots	: 6 by	20 fee	t									
Spra	iy vol: 14.8 gal/ac	Mix si	ze: 2 li	ters (min	.61734	.)							
Trt	Treatment	Form	Form		Rate	Grow	Appl	Amt Product	Plot N	lo. By l	Rep		
No.	Name	Conc	Туре	Rate	Unit	Stg	Code	to Measure	1	2	3	4	
1	No herbicide								102	208	307	407	
	No Vapam												
2	No herbicide								103	207	306	408	
	Vapam		L	25	gal/a	preplant	Α	*3378.0 ml/mx					
3	No herbicide								101	205	305	406	
	Vapam		L	50	gal/a	preplant	Α	*6756.0 ml/mx					
4	No herbicide								104	206	308	405	
	Vapam		L	75	gal/a	preplant	Α	*10.13 l/mx					
5	Dacthal	6	L	6	lb ai/a	PRE	В	135.1 ml/mx	106	204	311	403	
	Goal As needed after 2 If	4	F	0.0625	lb ai/a	2lf	D	2.111 ml/mx					
	No Vapam												
6	Dacthal	6	L	6	lb ai/a	PRE	В	135.1 ml/mx	107	203	310	412	
	Goal As needed after 2 If	4	F	0.0625	lb ai/a	2lf	D	2.111 ml/mx					
	Vapam		L	25	gal/a	preplant	А	*3378.0 ml/mx					
7	Dacthal	6	L	6	lb ai/a	PRE	В	135.1 ml/mx	105	201	309	402	
	Goal As needed after 2 If	4	F	0.0625	lb ai/a	2lf	D	2.111 ml/mx					
	Vapam		L	50	gal/a	preplant	A	*6756.0 ml/mx					
8	Dacthal	6	L	6	lb ai/a	PRE	В	135.1 ml/mx	108	202	312	409	
	Goal As needed after 2 lf	4	F	0.0625	lb ai/a	2lf	D	2.111 ml/mx					
	Vapam		L	75	gal/a	preplant	A	*10.13 l/mx					
9	Dacthal	6	L	3	lb ai/a	PRE	В	67.56 ml/mx	110	212	303	411	
	Dacthal	6	L	3	lb ai/a	spike	C	67.56 ml/mx					
	Goal As needed after 2 If	4	F	0.0625	id al/a	211	D	2.111 mi/mx					
10	No Vapani Deethel	6	1	<u> </u>	lh ai/a		D	67.56 ml/my	444	014	202	404	
10	Dacthal	0	L 1	ა ა		rre spiko		67.56 ml/mx	111	211	302	404	
	Goal As needed after 2 If	4	F	0.0625	lb ai/a	2lf	П	2 111 ml/mx					
	Vapam	-	Ĺ	25	dal/a	preplant	A	*3378.0 ml/mx					
11	Dacthal	6	-		lh ai/a	PRE	R	67 56 ml/mx	109	209	301	410	
	Dacthal	6	L	3	lb ai/a	spike	c	67.56 ml/mx	103	200	001	110	
	Goal As needed after 2 If	4	F	0.0625	lb ai/a	2lf	D	2.111 ml/mx					
	Vapam		L	50	gal/a	preplant	А	*6756.0 ml/mx					
12	Dacthal	6	L	3	lb ai/a	PRE	В	67.56 ml/mx	112	210	304	401	
	Dacthal	6	L	3	lb ai/a	spike	С	67.56 ml/mx					
	Goal As needed after 2 If	4	F	0.0625	lb ai/a	2lf	D	2.111 ml/mx					
	Vapam		L	75	gal/a	preplant	А	*10.13 l/mx					

* Amount of product to use exceeds the mix size.

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Lot Code
76,005.492	ml	Vapam L	
1,351.209	ml	Dacthal 6 L	
21.113	ml	Goal As needed after 2 If 4 F	

* '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.

Seeded onion and weed control by metam/herbicide systems.

Trial ID:	Onion1-05
Location:	VORF

Study Dir.: Stanley Culpepper Investigator: Stanley Culpepper

Trial Comments

OBJECTIVE: Evaluate seeded onion and weed response to Vapam/Herbicide programs.

Onion Response:

- 1. Onions were seeded 10 days after injecting Vapam with our new Vapam rig without injury.
- 2. Herbicides caused little to no injury throughout the season.
- 3. Stand counts were not impacted by herbicide or fumigant treatment.

4. Main effects for onion yield were noted. A) Herbicide programs increased yields at least 25% compared to the no herbicide program when pulled over Vapam rates. B) Including Vapam in the program increased yields at approximately 50% when pooled over herbicide options. There were no differences among rates of Vapam or within herbicide programs.

Weed Response:

Primrose:

1. During early and mid-season, Vapam and the herbicide program alone provided fair control.

2. Late-season control noted main effects. When pooled over the Vapam option, the herbicide program improved control by 14 to 18% compared to

no herbicide program. When pooled over the herbicide program, Vapam (25 G) improved control 29% when compared to no Vapam while Vapam at 50 or 75G improved control 55 to 58% compared to no Vapam.

Pink Purslane:

- 1. Vapam alone provided only fair control.
- 2. The herbicide program provided excellent control.
- 3. Combinations of herbicides and Vapam provided excellent control.
- 4. Purslane eventually went out when a heavy frost occurred.

Large Crabgrass

- 1. Vapam alone provided only fair control at 75 G with poor control noted with other rates.
- 2. The herbicide program provided excellent control.
- 3. Combinations of herbicides and Vapam provided excellent control.
- 4. Crabgrass died at time of the first light frost.

GENERAL COMMENTS:

1) Additional applications of Goal at 6 to 8 oz/A were applied overtop of plots receiving a herbicide program on Nov. 22 and on Dec. 7.

	2	seeded	onion	and weed	CONTROL 1	by metam/r	lerbicide	systems.		
Tri	al ID: Onion1-05			Study	Dir.: St	anley Culj	pepper			
Loc	ation: VORF			Investi	gator: St	anley Cul	pepper			
Wee	ed Code					PORPI	PORPI	OEOLA	OEOLA	OEOLA
Cro	o Code			onion	onion	_	_			
Rati	ng Data Type			injury	injury	control	control	control	control	control
Rati	ng Unit			percent	percent	percent	percent	percent	percent	percent
Rati	ng Date			Nov-22-04	Jan-07-05	Nov-22-04	Dec-07-04	Nov-22-04	Dec-07-04	Jan-07-05
Trt-E	Eval Interval			59 DA-A		59 DA-A		59 DA-A	74 DA-A	88 DA-A
Trt	Treatment		Rate							
No.	Name	Rate	Unit	1	2	3	4	5	6	7
1	No herbicide			0	0	0	0	0	0	0
	No Vapam									
2	No herbicide			0	0	69	63	59	70	68
	Vapam	25	gal/a							
3	No herbicide			0	0	80	85	75	88	79
	Vapam	50	gal/a							
4	No herbicide			0	0	78	85	71	71	72
	Vapam	75	gal/a							
5	Dacthal	6	lb ai/a	5	0	98	99	66	66	75
	Goal As needed after 2 If	0.0625	lb ai/a							
	No Vapam									
6	Dacthal	6	lb ai/a	4	0	99	99	85	79	90
	Goal As needed after 2 If	0.0625	lb ai/a							
	Vapam	25	gal/a							
7	Dacthal	6	lb ai/a	4	0	99	99	93	96	95
	Goal As needed after 2 If	0.0625	lb ai/a							
	Vapam	50	gal/a							
8	Dacthal	6	lb ai/a	6	0	99	99	89	92	91
	Goal As needed after 2 If	0.0625	lb ai/a							
	Vapam	75	gal/a							
9	Dacthal	3	lb ai/a	3	0	99	99	69	57	68
	Dacthal	3	lb ai/a							
	Goal As needed after 2 If	0.0625	lb ai/a							
	No Vapam									
10	Dacthal	3	lb ai/a	0	0	99	99	87	82	90
	Dacthal	3	lb ai/a							
	Goal As needed after 2 If	0.0625	lb ai/a							
	Vapam	25	gal/a							
11	Dacthal	3	lb ai/a	1	0	99	99	93	94	94
	Dacthal	3	lb ai/a							
	Goal As needed after 2 If	0.0625	Ib ai/a							
4.2	vapani Daathal	50	yaı/a							
12	Dacthal	3	Ib ai/a	2	0	99	99	95	93	95
		3	ib al/a							
	Vanam	0.0025	B/IS UI							
		73	yai/a			. –	<u>.</u>	10.5		10 -
LSD	(P=.05)			5.1	0.0	4.7	8.1	12.6	15.2	12.5
Star	iuaru Deviation			3.5 194 54	0.0	3.Z	0.C	0.8 11.01	10.5). ک 11 20
UV				104.04	0.0	3.0Z	0.01	11.91	14.20	11.59

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

						<u> </u>
Wee	ed Code		OEOLA	DIGSA		harvest
Crop	Code				onion	onion
Rati	ng Data Type		control	control	stand cts	Wt
Rati	ng Onit ng Date		Mar-30-05	Dec-07-04	#/10 Mar-31-05	10/3.3 May-18-05
Trt-E	Eval Interval		Mai-30-03	Dec-07-04	Mai - 5 i - 05	Way-10-00
Trt	Treatment F	Rate				
No.	Name Rate L	Jnit	8	9	10	11
1	No herbicide		0	0	29	2
	No Vapam					
2	No herbicide		38	33	33	3
	Vapam 25 g	gal/a				
3	No herbicide		64	18	29	4
	Vapam 50 g	gal/a				
4	No herbicide		59	70	31	3
	Vapam 75 g	gal/a				
5	Dacthal 6 lk	b ai/a	20	99	26	2
	Goal As needed after 2 if 0.0625 if	b al/a				
6		h ai/a	45	00	20	4
0	Goal As needed after 2 If 0.0625 If	b ai/a h ai/a	40	99	29	4
	Vapam 25 d	al/a				
7	Dacthal 6 lt	b ai/a	79	99	36	5
-	Goal As needed after 2 lf 0.0625 lb	b ai/a				-
	Vapam 50 g	gal/a				
8	Dacthal 6 lk	b ai/a	73	99	30	4
	Goal As needed after 2 lf 0.0625 lk	b ai/a				
	Vapam 75 g	gal/a				
9	Dacthal 3 lk	b ai/a	25	97	28	3
	Dacthal 3 It	b ai/a				
	No Vanam	u al/a				
10	Dacthal 3 lk	h ai/a	49	gg	30	4
10	Dacthal 3 lk	b ai/a	10	00	00	·
	Goal As needed after 2 lf 0.0625 lb	b ai/a				
	Vapam 25 g	gal/a				
11	Dacthal 3 lk	b ai/a	78	99	31	5
	Dacthal 3 lk	b ai/a				
	Goal As needed after 2 lf 0.0625 lk	b ai/a				
4.2	vapam 50 g	jai/a				
12	Dacthal 3 lt	b ai/a	79	99	30	4
	Goal As needed after 2 If 0 0625	b ai/a h ai/a				
	Vapam 75 g	gal/a				
LSD	(P=.05)		11.1	20.7	7.4	1.1
Stan	ndard Deviation		7.7	14.4	5.2	0.6
CV			15.17	18.93	17.15	18.64

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

Trial ID: Oni	on1-05	Study Dir.: Stanley Culpepper	2
Location: VOR	FI	investigator: Stanley Culpepper	• •
	GENERAL TRIA	L INFORMATION	
Study Directo	r: Stanley Culpepper	Title: Ext. We	eed Science
Affiliation:	Univ. of Georgia		
Postal Code:	31794		
Investigator:	Stanley Culpepper	Title: Ex. wee	ed 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:	Sep-24-04
Country:	U.S.A.	Planned Completion Dat	e:
E-Longitude c	f LL Corner °:	N-Latitude of LL Corner	°:
Altitude of L	L Corner: Unit:	Angle y-axis to North	°:
Directions:			
	COOPERATO	DR/LANDOWNER	
Cooperator:		Country:	
Drg:		Phone No:	
Address 1:		Fax No:	
Address 2:			
City:			
State/Prov:			
Postal Code:			
Conducted Und	ler GLP (Y/N): N	Conducted Under GEP (Y/N): N	1
Guidelines:	Guideline Des	scription:	
		-	
Dbjective:			
-			
longlugion -			

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	OEOLA	cutleaf eveningprimrose	
2.	PORPI	pink purslane	
3.	DIGSA	large crabgrass	

Crop 1:	onion	seeded or	nion			v.	ariety:	Grannex	33 PRR
Planting	Date: Oct	t-05-04		Plant	ing Meth	lod: se	eded		
Rate: 4	ft		Depth	0.2	in	Pere	nnial Ag	e:	
Row Spac:	ing: 15	inch	Spacing	Within	Row: 4	in	Seed	Bed: fl	at
Soil Temp	perature:	83 F	Soil Mo	oisture:	: irrigat	ed	Emergen	ce Date:	Oct-13-04
			SI	re and i	DESIGN				
Plot Widt	th, Unit:	6 1	FT P]	lot Leng	gth, Unit	: 20	FT	Reps:	4
Site Type Tillage :	e: rese Type: conv	earch sta ventiona	ation l	Stud	ly Design	: FACT	ORIAL		

Trial Initiation Comments:

	Previous Crops	Previous Pesticides	Year
1.			

MAINTENANCE

Field Prep./Maintenance:

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

%	Sand:	86	% OM:	0.47
%	silt:	10	pH:	5.8
%	Clay:	4	CEC:	

SOIL DESCRIPTION **Texture:** sand Soil Name: Tifton sandy loam

lay: 4	CEC:		Fert. Leve	1:	
-			NAL MEASUPED	FIFMENTS	
		ADDIIIO	TAD TEADORED		

ADDITIONAL		110
Element	Quantity	Unit

|--|

	Date	Time	Amount	Unit	Туре	Interval	Unit
1.							

Overall Moisture Conditions: .

Closest Weather Station: _____ Distance: ____ Unit: ___

	APPLICATION DESCRIPTION								
		A		в		C		D	
Application Date:	Sep-	24-04	Oct	-05-04	Oct	-14-04	Oct	-29-04	
Time of Day:	11:00am		10:00am		9:30am		8:30am		
Application Method:	Broadcast		Broadcast		Broadcast		Broadcast		
Application Timing:	preplant		PRE	1	spike trt		21f	onion	
Applic. Placement:	inje	ct4"	on	soil	ove	rtop	ove	rtop	
Air Temp., Unit:	81	F	83	F	66	F	71	F	
% Relative Humidity:	68		49		44		67		
Wind Velocity, Unit:	1.4	mph	2	mph	3	mph	0	mph	
Dew Presence (Y/N):	n		n						
Water Hardness:									
Soil Temp., Unit:	73	F	75	F	68	F	69	F	
Soil Moisture:	mois	t	moi	st	moi	st	fai	r	
% Cloud Cover:	23		15		0		100		

CROP STAGE AT EACH APPLICATION

	A	В	C	D
Crop 1 Code, Stage:	onion preplant	onion PRE	onion spike	onion 21f
Stage Scale:	not up	plant day	1 lf	1-2 leaf
Height, Unit:	0 inch	0 inch	0.75 inch	2.5 inch

WEED	STAGE	AT	EACH	APPLICATION

	A	В	C	D	
Weed 1 Code, Stage:	OEOLA preplant	OEOLA PRE	OEOLA spike	OEOLA 2-leaf	
Stage Scale:	not up	not up	0.15 inch	upto 1.5"	
Density, Unit:			12 ydsq	12 ydsq	
Weed 2 Code, Stage:	PORPI preplant	ORPI preplant PORPI PRE PORPI spike		PORPI 2-leaf	
Stage Scale:	not up	not up	0.15 inch	1 inch	
Density, Unit:			3 ydsq	3 ydsq	
Weed 3 Code, Stage:	DIGSA preplant	DIGSA PRE	DIGSA spike	DIGSA 2-leaf	
Stage Scale:	not up	not up 0.15 inch		1 inch	
Density, Unit:			3 ydsq	3 ydsq	

APPLICATION EQUIPMENT

	A		В		С		D
Appl. Equipment:	Vapam rig	backr	pack	backp	pack	back	pack
Operating Pressure:	40	23		23		23	
Nozzle Type:		flat	fan	flat	fan	flat	fan
Nozzle Size:		11002	2	11002	2	11002	2
Nozzle Spacing, Unit:		18	inch	18	inch	18	inch
Nozzles/Row:							
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.:	injected						
Hours to Incorp.:	0						
Incorp. Depth, Unit:	4 inch						
Carrier:	none	water	<u></u>	water	2	wate	r
Spray Volume, Unit:		14.8	GPA	14.8	GPA	14.8	GPA
Spray pH:							
Propellant:	PTO	CO2		CO2		CO2	
Tank Mix (Y/N):	Ν	Y		Y		Y	

Trt No	Treatment Application Comment