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Seeded onion weed management systems.

Trial ID: Veg2-08(onion)

Study Dir.: Jona Edwards

Location: VORF

Investigator: Stanley Culpepper

Reps: 3

Plots: 6 by 20 feet

Spray vol: 14.8 gal/ac

Mix size: 1 liters (min .46301)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Form Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Plot No. By Rep		
										1	2	3
1	Vapam 25 G							preplant A		101	203	305
	Dacthal	6		F	4	PT/A	PRE	B	33.78 ml/mx			
	Prowl	3.8		L	2	PT/A	loop	C	16.89 ml/mx			
	Goal	4		L	2	OZ/A	POST	E	1.056 ml/mx			
2	Dacthal	6		F	4	PT/A	PRE	B	33.78 ml/mx	102	202	306
	Prowl	3.8		L	2	PT/A	loop	C	16.89 ml/mx			
	Goal	4		L	2	OZ/A	POST	E	1.056 ml/mx			
	Vapam 25 G							preplant A		103	201	303
3	Dacthal	6		F	4	PT/A	PRE	B	33.78 ml/mx			
	Prowl	3.8		L	2	PT/A	loop	C	16.89 ml/mx			
	Dual Magnum	7.62		L	12	OZ/A	3 leaf	D	6.334 ml/mx			
	Goal	4		L	2	OZ/A	POST	E	1.056 ml/mx			
4	Dacthal	6		F	4	PT/A	PRE	B	33.78 ml/mx	104	206	304
	Prowl	3.8		L	2	PT/A	loop	C	16.89 ml/mx			
	Dual Magnum	7.62		L	12	OZ/A	3 leaf	D	6.334 ml/mx			
	Goal	4		L	2	OZ/A	POST	D	1.056 ml/mx			
5	Vapam 25 G							preplant A		105	205	301
	Dacthal	6		F	6	PT/A	PRE	B	50.67 ml/mx			
	Prowl	3.8		L	2	PT/A	loop	C	16.89 ml/mx			
	Dual Magnum	7.62		L	12	OZ/A	3 leaf	D	6.334 ml/mx			
6	Goal	4		L	2	OZ/A	POST	E	1.056 ml/mx			
	Non-treated									106	204	302

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
232.239	ml	Dacthal	6	F	
105.563	ml	Prowl	3.8	L	
6.598	ml	Goal	4	L	
23.754	ml	Dual Magnum	7.62	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.

Trial Comments

OBJECTIVE: Develop weed management programs for seeded onions.

Onion Response:

1. Dacthal PRE at 4 pt/A stunted onions up to 8%; stunting was 13% with 6 pt/A.
2. Dual POST to 3 leaf onion increased onion stunting 10 to 20%.

Herbicide Control:

1. All programs provided excellent control throughout the season.

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Wild Radish:

1. All programs provided excellent control during early and mid-season. By late season, control was similar among programs and ranged from 65 to 73%.

Swinecress:

1. All programs provided excellent control throughout the season.

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Weed Code		onion injury	onion injury	onion injury	onion injury	LAMAM	LAMAM	RAPRA	RAPRA	
Crop Code										
Rating Data Type		Nov-05-07	Dec-07-07	Dec-20-07	Feb-05-08	control	control	control	control	
Rating Date		14 DA-B	46 DA-B	59 DA-B	106 DA-B	46 DA-B	59 DA-B	46 DA-B	59 DA-B	
Trt-Eval Interval										
Trt No.	Treatment Name	Rate								
		Rate Unit	1	2	3	4	5	6	7	
1	Vapam 25 G Dacthal Prowl Goal	4 PT/A 2 PT/A 2 OZ/A	8 b	8 a	13 b	3 ab	99 a	98 a	97 a	98 a
2	Dacthal Prowl Goal	4 PT/A 2 PT/A 2 OZ/A	8 b	7 ab	13 b	0 b	99 a	98 a	88 b	92 b
3	Vapam 25 G Dacthal Prowl Dual Magnum Goal	4 PT/A 2 PT/A 12 OZ/A 2 OZ/A	8 b	5 ab	32 a	4 ab	99 a	99 a	99 a	99 a
4	Dacthal Prowl Dual Magnum Goal	4 PT/A 2 PT/A 12 OZ/A 2 OZ/A	7 b	10 a	23 ab	4 ab	99 a	99 a	92 ab	96 ab
5	Vapam 25 G Dacthal Prowl Dual Magnum Goal	6 PT/A 2 PT/A 12 OZ/A 2 OZ/A	13 a	8 a	28 a	13 a	99 a	99 a	98 a	99 a
6	Non-treated		0 c	0 b	0 c	0 b	0 b	0 b	0 c	0 c
LSD (P=.05)			2.9	7.4	12.5	9.4	0.5	2.0	6.8	5.5
Standard Deviation			1.6	4.0	6.9	5.2	0.3	1.1	3.7	3.0
CV			21.08	63.37	37.59	129.18	0.36	1.33	4.72	3.72
Bartlett's X2			0.0	3.98	6.805	0.612	0.0	0.857	15.395	4.781
P(Bartlett's X2)			1.00	0.264	0.147	0.894	1.00	0.355	0.004*	0.092

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)

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Weed Code	RAPRA	RAPRA	COPSS	COPSS	COPSS	COPSS		
Crop Code								
Rating Data Type	control	control	control	control	control	control		
Rating Date	Feb-05-08	Mar-28-08	Dec-07-07	Dec-20-07	Feb-02-08	Mar-28-08		
Trt-Eval Interval	106 DA-B	158 DA-B	46 DA-B	59 DA-B	103 DA-B	158 DA-B		
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate		
		Unit						
			9	10	11	12	13	14
1	Vapam 25 G		99 a	71 a	99 a	96 a	99 a	99 a
	Dacthal	4 PT/A						
	Prowl	2 PT/A						
	Goal	2 OZ/A						
2	Dacthal	4 PT/A	96 a	65 a	93 a	97 a	99 a	99 a
	Prowl	2 PT/A						
	Goal	2 OZ/A						
3	Vapam 25 G		99 a	73 a	99 a	99 a	96 a	98 ab
	Dacthal	4 PT/A						
	Prowl	2 PT/A						
	Dual Magnum	12 OZ/A						
	Goal	2 OZ/A						
4	Dacthal	4 PT/A	99 a	70 a	93 a	96 a	98 a	95 b
	Prowl	2 PT/A						
	Dual Magnum	12 OZ/A						
	Goal	2 OZ/A						
5	Vapam 25 G		99 a	73 a	99 a	99 a	99 a	99 a
	Dacthal	6 PT/A						
	Prowl	2 PT/A						
	Dual Magnum	12 OZ/A						
	Goal	2 OZ/A						
6	Non-treated		0 b	0 b	0 b	0 b	0 b	0 c
LSD (P=.05)			3.9	35.0	7.3	4.7	4.4	3.8
Standard Deviation			2.1	19.3	4.0	2.6	2.4	2.1
CV			2.59	32.91	5.01	3.18	2.94	2.55
Bartlett's X2			0.0	0.011	0.99	1.639	1.144	0.802
P(Bartlett's X2)			.	1.00	0.32	0.441	0.285	0.37

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)

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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: 5.8	Texture: loamy sand
% Silt: 10	pH: 0.47	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:	Nov-01-07	Oct-22-07	Nov-05-07	Dec-07-07	Dec-20-07
Time of Day:	11 am	11:00 am	9:30 am	4:30 pm	10:00 am
Application Method:	broadcast	broadcast	broadcast	broadcast	broadcast
Application Timing:	preplant	pre-emerg	1 leaf	3-4 leaf	POST
Applic. Placement:	6 in deep	on soil	overtop	overtop	overtop
Air Temp., Unit:	85 F	75.8 f	65 f	60 f	59 f
% Relative Humidity:	66	86	52	73	69
Wind Velocity, Unit:	5 mph	2.7 mph	3 mph	1 mph	2.3 mph
Dew Presence (Y/N):	n	n	n	n	n
Water Hardness:					
Soil Temp., Unit:	88 F	73.6 f	60 f	59 f	58 f
Soil Moisture:	moist	moist	moist	moist	wet
% Cloud Cover:	20	100	0	0	0

CROP STAGE AT EACH APPLICATION

	A	B	C	D	E
Crop 1 Code, Stage:	ALLCE preplant	ALLCE PRE	ALLCE 1-1f	ALLCE 3 1f	ALLCE POST
Stage Scale:	preplant	pre	1-leaf	3-4 leaf	5 leaf
Height, Unit:	0 in	0 in	0.5 in	5 in	7 inch

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WEED STAGE AT EACH APPLICATION

	A	B	C	D	E
Weed 1 Code, Stage:	LAMAM preplant	LAMAM PRE	LAMAM 1-lf	LAMAM 3-lf	LAMAM POST
Stage Scale:	not up	not up	0.1 inch	1 in	3 in
Density, Unit:	0 ydsq	0 ydsq	35 ydsq	35 ydsq	35 ydsq
Weed 2 Code, Stage:	COPSS preplant	COPSS PRE	COPSS 1-lf	COPSS 4 in	COPSS POST
Stage Scale:	not up	not up	not up	1 in	3 in
Density, Unit:	0 ydsq	0 ydsq	0 ydsq	8 ydsq	8 ydsq
Weed 3 Code, Stage:	RAPRA preplant	RAPRA PRE	RAPRA 1-lf	RAPRA 4 in	RAPRA POST
Stage Scale:	not up	not up	not up	1 inch	3 in
Density, Unit:	0 ydsq	0 ydsq	0 ydsq	5 ydsq	5 ydsq

APPLICATION EQUIPMENT

	A	B	C	D	E
Appl. Equipment:	Vapam rig	backpack	backpack	backpack	backpack
Operating Pressure:	29	24	24	24	24
Nozzle Type:		flat fan	flat fan	flat fan	flat fan
Nozzle Size:		11002	11002	11002	11002
Nozzle Spacing, Unit:	4 inch	18 in	18 in	18 in	18 in
Nozzles/Row:	18	2	2	2	2
Band Width, Unit:					
Boom Length, Unit:		4.5 ft	4.5 ft	4.5 ft	4.5 ft
Boom Height, Unit:		15 in	15 in	15 in	15 in
Ground Speed, Unit:		3 mph	3 mph	3 mph	3 mph
Incorporation Equip.:					
Hours to Incorp.:	0				
Incorp. Depth, Unit:	6 inch				
Carrier:	none	water	water	water	water
Spray Volume, Unit:	25 GPA	14.8 GPA	14.8 GPA	14.8 GPA	14.8 GPA
Spray pH:					
Propellant:	pump	CO2	CO2	CO2	CO2
Tank Mix (Y/N):	N	Y	Y	Y	Y

Trt No	Treatment Application Comment