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Seeded onion response to Dual Magnum, Outlook, and Prowl H20.

Trial ID: Veg1-07 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	Dual Magnum PRE Application	7.62	L	8	OZ/A		A A	4.223 ml/mx	101	210	304	412
2	Dual Magnum 1 leaf application	7.62	L	8	OZ/A		B B	4.223 ml/mx	102	215	312	418
3	Dual Magnum 6 leaf application	7.62	L	8	OZ/A			4.223 ml/mx	103	207	310	411
4	Dual Magnum PRE Application	7.62	L	16	OZ/A		A A	8.446 ml/mx	104	209	320	405
5	Dual Magnum 1 leaf application	7.62	L	16	OZ/A		B B	8.446 ml/mx	105	211	303	413
6	Dual Magnum 6 leaf application	7.62	L	16	OZ/A			8.446 ml/mx	106	214	318	419
7	Outlook PRE Application	6	L	8	OZ/A		A A	4.223 ml/mx	107	213	309	420
8	Outlook 1 leaf application	6	L	8	OZ/A		B B	4.223 ml/mx	108	206	315	407
9	Outlook 6 leaf application	6	L	8	OZ/A			4.223 ml/mx	109	203	305	410
10	Outlook PRE Application	6	L	16	OZ/A		A A	8.446 ml/mx	110	212	314	417
11	Outlook 1 leaf application	6	L	16	OZ/A		B B	8.446 ml/mx	111	202	316	409
12	Outlook 6 leaf application	6	L	16	OZ/A			8.446 ml/mx	112	220	319	404
13	Prowl H20 PRE Application	3.8	L	1	PT/A		A A	8.445 ml/mx	113	201	302	403
14	Prowl H20 1 leaf application	3.8	L	1	PT/A		B B	8.445 ml/mx	114	216	308	415
15	Prowl H20 6 leaf application	3.8	L	1	PT/A			8.445 ml/mx	115	218	313	408
16	Prowl H20 PRE Application	3.8	L	2	PT/A		A A	16.89 ml/mx	116	204	311	402
17	Prowl H20 1 leaf application	3.8	L	2	PT/A		B B	16.89 ml/mx	117	219	306	401
18	Prowl H20 6 leaf application	3.8	L	2	PT/A			16.89 ml/mx	118	205	307	416
19	Non-treated control								119	208	317	414
20	Non-treated control								120	217	301	406

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
47.509	ml	Dual Magnum	7.62	L	
47.509	ml	Outlook	6	L	
95.007	ml	Prowl H20	3.8	L	

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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.	Tr> N>	Form Conc	Form Type	Rate	Rate Unit	Plot No. By Rep

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code

* '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: To determine seeded onion response to Dual Magnum, Outlook, and Prowl H20.

PRE treatments - Dual Magnum, Outlook, and Prowl H2O all caused severe injury when applied PRE.

1-leaf treatments - Dual Magnum caused 81 to 97% injury 14 weeks after treatment. Outlook caused 41 to 72% injury 14 weeks after treatment. Prowl H2O was safe to onion with injury never exceeding 16%.

6-leaf treatments - due to a heavy weed infestation, 6 leaf applications were not made.

Conclusion - Dual Magnum and Outlook are not safe to apply either PRE or at the 1-leaf stage of onion. Prowl H2O caused severe injury when applied PRE. However, Prowl H2O was found safe to onion when applied POST at the 1-leaf stage.

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Seeded onion response to Dual Magnum, Outlook, and Prowl H20.

Trial ID: Veg1-07 Study Dir.: Stanley Culpepper
Location: VORF Investigator: Stanley Culpepper

Crop Code	ALLCE	ALLCE	ALLCE	ALLCE	ALLCE
Rating Data Type	Injury	Injury	Injury	Injury	Injury
Rating Unit	%	%	%	%	%
Rating Date	Nov-06-06	Nov-25-06	Dec-11-06	Dec-19-06	Feb-13-07
Crop Stage	1 leaf	1-2 leaf	2 leaf	3 leaf	5 leaf
Assessed By	AWM	AWM	AWM	AWM	AWM
Trt-Eval Interval	26 DA-A	19 DA-B	35 DA-B	43 DA-B	99 DA-B
Trt No. / Treatment Name / Rate / Rate Unit	1	2	3	4	5
1 Dual Magnum 8 OZ/A PRE Application	58 bc	83 a	96 a	93 ab	94 ab
2 Dual Magnum 8 OZ/A 1 leaf application	0 e	16 de	49 d	60 ef	81 bc
3 Dual Magnum 8 OZ/A 6 leaf application	0 e	0 f	0 g	0 h	0 e
4 Dual Magnum 16 OZ/A PRE Application	60 b	86 a	99 a	99 a	99 a
5 Dual Magnum 16 OZ/A 1 leaf application	0 e	38 c	77 bc	84 bc	98 a
6 Dual Magnum 16 OZ/A 6 leaf application	0 e	0 f	0 g	0 h	0 e
7 Outlook 8 OZ/A PRE Application	48 d	63 b	75 c	70 de	80 c
8 Outlook 8 OZ/A 1 leaf application	0 e	19 de	33 e	35 g	41 d
9 Outlook 8 OZ/A 6 leaf application	0 e	0 f	0 g	0 h	0 e
10 Outlook 16 OZ/A PRE Application	50 cd	68 b	85 b	81 cd	84 bc
11 Outlook 16 OZ/A 1 leaf application	0 e	25 d	51 d	54 f	73 c
12 Outlook 16 OZ/A 6 leaf application	0 e	0 f	0 g	0 h	0 e
13 Prowl H20 1 PT/A PRE Application	74 a	88 a	95 a	93 ab	94 ab
14 Prowl H20 1 PT/A 1 leaf application	0 e	4 f	3 g	3 h	3 e
15 Prowl H20 1 PT/A 6 leaf application	0 e	0 f	0 g	0 h	0 e
16 Prowl H20 2 PT/A PRE Application	81 a	94 a	97 a	96 a	98 a
17 Prowl H20 2 PT/A 1 leaf application	0 e	13 ef	16 f	11 h	6 e
18 Prowl H20 2 PT/A 6 leaf application	0 e	0 f	0 g	0 h	0 e
19 Non-treated control	0 e	0 f	0 g	0 h	0 e
20 Non-treated control	0 e	0 f	0 g	0 h	0 e
LSD (P=.05)	8.6	10.8	9.3	11.1	12.5
Standard Deviation	6.1	7.7	6.6	7.8	8.9
CV	32.87	25.77	16.94	20.14	20.89
Bartlett's X2	3.458	11.534	33.865	37.111	54.397
P(Bartlett's X2)	0.63	0.40	0.001*	0.001*	0.001*

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Rating Data Type	Injury	Injury	Injury	Injury	Injury
Rating Unit	%	%	%	%	%
Rating Date	Nov-06-06	Nov-25-06	Dec-11-06	Dec-19-06	Feb-13-07
Crop Stage	1 leaf	1-2 leaf	2 leaf	3 leaf	5 leaf
Assessed By	AWM	AWM	AWM	AWM	AWM
Trt-Eval Interval	26 DA-A	19 DA-B	35 DA-B	43 DA-B	99 DA-B

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

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Trial ID: Veg1-07 Study Dir.: Stanley Culpepper
Location: VORF Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Andrew MacRae **Title:** Ext. Weed Science
Affiliation: Univ. of Georgia
Postal Code: 31794

Investigator: Stanley Culpepper **Title:** Ext. Weed Science
Affiliation: Univ. of Georgia
Postal Code: 31794

TRIAL LOCATION

City: Vidalia **Trial Status:** completed
State/Prov.: GA **Trial Reliability:** good
Postal Code: ________ **Initiation Date:** Oct-11-06
Country: USA **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: To determine seeded onion response to Dual Magnum, Outlook, and Prowl H20.

Conclusions:

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	OEOLA	Cutleaf eveningprimrose	Oenothera laciniata
2.	CARHI	Hairy bittercress	Cardamine hirsuta
3.	COPDI	Swinecress	Coronopus didymus (L.) Sm.
4.	SINAR	Wild mustard	Sinapis arvensis

Crop 1: ALLCE ONION, DRY BULB **Variety:** Century
Planting Date: Oct-11-06 **Planting Method:** SEEDED
Rate: 87120 S/A **Depth:** 0.25 IN **Perennial Age:** ____ _____
Row Spacing: 15 IN **Spacing Within Row:** 4 IN **Seed Bed:** COARSE
Soil Temperature: 79 F **Soil Moisture:** Moist **Emergence Date:** Oct-18-06

SITE AND DESIGN

Plot Width, Unit: 6 FT **Plot Length, Unit:** 20 FT **Reps:** 4
Site Type: Vidialia Onion Research Center
Tillage Type: Conventional **Study Design:** FACTORIAL

Trial Initiation Comments:

	Previous Crops	Previous Pesticides	Year
1.			

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MAINTENANCE

Field Prep./Maintenance: Irrigation was applied 2 days prior to the land being rototilled and the beds being formed. Following bed forming, onions were immediately seeded using a Monosem vacuum assisted planter. Dacthal at 4 pts/A was applied immediately following seeding. Irrigation (0.25 inches) was applied within 2 hours of planting. Irrigation was applied twice daily at a rate of 0.25 inches per application. A second application of Dacthal at 4pts/A was made 9 days later (10-20-06) followed by irrigation. Goal 2XL at 2 oz/A was applied to 1 lf onion on 6-10-06 to control the cutleaf evening primrose that escaped the Dacthal treatments.

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

	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: irrigated often
Closest Weather Station: ____ **Distance:** _____ **Unit:** __

APPLICATION DESCRIPTION

	A	B
Application Date:	Oct-11-06	Nov-06-06
Time of Day:	13:30	09:00
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	1 leaf
Applic. Placement:	Soil	Soil
Air Temp., Unit:	81 F	66 F
% Relative Humidity:	59	71
Wind Velocity, Unit:	4 mph	4 mph
Dew Presence (Y/N):	N	N
Water Hardness:		
Soil Temp., Unit:	79 F	65 F
Soil Moisture:	Moist	Moist
% Cloud Cover:	5	15

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	ALLCE .	ALLCE .
Stage Scale:	Not emerg	1 leaf
Height, Unit:		

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WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	OEOLA .	OEOLA most coty
Stage Scale:	Not emerg	cotyl-2lf
Density, Unit:	. .	3 FT2
Weed 2 Code, Stage:	CARHI .	CARHI most coty
Stage Scale:	Not emerg	cotyl-4lf
Density, Unit:	. .	4 FT2
Weed 3 Code, Stage:	COPDI .	COPDI most coty
Stage Scale:	Not emerg	cotyl-2lf
Density, Unit:	. .	2 FT2
Weed 4 Code, Stage:	SINAR .	SINAR most 4lf
Stage Scale:	Not emerg	cotyl-6lf
Density, Unit:	. .	5 FT2

APPLICATION EQUIPMENT

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

Trt No	Treatment Application Comment