

University of Georgia

Seeded turnip and transplant cabbage response to Dual Magnum.

Trial ID: Veg11-06
Location: Ponder 5137

Study Dir.: Stanley Culpepper
Investigator: Stanley Culpepper

Reps: 4 Plots: 6 by 25 feet
Spray vol: 14.8 gal/ac Mix size: 1 liters (min .77168)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg	Code	Amt Product to Measure	Plot No. By Rep			
									1	2	3	4
1	Dual Magnum	7.62	L	1	PT/A	PP1	A	8.445 ml/mx	101	202	304	402
2	Dual Magnum	7.62	L	1	PT/A	PP2	B	8.445 ml/mx	102	206	305	406
3	Dual Magnum	7.62	L	1	PT/A	POST	C	8.445 ml/mx	103	205	303	401
4	Dual Magnum	7.62	L	1.5	PT/A	PP1	A	12.67 ml/mx	104	201	302	405
5	Dual Magnum	7.62	L	1.5	PT/A	PP2	B	12.67 ml/mx	105	203	301	403
6	Dual Magnum	7.62	L	1.5	PT/A	POST	C	12.67 ml/mx	106	204	306	404

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
79.172	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: Determine the most effective application timing for Dual Magnum in cabbage and turnip.

WEED RESPONSE:

- All treatments provided excellent control of henbit.
- All treatments except 1 pt applied prior to hole poking provided excellent control of swinecress.
- All treatments provided excellent control of corn spurry.

VISUAL TURNIP INJURY:

- No difference was noted among application methods, a rate effect was noted at 43 d after application.
- Injury at 43 d after application was severe and suggest that applying this product at no more than 12 oz/A as a POST application at least one week after emergence is still advised.

TURNIP HEIGHTS (measured 10 plants per plot):

- Application method had no impact, higher rates caused more stunting.

TURNIP BIOMASS:

- At 1.5 pt/A, more biomass was measured with the POST application when compared to PP1 or PP2 applications.
- Higher rates reduced biomass.

VISUAL CABBAGE INJURY:

- No difference was noted among application methods, a rate effect was noted at 43 d after application.
- Injury at 43 d after application was severe and suggest that applying this product at no more than 12 oz/A as a POST application at least one week after transplant is still advised.

CABBAGE HEIGHTS AND YIELD:

- Application method had no impact, higher rates generally caused more stunting.

CONCLUSIONS:

- Apply no more than 12 oz/A.
- Applications in turnip should be at least one week after emergence.

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3. Application in cabbage should be at least one week after transplanting.

GENERAL COMMENTS:

1. PP1 was applied after seeding turnip but prior to poking hole for cabbage transplant.
2. PP2 was applied after seeding turnip and after poking hole for cabbage transplant.
3. POST was applied 2 d after seeding turnip and immediately after transplanting cabbage.
4. Irrigation was applied immediately after POST treatments.

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Study Dir.: Stanley Culpepper
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Weed Code	LAMAM	COPSS	Corn Spurry control	BRSRR injury	BRSRR injury	BRSRR injury	plant 1 BRSRR ht	plant 2 BRSRR ht		
Rating Data Type	control	control	control	injury	injury	injury	ht	ht		
Rating Unit	percent	percent	percent	percent	percent	percent	cm	cm		
Rating Date	Mar-23-06	Mar-23-06	Mar-23-06	Feb-27-06	Mar-07-06	Mar-23-06	Mar-27-06	Mar-27-06		
Trt-Eval Interval	43 DA-A	43 DA-A	43 DA-A	19 DA-A	27 DA-A	43 DA-A	47 DA-A	47 DA-A		
ARM Action Codes										
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	Rate		
1	2	3	4	5	6	7	8			
1	Dual Magnum	1 PT/A	100 a	80 b	100 a	8 a	13 a	36 b	8 a	8 a
2	Dual Magnum	1 PT/A	100 a	95 a	100 a	15 a	14 a	39 b	6 ab	6 a
3	Dual Magnum	1 PT/A	100 a	96 a	100 a	13 a	13 a	39 b	7 ab	7 a
4	Dual Magnum	1.5 PT/A	100 a	95 a	100 a	12 a	13 a	63 a	3 b	4 a
5	Dual Magnum	1.5 PT/A	100 a	100 a	100 a	11 a	16 a	63 a	4 b	6 a
6	Dual Magnum	1.5 PT/A	100 a	100 a	100 a	13 a	16 a	63 a	5 ab	4 a
LSD (P=.05)		0.0	7.9	0.0	6.0	8.4	5.0	3.2	3.7	
Standard Deviation		0.0	5.2	0.0	4.0	5.6	3.3	2.1	2.5	
CV		0.0	5.52	0.0	33.95	40.09	6.58	39.33	43.58	
Bartlett's X2		0.0	1.119	0.0	7.591	7.504	3.258	10.545	13.346	
P(Bartlett's X2)		.	0.773	.	0.18	0.186	0.66	0.061	0.02*	

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

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Weed Code	plant 3	plant 4	plant 5	plant 6	plant 7	plant 8	plant 9	plant 10			
Crop Code	BRSRR	BRSRR	BRSRR	BRSRR	BRSRR	BRSRR	BRSRR	BRSRR			
Rating Data Type	ht	ht	ht	ht	ht	ht	ht	ht			
Rating Unit	cm	cm	cm	cm	cm	cm	cm	cm			
Rating Date	Mar-27-06	Mar-27-06	Mar-27-06	Mar-27-06	Mar-27-06	Mar-27-06	Mar-27-06	Mar-27-06			
Trt-Eval Interval	47 DA-A	47 DA-A	47 DA-A	47 DA-A	47 DA-A	47 DA-A	47 DA-A	47 DA-A			
ARM Action Codes											
Trt No.	Treatment Name	Rate	Unit	9	10	11	12	13	14	15	16
1	Dual Magnum	1	PT/A	7 a	6 ab	6 a	7 a	6 a	9 a	9 a	8 a
2	Dual Magnum	1	PT/A	6 ab	5 abc	6 a	6 ab	7 a	7 abc	6 bc	6 ab
3	Dual Magnum	1	PT/A	7 a	7 a	6 ab	7 a	6 a	7 ab	7 ab	7 ab
4	Dual Magnum	1.5	PT/A	3 c	4 c	4 c	4 b	3 b	4 cd	3 d	4 bc
5	Dual Magnum	1.5	PT/A	4 bc	4 bc	4 c	4 b	3 b	3 d	4 cd	3 c
6	Dual Magnum	1.5	PT/A	5 abc	4 bc	5 bc	6 ab	5 a	4 bcd	4 cd	5 abc
LSD (P=.05)				2.1	2.1	1.5	2.1	1.6	3.0	2.3	2.6
Standard Deviation				1.4	1.4	1.0	1.4	1.0	2.0	1.5	1.7
CV				27.6	28.34	19.59	26.93	20.91	35.96	27.28	30.9
Bartlett's X2				9.788	4.3	4.427	3.645	11.324	16.438	2.031	5.729
P(Bartlett's X2)				0.081	0.367	0.49	0.602	0.045*	0.006*	0.845	0.333

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

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Weed Code	Avg.10pl BRSRR	Harv 1 BRSRR	BRSOL	BRSOL	BRSOL	plant 1 BRSOL	plant 2 BRSOL	plant 3 BRSOL			
Crop Code	ht	biomass wt	injury	injury	injury	ht	ht	ht			
Rating Data Type	cm	lb/5ft	percent	percent	percent	cm	cm	cm			
Rating Unit	Mar-27-06	Apr-06-06	Feb-27-06	Mar-07-06	Mar-23-06	Mar-27-06	Mar-27-06	Mar-27-06			
Rating Date	47 DA-A	57 DA-A	19 DA-A	27 DA-A	43 DA-A	47 DA-A	47 DA-A	47 DA-A			
Trt-Eval Interval	T1										
ARM Action Codes											
Trt No.	Treatment Name	Rate	Unit	17	18	19	20	21	22	23	24
1	Dual Magnum	1	PT/A	7 a	2 a	8 a	19 a	38 c	15 a	15 a	9 a
2	Dual Magnum	1	PT/A	6 b	2 a	14 a	26 a	45 b	10 ab	13 ab	11 a
3	Dual Magnum	1	PT/A	7 ab	2 a	12 a	22 a	40 bc	13 ab	12 abc	14 a
4	Dual Magnum	1.5	PT/A	3 d	1 c	10 a	30 a	58 a	10 ab	9 bc	9 a
5	Dual Magnum	1.5	PT/A	4 cd	1 c	10 a	31 a	63 a	8 b	7 c	10 a
6	Dual Magnum	1.5	PT/A	5 c	1 b	13 a	30 a	59 a	8 b	8 bc	8 a
LSD (P=.05)		1.1		0.3	6.0	11.9	5.8	5.7	4.7	5.2	
Standard Deviation		0.8		0.2	4.0	7.9	3.9	3.8	3.1	3.5	
CV		14.34		14.04	36.06	30.13	7.7	35.3	29.81	34.09	
Bartlett's X2		2.872		2.273	6.88	3.159	1.461	4.842	10.615	5.283	
P(Bartlett's X2)		0.72		0.81	0.23	0.675	0.918	0.304	0.06	0.382	

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Column 17: T1 = @AVG([C7].[C16])

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Weed Code	plant 4	plant 5	plant 6	plant 7	plant 8	plant 9	plant 10	Avg10pla			
Crop Code	BRSOL	BRSOL	BRSOL	BRSOL	BRSOL	BRSOL	BRSOL	BRSOL			
Rating Data Type	ht	ht	ht	ht	ht	ht	ht	ht			
Rating Unit	cm	cm	cm	cm	cm	cm	cm	cm			
Rating Date	Mar-27-06	Mar-27-06	Mar-27-06	Mar-27-06	Mar-27-06	Mar-27-06	Mar-27-06	Mar-27-06			
Trt-Eval Interval	47 DA-A	47 DA-A	47 DA-A	47 DA-A	47 DA-A	47 DA-A	47 DA-A	47 DA-A			
ARM Action Codes								T2			
Trt No.	Treatment Name	Rate	Unit	25	26	27	28	29	30	31	32
1	Dual Magnum	1	PT/A	14 a	14 a	12 a	12 a	12 a	12 a	12 a	13 a
2	Dual Magnum	1	PT/A	13 ab	12 a	13 a	12 a	12 a	13 a	13 a	12 a
3	Dual Magnum	1	PT/A	10 ab	12 a	12 a	11 a	11 a	11 a	11 a	12 a
4	Dual Magnum	1.5	PT/A	10 ab	9 a	11 a	9 ab	10 a	10 a	10 a	10 b
5	Dual Magnum	1.5	PT/A	9 b	10 a	10 a	6 b	11 a	11 a	10 a	9 b
6	Dual Magnum	1.5	PT/A	10 ab	12 a	9 a	9 ab	11 a	11 a	9 a	9 b
LSD (P=.05)				3.9	4.1	3.7	3.2	3.8	3.5	4.2	1.9
Standard Deviation				2.6	2.7	2.5	2.1	2.5	2.3	2.8	1.3
CV				23.6	23.98	22.07	21.97	23.29	20.51	26.07	11.93
Bartlett's X2				4.143	1.148	4.581	1.93	6.249	2.535	5.474	6.073
P(Bartlett's X2)				0.529	0.95	0.333	0.859	0.283	0.771	0.361	0.299

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

Column 32: T2 = @AVG([C22].[C31])

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Weed Code		Yield
Crop Code		BRSOL
Rating Data Type		lbs
Rating Unit		plot
Rating Date		May-11-06
Trt-Eval Interval		92 DA-A
ARM Action Codes		
Trt No.	Treatment Name	Rate Unit
		33
1	Dual Magnum	1 PT/A
2	Dual Magnum	1 PT/A
3	Dual Magnum	1 PT/A
4	Dual Magnum	1.5 PT/A
5	Dual Magnum	1.5 PT/A
6	Dual Magnum	1.5 PT/A
LSD (P=.05)		6.3
Standard Deviation		4.2
CV		32.92
Bartlett's X2		2.439
P(Bartlett's X2)		0.786

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Trial ID: Veg11-06 Study Dir.: Stanley Culpepper
Location: Ponder 5137 Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Stanley Culpepper **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: TyTy **Trial Status:** completed
State/Prov.: GA **Trial Reliability:** good
Postal Code: 31794 **Initiation Date:** Feb-08-06
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:

Conclusions:

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	LAMAM	henbit	
2.	COPSS	swinecress	
3.	spurry	corn spurry	

Crop 1: BRSRR TURNIP **Variety:** White Globe Turnip Top
Planting Date: Feb-08-06 **Planting Method:** seeded
Rate: 8 per ft **Depth:** 0.15 in **Perennial Age:** _____
Row Spacing: 36 inch **Spacing Within Row:** 0.33 inch **Seed Bed:** flat
Soil Temperature: 54 F **Soil Moisture:** moist **Emergence Date:** Feb-17-06

Crop 2: BRSOL CABBAGE **Variety:** Bravo
Planting Date: Feb-10-06 **Planting Method:** transplant
Rate: 1 per ft **Depth:** 1 in **Perennial Age:** _____
Row Spacing: 36 inch **Spacing Within Row:** 12 inch **Seed Bed:** flat
Soil Temperature: 58 F **Soil Moisture:** moist **Emergence Date:** _____

SITE AND DESIGN

Plot Width, Unit: 6 FT **Plot Length, Unit:** 25 FT **Reps:** 4
Site Type: Research station
Tillage Type: conventional **Study Design:** RANDOMIZED COMPLETE BLOCK

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Trial Initiation Comments:

	Previous Crops	Previous Pesticides	Year
1.			

MAINTENANCE

Field Prep./Maintenance:

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

SOIL DESCRIPTION

% Sand: 94 % OM: 1.1 Texture: sand
 % Silt: 2 pH: 6.1 Soil Name: Tifton sandy loam
 % 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
Application Date:	Feb-08-06	Feb-10-06	Feb-10-06
Time of Day:	10 am	8 am	3 pm
Application Method:	broadcast	broadcast	broadcast
Application Timing:	PP1	PP2	POST
Applic. Placement:	on soil	on soil	over cabb
Air Temp., Unit:	54 F	39 F	61 F
% Relative Humidity:	24	34	27
Wind Velocity, Unit:	2 mph	0 mph	0 mph
Dew Presence (Y/N):	n	y	n
Water Hardness:			
Soil Temp., Unit:	54 F	34 F	54 F
Soil Moisture:	moist	moist	moist
% Cloud Cover:	0	0	0

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	BRSRR PP1	BRSRR PP2	BRSRR POST
Stage Scale:	not up	not up	not up
Height, Unit:	0 inch	0 inch	0 inch
Crop 2 Code, Stage:	BRSOL PP1	BRSOL PP2	BRSOL POST
Stage Scale:	not plant	not plant	3-5 lf
Height, Unit:	0 inch	0 inch	3.5 inch

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WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code, Stage:	LAMAM PP1	LAMAM PP2	LAMAM POST
Stage Scale:	not up	not up	not up
Density, Unit:	10 ydsq	10 ydsq	10 ydsq
Weed 2 Code, Stage:	COPSS PP1	COPSS PP2	COPSS POST
Stage Scale:	not up	not up	not up
Density, Unit:	3 ydsq	3 ydsq	3 ydsq
Weed 3 Code, Stage:	spurr PP1	spurr PP2	spurr POST
Stage Scale:	not up	not up	not up
Density, Unit:	15 ydsq	15 ydsq	15 ydsq

APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	backpack	backpack	backpack
Operating Pressure:	24	24	24
Nozzle Type:	flat fan	flat fan	flat fan
Nozzle Size:	11002	11002	11002
Nozzle Spacing, Unit:	18 inch	18 inch	18 inch
Nozzles/Row:	2	2	2
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.:			
Hours to Incorp.:			
Incorp. Depth, Unit:			
Carrier:	water	water	water
Spray Volume, Unit:	14.8 GPA	14.8 GPA	14.8 GPA
Spray pH:			
Propellant:	CO2	CO2	CO2
Tank Mix (Y/N):	Y	Y	Y

Trt No	Treatment Application Comment