

University of Georgia

Nutsedge and eggplant response to MIDAS applied under VIF mulch.

Trial ID: Veg33-07
Location: Ponder Farm

Protocol ID:
Study Director: Stanley Culpepper
Investigator: Stanley Culpepper

Reps: 3 Plots: 6 by 50 feet
Spray vol: 14.8 gal/ac Mix size: 2 liters (min 1.1575)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate Rate	Growth Unit	Appl Code	Amt to Measure	Plot No. By Rep		
									1	2	3
1	MIDAS 150 broadcast Blocade Mulch						A A		101	205	301
2	MIDAS 162.5 broadcast Blocade Mulch						A A		102	201	305
3	MIDAS 175 lb/A broadcast Blocade Mulch						A A		103	202	303
4	MB 50:50 240 lb/A broadc Blocade Mulch						A A		104	203	302
5	No Fumigant Blocade Mulch						A A		105	204	304

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
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- * '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.

Trial Comments

OBJECTIVE: Compare various rates of MIDAS and MB for the control of nutsedge and eggplant production.

VISUAL NUTSEDGE CONTROL:

1. Early season MIDAS at 150 and 163 lb/A were less effective than MIDAS at 175 lb or MB.
2. At the first harvest MB at 240 lb was more effective than any MIDAS system.

NUTSEDGE COUNTS:

1. Nutsedge penetrating the mulch or plant hole were counted for the entire plot three times during the season.
2. MIDAS at 150 lb was less effective than other treatments.
3. In late August MB had 41 plants per plot while MIDAS at 175 lb had 63 plants per plot.

EGGPLANT INJURY AND HEIGHTS:

1. Eggplant was not injured by fumigant treatment.
2. Plant heights were not impacted by fumigant.

EGGPLANT YIELD:

1. Eggplant was harvested 8 times.
2. When adding yield over all harvest: lowest yields were noted in the nontreated control followed most closely by MIDAS at 150 lb/A. No differences or trends for differences were noted with MB and MIDAS at 163 or 175.

CONCLUSIONS:

1. In heavy infestations of nutsedge, MIDAS should be applied at rates above 175 lb/A.
2. MB 50:50 does not provide adequate control of heavy nutsedge infestations. MB should be applied as a 67:43 formulation.

GENERAL COMMENTS:

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1. Fumigants were applied, beds were formed and mulch was laid. MIDAS and MB were applied with the super bedder plastic layer injected 8 inches deep with 3 knives on a 32 inch bedtop.

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Trial ID: Veg33-07

Protocol ID:

Location: Ponder Farm

Study Director: Stanley Culpepper

Investigator: Stanley Culpepper

Pest Code	SOLME	SOLME	CYPRO	CYPRO	CYPRO	CYPRO	CYPRO	
Crop Code	BVSO	BVSO						
BBCH Scale								
Rating Date	Aug-23-07	Sep-07-07	Aug-05-07	Aug-10-07	Aug-23-07	Sep-07-07	Oct-01-07	
Rating Data Type	injury	injury	control	control	control	control	control	
Rating Unit	%	%	%	%	%	%	%	
Assessed By	SC	SC	SC	SC	SC	SC	SC	
Days After First/Last Applic.	37	52	19	24	37	52	76	
Trt-Eval Interval	37 DA-A	37 DA-A	19 DA-A	19 DA-A	19 DA-A	37 DA-A	52 DA-A	
ARM Action Codes								
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	
		Unit						
1	MIDAS 150 broadcast Blocade Mulch	0 a	0 a	83 b	68 c	67 c	53 b	40 d
2	MIDAS 162.5 broadcast Blocade Mulch	0 a	0 a	93 a	83 b	83 b	73 a	50 c
3	MIDAS 175 lb/A broadcast Blocade Mulch	0 a	0 a	97 a	93 a	88 ab	78 a	73 b
4	MB 50:50 240 lb/A broadc Blocade Mulch	0 a	0 a	97 a	95 a	92 a	82 a	77 a
5	No Fumigant Blocade Mulch	0 a	0 a	0 c	0 d	0 d	0 c	0 e
LSD (P=.05)		0.0	0.0	4.0	9.0	8.5	10.4	2.5
Standard Deviation		0.0	0.0	2.1	4.8	4.5	5.5	1.3
CV		0.0	0.0	2.88	7.03	6.83	9.62	2.77
Bartlett's X2		0.0	0.0	3.668	1.323	0.636	1.47	0.477
P(Bartlett's X2)		.	.	0.30	0.724	0.888	0.689	0.49

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

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Pest Code	CYPRO	CYPRO	CYPRO	plant 1	plant 2	plant 3	plant 4
Crop Code				SOLME	SOLME	SOLME	SOLME
BBCH Scale				BVSO	BVSO	BVSO	BVSO
Rating Date	Aug-03-07	Aug-13-07	Aug-28-07	Sep-11-07	Sep-11-07	Sep-11-07	Sep-11-07
Rating Data Type	#	#	#	ht	ht	ht	ht
Rating Unit	per plot	per plot	per plot	cm	cm	cm	cm
Assessed By							
Days After First/Last Applic.	17	27	42	56	56	56	56
Trt-Eval Interval	76 DA-A	17 DA-A	27 DA-A	56 DA-A	56 DA-A	56 DA-A	56 DA-A
ARM Action Codes							
Trt Treatment	Rate						
No. Name	Rate Unit	8	9	10	11	12	13
1 MIDAS 150 broadcast Blocade Mulch	30 b	80 b	304 b	53 a	54 a	61 a	59 a
2 MIDAS 162.5 broadcast Blocade Mulch	6 b	23 c	112 c	45 a	54 a	53 ab	47 a
3 MIDAS 175 lb/A broadcast Blocade Mulch	3 b	15 c	63 c	53 a	45 b	56 ab	52 a
4 MB 50:50 240 lb/A broadc Blocade Mulch	2 b	6 c	41 c	51 a	48 ab	48 ab	52 a
5 No Fumigant Blocade Mulch	302 a	283 a	663 a	50 a	52 ab	44 b	53 a
LSD (P=.05)	66.4	45.6	176.1	16.8	7.4	13.3	18.1
Standard Deviation	35.3	24.2	93.5	8.9	3.9	7.1	9.6
CV	51.34	29.66	39.51	17.75	7.81	13.48	18.36
Bartlett's X2	24.278	8.191	8.773	0.134	1.718	1.796	5.32
P(Bartlett's X2)	0.001*	0.085	0.067	0.998	0.787	0.773	0.256

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

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Pest Code	plant 5	plant 6	plant 7	plant 8	plant 9	plant 10	AVG10PLa	
Crop Code	SOLME	SOLME	SOLME	SOLME	SOLME	SOLME	SOLME	
BBCH Scale	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	
Rating Date	Sep-11-07	Sep-11-07	Sep-11-07	Sep-11-07	Sep-11-07	Sep-11-07	Sep-11-07	
Rating Data Type	ht	ht	ht	ht	ht	ht	ht	
Rating Unit	cm	cm	cm	cm	cm	cm	cm	
Assessed By								
Days After First/Last Applic.	56	56	56	56	56	56	56	
Trt-Eval Interval	56 DA-A	56 DA-A	56 DA-A	56 DA-A	56 DA-A	56 DA-A	56 DA-A	
ARM Action Codes							T1	
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	
		Unit	Unit	Unit	Unit	Unit	Unit	
		15	16	17	18	19	20	
		21						
1	MIDAS 150 broadcast Blocade Mulch	58 a	51 a	56 a	55 a	55 a	63 a	56 a
2	MIDAS 162.5 broadcast Blocade Mulch	49 a	51 a	54 a	49 a	50 a	51 ab	50 a
3	MIDAS 175 lb/A broadcast Blocade Mulch	55 a	50 a	48 a	47 a	49 a	53 ab	51 a
4	MB 50:50 240 lb/A broadc Blocade Mulch	55 a	54 a	53 a	53 a	50 a	51 ab	51 a
5	No Fumigant Blocade Mulch	50 a	45 a	50 a	53 a	51 a	48 b	50 a
LSD (P=.05)		13.5	10.1	13.7	9.8	8.7	12.8	8.5
Standard Deviation		7.2	5.4	7.3	5.2	4.6	6.8	4.5
CV		13.5	10.76	13.95	10.1	9.09	12.82	8.77
Bartlett's X2		1.249	0.756	6.217	0.875	11.856	3.894	2.993
P(Bartlett's X2)		0.87	0.944	0.184	0.928	0.008*	0.421	0.559

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

Column 21: T1 = @AVG([C11].[C20])

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Pest Code	Harv 1	Harv 1	Harv 2	Harv 2	Harv 3	Harv 3	Harv 4
Crop Code	SOLME	SOLME	SOLME	SOLME	SOLME	SOLME	SOLME
BBCH Scale	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO
Rating Date	Sep-27-07	Sep-27-07	Oct-03-07	Oct-03-07	Oct-11-07	Oct-11-07	Oct-11-07
Rating Data Type	#	wt/lb	#	wt/lb	#	wt/lb	#
Rating Unit	per plot	per plot	per plot	per plot	per plot	per plot	per plot
Assessed By							
Days After First/Last Applic.	72	72	78	78	86	86	86
Trt-Eval Interval	72 DA-A	72 DA-A	72 DA-A	72 DA-A	78 DA-A	78 DA-A	86 DA-A
ARM Action Codes							
Trt Treatment	Rate						
No. Name	Rate Unit	22	23	24	25	26	27
1 MIDAS 150 broadcast Blocade Mulch		2 b	2 b	9 a	9 a	7 a	8 a
2 MIDAS 162.5 broadcast Blocade Mulch		6 a	6 a	10 a	11 a	10 a	11 a
3 MIDAS 175 lb/A broadcast Blocade Mulch		6 a	6 a	8 a	9 a	7 a	8 a
4 MB 50:50 240 lb/A broadc Blocade Mulch		7 a	7 a	8 a	9 a	8 a	8 a
5 No Fumigant Blocade Mulch		0 b	0 b	6 a	6 a	5 a	6 a
LSD (P=.05)		2.5	2.4	3.7	4.3	5.3	6.5
Standard Deviation		1.3	1.3	1.9	2.3	2.8	3.5
CV		32.53	30.95	24.17	25.88	38.83	42.19
Bartlett's X2		4.17	0.202	3.217	2.473	2.922	3.116
P(Bartlett's X2)		0.244	0.977	0.522	0.649	0.571	0.516

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

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Pest Code	Harv 4	Harv 5	Harv 5	Harv 6	Harv 6	Harv 7	Harv 7
Crop Code	SOLME	SOLME	SOLME	SOLME	SOLME	SOLME	SOLME
BBCH Scale	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO
Rating Date	Oct-11-07	Oct-25-07	Oct-25-07	Oct-30-07	Oct-30-07	Nov-06-07	Nov-06-07
Rating Data Type	wt/lb	#	wt/lb	#	wt/lb	#	wt/lb
Rating Unit	per plot	per plot	per plot	per plot	per plot	per plot	per plot
Assessed By							
Days After First/Last Applic.	86	100	100	105	105	112	112
Trt-Eval Interval	86 DA-A	86 DA-A	86 DA-A	86 DA-A	86 DA-A	105 DA-A	105 DA-A
ARM Action Codes							
Trt Treatment	Rate						
No. Name	Rate Unit	29	30	31	32	33	34
1 MIDAS 150 broadcast Blocade Mulch		22 ab	14 ab	16 ab	11 a	9 a	16 ab
2 MIDAS 162.5 broadcast Blocade Mulch		24 ab	21 a	20 ab	15 a	13 a	19 ab
3 MIDAS 175 lb/A broadcast Blocade Mulch		30 a	22 a	22 a	16 a	14 a	20 a
4 MB 50:50 240 lb/A broadc Blocade Mulch		26 ab	22 a	21 ab	14 a	12 a	23 a
5 No Fumigant Blocade Mulch		17 b	9 b	9 b	9 a	7 a	10 b
LSD (P=.05)		11.7	9.3	11.6	9.1	8.0	8.8
Standard Deviation		6.2	4.9	6.2	4.8	4.3	4.7
CV		26.24	28.01	35.09	38.03	37.89	26.71
Bartlett's X2		1.822	4.407	3.03	4.956	3.858	9.094
P(Bartlett's X2)		0.768	0.354	0.553	0.292	0.426	0.059

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Pest Code	Harv 1-2	Harv 1-2	Harv 1-4	Harv 1-4	Harv 1-8	Harv 1-8	
Crop Code	SOLME	SOLME	SOLME	SOLME	SOLME	SOLME	
BBCH Scale	BVSO	BVSO	BVSO	BVSO	BVSO	BVSO	
Rating Date	Jan-06-08	Jan-06-08	Jan-06-08	Jan-06-08	Jan-06-08	Jan-06-08	
Rating Data Type	#	wt/lb	#	wt/lb	#	wt/lb	
Rating Unit	per plot	per plot	per plot	per plot	per plot	per plot	
Assessed By							
Days After First/Last Applic.	173	173	173	173	173	173	
Trt-Eval Interval	112 DA-A	112 DA-A	173 DA-A	173 DA-A	173 DA-A	173 DA-A	
ARM Action Codes	T2	T3	T4	T5	T6	T7	
Trt Treatment	Rate						
No. Name	Rate Unit	36	37	38	39	40	41
1 MIDAS 150 broadcast Blocade Mulch		11 ab	11 bc	40 ab	41 ab	80 b	80 a
2 MIDAS 162.5 broadcast Blocade Mulch		16 a	17 a	50 a	52 a	105 a	104 a
3 MIDAS 175 lb/A broadcast Blocade Mulch		14 a	15 ab	50 a	52 a	107 a	106 a
4 MB 50:50 240 lb/A broadc Blocade Mulch		15 a	16 ab	49 a	50 a	107 a	105 a
5 No Fumigant Blocade Mulch		6 b	6 c	26 b	29 b	55 c	54 b
LSD (P=.05)		4.8	5.3	14.2	13.6	20.5	25.3
Standard Deviation		2.5	2.8	7.5	7.2	10.9	13.4
CV		20.96	21.66	17.55	16.14	11.98	14.9
Bartlett's X2		4.729	5.662	3.893	4.855	13.94	4.487
P(Bartlett's X2)		0.316	0.226	0.421	0.302	0.007*	0.344

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

Column 36: T2 = ([C22]+[C24])

Column 37: T3 = ([C23]+[C25])

Column 38: T4 = ([C22]+[C24]+[C26]+[C28])

Column 39: T5 = ([C23]+[C25]+[C27]+[C29])

Column 40: T6 = ([C22]+[C24]+[C26]+[C28]+[C30]+[C32]+[C34])

Column 41: T7 = ([C23]+[C25]+[C27]+[C29]+[C31]+[C33]+[C35])

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Trial ID: Veg33-07
Location: Ponder Farm

Protocol ID:
Study Director: Stanley Culpepper
Investigator: Stanley Culpepper

General Trial Information

Study Director: Stanley Culpepper **Title:** Ext. Weed Science
Affiliation: University of Georgia
Postal Code: 31794 **E-mail:** _____

Investigator: Stanley Culpepper **Title:** Ext. Weed Science
Affiliation: University of Georgia
Postal Code: 31794 **E-mail:** _____

Keywords:

Trial Location

City: TyTy **Trial Status:** completed
State/Prov.: GA **Trial Reliability:** good
Postal Code: 31795 **Initiation Date:** Jul-17-07
Country: USA **Planned Completion Date:** _____
_ -Latitude of LL Corner °: _____ _ -Longitude of LL Corner °: _____
Altitude of LL Corner: _____ **Unit:** _____ **Angle y-axis to North °:** _____
Map Reference: _____
Directions:

Conducted Under GLP: _ **Official Trial Code:** _____
Conducted Under GEP: _ **Other Trial Code:** _____

	Guideline	Description
1.		

Objectives:

Conclusions:

Cooperator/Landowner

Cooperator: _____ **Country:** _____
Organization: _____ **Phone No:** _____
Address 1: _____ **Fax No:** _____
Address 2: _____
City: _____
State/Prov: _____
Postal Code: _____ **E-mail:** _____

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Crop Description			
Crop 1: SOLME Solanum melongena		Aubergine	
Variety: Santana	Description: _____		
BBCH Scale: BVSO	Planting Date: Aug-14-07		
Planting Method: transplant	Rate, Unit: 1 20 inch		
Depth, Unit: 1.5 in	Perennial Age, Unit: _____		
Row Spacing, Unit: 6 foot	Spacing Within Row, Unit: 20 inch		
Seed Bed: mulched	Soil Temperature, Unit: 98 F		
Soil Moisture: drip	Emergence Date: _____		
Harvest Date: _____	Harvest Equipment: _____		
Harvested Width, Unit: _____	Harvested Length, Unit: _____		
% Standard Moisture: _____	Moisture Meter: _____		
Weighing Equipment: _____			

Pest Description	
Pest 1 Type: W	Code: CYPRO _____
Common Name: Cyperus rotundus	
Description: purple nutsedge	

Site and Design			
Plot Width, Unit: 6	FT	Site Type:	Ponder Research Farm
Plot Length, Unit: 50	FT	Tillage Type:	Conventional
Replications: 3		Study Design:	Randomized Complete Block
% Slope: _____		Soil Drainage: _	_____

Trial Initiation Comments:

	Previous Crops	Previous Pesticides	Year
1.			

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

Comment:

Field Prep./Maintenance:

Soil Description			
Description Name: _____			
% Sand: 94	% OM: 6.4	Texture:	Sand
% Silt: 2	pH: 1.3	Soil Name:	Tifton sandy loam
% Clay: 4	CEC: _____	Fert. Level:	_____
Analyzed By: _____			

Additional Measured Elements		
Element	Quantity	Unit

Moisture Conditions		
Overall Moisture Conditions: drip irrigation		
Closest Weather Station: _____	Distance: _____	Unit: _____

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	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Application Description

A	
Application Date:	Jul-17-07
Time of Day:	1:00 pm
Application Method:	band
Application Timing:	preplant
Application Placement:	injected
Applied By:	
Air Temperature, Unit:	93 F
% Relative Humidity:	42
Wind Velocity, Unit:	4 mph
Wind Direction:	
Dew Presence (Y/N):	n
Water Hardness:	
Soil Temperature, Unit:	88 F
Soil Moisture:	moist
% Cloud Cover:	10
Next Rain Occurred On:	

Crop Stage At Each Application

A	
Crop 1 Code, BBCH Scale:	SOLME BVSO
Stage Scale Used:	preplant
Stage Majority, Percent:	.
Stage Minimum, Percent:	
Stage Maximum, Percent:	
Diameter, Unit:	
Height, Unit:	
Height Minimum, Maximum:	

Pest Stage At Each Application

A	
Pest 1 Code, Disc., Scale:	CYPRO W .
Stage Majority, Percent:	.
Stage Minimum, Percent:	
Stage Maximum, Percent:	
Diameter, Unit:	
Height, Unit:	
Height Minimum, Maximum:	
Density, Unit:	0. .
Coverage, Unit:	

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Application Equipment

	A
Appl. Equipment:	super bed
Operating Pressure, Unit:	see commen
Nozzle Type:	section
Nozzle Size:	
Nozzle Spacing, Unit:	
Nozzles/Row:	
Nozzle Calibration, Unit:	
Band Width, Unit:	
Boom ID:	
Boom Length, Unit:	
Boom Height, Unit:	
Ground Speed, Unit:	
Incorporation Equip.:	
Hours to Incorp.:	
Incorp. Depth, Unit:	
Carrier:	
Spray Volume, Unit:	
Mix Size, Unit:	
Spray pH:	
Propellant:	
Tank Mix (Y/N):	

Equipment Comment:

Trt No Treatment Application Comment

Date By Notes

Date By Deviations

Reasons: