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Killing pepper after harvest but prior to a second crop on plastic.

Trial ID: Veg37-03 Study Director: Culpepper
Location: Ponder farm Investigator: Stanley Culpepper

General Trial Information

Study Director: Culpepper **Title:** Ext.weed science
Affiliation: University of Georgia
Postal Code: 31794
Investigator: Stanley Culpepper **Title:** Ext.weed science
Affiliation: University of Georgia
Postal Code: 31794

Trial Location

City: TyTy **Trial Status:** completed
State/Prov.: Ga **Trial Reliability:** good
Postal Code: 31795 **Initiation Date:** Jun-30-03
Country: U.S.A.
Directions:

Objectives:

Conclusions:

Crop Description

Crop 1: CPSAN Capsicum annuum Bell pepper
Variety: Amelia
BBCH Scale: BVSO **Planting Date:** Mar-10-03
Planting Method: transplant **Rate, Unit:** 1 12 inch
Depth, Unit: 1.5 in
Row Spacing, Unit: 6 feet **Spacing Within Row, Unit:** 12 inch
Seed Bed: plastic **Soil Temperature, Unit:** 85 F
Soil Moisture: drip

Site and Design

Plot Width, Unit: 6 FT **Site Type:** research station
Plot Length, Unit: 20 FT **Tillage Type:** plasticulture
Replications: 4 **Study Design:** Split-Plot

Trial Initiation Comments:

Field Prep./Maintenance:

Soil Description

% Sand: 94 **% OM:** 1.1 **Texture:** sand
% Silt: 2 **pH:** 6.4 **Soil Name:** Tifton sandy loam
% Clay: 4

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Application Description

	A	B	C
Application Date:	Jun-30-03	Jul-02-03	Jul-05-03
Time of Day:	10 am	3:00pm	9:00am
Application Method:	Broadcast	Broadcast	broadcast
Application Timing:	bef.Vapam	Vap injec	aft.Vapam
Application Placement:	overtop	in drip	overtop
Applied By:	culpepper	culpepper	culpepper
Air Temperature, Unit:	90 F	87 F	85 F
% Relative Humidity:	55	55	61
Wind Velocity, Unit:	2 mph	8 mph	1 mph
Dew Presence (Y/N):	n	n	n
Soil Temperature, Unit:	94 F	94 F	88 F
Soil Moisture:	moist	moist	wet
% Cloud Cover:	100	90	40

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	CPSAN BVSO	CPSAN BVSO	CPSAN BVSO
Stage Scale Used:	BBCH	BBCH	BBCH
Stage Majority, Percent:	postharv 100	postharv 100	postharv 100
Stage Minimum, Percent:	. 0	. 0	. 0
Stage Maximum, Percent:	. 0	. 0	. 0
Diameter, Unit:	0. .	0. .	0. .
Height, Unit:	24 in	24 in	24 in
Height Minimum, Maximum:	20 28	20 28	20 28

Application Equipment

	A	B	C
Appl. Equipment:	backpack	drip inje	backpack
Operating Pressure:	22	2.5 hours	22
Pressure Unit:	PSI		PSI
Nozzle Type:	flat fan		flat fan
Nozzle Size:	11002		11002
Nozzle Spacing, Unit:	18 inch		18 inch
Nozzles/Row:	4		4
Boom Length, Unit:	4.5 feet		4.5 feet
Boom Height, Unit:	15 inch		15 inch
Ground Speed, Unit:	3 mph		3 mph
Carrier:	water		water
Spray Volume:	14.8		14.8
Volume Unit:	GPA		GPA
Propellant:	CO2		CO2
Tank Mix (Y/N):	Y		Y

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Trt No.	Treatment Name	Rate	Rate Unit	1	2	3	4
	Crop Code			PEPPER	PEPPER	PEPPER	PEPPER
	Rating Date			Jul-13-03	Jul-20-03	Aug-08-03	Aug-26-03
	Rating Data Type			injury	injury	injury	injury
	Rating Unit			percent	percent	percent	percent
	Days After Last Applic.			8	15	34	52
	Trt-Eval Interval						57 DA-A
1	Before Vapam	25	g/a	81.8	83.0	81.8	75.0
	None						
2	Before Vapam	25	g/a	92.3	90.3	93.3	96.3
	WeatherMax	21.3	oz/a				
3	Before Vapam	25	g/a	92.5	91.3	95.3	95.3
	WeatherMax	32	oz/a				
4	Before Vapam	25	g/a	90.0	84.5	84.5	88.0
	WeatherMax	21.3	oz/a				
	Aim	1	oz/a				
5	Before Vapam	25	g/a	86.3	82.0	83.0	78.8
	WeatherMax	21.3	oz/a				
	Aim	2	oz/a				
6	Before Vapam	25	g/a	91.5	79.5	78.5	80.5
	Gramxone Max	32	oz/a				
	NIS	0.25	% v/v				
7	No Fumigant			0.0	0.0	0.0	0.0
	None						
8	No Fumigant			32.5	25.0	25.0	22.5
	WeatherMax	21.3	oz/a				
9	No Fumigant			28.8	25.0	38.8	33.0
	WeatherMax	32	oz/a				
10	No Fumigant			64.5	63.8	38.8	40.0
	WeatherMax	21.3	oz/a				
	Aim	1	oz/a				
11	No Fumigant			62.5	54.3	42.5	38.8
	WeatherMax	21.3	oz/a				
	Aim	2	oz/a				
12	No Fumigant			85.3	74.5	42.5	36.3
	Gramxone Max	32	oz/a				
	NIS	0.25	% v/v				
13	After Vapam			87.8	90.3	90.0	74.5
	None						
14	After Vapam			93.5	96.8	98.0	92.3
	WeatherMax	21.3	oz/a				
15	After Vapam			85.8	89.8	92.0	92.3
	WeatherMax	32	oz/a				
16	After Vapam			88.8	90.5	89.5	92.5
	WeatherMax	21.3	oz/a				
	Aim	1	oz/a				
17	After Vapam			96.3	97.8	97.5	99.8
	WeatherMax	21.3	oz/a				
	Aim	2	oz/a				
18	After Vapam			95.0	95.5	98.0	95.3
	Gramxone Max	32	oz/a				
	NIS	0.25	% v/v				
	LSD (P=.05)			11.60	11.59	10.12	10.60
	Standard Deviation			8.20	8.19	7.15	7.50
	CV			10.9	11.23	10.15	10.96
	Bartlett's X2			39.277	35.592	31.303	31.79
	P(Bartlett's X2)			0.001*	0.003*	0.012*	0.011*

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Crop Code	PEPPER	PEPPER	PEPPER	PEPPER
Rating Date	Jul-13-03	Jul-20-03	Aug-08-03	Aug-26-03
Rating Data Type	injury	injury	injury	injury
Rating Unit	percent	percent	percent	percent
Days After Last Applic.	8	15	34	52
Trt-Eval Interval				57 DA-A

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

Trial Comments

OBJECTIVE: Determine the most effective fumigant application/herbicide option to kill pepper after harvest.

VISUAL CONTROL:
1. Vapam alone was more effective than any of the herbicide options applied alone.
2. With WeatherMax, it did not matter if it was applied before or after the Vapam application.
3. Mixing Aim with WeatherMax did not improve control and tended to reduce control if the glyphosate plus Aim was applied prior to the Vapam (36 or 54 d after injecting Vapam).
4. There was a Gramoxone by Vapam timing interaction. By 17 DAT, control was greater when Gramoxone was applied after the Vapam injection as compared to being applied before the Vapam injection. Control from Gramoxone before Vapamwas no better than Vapam alone.
5. By 36 to 54 DAT, the most effective treatments were WeatherMax applied before or after Vapam or Vapam followed by any herbicide application.