

# University of Georgia

**Controlling GR Palmer amaranth at layby without MSMA.**

Trial ID: C54-08  
 Location: Macon County

Study Dir.: Stanley Culpepper  
 Investigator: Stanley Culpepper

Reps: 3                      Plots: 6 by 25 feet  
 Spray vol: 14.8 gal/ac      Mix size: 1 liters (min .57876)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate Rate	Grow Unit	Appl Stg	Code	Amt Product to Measure	Plot No. By Rep		
										1	2	3
1	Non-treated									101	202	306
2	Direx	4		SC	2	PT/A		PDIR A	16.89 ml/mx	102	207	303
	MSMA 6 Plus	6.0		SL	2.5	PT/A		PDIR A	21.11 ml/mx			
	Agridex			EC	1.0	% V/V		PDIR A	9.999 ml/mx			
3	Direx	4		SC	2	PT/A		PDIR A	16.89 ml/mx	103	208	304
	Agridex			EC	1.0	% V/V		PDIR A	9.999 ml/mx			
4	Direx	4		SC	2	PT/A		PDIR A	16.89 ml/mx	104	205	302
	Valor SX	51		WG	1.0	OZ/A		PDIR A	0.506 g/mx			
	Agridex			EC	1.0	% V/V		PDIR A	9.999 ml/mx			
5	Direx	4		SC	2	PT/A		PDIR A	16.89 ml/mx	105	201	308
	Valor SX	51		WG	2.0	OZ/A		PDIR A	1.012 g/mx			
	Agridex			EC	1.0	% V/V		PDIR A	9.999 ml/mx			
6	Gramoxone Inteon	2		SL	2	PT/A		PDIR A	16.89 ml/mx	106	203	301
	Direx	4		SC	2	PT/A		PDIR A	16.89 ml/mx			
	Agridex			EC	1.0	% V/V		PDIR A	9.999 ml/mx			
7	Direx	4		SC	2	PT/A		PDIR A	16.89 ml/mx	107	204	305
	Valor SX	51		WG	1.0	OZ/A		PDIR A	0.506 g/mx			
	Agridex			EC	1.0	% V/V		PDIR A	9.999 ml/mx			
8	Direx	4		SC	2	PT/A		PDIR A	16.89 ml/mx	108	206	307
	Valor SX	51		WG	2	OZ/A		PDIR A	1.012 g/mx			
	Agridex			EC	1.0	% V/V		PDIR A	9.999 ml/mx			

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
147.788	ml	Direx	4	SC	
26.391	ml	MSMA 6 Plus	6.0	SL	
87.491	ml	Agridex		EC	
3.795	g	Valor SX	51	WG	
21.113	ml	Gramoxone Inteon	2	SL	

- \* '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.
- \* 'Per volume' calculations use spray volume= 14.8 gal/ac, mix size= 1 liters.

Trial Comments

OBJECTIVE: Determine extremely large Palmeramaranth response to Direx mixtures applied topically.

Palmer amaranth response:

1. Palmer was so large at time of application, only paraquat mixed with diuron improved control.
2. The benefit from residual control from the Valor was not noted as the emerged population was never adequately controlled.

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Weed Code		AMAPA	AMAPA
Rating Data Type		control	control
Rating Unit		%	%
Rating Date		Aug-11-08	Aug-25-08
Trt-Eval Interval		5 DA-A	19 DA-A
Trt No.	Treatment Name	Rate	Rate
		Unit	Unit
		1	2
1	Non-treated	0 c	0 c
2	Direx	2 PT/A	68 b
	MSMA 6 Plus	2.5 PT/A	55 b
	Agridex	1.0 % V/V	
3	Direx	2 PT/A	68 b
	Agridex	1.0 % V/V	57 b
4	Direx	2 PT/A	68 b
	Valor SX	1.0 OZ/A	52 b
	Agridex	1.0 % V/V	
5	Direx	2 PT/A	68 b
	Valor SX	2.0 OZ/A	52 b
	Agridex	1.0 % V/V	
6	Gramoxone Inteon	2 PT/A	86 a
	Direx	2 PT/A	78 a
	Agridex	1.0 % V/V	
7	Direx	2 PT/A	72 b
	Valor SX	1.0 OZ/A	50 b
	Agridex	1.0 % V/V	
8	Direx	2 PT/A	72 b
	Valor SX	2 OZ/A	55 b
	Agridex	1.0 % V/V	
LSD (P=.05)		8.0	12.2
Standard Deviation		4.6	7.0
CV		7.27	13.97
Bartlett's X2		3.86	4.821
P(Bartlett's X2)		0.696	0.438

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



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

**SOIL DESCRIPTION**

% Sand: 82      % OM: 6.4      Texture: loamy sand  
 % Silt: 14      pH: 2      Soil Name: \_\_\_\_\_  
 % Clay: 4      CEC: \_\_\_\_\_      Fert. Level: \_\_\_\_\_

**ADDITIONAL MEASURED ELEMENTS**

Element	Quantity	Unit

**MOISTURE CONDITIONS**

No.	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: \_\_\_\_\_

Closest Weather Station: \_\_\_\_\_ Distance: \_\_\_\_\_ Unit: \_\_\_\_\_

**APPLICATION DESCRIPTION**

	A
Application Date:	Aug-06-08
Time of Day:	8:00 am
Application Method:	broadcast
Application Timing:	POST
Applic. Placement:	overtop
Air Temp., Unit:	78 F
% Relative Humidity:	67
Wind Velocity, Unit:	0 mph
Dew Presence (Y/N):	Y
Water Hardness:	
Soil Temp., Unit:	
Soil Moisture:	moist
% Cloud Cover:	20

**CROP STAGE AT EACH APPLICATION**

	A
Crop 1 Code, Stage:	
Stage Scale:	
Height, Unit:	

**WEED STAGE AT EACH APPLICATION**

	A
Weed 1 Code, Stage:	AMAPA POST
Stage Scale:	22 in
Density, Unit:	10 ydsq

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## APPLICATION EQUIPMENT

	A
Appl. Equipment:	backpack
Operating Pressure:	24
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	18 in
Nozzles/Row:	2
Band Width, Unit:	
Boom Length, Unit:	4.5 ft
Boom Height, Unit:	15 in
Ground Speed, Unit:	3 mph
Incorporation Equip.:	
Hours to Incorp.:	
Incorp. Depth, Unit:	
Carrier:	water
Spray Volume, Unit:	15 GPA
Spray pH:	
Propellant:	CO2
Tank Mix (Y/N):	y

Trt No	Treatment Application Comment