

# University of Georgia

## Resistant Palmer amaranth sustainability study.

Year 1

Trial ID: C29-06

Study Dir.: MacRae, Culpepper

Location: Macon (paved rd)

Investigator: Stanley Culpepper

Reps: 4

Plots: 48 by 100 feet

Spray vol: 14.8 gal/ac

Mix size: 10 gallons (min 6.5234)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Form Rate	Rate Unit	Grow Stg	Appl Code	Amt to Measure	Product	Plot No. By Rep			
											1	2	3	4
1	RRF COTTON DRYLAND										102	208	308	404
	Prowl H20	3.8	L		2.1	PT/A	PRE	A	671.3	ml/mx				
	Reflex	2	L		1	PT/A	PRE	A	319.7	ml/mx				
	Roundup WeatherMax	4.5	L		22	OZ/A	POST1	B	439.6	ml/mx				
	Roundup WeatherMax	4.5	L		22	OZ/A	POST2	C	439.6	ml/mx				
	Direx	4	L		2	PT/A	LPD	E	639.4	ml/mx				
	MSMA	6	L		2	LB A/A	LPD	E	852.5	ml/mx				
	NIS		L		0.25	% V/V	LPD	E	94.63	ml/mx				
2	RRF COTTON DRYLAND										104	206	306	408
	Prowl H20	3.8	L		2.1	PT/A	PRE	A	671.3	ml/mx				
	Reflex	2	L		1	PT/A	PRE	A	319.7	ml/mx				
	Roundup WeatherMax	4.5	L		22	OZ/A	POST1	B	439.6	ml/mx				
	Dual Magnum	7.62	L		1	PT/A	POST1	B	319.7	ml/mx				
	Roundup WeatherMax	4.5	L		22	OZ/A	POST2	C	439.6	ml/mx				
	Direx	4	L		2	PT/A	LPD	E	639.4	ml/mx				
	MSMA	6	L		2	LB A/A	LPD	E	852.5	ml/mx				
	NIS		L		0.25	% V/V	LPD	E	94.63	ml/mx				
3	RRF COTTON DRYLAND										106	210	304	410
	Prowl H20	3.8	L		2.1	PT/A	PRE	A	671.3	ml/mx				
	Reflex	2	L		1	PT/A	PRE	A	319.7	ml/mx				
	Roundup WeatherMax	4.5	L		22	OZ/A	POST1	B	439.6	ml/mx				
	Dual Magnum	7.62	L		1	PT/A	POST1	B	319.7	ml/mx				
	Roundup WeatherMax	4.5	L		22	OZ/A	POST2	C	439.6	ml/mx				
	Roundup WeatherMax	4.5	L		22	OZ/A	POST 3	D	439.6	ml/mx				
	Staple	3.2	L		1.7	OZ/A	POST 3	D	33.97	ml/mx				
4	RRF COTTON DRYLAND										108	204	302	406
	Prowl H20	3.8	L		2.5	PT/A	PRE	A	799.2	ml/mx				
	Direx	4	L		1	QT/A	PRE	A	639.4	ml/mx				
	Roundup WeatherMax	4.5	L		22	OZ/A	POST1	B	439.6	ml/mx				
	Dual Magnum	7.62	L		0.0625	PT/A	POST1	B	19.98	ml/mx				
	Roundup WeatherMax	4.5	L		22	OZ/A	POST2	C	439.6	ml/mx				
	Valor SX	51	WG		2	OZ/A	LPD	E	38.31	g/mx				
	MSMA	6	L		2.4	PT/A	LPD	E	767.2	ml/mx				
	NIS		L		0.25	% V/V	LPD	E	94.63	ml/mx				
5	RRF COTTON DRY LAND										110	202	310	402
	Prowl H20	3.8	L		2.1	PT/A	PRE	A	671.3	ml/mx				
	Reflex	2	L		1	PT/A	PRE	A	319.7	ml/mx				
	Roundup WeatherMax	4.5	L		22	OZ/A	POST1	B	439.6	ml/mx				
	Dual Magnum	7.62	L		1	PT/A	POST1	B	319.7	ml/mx				
	Roundup WeatherMax	4.5	L		22	OZ/A	POST2	C	439.6	ml/mx				
	Direx	4	L		2	PT/A	LPD	E	639.4	ml/mx				
	MSMA	6	L		2	LB A/A	LPD	E	852.5	ml/mx				
	NIS		L		0.25	% V/V	LPD	E	94.63	ml/mx				

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Reps: 4                      Plots: 48 by 100 feet  
 Spray vol: 14.8 gal/ac                      Mix size: 10 gallons (min 6.5234)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt to Measure	Product	Plot No. By Rep			
											1	2	3	4
6	RR CORN DRYLAND										101	209	307	405
	Atrazine	4	L		1	QT/A	PRE	A	639.4 ml/mx					
	Roundup WeatherMax	4.5	L		22	OZ/A	POST1	B	439.6 ml/mx					
	Atrazine	4	L		1.5	QT/A	POST1	B	959.0 ml/mx					
	2,4-D as needed	4	L		1	PT/A	After Ha	E	319.7 ml/mx					
7	RR CORN DRYLAND										103	205	305	403
	Degree Extra	4	L		1.1	QT/A	PRE	A	703.3 ml/mx					
	Roundup WeatherMax	4.5	L		22	OZ/A	POST1	B	439.6 ml/mx					
	Roundup WeatherMax	4.5	L		22	OZ/A	POST2	C	439.6 ml/mx					
8	RR CORN DRYLAND										105	207	301	409
	Bicep II Magnum	5.5	L		1	QT/A	PRE	A	639.4 ml/mx					
	Roundup WeatherMax	4.5	L		22	OZ/A	POST1	B	439.6 ml/mx					
	Roundup WeatherMax	4.5	L		22	OZ/A	POST2	C	439.6 ml/mx					
9	RR CORN DRYLAND										107	203	303	407
	Lexar	3.7	L		1.5	QT/A	PRE	A	959.0 ml/mx					
	Roundup WeatherMax	4.5	L		22	OZ/A	POST1	B	439.6 ml/mx					
	Roundup WeatherMax	4.5	L		22	OZ/A	POST2	C	439.6 ml/mx					
10	RR CORN DRY LAND										109	201	309	401
	Atrazine	4	L		1	QT/A	PRE	A	639.4 ml/mx					
	Roundup WeatherMax	4.5	L		22	OZ/A	POST1	B	439.6 ml/mx					
	Atrazine	4	L		1.5	QT/A	POST1	B	959.0 ml/mx					
	2,4-D after harvest	4	L		1	PT/A	After Ha	E	319.7 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
4,355.627	ml	Prowl H20	3.8	L	
1,598.395	ml	Reflex	2	L	
10,440.648	ml	Roundup WeatherMax	4.5	L	
3,196.791	ml	Direx	4	L	
4,155.828	ml	MSMA	6	L	
473.125	ml	NIS		L	
1,223.771	ml	Dual Magnum	7.62	L	
42.462	ml	Staple	3.2	L	
47.888	g	Valor SX	51	WG	
3,995.989	ml	Atrazine	4	L	
399.599	ml	2,4-D as needed	4	L	
879.118	ml	Degree Extra	4	L	
799.198	ml	Bicep II Magnum	5.5	L	
1,198.797	ml	Lexar	3.7	L	
399.599	ml	2,4-D after harvest	4	L	

\* 'Per area' calculations based on spray volume= 14.8 gal/ac, mix size= 10 gallons (mix size basis).  
 \* Product amount calculations increased 25 % for overage adjustment.  
 \* 'Per volume' calculations use spray volume= 14.8 gal/ac, mix size= 10 gallons.

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## Resistant Palmer amaranth sustainability study.

Year 1

Trial ID: C29-06

Study Dir.: MacRae, Culpepper

Location: Macon (paved rd)

Investigator: Stanley Culpepper

### Trial Comments

**OBJECTIVE:** Determine the most effective management tactics for Palmer amaranth in Georgia.

#### VISUAL INJURY:

1. Soil applied herbicides caused minor early season stunting (7-10%) in cotton with no injury in corn.
2. Early season POST applications caused little to no injury.
3. Layby treatments in cotton caused 5 to 11% stem necrosis/leaf chlorosis except for Valor plus MSMA. Injury from Valor plus MSMA was 30% which included leaf drop and severe stem burn. Injury from Valor was significant because cotton was only 11 inches tall at time of application. Applications had to be made in an effort to control the Palmer amaranth.

#### VISUAL PALMER CONTROL:

1. At 19 d PRE treatments, Palmer control was excellent with all cotton and corn systems.
2. In cotton just prior to the layby, control was similar with all programs except the Prowl + Direx PRE system was less effective than the Prowl + Reflex systems.
3. Mid-season control in the corn noted at least 89% with all systems.
4. Late-season control in cotton noted the system of Prowl + Reflex PRE fb Roundup + Dual POST and Direx plus MSMA was the most effective program.
5. Late in the corn crop season during early July, excellent control was noted with 1) Atrazine fb Roundup plus Atrazine and with 2) Lexar followed by WeatherMax.
6. Control in corn plots after harvest on Sept 12 noted poor control with all programs not receiving 2,4-D after harvest.

#### NUMBER OF PALMER PLANTS PER PLOT:

1. In August at corn harvest, the number of pigweed in each plot were counted for the entire plot.  
Prowl + Reflex fb RU + Dual fb Direx plus MSMA system averaged 10-12 plants per plot in the cotton. Five times that number was noted in the Prowl + Direx PRE system while nearly 3 times that number were noted with RU + Staple as compared to Direx + MSMA at layby.
2. At corn harvest, the number of plants per plot were similar in the Atrazine fb Atrazine systems and the Lexar system. Three to five times more plants were noted in the Degree Extra system and the Bicep II system.

#### COTTON YIELD:

1. Six rows by 10 feet were hand harvested.
2. Early-season weed control was excellent with all programs and seed yield was similar among programs with a trend for lower yield in the Valor system likely because of crop injury.

#### CORN YIELD:

1. One row by 50 feet was harvested for silage.
2. Early-season weed control was excellent with all programs and yield was similar among programs.

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## Resistant Palmer amaranth sustainability study.

Year 1

Trial ID: C29-06

Study Dir.: MacRae, Culpepper

Location: Macon (paved rd)

Investigator: Stanley Culpepper

Weed Code				AMAPA	AMAPA	AMAPA	AMAPA			
Crop Code	Crop injury	Crop injury	Crop injury	control	control	control	control			
Rating Data Type	%	%	%	%	%	%	%			
Rating Unit										
Rating Date	May-23-06	Jun-01-06	Jun-20-06	May-23-06	Jun-01-06	Jun-20-06	Jul-02-06			
Assessed By	SC	SC	SC	SC	SC	SC	SC			
Trt-Eval Interval	19 DA-A	28 DA-A	47 DA-A	19 DA-A	28 DA-A	47 DA-A	56 DA-A			
ARM Action Codes										
# Subsamples, Dec.										
Trt No.	Treatment Name	Rate	Unit	1	2	3	4	5	6	7
1	RRF COTTON DRYLAND			9 a	0 a	13 b	99 a	91 ab	83 c	81 bc
	Prowl H20	2.1	PT/A							
	Reflex	1	PT/A							
	Roundup WeatherMax	22	OZ/A							
	Roundup WeatherMax	22	OZ/A							
	Direx	2	PT/A							
	MSMA	2	LB A/A							
	NIS	0.25	% V/V							
2	RRF COTTON DRYLAND			11 a	0 a	8 cd	99 a	96 a	87 c	86 b
	Prowl H20	2.1	PT/A							
	Reflex	1	PT/A							
	Roundup WeatherMax	22	OZ/A							
	Dual Magnum	1	PT/A							
	Roundup WeatherMax	22	OZ/A							
	Direx	2	PT/A							
	MSMA	2	LB A/A							
	NIS	0.25	% V/V							
3	RRF COTTON DRYLAND			7 a	0 a	5 de	99 a	95 a	86 c	82 bc
	Prowl H20	2.1	PT/A							
	Reflex	1	PT/A							
	Roundup WeatherMax	22	OZ/A							
	Dual Magnum	1	PT/A							
	Roundup WeatherMax	22	OZ/A							
	Roundup WeatherMax	22	OZ/A							
	Staple	1.7	OZ/A							
4	RRF COTTON DRYLAND			10 a	2 a	30 a	99 a	81 c	70 d	75 c
	Prowl H20	2.5	PT/A							
	Direx	1	QT/A							
	Roundup WeatherMax	22	OZ/A							
	Dual Magnum	0.0625	PT/A							
	Roundup WeatherMax	22	OZ/A							
	Valor SX	2	OZ/A							
	MSMA	2.4	PT/A							
	NIS	0.25	% V/V							

# University of Georgia

Weed Code				AMAPA	AMAPA	AMAPA	AMAPA			
Crop Code	Crop	Crop	Crop	control	control	control	control			
Rating Data Type	injury	injury	injury	control	control	control	control			
Rating Unit	%	%	%	%	%	%	%			
Rating Date	May-23-06	Jun-01-06	Jun-20-06	May-23-06	Jun-01-06	Jun-20-06	Jul-02-06			
Assessed By	SC	SC	SC	SC	SC	SC	SC			
Trt-Eval Interval	19 DA-A	28 DA-A	47 DA-A	19 DA-A	28 DA-A	47 DA-A	56 DA-A			
ARM Action Codes										
# Subsamples, Dec.										
Trt No.	Treatment Name	Rate	Unit	1	2	3	4	5	6	7
5	RRF COTTON DRY LAND			9 a	0 a	11 bc	99 a	97 a	83 c	84 b
	Prowl H20	2.1	PT/A							
	Reflex	1	PT/A							
	Roundup WeatherMax	22	OZ/A							
	Dual Magnum	1	PT/A							
	Roundup WeatherMax	22	OZ/A							
	Direx	2	PT/A							
	MSMA	2	LB A/A							
	NIS	0.25	% V/V							
6	RR CORN DRYLAND			0 b	0 a	0 e	99 a	100 a	99 a	100 a
	Atrazine	1	QT/A							
	Roundup WeatherMax	22	OZ/A							
	Atrazine	1.5	QT/A							
	2,4-D as needed	1	PT/A							
7	RR CORN DRYLAND			0 b	0 a	3 e	99 a	93 a	91 abc	81 bc
	Degree Extra	1.1	QT/A							
	Roundup WeatherMax	22	OZ/A							
	Roundup WeatherMax	22	OZ/A							
8	RR CORN DRYLAND			0 b	0 a	0 e	98 a	83 bc	89 bc	75 c
	Bicep II Magnum	1	QT/A							
	Roundup WeatherMax	22	OZ/A							
	Roundup WeatherMax	22	OZ/A							
9	RR CORN DRYLAND			0 b	0 a	1 e	99 a	99 a	97 ab	99 a
	Lexar	1.5	QT/A							
	Roundup WeatherMax	22	OZ/A							
	Roundup WeatherMax	22	OZ/A							
10	RR CORN DRY LAND			0 b	0 a	0 e	94 b	100 a	98 ab	99 a
	Atrazine	1	QT/A							
	Roundup WeatherMax	22	OZ/A							
	Atrazine	1.5	QT/A							
	2,4-D after harvest	1	PT/A							
LSD (P=.05)				3.8	1.4	4.7	3.1	9.6	8.1	7.4
Standard Deviation				2.6	0.9	3.2	2.1	6.6	5.6	5.1
CV				56.9	632.46	46.62	2.17	7.07	6.3	5.95
Bartlett's X2				6.045	0.0	11.712	10.687	20.754	7.875	17.13
P(Bartlett's X2)				0.196	.	0.039*	0.005*	0.004*	0.446	0.047*

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

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Weed Code	AMAPA	AMAPA	Silage	Silage	Seed	Seed			
Crop Code			ZEAMX	ZEAMX	GOSHI	GOSHI			
Rating Data Type	control	per plot	per 50'	YIELD	per 60'	YIELD			
Rating Unit	%	#	wt/lb	LB/A	wt/lb	LB/A			
Rating Date	Sep-12-06	Aug-01-06	Aug-01-06	Aug-01-06	Nov-06-06	Nov-06-06			
Assessed By	SC								
Trt-Eval Interval	131 DA-A	89 DA-A	89 DA-A	89 DA-A	186 DA-A	186 DA-A			
ARM Action Codes				TY2		TY1			
# Subsamples, Dec.				1		1			
Trt No.	Treatment Name	Rate	Unit	8	9	10	11	12	13
1	RRF COTTON DRYLAND Prowl H20 Reflex Roundup WeatherMax Roundup WeatherMax Direx MSMA NIS	2.1 1 22 22 2 2 0.25	PT/A PT/A OZ/A OZ/A PT/A LB A/A % V/V	71 c	21 c			6 a	1409.7 a
2	RRF COTTON DRYLAND Prowl H20 Reflex Roundup WeatherMax Dual Magnum Roundup WeatherMax Direx MSMA NIS	2.1 1 22 1 22 2 2 0.25	PT/A PT/A OZ/A PT/A OZ/A PT/A LB A/A % V/V	91 ab	12 c			6 a	1421.8 a
3	RRF COTTON DRYLAND Prowl H20 Reflex Roundup WeatherMax Dual Magnum Roundup WeatherMax Roundup WeatherMax Staple	2.1 1 22 1 22 22 1.7	PT/A PT/A OZ/A PT/A OZ/A OZ/A OZ/A	80 bc	47 bc			6 a	1447.2 a
4	RRF COTTON DRYLAND Prowl H20 Direx Roundup WeatherMax Dual Magnum Roundup WeatherMax Valor SX MSMA NIS	2.5 1 22 0.0625 22 2 2.4 0.25	PT/A QT/A OZ/A PT/A OZ/A OZ/A OZ/A PT/A % V/V	58 d	109 bc			5 a	1211.2 a
5	RRF COTTON DRY LAND Prowl H20 Reflex Roundup WeatherMax Dual Magnum Roundup WeatherMax Direx MSMA NIS	2.1 1 22 1 22 2 2 0.25	PT/A PT/A OZ/A PT/A OZ/A PT/A LB A/A % V/V	91 ab	13 c			6 a	1349.8 a

# University of Georgia

Weed Code	AMAPA	AMAPA	Silage	Silage	Seed	Seed
Crop Code			ZEAMX	ZEAMX	GOSHI	GOSHI
Rating Data Type	control	per plot	per 50'	YIELD	per 60'	YIELD
Rating Unit	%	#	wt/lb	LB/A	wt/lb	LB/A
Rating Date	Sep-12-06	Aug-01-06	Aug-01-06	Aug-01-06	Nov-06-06	Nov-06-06
Assessed By	SC					
Trt-Eval Interval	131 DA-A	89 DA-A	89 DA-A	89 DA-A	186 DA-A	186 DA-A
ARM Action Codes				TY2		TY1
# Subsamples, Dec.				1		1
Trt Treatment						
No. Name Rate Unit	8	9	10	11	12	13
6 RR CORN DRYLAND Atrazine 1 QT/A Roundup WeatherMax 22 OZ/A Atrazine 1.5 QT/A 2,4-D as needed 1 PT/A	95 a	63 bc	81 a	23546.4 a		
7 RR CORN DRYLAND Degree Extra 1.1 QT/A Roundup WeatherMax 22 OZ/A Roundup WeatherMax 22 OZ/A	58 d	161 b	83 a	24009.5 a		
8 RR CORN DRYLAND Bicep II Magnum 1 QT/A Roundup WeatherMax 22 OZ/A Roundup WeatherMax 22 OZ/A	50 d	284 a	75 a	21655.9 a		
9 RR CORN DRYLAND Lexar 1.5 QT/A Roundup WeatherMax 22 OZ/A Roundup WeatherMax 22 OZ/A	56 d	48 bc	76 a	22038.5 a		
10 RR CORN DRY LAND Atrazine 1 QT/A Roundup WeatherMax 22 OZ/A Atrazine 1.5 QT/A 2,4-D after harvest 1 PT/A	94 ab	65 bc	81 a	23583.4 a		
LSD (P=.05)	12.8	105.0	20.8	6038.62	1.8	445.82
Standard Deviation	8.8	72.3	13.5	3919.18	1.2	289.35
CV	11.9	88.03	17.06	17.06	21.15	21.15
Bartlett's X2	31.882	52.233	6.965	6.965	18.061	18.061
P(Bartlett's X2)	0.001*	0.001*	0.138	0.138	0.001*	0.001*

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

Column 11: TY2 = 290.4\*[10]  
Column 13: TY1 = 242.0\*[C12]

University of Georgia

Resistant Palmer amaranth sustainability study.
Year 1
Trial ID: C29-06 Study Dir.: MacRae, Culpepper
Location: Macon (paved rd) Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Andrew MacRae Title: Post Doc
Affiliation: University of Georgia
Postal Code: 31794
Investigator: Stanley Culpepper Title: Ext. Weed Science
Affiliation: University of Georgia
Postal Code: 31794

TRIAL LOCATION

City: Macon Co. Trial Status: completed
State/Prov.: GA Trial Reliability: excellent
Postal Code: \_\_\_\_\_ Initiation Date: May-04-06
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

Table with 4 columns: Weed, Code, Common Name, Scientific Name. Row 1: 1. AMAPA Palmer amaranth

Crop 1: GOSHI COTTON, SHORT STAPLE Variety: ST 6565 BR Flex
Planting Date: May-02-06 Planting Method: hill drop
Rate: 2 8 in Depth: 0.5 in Perennial Age:
Row Spacing: 36 in Spacing Within Row: Seed Bed: bedded
Soil Temperature: 87 F Soil Moisture: moist Emergence Date: May-09-06

Crop 2: ZEAMX CORN, FIELD Variety: DKC 6971 RR2/ygcp
Planting Date: May-02-06 Planting Method: seeded
Rate: 1 6 inch Depth: 1 in Perennial Age:
Row Spacing: 36 inch Spacing Within Row: 6 inch Seed Bed: bedded
Soil Temperature: 87 F Soil Moisture: moist Emergence Date: May-09-06

SITE AND DESIGN

Plot Width, Unit: 48 FT Plot Length, Unit: 100 FT Reps: 4
Site Type: on farm
Tillage Type: conventional Study Design: RANDOMIZED COMPLETE BLOCK

Trial Initiation Comments:



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	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: 82	% OM: 2.0	Texture: loamy sand
% Silt: 14	pH: 6.3	Soil Name: _____
% Clay: 4	CEC: _____	Fert. Level: _____

### ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

### MOISTURE CONDITIONS

	Date	Time	Amount	Unit	Type	Interval	Unit
1.	May-05-06		1	in			
2.	May-07-06		2.5	in			
3.	May-10-06		2	in			
4.	Jun-20-06		0.4	in			

Overall Moisture Conditions: dryland

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

### APPLICATION DESCRIPTION

	A	B	C	D	E
Application Date:	May-04-06	May-23-06	Jun-05-06	Jun-21-06	Aug-22-06
Time of Day:	2 pm	2 pm	12 pm	1 pm	10 am
Application Method:	broadcast	broadcast	broadcast	broadcast	broadcast
Application Timing:	PRE	POST 1	POST 2	LPD	afterharv
Applic. Placement:	on soil	overtop	overtop	directed	overtop
Air Temp., Unit:	88 F	87 F	90 F	94 F	94 F
% Relative Humidity:	52	47	44	44	40
Wind Velocity, Unit:	3 mph	3 mph	2 mph	3 mph	2 mph
Dew Presence (Y/N):					
Water Hardness:					
Soil Temp., Unit:	86 F	85 F	93 F	100 F	101 F
Soil Moisture:	fair	dry	fair	dry/fair	fair
% Cloud Cover:	35	25	20	15	20

### CROP STAGE AT EACH APPLICATION

	A	B	C	D	E
Crop 1 Code, Stage:	GOSHI PRE	GOSHI POST 1	GOSHI POST 2	GOSHI LPD	GOSHI .
Stage Scale:	not up	1 leaf	5 leaf	10 leaf	.
Height, Unit:	0 inch	1.5 inch	5 inch	11 inch	0. .
Crop 2 Code, Stage:	ZEAMX PRE	ZEAMX .	ZEAMX POST 2	ZEAMX .	ZEAMX after har
Stage Scale:	not up	.	.	.	cut/harve
Height, Unit:	0 inch	6 inch	12 inch	0. .	0 inch

# University of Georgia

## WEED STAGE AT EACH APPLICATION

	A	B	C	D	E
<b>Weed 1 Code, Stage:</b>	AMAPA PRE	AMAPA POST 1	AMAPA POST 2	AMAPA LPD	AMAPA After har
<b>Stage Scale:</b>	not up	<0.5 inch	<6 inch	<15 inch	<8 inch
<b>Density, Unit:</b>	50 ydsq	10 ydsq	2 ydsq	2 ydsq	15 ydsq

## APPLICATION EQUIPMENT

	A	B	C	D	E
<b>Appl. Equipment:</b>	backpack	backpack	backpack	backpack	backpack
<b>Operating Pressure:</b>	24	24	24	18	24
<b>Nozzle Type:</b>	flat fan	flat fan	flat fan	flat fan	flat fan
<b>Nozzle Size:</b>	11002	11002	11002	11002	11002
<b>Nozzle Spacing, Unit:</b>	18 inch	18 inch	18 inch	12 inch	18 inch
<b>Nozzles/Row:</b>	2	2	2	3	2
<b>Band Width, Unit:</b>					
<b>Boom Length, Unit:</b>	4.5 ft	4.5 ft	4.5 ft	2 ft	4.5 ft
<b>Boom Height, Unit:</b>	15 inch	15 inch	15 inch	12 inch	15 inch
<b>Ground Speed, Unit:</b>	3 mph	3 mph	3 mph	3 mph	3 mph
<b>Incorporation Equip.:</b>					
<b>Hours to Incorp.:</b>					
<b>Incorp. Depth, Unit:</b>					
<b>Carrier:</b>	water	water	water	water	water
<b>Spray Volume, Unit:</b>	14.8 GPA	14.8 GPA	14.8 GPA	14.8 GPA	14.8 GPA
<b>Spray pH:</b>					
<b>Propellant:</b>	CO2	CO2	CO2	CO2	CO2
<b>Tank Mix (Y/N):</b>	Y	Y	Y	Y	Y

Trt No	Treatment Application Comment