

University of Georgia

Large acreage PHY 485 WF cotton and glyphosate-resistant Palmer amaranth response to Ignite/Roundup Systems

Trial ID: C41-07 Study Dir.: Kichler, MacRae, Culpepper
 Location: Macon County Investigator: Stanley Culpepper

Reps: 4 Plots: 18 by 1000 feet
 Spray vol: 14.8 gal/ac Mix size: 1 liters (min 92.602)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Form Rate	Grow Unit	Appl Stg	Appl Code	Amt Product to Measure	Plot No. By Rep			
										1	2	3	4
1	Treflan	4	L	1.5	PT/A	PPI	A	12.67 ml/mx	101	203	301	403	
	Reflex	2	L	1	PT/A	PRE	B	8.445 ml/mx					
	Ignite 280	2.34	L	23	OZ/A	POST1	C	12.14 ml/mx					
	Ignite 280	2.34	L	23	OZ/A	POST2	C	12.14 ml/mx					
	Conv. Layby												
2	Treflan	4	L	1.5	PT/A	PPI	A	12.67 ml/mx	102	204	302	404	
	Reflex	2	L	1	PT/A	PRE	B	8.445 ml/mx					
	Ignite 280	2.34	L	23	OZ/A	POST1	C	12.14 ml/mx					
	Staple	3.2	L	1.7	OZ/A	POST1	C	0.8974 ml/mx					
	Ignite 280	2.34	L	23	OZ/A	POST2	C	12.14 ml/mx					
3	Treflan	4	L	1.5	PT/A	PPI	A	12.67 ml/mx	103	201	305	405	
	Reflex	2	L	1	PT/A	PRE	B	8.445 ml/mx					
	Direx	4	L	1	QT/A	PRE	B	16.89 ml/mx					
	Ignite 280	2.34	L	23	OZ/A	POST1	C	12.14 ml/mx					
	Ignite 280	2.34	L	23	OZ/A	POST2	C	12.14 ml/mx					
4	Treflan	4	L	1.5	PT/A	PPI	A	12.67 ml/mx	104	202	306	406	
	Reflex	2	L	1	PT/A	PRE	B	8.445 ml/mx					
	Direx	4	L	1	QT/A	PRE	B	16.89 ml/mx					
	Ignite 280	2.34	L	23	OZ/A	POST1	C	12.14 ml/mx					
	Staple	3.2	L	1.7	OZ/A	POST1	C	0.8974 ml/mx					
5	Treflan	4	L	1.5	PT/A	PPI	A	12.67 ml/mx	105	205	303	401	
	No PRE												
	Ignite 280	2.34	L	23	OZ/A	POST1	C	12.14 ml/mx					
	Ignite 280	2.34	L	23	OZ/A	POST2	C	12.14 ml/mx					
	Conv. Layby												
6	Treflan	4	L	1.5	PT/A	PPI	A	12.67 ml/mx	106	206	304	402	
	No PRE												
	Ignite 280	2.34	L	23	OZ/A	POST1	C	12.14 ml/mx					
	Staple	3.2	L	1.7	OZ/A	POST1	C	0.8974 ml/mx					
	Ignite 280	2.34	L	23	OZ/A	POST2	C	12.14 ml/mx					
Conv. Layby													

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
95.007	ml	Treflan	4	L	
42.225	ml	Reflex	2	L	
182.116	ml	Ignite 280	2.34	L	
3.365	ml	Staple	3.2	L	
42.225	ml	Direx	4	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.

University of Georgia

Large acreage PHY 485 WF cotton and glyphosate-resistant Palmer amaranth response to Ignite/Roundup Systems

Trial ID: C41-07

Study Dir.: Kichler, MacRae, Culpepper

Location: Macon County

Investigator: Stanley Culpepper

Trial Comments

OBJECTIVE: Determine Widestrike cotton and weed response to Ignite in large on farm replicated trials.

COTTON RESPONSE:

1. Rainfall did not occur until 17 d after planting thus there was no at plant herbicide injury.
2. Ignite or Ignite plus Staple applied to 3 - 4 leaf cotton did not injure the cotton crop at all.
3. Ignite or Ignite plus Staple applied to 10 leaf cotton caused up to 7% chlorosis. Injury was often in leaves that emerged 3 to 9 days prior to the application.

WEED RESPONSE:

Glyphosate-resistant Palmer amaranth:

1. Rainfall did not activate herbicides until 17 d after application. At 21 d after the rainfall Reflex alone provided 78% control of the pigweed while Direx plus Reflex provided 92% control.
2. Ignite applied to 3-4 leaf cotton following PRE treatments when Palmer was 3 inches or less provided excellent control. However, Ignite applied to 3-4 leaf cotton when not following a PRE provided only 56% control, the addition of Staple with this Ignite application improved control only 11%.
3. Sequential applications following PRE applications provided excellent control at harvest; control was at least 10% less when no PRE was applied.

Morningglory:

1. Reflex PRE provided only 30% control while Direx plus Reflex provided 50% control, remember rainfall did not occur until 17 d after applying herbicides.
2. Ignite POST provided complete control regardless of previous herbicide applications.

Sicklepod:

1. Reflex PRE provided only 30% control while Direx plus Reflex provided 48% control, remember rainfall did not occur until 17 d after applying herbicides.
2. Ignite POST provided complete control regardless of previous herbicide applications.

GENERAL COMMENTS:

July 28: Layby PRO + MSMA broadcast over trial area.

University of Georgia

Large acreage PHY 485 WF cotton and glyphosate-resistant Palmer amaranth response to Ignite/Roundup Systems

Trial ID: C41-07 Study Dir.: Kichler, MacRae, Culpepper
 Location: Macon County Investigator: Stanley Culpepper

Weed Code											
Crop Code	GOSHI	GOSHI	GOSHI	AMAPA	AMAPA	AMAPA	AMAPA	IPOLA	IPOLA		
Rating Data Type	%	%	%	%	%	%	%	%	%		
Rating Unit	injury	injury	injury	control	control	control	control	control	control		
Rating Date	Jun-22-07	Jul-01-07	Jul-16-07	Jun-17-07	Jul-01-07	Jul-16-07	Nov-02-07	Jun-17-07	Jul-01-07		
Trt-Eval Interval	5 DA-B	14 DA-B	6 DA-C	38 DA-A	14 DA-B	6 DA-C	115 DA-C	38 DA-A	14 DA-B		
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate		
		Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit		
			1	2	3	4	5	6	7		
			8	9							
1	Treflan	1.5 PT/A	0 a	0 a	7 a	78 b	96 a	96 a	99 a	30 a	99 a
	Reflex	1 PT/A									
	Ignite 280	23 OZ/A									
	Ignite 280	23 OZ/A									
	Conv. Layby										
2	Treflan	1.5 PT/A	0 a	0 a	7 a	78 b	97 a	96 a	99 a	30 a	99 a
	Reflex	1 PT/A									
	Ignite 280	23 OZ/A									
	Staple	1.7 OZ/A									
	Ignite 280	23 OZ/A									
	Conv. Layby										
3	Treflan	1.5 PT/A	0 a	0 a	7 a	92 a	97 a	97 a	99 a	50 a	99 a
	Reflex	1 PT/A									
	Direx	1 QT/A									
	Ignite 280	23 OZ/A									
	Ignite 280	23 OZ/A									
	Conv. Layby										
4	Treflan	1.5 PT/A	0 a	0 a	7 a	92 a	98 a	97 a	98 a	50 a	99 a
	Reflex	1 PT/A									
	Direx	1 QT/A									
	Ignite 280	23 OZ/A									
	Staple	1.7 OZ/A									
	Ignite 280	23 OZ/A									
	Conv. Layby										
5	Treflan	1.5 PT/A	0 a	0 a	5 a	0 c	56 c	80 c	90 b	0 b	99 a
	No PRE										
	Ignite 280	23 OZ/A									
	Ignite 280	23 OZ/A									
	Conv. Layby										
6	Treflan	1.5 PT/A	0 a	0 a	5 a	0 c	68 b	88 b	89 b	0 b	99 a
	No PRE										
	Ignite 280	23 OZ/A									
	Staple	1.7 OZ/A									
	Ignite 280	23 OZ/A									
	Conv. Layby										
LSD (P=.05)			0.0	0.0	3.1	5.7	5.0	5.1	2.0	20.1	0.0
Standard Deviation			0.0	0.0	2.1	3.8	3.3	3.4	1.3	13.3	0.0
CV			0.0	0.0	34.22	6.74	3.86	3.65	1.41	50.0	0.0
Bartlett's X2			0.0	0.0	4.121	2.768	6.668	15.701	5.295	0.403	0.0
P(Bartlett's X2)			.	.	0.532	0.429	0.246	0.008*	0.071	0.94	.

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

University of Georgia

Weed Code			IPOLA	IPOLA	CASOB	CASOB	CASOB	CASOB
Crop Code								
Rating Data Type			%	%	%	%	%	%
Rating Unit			control	control	control	control	control	control
Rating Date			Jul-16-07	Nov-02-07	Jun-17-07	Jul-01-07	Jul-16-07	Nov-02-07
Trt-Eval Interval			6 DA-C	115 DA-C	38 DA-A	14 DA-B	6 DA-C	115 DA-C
Trt No.	Treatment Name	Rate	10	11	12	13	14	15
1	Treflan Reflex Ignite 280 Ignite 280 Conv. Layby	1.5 PT/A 1 PT/A 23 OZ/A 23 OZ/A	99 a	99 a	30 a	99 a	99 a	99 a
2	Treflan Reflex Ignite 280 Staple Ignite 280 Conv. Layby	1.5 PT/A 1 PT/A 23 OZ/A 1.7 OZ/A 23 OZ/A	99 a	99 a	30 a	99 a	99 a	99 a
3	Treflan Reflex Direx Ignite 280 Ignite 280 Conv. Layby	1.5 PT/A 1 PT/A 1 QT/A 23 OZ/A 23 OZ/A	99 a	99 a	48 a	99 a	99 a	99 a
4	Treflan Reflex Direx Ignite 280 Staple Ignite 280 Conv. Layby	1.5 PT/A 1 PT/A 1 QT/A 23 OZ/A 1.7 OZ/A 23 OZ/A	99 a	99 a	48 a	99 a	99 a	99 a
5	Treflan No PRE Ignite 280 Ignite 280 Conv. Layby	1.5 PT/A 23 OZ/A 23 OZ/A	99 a	99 a	0 b	99 a	99 a	99 a
6	Treflan No PRE Ignite 280 Staple Ignite 280 Conv. Layby	1.5 PT/A 23 OZ/A 1.7 OZ/A 23 OZ/A	99 a	99 a	0 b	99 a	99 a	99 a
LSD (P=.05)			0.0	0.0	18.9	0.0	0.0	0.0
Standard Deviation			0.0	0.0	12.6	0.0	0.0	0.0
CV			0.0	0.0	48.62	0.0	0.0	0.0
Bartlett's X2			0.0	0.0	0.216	0.0	0.0	0.0
P(Bartlett's X2)			.	.	0.975	.	.	.

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

University of Georgia

MAINTENANCE

Field Prep./Maintenance:

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

SOIL DESCRIPTION

% Sand: _____ % OM: 0. Texture: Loamy sand
 % Silt: _____ pH: 0. Soil Name: _____
 % Clay: _____ CEC: _____ Fert. Level: _____

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

No.	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: Dry

Closest Weather Station: _____ Distance: _____ Unit: ____

APPLICATION DESCRIPTION

	A	B	C
Application Date:	May-10-07	Jun-17-07	Jul-10-07
Time of Day:	6:00 pm	5:00 pm	5:00 pm
Application Method:	broadcast	broadcast	broadcast
Application Timing:	PRE	POST 1	POST2
Applic. Placement:	on soil	overtop	overtop
Air Temp., Unit:	85 F	93 F	95 F
% Relative Humidity:	43	39	44
Wind Velocity, Unit:	5 mph	6 mph	5 mph
Dew Presence (Y/N):	N	N	N
Water Hardness:			
Soil Temp., Unit:	88 F	96 F	97 F
Soil Moisture:	fair	fair	moist
% Cloud Cover:	0	50	25

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	GOSHI PRE	GOSHI POST1	GOSHI POST2
Stage Scale:	not up	3-4 leaf	10 leaf
Height, Unit:	0 inch	4 inch	12 inch

University of Georgia

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code, Stage:	AMAPA PRE	AMAPA POST1	AMAPA POST2
Stage Scale:	not up	3 inch	3 inch
Density, Unit:	0 ydsq	100 ydsq	30 ydsq
Weed 2 Code, Stage:	CASOB PRE	CASOB POST1	CASOB POST2
Stage Scale:	not up	4 inch	4 inch
Density, Unit:	0 ydsq	4 ydsq	2 ydsq
Weed 3 Code, Stage:	IPOLA PRE	IPOLA POST1	IPOLA POST2
Stage Scale:	not up	4 inch	3 inch
Density, Unit:	0 ydsq	4 ydsq	2 ydsq

APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	tractor	tractor	tractor
Operating Pressure:	30	30	30
Nozzle Type:	flat fan	flat fan	flat fan
Nozzle Size:	11002	11002	11002
Nozzle Spacing, Unit:	18 in	18 in	18 in
Nozzles/Row:	2	2	2
Band Width, Unit:			
Boom Length, Unit:	12 ft	12 ft	12 ft
Boom Height, Unit:	18 in	18 in	18 in
Ground Speed, Unit:	4 mph	4 mph	4 mph
Incorporation Equip.:			
Hours to Incorp.:			
Incorp. Depth, Unit:			
Carrier:	water	water	water
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA
Spray pH:			
Propellant:	pump	pump	pump
Tank Mix (Y/N):	Y	Y	Y

Trt No	Treatment Application Comment