

Tidewater Ag. Res. & Ext. Ctr.

ECB Response to Insect Resistant Cotton & Burndown

Trial ID: BRNDN0205
 Protocol ID: BRNDN0205
 Location: Duke Farm

Study Director: Dr. Ames Herbert
 Investigator: Dr. Joel C. Faircloth

Pest Code			LAMAM	STEME	TRZAW	CHEAL	
Pest Name			Henbit	Common chickweed	Winter wheat	Lambsquarters	
Rating Data Type			CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit			%	%	%	%	
Rating Date			27-Apr-2005	27-Apr-2005	27-Apr-2005	27-Apr-2005	
Trt Treatment No. Name	Form	Rate	Growth Stage	Appl Code			
1 Complete, early			30 DBP A				
1 Roundup UltraMAX	5	1.5 PT/A	30 DBP A				
1 2,4-D Amine 4	4	1 PT/A	30 DBP A				
1 Widestrike RR							
				100.0 a	95.0 a	100.0 a	
2 Complete, early			30 DBP A				
2 Roundup UltraMAX	5	1.5 PT/A	30 DBP A				
2 2,4-D Amine 4	4	1 PT/A	30 DBP A				
2 ST 4646 B2R							
3 Complete, early			30 DBP A				
3 Roundup UltraMAX	5	1.5 PT/A	30 DBP A				
3 2,4-D Amine 4	4	1 PT/A	30 DBP A				
3 DP 455 BG/RR							
4 Complete, early			30 DBP A				
4 Roundup UltraMAX	5	1.5 PT/A	30 DBP A				
4 2,4-D Amine 4	4	1 PT/A	30 DBP A				
4 DP 432 RR							
5 Complete, late			14 DBP B				
5 Roundup UltraMAX	5	1.5 PT/A	14 DBP B				
5 2,4-D Amine 4	4	1 PT/A	14 DBP B				
5 Widestrike RR							
6 Complete, late			14 DBP B				
6 Roundup UltraMAX	5	1.5 PT/A	14 DBP B				
6 2,4-D Amine 4	4	1 PT/A	14 DBP B				
6 ST 4646 B2R							
7 Complete, late			14 DBP B				
7 Roundup UltraMAX	5	1.5 PT/A	14 DBP B				
7 2,4-D Amine 4	4	1 PT/A	14 DBP B				
7 DP 455 BG/RR							
8 Complete, late			14 DBP B				
8 Roundup UltraMAX	5	1.5 PT/A	14 DBP B				
8 2,4-D Amine 4	4	1 PT/A	14 DBP B				
8 DP 432 RR							
9 Not complete, late			14 DBP B				
9 Aim	2	0.5 OZ/A	14 DBP B				
9 2,4-D Amine 4	4	1 PT/A	14 DBP B				
9 Widestrike RR							
10 Not complete, late			14 DBP B				
10 Aim	2	0.5 OZ/A	14 DBP B				
10 2,4-D Amine 4	4	1 PT/A	14 DBP B				
10 ST 4646 B2R							
11 Not complete, late			14 DBP B				
11 Aim	2	0.5 OZ/A	14 DBP B				
11 2,4-D Amine 4	4	1 PT/A	14 DBP B				
11 DP 455 BG/RR							
12 Not complete, late			14 DBP B				
12 Aim	2	0.5 OZ/A	14 DBP B				
12 2,4-D Amine 4	4	1 PT/A	14 DBP B				
12 DP 432 RR							
LSD (P=.05)				2.01	8.51	1.05	0.00
Standard Deviation				1.38	5.86	0.72	0.00
CV				3.42	11.17	1.06	0.0
Grand Mean				40.42	52.5	67.92	100.0

Means followed by same letter do not significantly differ (P=.05, LSD)
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Pest Code	HORSE	STEME	TRZAW	CHEAL
Pest Name	Meadow barley	Common chickweed	Winter wheat	Lambsquarters
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	%	%	%	%
Rating Date	27-Apr-2005	17-May-2005	17-May-2005	17-May-2005

Trt Treatment No. Name	Form Conc	Rate Rate	Growth Unit	Appl Stage	Code					
1 Complete, early			30	DBP	A	100.0 a		100.0 a	100.0 a	100.0 a
1 Roundup UltraMAX	5	1.5	PT/A	30	DBP A					
1 2,4-D Amine 4	4	1	PT/A	30	DBP A					
1 Widestrike RR										
2 Complete, early			30	DBP	A					
2 Roundup UltraMAX	5	1.5	PT/A	30	DBP A					
2 2,4-D Amine 4	4	1	PT/A	30	DBP A					
2 ST 4646 B2R										
3 Complete, early			30	DBP	A					
3 Roundup UltraMAX	5	1.5	PT/A	30	DBP A					
3 2,4-D Amine 4	4	1	PT/A	30	DBP A					
3 DP 455 BG/RR										
4 Complete, early			30	DBP	A					
4 Roundup UltraMAX	5	1.5	PT/A	30	DBP A					
4 2,4-D Amine 4	4	1	PT/A	30	DBP A					
4 DP 432 RR										
5 Complete, late			14	DBP	B	63.8 b		100.0 a	100.0 a	100.0 a
5 Roundup UltraMAX	5	1.5	PT/A	14	DBP B					
5 2,4-D Amine 4	4	1	PT/A	14	DBP B					
5 Widestrike RR										
6 Complete, late			14	DBP	B					
6 Roundup UltraMAX	5	1.5	PT/A	14	DBP B					
6 2,4-D Amine 4	4	1	PT/A	14	DBP B					
6 ST 4646 B2R										
7 Complete, late			14	DBP	B					
7 Roundup UltraMAX	5	1.5	PT/A	14	DBP B					
7 2,4-D Amine 4	4	1	PT/A	14	DBP B					
7 DP 455 BG/RR										
8 Complete, late			14	DBP	B					
8 Roundup UltraMAX	5	1.5	PT/A	14	DBP B					
8 2,4-D Amine 4	4	1	PT/A	14	DBP B					
8 DP 432 RR										
9 Not complete, late			14	DBP	B	35.0 c		0.0 b	0.0 b	100.0 a
9 Aim	2	0.5	OZ/A	14	DBP B					
9 2,4-D Amine 4	4	1	PT/A	14	DBP B					
9 Widestrike RR										
10 Not complete, late			14	DBP	B					
10 Aim	2	0.5	OZ/A	14	DBP B					
10 2,4-D Amine 4	4	1	PT/A	14	DBP B					
10 ST 4646 B2R										
11 Not complete, late			14	DBP	B					
11 Aim	2	0.5	OZ/A	14	DBP B					
11 2,4-D Amine 4	4	1	PT/A	14	DBP B					
11 DP 455 BG/RR										
12 Not complete, late			14	DBP	B					
12 Aim	2	0.5	OZ/A	14	DBP B					
12 2,4-D Amine 4	4	1	PT/A	14	DBP B					
12 DP 432 RR										
LSD (P=.05)						10.59		0.00	0.00	0.00
Standard Deviation						7.30		0.00	0.00	0.00
CV						11.02		0.0	0.0	0.0
Grand Mean						66.25		66.67	66.67	100.0

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Pest Code	Pest Name	Rating Data Type	Rating Unit	Rating Date	INJURY		STAND		PYRUNU	
					%	10 FT/RW	# HITS/60 RW FT	# HITS/120 RWFT		
Trt Treatment No. Name	Form Conc	Rate	Growth Unit	Appl Stage	Code	17-May-2005	23-May-2005	14-Jun-2005	20-Jun-2005	
1 Complete, early			30	DBP A		0.0 a	26.9 a	0.0 a	0.0 a	
1 Roundup UltraMAX	5	1.5 PT/A	30	DBP A						
1 2,4-D Amine 4	4	1 PT/A	30	DBP A						
1 Widestrike RR										
2 Complete, early			30	DBP A			21.0 a	0.0 a	0.0 a	
2 Roundup UltraMAX	5	1.5 PT/A	30	DBP A						
2 2,4-D Amine 4	4	1 PT/A	30	DBP A						
2 ST 4646 B2R										
3 Complete, early			30	DBP A			17.9 a	0.0 a	0.0 a	
3 Roundup UltraMAX	5	1.5 PT/A	30	DBP A						
3 2,4-D Amine 4	4	1 PT/A	30	DBP A						
3 DP 455 BG/RR										
4 Complete, early			30	DBP A			22.4 a	0.0 a	0.0 a	
4 Roundup UltraMAX	5	1.5 PT/A	30	DBP A						
4 2,4-D Amine 4	4	1 PT/A	30	DBP A						
4 DP 432 RR										
5 Complete, late			14	DBP B		0.0 a	22.1 a	0.0 a	0.0 a	
5 Roundup UltraMAX	5	1.5 PT/A	14	DBP B						
5 2,4-D Amine 4	4	1 PT/A	14	DBP B						
5 Widestrike RR										
6 Complete, late			14	DBP B			19.9 a	0.0 a	0.0 a	
6 Roundup UltraMAX	5	1.5 PT/A	14	DBP B						
6 2,4-D Amine 4	4	1 PT/A	14	DBP B						
6 ST 4646 B2R										
7 Complete, late			14	DBP B			22.0 a	0.0 a	0.0 a	
7 Roundup UltraMAX	5	1.5 PT/A	14	DBP B						
7 2,4-D Amine 4	4	1 PT/A	14	DBP B						
7 DP 455 BG/RR										
8 Complete, late			14	DBP B			19.8 a	0.0 a	0.0 a	
8 Roundup UltraMAX	5	1.5 PT/A	14	DBP B						
8 2,4-D Amine 4	4	1 PT/A	14	DBP B						
8 DP 432 RR										
9 Not complete, late			14	DBP B		0.0 a	24.0 a	0.3 a	0.3 a	
9 Aim	2	0.5 OZ/A	14	DBP B						
9 2,4-D Amine 4	4	1 PT/A	14	DBP B						
9 Widestrike RR										
10 Not complete, late			14	DBP B			22.3 a	0.0 a	0.3 a	
10 Aim	2	0.5 OZ/A	14	DBP B						
10 2,4-D Amine 4	4	1 PT/A	14	DBP B						
10 ST 4646 B2R										
11 Not complete, late			14	DBP B			19.3 a	0.0 a	0.5 a	
11 Aim	2	0.5 OZ/A	14	DBP B						
11 2,4-D Amine 4	4	1 PT/A	14	DBP B						
11 DP 455 BG/RR										
12 Not complete, late			14	DBP B			23.5 a	0.3 a	0.3 a	
12 Aim	2	0.5 OZ/A	14	DBP B						
12 2,4-D Amine 4	4	1 PT/A	14	DBP B						
12 DP 432 RR										
LSD (P=.05)						0.00	5.29	0.31	0.45	
Standard Deviation						0.00	3.64	0.22	0.31	
CV						0.0	16.75	516.4	295.75	
Grand Mean						0.0	21.74	0.04	0.1	

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Study Director: Dr. Ames Herbert
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Pest Code PYRUNU
 Pest Name European Corn Borer
 Rating Data Type # HITS/
 Rating Unit 120 RWFT
 Rating Date 27-Jun-2005

Trt Treatment No. Name	Form Conc	Rate Rate	Growth Unit	Appl Stage Code	
1 Complete, early			30	DBP A	0.0 b
1 Roundup UltraMAX	5	1.5 PT/A	30	DBP A	
1 2,4-D Amine 4	4	1 PT/A	30	DBP A	
1 Widestrike RR					
2 Complete, early			30	DBP A	0.0 b
2 Roundup UltraMAX	5	1.5 PT/A	30	DBP A	
2 2,4-D Amine 4	4	1 PT/A	30	DBP A	
2 ST 4646 B2R					
3 Complete, early			30	DBP A	0.0 b
3 Roundup UltraMAX	5	1.5 PT/A	30	DBP A	
3 2,4-D Amine 4	4	1 PT/A	30	DBP A	
3 DP 455 BG/RR					
4 Complete, early			30	DBP A	0.0 b
4 Roundup UltraMAX	5	1.5 PT/A	30	DBP A	
4 2,4-D Amine 4	4	1 PT/A	30	DBP A	
4 DP 432 RR					
5 Complete, late			14	DBP B	0.0 b
5 Roundup UltraMAX	5	1.5 PT/A	14	DBP B	
5 2,4-D Amine 4	4	1 PT/A	14	DBP B	
5 Widestrike RR					
6 Complete, late			14	DBP B	0.0 b
6 Roundup UltraMAX	5	1.5 PT/A	14	DBP B	
6 2,4-D Amine 4	4	1 PT/A	14	DBP B	
6 ST 4646 B2R					
7 Complete, late			14	DBP B	0.0 b
7 Roundup UltraMAX	5	1.5 PT/A	14	DBP B	
7 2,4-D Amine 4	4	1 PT/A	14	DBP B	
7 DP 455 BG/RR					
8 Complete, late			14	DBP B	0.0 b
8 Roundup UltraMAX	5	1.5 PT/A	14	DBP B	
8 2,4-D Amine 4	4	1 PT/A	14	DBP B	
8 DP 432 RR					
9 Not complete, late			14	DBP B	0.3 ab
9 Aim	2	0.5 OZ/A	14	DBP B	
9 2,4-D Amine 4	4	1 PT/A	14	DBP B	
9 Widestrike RR					
10 Not complete, late			14	DBP B	0.0 b
10 Aim	2	0.5 OZ/A	14	DBP B	
10 2,4-D Amine 4	4	1 PT/A	14	DBP B	
10 ST 4646 B2R					
11 Not complete, late			14	DBP B	0.5 a
11 Aim	2	0.5 OZ/A	14	DBP B	
11 2,4-D Amine 4	4	1 PT/A	14	DBP B	
11 DP 455 BG/RR					
12 Not complete, late			14	DBP B	0.0 b
12 Aim	2	0.5 OZ/A	14	DBP B	
12 2,4-D Amine 4	4	1 PT/A	14	DBP B	
12 DP 432 RR					
LSD (P=.05)					0.29
Standard Deviation					0.20
CV					317.4
Grand Mean					0.06

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Crop Description

Crop 1: TRZAW Triticum aestivum (winter) Winter wheat
 Description: COVER CROP
 BBCH Scale: BCER

Crop 2: GOSHI Gossypium hirsutum Cotton, American upland
 Variety: DP 444 BG/RR
 BBCH Scale: BCOT Planting Date: 02-May-2005

Pest Description

Pest 1 Type: W Code: LAMAM Lamium amplexicaule
 Common Name: Henbit
 Pest 2 Type: W Code: STEME Stellaria media
 Common Name: Common chickweed
 Pest 3 Type: W Code: TAROF Taraxacum officinale
 Common Name: Common dandelion
 Pest 4 Type: W Code: OEOBI Oenothera biennis
 Common Name: Common evening primrose
 Pest 5 Type: W Code: PLALA Plantago lanceolata
 Common Name: Buckhorn plantain
 Pest 6 Type: W Code: RUMOB Rumex obtusifolius
 Common Name: Blunt-leaved dock

Site and Design

Plot Width, Unit: 12 FT
 Plot Length, Unit: 30 FT
 Replications: 4 Study Design: Split-Plot

Trial Initiation Comments:

Maintenance

No.	Date	Maintenance Treatment Name	Form	Conc	Unit	Form	Rate	Unit
1.	18-Apr-2005	9-15-36					330	LB/A
2.	06-Jun-2005	Roundup WeatherMax	4.5	SL	22			OZ/A

Field Prep./Maintenance:

Soil Description

% Sand: 83.8 % OM: 0.8 Texture: LOAMY SAND
 % Silt: 12.8 pH: 6.05
 % Clay: 3.4

Application Description

	A	B
Application Date:	30-Mar-2005	18-Apr-2005
Time of Day:	1:30 PM	11:00 AM
Application Method:	SPRAY	SPRAY
Application Timing:	30 DBP	14 DBP
Application Placement:	BROFOL	BROFOL
Air Temperature, Unit:	67 F	68 F
% Relative Humidity:	72	54
Wind Velocity, Unit:	0 MPH	2 MPH
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	61 F	58 F
Soil Moisture:	EXCESSIVE	ADEQAUTE
% Cloud Cover:	0	0

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	TRZAW BCER	TRZAW BCER
Height, Unit:	4 IN	7 IN
Crop 2 Code, BBCH Scale:	GOSHI BCOT	GOSHI BCOT
Stage Scale Used:	BBCH	

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Pest Stage At Each Application

	A	B
Pest 1 Code, Disc., Scale:	LAMAM	W LAMAM W
Height, Unit:	5	IN 8 IN
Pest 2 Code, Disc., Scale:	STEME	W STEME W
Diameter, Unit:	5	IN 8 IN
Pest 3 Code, Disc., Scale:	TAROF	W TAROF W
Diameter, Unit:	3	IN 6 IN
Pest 4 Code, Disc., Scale:	OEOBI	W OEOBI W
Diameter, Unit:	4	IN
Pest 5 Code, Disc., Scale:	PLALA	W PLALA W
Height, Unit:	3	IN 5 IN
Pest 6 Code, Disc., Scale:	RUMOB	W RUMOB W
Diameter, Unit:	3	IN

Application Equipment

	A	B
Appl. Equipment:	TRACTOR	TRACTOR
Operating Pressure:	32	32
Pressure Unit:	PSI	PSI
Nozzle Type:	FLAT FAN	FLAT FAN
Nozzle Size:	XR8002VS	XR8002VS
Nozzle Spacing, Unit:	18 IN	18 IN
Boom Length, Unit:	12 FT	12 FT
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume:	15	15
Volume Unit:	GAL/AC	GAL/AC
Propellant:	COMP. AIR	COMP. AIR
Tank Mix (Y/N):	Y	Y