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Country: UNITED STATES OF AMERICA Region: Trial Use: NORMAL
 Discipline: HERBICIDE Sequence: Year: 2009
 Trial Id.: US__0H__2009 Protocol Id.: HAJM01A4-2009US Revision Date: DEC 15
 Master Protocol Id.:

Trial Origin: COOPERATOR TRIAL Licensee: Dr. Bill Johnson GEP: N

Title: Compare Halex GT one and two pass programs vs competitors for season long weed control in GT/LL Corn

SITE AND DESIGN

Plot Width: 10 Unit: FT Plot Length: 30 Unit: FT Plot Area: 300.0 Unit: FT2 No Reps: 4 No Treats: 11

Site Description Event Date: 5-22-2009 Plot Items: 1.0 Plot Unit: PLOT Study Design: RACOB
 Trial Location: Throckmorton Purdue Agriculture Center Farm/Station Name: TPAC
 County: Tippecanoe Farm Manager: Jay Young
 State/Province: IN Street: 8343 US Highway 231
 Postal Code: 47909 City+State/Prov: Lafayette
 Cooperator Name: Purdue University/Dr. William Johnson Postal Code: 47909
 Country: UNITED STATES OF AMERICA

Soil Texture: SILT LOAM
 Soil Drainage: FAIR
 Tillage Type: CONVENTIONAL-TILL

Previous Crop/Pest
GLYCINE MAX

GENERAL TRIAL INFORMATION

Initiation Date: 4-10-2009 Protocol Id. : HAJM01A4-2009US
 Title: Compare Halex GT one and two pass programs vs competitors for season long weed control in GT/LL Corn
 Investigator: Dr. Bill Johnson
 Local Protocol Responsibility: Adrian Moses

TRIAL STATUS

Date: 4-10-2009 TRIAL STATUS: ESTABLISHED
 Comment: Generated by ARM

SEED DESCRIPTION

1. Date: 5-22-2009 Area: Trial Crop: ZEA MAYS Var: P33W84
 Comment: Roundup Ready/Liberty Link

CROP OCCURRENCE

	1.
Date:	5-22-2009
Area:	Trial
Crop:	CORN
Crop Code:	ZEAMX
BBCH Scale:	BCOR
Variety:	P33W84
Seed Description:	1
Planting Date:	5-22-2009
Emergence Date:	5-27-2009
PL. TYPE:	PLANTING OF SEEDS
Planting/Pruning System:	AREAL DRILLING/PLANTING
Planting Depth Min, Max, Unit:	2.0 2.0 IN
Row Spacing, Unit:	30.0 IN
Planting Rate, Unit:	32000.0 P/A
Method:	DIRECT DRILLED

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PEST OCCURRENCE						
	1.	2.	3.	4.	5.	6.
Date:	6-9-2009	6-9-2009	6-9-2009	6-18-2009	6-18-2009	6-18-2009
Area:	Trial	Trial	Trial	Trial	Trial	Trial
Pest:	AMBROSIA TRIFIDA	IPOMOEA SP.	SETARIA FABERI	AMBROSIA TRIFIDA	IPOMOEA SP.	SETARIA FABERI
Pest Code:	AMBTR	IPOSS	SETFA	AMBTR	IPOSS	SETFA
Stage Scale:	BBCH	BBCH	BGRM	BBCH	BBCH	BGRM
OCCURRENCE TYPE:	OCCURRED	OCCURRED	OCCURRED	OCCURRED	OCCURRED	OCCURRED
	7.	8.	9.			
Date:	6-18-2009	6-18-2009	6-18-2009			
Area:	Trial	Trial	Trial			
Pest:	ABUTILON THEOPHRASTI	CHENOPODIUM ALBUM	AMARANTHUS RETROFLEXUS			
Pest Code:	ABUTH	CHEAL	AMARE			
Stage Scale:	BBCH	BBCH	BDWE			
OCCURRENCE TYPE:	OCCURRED	OCCURRED	OCCURRED			
	10.	11.	12.	13.		
Date:	6-23-2009	6-23-2009	6-23-2009	6-23-2009		
Area:	Trial	Trial	Trial	Trial		
Pest:	ABUTILON THEOPHRASTI	AMBROSIA TRIFIDA	SETARIA FABERI	CALYSTEGIA SEPIUM		
Pest Code:	ABUTH	AMBTR	SETFA	CAGSE		
Stage Scale:	BBCH	BBCH	BGRM	BBCH		
OCCURRENCE TYPE:	OCCURRED	OCCURRED	OCCURRED	OCCURRED		
	14.	15.	16.	17.		
Date:	6-23-2009	6-23-2009	7-9-2009	7-9-2009		
Area:	Trial	Trial	Trial	Trial		
Pest:	IPOMOEA HEDERACEA	AMARANTHUS RETROFLEXUS	AMBROSIA TRIFIDA	SETARIA FABERI		
Pest Code:	IPOHE	AMARE	AMBTR	SETFA		
Stage Scale:	BDIC	BDWE	BBCH	BGRM		
OCCURRENCE TYPE:	OCCURRED	OCCURRED	OCCURRED	OCCURRED		

CROP DEVELOPMENT						
	1.	2.	3.	4.	5.	6.
Date:	5-22-2009	6-9-2009	6-18-2009	6-23-2009	7-9-2009	8-5-2009
Crop:	1 CORN	1 CORN	1 CORN	1 CORN	1 CORN	1 CORN
Crop Code:	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
BBCH Scale:	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR
Variety:	P33W84	P33W84	P33W84	P33W84	P33W84	P33W84
Dev. Stage Min, Max:		13 14	14 15	15 17	19 19	67 67
Dev. Stage Majority:		14	15	16	19	
Height Min, Max, Unit:		6.0 9.0 IN	18.0 24.0 IN	30.0 30.0 IN		9.0 10.0 FT

Tree/Crop Row Volume Information						
Height Total (m):		0.19	0.53	0.76		2.9

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	7.
Date:	11-13-2009
Crop:	1 CORN
Crop Code:	ZEAMX
BBCH Scale:	BCOR
Variety:	P33W84
Dev. Stage Min, Max:	99 99
Dev. Stage Majority:	
Height Min, Max, Unit:	

Tree/Crop Row Volume Information	
Height Total (m):	

PEST DEVELOPMENT

	1.	2.	3.	4.
Date:	6-9-2009	6-9-2009	6-9-2009	6-18-2009
Pest:	1 AMBROSIA TRIFIDA	2 IPOMOEA SP.	3 SETARIA FABERI	4 AMBROSIA TRIFIDA
Pest Code:	AMBTR	IPOSS	SETFA	AMBTR
Stage Scale:	BBCH	BBCH	BGRM	BBCH
Dev. Stage Min, Max:	41 42	41 41	12 15	41 44
Dev. Stage Majority:	41	41	14	42
Density Min, Max, Majority:	1.0 5.0 2.5	1.0 5.0 2.5	10.0 30.0 20.0	1.0 5.0 2.5
Unit:	PER SQUARE YARD	PER SQUARE YARD	PER SQUARE YARD	PER SQUARE YARD
Height Min, Max, Unit:	0.5 4.0 IN	0.5 1.0 IN	0.5 3.0 IN	0.0 18.0 IN
Natural Incidence:	Y	Y	Y	Y

	5.	6.	7.	8.
Date:	6-18-2009	6-18-2009	6-18-2009	6-18-2009
Pest:	5 IPOMOEA SP.	6 SETARIA FABERI	7 ABUTILON THEOPHRASTI	8 CHENOPODIUM ALBUM
Pest Code:	IPOSS	SETFA	ABUTH	CHEAL
Stage Scale:	BBCH	BGRM	BBCH	BBCH
Dev. Stage Min, Max:	09 13	09 23	09 42	09 09
Dev. Stage Majority:	10	15	41	09
Density Min, Max, Majority:	0.0 2.0 1.0	5.0 35.0 20.0	0.0 3.0 2.0	0.0 5.0 2.5
Unit:	PER SQUARE YARD	PER SQUARE FOOT	PER SQUARE YARD	PER SQUARE YARD
Height Min, Max, Unit:	0.0 4.0 IN	0.0 12.0 IN	0.0 5.0 IN	0.0 2.0 IN
Natural Incidence:	Y	Y	Y	Y

	9.	10.	11.
Date:	6-18-2009	6-23-2009	6-23-2009
Pest:	9 AMARANTHUS RETROFLEXUS	10 ABUTILON THEOPHRASTI	11 AMBROSIA TRIFIDA
Pest Code:	AMARE	ABUTH	AMBTR
Stage Scale:	BDWE	BBCH	BBCH
Dev. Stage Min, Max:	10 35	09 42	41 43
Dev. Stage Majority:	32	41	42
Density Min, Max, Majority:	0.0 5.0 2.5	0.0 1.0 1.0	0.0 5.0 2.5
Unit:	PER SQUARE YARD	PER SQUARE YARD	PER SQUARE YARD
Height Min, Max, Unit:	0.0 8.0 IN	0.0 18.0 IN	0.0 25.0 IN
Natural Incidence:	Y	Y	Y

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	12.	13.	14.
Date:	6-23-2009	6-23-2009	6-23-2009
Pest:	12 SETARIA FABERI	13 CALYSTEGIA SEPIUM	14 IPOMOEA HEDERACEA
Pest Code:	SETFA	CAGSE	IPOHE
Stage Scale:	BGRM	BBCH	BDIC
Dev. Stage Min, Max:	20 24	41 41	10 25
Dev. Stage Majority:	22	41	22
Density Min, Max, Majority:	10.0 50.0 30.0	0.0 1.0 0.5	0.0 1.0 1.0
Unit:	PER SQUARE YARD	PER SQUARE YARD	PER SQUARE YARD
Height Min, Max, Unit:	0.0 20.0 IN	5.0 10.0 IN	3.0 7.0 IN
Natural Incidence:	Y	Y	Y

	15.	16.	17.	18.
Date:	6-23-2009	7-9-2009	7-9-2009	8-5-2009
Pest:	15 AMARANTHUS RETROFLEXUS	16 AMBROSIA TRIFIDA	17 SETARIA FABERI	17 SETARIA FABERI
Pest Code:	AMARE	AMBTR	SETFA	SETFA
Stage Scale:	BDWE	BBCH	BGRM	BGRM
Dev. Stage Min, Max:	10 35			65 65
Dev. Stage Majority:	32			
Density Min, Max, Majority:	1.0 3.0 2.0	0.0 6.0 3.0	20.0 50.0 35.0	30.0 100.0
Unit:	PER SQUARE YARD	PER SQUARE YARD	PER SQUARE YARD	PER SQUARE YARD
Height Min, Max, Unit:	0.0 12.0 IN	18.0 60.0 IN	24.0 48.0 IN	36.0 72.0 IN
Natural Incidence:	Y	Y	Y	Y

	19.
Date:	8-5-2009
Pest:	16 AMBROSIA TRIFIDA
Pest Code:	AMBTR
Stage Scale:	BBCH
Dev. Stage Min, Max:	55 55
Dev. Stage Majority:	
Density Min, Max, Majority:	1.0 5.0
Unit:	PER SQUARE YARD
Height Min, Max, Unit:	48.0 110.0 IN
Natural Incidence:	Y

WEATHER DESCRIPTION

1. **Date:** 5-22-2009 **Air Temp. Min:** 88.0 **Max:** 88.0 **Unit:** F **% Rel. Humidity Min:** 23.3 **Max:** 23.3
Wind Velocity Min: 1.1 **Max:** 1.1 **Unit:** MPH **Wind Direction:** W
Sky Condition: 80% clouds
2. **Date:** 6-9-2009 **Air Temp. Min:** 74.0 **Max:** 74.0 **Unit:** F **% Rel. Humidity Min:** 70.0 **Max:** 70.0
Wind Velocity Min: 1.5 **Max:** 1.5 **Unit:** MPH **Wind Direction:** SW
Sky Condition: 90% cloud cover
3. **Date:** 6-18-2009 **Air Temp. Min:** 80.0 **Max:** 80.0 **Unit:** F **% Rel. Humidity Min:** 72.0 **Max:** 72.0
Wind Velocity Min: 1.0 **Max:** 1.0 **Unit:** MPH **Wind Direction:** W
Sky Condition: 60% cloud cover
4. **Date:** 6-23-2009 **Air Temp. Min:** 77.0 **Max:** 77.0 **Unit:** F **% Rel. Humidity Min:** 78.0 **Max:** 78.0
Wind Velocity Min: 1.5 **Max:** 1.5 **Unit:** MPH **Wind Direction:** W
Sky Condition: 0% cloud cover

No.	Date	Soil Temp.	Unit	Soil Moisture Condition
1.	5-22-2009	72.0	F	dry
2.	6-9-2009	70.0	F	moist
3.	6-18-2009	74.0	F	wet
4.	6-23-2009	75.0	F	moist

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APPLICATION		B	C	D
Application Date/Time:	5-22-2009 6:00 PM	6-9-2009 10:00 AM	6-18-2009 7:00 AM	6-23-2009 8:15 AM
Applied By:	CB	RH	MH	CB
Target (Crop):	1 ZEAMX	2 ZEAMX	3 ZEAMX	4 ZEAMX
Variety (Crop):	P33W84	P33W84	P33W84	P33W84
Development (Crop):		13 14	14 15	15 17
Weather:	1	2	3	4
Soil:	1	2	3	4
Equipment Name:	BACKPACK CO2	BACKPACK CO2	BACKPACK CO2	BACKPACK CO2
Application Equipment:	BOOSPH	BOOSPH	BOOSPH	BOOSPH
Pressure, Unit:	28 PSI	28 PSI	28 PSI	28 PSI
Nozzle Type:	FLAFAN	FLAFAN	FLAFAN	FLAFAN
Nozzle Description:	XR11002	XR11002	XR11002	XR11002
Nozzle Spacing, Unit:	15 IN	15 IN	15 IN	15 IN
Nozzles/Row:	8	8	8	8
Boom Length, Unit:	10 FT	10 FT	10 FT	10 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH	3 MPH
Spray Volume, Unit:	15.0 GPA	15.0 GPA	15.0 GPA	15.0 GPA
Mix Size, Unit:	1.8 L	1.8 L	1.8 L	1.8 L
Propellent:	COMCO2	COMCO2	COMCO2	COMCO2
Dew Presence (Y/N):	N	Y	N	N
Wet Leaves (Y/N):	N	Y	N	N
Application Timing:	PREPRE	POSPOS	POSPOS	POSPOS
Applic. Placement:	BROSOI	BROFOL	BROFOL	BROFOL

No.	Date	Area	Laboratory Name	pH/KCL	pH/H2O	CEC	Soil Texture
1.	5-22-2009	Trial	Toronto-Millbrook	6.2	13.3	SILT LOAM	
Comment: A&L Great Lakes Laboratories, Inc. Report #: F04048-0006							
Soil Component:							% Organic Matter: 2.9
Soil Element:				P: 34.0 PPM	K: 124.0 PPM	Ca: 1400.0 PPM	Mg: 430.0 PPM

INOCULATION/INFESTATION

1.		
No.	Date	General Comments
1.	5-22-2009	Field cultivation and disced 1 day prior to planting.
Code	Comment	

Area Name	Treatment Numbers in Area
1.	

INSTRUCTIONS

Crops: GT/LL CORN
 Targets: weeds

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 Objective Notes:
 =====
 Evaluate several Halex GT corn herbicide 1 & 2 pass programs for season long control.
 =====
 Critical Protocol Tasks:
 =====
 Evaluate this Corn trial on a heavy populations of weeds

Determine the best treatment for weed control

Plant a GT/LL corn hybrid.

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 Trial Design Notes:
 =====
 RCBD with 3-4 reps (4 reps for yield)

Plot size determined by the trialist

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Treatment Notes:

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Make Applications in 10-15 GPA
 A=PREM
 B=EPOST 1-2" weeds or V1-V2-corn (Halex GT timing)
 C=Post 2-4"weeds or V4-V6 corn
 D=Post 2-4"weeds or V6-V8 corn

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Assessment Notes:

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Corn injury at 4-7, 14 & 28 DAT
 Weed Control at 14, 28, 56 DAT & at corn maturity
 Moisture & Yield

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Reporting Notes:

Date Data Required By: 10/15/2008

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Other Notes:

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This is a sales support protocol to support Halex GT in weedy field areas.

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Assessment Tasks																	
No.	Timing ID	SE Name	SE Description	Part Assess	Assess Data Type	Assess Unit	Samples per 1 Collect. basis	Sample Unit	Coll. Basis	Bas is Unit	Reporti ng Basis	Reporti ng Basis Unit	As mt Type	Asmt Sub Type	Cal c Type	Sca le Type	Sca Min
1.	1	ZUSX001	%Phyto-General	PLAN T	PHYGE N	%	1.0	PLOT	1.0	PLO T	1.0	PLOT	NO R	RAW	NC	S	0
2.	2	ZUSW001	%Control	PLAN T	CONTR O	%	1.0	PLOT	1.0	PLO T	1.0	PLOT	NO R	RAW	NC	S	0
			Yield weight	GRAI N	WEIGH T	LB		FT2	1.0	PLO T		FT2	YL W	RAW	NC	O	
			Yield Bu	GRAI N	YIELD	BU		FT2	1.0	PLO T	1.0	ACRE	YLD	YLR	NC	O	
5.	5	Y086	% moisture content o	GRAI N	CONM OI	%	1.0	PLOT	1.0	PLO T	1.0	PLOT	YL M	MOI	NC	O	0
No.	Timing ID																
1.	1																
2.	2																
3.																	
4.																	
5.	5																

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Assessment Date	6-17-2009 12:00 AM	6-23-2009 12:00 AM	6-23-2009 12:00 AM
Assessed By	PM	MK	MK
Crop Code	3 ZEAMX	4 ZEAMX	4 ZEAMX
Crop Variety	P33W84	P33W84	P33W84
Crop Development	14 15	15 17	15 17
Pest Code			12 SETFA
Pest Development			20 24
SE Group No.	1	2	1
Assessment Data Type	PHYGEN	PHYGEN	CONTRO
Assessment Unit	%	%	%
Assessment Type, Sub-Type	NOR RAW	NOR RAW	NOR RAW
Number of Subsamples	1	1	1
ARM Action Codes			
Days After Planting	26DAP-1	32DAP-1	32DAP-1
Days After Last Application	8	5	5
No. Decimals Reported			
Trt Treatment/Product Name	Product/AI Rate	Product/AI Rate	Product/AI Rate
	Unit	Unit	Unit
	Code	Code	Code
	1	2	3
11 N-PAK AMS LIQUID	2.5 %v/v	C	
HALEX GT 4.38 CS	2205.0 gai/ha	C	
NIS	0.25 %v/v	C	
LSD (P=.05)	4.23	3.89	3.88
Standard Deviation	2.93	2.70	2.68
CV	368.63	137.96	3.15
Bartlett's X2	0.2	11.618	31.938
P(Bartlett's X2)	0.655	0.169	0.001*
Replicate F	0.419	1.071	4.118
Replicate Prob(F)	0.7410	0.3761	0.0150
Treatment F	1.493	2.454	458.169
Treatment Prob(F)	0.1904	0.0280	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Assessment Date	6-23-2009 12:00 AM		7-9-2009 12:00 AM	7-9-2009 12:00 AM		
Assessed By	MK		RH/JD	RH/JD		
Crop Code	4 ZEAMX		5 ZEAMX	5 ZEAMX		
Crop Variety	P33W84		P33W84	P33W84		
Crop Development	15 17		19 19	19 19		
Pest Code	11 AMBTR			16 AMBTR		
Pest Development	41 43					
SE Group No.	1		3	4		
Assessment Data Type	CONTRO		PHYGEN	CONTRO		
Assessment Unit	%		%	%		
Assessment Type, Sub-Type	NOR RAW		NOR RAW	NOR RAW		
Number of Subsamples	1		1	1		
ARM Action Codes						
Days After Planting	32DAP-1		48DAP-1	48DAP-1		
Days After Last Application	5		16	16		
No. Decimals Reported						
Trt Treatment/Product Name	Product/AI Rate	Product/AI Rate Unit	Applic. Code	4	5	6
1 UNTREATED				0.0 c	0.0 a	0.0 b
2 LUMAX 3.94 SE	2200.0 gai/ha	A		99.0 a	0.0 a	99.5 a
N-PAK AMS LIQUID	2.5 %v/v	C				
HALEX GT 4.38 CS	2205.0 gai/ha	C				
NIS	0.25 %v/v	C				
3 N-PAK AMS LIQUID	2.5 %v/v	C		92.2 ab	0.0 a	100.0 a
HALEX GT 4.38 CS	2205.0 gai/ha	C				
AATREX 4L	280.0 gai/ha	C				
NIS	0.25 %v/v	C				
4 N-PAK AMS LIQUID	2.5 %v/v	C		92.3 ab	0.0 a	100.0 a
HALEX GT 4.38 CS	2205.0 gai/ha	C				
BUCTRIL 2 EC	105.0 gai/ha	C				
NIS	0.25 %v/v	C				
5 BICEP II MAGNUM 5.5 SC	1540.0 gai/ha	A		94.0 ab	0.0 a	99.8 a
N-PAK AMS LIQUID	2.5 %v/v	C				
HALEX GT 4.38 CS	2205.0 gai/ha	C				
NIS	0.25 %v/v	C				
6 N-PAK AMS LIQUID	2.5 %v/v	B		99.8 a	0.0 a	100.0 a
CORVUS 2.63 SC	104.0 gai/ha	B				
NIS	0.25 %v/v	B				
7 N-PAK AMS LIQUID	2.5 %v/v	C		90.0 ab	1.3 a	100.0 a
TOUCHDOWN TOTAL 4.17 SL	880.0 gae/ha	C				
CAPRENO 3.45 SC	90.5 gai/ha	C				
NIS	0.25 %v/v	C				
8 N-PAK AMS LIQUID	2.5 %v/v	C		99.3 a	0.0 a	100.0 a
IGNITE 2.34 SL	490.0 gai/ha	C				
CAPRENO 3.45 SC	90.5 gai/ha	C				
NIS	0.25 %v/v	C				
9 N-PAK AMS LIQUID	2.5 %v/v	C		83.8 b	0.0 a	99.5 a
TOUCHDOWN TOTAL 4.17 SL	880.0 gae/ha	C				
SURESTART	1040.0 gai/ha	C				
NIS	0.25 %v/v	C				
10 N-PAK AMS LIQUID	2.5 %v/v	B		97.3 a	0.0 a	99.5 a
ROUNDUP POWERMAX 4.5 SL	880.0 gae/ha	B				
N-PAK AMS LIQUID	2.5 %v/v	D				
ROUNDUP POWERMAX 4.5 SL	880.0 gae/ha	D				

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Assessment Date	6-23-2009 12:00 AM		7-9-2009 12:00 AM	7-9-2009 12:00 AM
Assessed By	MK		RH/JD	RH/JD
Crop Code	4 ZEAMX		5 ZEAMX	5 ZEAMX
Crop Variety	P33W84		P33W84	P33W84
Crop Development	15 17		19 19	19 19
Pest Code	11 AMBTR			16 AMBTR
Pest Development	41 43			
SE Group No.	1		3	4
Assessment Data Type	CONTRO		PHYGEN	CONTRO
Assessment Unit	%		%	%
Assessment Type, Sub-Type	NOR RAW		NOR RAW	NOR RAW
Number of Subsamples	1		1	1
ARM Action Codes				
Days After Planting	32DAP-1		48DAP-1	48DAP-1
Days After Last Application	5		16	16
No. Decimals Reported				
Trt Treatment/Product Name	Product/AI Rate	Product/AI Rate Unit	Applic. Code	
				4 5 6
11 N-PAK AMS LIQUID	2.5 %v/v	C		87.3 ab 0.0 a 99.8 a
HALEX GT 4.38 CS	2205.0 gai/ha	C		
NIS	0.25 %v/v	C		
LSD (P=.05)	7.77		1.09	0.52
Standard Deviation	5.37		0.75	0.36
CV	6.32		663.33	0.4
Bartlett's X2	33.092		0.0	0.139
P(Bartlett's X2)	0.001*		.	0.998
Replicate F	2.577		1.000	1.379
Replicate Prob(F)	0.0729		0.4064	0.2681
Treatment F	113.816		1.000	27477.417
Treatment Prob(F)	0.0001		0.4654	0.0001

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Assessment Date	7-9-2009 12:00 AM	8-5-2009 12:00 AM	8-5-2009 12:00 AM			
Assessed By	RH/JD	CB/RT	CB/RT			
Crop Code	5 ZEAMX	6 ZEAMX	6 ZEAMX			
Crop Variety	P33W84	P33W84	P33W84			
Crop Development	19 19	67 67	67 67			
Pest Code	17 SETFA	18 SETFA	19 AMBTR			
Pest Development		65 65	55 55			
SE Group No.	5	6	7			
Assessment Data Type	CONTRO	CONTRO	CONTRO			
Assessment Unit	%	%	%			
Assessment Type, Sub-Type	NOR RAW	NOR RAW	NOR RAW			
Number of Subsamples	1	1	1			
ARM Action Codes						
Days After Planting	48DAP-1	75DAP-1	75DAP-1			
Days After Last Application	16	43	43			
No. Decimals Reported						
Trt Treatment/Product Name	Product/AI Rate	Product/AI Rate Unit	Applic. Code	7	8	9
1 UNTREATED				0.0 b	0.0 b	0.0 b
2 LUMAX 3.94 SE	2200.0 gai/ha	A		100.0 a	98.5 a	97.3 a
N-PAK AMS LIQUID	2.5 %v/v	C				
HALEX GT 4.38 CS	2205.0 gai/ha	C				
NIS	0.25 %v/v	C				
3 N-PAK AMS LIQUID	2.5 %v/v	C		100.0 a	99.1 a	99.7 a
HALEX GT 4.38 CS	2205.0 gai/ha	C				
AATREX 4L	280.0 gai/ha	C				
NIS	0.25 %v/v	C				
4 N-PAK AMS LIQUID	2.5 %v/v	C		100.0 a	99.5 a	99.3 a
HALEX GT 4.38 CS	2205.0 gai/ha	C				
BUCTRIL 2 EC	105.0 gai/ha	C				
NIS	0.25 %v/v	C				
5 BICEP II MAGNUM 5.5 SC	1540.0 gai/ha	A		100.0 a	99.8 a	99.8 a
N-PAK AMS LIQUID	2.5 %v/v	C				
HALEX GT 4.38 CS	2205.0 gai/ha	C				
NIS	0.25 %v/v	C				
6 N-PAK AMS LIQUID	2.5 %v/v	B		99.3 a	96.5 a	100.0 a
CORVUS 2.63 SC	104.0 gai/ha	B				
NIS	0.25 %v/v	B				
7 N-PAK AMS LIQUID	2.5 %v/v	C		100.0 a	99.8 a	99.5 a
TOUCHDOWN TOTAL 4.17 SL	880.0 gae/ha	C				
CAPRENO 3.45 SC	90.5 gai/ha	C				
NIS	0.25 %v/v	C				
8 N-PAK AMS LIQUID	2.5 %v/v	C		99.5 a	98.3 a	100.0 a
IGNITE 2.34 SL	490.0 gai/ha	C				
CAPRENO 3.45 SC	90.5 gai/ha	C				
NIS	0.25 %v/v	C				
9 N-PAK AMS LIQUID	2.5 %v/v	C		99.5 a	96.0 a	99.3 a
TOUCHDOWN TOTAL 4.17 SL	880.0 gae/ha	C				
SURESTART	1040.0 gai/ha	C				
NIS	0.25 %v/v	C				
10 N-PAK AMS LIQUID	2.5 %v/v	B		99.5 a	97.8 a	99.5 a
ROUNDUP POWERMAX 4.5 SL	880.0 gae/ha	B				
N-PAK AMS LIQUID	2.5 %v/v	D				
ROUNDUP POWERMAX 4.5 SL	880.0 gae/ha	D				

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Assessment Date	7-9-2009 12:00 AM	8-5-2009 12:00 AM	8-5-2009 12:00 AM
Assessed By	RH/JD	CB/RT	CB/RT
Crop Code	5 ZEAMX	6 ZEAMX	6 ZEAMX
Crop Variety	P33W84	P33W84	P33W84
Crop Development	19 19	67 67	67 67
Pest Code	17 SETFA	18 SETFA	19 AMBTR
Pest Development		65 65	55 55
SE Group No.	5	6	7
Assessment Data Type	CONTRO	CONTRO	CONTRO
Assessment Unit	%	%	%
Assessment Type, Sub-Type	NOR RAW	NOR RAW	NOR RAW
Number of Subsamples	1	1	1
ARM Action Codes			
Days After Planting	48DAP-1	75DAP-1	75DAP-1
Days After Last Application	16	43	43
No. Decimals Reported			
Trt Treatment/Product Name	Product/AI Rate	Product/AI Rate	Product/AI Rate
	Unit	Unit	Unit
	Code	Code	Code
	7	8	9
11 N-PAK AMS LIQUID	2.5 %v/v	C	
HALEX GT 4.38 CS	2205.0 gai/ha	C	
NIS	0.25 %v/v	C	
LSD (P=.05)	0.52	2.87	2.33
Standard Deviation	0.36	1.98	1.61
CV	0.39	2.22	1.78
Bartlett's X2	0.139	20.344	27.399
P(Bartlett's X2)	0.998	0.016*	0.001*
Replicate F	2.148	1.096	0.820
Replicate Prob(F)	0.1157	0.3666	0.4933
Treatment F	28501.309	897.640	1385.118
Treatment Prob(F)	0.0001	0.0001	0.0001

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Assessment Date		11-13-2009 12:00 AM	11-13-2009 12:00 AM
Assessed By		PM	PM
Crop Code		7 ZEAMX	7 ZEAMX
Crop Variety		P33W84	P33W84
Crop Development		99 99	99 99
Pest Code			
Pest Development			
SE Group No.		8	9
Assessment Data Type		YIELD	YIELD
Assessment Unit		LB	BU
Assessment Type, Sub-Type		NOR RAW	YLD YLR
Number of Subsamples		1	1
ARM Action Codes			TY1
Days After Planting		175DAP-1	175DAP-1
Days After Last Application		143	143
No. Decimals Reported			1
Trt Treatment/Product Name	Product/AI Rate	Product/AI Rate Unit	Applic. Code
1 UNTREATED			10
			11
2 LUMAX 3.94 SE	2200.0 gai/ha	A	42.73 b
N-PAK AMS LIQUID	2.5 %v/v	C	129.0 b
HALEX GT 4.38 CS	2205.0 gai/ha	C	69.85 a
NIS	0.25 %v/v	C	210.9 a
3 N-PAK AMS LIQUID	2.5 %v/v	C	58.28 a
HALEX GT 4.38 CS	2205.0 gai/ha	C	176.0 a
AATREX 4L	280.0 gai/ha	C	
NIS	0.25 %v/v	C	
4 N-PAK AMS LIQUID	2.5 %v/v	C	66.43 a
HALEX GT 4.38 CS	2205.0 gai/ha	C	200.6 a
BUCTRIL 2 EC	105.0 gai/ha	C	
NIS	0.25 %v/v	C	
5 BICEP II MAGNUM 5.5 SC	1540.0 gai/ha	A	67.85 a
N-PAK AMS LIQUID	2.5 %v/v	C	204.9 a
HALEX GT 4.38 CS	2205.0 gai/ha	C	
NIS	0.25 %v/v	C	
6 N-PAK AMS LIQUID	2.5 %v/v	B	67.48 a
CORVUS 2.63 SC	104.0 gai/ha	B	203.7 a
NIS	0.25 %v/v	B	
7 N-PAK AMS LIQUID	2.5 %v/v	C	65.03 a
TOUCHDOWN TOTAL 4.17 SL	880.0 gae/ha	C	196.3 a
CAPRENO 3.45 SC	90.5 gai/ha	C	
NIS	0.25 %v/v	C	
8 N-PAK AMS LIQUID	2.5 %v/v	C	68.15 a
IGNITE 2.34 SL	490.0 gai/ha	C	205.8 a
CAPRENO 3.45 SC	90.5 gai/ha	C	
NIS	0.25 %v/v	C	
9 N-PAK AMS LIQUID	2.5 %v/v	C	66.98 a
TOUCHDOWN TOTAL 4.17 SL	880.0 gae/ha	C	202.2 a
SURESTART	1040.0 gai/ha	C	
NIS	0.25 %v/v	C	
10 N-PAK AMS LIQUID	2.5 %v/v	B	73.25 a
ROUNDUP POWERMAX 4.5 SL	880.0 gae/ha	B	221.2 a
N-PAK AMS LIQUID	2.5 %v/v	D	
ROUNDUP POWERMAX 4.5 SL	880.0 gae/ha	D	

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Assessment Date	11-13-2009 12:00 AM		11-13-2009 12:00 AM	
Assessed By	PM		PM	
Crop Code	7 ZEAMX		7 ZEAMX	
Crop Variety	P33W84		P33W84	
Crop Development	99 99		99 99	
Pest Code				
Pest Development				
SE Group No.	8		9	
Assessment Data Type	YIELD		YIELD	
Assessment Unit	LB		BU	
Assessment Type, Sub-Type	NOR RAW		YLD YLR	
Number of Subsamples	1		1	
ARM Action Codes			TY1	
Days After Planting	175DAP-1		175DAP-1	
Days After Last Application	143		143	
No. Decimals Reported			1	
Trt Treatment/Product Name	Product/AI Rate	Product/AI Rate Unit	Applic. Code	
				10
				11
11 N-PAK AMS LIQUID	2.5 %v/v	C		64.10 a
HALEX GT 4.38 CS	2205.0 gai/ha	C		193.5 a
NIS	0.25 %v/v	C		
LSD (P=.05)			9.354	28.25
Standard Deviation			6.479	19.56
CV			10.04	10.04
Bartlett's X2			6.298	6.298
P(Bartlett's X2)			0.79	0.79
Replicate F			0.975	0.974
Replicate Prob(F)			0.4175	0.4178
Treatment F			6.306	6.306
Treatment Prob(F)			0.0001	0.0001

Purdue University

Country: UNITED STATES OF AMERICA	Region:	Trial Use: NORMAL	Year: 2009
Discipline: HERBICIDE	Sequence:	Protocol Id.: HAJM01A4-2009US	Revision Date: DEC 15
Trial Id.: US__0H__2009	Master Protocol Id.:		

Trial Origin: COOPERATOR TRIAL

Licensee: Dr. Bill Johnson

GEP: N

 Title: Compare Halex GT one and two pass programs vs competitors for season long weed control in GT/LL Corn

T67, T26, 3, ZEAMX, P33W84, 14, 15 = 1
 T68, T26, 4, ZEAMX, P33W84, 15, 17 = 1
 T92, T26, 5, ZEAMX, P33W84, 19, 19 = 1
 T95, T26, 6, ZEAMX, P33W84, 67, 67 = 1
 T96, T26, 7, ZEAMX, P33W84, 99, 99 = 1

T86, T55, 12, SETFA, , 20, 24 = 12
 T85, T53, 11, AMBTR, , 41, 43 = 11
 T90, T63, 16, AMBTR, , , = 16
 T91, T65, 17, SETFA, , , = 17
 T93, T65, 18, SETFA, , 65, 65 = 17
 T94, T63, 19, AMBTR, , 55, 55 = 16

5315, PHYGEN = PHYTOTOXICITY - GENERAL
 5260, CONTRO = CONTROL
 5353, YIELD = YIELD

1221, % = PERCENT
 1230, LB = POUND

Assessment Type, Sub-Type

NOR = NORMAL
 YLD = YIELD CALCULATED
 RAW = RAW DATA
 YLR = YIELD CALCULATION

ARM Action Codes

TY1 = 3.019374*10

Days After Planting

26DAP-1 = 1 5-22-2009
 32DAP-1 = 1 5-22-2009
 48DAP-1 = 1 5-12-2009
 75DAP-1 = 1 5-22-2009
 175DAP-1 = 1 5-22-2009