

Purdue Weed Science

One Pass Preemergence Programs in Conventional Till Corn

Trial ID: 16S-TPAC-CORN-03
Protocol ID: 16S-TPAC-CORN-03
Project ID: EHLCOR1-2016

Location: TPAC
Investigator: Dr. Bill Johnson
Study Director: Joe Ikley
Sponsor Contact: Syngenta - Steve Mroczkiewicz

Trial Year: 2016

General Trial Information

Study Director: Joe Ikley **Title:** Research Associate
Investigator: Dr. Bill Johnson **Title:** Professor

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Joe Ikley **Title:** Research Associate
Organization: Purdue University
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Investigator: Dr. Bill Johnson **Title:** Professor
Organization: Purdue University
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Cooperator: Jay Young **Role:** Superintendent
Organization: Purdue University
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Country: USA United States **E-mail:** jayyoung@purdue.edu

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: DKC 62-08

Planting Rate, Unit: 32000 S/A
Depth, Unit: 1.75 IN
Row Spacing, Unit: 30 IN

Soil Temperature, Unit: 74 F
Soil Moisture: SLIDRY slightly dry

Planting Date: Apr-26-2016
Planting Method: PLANTD planted
Planting Equipment: FPP Finger Pickup Planter
Emergence Date: May-10-2016
Harvested Width, Unit: 5 FT
Harvested Length, Unit: 25 FT
% Standard Moisture: 15.5

Pest Description

Pest 1 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed

Pest 2 Type: W **Code:** CHEAL Chenopodium album
Common Name: common lambsquarters

Pest 3 Type: W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail

Site and Design

Treated Plot Width: 10 FT
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT2 **Treatments:** 10
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB� Randomized Complete Block (RCB)

Field Prep./Maintenance:

171 lbs of N applied as UAN on 4/19/16

Soil Description

Description Name: TPAC -Field 4A
% OM: 3.1 **Texture:** SIL silt loam
pH: 6 **Soil Name:** Toronto-Millbrook
CEC: 11.1

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Application Description

	A
Application Date:	Apr-26-2016
Appl. Start Time:	1:00 PM
Appl. Stop Time:	1:30 PM
Application Method:	SPRAY
Application Timing:	PRE
Application Placement:	BROADC
Applied By:	TC
Air Temperature, Unit:	76 F
% Relative Humidity:	50
Wind Velocity, Unit:	5 MPH
Wind Direction:	NNW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	74 F
Soil Moisture:	SLIDRY
% Cloud Cover:	100

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMX BCOR

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMBTR W
Pest 2 Code, Type, Scale:	CHEAL W
Pest 3 Code, Type, Scale:	SETFA W

Application Equipment

	A
Appl. Equipment:	CO2 BACKPACK
Equipment Type:	BACSPR
Operation Pressure, Unit:	18 PSI
Nozzle Type:	FLAT FAN
Nozzle Size:	XR 11002
Nozzle Spacing, Unit:	15 IN
Nozzles/Row:	8
Boom Length, Unit:	10 FT
Boom Height, Unit:	17 IN
Ground Speed, Unit:	3 MPH
Carrier:	MEIGS
Spray Volume, Unit:	15 gal/ac
Mix Size, Unit:	1.8 liters
Propellant:	CO2

Trial Comments

Reps: 4 Plots: 10 by 30 feet
 Spray vol: 15 GAL/AC Mix Size: 1.8 liters (1.5642 liters calculated mix size)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Appl Code	Amt Product to Measure	Rep 1	Rep 2	Rep 3	Rep 4
1	Untreated Check								101	404	603	704

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Reps: 4 Plots: 10 by 30 feet
 Spray vol: 15 GAL/AC Mix Size: 1.8 liters (1.5642 liters calculated mix size)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Appl Code	Amt Product to Measure	Rep 1	Rep 2	Rep 3	Rep 4
2	ACURON	3.44 LB/GAL	ZC		3 qt/a	A	90.0 ml/mx	102	403	605	802
3	ACURON AATREX	3.44 LB/GAL 4 LB/GAL	ZC L		3 qt/a 1 pt/a	A A	90.0 ml/mx 15.0 ml/mx	103	304	503	801
4	ACURON FLEXI	3.26 LB/GAL	ZC		2.25 qt/a	A	67.5 ml/mx	104	401	504	701
5	CORVUS AATREX	2.63 LB/GAL 4 LB/GAL	SC L		5.6 fl oz/a 1 qt/a	A A	5.25 ml/mx 30.0 ml/mx	105	305	601	705
6	RESICORE	3.29 LB/GAL	SE		2.5 qt/a	A	75.0 ml/mx	201	405	502	702
7	ANTHEM ATZ AATREX	4.505 LB/GAL 4 LB/GAL	SE L		2.5 pt/a 0.5 pt/a	A A	37.5 ml/mx 7.5 ml/mx	202	301	602	803
8	CINCH ATZ INSTIGATE @ 6 OZ/A RESOLVE MESOTRIONE	5.5 LB/GAL 25 % 50 %	L DF WG		2 qt/a 0.25 oz ai/a 2.5 oz ai/a	A A A	60.0 ml/mx 0.8987 g/mx 4.493 g/mx	203	302	505	805
9	VERDICT AATREX	5.57 LB/GAL 4 LB/GAL	EC L		18 fl oz/a 1.5 qt/a	A A	16.87 ml/mx 45.0 ml/mx	204	303	501	804
10	Untreated Check							205	402	604	703

Sort Order: Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Unit	Form Type	Lot Code
224.999	ml	ACURON	3.44	LB/GAL	ZC	
121.875	ml	AATREX	4	LB/GAL	L	
84.375	ml	ACURON FLEXI	3.26	LB/GAL	ZC	
6.562	ml	CORVUS	2.63	LB/GAL	SC	
93.750	ml	RESICORE	3.29	LB/GAL	SE	
46.875	ml	ANTHEM ATZ	4.505	LB/GAL	SE	
75.000	ml	CINCH ATZ	5.5	LB/GAL	L	
1.123	g	RESOLVE	25	%	DF	
5.617	g	MESOTRIONE	50	%	WG	
21.094	ml	VERDICT	5.57	LB/GAL	EC	

* 'Per area' calculations based on spray volume= 15 GAL/AC, mix size= 1.8 liters (mix size basis).

* Product amount calculations increased 25 % for overage adjustment.

Pest Type	Pest Code	Pest Scientific Name	Pest Name	Crop Code	Crop Name	Part Rated	Rating Date	Rating Type	Rating Unit	Number of Subsamples	Days After First/Last Applic.	Trt-Eval Interval	Days After Emergence	ARM Action Codes	Number of Decimals
W Weed	AMBTR	Ambrosia trifi>	Giant ragweed	ZEAMX	Corn	PLOT C	May-17-2016	PHYGEN	%	1	21 21	21 DA-A	7 DE-1	P	0
W Weed	CHEAL	Chenopodium al>	common lambsqu>	ZEAMX	Corn	PLOT P	May-17-2016	CONTRO	%	1	21 21	21 DA-A	7 DE-1	P	0
W Weed	AMBTR	Ambrosia trifi>	Giant ragweed	ZEAMX	Corn	PLOT P	May-23-2016	PHYGEN	%	1	27 27	27 DA-A	13 DE-1	P	0
W Weed	CHEAL	Chenopodium al>	common lambsqu>	ZEAMX	Corn	PLOT C	May-23-2016	CONTRO	%	1	27 27	27 DA-A	13 DE-1	P	0

Trt No.	Treatment Name	Rate	Appl Code	Plot 1	Plot 2	Plot 3	Plot 4	Plot 5
1	Untreated Check			101	0	0	0	0
				404	0	0	0	0
				603	0	0	0	0

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 Sponsor Contact: Syngenta - Steve Mroczkiewicz

Pest Type			W Weed	W Weed		W Weed	
Pest Code			AMBTR	CHEAL		AMBTR	
Pest Scientific Name			Ambrosia trifi>	Chenopodium al>		Ambrosia trifi>	
Pest Name			Giant ragweed	common lambsqu>		Giant ragweed	
Crop Code	ZEAMX				ZEAMX		
Crop Name	Corn				Corn		
Part Rated	PLOT C		PLOT P	PLOT P	PLOT C	PLOT P	
Rating Date	May-17-2016		May-17-2016	May-17-2016	May-23-2016	May-23-2016	
Rating Type	PHYGEN		CONTRO	CONTRO	PHYGEN	CONTRO	
Rating Unit	%		%	%	%	%	
Number of Subsamples	1		1	1	1	1	
Days After First/Last Applic.	21 21		21 21	21 21	27 27	27 27	
Trt-Eval Interval	21 DA-A		21 DA-A	21 DA-A	27 DA-A	27 DA-A	
Days After Emergence	7 DE-1		7 DE-1	7 DE-1	13 DE-1	13 DE-1	
ARM Action Codes	P		P	P	P	P	
Number of Decimals	0		0	0	0	0	
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	1	2	3	4	5
		704	0	0	0	0	0
		Mean =	0	0	0	0	0
2 ACURON	3 qt/a	A 102	0	90	100	0	97
		403	0	90	100	0	95
		605	0	95	100	0	97
		802	0	95	100	0	95
		Mean =	0	93	100	0	96
3 ACURON	3 qt/a	A 103	0	95	100	0	95
AATREX	1 pt/a	A 304	0	90	100	0	95
		503	0	100	100	0	99
		801	5	95	100	0	95
		Mean =	1	95	100	0	96
4 ACURON FLEXI	2.25 qt/a	A 104	0	85	100	0	95
		401	0	95	100	0	97
		504	0	97	100	0	97
		701	0	95	100	5	95
		Mean =	0	93	100	1	96
5 CORVUS	5.6 fl oz/a	A 105	0	90	100	0	90
AATREX	1 qt/a	A 305	0	90	100	0	90
		601	5	90	100	0	99
		705	0	95	100	0	95
		Mean =	1	91	100	0	94
6 RESICORE	2.5 qt/a	A 201	0	95	100	0	95
		405	0	90	100	0	95
		502	0	100	100	0	100
		702	5	95	100	0	97
		Mean =	1	95	100	0	97
7 ANTHEM ATZ	2.5 pt/a	A 202	0	80	100	0	75
AATREX	0.5 pt/a	A 301	0	75	100	0	65
		602	0	80	100	0	65
		803	0	90	100	0	80
		Mean =	0	81	100	0	71
8 CINCH ATZ	2 qt/a	A 203	0	90	100	5	95
INSTIGATE @ 6 OZ/A		302	0	90	100	0	85
RESOLVE	0.25 oz ai/a	A 505	0	100	100	0	97
MESOTRIONE	2.5 oz ai/a	A 805	0	90	100	0	90
		Mean =	0	93	100	1	92
9 VERDICT	18 fl oz/a	A 204	5	85	100	5	90
AATREX	1.5 qt/a	A 303	5	95	100	5	95
		501	5	100	100	0	100
		804	0	95	100	0	95
		Mean =	4	94	100	3	95
10 Untreated Check		205	0	0	0	0	0
		402	0	0	0	0	0
		604	0	0	0	0	0
		703	0	0	0	0	0
		Mean =	0	0	0	0	0

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	Sponsor Contact: Syngenta - Steve Mroczkiewicz	

Pest Type	W Weed		W Weed	W Weed	W Weed
Pest Code	CHEAL		AMBTR	CHEAL	AMBTR
Pest Scientific Name	Chenopodium al>		Ambrosia trifi>	Chenopodium al>	Ambrosia trifi>
Pest Name	common lambsqu>		Giant ragweed	common lambsqu>	Giant ragweed
Crop Code		ZEAMX			
Crop Name		Corn			
Part Rated	PLOT P	PLOT C	PLOT P	PLOT P	PLOT P
Rating Date	May-23-2016	Jun-8-2016	Jun-8-2016	Jun-8-2016	Jun-24-2016
Rating Type	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	27 27	43 43	43 43	43 43	59 59
Trt-Eval Interval	27 DA-A	43 DA-A	43 DA-A	43 DA-A	59 DA-A
Days After Emergence	13 DE-1	29 DE-1	29 DE-1	29 DE-1	45 DE-1
ARM Action Codes	P	P	P	P	P
Number of Decimals	0	0	0	0	0
Trt Treatment					
No. Name	Rate	Appl			
	Rate Unit	Code Plot			
			6	7	8
			9	10	
1 Untreated Check	101		0	0	0
	404		0	0	0
	603		0	0	0

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Pest Type	W Weed		W Weed	W Weed	W Weed		W Weed
Pest Code	CHEAL		AMBTR	CHEAL	AMBTR		AMBTR
Pest Scientific Name	Chenopodium al>		Ambrosia trifi>	Chenopodium al>	Ambrosia trifi>		Ambrosia trifi>
Pest Name	common lambsqu>		Giant ragweed	common lambsqu>	Giant ragweed		Giant ragweed
Crop Code		ZEAMX					
Crop Name		Corn					
Part Rated	PLOT P	PLOT C	PLOT P	PLOT P	PLOT P		PLOT P
Rating Date	May-23-2016	Jun-8-2016	Jun-8-2016	Jun-8-2016	Jun-8-2016		Jun-24-2016
Rating Type	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO		CONTRO
Rating Unit	%	%	%	%	%		%
Number of Subsamples	1	1	1	1	1		1
Days After First/Last Applic.	27 27	43 43	43 43	43 43	43 43		59 59
Trt-Eval Interval	27 DA-A	43 DA-A	43 DA-A	43 DA-A	43 DA-A		59 DA-A
Days After Emergence	13 DE-1	29 DE-1	29 DE-1	29 DE-1	29 DE-1		45 DE-1
ARM Action Codes	P	P	P	P	P		P
Number of Decimals	0	0	0	0	0		0
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	6	7	8	9	10
		704	0	0	0	0	0
		Mean =	0	0	0	0	0
2 ACURON	3 qt/a	A 102	100	0	97	100	95
		403	100	0	95	100	95
		605	100	0	97	100	95
		802	100	0	97	100	90
		Mean =	100	0	97	100	94
3 ACURON	3 qt/a	A 103	100	0	95	100	92
AATREX	1 pt/a	A 304	100	0	95	100	100
		503	100	0	100	100	100
		801	100	0	95	100	95
		Mean =	100	0	96	100	97
4 ACURON FLEXI	2.25 qt/a	A 104	100	0	95	100	99
		401	100	0	95	100	95
		504	100	0	100	100	100
		701	100	0	95	100	95
		Mean =	100	0	96	100	97
5 CORVUS	5.6 fl oz/a	A 105	100	0	90	100	65
AATREX	1 qt/a	A 305	100	0	85	100	60
		601	100	0	90	100	75
		705	100	0	95	100	85
		Mean =	100	0	90	100	71
6 RESICORE	2.5 qt/a	A 201	100	0	85	100	75
		405	100	0	95	100	85
		502	100	0	100	100	100
		702	100	0	95	100	80
		Mean =	100	0	94	100	85
7 ANTHEM ATZ	2.5 pt/a	A 202	100	0	50	100	20
AATREX	0.5 pt/a	A 301	100	0	30	.	10
		602	100	0	30	100	15
		803	100	0	50	100	25
		Mean =	100	0	40	100	18
8 CINCH ATZ	2 qt/a	A 203	100	0	90	100	85
INSTIGATE @ 6 OZ/A		302	100	0	75	100	30
RESOLVE	0.25 oz ai/a	A 505	100	0	97	100	95
MESOTRIONE	2.5 oz ai/a	A 805	100	0	85	100	65
		Mean =	100	0	87	100	69
9 VERDICT	18 fl oz/a	A 204	100	0	80	100	30
AATREX	1.5 qt/a	A 303	100	0	85	100	80
		501	100	0	97	100	85
		804	100	0	85	100	75
		Mean =	100	0	87	100	68
10 Untreated Check		205	0	0	0	0	0
		402	0	0	0	0	0
		604	0	0	0	0	0
		703	0	0	0	0	0
		Mean =	0	0	0	0	0

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Pest Type	W Weed			
Pest Code	AMBTR			
Pest Scientific Name	Ambrosia trifid			
Pest Name	Giant ragweed			
Crop Code		ZEAMX	ZEAMX	ZEAMX
Crop Name		Corn	Corn	Corn
Part Rated	PLOT P	PLOT C	PLOT C	PLOT C
Rating Date	Jul-7-2016	Oct-7-2016	Oct-7-2016	Oct-7-2016
Rating Type	CONTRO	YIELD	MOICON	YIELD
Rating Unit	%	lb/plot	%	BU
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	72 72	164 164	164 164	164 164
Trt-Eval Interval	72 DA-A	164 DA-A	164 DA-A	164 DA-A
Days After Emergence	58 DE-1	150 DE-1	150 DE-1	150 DE-1
ARM Action Codes	P			TY1
Number of Decimals	0	2	1	1
Trt Treatment				
No. Name	Rate Unit	Code Plot		
		11	12	13
1 Untreated Check	101	0	0.00	0.0
	404	0	0.00	0.0
	603	0	0.00	0.0

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				W Weed			
				AMBTR			
				Ambrosia trifid			
				Giant ragweed			
					ZEAMX	ZEAMX	ZEAMX
					Corn	Corn	Corn
				PLOT P	PLOT C	PLOT C	PLOT C
				Jul-7-2016	Oct-7-2016	Oct-7-2016	Oct-7-2016
				CONTRO	YIELD	MOICON	YIELD
				%	lb/plot	%	BU
				1	1	1	1
				72 72	164 164	164 164	164 164
				72 DA-A	164 DA-A	164 DA-A	164 DA-A
				58 DE-1	150 DE-1	150 DE-1	150 DE-1
				P			TY1
				0	2	1	1
Trt	Treatment	Rate	Appl				
No.	Name	Rate Unit	Code Plot	11	12	13	14
			704	0	0.00	0.0	0.0
			Mean =	0	0.00	0.0	0.0
2	ACURON	3 qt/a	A 102	99	43.85	18.8	262.1
			403	95	28.43	18.8	170.0
			605	99	29.72	17.4	180.9
			802	90	30.69	18.6	183.9
			Mean =	96	33.17	18.4	199.2
3	ACURON	3 qt/a	A 103	95	40.31	18.0	243.4
	AATREX	1 pt/a	A 304	95	37.73	19.5	223.7
			503	100	40.90	20.5	239.5
			801	95	28.27	18.3	170.1
			Mean =	96	36.80	19.1	219.1
4	ACURON FLEXI	2.25 qt/a	A 104	95	38.75	18.2	233.3
			401	95	28.70	19.7	169.7
			504	100	34.99	18.6	209.8
			701	99	32.94	19.9	194.3
			Mean =	97	33.84	19.1	201.8
5	CORVUS	5.6 fl oz/a	A 105	60	29.29	17.6	177.7
	AATREX	1 qt/a	A 305	20	14.51	17.8	87.8
			601	.	30.09	20.4	176.3
			705	85	22.41	17.9	135.6
			Mean =	55	24.07	18.4	144.3
6	RESICORE	2.5 qt/a	A 201	70	23.91	17.4	145.4
			405	80	24.34	19.2	144.8
			502	99	38.91	19.0	232.0
			702	70	25.53	17.8	154.6
			Mean =	80	28.17	18.4	169.2
7	ANTHEM ATZ	2.5 pt/a	A 202	10	6.44	17.8	39.0
	AATREX	0.5 pt/a	A 301	0	0.00	0.0	0.0
			602	0	7.30	20.0	43.0
			803	0	0.00	0.0	0.0
			Mean =	3	3.44	9.4	20.5
8	CINCH ATZ	2 qt/a	A 203	85	31.01	19.0	184.9
	INSTIGATE @ 6 OZ/A		302	20	12.09	21.0	70.3
	RESOLVE	0.25 oz ai/a	A 505	90	29.07	18.0	175.6
	MESOTRIONE	2.5 oz ai/a	A 805	40	15.26	17.3	92.9
			Mean =	59	21.86	18.8	130.9
9	VERDICT	18 fl oz/a	A 204	30	9.78	18.8	58.4
	AATREX	1.5 qt/a	A 303	80	28.00	19.6	165.7
			501	.	32.30	20.2	189.8
			804	20	17.36	19.0	103.6
			Mean =	43	21.86	19.4	129.4
10	Untreated Check		205	0	0.00	0.0	0.0
			402	0	0.00	0.0	0.0
			604	0	0.00	0.0	0.0
			703	0	0.00	0.0	0.0
			Mean =	0	0.00	0.0	0.0

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 Protocol ID: 16S-TPAC-CORN-03 Investigator: Dr. Bill Johnson
 Project ID: EHLCOR1-2016 Study Director: Joe Ikley
 Sponsor Contact: Syngenta - Steve Mroczkiewicz

Pest Type
 W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
 AMBTR, Ambrosia trifida, = US
 CHEAL, Chenopodium album, = US
Crop Code
 ZEAMX, BCOR, Zea mays, = US
Part Rated
 PLOT = plot
 C = Crop is Part Rated
 P = Pest is Part Rated
Rating Type
 PHYGEN = phytotoxicity - general / injury
 CONTRO = control / burndown or knockdown
 YIELD = yield
 MOICON = moisture content
Rating Unit
 % = percent
 lb/plot = pounds per plot
 BU = bushel
ARM Action Codes
 P = Rating scale of 0 to 100 (e.g. % control or injury)
 TY1 = 6.222857*[12]*(100-[13])/84.5

Pest Type	Pest Code	W Weed AMBTR Ambrosia trifida> Giant ragweed	W Weed CHEAL Chenopodium al> common lambsqu>	W Weed AMBTR Ambrosia trifi> Giant ragweed	W Weed CHEAL Chenopodium al> common lambsqu>
Crop Code	ZEAMX			ZEAMX	
Crop Name	Corn			Corn	
Part Rated	PLOT C	PLOT P	PLOT P	PLOT C	PLOT P
Rating Date	May-17-2016	May-17-2016	May-17-2016	May-23-2016	May-23-2016
Rating Type	PHYGEN	CONTRO	CONTRO	PHYGEN	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	21 21	21 21	21 21	27 27	27 27
Trt-Eval Interval	21 DA-A	21 DA-A	21 DA-A	27 DA-A	27 DA-A
Days After Emergence	7 DE-1	7 DE-1	7 DE-1	13 DE-1	13 DE-1
ARM Action Codes	P	P	P	P	P
Number of Decimals	0	0	0	0	0
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	1	2	3
			4	5	6
1 Untreated Check			0 -	0 c	0 -
2 ACURON	3 qt/a	A	0 -	93 a	100 -
3 ACURON	3 qt/a	A	1 -	95 a	100 -
AATREX	1 pt/a	A			
4 ACURON FLEXI	2.25 qt/a	A	0 -	93 a	100 -
5 CORVUS	5.6 fl oz/a	A	1 -	91 a	100 -
AATREX	1 qt/a	A			
6 RESICORE	2.5 qt/a	A	1 -	95 a	100 -
7 ANTHEM ATZ	2.5 pt/a	A	0 -	81 b	100 -
AATREX	0.5 pt/a	A			
8 CINCH ATZ	2 qt/a	A	0 -	93 a	100 -
INSTIGATE @ 6 OZ/A					
RESOLVE	0.25 oz ai/a	A			
MESOTRIONE	2.5 oz ai/a	A			
9 VERDICT	18 fl oz/a	A	4 -	94 a	100 -
AATREX	1.5 qt/a	A			

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Pest Type		W Weed AMBTR	W Weed CHEAL		W Weed AMBTR	W Weed CHEAL
Pest Code		Ambrosia trifi>	Chenopodium al>		Ambrosia trifi>	Chenopodium al>
Pest Scientific Name		Giant ragweed	common lambsqu>		Giant ragweed	common lambsqu>
Pest Name						
Crop Code	ZEAMX			ZEAMX		
Crop Name	Corn			Corn		
Part Rated	PLOT C	PLOT P	PLOT P	PLOT C	PLOT P	PLOT P
Rating Date	May-17-2016	May-17-2016	May-17-2016	May-23-2016	May-23-2016	May-23-2016
Rating Type	PHYGEN	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1
Days After First/Last Applic.	21 21	21 21	21 21	27 27	27 27	27 27
Trt-Eval Interval	21 DA-A	21 DA-A	21 DA-A	27 DA-A	27 DA-A	27 DA-A
Days After Emergence	7 DE-1	7 DE-1	7 DE-1	13 DE-1	13 DE-1	13 DE-1
ARM Action Codes	P	P	P	P	P	P
Number of Decimals	0	0	0	0	0	0
Trt Treatment	Rate	Appl				
No. Name	Rate Unit	Code	1	2	3	4
10 Untreated Check			0 -	0 c	0 -	0 -
LSD P=.05			2.4	5.2	.	2.1
Standard Deviation			1.6	3.6	0.0	1.5
CV			218.49	4.88	0.0	291.87
Bartlett's X2			0.0	3.963	0.0	0.083
P(Bartlett's X2)			.	0.784	.	0.959
Skewness			2.0376*	-1.4849*	-1.5591*	2.7717*
Kurtosis			2.2626*	0.3337	0.4507	5.9791*
Replicate F			0.310	5.133	0.000	0.783
Replicate Prob(F)			0.8177	0.0061	1.0000	0.5140
Treatment F			2.172	471.461	0.000	1.435
Treatment Prob(F)			0.0577	0.0001	1.0000	0.2227
						518.370
						0.0001
						0.0000
						1.0000

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Pest Type		W Weed AMBTR Ambrosia trifi> Giant ragweed	W Weed CHEAL Chenopodium al> common lambsqu>	W Weed AMBTR Ambrosia trifi> Giant ragweed	W Weed AMBTR Ambrosia trifi> Giant ragweed			
Pest Code								
Pest Scientific Name								
Pest Name								
Crop Code	ZEAMX					ZEAMX		
Crop Name	Corn					Corn		
Part Rated	PLOT C	PLOT P	PLOT P	PLOT P	PLOT P	PLOT C		
Rating Date	Jun-8-2016	Jun-8-2016	Jun-8-2016	Jun-24-2016	Jul-7-2016	Oct-7-2016		
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	YIELD		
Rating Unit	%	%	%	%	%	lb/plot		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	43 43	43 43	43 43	59 59	72 72	164 164		
Trt-Eval Interval	43 DA-A	43 DA-A	43 DA-A	59 DA-A	72 DA-A	164 DA-A		
Days After Emergence	29 DE-1	29 DE-1	29 DE-1	45 DE-1	58 DE-1	150 DE-1		
ARM Action Codes	P	P	P	P	P			
Number of Decimals	0	0	0	0	0	2		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	7	8	9	10	11	12
1 Untreated Check			0 -	0 c	0 -	0 c	0 d	0.00 c
2 ACURON	3 qt/a	A	0 -	97 a	100 -	94 ab	96 a	33.17 ab
3 ACURON AATREX	3 qt/a 1 pt/a	A A	0 -	96 a	100 -	97 a	96 a	36.80 a
4 ACURON FLEXI	2.25 qt/a	A	0 -	96 a	100 -	97 a	97 a	33.84 ab
5 CORVUS AATREX	5.6 fl oz/a 1 qt/a	A A	0 -	90 a	100 -	71 ab	55 bc	24.07 b
6 RESICORE	2.5 qt/a	A	0 -	94 a	100 -	85 ab	80 ab	28.17 ab
7 ANTHEM ATZ AATREX	2.5 pt/a 0.5 pt/a	A A	0 -	40 b	100 -	18 c	3 d	3.44 c
8 CINCH ATZ INSTIGATE @ 6 OZ/A RESOLVE MESOTRIONE	2 qt/a 0.25 oz ai/a 2.5 oz ai/a	A A A A	0 -	87 a	100 -	69 b	59 bc	21.86 b
9 VERDICT AATREX	18 fl oz/a 1.5 qt/a	A A	0 -	87 a	100 -	68 b	43 c	21.86 b

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Project ID: EHLCOR1-2016	Study Director: Joe Ikley	
	Sponsor Contact: Syngenta - Steve Mroczkiewicz	

		W Weed AMBTR Ambrosia trifi> Giant ragweed	W Weed CHEAL Chenopodium al> common lambsqu>	W Weed AMBTR Ambrosia trifi> Giant ragweed	W Weed AMBTR Ambrosia trifi> Giant ragweed			
Crop Code	ZEAMX					ZEAMX		
Crop Name	Corn					Corn		
Part Rated	PLOT C	PLOT P	PLOT P	PLOT P	PLOT P	PLOT C		
Rating Date	Jun-8-2016	Jun-8-2016	Jun-8-2016	Jun-24-2016	Jul-7-2016	Oct-7-2016		
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	YIELD		
Rating Unit	%	%	%	%	%	lb/plot		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	43 43	43 43	43 43	59 59	72 72	164 164		
Trt-Eval Interval	43 DA-A	43 DA-A	43 DA-A	59 DA-A	72 DA-A	164 DA-A		
Days After Emergence	29 DE-1	29 DE-1	29 DE-1	45 DE-1	58 DE-1	150 DE-1		
ARM Action Codes	P	P	P	P	P			
Number of Decimals	0	0	0	0	0	2		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	7	8	9	10	11	12
10 Untreated Check	0 -		0 c		0 -	0 c	0 d	0.00 c
LSD P=.05	.		8.1		.	18.8	25.6	8.264
Standard Deviation	0.0		5.6		0.0	13.0	17.6	5.696
CV	0.0		8.18		0.0	21.69	34.87	28.03
Bartlett's X2	0.0		18.103		0.0	28.207	33.278	4.129
P(Bartlett's X2)	.		0.012*		.	0.001*	0.001*	0.765
Skewness	.		-1.0638*		-1.5196*	-0.5759	-0.2189	-0.2389
Kurtosis	.		-0.6357		0.323	-1.431	-1.8305*	-1.4041
Replicate F	0.000		1.823		0.000	1.557	0.805	3.928
Replicate Prob(F)	1.0000		0.1668		1.0000	0.2228	0.5028	0.0190
Treatment F	0.000		201.581		0.000	36.400	21.081	24.806
Treatment Prob(F)	1.0000		0.0001		1.0000	0.0001	0.0001	0.0001

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Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Code	ZEAMX	ZEAMX	
Crop Name	Corn	Corn	
Part Rated	PLOT C	PLOT C	
Rating Date	Oct-7-2016	Oct-7-2016	
Rating Type	MOICON	YIELD	
Rating Unit	%	BU	
Number of Subsamples	1	1	
Days After First/Last Applic.	164 164	164 164	
Trt-Eval Interval	164 DA-A	164 DA-A	
Days After Emergence	150 DE-1	150 DE-1	
ARM Action Codes		TY1	
Number of Decimals	1	1	
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
			13 14
1 Untreated Check			0.0 c 0.0 c
2 ACURON	3 qt/a	A	18.4 a 199.2 ab
3 ACURON	3 qt/a	A	19.1 a 219.1 a
AATREX	1 pt/a	A	
4 ACURON FLEXI	2.25 qt/a	A	19.1 a 201.8 ab
5 CORVUS	5.6 fl oz/a	A	18.4 a 144.3 b
AATREX	1 qt/a	A	
6 RESICORE	2.5 qt/a	A	18.4 a 169.2 ab
7 ANTHEM ATZ	2.5 pt/a	A	9.4 b 20.5 c
AATREX	0.5 pt/a	A	
8 CINCH ATZ	2 qt/a	A	18.8 a 130.9 b
INSTIGATE @ 6 OZ/A			
RESOLVE	0.25 oz ai/a	A	
MESOTRIONE	2.5 oz ai/a	A	
9 VERDICT	18 fl oz/a	A	19.4 a 129.4 b
AATREX	1.5 qt/a	A	

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Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Code	ZEAMX	ZEAMX	
Crop Name	Corn	Corn	
Part Rated	PLOT C	PLOT C	
Rating Date	Oct-7-2016	Oct-7-2016	
Rating Type	MOICON	YIELD	
Rating Unit	%	BU	
Number of Subsamples	1	1	
Days After First/Last Applic.	164 164	164 164	
Trt-Eval Interval	164 DA-A	164 DA-A	
Days After Emergence	150 DE-1	150 DE-1	
ARM Action Codes		TY1	
Number of Decimals	1	1	
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
	13	14	
10 Untreated Check	0.0 c	0.0 c	
LSD P=.05	5.20	48.71	
Standard Deviation	3.58	33.58	
CV	25.39	27.65	
Bartlett's X2	48.941	3.904	
P(Bartlett's X2)	0.001*	0.791	
Skewness	-1.1584*	-0.2465	
Kurtosis	-0.6248	-1.4048	
Replicate F	0.966	4.034	
Replicate Prob(F)	0.4232	0.0171	
Treatment F	19.929	25.503	
Treatment Prob(F)	0.0001	0.0001	

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Pest Type

W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code

AMBTR, Ambrosia trifida, = US

CHEAL, Chenopodium album, = US

Crop Code

ZEAMX, BCOR, Zea mays, = US

Part Rated

PLOT = plot

C = Crop is Part Rated

P = Pest is Part Rated

Rating Type

PHYGEN = phytotoxicity - general / injury

CONTRO = control / burndown or knockdown

YIELD = yield

MOICON = moisture content

Rating Unit

% = percent

lb/plot = pounds per plot

BU = bushel

ARM Action Codes

P = Rating scale of 0 to 100 (e.g. % control or injury)

TY1 = $6.222857 * [12] * (100 - [13]) / 84.5$