

One-Pass Preemergence Corn Weed Control Trial.

Trial ID: 16-21M-MMME30 Location: Belleville Res. Center Trial Year: 2016
 Investigator: Karla L. Gage, Ph.D.

<p>Trial Status: F one-year/final Initiation Date: 5-29-16 Completion Date: 7-11-16</p>	Trial Location
<p>City: Belleville Country: USA State/Prov.: Illinois IL Postal Code: 62221</p>	

Objectives:
 Evaluate top Syngenta and competitive one-pass preemergence herbicide programs.

<p>Study Director: Karla Gage, Ph.D. Title: Assistant Professor of Weed Science Organization: Southern Illinois University Carbondale Address: 1205 Lincoln Drive MC 4415 Phone No.: 618-453-7679 City+State/Prov.: Carbondale, IL Postal Code: 62901 E-mail: kgage@siu.edu Country: USA</p>	Contacts
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<p>Crop 1: ZEAMD Zea mays indentata Dent corn Variety: DKC 63-33 BBCH Scale: BCOR Description: SS RIB</p>	Crop Description
<p>Planting Rate, Unit: 32000 S/A Depth, Unit: 1.5 IN Row Spacing, Unit: 30 IN</p>	<p>Planting Date: 5-29-16 Planting Method: SEEDED</p>

<p>Pest 1 Type: W Code: AMBTR Ambrosia trifida L. Common Name: ragweed, giant</p> <p>Pest 2 Type: W Code: AMATA Amaranthus rudis Sauer Common Name: waterhemp, common</p>	Pest Description
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<p>Treated Plot Width: 7.5 FT Total Plot Width: 10 FT Treated Plot Length: 30 FT Total Plot Length: 30 FT</p> <p>Replications: 3 Untreated Arrangement: INCLUDED single control randomized in each block</p>	<p>Site and Design Site Type: FIELD Experimental Unit: 1 PLOT Tillage Type: REDTIL reduced-till Study Design: RACOB� Randomized Complete Block (RCB)</p>						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Previous Crop</th> <th>Year</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>GLXMA</td> <td>2015</td> </tr> </tbody> </table>		No.	Previous Crop	Year	1.	GLXMA	2015
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1.	N 150 LB/A, P2O5 50 LB/A, K2O 150 LB/A				

<p>Description Name: 21M_2013 % OM: 3.4 Texture: SIL silt loam pH: 6.5 Soil Name: Bethalto CEC: 12</p>	Soil Description									
<p>Additional Measured Elements</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Element</th> <th>Quantity</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>P1</td> <td>71</td> <td>lb/A</td> </tr> <tr> <td>K</td> <td>297</td> <td>lb/A</td> </tr> </tbody> </table>		Element	Quantity	Unit	P1	71	lb/A	K	297	lb/A
Element	Quantity	Unit								
P1	71	lb/A								
K	297	lb/A								

<p>Overall Moisture Conditions: NORMAL Closest Weather Station: ICN - Belleville IL</p>	<p>Moisture and Weather Conditions Distance, Unit: 0.5 MI</p>
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No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-1-16					7	DAY	32	75	F
2.	4-6-16	0.49	IN	RAIN	rain	1	DAY			
3.	4-8-16					7	DAY	28	71	F
4.	4-10-16	0.97	IN	RAIN	rain	2	DAY			
5.	4-15-16					7	DAY	48	81	F
6.	4-20-16	0.45	IN	RAIN	rain	3	DAY			
7.	4-22-16					7	DAY	47	85	F
8.	4-26-16	1.74	IN	RAIN	rain	2	DAY			
9.	4-29-16					7	DAY	46	75	F
10.	4-29-16	1.94	IN	RAIN	rain	2	DAY			
11.	5-4-16	0.02	IN	RAIN	rain	1	DAY			
12.	5-6-16					7	DAY	44	87	F
13.	5-7-16	0.07	IN	RAIN	rain	1	DAY			
14.	5-9-16	2.12	IN	RAIN	rain	5	DAY			
15.	5-13-16					7	DAY	41	76	F
16.	5-16-16	1.06	IN	RAIN	rain	2	DAY			
17.	5-20-16					7	DAY	51	83	F
18.	5-20-16	0.06	IN	RAIN	rain	1	DAY			
19.	5-25-16	0.68	IN	RAIN	rain	3	DAY			
20.	5-27-16					7	DAY	62	88	F
21.	5-31-16	0.03	IN	RAIN	rain	2	DAY			
22.	6-3-16					7	DAY	55	89	F
23.	6-3-16	0.01	IN	RAIN	rain	1	DAY			
24.	6-4-16	0.72	IN	RAIN	rain	1	DAY			
25.	6-10-16					7	DAY	65	96	F
26.	6-13-16	0.03	IN	RAIN	rain	1	DAY			
27.	6-17-16					7	DAY	67	97	F
28.	6-21-16	0.01	IN	RAIN	rain	1	DAY			
29.	6-24-16					7	DAY	57	95	F
30.	6-25-16	0.02	IN	RAIN	rain	1	DAY			
31.	6-30-16	0.03	IN	RAIN	rain	1	DAY			
32.	7-1-16					7	DAY	60	91	F
33.	7-1-16	2.26	IN	RAIN	rain	4	DAY			
34.	7-6-16	0.32	IN	RAIN	rain	3	DAY			
35.	7-8-16					7	DAY	67	93	F
36.	7-13-16	0.49	IN	RAIN	rain	2	DAY			
37.	7-15-16					7	DAY	68	93	F
38.	7-17-16	0.02	IN	RAIN	rain	1	DAY			
39.	7-19-16	1.47	IN	RAIN	rain	2	DAY			
40.	7-22-16					7	DAY	72	94	F
41.	7-25-16	0.1	IN	RAIN	rain	1	DAY			
42.	7-29-16					7	DAY	69	91	F
43.	7-31-16	0.52	IN	RAIN	rain	3	DAY			
44.	8-3-16	0.75	IN	RAIN	rain	1	DAY			
45.	8-5-16					7	DAY	66	93	F
46.	8-5-16	0.06	IN	RAIN	rain	1	DAY			
47.	8-12-16					7	DAY	68	91	F
48.	8-12-16	4.85	IN	RAIN	rain	5	DAY			
49.	8-19-16					7	DAY	57	93	F

Comment:

Rainfall was recorded on station and provided by Illinois Climate Network.
Air temperature was recorded at Scott Air Force Base 2.5 miles north and provided by NOAA's National Centers for Environmental Information.
Air temperatures given are summarized as weekly high and low, detailed weather data is available on request.

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Application Description

	A
Application Date:	5-30-16
Appl. Start Time:	15:00
Appl. Stop Time:	15:45
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROSOI
Applied By:	RLS
Air Temperature, Unit:	83 F
% Relative Humidity:	53
Wind Velocity, Unit:	2 MPH
Wind Direction:	SE
Dew Presence (Y/N):	N
Soil Temperature, Unit:	73 F
Soil Moisture:	NORMAL
% Cloud Cover:	75
Next Moisture Occurred On:	6-4-16
Time to Next Moisture, Unit:	5 DAY

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMD
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMBTR W
Stage Majority, Percent:	NA
Pest 2 Code, Type, Scale:	AMATA W
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

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Pest Code							ZEAMD	ZEAMD	AMBTR	AMBTR	AMBTR	AMATA	AMATA	AMATA			
Crop Code							6-13-16	6-27-16	6-13-16	6-27-16	7-11-16	6-13-16	6-27-16	7-11-16			
Rating Date							Injury	Injury	Control	Control	Control	Control	Control	Control			
Rating Type							Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent			
Rating Unit																	
Rating Timing																	
Trt-Eval Interval							14 DA-A	28 DA-A	14 DA-A	28 DA-A	42 DA-A	14 DA-A	28 DA-A	42 DA-A			
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Other Rate	Other Rate	Growth Unit	Appl Stage	Code								
1	NONTREATED									0	0	0	0	0			
2	ACURON	3.44 CS		2.15 lb ai/a	2.5 qt/a		PRE	A		0 a	0 a	78 ab	75 ab	68 abc	99 a	99 a	99 a
3	ACURON PRINCEP 4L	3.44 CS 4 SC		2.15 lb ai/a 1 lb ai/a	2.5 qt/a 1 qt/a		PRE PRE	A A		0 a	0 a	80 a	83 a	80 a	99 a	99 a	99 a
4	ACURON FLEXI	3.26 ES		1.63 lb ai/a	2.0 qt/a		PRE	A		0 a	0 a	78 ab	74 ab	73 ab	99 a	99 a	99 a
5	CORVUS AATREX 4L	2.63 SC 4 SC		0.115 lb ai/a 1 lb ai/a	5.6 fl oz/a 1 qt/a		PRE PRE	A A		0 a	0 a	68 bc	62 b	47 c	99 a	96 a	99 a
6	RESICORE	3.29 EC		2.06 lb ai/a	2.5 qt/a		PRE	A		0 a	0 a	85 a	81 a	73 ab	99 a	99 a	99 a
7	ANTHEM ATZ	4.5 SE		1.4 lb ai/a	2.5 pt/a		PRE	A		0 a	0 a	77 ab	72 ab	53 bc	99 a	99 a	98 a
8	CINCH ATZ INSTIGATE	5.5 SC 45.84 WG		2.75 lb ai/a 0.143 lb ai/a	2 qt/a 5 oz/a		PRE PRE	A A		0 a	0 a	80 a	74 ab	58 abc	99 a	96 a	99 a
9	VERDICT	5.57 EC		0.78 lb ai/a	18 fl oz/a		PRE	A		0 a	0 a	63 c	35 c	0 d	99 a	99 a	
LSD P=.05							.	.	11.5	17.2	25.7	.	4.5	0.8			
Standard Deviation							0.0	0.0	6.6	9.8	14.7	0.0	2.5	0.4			
CV							0.0	0.0	8.6	14.1	25.88	0.0	2.59	0.44			
Replicate F							0.000	0.000	1.526	3.098	1.952	0.000	2.325	1.000			
Replicate Prob(F)							1.0000	1.0000	0.2515	0.0769	0.1787	1.0000	0.1343	0.3966			
Treatment F							0.000	0.000	3.419	7.387	9.091	0.000	1.000	1.000			
Treatment Prob(F)							1.0000	1.0000	0.0240	0.0008	0.0003	1.0000	0.4706	0.4682			

Means followed by same letter or symbol do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Could not calculate LSD (% mean diff) for columns 5,8,7 because error mean square = 0.

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Trial Comments

1. Protocol: Syngenta (EHLCor1-2016).
2. Ratings:
 - CI 14 and 28 DA-A.
 - WC 14, 28, and 42 DA-A.
3. Yield.
4. Photos not requested, maybe when differences or at 28 DA-A.
5. Rainfall following the PRE application A was 0.73 inch over 2 days beginning 5 days later.
6. Missing data for AMATA in treatment 9 at 42 DA-A was due to a dense stand of AMBTR in those plots which interfered with any possible AMATA emergence, could not be rated.
7. Not harvested.