

Impact Sequential and One-Pass Programs.

Trial ID: 13-2C-MME60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final Initiation Date: 6-15-13 Completion Date: 11-8-13		Trial Location
City: Belleville State/Prov.: Illinois IL Postal Code: 62221	Country: USA	

Objectives:
Evaluate Impact in sequential or total postemergence weed control programs in corn.

Study Director: Bryan Young Organization: Southern Illinois University Address: 1205 Lincoln Drive - AG 176 - MC 4415 City+State/Prov: Carbondale IL Postal Code: 62901 Country: USA		Title: Professor Phone No.: 618-453-7679 Mobile No.: 618-713-6471 E-mail: bgyoung@siu.edu
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Crop 1: ZEAMD Zea mays indentata Dent corn Variety: DKC 63-33 Description: SS RIB		Crop Description
Planting Rate, Unit: 28000 S/A Depth, Unit: 1.5 IN Row Spacing, Unit: 30 IN	Planting Date: 6-15-13 Planting Method: SEEDED	

Pest 1 Type: W Code: GGGAN Common Name: grasses, annual Description: Mixture of SETFA 10% and PANDI 90%		Pest Description
Pest 2 Type: W Code: AMBEL Ambrosia artemisiifolia L. Common Name: ragweed, common		
Pest 3 Type: W Code: ABUTH Abutilon theophrasti Medik. Common Name: velvetleaf		
Pest 4 Type: W Code: IPOHE Ipomoea hederacea (L.) Jacq. Common Name: morningglory, ivyleaf		

Treated Plot Width: 7.5 FT Total Plot Width: 10 FT Treated Plot Length: 28 FT Total Plot Length: 28 FT		Site and Design Site Type: FIELD Experimental Unit: 1 PLOT Tillage Type: REDTIL reduced-till Study Design: RACOB� Randomized Complete Block (RCB)
Replications: 4 Untreated Arrangement: INCLUDED single control randomized in each block		
No.	Previous Crop	Year
1.	NONE	2012

Maintenance	
No.	Maintenance Product Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 100 LB/A

% OM: 2.7 Texture: SIL silt loam pH: 6.1 Soil Name: Pierron CEC: 7			Soil Description
Additional Measured Elements			
Element	Quantity	Unit	
P1	68	lb/A	
K	322	lb/A	

Overall Moisture Conditions: ABONOR Closest Weather Station: ICN - Belleville IL		Moisture and Weather Conditions Distance, Unit: 0.5 MI
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No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-2-13					7	DAY	50	80	F
2.	6-9-13					7	DAY	59	94	F
3.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
4.	6-16-13					7	DAY	61	90	F
5.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
6.	6-23-13					7	DAY	64	92	F
7.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
8.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
9.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
10.	6-30-13					7	DAY	61	86	F
11.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
12.	7-7-13					7	DAY	62	94	F
13.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
14.	7-14-13					7	DAY	64	94	F
15.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
16.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
17.	7-21-13					7	DAY	56	91	F
18.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
19.	7-28-13					7	DAY	52	87	F
20.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
21.	8-2-13	0.24	IN	RAIN	rain	1	DAY			
22.	8-4-13					7	DAY	62	87	F
23.	8-8-13	0.03	IN	RAIN	rain	3	DAY			
24.	8-11-13					7	DAY	54	85	F
25.	8-12-13	0.57	IN	RAIN	rain	1	DAY			
26.	8-18-13	0.1	IN	RAIN	rain	1	DAY			
27.	8-18-13					7	DAY	61	91	F
28.	8-25-13					7	DAY	62	100	F
29.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
30.	9-1-13					7	DAY	57	92	F
31.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Application Description

	A	B	C
Application Date:	6-15-13	6-27-13	7-5-13
Appl. Start Time:	19:30	19:30	12:30
Appl. Stop Time:	20:00	20:00	13:00
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	2-4"W-1	2-4"W-2
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	LXF	LXF	NTH
Air Temperature, Unit:	79 F	85 F	78 F
% Relative Humidity:	70	80	74
Wind Velocity, Unit:	3 MPH	2 MPH	4 MPH
Wind Direction:	S	W	E
Dew Presence (Y/N):	N	N	N
Soil Temperature, Unit:	73 F	74 F	74 F
Soil Moisture:	NORMAL	ABONOR	ABONOR
% Cloud Cover:	80	30	50
Next Moisture Occurred On:	6-15-13	6-29-13	7-10-13
Time to Next Moisture, Unit:	1 HR	2 DAY	5 DAY

Impact Sequential and One-Pass Programs.

Trial ID: 13-2C-MME60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young**Crop Stage At Each Application**

	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMD	ZEAMD	ZEAMD
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	V3	V5
Stage Minimum, Percent:		V2	V4
Stage Maximum, Percent:		V3	V5
Height, Unit:		8 IN	12 IN
Height Minimum, Maximum:		6 8	8 12

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	GCGAN W	GCGAN W	GCGAN W
Stage Majority, Percent:	NA	2	3
Stage Minimum, Percent:		1	1
Stage Maximum, Percent:		3	4
Height, Unit:		0.5 IN	3 IN
Height Minimum, Maximum:		0.125 1	0.5 4
Density, Unit:		3 FT2	0.25 FT2
Pest 2 Code, Type, Scale:	AMBEL W	AMBEL W	AMBEL W
Stage Majority, Percent:	NA	2	6
Stage Minimum, Percent:		2	COTY
Stage Maximum, Percent:		4	8
Height, Unit:		0.75 IN	3 IN
Height Minimum, Maximum:		0.5 1	0.5 6
Density, Unit:		0.3 FT2	0.25 FT2
Pest 3 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W
Stage Majority, Percent:	NA	2	NA
Stage Minimum, Percent:		COTY	
Stage Maximum, Percent:		2	
Height, Unit:		1 IN	
Height Minimum, Maximum:		0.5 1.5	
Density, Unit:		0.1 FT2	
Pest 4 Code, Type, Scale:	IPOHE W	IPOHE W	IPOHE W
Stage Majority, Percent:	NA	NA	2
Stage Minimum, Percent:			COTY
Stage Maximum, Percent:			4
Height, Unit:			2 IN
Height Minimum, Maximum:			0.5 3
Density, Unit:			0.5 FT2

Application Equipment

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

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Impact Sequential and One-Pass Programs.

Trial ID: 13-2C-MME60 Location: Belleville Res. Center Trial Year: 2013
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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval										ZEAMD 11-8-13 Moisture Percent	ZEAMD 11-8-13 Test wt. lb/bu	ZEAMD 11-8-13 Yield bu/A
Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	NONTREATED									23.2 a	55.1 a	175 b
2	DEGREE XTRA	4.04	CS	2.02 lb ai/a		4 pt/a		PRE	A	25.5 a	54.4 a	196 ab
	IMPACT	2.8	SC	0.0219 lb ai/a		1 fl oz/a		2-4"W-2	C			
	AATREX 4L	4	SC	0.75 lb ai/a		1.5 pt/a		2-4"W-2	C			
	MSO (MSO ULTRA)	100	SL	1 % v/v		1 % v/v		2-4"W-2	C			
	28% UAN	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-2	C			
3	DEGREE XTRA	4.04	CS	2.02 lb ai/a		4 pt/a		PRE	A	22.9 a	55.2 a	201 a
	IMPACT	2.8	SC	0.0164 lb ai/a		0.75 fl oz/a		2-4"W-2	C			
	STATUS	56	WG	0.0875 lb ae/a		2.5 oz/a		2-4"W-2	C			
	AATREX 4L	4	SC	0.75 lb ai/a		1.5 pt/a		2-4"W-2	C			
	MSO (MSO ULTRA)	100	SL	1 % v/v		1 % v/v		2-4"W-2	C			
	28% UAN	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-2	C			
4	DEGREE XTRA	4.04	CS	2.02 lb ai/a		4 pt/a		PRE	A	24.5 a	54.6 a	216 a
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a		32 fl oz/a		2-4"W-2	C			
	N-PAK AMS	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-2	C			
5	DEGREE XTRA	4.04	CS	2.02 lb ai/a		4 pt/a		PRE	A	23.4 a	55.0 a	216 a
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a		32 fl oz/a		2-4"W-2	C			
	IMPACT	2.8	SC	0.0164 lb ai/a		0.75 fl oz/a		2-4"W-2	C			
	AATREX 4L	4	SC	0.75 lb ai/a		1.5 pt/a		2-4"W-2	C			
	MSO (MSO ULTRA)	100	SL	0.5 % v/v		0.5 % v/v		2-4"W-2	C			
	N-PAK AMS	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-2	C			
6	DEGREE XTRA	4.04	CS	2.02 lb ai/a		4 pt/a		PRE	A	24.1 a	54.8 a	211 a
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a		32 fl oz/a		2-4"W-2	C			
	LAUDIS	3.5	SC	0.082 lb ai/a		3 fl oz/a		2-4"W-2	C			
	AATREX 4L	4	SC	0.75 lb ai/a		1.5 pt/a		2-4"W-2	C			
	MSO (MSO ULTRA)	100	SL	0.5 % v/v		0.5 % v/v		2-4"W-2	C			
	N-PAK AMS	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-2	C			
7	WARRANT	3	CS	1.13 lb ai/a		3 pt/a		2-4"W-1	B	24.2 a	54.8 a	209 a
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a		32 fl oz/a		2-4"W-1	B			
	IMPACT	2.8	SC	0.0164 lb ai/a		0.75 fl oz/a		2-4"W-1	B			
	AATREX 4L	4	SC	1 lb ai/a		2 pt/a		2-4"W-1	B			
	MSO (MSO ULTRA)	100	SL	0.5 % v/v		0.5 % v/v		2-4"W-1	B			
	N-PAK AMS	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-1	B			
8	HALEX GT	4.389	CS	1.98 lb ai/a		3.6 pt/a		2-4"W-1	B	24.2 a	54.8 a	202 a
	AATREX 4L	4	SC	1 lb ai/a		2 pt/a		2-4"W-1	B			
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v		0.25 % v/v		2-4"W-1	B			
	N-PAK AMS	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-1	B			
LSD (P=.05)										2.13	0.68	23.0
Standard Deviation										1.42	0.46	15.4
CV										5.91	0.83	7.56
Replicate F										0.434	0.420	0.868
Replicate Prob(F)										0.7315	0.7414	0.4780
Treatment F										1.369	1.498	3.131
Treatment Prob(F)										0.2836	0.2373	0.0278

Means followed by same letter do not significantly differ (P=.05, LSD)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Missing data estimates are included in columns: Average=2,3,6,11,16,21,26,35,12,17,22,27,31,36,40,13,18,23,28,32,37,41,14,19,24,29,33,38,42,15,20,25,30,34,39,43

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Impact Sequential and One-Pass Programs.

Trial ID: 13-2C-MME60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code										ZEAMD 7-4-13 Injury Percent -1 DA-C	ZEAMD 7-12-13 Injury Percent	ZEAMD 7-20-13 Injury Percent	ZEAMD 7-27-13 Injury Percent	ZEAMD 8-4-13 Injury Percent
Crop Code														
Rating Date														
Rating Type														
Rating Unit														
Rating Timing														
Trt-Eval Interval										7 DA-B	7 DA-C	15 DA-C	30 DA-B	30 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	NONTREATED									0 c	0 b	0 a	0 a	0 a
2	DEGREE XTRA	4.04	CS	2.02 lb ai/a		4 pt/a		PRE	A	0 c	1 b	1 a	0 a	0 a
	IMPACT	2.8	SC	0.0219 lb ai/a		1 fl oz/a		2-4"W-2 C						
	AATREX 4L	4	SC	0.75 lb ai/a		1.5 pt/a		2-4"W-2 C						
	MSO (MSO ULTRA)	100	SL	1 % v/v		1 % v/v		2-4"W-2 C						
	28% UAN	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-2 C						
3	DEGREE XTRA	4.04	CS	2.02 lb ai/a		4 pt/a		PRE	A	0 c	0 b	0 a	0 a	0 a
	IMPACT	2.8	SC	0.0164 lb ai/a		0.75 fl oz/a		2-4"W-2 C						
	STATUS	56	WG	0.0875 lb ae/a		2.5 oz/a		2-4"W-2 C						
	AATREX 4L	4	SC	0.75 lb ai/a		1.5 pt/a		2-4"W-2 C						
	MSO (MSO ULTRA)	100	SL	1 % v/v		1 % v/v		2-4"W-2 C						
	28% UAN	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-2 C						
4	DEGREE XTRA	4.04	CS	2.02 lb ai/a		4 pt/a		PRE	A	0 c	1 b	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a		32 fl oz/a		2-4"W-2 C						
	N-PAK AMS	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-2 C						
5	DEGREE XTRA	4.04	CS	2.02 lb ai/a		4 pt/a		PRE	A	0 c	3 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a		32 fl oz/a		2-4"W-2 C						
	IMPACT	2.8	SC	0.0164 lb ai/a		0.75 fl oz/a		2-4"W-2 C						
	AATREX 4L	4	SC	0.75 lb ai/a		1.5 pt/a		2-4"W-2 C						
	MSO (MSO ULTRA)	100	SL	0.5 % v/v		0.5 % v/v		2-4"W-2 C						
	N-PAK AMS	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-2 C						
6	DEGREE XTRA	4.04	CS	2.02 lb ai/a		4 pt/a		PRE	A	0 c	0 b	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a		32 fl oz/a		2-4"W-2 C						
	LAUDIS	3.5	SC	0.082 lb ai/a		3 fl oz/a		2-4"W-2 C						
	AATREX 4L	4	SC	0.75 lb ai/a		1.5 pt/a		2-4"W-2 C						
	MSO (MSO ULTRA)	100	SL	0.5 % v/v		0.5 % v/v		2-4"W-2 C						
	N-PAK AMS	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-2 C						
7	WARRANT	3	CS	1.13 lb ai/a		3 pt/a		2-4"W-1 B		4 b	0 b	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a		32 fl oz/a		2-4"W-1 B						
	IMPACT	2.8	SC	0.0164 lb ai/a		0.75 fl oz/a		2-4"W-1 B						
	AATREX 4L	4	SC	1 lb ai/a		2 pt/a		2-4"W-1 B						
	MSO (MSO ULTRA)	100	SL	0.5 % v/v		0.5 % v/v		2-4"W-1 B						
	N-PAK AMS	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-1 B						
8	HALEX GT	4.389	CS	1.98 lb ai/a		3.6 pt/a		2-4"W-1 B		7 a	1 b	0 a	0 a	0 a
	AATREX 4L	4	SC	1 lb ai/a		2 pt/a		2-4"W-1 B						
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v		0.25 % v/v		2-4"W-1 B						
	N-PAK AMS	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-1 B						
LSD (P=.05)										0.6	1.4	0.8	0.0	0.0
Standard Deviation										0.4	0.9	0.5	0.0	0.0
CV										29.1	130.79	432.05	0.0	0.0
Replicate F										0.857	1.073	0.857	0.000	0.000
Replicate Prob(F)										0.4811	0.3855	0.4811	1.0000	1.0000
Treatment F										186.000	4.804	1.714	0.000	0.000
Treatment Prob(F)										0.0001	0.0034	0.1685	1.0000	1.0000

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Impact Sequential and One-Pass Programs.

Trial ID: 13-2C-MME60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code									GGGAN	GGGAN	GGGAN	GGGAN	GGGAN	GGGAN	GGGAN
Crop Code															
Rating Date									7-4-13	7-12-13	7-20-13	7-27-13	8-4-13	8-26-13	9-3-13
Rating Type									Control	Control	Control	Control	Control	Control	Control
Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing									-1 DA-C						
Trt-Eval Interval									7 DA-B	7 DA-C	15 DA-C	30 DA-B	30 DA-C	60 DA-B	60 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	NONTREATED									0 c	0 c	0 c	0 c	0 d	0 b
2	DEGREE XTRA	4.04	CS	2.02 lb ai/a	4 pt/a			PRE A		93 b	98 ab	97 ab	96 b	94 c	92 a
	IMPACT	2.8	SC	0.0219 lb ai/a	1 fl oz/a			2-4"W-2 C							
	AATREX 4L	4	SC	0.75 lb ai/a	1.5 pt/a			2-4"W-2 C							
	MSO (MSO ULTRA)	100	SL	1 % v/v	1 % v/v			2-4"W-2 C							
	28% UAN	100	SL	2.5 % v/v	2.5 % v/v			2-4"W-2 C							
3	DEGREE XTRA	4.04	CS	2.02 lb ai/a	4 pt/a			PRE A		94 b	98 b	97 ab	97 ab	95 bc	94 a
	IMPACT	2.8	SC	0.0164 lb ai/a	0.75 fl oz/a			2-4"W-2 C							
	STATUS	56	WG	0.0875 lb ae/a	2.5 oz/a			2-4"W-2 C							
	AATREX 4L	4	SC	0.75 lb ai/a	1.5 pt/a			2-4"W-2 C							
	MSO (MSO ULTRA)	100	SL	1 % v/v	1 % v/v			2-4"W-2 C							
	28% UAN	100	SL	2.5 % v/v	2.5 % v/v			2-4"W-2 C							
4	DEGREE XTRA	4.04	CS	2.02 lb ai/a	4 pt/a			PRE A		95 b	98 ab	97 b	96 b	93 c	94 a
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a	32 fl oz/a			2-4"W-2 C							
	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			2-4"W-2 C							
5	DEGREE XTRA	4.04	CS	2.02 lb ai/a	4 pt/a			PRE A		96 ab	99 ab	97 ab	96 b	94 c	96 a
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a	32 fl oz/a			2-4"W-2 C							
	IMPACT	2.8	SC	0.0164 lb ai/a	0.75 fl oz/a			2-4"W-2 C							
	AATREX 4L	4	SC	0.75 lb ai/a	1.5 pt/a			2-4"W-2 C							
	MSO (MSO ULTRA)	100	SL	0.5 % v/v	0.5 % v/v			2-4"W-2 C							
	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			2-4"W-2 C							
6	DEGREE XTRA	4.04	CS	2.02 lb ai/a	4 pt/a			PRE A		95 b	99 ab	98 a	98 a	97 ab	98 a
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a	32 fl oz/a			2-4"W-2 C							
	LAUDIS	3.5	SC	0.082 lb ai/a	3 fl oz/a			2-4"W-2 C							
	AATREX 4L	4	SC	0.75 lb ai/a	1.5 pt/a			2-4"W-2 C							
	MSO (MSO ULTRA)	100	SL	0.5 % v/v	0.5 % v/v			2-4"W-2 C							
	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			2-4"W-2 C							
7	WARRANT	3	CS	1.13 lb ai/a	3 pt/a			2-4"W-1 B		99 a	99 ab	98 ab	97 ab	97 ab	97 a
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a	32 fl oz/a			2-4"W-1 B							
	IMPACT	2.8	SC	0.0164 lb ai/a	0.75 fl oz/a			2-4"W-1 B							
	AATREX 4L	4	SC	1 lb ai/a	2 pt/a			2-4"W-1 B							
	MSO (MSO ULTRA)	100	SL	0.5 % v/v	0.5 % v/v			2-4"W-1 B							
	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			2-4"W-1 B							
8	HALEX GT	4.389	CS	1.98 lb ai/a	3.6 pt/a			2-4"W-1 B		99 a	99 a	98 a	97 ab	98 a	93 a
	AATREX 4L	4	SC	1 lb ai/a	2 pt/a			2-4"W-1 B							
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v			2-4"W-1 B							
	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			2-4"W-1 B							
LSD (P=.05)										3.6	0.8	1.2	1.5	2.5	6.0
Standard Deviation										2.4	0.5	0.8	1.0	1.7	4.0
CV										2.88	0.62	0.95	1.16	2.05	4.84
Replicate F										0.385	2.640	0.346	0.925	1.227	2.354
Replicate Prob(F)										0.7651	0.0808	0.7924	0.4501	0.3289	0.1062
Treatment F										791.560	16783.071	7266.119	4827.718	1558.069	266.657
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Impact Sequential and One-Pass Programs.

Trial ID: 13-2C-MME60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code									AMBEL	AMBEL	AMBEL	AMBEL	AMBEL	AMBEL	AMBEL	AMBEL
Crop Code									7-4-13	7-12-13	7-20-13	7-27-13	8-4-13	8-26-13	9-3-13	
Rating Date									Control	Control	Control	Control	Control	Control	Control	Control
Rating Type									Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit									-1 DA-C							
Rating Timing																
Trt-Eval Interval									7 DA-B	7 DA-C	15 DA-C	30 DA-B	30 DA-C	60 DA-B	60 DA-C	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code							
1	NONTREATED									0 d	0 a	0 b	0 c	0 c	0 b	0 b
2	DEGREE XTRA	4.04	CS	2.02 lb ai/a		4 pt/a		PRE	A	92 bc	99 a	99 a	98 b	97 b	98 a	98 a
	IMPACT	2.8	SC	0.0219 lb ai/a		1 fl oz/a		2-4"W-2 C								
	AATREX 4L	4	SC	0.75 lb ai/a		1.5 pt/a		2-4"W-2 C								
	MSO (MSO ULTRA)	100	SL	1 % v/v		1 % v/v		2-4"W-2 C								
	28% UAN	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-2 C								
3	DEGREE XTRA	4.04	CS	2.02 lb ai/a		4 pt/a		PRE	A	94 b	99 a	97 a	99 a	99 a	99 a	99 a
	IMPACT	2.8	SC	0.0164 lb ai/a		0.75 fl oz/a		2-4"W-2 C								
	STATUS	56	WG	0.0875 lb ae/a		2.5 oz/a		2-4"W-2 C								
	AATREX 4L	4	SC	0.75 lb ai/a		1.5 pt/a		2-4"W-2 C								
	MSO (MSO ULTRA)	100	SL	1 % v/v		1 % v/v		2-4"W-2 C								
	28% UAN	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-2 C								
4	DEGREE XTRA	4.04	CS	2.02 lb ai/a		4 pt/a		PRE	A	90 c	99 a	98 a	98 b	98 ab	98 a	98 a
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a		32 fl oz/a		2-4"W-2 C								
	N-PAK AMS	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-2 C								
5	DEGREE XTRA	4.04	CS	2.02 lb ai/a		4 pt/a		PRE	A	93 b	99 a	99 a	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a		32 fl oz/a		2-4"W-2 C								
	IMPACT	2.8	SC	0.0164 lb ai/a		0.75 fl oz/a		2-4"W-2 C								
	AATREX 4L	4	SC	0.75 lb ai/a		1.5 pt/a		2-4"W-2 C								
	MSO (MSO ULTRA)	100	SL	0.5 % v/v		0.5 % v/v		2-4"W-2 C								
	N-PAK AMS	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-2 C								
6	DEGREE XTRA	4.04	CS	2.02 lb ai/a		4 pt/a		PRE	A	93 bc	99 a	99 a	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a		32 fl oz/a		2-4"W-2 C								
	LAUDIS	3.5	SC	0.082 lb ai/a		3 fl oz/a		2-4"W-2 C								
	AATREX 4L	4	SC	0.75 lb ai/a		1.5 pt/a		2-4"W-2 C								
	MSO (MSO ULTRA)	100	SL	0.5 % v/v		0.5 % v/v		2-4"W-2 C								
	N-PAK AMS	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-2 C								
7	WARRANT	3	CS	1.13 lb ai/a		3 pt/a		2-4"W-1 B		99 a	99 a	99 a	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a		32 fl oz/a		2-4"W-1 B								
	IMPACT	2.8	SC	0.0164 lb ai/a		0.75 fl oz/a		2-4"W-1 B								
	AATREX 4L	4	SC	1 lb ai/a		2 pt/a		2-4"W-1 B								
	MSO (MSO ULTRA)	100	SL	0.5 % v/v		0.5 % v/v		2-4"W-1 B								
	N-PAK AMS	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-1 B								
8	HALEX GT	4.389	CS	1.98 lb ai/a		3.6 pt/a		2-4"W-1 B		99 a	99 a	99 a	99 a	99 a	99 a	99 a
	AATREX 4L	4	SC	1 lb ai/a		2 pt/a		2-4"W-1 B								
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v		0.25 % v/v		2-4"W-1 B								
	N-PAK AMS	100	SL	2.5 % v/v		2.5 % v/v		2-4"W-1 B								
LSD (P=.05)										3.3	0.0	2.6	0.8	1.7	0.8	0.8
Standard Deviation										2.2	0.0	1.8	0.5	1.1	0.5	0.5
CV										2.7	0.0	2.04	0.6	1.33	0.6	0.6
Replicate F										0.584	0.000	0.857	0.103	0.761	0.698	0.698
Replicate Prob(F)										0.6330	1.0000	0.4811	0.9572	0.5308	0.5655	0.5655
Treatment F										904.152	0.000	1577.093	18058.447	3700.002	18392.743	18392.743
Treatment Prob(F)										0.0001	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Impact Sequential and One-Pass Programs.

Trial ID: 13-2C-MME60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing								ABUTH 7-4-13 Control Percent -1 DA-C	ABUTH 7-12-13 Control Percent	ABUTH 7-20-13 Control Percent	ABUTH 7-27-13 Control Percent	ABUTH 8-4-13 Control Percent	ABUTH 8-26-13 Control Percent	ABUTH 9-3-13 Control Percent
Trt-Eval Interval								7 DA-B	7 DA-C	15 DA-C	30 DA-B	30 DA-C	60 DA-B	60 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit Unit	Other Rate	Other Rate	Growth Unit	Stage	Appl Code				
1	NONTREATED										0 c	0 b	0 d	0 c
2	DEGREE XTRA	4.04 CS		2.02 lb ai/a		4 pt/a		PRE	A		67 b	99 a	98 ab	96 a
	IMPACT	2.8 SC		0.0219 lb ai/a		1 fl oz/a		2-4"W-2 C						
	AATREX 4L	4 SC		0.75 lb ai/a		1.5 pt/a		2-4"W-2 C						
	MSO (MSO ULTRA)	100 SL		1 % v/v		1 % v/v		2-4"W-2 C						
	28% UAN	100 SL		2.5 % v/v		2.5 % v/v		2-4"W-2 C						
3	DEGREE XTRA	4.04 CS		2.02 lb ai/a		4 pt/a		PRE	A		65 b	99 a	95 bc	94 ab
	IMPACT	2.8 SC		0.0164 lb ai/a		0.75 fl oz/a		2-4"W-2 C						
	STATUS	56 WG		0.0875 lb ae/a		2.5 oz/a		2-4"W-2 C						
	AATREX 4L	4 SC		0.75 lb ai/a		1.5 pt/a		2-4"W-2 C						
	MSO (MSO ULTRA)	100 SL		1 % v/v		1 % v/v		2-4"W-2 C						
	28% UAN	100 SL		2.5 % v/v		2.5 % v/v		2-4"W-2 C						
4	DEGREE XTRA	4.04 CS		2.02 lb ai/a		4 pt/a		PRE	A		75 b	98 a	93 c	90 b
	ROUNDUP POWERMAX	4.5 SL		1.13 lb ae/a		32 fl oz/a		2-4"W-2 C						
	N-PAK AMS	100 SL		2.5 % v/v		2.5 % v/v		2-4"W-2 C						
5	DEGREE XTRA	4.04 CS		2.02 lb ai/a		4 pt/a		PRE	A		80 b	98 a	98 ab	96 a
	ROUNDUP POWERMAX	4.5 SL		1.13 lb ae/a		32 fl oz/a		2-4"W-2 C						
	IMPACT	2.8 SC		0.0164 lb ai/a		0.75 fl oz/a		2-4"W-2 C						
	AATREX 4L	4 SC		0.75 lb ai/a		1.5 pt/a		2-4"W-2 C						
	MSO (MSO ULTRA)	100 SL		0.5 % v/v		0.5 % v/v		2-4"W-2 C						
	N-PAK AMS	100 SL		2.5 % v/v		2.5 % v/v		2-4"W-2 C						
6	DEGREE XTRA	4.04 CS		2.02 lb ai/a		4 pt/a		PRE	A		74 b	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5 SL		1.13 lb ae/a		32 fl oz/a		2-4"W-2 C						
	LAUDIS	3.5 SC		0.082 lb ai/a		3 fl oz/a		2-4"W-2 C						
	AATREX 4L	4 SC		0.75 lb ai/a		1.5 pt/a		2-4"W-2 C						
	MSO (MSO ULTRA)	100 SL		0.5 % v/v		0.5 % v/v		2-4"W-2 C						
	N-PAK AMS	100 SL		2.5 % v/v		2.5 % v/v		2-4"W-2 C						
7	WARRANT	3 CS		1.13 lb ai/a		3 pt/a		2-4"W-1 B			99 a	98 a	95 bc	94 ab
	ROUNDUP POWERMAX	4.5 SL		1.13 lb ae/a		32 fl oz/a		2-4"W-1 B						
	IMPACT	2.8 SC		0.0164 lb ai/a		0.75 fl oz/a		2-4"W-1 B						
	AATREX 4L	4 SC		1 lb ai/a		2 pt/a		2-4"W-1 B						
	MSO (MSO ULTRA)	100 SL		0.5 % v/v		0.5 % v/v		2-4"W-1 B						
	N-PAK AMS	100 SL		2.5 % v/v		2.5 % v/v		2-4"W-1 B						
8	HALEX GT	4.389 CS		1.98 lb ai/a		3.6 pt/a		2-4"W-1 B			99 a	99 a	98 ab	96 a
	AATREX 4L	4 SC		1 lb ai/a		2 pt/a		2-4"W-1 B						
	NIS (ACTIVATOR 90)	100 SL		0.25 % v/v		0.25 % v/v		2-4"W-1 B						
	N-PAK AMS	100 SL		2.5 % v/v		2.5 % v/v		2-4"W-1 B						
LSD (P=.05)								18.5	1.2	3.7	5.3	11.4	8.7	8.3
Standard Deviation								12.3	0.8	2.5	3.6	7.7	5.9	5.6
CV								17.66	0.91	2.95	4.27	9.44	7.11	6.76
Replicate F								3.191	0.779	0.568	0.307	0.933	0.718	0.804
Replicate Prob(F)								0.0521	0.5209	0.6434	0.8199	0.4451	0.5541	0.5079
Treatment F								25.412	7948.670	755.458	360.581	75.021	130.379	143.668
Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Impact Sequential and One-Pass Programs.

Trial ID: 13-2C-MME60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing								IPOHE 7-4-13 Control Percent -1 DA-C	IPOHE 7-12-13 Control Percent	IPOHE 7-20-13 Control Percent	IPOHE 7-27-13 Control Percent	IPOHE 8-4-13 Control Percent	IPOHE 8-26-13 Control Percent	IPOHE 9-3-13 Control Percent
Trt-Eval Interval								7 DA-B	7 DA-C	15 DA-C	30 DA-B	30 DA-C	60 DA-B	60 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	NONTREATED									0 d	0 c	0 c	0 c	0 d
2	DEGREE XTRA	4.04	CS	2.02 lb ai/a	4 pt/a			PRE	A	70 bc	98 a	97 a	96 a	94 a
	IMPACT	2.8	SC	0.0219 lb ai/a	1 fl oz/a			2-4"W-2 C						92 abc
	AATREX 4L	4	SC	0.75 lb ai/a	1.5 pt/a			2-4"W-2 C						
	MSO (MSO ULTRA)	100	SL	1 % v/v	1 % v/v			2-4"W-2 C						
	28% UAN	100	SL	2.5 % v/v	2.5 % v/v			2-4"W-2 C						
3	DEGREE XTRA	4.04	CS	2.02 lb ai/a	4 pt/a			PRE	A	77 b	99 a	97 a	95 a	93 a
	IMPACT	2.8	SC	0.0164 lb ai/a	0.75 fl oz/a			2-4"W-2 C						94 ab
	STATUS	56	WG	0.0875 lb ae/a	2.5 oz/a			2-4"W-2 C						95 abc
	AATREX 4L	4	SC	0.75 lb ai/a	1.5 pt/a			2-4"W-2 C						
	MSO (MSO ULTRA)	100	SL	1 % v/v	1 % v/v			2-4"W-2 C						
	28% UAN	100	SL	2.5 % v/v	2.5 % v/v			2-4"W-2 C						
4	DEGREE XTRA	4.04	CS	2.02 lb ai/a	4 pt/a			PRE	A	68 bc	90 b	92 b	88 ab	87 ab
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a	32 fl oz/a			2-4"W-2 C					88 bc	93 abc
	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			2-4"W-2 C						
5	DEGREE XTRA	4.04	CS	2.02 lb ai/a	4 pt/a			PRE	A	68 bc	98 a	97 a	93 a	91 ab
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a	32 fl oz/a			2-4"W-2 C					92 abc	96 ab
	IMPACT	2.8	SC	0.0164 lb ai/a	0.75 fl oz/a			2-4"W-2 C						
	AATREX 4L	4	SC	0.75 lb ai/a	1.5 pt/a			2-4"W-2 C						
	MSO (MSO ULTRA)	100	SL	0.5 % v/v	0.5 % v/v			2-4"W-2 C						
	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			2-4"W-2 C						
6	DEGREE XTRA	4.04	CS	2.02 lb ai/a	4 pt/a			PRE	A	65 c	98 a	97 a	95 a	97 a
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a	32 fl oz/a			2-4"W-2 C					97 a	97 a
	LAUDIS	3.5	SC	0.082 lb ai/a	3 fl oz/a			2-4"W-2 C						
	AATREX 4L	4	SC	0.75 lb ai/a	1.5 pt/a			2-4"W-2 C						
	MSO (MSO ULTRA)	100	SL	0.5 % v/v	0.5 % v/v			2-4"W-2 C						
	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			2-4"W-2 C						
7	WARRANT	3	CS	1.13 lb ai/a	3 pt/a			2-4"W-1 B		99 a	97 a	96 ab	84 b	82 b
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a	32 fl oz/a			2-4"W-1 B					87 c	89 c
	IMPACT	2.8	SC	0.0164 lb ai/a	0.75 fl oz/a			2-4"W-1 B						
	AATREX 4L	4	SC	1 lb ai/a	2 pt/a			2-4"W-1 B						
	MSO (MSO ULTRA)	100	SL	0.5 % v/v	0.5 % v/v			2-4"W-1 B						
	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			2-4"W-1 B						
8	HALEX GT	4.389	CS	1.98 lb ai/a	3.6 pt/a			2-4"W-1 B		99 a	99 a	97 a	94 a	92 ab
	AATREX 4L	4	SC	1 lb ai/a	2 pt/a			2-4"W-1 B					94 abc	94 abc
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v	0.25 % v/v			2-4"W-1 B						
	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v			2-4"W-1 B						
LSD (P=.05)								10.6	6.1	3.5	9.1	10.7	7.4	5.7
Standard Deviation								7.1	4.1	2.4	6.1	7.2	5.0	3.8
CV								10.45	4.87	2.82	7.61	9.07	6.18	4.72
Replicate F								1.063	0.740	0.490	0.818	0.489	1.618	3.037
Replicate Prob(F)								0.3895	0.5419	0.6936	0.5015	0.6943	0.2202	0.0559
Treatment F								74.377	276.991	823.260	114.503	81.071	172.532	295.306
Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Impact Sequential and One-Pass Programs.

Trial ID: 13-2C-MME60 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Comments

1. Protocol: Amvac (13C04H059).
2. Ratings: CI 7, 15, and 30 DA-B and DA-C. WC 7, 15, 30, and 60 DA-B and DA-C.
3. Application B targeting V2-V3 corn, application C targeting V3-V4 corn.
4. Yield.
5. Missing data in some plots was due to early season standing water in some plots.
6. Following the PRE application the first rainfall event, beginning 1 hour later, was 2.16 inch over 3 days.
Following the 2-4"W-1 application the first rainfall event, beginning 2 days later, was 2.27 inch over 4 days.
Following the 2-4"W-2 application the first rainfall event, beginning 5 days later, was 0.20 inch over 1 day.
7. GGGAN = Annual grasses including 10% SETFA (giant foxtail) and 90% PANDI (fall panicum).
8. Harvested 11-8-13, (2) 30 inch rows by 25 ft.