

# Adjuvant Studies in Corn or Soybean

Southern Illinois University

Adjuvant Evaluation with Laudis - United Suppliers

Trial ID: 08-1-E50

Location: Belleville Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu  
City State Zip Country: Belleville IL 62221 USA  
Trial Status: FINAL Initiation Date: 06-15-08

Objectives: Evaluate commercial and experimental adjuvants with Laudis applied with and without atrazine.

Crop 1: ZEAMD Dent corn Variety: P33K44  
Planting Method: SEEDDED Planting Date: 06-15-08  
Rate, Unit: 28000 S/A Depth, Unit: 1.5 IN  
Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: PANDI Panicum dichotomiflorum Michx. panicum, fall  
Pest 2 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common  
Pest 3 Type: W Code: ABUTH Abutilon theophrasti Medicus velvetleaf

Plot Width, Unit: 10 FT Site Type: FIELD  
Plot Length, Unit: 28 FT Tillage Type: REDUCED-TILL  
Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year  
1. GLXMA 2007

Field Prep./Maintenance: N 150 LB/A, P205 0 LB/A, K20 100 LB/A

% OM: 1.6 Texture: SILT LOAM  
pH: 6.2 Soil Name: WINFIELD  
CEC: 8 Fert. Level: P1: 83 LB/A, K: 396 LB/A

## Application Description

A  
Application Date: 07-09-08  
Time of Day: 14:00  
Application Method: Spray  
Application Timing: 8-10"W  
Application Placement: BROFOL  
Applied By: TGM  
Air Temperature, Unit: 84 F  
% Relative Humidity: 56  
Wind Velocity, Unit: 1 MPH  
Dew Presence (Y/N): N  
Soil Temperature, Unit: 85 F  
Soil Moisture: ABONOR  
% Cloud Cover: 10

07-09-08  
Crop stage at application: V6  
Height Min, Max (inch): 24 28

## Pest Stage At Each Application

Application Date: 07-09-08  
Weed Code: PANDI  
Stage Majority (leaves): 6  
Stage Min, Max: 5 8  
Height Majority: 10 IN  
Height Min, Max: 6 12  
Density, Unit: 15 FT2  
Weed Code: AMATA  
Stage Majority (leaves): 24  
Stage Min, Max: 12 26  
Height Majority: 10 IN  
Height Min, Max: 6 12  
Density, Unit: 6 FT2  
Weed Code: ABUTH  
Stage Majority (leaves): 6  
Stage Min, Max: 6 8  
Height Majority: 10 IN  
Height Min, Max: 8 12  
Density, Unit: 4 FT2

## Application Equipment

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

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										PANDI	PANDI	AMATA	AMATA	ABUTH	ABUTH	
										ZEAMD	ZEAMD					
										07-23-08	08-06-08	07-23-08	08-06-08	07-23-08	08-06-08	
										Injury	Injury	Control	Control	Control	Control	
										Percent	Percent	Percent	Percent	Percent	Percent	
										14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Other Rate	Other Rate	Growth Stage	Appl Code								
1	LAUDIS	3.5	SC	0.082	lb ai/a	3 fl oz/a	8-10"W	A	1 a	0 a	28 ab	27 bcd	92 c	99 a	96 bc	99 a
1	AMS	100	SG	1	% w/w	8.5 lb/100 gal	8-10"W	A								
1	PREMIUM COC	100	SL	1	% v/v	1 % v/v	8-10"W	A								
2	LAUDIS	3.5	SC	0.082	lb ai/a	3 fl oz/a	8-10"W	A	2 a	0 a	25 abc	28 bc	83 e	99 a	94 c	99 a
2	AMS	100	SG	1	% w/w	8.5 lb/100 gal	8-10"W	A								
2	BETWEEN	100	SL	0.5	% v/v	0.5 % v/v	8-10"W	A								
3	LAUDIS	3.5	SC	0.082	lb ai/a	3 fl oz/a	8-10"W	A	0 a	0 a	30 a	33 a	92 c	99 a	98 a	99 a
3	AMS	100	SG	1	% w/w	8.5 lb/100 gal	8-10"W	A								
3	USEX108	100	SL	0.5	% v/v	0.5 % v/v	8-10"W	A								
4	LAUDIS	3.5	SC	0.082	lb ai/a	3 fl oz/a	8-10"W	A	2 a	0 a	23 a-d	25 cd	87 de	98 b	97 ab	99 a
4	AMS	100	SG	1	% w/w	8.5 lb/100 gal	8-10"W	A								
4	USEX208	100	SL	0.5	% v/v	0.5 % v/v	8-10"W	A								
5	LAUDIS	3.5	SC	0.082	lb ai/a	3 fl oz/a	8-10"W	A	0 a	0 a	28 ab	25 cd	93 bc	99 a	95 bc	99 a
5	AMS	100	SG	1	% w/w	8.5 lb/100 gal	8-10"W	A								
5	USEX308	100	SL	0.5	% v/v	0.5 % v/v	8-10"W	A								
6	LAUDIS	3.5	SC	0.082	lb ai/a	3 fl oz/a	8-10"W	A	0 a	0 a	25 abc	22 d	90 cd	99 a	95 bc	99 a
6	AMS	100	SG	1	% w/w	8.5 lb/100 gal	8-10"W	A								
6	SUCCEED	100	SL	1	% v/v	1 % v/v	8-10"W	A								
7	LAUDIS	3.5	SC	0.082	lb ai/a	3 fl oz/a	8-10"W	A	0 a	0 a	18 c-f	26 cd	99 a	99 a	99 a	99 a
7	AATREX NINE-O	90	WG	0.5	lb ai/a	0.556 lb/a	8-10"W	A								
7	AMS	100	SG	1	% w/w	8.5 lb/100 gal	8-10"W	A								
7	PREMIUM COC	100	SL	1	% v/v	1 % v/v	8-10"W	A								
8	LAUDIS	3.5	SC	0.082	lb ai/a	3 fl oz/a	8-10"W	A	0 a	0 a	17 def	26 cd	99 a	99 a	99 a	99 a
8	AATREX NINE-O	90	WG	0.5	lb ai/a	0.556 lb/a	8-10"W	A								
8	AMS	100	SG	1	% w/w	8.5 lb/100 gal	8-10"W	A								
8	BETWEEN	100	SL	0.5	% v/v	0.5 % v/v	8-10"W	A								
9	LAUDIS	3.5	SC	0.082	lb ai/a	3 fl oz/a	8-10"W	A	0 a	0 a	23 b-e	31 ab	99 a	99 a	99 a	99 a
9	AATREX NINE-O	90	WG	0.5	lb ai/a	0.556 lb/a	8-10"W	A								
9	AMS	100	SG	1	% w/w	8.5 lb/100 gal	8-10"W	A								
9	USEX108	100	SL	0.5	% v/v	0.5 % v/v	8-10"W	A								
10	LAUDIS	3.5	SC	0.082	lb ai/a	3 fl oz/a	8-10"W	A	0 a	0 a	13 f	27 bc	98 ab	99 ab	99 a	99 a
10	AATREX NINE-O	90	WG	0.5	lb ai/a	0.556 lb/a	8-10"W	A								
10	AMS	100	SG	1	% w/w	8.5 lb/100 gal	8-10"W	A								
10	USEX208	100	SL	0.5	% v/v	0.5 % v/v	8-10"W	A								
11	LAUDIS	3.5	SC	0.082	lb ai/a	3 fl oz/a	8-10"W	A	1 a	0 a	20 c-f	31 ab	99 a	99 a	99 a	99 a
11	AATREX NINE-O	90	WG	0.5	lb ai/a	0.556 lb/a	8-10"W	A								
11	AMS	100	SG	1	% w/w	8.5 lb/100 gal	8-10"W	A								
11	USEX308	100	SL	0.5	% v/v	0.5 % v/v	8-10"W	A								
12	LAUDIS	3.5	SC	0.082	lb ai/a	3 fl oz/a	8-10"W	A	2 a	0 a	16 ef	35 a	99 a	99 a	99 a	99 a
12	AATREX NINE-O	90	WG	0.5	lb ai/a	0.556 lb/a	8-10"W	A								
12	AMS	100	SG	1	% w/w	8.5 lb/100 gal	8-10"W	A								
12	SUCCEED	100	SL	1	% v/v	1 % v/v	8-10"W	A								
13	NONTREATED								0 a	0 a	0 g	0 e	0 f	0 c	0 d	0 b
LSD (P=.05)									2.4	0.0	6.7	4.6	5.0	0.6	2.1	0.0
Replicate F									1.028	0.000	8.215	4.799	1.987	0.581	1.227	0.000
Replicate Prob(F)									0.3729	1.0000	0.0019	0.0176	0.1590	0.5672	0.3108	1.0000
Treatment F									0.941	0.000	12.307	29.665	243.882	17044.873	1384.872	0.000
Treatment Prob(F)									0.5249	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	1.0000

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

Trial Comments

1. Protocol: United Suppliers.
2. Ratings: CI/WC at 14 + 28 DAT.
3. DA-A = Days after 8-10"W application.
4. At the Belleville Research Center the above normal rainfall in spring 2008 (no more than four consecutive rain-free days between March 22 and June 15) delayed corn and soybean planting until mid-June.
5. Not harvested.