

Nutrapathic Product Evaluation in Corn - BRC.

Trial ID: 09-20A-MME30

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: 06-26-09

Objectives: Determine the efficacy of Nutrapathic products
for enhanced corn growth and yield.

Crop 1: ZEAMD Dent corn

Variety: DKC 61-69

Description: RR2(VT3)

Planting Method: SEEDED

Planting Date: 06-26-09

Rate, Unit: 28000 S/A

Depth, Unit: 1.5 IN

Row Spacing, Unit: 30 IN

Code: NA

Plot Width, Unit: 10 FT

Site Type: FIELD

Plot Length, Unit: 25 FT

Tillage Type: REDUCED-TILL

Replications: 4

Study Design: Randomized Complete Block

Prior Crops, Year

1. GLXMA 2008

Field Prep./Maintenance: N 150 LB/A, P2O5 0 LB/A, K2O 150 LB/A

% OM: 2.6

Texture: SILT LOAM

pH: 6.1

Soil Name: BETHALTO

CEC: 13

Fert. Level: P1 78 LB/A, K 423 LB/A

Application Description

A

Application Date: 06-27-09

Time of Day: 8:30

Application Method: Spray

Application Timing: PRE

Application Placement: BROSOI

Applied By: DKP

Air Temperature, Unit: 78 F

% Relative Humidity: 92

Wind Velocity, Unit: 1 MPH

Wind Direction: NE

Dew Presence (Y/N): N

Soil Moisture: NORMAL

% Cloud Cover: 10

06-27-09

Crop stage at application: NA

Pest Stage At Each Application

Application Date: 06-27-09

Weed Code: NA

Application Equipment

Appl. Equipment: CO2 sprayer

Operating Pressure: 30 PSI

Nozzle Type: Flat fan

Nozzle Size: XR 8002

Boom Length, Unit: 10 FT

Spray Volume, Unit: 20 GPA

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ZEAMD ZEAMD ZEAMD
12-16-09 12-16-09 12-16-09
Moisture Test wt. Yield
Percent lb/bu bu/A

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Other Rate	Other Rate	Growth Stage	Appl Code			
1	NONTREATED								21.5 a	49.6 a	165 a
2	LIQUID BACTERIA CONCENTRATE	100	SL	2 fl oz/a		2 fl oz/a	PRE	A	21.9 a	49.4 a	138 b
3	SOIL RESTORE	100	SL	2 fl oz/a		2 fl oz/a	PRE	A	21.6 a	50.0 a	171 a
4	LIQUID BACTERIA CONCENTRATE	100	SL	2 fl oz/a		2 fl oz/a	PRE	A	22.1 a	50.1 a	159 ab
4	SOIL RESTORE	100	SL	2 fl oz/a		2 fl oz/a	PRE	A			
LSD (P=.05)									0.56	1.12	23.8
Replicate F									7.409	7.402	0.831
Replicate Prob(F)									0.0084	0.0084	0.5097
Treatment F									1.967	1.044	3.879
Treatment Prob(F)									0.1896	0.4192	0.0495

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

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ZEAMD ZEAMD ZEAMD ZEAMD ZEAMD
07-06-09 07-17-09 07-17-09 07-17-09 09-06-09
Plants Vigor Height Height SPAD
000/A 1-10 Inch Inch
5 Plants Overall
9 DA-A 20 DA-A 20 DA-A 20 DA-A 71 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Other Rate	Other Rate	Growth Stage	Appl Code					
1	NONTREATED								30.5 a	8.8 a	32.9 a	33.0 a	51.6 a
2	LIQUID BACTERIA CONCENTRATE	100	SL	2 fl oz/a		2 fl oz/a	PRE	A	30.1 a	8.8 a	33.3 a	32.8 a	50.7 a
3	SOIL RESTORE	100	SL	2 fl oz/a		2 fl oz/a	PRE	A	30.8 a	9.0 a	33.3 a	32.8 a	50.2 a
4	LIQUID BACTERIA CONCENTRATE	100	SL	2 fl oz/a		2 fl oz/a	PRE	A	30.9 a	9.0 a	32.9 a	32.3 a	51.2 a
4	SOIL RESTORE	100	SL	2 fl oz/a		2 fl oz/a	PRE	A					
LSD (P=.05)									1.91	0.46	1.12	1.69	1.54
Replicate F									0.659	3.000	0.309	2.441	1.145
Replicate Prob(F)									0.5978	0.0877	0.8184	0.1312	0.3824
Treatment F									0.307	1.000	0.445	0.354	1.575
Treatment Prob(F)									0.8196	0.4363	0.7270	0.7875	0.2624

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Pest Code	Crop Code	Rating Date	Rating Data Type	Rating Unit	Rating Timing	Trt-Eval Interval	SOIL 06-26-09 Mg\$ Percent	SOIL 12-01-09 Mg\$ Percent	SOIL 06-26-09 K\$ Percent	SOIL 12-01-09 K\$ Percent	SOIL 06-26-09 Na\$ Percent	SOIL 12-01-09 Na\$ Percent			
Trt	Treatment	Form	Form	Rate	Other	Other	Growth	Appl							
No.	Name	Conc	Type	Rate	Unit	Rate	Unit	Stage	Code						
1	NONTREATED									7.24 a	9.53 a	4.55 a	4.47 ab	0.51 a	0.95 a
2	LIQUID BACTERIA CONCENTRATE	100	SL	2 fl oz/a		2 fl oz/a		PRE	A	7.65 a	9.77 a	5.06 a	5.04 a	0.55 a	0.96 a
3	SOIL RESTORE	100	SL	2 fl oz/a		2 fl oz/a		PRE	A	7.81 a	9.69 a	4.93 a	4.09 b	0.61 a	1.16 a
4	LIQUID BACTERIA CONCENTRATE	100	SL	2 fl oz/a		2 fl oz/a		PRE	A	7.70 a	9.90 a	5.14 a	4.63 ab	0.60 a	0.79 a
4	SOIL RESTORE	100	SL	2 fl oz/a		2 fl oz/a		PRE	A						
LSD (P=.05)										1.287	0.636	0.903	0.735	0.178	0.594
Replicate F										1.327	20.233	5.290	4.189	1.172	0.349
Replicate Prob(F)										0.3253	0.0002	0.0224	0.0411	0.3734	0.7909
Treatment F										0.387	0.586	0.864	2.885	0.712	0.666
Treatment Prob(F)										0.7653	0.6391	0.4944	0.0950	0.5692	0.5938

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Trt	Treatment	Form	Form	Rate	Other	Other	Growth	Appl								
No.	Name	Conc	Type	Rate	Unit	Rate	Rate	Unit	Stage	Code						
1	NONTREATED										5.63 a	4.40 a	18.38 a	0.75 a	0.38 a	0.27 a
2	LIQUID BACTERIA CONCENTRATE	100	SL	2 fl oz/a		2 fl oz/a	PRE	A			5.38 a	4.35 a	14.63 a	0.38 a	0.41 a	0.26 a
3	SOIL RESTORE	100	SL	2 fl oz/a		2 fl oz/a	PRE	A			5.33 a	4.33 a	13.88 a	0.75 a	0.46 a	0.23 a
4	LIQUID BACTERIA CONCENTRATE	100	SL	2 fl oz/a		2 fl oz/a	PRE	A			5.30 a	4.33 a	13.88 a	0.38 a	0.42 a	0.31 a
4	SOIL RESTORE	100	SL	2 fl oz/a		2 fl oz/a	PRE	A								
LSD (P=.05)											0.772	0.188	11.720	0.894	0.113	0.133
Replicate F											1.642	4.801	1.512	5.400	1.295	0.812
Replicate Prob(F)											0.2478	0.0290	0.2768	0.0211	0.3344	0.5189
Treatment F											0.382	0.360	0.346	0.600	0.924	0.607
Treatment Prob(F)											0.7684	0.7834	0.7932	0.6310	0.4677	0.6269

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SOIL	SOIL	SOIL	SOIL
06-26-09	12-01-09	06-26-09	12-01-09
NO3-N	NO3-N	NH4-N	NH4-N
ppm	ppm	ppm	ppm
-1 DA-A	157 DA-A	-1 DA-A	157 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
1	NONTREATED								87.58 a	3.48 a	2.23 a	1.98 ab
2	LIQUID BACTERIA CONCENTRATE	100	SL	2 fl oz/a	2 fl oz/a		PRE	A	71.63 a	3.33 a	2.20 a	2.28 a
3	SOIL RESTORE	100	SL	2 fl oz/a	2 fl oz/a		PRE	A	83.15 a	4.10 a	2.23 a	1.80 b
4	LIQUID BACTERIA CONCENTRATE	100	SL	2 fl oz/a	2 fl oz/a		PRE	A	86.30 a	4.00 a	2.33 a	2.13 ab
4	SOIL RESTORE	100	SL	2 fl oz/a	2 fl oz/a		PRE	A				
LSD (P=.05)									32.907	0.853	0.287	0.441
Replicate F									0.851	0.250	9.000	2.172
Replicate Prob(F)									0.5004	0.8595	0.0045	0.1693
Treatment F									0.499	2.137	0.381	2.263
Treatment Prob(F)									0.6921	0.1737	0.7695	0.1583

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Trial Comments

1. Protocol: Nutrapathic.
2. Ratings: Corn stand counts 7-14 DAP, corn vigor 14-21 DAP, corn height 21 DAP, leaf greenness at tasseling (VT growth stage) - measure ear leaf with SPAD meter (10 per plot).
3. Yield, moisture, and test weight.
4. Blanket PRE application of Bicep II Magnum (2.4 qt/A) to entire area was applied 6-26-09.
5. Take soil samples in each plot prior to application and again at harvest (minimum 60 g or 1 cup).
Soil samples must be stored dry (air dry) or frozen, prefer to be dried right away.
Submit soil samples to Brookside Labs for their S001 (standard soil test), S110 (available N as NH4-N + NO3-N) and S112 (total N).
6. Corn height; 5 Plants is average height of 5 random plants per plot, Overall is looking across the top of the plants.
Plants 000/A = Thousands per acre.
SPAD = Minolta chlorophyll meter (model SPAD 502) reading on on the ear leaf.
7. Soil test data; * Mehlich III extractable elements.
§ This value represents the percent of a given element found on the soils total exchange capacity.
Values should add to 100 for a given sample.
Note: For a listing of methods and references please refer to the website for Brookside Laboratories Inc (www.blinc.com).
8. Harvested 12-16-09, (2) 30 inch rows by 22 ft.