

## Evaluation of Zn-Mn+Booster in Soybean.

Trial ID: 09-27-S70

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: 06-30-09

Objectives: Evaluate the seed treatment product SOYA Coat Zn+Mn for enhanced soybean growth and development in a Roundup Ready system.

Crop 1: GLXMA Soybean Variety: AG 4404 Description: RR/STS  
 Planting Method: SEEDED Planting Date: 06-30-09  
 Rate, Unit: 75 LB/A Depth, Unit: 1.0 IN  
 Row Spacing, Unit: 30 IN

Plot Width, Unit: 10 FT Site Type: FIELD  
 Plot Length, Unit: 29 FT Tillage Type: REDUCED-TILL  
 Replications: 6 Study Design: Randomized Complete Block

Prior Crops, Year  
 1. ZEAMD 2008

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

% OM: 2.8 Texture: SILT LOAM  
 pH: 6 Soil Name: BETHALTO  
 CEC: 13 Fert. Level: P1: 67 LB/A, K: 409 LB/A

## Application Description

A

Application Date: 08-11-09  
 Time of Day: 13:00  
 Application Method: Spray  
 Application Timing: V5  
 Application Placement: BROFOL  
 Applied By: NVH  
 Air Temperature, Unit: 78 F  
 % Relative Humidity: 92  
 Wind Velocity, Unit: 4 MPH  
 Wind Direction: SW  
 Dew Presence (Y/N): N  
 Soil Moisture: ABONOR  
 % Cloud Cover: 40

08-11-09  
 Crop stage at application: V5  
 Height Min, Max (inch): 8 10

## Pest Stage At Each Application

Application Date: 08-11-09  
 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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Pest Code Crop Code Rating Date Rating Data Type Rating Unit Rating Timing Trt-Eval Interval										GLXMA 11-09-09 Moisture Percent	GLXMA 11-09-09 Yield bu/A	GLXMA 08-01-09 Plants 000/A	GLXMA 11-09-09 Plants 000/A	GLXMA 08-18-09 SPAD	GLXMA 08-18-09 Injury Percent	GLXMA 11-09-09 Height Inch
										30 DAP		EOS		7 DA-A	7 DA-A	EOS
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code							
1	NO SEED TREATMENT									14.7 a	40 ab	106.8 b	92.2 bc	25.9 a	0 a	29 a
2	NO SEED TREATMENT									14.7 a	39 b	116.3 ab	101.2 ab	26.3 a	0 a	29 a
2	ROUNDUP POWERMAX	4.5	SL	1.125	lb ae/a	32	fl oz/a	V5	A							
3	NO SEED TREATMENT									14.5 ab	39 b	108.2 b	90.7 c	25.9 a	0 a	28 a
3	ZN-MN+BOOSTER	100	SL	1	qt/a	1	qt/a	V5	A							
4	NO SEED TREATMENT									14.5 ab	39 b	116.3 ab	99.6 abc	25.3 a	0 a	29 a
4	ZN-MN+BOOSTER	100	SL	1	qt/a	1	qt/a									
4	ROUNDUP POWERMAX	4.5	SL	1.125	lb ae/a	32	fl oz/a	V5	A							
5	MICROSUN ZNO SEED TRT			6	oz wt/cwt					14.4 b	43 a	122.0 a	102.8 a	26.8 a	0 a	29 a
6	MICROSUN ZNO SEED TRT			6	oz wt/cwt					14.5 ab	43 ab	126.9 a	105.8 a	26.0 a	0 a	29 a
6	ROUNDUP POWERMAX	4.5	SL	1.125	lb ae/a	32	fl oz/a	V5	A							
LSD (P=.05)										0.23	3.6	11.78	9.91	1.72	0.0	0.9
Replicate F										4.585	2.222	7.382	9.570	2.551	0.000	6.960
Replicate Prob(F)										0.0045	0.0852	0.0003	0.0001	0.0536	1.0000	0.0004
Treatment F										2.106	2.314	3.691	3.145	0.719	0.000	1.050
Treatment Prob(F)										0.0996	0.0752	0.0128	0.0253	0.6156	1.0000	0.4118

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

## Trial Comments

1. Protocol: SIU/RFK.
2. Ratings: Soybean stand count 30 DAP, SPAD reading after POST application, plant height at harvest, grain yield.
3. Blanket PRE application of Firstate (0.031 lbai/A) plus Spartan (0.25 lbai/A) plus Dual II Magnum (1.27 lbai/A) was applied on 7-1-09.
4. Stand reduction due to standing water was observed and recorded by plot.
5. Plants 000/A = Thousands per acre. DAP = Days after planting.  
SPAD = Minolta chlorophyll meter (model SPAD 502) reading on on the newest fully developed leaf.
6. Harvested 11-9-09, (2) 30 inch rows by 26 ft.