

Corn Hybrids, Insecticides and Plant Growth Regulators

Southern Illinois University

Interaction of In-Furrow Counter with Early Preplant Applied SU Herbicides.

Trial ID: 12-WF-SE-N120
Location: Belleville Res. Center

Investigator: Bryan Young

General Trial Information	
Study Director: Bryan Young	Title: Professor
Investigator: Bryan Young	
Trial Status: F - one-year/final	
Initiation Date: 4-2-12	
Trial Location	
City: Belleville	
State/Prov.: IL	
Postal Code: 62221	
Country: USA	

Objectives:
Evaluate crop tolerance from early preplant applications of Basis at 45 or 30 DAP to corn planted with Counter 20G in-furrow.

Personnel	
Study Director: Bryan Young	Title: Professor
Investigator: Bryan Young	
Affiliation: Southern Illinois University	
Address: 1205 Lincoln Drive - AG 176 - MC 4415	
Location: Carbondale IL	
Postal Code: 62901	E-mail: bgyoung@siu.edu
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Crop Description	
Crop 1: ZEAMD Zea mays indentata Dent corn	Description: non-RIB
Variety: P1395HR	Planting Date: 5-17-12
BBCH Scale: BCOR	Rate, Unit: 28000 S/A
Planting Method: SEEDED Seeded	
Depth, Unit: 1.5 IN	
Row Spacing, Unit: 30 IN	

Pest Description	
Pest 1 Type: W	Code: NA
Common Name: crop tolerance only	

Site and Design	
Plot Width, Unit: 10 FT	Site Type: FIELD field
Plot Length, Unit: 45 FT	
Plot Area, Unit: 450 FT2	Tillage Type: NOTILL no-till
Replications: 4	Study Design: RACOB Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.		2011

Maintenance	
No.	Maintenance Treatment Name
1.	N 150 LB/A, P205 50 LB/A, K20 150 LB/A

Soil Description	
% Sand: 5.67	% OM: 1.69
% Silt: 82.40	pH: 6.1
% Clay: 11.97	CEC: 10.4
Texture: SIL SILT LOAM	
Soil Name: WINFIELD	

Additional Measured Elements		
Element	Quantity	Unit
P1	92	LB/A
K	390	LB/A

Moisture and Weather Conditions	
Overall Moisture Conditions:	BELNOR below normal
Closest Weather Station: ICN - Belleville IL	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.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A	B	C	D
Application Date:	4-2-12	4-17-12	5-10-12	5-17-12
Time of Day:	10:00	10:00	8:00	16:00
Application Method:	Spray	Spray	Spray	Planter
Application Timing:	45EPP	30EPP	7EPP	IN-FURROW
Application Placement:	BROFOL	BROFOL	BROFOL	INFURR
Applied By:	RFK	RFK	RFK	RFK
Air Temperature, Unit:	84 F	64 F	61 F	80 F
% Relative Humidity:	55	54	70	28
Wind Velocity, Unit:	0 MPH	0 MPH	0 MPH	5 MPH
Wind Direction:				E
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	47 F	54 F	66 F	61 F
Soil Moisture:	NORMAL	ABONOR	ABONOR	NORMAL
% Cloud Cover:	0	0	0	0
Next Rain Occurred On:	4-4-12	4-20-12	5-20-12	5-20-12

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Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	NA	NA	NA	NA

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	NA W DESC	NA W DESC	NA W DESC	NA W DESC
Stage Majority, Percent:	NA	NA	NA	NA

Application Equipment

	A	B	C	D
Appl. Equipment:	C02 sprayer	C02 sprayer	C02 sprayer	Planter
Equipment Type:	BACSPR	BACSPR	BACSPR	METDEV
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	
Nozzle Type:	Flat fan	Flat fan	Flat fan	NA
Nozzle Size:	XR 8002	XR 8002	XR 8002	NA
Boom Length, Unit:	10 FT	10 FT	10 FT	
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								ZEAMD 5-31-12 Injury Percent	ZEAMD 6-14-12 Injury Percent	ZEAMD 7-12-12 Injury Percent
								14 DAP	28 DAP	56 DAP
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
1	BASIS	75 WG		0.0234 lb ai/a		0.5 oz/a		45EPP	A	0.0 a
2	BASIS COUNTER 20 G	75 WG 20 GR		0.0234 lb ai/a 1.2 oz ai/1000 row-ft		0.5 oz/a 6 oz wt/1000 row-ft		45EPP IN-FURROW D	A	0.0 a
3	BASIS	75 WG		0.047 lb ai/a		1 oz/a		45EPP	A	0.0 a
4	BASIS COUNTER 20 G	75 WG 20 GR		0.047 lb ai/a 1.2 oz ai/1000 row-ft		1 oz/a 6 oz wt/1000 row-ft		45EPP IN-FURROW D	A	0.0 a
5	BASIS	75 WG		0.0234 lb ai/a		0.5 oz/a		30EPP	B	0.0 a
6	BASIS COUNTER 20 G	75 WG 20 GR		0.0234 lb ai/a 1.2 oz ai/1000 row-ft		0.5 oz/a 6 oz wt/1000 row-ft		30EPP IN-FURROW D	B	0.0 a
7	BASIS	75 WG		0.047 lb ai/a		1 oz/a		30EPP	B	0.0 a
8	BASIS COUNTER 20 G	75 WG 20 GR		0.047 lb ai/a 1.2 oz ai/1000 row-ft		1 oz/a 6 oz wt/1000 row-ft		30EPP IN-FURROW D	B	0.0 a
9	BASIS	75 WG		0.047 lb ai/a		1 oz/a		7EPP	C	0.0 a
10	BASIS COUNTER 20 G	75 WG 20 GR		0.047 lb ai/a 1.2 oz ai/1000 row-ft		1 oz/a 6 oz wt/1000 row-ft		7EPP IN-FURROW D	C	0.0 a
11	NONTREATED									0.0 a
12	COUNTER 20 G	20 GR		1.2 oz ai/1000 row-ft		6 oz wt/1000 row-ft		IN-FURROW D		0.0 a
LSD (P=.05)								0.00	0.00	0.00
Standard Deviation								0.00	0.00	0.00
CV								0.0	0.0	0.0
Replicate F								0.000	0.000	0.000
Replicate Prob(F)								1.0000	1.0000	1.0000
Treatment F								0.000	0.000	0.000
Treatment Prob(F)								1.0000	1.0000	1.0000

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.

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Trial Comments

1. Protocol: DuPont (USA-12-114).
2. Ratings: CI at 14, 28, and 56 DAP.
Record soil texture class and % sand silt clay, pH, OM, and CEC.
Report daily rainfall starting 2 weeks before planting until 4 weeks after planting.
3. Weedfree - start clean, use glyphosate prior to planting if needed.
Keep weedfree using non-SU herbicides POST.
4. Use Counter 20% from AMVAC, not 20 CR, not 15 G.
5. Rainfall in inches for the 2 weeks before and 4 weeks after planting on 5-17-12 was;
0.25 on May 4,
0.29 on May 7,
0.18 on May 21,
0.28 on May 31,
0.75 on June 11,
0.36 on June 17.
6. Not harvested.