

Corn or Soybean Fungicide Studies

12-02-05 (05-WF-SE-M70)

Southern Illinois University

Headline Evaluation in Corn.

Project Code: 05-WF-SE-M70 Location: Belleville Research Center
Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
Trial Status: Final Updated: 12-02-05

Objective:
Assess the effect of Headline and application timing on disease and corn yield.

Weed Code Common Name Scientific Name
1. NA crop tolerance only

Crop 1: ZEAMX corn, field **Variety:** DKC 60-17 RR
Planting Method: Seeded **Planting Date:** 5-7-05
Rate: 28000 S/A **Depth:** 1.5 IN
Row Spacing: 30 IN

Plot Width, Unit: 10 FT **Plot Length, Unit:** 28 FT **Reps:** 6
Tillage Type: Reduced-Till **Study Design:** Randomized complete block
Previous Crop, Year: GLXMA, 2004

Field Prep./Maintenance: N 150 LB/A, P205 100 LB/A, K20 200 LB/A

Soil Name: Ebbert **% OM:** 2.1 **pH:** 5.6 **CEC:** 10
Texture: Silt loam **Fert. Level:** P1: 54 LB/A, K: 316 LB/A

APPLICATION DESCRIPTION

| | A | B | C | D |
|-----------------------------|----------|----------|----------|----------|
| Application Date: | 06-30-05 | 07-05-05 | 07-08-05 | 07-11-05 |
| Time of Day: | 10:45 | 14:00 | 13:00 | 8:30 |
| Application Method: | Spray | Spray | Spray | Spray |
| Application Timing: | V14 | PRETASSL | TASSEL | R1-SILK |
| Applic. Placement: | BROFOL | BROFOL | BROFOL | BROFOL |
| Air Temp., Unit: | 80 F | 82 F | 86 F | 70 |
| % Relative Humidity: | 34 | 34 | 32 | 96 |
| Wind Velocity, Unit: | 3 MPH | 1 MPH | 0 MPH | 2-3 MPH |
| Dew Presence (Y/N): | N | N | N | N |
| Soil Moisture: | BELNOR | ABONOR | ABONOR | ABONOR |
| % Cloud Cover: | CLEAR | 70% | | |

CROP STAGE AT EACH APPLICATION

| | A | B | C | D |
|----------------------------|-----------|----------|--------------|------------|
| Crop 1 Code, Stage: | ZEAMX V14 | ZEAMX R1 | ZEAMX Tassel | ZEAMX SILK |
| Height, Unit: | 84 IN | 96 IN | 99 IN | 100 IN |

APPLICATION EQUIPMENT

| | A | B | C | D |
|----------------------------|-------------|-------------|-------------|-------------|
| Appl. Equipment: | CO2 sprayer | CO2 sprayer | CO2 sprayer | CO2 sprayer |
| Operating Pressure: | 40 PSI | 40 PSI | 40 PSI | 40 PSI |
| Nozzle Type: | Flat fan | Flat fan | Flat fan | Flat fan |
| Nozzle Size: | 8002 | 8002 | 8002 | 8002 |
| Boom Length, Unit: | 5 FT | 5 FT | 5 FT | 5 FT |
| Spray Volume, Unit: | 20 GPA | 20 GPA | 20 GPA | 20 GPA |

NOTES:

Headline Evaluation in Corn.

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Weed Code
 Crop Code
 Rating Data Type
 Rating Unit
 Rating Date
 Trt-Eval Interval

ZEAMX ZEAMX ZEAMX ZEAMX
 Moisture Yield Disease Disease
 Percent bu/A % Incid % Sever
 10-13-05 10-13-05
 14 DAT 14 DAT

| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Prod Rate | Prod Unit | Grow Stg | Appl Code | ZEAMX Moisture Percent | ZEAMX Yield bu/A | ZEAMX Disease % Incid | ZEAMX Disease % Sever |
|-------------------|----------------|-----------|-----------|-------|-----------|-----------|-----------|----------|-----------|------------------------|------------------|-----------------------|-----------------------|
| 1 | NONTREATED | | | | | | | | | 14.9 | 223 | 0 | 0 |
| 2 | HEADLINE | 2.09 | EC | 0.098 | lb ai/a | 6 | fl oz/a | V14 | A | 15.2 | 223 | 0 | 0 |
| 2 | ACTIVATOR 90 | 100 | LIQ | 0.125 | % v/v | 0.125 | % v/v | V14 | A | | | | |
| 3 | HEADLINE | 2.09 | EC | 0.098 | lb ai/a | 6 | fl oz/a | PRETASSL | B | 15.4 | 227 | 0 | 0 |
| 3 | ACTIVATOR 90 | 100 | LIQ | 0.125 | % v/v | 0.125 | % v/v | PRETASSL | B | | | | |
| 4 | HEADLINE | 2.09 | EC | 0.098 | lb ai/a | 6 | fl oz/a | TASSEL | C | 15.5 | 231 | 0 | 0 |
| 4 | ACTIVATOR 90 | 100 | LIQ | 0.125 | % v/v | 0.125 | % v/v | TASSEL | C | | | | |
| 5 | HEADLINE | 2.09 | EC | 0.098 | lb ai/a | 6 | fl oz/a | R1-SILK | D | 15.6 | 226 | 0 | 0 |
| 5 | ACTIVATOR 90 | 100 | LIQ | 0.125 | % v/v | 0.125 | % v/v | R1-SILK | D | | | | |
| LSD (P=.05) | | | | | | | | | | 0.32 | 14.0 | 0.0 | 0.0 |
| Replicate F | | | | | | | | | | 5.468 | 3.692 | 0.000 | 0.000 |
| Replicate Prob(F) | | | | | | | | | | 0.0025 | 0.0157 | 1.0000 | 1.0000 |
| Treatment F | | | | | | | | | | 6.320 | 0.537 | 0.000 | 0.000 |
| Treatment Prob(F) | | | | | | | | | | 0.0019 | 0.7101 | 1.0000 | 1.0000 |

Trial Comments

1. Protocol: BASF.
2. Ratings: Disease incidence and severity at 14 DAT.
3. Record the exact day for each growth stage to help define the time period that each "stage" takes to progress.
4. Blanket application of Guardsman Max (4 pt/A) PRE was applied 5-7-05, followed by Distinct (4 oz/A) + NIS (0.25% v/v) + AMS (2.5 lb/A) at 12 inch corn to all plots 10 ft wide on 6-1-05.
5. Yield.
6. % Incid = Percent incidence. % Sever = Percent severity. DAT = Days after various applications.
 Ratings at 14 DAT were on 7-14-05, 7-19-05, 7-22-05, and 7-25-05 for the V14, PRETASSL, TASSEL, and R1-SILK applications, respectively.
7. Harvested 10-13-05, (2) 30 inch rows by 25 ft.