2008 Foliar Fungicides on Corn
Product Comparisons

South Central Agricultural Laboratory
Clay Center, NE

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University of Nebraska-Lincoln
Disease Notes
Gray Leaf Spot

• Gray leaf spot (GLS) was the predominant foliar disease in this trial

• Gray leaf spot reached the tassel leaf prior to senescence in most plots
Common Rust

- Common rust developed at low severity (<5%) in this trial.
- In general, common rust was more severe than normal in Nebraska in 2008, likely due to the ample moisture and cooler than normal temperatures.
Southern Rust developed in Nebraska in 2008 for the third consecutive year. The disease developed at very low incidence and severity (<3%) in this trial and surrounding areas, likely because of the cooler than normal temperatures.
2008 Foliar Fungicide Trials

- Applied with high clearance sprayer
- Continuous corn
- Later planting (May 14, 2008)
- 6 reps
- 20 gpa
- Overhead sprinkler irrigated

South Central Ag Lab, Clay Center, NE
Acknowledgement – Big John Manufacturing, Althouse, Ridgway, Rathje
2008 Foliar Fungicide Trials

Data Collection

- Disease severity = % total leaf area covered by lesions or rust pustules
- GLS progression recorded as leaf number moving up the plant (1-18)
- Grain mechanically harvested and adjusted to 15.5% moisture
- Lodged plants per plot (%) estimated at harvest
2008 Corn Yield in NE
DKC 60-18 (GLS rating = 7/fair)

South Central Agricultural Lab near Clay Center, NE – no statistical differences
Fungicides applied at VT & when GLS reached ear leaf 20 gpa, NIS = 0.25% v/v
2008 Corn Gray Leaf Spot Severity in NE
DKC 60-18 (GLS rating = 7/fair)

![Graph showing disease severity over dates for different treatments.](Image)

- **1** Quadris @ VT
- **2** Tilt @ VT
- **3** Quilt @ VT
- **4** Headline @ VT
- **5** Stratego @ VT
- **6** Headline GLS at Ear
- **7** Stratego GLS at Ear
- **8** Non-treated

_Disease Severity (%)_

Date

- 7/23
- 8/26
- 9/9
2008 Corn Gray Leaf Spot Progression in NE
DKC 60-18 (GLS rating = 7/fair)

August 26, 2008

Disease Progression (Leaf # from base of plant)

Quadris  Tilt  Quilt  Headline Stratego  Headline Stratego  None

<table>
<thead>
<tr>
<th></th>
<th>Applied</th>
<th>Timing</th>
<th>Disease Progression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quadris</td>
<td>6.2 + NIS</td>
<td>July 21</td>
<td>0c</td>
</tr>
<tr>
<td>Tilt</td>
<td>4</td>
<td>VT</td>
<td>0c</td>
</tr>
<tr>
<td>Quilt</td>
<td>14 + NIS</td>
<td>July 21</td>
<td>0c</td>
</tr>
<tr>
<td>Headline</td>
<td>6 + NIS</td>
<td>July 21</td>
<td>0c</td>
</tr>
<tr>
<td>Stratego</td>
<td>10 + NIS</td>
<td>July 21</td>
<td>0c</td>
</tr>
<tr>
<td>Headline</td>
<td>6 + NIS</td>
<td>Aug 24</td>
<td>10a</td>
</tr>
<tr>
<td>Stratego</td>
<td>10 + NIS</td>
<td>Aug 24</td>
<td>12ab</td>
</tr>
<tr>
<td>None</td>
<td></td>
<td></td>
<td>16b</td>
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</table>

- 8/26/08, GLS was on tassel leaf of all treatments by 9/9/2008
- South Central Agricultural Lab near Clay Center, NE
- Fungicides applied at VT & when GLS reached ear leaf 20 gpa, NIS = 0.25% v/v
2008 Corn Top Rot Incidence in NE

DKC 60-18 (GLS rating = 7/fair)

Incidence (% of Population)

Quadris 6.2 + NIS
Tilt 4
Quilt 14 + NIS
Headline 6 + NIS
Stratego 10 + NIS
Headline 6 + NIS
Stratego 10 + NIS
None

Timing

South Central Agricultural Lab near Clay Center, NE
Fungicides applied at VT & when GLS reached ear leaf 20 gpa, NIS = 0.25% v/v
2008 Corn Lodging in NE
DKC 60-18 (GLS rating = 7/fair)

Lodged Plants (%)

<table>
<thead>
<tr>
<th></th>
<th>Quadris</th>
<th>Tilt</th>
<th>Quilt</th>
<th>Headline</th>
<th>Stratego</th>
<th>Headline</th>
<th>Stratego</th>
<th>None</th>
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</thead>
<tbody>
<tr>
<td>Applied</td>
<td>6.2 + NIS</td>
<td>4</td>
<td>14 + NIS</td>
<td>6 + NIS</td>
<td>10 + NIS</td>
<td>6 + NIS</td>
<td>10 + NIS</td>
<td>10 + NIS</td>
</tr>
<tr>
<td></td>
<td>VT</td>
<td>VT</td>
<td>VT</td>
<td>VT</td>
<td>VT</td>
<td>50% dented</td>
<td>50% dented</td>
<td></td>
</tr>
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South Central Agricultural Lab near Clay Center, NE
Fungicides applied at VT & when GLS reached ear leaf 20 gpa, NIS = 0.25% v/v
2008 Corn 500 Kernel Weight in NE
DKC 60-18 (GLS rating = 7/fair)

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Weight (g)</th>
<th>Applied</th>
<th>Timing</th>
<th>% Dented</th>
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<tbody>
<tr>
<td>Quadris</td>
<td>ab 182.6</td>
<td>July 21</td>
<td>VT</td>
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<tr>
<td>Tilt</td>
<td>b 180.5</td>
<td>July 21</td>
<td>VT</td>
<td></td>
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<tr>
<td>Quilt</td>
<td>a 185.3</td>
<td>July 21</td>
<td>VT</td>
<td></td>
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<tr>
<td>Headline</td>
<td>a 186.4</td>
<td>July 21</td>
<td>VT</td>
<td></td>
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<tr>
<td>Stratego</td>
<td>b 180.5</td>
<td>July 21</td>
<td>VT</td>
<td></td>
</tr>
<tr>
<td>Headline</td>
<td>b 181.1</td>
<td>Aug 24</td>
<td>50% dented</td>
<td></td>
</tr>
<tr>
<td>Stratego</td>
<td>b 180.5</td>
<td>Aug 24</td>
<td>50% dented</td>
<td></td>
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<tr>
<td>None</td>
<td>c 174.7</td>
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South Central Agricultural Lab near Clay Center, NE
Fungicides applied at VT & when GLS reached ear leaf 20 gpa, NIS = 0.25% v/v
# 2008 Rainfall
Clay Center, NE

<table>
<thead>
<tr>
<th>Month</th>
<th>Total Rain (in.)</th>
<th>Avg. High Temp (F)</th>
<th>Avg. Low Temp (F)</th>
<th>High Temp. (F)</th>
<th>Low Temp. (F)</th>
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<td>10.15</td>
<td>67</td>
<td>46</td>
<td>86</td>
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<tr>
<td>June</td>
<td>10.65</td>
<td>81</td>
<td>59</td>
<td>90</td>
<td>55</td>
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<tr>
<td>July</td>
<td>4.6</td>
<td>87</td>
<td>65</td>
<td>97</td>
<td>55</td>
</tr>
<tr>
<td>August</td>
<td>1.67</td>
<td>85</td>
<td>64</td>
<td>100</td>
<td>55</td>
</tr>
<tr>
<td>September</td>
<td>1.79</td>
<td>75</td>
<td>53</td>
<td>91</td>
<td>40</td>
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<tr>
<td>October</td>
<td>8.53</td>
<td>63</td>
<td>42</td>
<td>79</td>
<td>25</td>
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<tr>
<td>November</td>
<td>0</td>
<td>73</td>
<td>47</td>
<td>73</td>
<td>34</td>
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</table>

*Does not include irrigation.*

*Source used: Nebraska Department of Natural Resources: [http://dnrdata.dnr.ne.gov/NeRAIN/](http://dnrdata.dnr.ne.gov/NeRAIN/)*
Acknowledgments

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