Agronomy Information and Tips

Hail, and wind, it has been a rough growing season for NW Missouri growers. Crop yields have been dramatically affected by stand reduction, harvestability and leaf defoliation.

Most corn was in the dent stage when damaged occurred. During the dent stage, the starch is hardening at the top of the kernel causing a milk line. Above the line is hard starch, below is milk. This line moves from the top of the kernel toward the cob. Kernels at this stage will not abort. Kernels may be lighter as the kernel continues to dry down. This is good news where corn fields have standing stalks with ears that can be harvested.

Soybean plants will adjust growth for the condition of the individual plant. Four days after the injury, we are seeing brown pods which the soybean plant will abort and they will drop to the ground. Soybeans will be affected greatly when leaves are lost and stems are bruised and cut. This damaged occurred during the critical seed fill. You can inspect your crops now and check for pod drop. With injury occurring this late in the season, plants will not compensate. They will set as much seed as each individual plant can with the stress placed on it.

![Graph showing percent yield loss of soybean due to defoliation](image1)

![Graph showing percent yield loss of corn due to defoliation](image2)
Our recommendation to dry corn with air no heat is to move the drying front through the grain to the grain surface even if it is raining. Corn will not pick up water again. However, soybeans is different and will rehydrate.

### Equilibrium moisture content (% wet basis) for crops exposed to air at various temperatures

<table>
<thead>
<tr>
<th>Relative Humidity</th>
<th>20%</th>
<th>40%</th>
<th>60%</th>
<th>80%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temp F</td>
<td>C</td>
<td>W</td>
<td>SB</td>
<td>C</td>
</tr>
<tr>
<td>40</td>
<td>9.2</td>
<td>8.5</td>
<td>4.6</td>
<td>11.9</td>
</tr>
<tr>
<td>50</td>
<td>8.5</td>
<td>8.2</td>
<td>4.2</td>
<td>11.2</td>
</tr>
<tr>
<td>60</td>
<td>7.9</td>
<td>7.9</td>
<td>3.9</td>
<td>10.6</td>
</tr>
<tr>
<td>70</td>
<td>7.3</td>
<td>7.7</td>
<td>3.6</td>
<td>10.0</td>
</tr>
<tr>
<td>80</td>
<td>6.7</td>
<td>7.5</td>
<td>3.3</td>
<td>9.6</td>
</tr>
</tbody>
</table>

C = yellow dent corn; W = hard red winter wheat; SB = soybeans

### Grain Storage Tips, University of Minnesota.

**Seeding new stands of tall fescue.** Try new novel endophyte fescues that are able to handle drought and nematode damage. New releases are Jesup Max Q (Max Q), Texoma MaxQII both sold by Pennington Seed company; BarOptima Plus E34 sold by Barenbrug USA. If you are reseeding, check about these as these varieties have improved cattle gains compared to KY-31. If you do not over-graze or roll old bales of hay into the new seeding, KY-31 will not retake the pasture. Be sure to use the spray smother spray method of killing the old sod.

If you would like to be added to our electronic mailing list, please contact Charmaine Flint, Holt County Secretary at 660-446-3724.

Information contained in this newsletter is intended for use in Northwest Missouri and may need to be adapted to other locations. We ask that you credit University of Missouri Extension if you use this information.

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