May 2007

Field Crop News

Freeze Damage
The major topic during April and continuing into May is the well below average temperatures we experienced during the Easter holiday weekend. Some damage assessments to crops have been made but it is still too early to know the total amount of damage the crops suffered.

The North Carolina Climate office at the Albert Ellis Airport in Jacksonville recorded the following temperatures:

<table>
<thead>
<tr>
<th>Date</th>
<th>High (°F)</th>
<th>Low (°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thursday 4/5</td>
<td>75.2</td>
<td>37.4</td>
</tr>
<tr>
<td>Friday 4/6</td>
<td>57.2</td>
<td>33.8</td>
</tr>
<tr>
<td>Saturday 4/7</td>
<td>50</td>
<td>26.6</td>
</tr>
<tr>
<td>Sunday 4/8</td>
<td>57.2</td>
<td>21.2</td>
</tr>
<tr>
<td>Monday 4/9</td>
<td>55.4</td>
<td>28.4</td>
</tr>
<tr>
<td>Tuesday 4/10</td>
<td>66.2</td>
<td>28.4</td>
</tr>
<tr>
<td>Wednesday 4/11</td>
<td>64.4</td>
<td>42.8</td>
</tr>
</tbody>
</table>

Temperature fluctuations throughout the county were observed but these temperatures are used as a reference. As the table shows, temperatures dropped below 30°F for four nights in a row. These temperatures were low enough to cause substantial damage to a number of crops in our county. One factor that played in our favor was that it was very dry before the freeze. Drought stress reduces the water content of plants and therefore the "severity of freeze injury."

Corn
There were numerous acres of corn planted in Onslow County prior to the freeze, but much of it had yet to germinate. EARLY assessments of corn that had already germinated are favorable in terms of recovery. Ron Heiniger, NCSU Corn Specialist, suggests waiting 7 days after the freeze for accurate assessment. Attached
to this newsletter is *Assessing Freeze Damage to Corn* an article written by Heiniger to help growers assess damage and/or the need to replant.

**Wheat**

A large percentage of the wheat crop in Onslow County was in the boot or heading stage when the freeze hit. These stages of growth are more vulnerable to freeze damage than the younger stages of growth. According to the *Spring Freeze Injury To Kansas Wheat* publication, if the wheat is in the boot stage and is exposed to 28°F for two hours or longer the damage can be moderate to severe. Referring to the table above our temperatures stayed in this range for four nights in a row, which does not look very promising for our wheat yields. Although EARLY assessment showed very little freeze injury symptoms, Randy Weisz, NCSU Small Grains Specialist, emphasized that it is necessary to give the plants 10-14 days after freeze event before assessing damage.

**Wheat Damage Assessment**

Wheat should be scouted for initial damage 10-14 days after the freeze event. There are numerous symptoms to look for when checking for damage. Are the exposed heads white in appearance rather than being green? Are the heads emerging from the boot splitting out the side? Are these heads bent or twisted? In younger wheat, is the leaf emerging from the whorl yellow or necrotic? If you answered yes to any of these questions, some damage has occurred in your wheat. The extent of the damage will take more time to determine. Although you may have answered “no” to these questions, the anthers of the wheat should still be examined. Anthers are the male part of the wheat floret; they are normally tri-lobed, turgid and green in color when young. If freeze damage has occurred to these vital portions of the floret they will shrivel and turn white to whitish-brown in color. If so, wheat being self-pollinated, this floret will not set seed and therefore a reduction in yield.

**Early May Assessment**

Determine the average number of healthy heads per square foot. Rub heads between your fingers and determine how many kernels are forming in the heads. Determine the average number of kernels per head.
Apply these averages to the following chart.

A presentation will be held at the Onslow County Multipurpose Complex Building on June 4, 2007 at 6:30 p.m. Supper will be provided. Call Lynn at the Soil & Water Conservation office at 910-455-4472 ext.# 3 Reserve your seat by May 25, 2007.

Tray Bridgers Extension Agent Agriculture – Field Crops

Soybeans

Attached are the 2007 NCSU Soybean Suggested Plant Populations for May and June plantings.

Have you heard of a Voluntary Agricultural District?

What is Voluntary Agricultural District?

Encourages the preservation and protection of farmland from non-farm development.

Want to know how you can participate?