



Flood or Moisture Damage to Corn

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There has been substantial damage to the corn crop in many areas of the state due to flooding and constant rainfall. Following are a few observations and recommendations for corn producers who must deal with this natural disaster.

1. The substantial rainfall and/or flooding that resulted from the storm will cause further deterioration of the stalk and result in sprout and mold damage to the ear. Producers in this situation should consider harvesting the crop as soon as possible. Delays in harvest will contribute to further ear loss and deterioration to the point that there may not be much left worth harvesting. Sprout damaged corn is still worth harvesting. In fact, sprout damaged corn can have the same or higher field value as #2 yellow corn. However, dockage at the local mill due to damaged kernels can be severe. It is a different story with corn that has mold damage. Mold can result in mycotoxins that are harmful to livestock and humans. Corn with high mycotoxin levels cannot be sold and should not be harvested.
2. The first thing to do when considering what to do with damaged corn is to determine the type of damage. If the damage is primarily sprout damage, then it should be possible to harvest, dry, and store the grain. Check with the local mill to determine how much damage they will accept. If sprout damage is severe, but the corn is not moldy, then blending corn for livestock feed is possible. Unfortunately, severe sprout damage is often associated with mold damage. If the corn is moldy, conduct a thorough and intensive scouting program for aflatoxin and/or fumonisin. These fungi infect corn that has been subjected to drought stress or other damage during the growing season. Once the infection is established in the kernel, it flourishes in humid environments (85 to 95% relative humidity and temperature from 77 to 90 degrees F) infecting adjacent kernels. Since most of the non-irrigated corn in the southeast is subjected to some drought or insect stress aflatoxin is almost certainly present. In most years, this infection would be well below the permissible concentration of 20 parts per billion as established by the Food and Drug administration. However, the moist conditions associated with a hurricane and the condition of the crop will enhance the infection in the field. By scouting prior to harvest (which means taking a sample and having it analyzed at the NCDA lab or a grain handling facility equipped with the proper test kit), farmers can determine if they have a problem and make plans for handling grain affected by aflatoxin. The NCDA lab is now testing corn samples for aflatoxin for free. They require a 5 pound sample. These samples can be picked up a regional location (contact your local NCDA agronomist). It is no longer legal to blend corn that has aflatoxin concentrations greater than 20 ppb. In cases where concentrations of aflatoxin are measured over 20 ppb



the only option is to dispose of the grain as a toxic substance. Most often this means spreading it back on the field and incorporating it into the soil. Obviously, a producer would be better off not harvesting aflatoxin contaminated corn. This is where a good scouting program will pay off.

3. There are two things that should be done to minimize the losses that will occur from flood or water damage. First, do a thorough scouting to determine the damage to sprouting and or mold. If you find mold damage, have a sample analyzed as soon as possible to determine aflatoxin levels. If aflatoxin levels are low and sprouting damage is the only problem, plan to harvest the grain as soon as possible to minimize the ear loss that can occur as the combine tries to gather the stalks. Harvesting at 25+% moisture and drying to 15.5% moisture will reduce harvest losses considerably when compared to waiting until the corn dries down to 15.5%. This is probably the most important step that should be taken in salvaging this year's crop.

The Bottom Line:

SCOUT the fields for mold and plan to **HARVEST EARLY** and to deal with lodged stalks. Corn losses from ear drop and stalk lodging will be severe and, in some cases, there are no alternatives for salvaging the crop. Watch for aflatoxin problems. Contact your crop insurance agent about assessing your loss. **Take advantage of all the disaster relief available by documenting loss and obtaining independent assessments.**