

[Update provided by [Dr. Matt Poore](#), Department Extension Leader in Animal Science, NC State]

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Dealing with Pasture & Forage Issues During Recovery from Hurricane Matthew

A week after Hurricane Matthew water is still high in eastern NC with many fields flooded and farms inaccessible. Farmers are assessing damage to fields and property as the water recedes, and we are getting many questions about the likely impact on hay, pastures and cattle health. This information is intended to help extension agents answer questions they are getting from their farmers.

Hay

Pasture-based livestock producers need to assess and document loss of hay as soon as it is safe to do so. If a producer lost hay they should take photos of the bales (when bales are still on the property), or the place the bales were stored. Make sure to write down the number of bales, type and quality of hay, and the estimated weight (or the size i.e. 4 x 4, 4 x 5, etc.). Contact the FSA office and visit them with this information as soon as possible. Our understanding is that hay losses will be covered under the Emergency Assistance for Livestock, Honeybees, and Farm-Raised Fish Program (ELAP). This program will help pay producers for their hay losses. To be covered hay had to be baled, and the program will not cover hay that was cut and on the ground (not likely in this event due to the very wet conditions that preceded Matthew). Also, this program only covers hay purchased to feed or hay cut to feed. It does not cover hay that was cut to sell, so producers will likely need to document that they do own livestock and planned on feeding the hay that was lost.

After Hurricane Floyd in 1999 we went to the flood zone after the water receded to determine the impact on hay that had either been flooded (totally or partially submerged in water) or that had been on higher ground out of the flood, but still impacted by 10-15 inches of rain in a 24 hour period. Hay that had been flooded was found to be severely damaged with little usable forage remaining. The amount of rotted hay and mold in this flooded hay makes it of little value, and potentially a hazard to livestock. Hay that didn't go under flood waters was in remarkably good shape with only a couple of inches of damage to the outside of bales which was consistent with what you see in normal outside storage. Our best advice on flood hay is that if it was in at least 1 foot of water for one day then it is likely in very poor shape and should not be fed, but rather counted as a loss.

Due to this difference between hay that went under water and hay that was on high ground, it is critical that producers carefully document hay that was flooded, relative to hay that was simply heavily rained on. It would be good to have an extension agent or other official verify these losses in person, but given the number of producers impacted and difficulty traveling in the flood zone a producer affidavit with photos is the immediate need, but it is a good idea for producers to call their extension agent to tell them their situation and to get advice.

Hay that was flooded in storage barns should be removed as soon as possible because it will start to heat and spontaneous combustion is a real possibility. This hay could be used for erosion control or composted, but likely will have little usable feed value.

Pastures

Many pastures remain flooded and likely will be severely impacted. Again, based on our experience following Floyd we would expect bermudagrass and bahiagrass pastures to survive up to a week or more under flood waters, but fescue pastures likely will not survive more than a couple of days of submersion. Any winter annuals that were seeded also are unlikely to survive flooding. Due to the wet weather that preceded Matthew the final cutting of bermudagrass was still in the fields on many farms, and most producers had not planted their overseeded winter annuals. Once it is possible to get back into the fields it will be critical to remove the bermudagrass residue by cutting and baling, and then to get the winter annual drilled in. This is especially critical for producers who use winter annuals as part of their animal waste management plan. It is important to remove that residue so that the seeded annuals can emerge and grow without a lot of shading and competition for nutrients. Depending on the extent of damage it might be possible to graze off the residue, but producers should be aware that there will be issues with dirt and other contaminants that came with the flood on the standing forage, and livestock are unlikely to eat it. Setting cutters very low (1-2 inches) will be important because much of the existing vegetation will be lodged. If there is not a great amount of residue and it is very flat on the ground then drilling through the residue is possible.

In eastern North Carolina it is possible to establish winter annuals until mid-November, so producers are encouraged to plant so that grazing will be available early next spring. Because of the heavy leaching that has occurred it will require additional nitrogen application will be needed (about 50 lbs of N per acre is the maximum level this late in the growing season). The ELAP program will also cover losses to pasture, and our understanding that is up to 150 grazing days, but given that the water is receding it is not clear how that will be determined. We did not have this program during past floods, so we will be working with FSA to clarify the procedure for producers and get that information to you as soon as we have it. At a minimum, producers will already have to have reported their pasture acres to the FSA office, and will need to show on an aerial map where the flood waters reached, and some proof that livestock had to be removed.

Again, making notes on a map and keeping a log of the timeline of when flood waters receded and the days of grazing lost is important. If the last 30 days growth of bermudagrass was left in fields and is lost for grazing then you can estimate about 3000-4000 lbs of grazable material per acre and that would be about 100-150 grazing days per acre.

Alternative Feeds

We have had several questions about feeding alternatives given that most pasture is severely impacted and some producers also have no hay to feed. Cows can be fed on concentrates but need some forage or other fiber source to stay in good digestive health. Cows can be fed up to 15 lbs of whole shell corn or other concentrates, and about 2 lbs of a protein supplement along with 5 lbs of hay. Some producers have damaged swine or poultry feed they wish to give to

their livestock, but be aware **Swine and Poultry Feeds Should not be Fed to Grazing Livestock** unless the company manufacturing the feeds can attest that they do not contain ruminant meat and bone meal (for all species but horses), and that they don't contain any antibiotics or other drugs not approved for cattle or horses. Unfortunately most commercial poultry and swine feed will contain something that can't be fed to cattle, horses, sheep or goats.

Health of Grazing Livestock

It appears at this point that few cattle, horses, sheep and goats were lost as a direct result of the storm. However, chronic issues will be likely as the winter progresses. Following Floyd we documented in the weeks following the floods severe dermatitis in some animals, and these were thought to be due to contact with the flood waters, and potentially to the ingestion of poisonous plants. During the winter months we observed animals in poor body condition, animals that had very weak calves, and higher than normal sickness and death loss. These conditions can be blamed on chronic malnutrition during the aftermath of the storm. Once it is possible start feeding animals to regain the body condition they lost during the flood. Pregnant cows need a good supply of protein and energy for normal fetal development, so especially pay attention to them. Make sure that a good quality mineral supplement is being provided and that the cattle eating it. These are always our recommendations going into winter, but this year it will be especially important given the stress on the livestock.