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TIMELY INFORMATION
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Dealing with Pasture, Hay, Feed, and Animal Health Issues During Recovery from Hurricane Michael

As a result of Hurricane Michael, water is still high in Wiregrass Region of Alabama with many fields flooded and farms inaccessible. Farmers will be assessing damage to fields and property as the water recedes, and we are getting many questions about the likely impact on hay, pastures, feed and cattle health. This information is intended to help farmers impacted by the storm that experienced damage to their pasture-based production systems.

Livestock That Died As a Result of Hurricane Michael

- An unfortunate consequence of owning and raising livestock is the inevitable death of some animals, despite even the best animal husbandry and veterinary care. Animals may have died as a direct result of Hurricane Michael, or may have died following the storm as a result of injuries, illness, lack of adequate food and/or water, etc.
- Livestock owners and custodians must therefore understand methods of responsible carcass disposal to protect their herds from various infectious diseases, be good stewards of the environment, and promote a positive image for the livestock industry.
- Proper carcass disposal first and foremost ensures the safety of the herd by removing the source of a variety of infectious diseases, as well as protecting wildlife from the same diseases. Proper carcass disposal also helps to avoid environmental problems and the undesirable publicity the livestock industry receives when carcasses are found in inappropriate places such as creeks, ponds, and along the side of the road.
- Alabama law requires carcass disposal within 24 hours. Approved methods of carcass disposal include burial and burning, as well as disposing of the carcass in an approved landfill (contact your local landfill for more information). Burial is not an option for those locations in Alabama with a high water table. If an incinerator is used to burn mortalities, use one approved by the Alabama Department of Environmental Management Air Division.
- Four Alabama Department of Agriculture Veterinary Diagnostic Laboratories are also available to perform an examination into the cause of death (necropsy) and then dispose of the carcass. Contact information for the four Alabama Veterinary Diagnostic Laboratories is listed below. The Alabama Veterinary Diagnostic Laboratories should only be used when the cause of death needs to be determined.
- Alabama Department of Agriculture Veterinary Diagnostic Laboratories:
  Auburn (334) 844-4987
  Boaz (256) 593-2995

Elba (334) 897-6340
Hanceville (256) 352-8036

Damage to Hay

- Document all losses of hay as soon as it is safe to do so.
- Take photos of bales or the place where bales were stored prior to the storm.
- Write down the number of bales, type and quality of hay, and the estimated weight or size (i.e., 4 × 4, 4 × 5, etc.)..
- Contact the FSA office and visit them with this information as soon as possible.
- Eligible Hay losses with be covered under the Emergency Assistance for Livestock, Honeybees, and Farm-raised Fish Program (ELAP). More information can be found at www.fsa.usda.gov.
- To qualify for the program, hay had to be baled, and the program will not cover hay that was cut and on the ground.
- This program only covers hay purchased to feed or hay cut to feed. The program does not cover hay that was cut to sell.
- Document hay that was flooded vs. hay that was rained on.
- When possible, have an Extension agent or other official help you document your losses.
- Farmers need to file a 'notice of loss' to the FSA office within 30 days of the loss.

Feeding Damaged Hay

- Even if hay was not submerged in water, heavy rains will likely decrease quality of hay stored outside or on the ground.
- Hay that is submerged by as little as 1 ft, has little usable forage remaining.
- The amount of rotted hay, mold, and possible contaminants in flooded hay, make it of little value and potentially a hazard to livestock.
- Hay that has less than < 1 ft submersion, may still have some useable forage, but should be used with caution and should only be fed to cattle.
- For hay submerged < 1ft, feed the dry hay, but do not force the cattle to consume the wet and rotting portion of the bale.
- Hay that was flooded in storage barns should be removed as soon as possible
- This hay will begin to heat and spontaneous combustion is a possibility
- Hay that is not fit for livestock should be disposed of by burning or compositing.

Pastures

- Pastures that were flooded will likely be severely impacted.

- Bermudagrass and bahiagrass pasture are expected to survive up to a week or more under flood waters
- Winter annuals that were seeded before the hurricane are unlikely to survive flooding.
- Once it is possible to get back into the fields, it will be critical to remove the forage residue by cutting and baling, and drill the winter annuals for winter feed needs.
- It is important to remove excessive residual forage so that the seeded annuals can emerge and growth without a lot of shading and competition for nutrients.
- Depending on the damage, it might be possible to graze off the residue, but dirt and contaminants are common in flooded pastures making forage less palatable for grazing.
- If the existing forage is lodged, setting cutters very low (1-2 inches) will be important to ensure removal.
- In Southern Alabama, it is possible to establish winter annuals until mid-November, but this will reduce the possibility of fall and winter grazing.
- The ELAP program will also cover losses to pastures, but flooding will need to be documented.
- Use an aerial map to log the timeline of the flood and when waters recede, as well as the number of days of grazing lost.
- If the last 30 days of growth of bermudagrass was left in the fields and lost for grazing, you can estimate about 3,000 – 4,000 lbs of grazable material per acre, which is approximately 100-150 cow grazing days per acre.
- You Extension agent or other advisor can help you determine how many grazing days were lost.
- Grazing days are reimbursed at a rate of $0.94/day regardless of livestock species.

Physical Damage to Fences and Grazing Lands

- Removal of debris, repair of land, and repairs fences may be covered by the Emergence Conservation Program (ECP).
- This program is designed specifically for dealing with cleanup following a storm and repairing damage.
- A field inspection by FSA is recommend to determine eligibility for that program.
- It is critical that producers experiencing a loss take good pictures and document the number of feet/miles of fence that were lost.

Loss of Feedstuffs

- Feed that farmers had on hand (including commercial feed and harvested commodities) may be covered by the ELAP program. Farmers need to document the amount and type of feed that was damaged, and type of damage that occurred.

Using Alternative Feedstuffs

- Some producers may be faced with a situation where pasture is severely impacted, and/or there is little to no hay available 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. However, this process requires a transition period and acclimation to starchier-based feeds in the diet. Increase the amount of corn in the diet by 2 to 3 pounds every three days until the target level of supplementation is achieved.
- If trying to limit-feed hay, the hay should be put out in such a way that all animals can eat at the same time (by dispersing square-baled hay, or unrolling round bales.

Maintaining Health of Grazing Livestock

- Death loss as a result of the storm needs to be documented with photos and reported to FSA as part of an application to the Livestock Indemnity Program (LIP). This includes death losses directly related to the storm (e.g. a barn collapsing) or indirectly related (e.g. inadequate feed and/or water for days or weeks after the storm).
- Be aware that feeding levels for animals that have been short on feed for several days or a week need to be higher than normal maintenance rations usually fed this time of year. Animals that have lost significant body condition due to feed restriction will need to gain weight significantly and are likely to need supplemental concentrate in addition to good quality hay or pasture. 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 elevated level of stress on the livestock.
- Livestock will be vulnerable to a number of diseases following a flooding event including respiratory disease, clostridial diseases (like black leg), leptospirosis, and infections due to cuts and loss of integrity of skin and hooves as a result of prolonged exposure to standing water or wet conditions. These diseases may result from either increased environmental exposure to the pathogens in question, or due to comingling with other livestock that carry the diseases. Livestock on a good health program will have been vaccinated for most of these diseases, improving the outcome when they undergo stress and pathogen exposure.
- Animals impacted by the storm that have not been on a good health program (including vaccination for clostridial diseases, leptospirosis and respiratory diseases) should be vaccinated once they have been contained and have received adequate feed for several days.
- Developing a relationship with a local veterinarian is an incredibly important part of a livestock management program. If a producer does not enjoy that kind of relationship they are encouraged to identify a veterinarian and develop a proactive health program.

- Remember, maintaining an adequate nutritional plane of impacted animals is a key to development of a high level of immunity to disease when vaccines are administered.

For assistance with any of the mentioned programs, please contact your local Animal Science and Forage Extension agent. This information can be found at aces.edu or by contacting your local County Office.

Geneva County Extension Office:	334-684-2484
Henry County Extension Office:	334-585-6416
Dale County Extension Office:	334-774-2329
Houston County Extension Office:	334-794-4108

This article was adapted with permission from a previous article by Dr. Matt Poore, North Carolina State University.

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