

Department of Plant Sciences

PASTURE AND HAY CHALLENGES AFTER A HURRICANE

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In recent years, we've been talking more about changes in weather patterns, and weather experts have stressed the need to be ready for more frequent and extreme events. While we can't predict exactly how often or how severe these events will be, the truth is, we'll face them from time to time here in Tennessee — just as with Hurricane Helene in October 2024. The fact is, in a state with approximately 3.5 million acres of pastureland where producers manage more than 1.6 million cattle, a hurricane event can have a substantial impact on both state and national economies. In addition, forage is the most important feed source to Tennessee's livestock industry, which is a crucial player in the livestock industry in the country due to its important cow/calf operation.

Assessing Pastures After a Weather Event

As our livestock herd heavily depends on forages, maintaining safe pastures and hay is essential after a weather event. Start by walking through the fields to check for wind damage and remove any debris, like branches or trash, that could harm your animals. Every strange object needs to be removed. Make sure your pastures are clear before turning livestock in to graze. It can prevent animals from being hurt or ingesting materials such as plastic that may lead to death.

Hay Damage and Safety Concerns

Next, take a close look at your hay, especially if it got flooded. Even hay stored in barns or covered stacks can get damaged by floodwaters. Flooded hay tends to mold quickly, potentially leading to health problems for animals.



Figure 1. Hay exposed to harsh weather conditions, leading to mold and nutrient loss.

If your hay got wet, unstack it and let it dry. If it's been underwater for too long, it's probably not safe to feed — especially to pregnant or lactating animals, and definitely not to horses. If you see mold or rot, it's best to get rid of that hay. Use it for erosion control or compost, but don't risk your animal's health.

Efficient Hay Feeding in Times of Short Supply

After severe weather events, hay is often in short supply. When this situation occurs it's critical to make the most of what is available, even if the nutrient content of the hay is relatively low. Hay efficiency is more important than ever. When you unroll a bale in the pasture, you can lose over 25 percent of the original bale weight to waste (Ball et al., 2015). If unrolling hay is your only option, try to unroll just enough for the day to minimize waste. This strategy helps keep animals from trampling the hay and reduces losses.

If you have hay-feeding devices, now is the time to use them. Using a cone or ring can decrease feeding losses to below 7 percent. Hay trailers and cradles are also alternatives, with losses from 11 to 15 percent, which is still less than half of unrolling hay (Ball et al., 2015). Thus, these devices can drastically reduce waste and help stretch the hay supply as far as possible. In tough times like these, every bale counts, so it's important to focus on feeding efficiently.

Soil Testing After Heavy Rains

Once the pasture dries out, it's a good idea to take a soil test. Heavy rains and flooding can wash away nutrients, and a soil test will show if you need to adjust your fertilization plan. Remember, to get a good soil sample, take around 15 soil cores from a depth of 6 inches in a uniform area of the pasture. If your pasture is hilly, divide it into sections — hilltop, side slope, and bottom — and take separate samples from each area. This method will give you three different samples to submit for analysis. Nutrients are key for getting your forage growing again or reestablishing it if needed. Our Extension offices have soil probes available and can help you fill out the submission form if needed.

Addressing Soil Issues in Hilly Pastures

In hilly areas, it's a good idea to check the soil at the top of the hill because the rain likely washed it down to the bottom. This can leave rocky soil on top and muddy areas in the lower pastures. Trying to remove the mud from the lower areas probably won't be worth the cost. Also, you may not be able to use a drill on the rocky hilltop soil anymore, so broadcast seeding will likely be your best option.

Reseeding and Forage Planning

If you need to reseed, check the seeding dates in the Forage and Field Crop Seeding Guide for Tennessee (tiny.utk.edu/seedingguide). It will help you figure out the best time to plant, as well as seeding rate and depth. It is important because after a late fall hurricane, like Helene in October 2024, you might find that by the time you finish cleaning up and getting settled, the planting window has closed. If that happens, be even more careful with your remaining hay supply, as mentioned above, and use any moldy hay to cover bare ground. Just make sure to keep livestock off areas where the moldy hay has been unrolled while it decomposes.

Preparing for the Next Growing Season

After getting through the winter, planting spring oats and annual ryegrass between February 20 and April 1 is a good option to boost your spring and early summer forage supply. After that window, several summer annuals like crabgrass, sorghum, sudangrass, and their hybrids can be planted in the summer months. These are great alternatives to keep your forage going until the next cool-season forage planting window in the fall, when forages like tall fescue and orchardgrass can be re-established.

Utilize Extension Support for Specific Recommendations

By taking these steps — clearing your fields, checking your hay, using hay efficiently, and planning ahead — you can get through it and be ready for the next growing season. Be sure to utilize your local Extension agent for specific recommendations for your situation.

References:

- Ball, D.M.; Hoveland, C.S.; and Lacefield, G.D. (2015). *Southern Forages: Modern Concepts for Forage Crop Management* (5th ed.). International Plant Nutrition Institute, Atlanta, GA.
- Pedreira, B.C.; Harper, C.; Raper, T.; Sykes, V., and McNeal, J. (2024). *Forage and Field Crops Seeding Guide for Tennessee*. UT Extension Publication (PB 378 REV).



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