Recovery of Pastures After Floods

The Educated Horseman: Management Series

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Flood events are cause for concern for horse owners on many levels. Once you have addressed the health support your horse needs following a flood, the next concern you need to address is managing your pastures.

Major flood events will vary in the degree of impact on pastures. This will depend on how the flood proceeded across the land, the soil types involved, water table levels and a range of other factors. In general, warm-season perennial species grown for pasture in Louisiana are pretty tolerant of flooding conditions. Bermudagrass has been reported to survive after submersion of 55 days, while bahiagrass survived in a greenhouse trial after 84 days of submersion.

Water cover by itself is not the only determinant of degree of pasture damage. A combination of factors, including soil texture (drainage), speed of water flow, water quality and water depth, all contribute to varying levels of pasture damage. However, the longer the pasture is under water, the greater the potential for waterlogging damage. Light-textured soils that drain freely will allow a speedy pasture recovery. Heavy soils hold the water for a longer period after the flood has receded and extend the period of waterlogging. Providing the soil has not eroded, the quicker the water flow rates, the better the pasture recovery. The slower the water flows, the more sedimentation and the slower pasture recovery.

Moving water appears to provide more oxygen and is often at a lower temperature than stagnant or slow-moving water. Stagnant water can rapidly heat up and can cause scalding and rapid decay of the pasture plants. Pastures that have cool, highly turbid and constantly flowing water covering them for several days will often make a faster recovery than pastures with stagnant, warm, low-turbidity water covering them. Generally, the deeper the water over the pasture, the slower the flow rate and longer period of inundation. This means a greater chance of silt and mud deposition, which leads to a slower pasture recovery.

When floodwaters have receded, assess the damage and develop a plan for recovery. The biggest issue is that floodwater and silt can be a source of pathogens. Livestock producers are strongly encouraged to work closely with their local veterinarian when determining which vaccination and feeding protocols to use to protect animals for possible health issues associated with grazing flooded pastures. Floodwater and silt can also cause palatability issues with the forage grasses. **It is probably a good idea to clip the pasture to remove top growth and allow the plants to regrow.** Plants should not be clipped any lower than about 3 inches. Flooded plants may have weakened root systems and may be slow to recover. When grazing flooded pastures this fall, graze lightly and try to leave at least 3 inches of top growth heading into the winter.

Photo by Wendy Moody

Flooding may also have an impact on the fertility of the soil in the pasture, as some nutrients may have been leached. However, it is probably not advisable to apply fertilizer this fall because the growth of these warm-season pastures will slow between now and mid-October. Livestock producers should take soil samples of these affected pastures during the early spring months of 2018 and apply the recommended amounts of fertilizer. This should aid in the regrowth of these affected pastures as they begin to green up in April or May of 2018.

Another issue to be concerned about with flooding is the introduction of weeds to the pastures. Flooding can cause weed seeds to be transported from other areas and be deposited into pastures. Producers should monitor their pastures for weeds in 2018 and apply appropriate control measures when needed. Producers may want to contact their local extension agent for assistance with weed identification and control measures.

While many horse owners are concerned about hazardous waste, chemicals and other toxic compounds, floodwaters will generally dilute hazardous material to a tolerable level, and it is unlikely that the surviving forage will serve as a reservoir. However, it is advised to:

- Wait two to four weeks before allowing animals back onto a flooded pasture.
- Mow the surviving forage, leaving 3 inches of plant to regrow prior to grazing.

- Allow pasture to completely dry — this will prevent horses from drinking from pools of water that may contain residual levels of toxins.
- Provide clean drinking water.
- Check pastures for foreign objects, including fencing material, metal objects, chemical containers or anything else that a horse can injure itself on.
- Work with your veterinarian to determine proper pathogen and disease protection.
- In extreme cases of hazardous waste or chemical spills, horses should not be returned to that pasture until owners can be sure that there is no longer a health threat.

Unfortunately, there is no quick and easy fix to return pastures back to their original condition prior to the flood. However, with proper planning and attention to details, a safe environment can be created to serve your horse's forage needs. If you have any questions regarding safe grazing practices, please contact your local veterinarian or extension agent.

Photo by Wendy Moody

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