



Pasture Recovery After Drought

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Maintaining a healthy pasture can be challenging, even in years with average rainfall. Drought affected the southeastern US from July to December of 2016. Drought conditions can impact pasture productivity further into next season. Established summer pastures that were grazed for the majority of the summer can have moderate to severe degrees of damage. Lack of moisture in the fall along with cooler weather can impact plant growth and delay root development. Without the adequate root structure and architecture to store nutrient for the winter, spring growth can be affected. How pastures are utilized coming out of a drought is just as important or more critical as managing your pasture during the drought. Precipitation levels may have improved or reduced the drought threat, but plants require time to recover and be competitive. Moisture alone does not overcome drought stress and some strategies should be implemented to aid in the recovery process.

Assess Your Soil Fertility – Pastures are more productive with proper fertilization. It is a good time to soil test your permanent pastures (tall fescue, bahiagrass and bermudagrass) and hay fields. Follow the soil test recommendations to apply lime and other recommended nutrients. If the soil pH requires more than 1 ton of lime per acre (100% neutralizing value), then concentrate on liming the field first. Soil pH can impact root development and therefore, plant cannot take full advantage of the applied fertilizer. Low fertilizer uptake can translate in low fertilizer use efficiency. If nitrogen, phosphorus, and potassium are recommended, adjust the necessary rates to ensure utilization. It might be good to split the applications, especially with nitrogen and potassium to increase efficiency. Do not fertilizer blindly and assess the economic aspect of you nutrient management plan. Before applying any fertilizer to bahiagrass or bermudagrass this spring, it important that pasture has at least 80-90% green up. Fertilizer recommendation should focus on adding phosphorus if needed to stimulate root growth.



Tips for Maintaining a Healthy Pasture:



• Apply fertilizer when necessary

- Pay special attention to P fertility needs first to increase root growth of drought-damaged pastures



• Control weeds

- Use timely applications and the proper rate
- Follow label recommendations and pay attention to grazing and hay restrictions.
- Calibrate your sprayer!



• Do not graze or harvest too early.

- Allow rest periods for pasture recovery
- Graze at 8 to 10 inches, rest at 3 to 4 inches

Implement a Grazing Management Plan – Patience is the key to a successful pasture recovery following a drought period. It can be tempting to start grazing bahiagrass and bermudagrass as soon as replenished moisture and weather conditions start to green up your fields. Allowing unlimited access to your pastures in the spring before a stronger root system in developed can further weaken plants, delay forage production, and recovery. If the recovery period of a weakened plant is limited by overgrazing, a plant is forced to utilize more of its stored sugars to grow replacement leaves. This is especially true for warm-season perennial pastures such as bahiagrass and bermudagrass. Drought weakens plants and amplifies the effects of grazing, the key to managing your pastures is to limit the time that livestock spend on a specific field or paddock. We are accustomed to let the animal graze freely in pasture, but to allow plant recovery (Table 1) and root development, it is advised to limit grazing to three inches and let the pasture recover. Do allow the animals to graze the pasture until plants have reached an eight to ten inches height to increase plant vigor.

Develop a Weed Control Plan – After the drought, assess your pasture for damage and losses. Pastures are weak and less able to compete with vigorous weeds, especially annual weeds. It is also important to scout and identify weeds that might be toxic to livestock and you have not encountered in the past. Under drought conditions, weeds can become more opportunistic and competitive in your pasture, especially in bare spots. Start scouting your fields and identifying weeds to develop a

broad herbicide application plan that will be economic and effective. Some broadleaf weeds can be fast growing early in the spring and can shade your grasses and reduce production. It is very important to develop an aggressive weed control program to reduce competition for moisture and nutrients.

Do I need to Renovate?

– Do not rush to renovate your warm-season pastures. I would recommend to wait until green up to determine pasture loss and make a decision in renovating. This holds very well for bermudagrass because it can be fast spreading under good moisture conditions. If you examine a pasture as you have at least one viable plant per square foot, then the pasture should recover and you might divert your efforts to nutrient and grazing management strategies. Depending on the stand impact caused by drought, some pastures can benefit from overseeding bare areas with a legume if soil pH and fertility is not limited. Pastures with less than 30% stand loss (slightly damaged) should recover quickly with strategic fertility, weed control and grazing management. Stands with 30 to 60% stand loss (moderately damaged) should achieve full recover with proper reseeding, fertility, weed control and grazing management after several months. Stands with more than 60% stand loss (severely damaged) might require renovation or long rest periods (9 months to a year under favorable weather conditions) for adequate recovery. This means an increase in seed cost and also taken the land out of production until the new stand is fully established.

Table 1. Optimal Rest Period for Different Forage Species.

Forage Species	Weather Conditions	
	Cool	Hot
	----- days -----	
Cool-season grasses Annual ryegrass, small grains, tall fescue	10-14	35-50
Warm-season grasses Bahia grass, bermudagrass, dallisgrass	35-40	14-21
Legumes Alfalfa, clovers	21-28	30-40

In summary, pasture recovery following a drought can be difficult to predict. Carefully identify plants and make sure they are truly forages and not weeds. Grazing too soon on drought-weakened pastures can cause plants to further decline, prolong recovery time or even lose the stand. Some pastures will recover with rest, restricted grazing, and appropriate fertilization. Other pastures may require complete renovation to be productive again. Resist the temptation of applying anything without knowing what is needed. The best approach at managing pastures after a drought is to treat them as new established pastures with fertility based on soil test recommendations, an aggressive weed control program and a rotational grazing management approach.

Upcoming Events

- April 4, 2017—Cool-season Forage Tour, Starkville, MS
- April 21, 2017—Beef Boot Camp, Starkville, MS
- April 28, 2017—Pearl River Co. Forage Field Day, Poplarville, MS
- April 29, 2017—Beef Unit Field Day, Starkville, MS
- May 4, 2017—Coastal Plain Exp. Station Forage Production Field Day, Newton, MS
- May 11, 2017—Hinds Co. Forage Field Day, Utica, MS

For upcoming forage related events visit: <http://forages.pss.msstate.edu/events.html>

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