Forage News

MISSISSIPPI STATE UNIVERSITY EXTENSION
Center for Forage Management and Environmental Stewardship

Drought Impact in Forage Production

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Lack of moisture can impact forage establishment, especially with annual ryegrass and clovers.
Winter grazing pastures are usually planted in south Mississippi by September 15th and by October 15 in the northern part of the state. This might not be the case this fall since Mississippi have been extensively impacted by drought conditions for the last 60 days, causing issues with establishment due to poor germination. Currently, only 35% of the estimated acreage for winter grazing has been planted. Due to the lack of rain, using a combination of small grains, annual ryegrass and clovers could help increase the forage potential. Small grains tend to have better drought tolerance during establishment. It is advised to plant in a prepared seed bed instead of sod seeding to speed up establishment and minimizing delay in grazing opportunities. To speed up the establishment of winter grasses, producers will be tempted to apply the fertilizer (especially nitrogen) along with the seed. It is recommended to wait until the seed has germinated and they are about two to three inches before applying nitrogen granted there is enough moisture to increase the opportunity for better use efficiency by the new seedlings. A nitrogen rate of 30 to 40 units of nitrogen (e.g. 65 to 90 lbs of urea or 90 to 120 lbs of urea ammonium sulfate) should be sufficient for the first two grazing cycles and repeat fertilization to increase forage production into the spring.

Figure 1. Selecting crops that can have strong seed vigor during drought conditions are important to ensure better establishment and recovery.

It is also time for producers to evaluate their hay inventory and make sure that there is plenty of hay available in case the winter grazing capacity of the pastures is limited. Two things are needed: (1) test your hay to ensure that the hay is meeting the nutritional needs of the cow and minimize the cost of developing rations. (2) Develop a hay inventory to ensure that enough hay is available. Let's assume that a cow will consume 3% of its body weight (include storage and feeding waste) and there is a hay need for 120 days of feeding. Then a 1,100 lb-cow is going to consume 3,960 lbs of hay (1.98 tons). If you take into consideration the cost of hay at $80.00 per ton, this will cost $158.40 per cow. This is purely based on hay usage and not in quality, which can increase the cost if extensive supplementation is needed when hay is

not meeting the nutrient requirements. Keep in mind that the amount and type of by-products needed for developing a ration can be affected by hay quality, cow weight, calving season, reproductive stage and climatic factors. Contact your animal nutritionist to develop a ration that will best fit the need of your livestock.

Under drought conditions, common poisonous plants can become a greater problem after or during an extended drought. Although the poisonous plants might not increase in density, they have tendency to maintain productivity and be selected by the livestock due to higher sugar levels and quality than dead or dormant grass. One reason for increased toxicity problems is that there is less (if any) residual carry-over forage to buffer the toxins. It is important to scout your pastures and shaded areas for poisonous plants that can have favorable environmental conditions to allow them to grow and reproduce.

Figure 2. Forage that can impact animal health due to toxins, prussic acid accumulation or low quality and high ash content: (a) perilla mint, (b) Johnsongrass, (c) sorghum/sudangrass, (d) corn regrowth, and (e) annual peanut residue.

Some producers might consider grazing alternative crops such as Johnsongrass, corn, sorghum and sudangrass. Under drought conditions, these forage crops can accumulate toxic nitrate levels. When grazing or making hay from these forages, it is important to test your hay for nitrate levels and adjust feeding recommendations as appropriate. These forages can also accumulate prussic acid after frost stress. Grazing should be avoided at least 7 to 10 days after a severe frost. It is important to note that while prussic acid can dissipate from the tissues, nitrate will remain in the tissue. A reason why a test must be performed before feeding under these adverse conditions. Other producers have been contemplating the use of annual peanut hay as a feed alternative. Peanut hay contains a lot of junk, pesticide residues, and could be low in quality. Forage quality is affected due to the loss of leaves, leaving vines that are high in fiber and lignin content. The protein content of peanut hay could range from fair to good, but the energy content is very low. An important point is that certain chemicals (herbicides and pesticides) are not labeled for the feeding of crop residue to livestock. Asked what herbicides were used and read the label to determine their limitation to feeding livestock.

Forage and livestock producers in central and north Mississippi Counties may qualify for the Noninsured Crop Disaster Assistance Program (NAP) due to extreme drought conditions, which is based on the U.S. Drought Monitor. This program is intended for livestock producers that own or lease grazing land. Eligible producers are encouraged to visit their local Farm Service Agency (FSA) for additional information.

Upcoming Events
October 27, 2016—Cattlemen College, Hattiesburg, MS
October 28, 2016—Cattlemen College, Batesville, MS
For detailed information related to upcoming forage events please visit:
http://forages.pss.msstate.edu/events.html

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