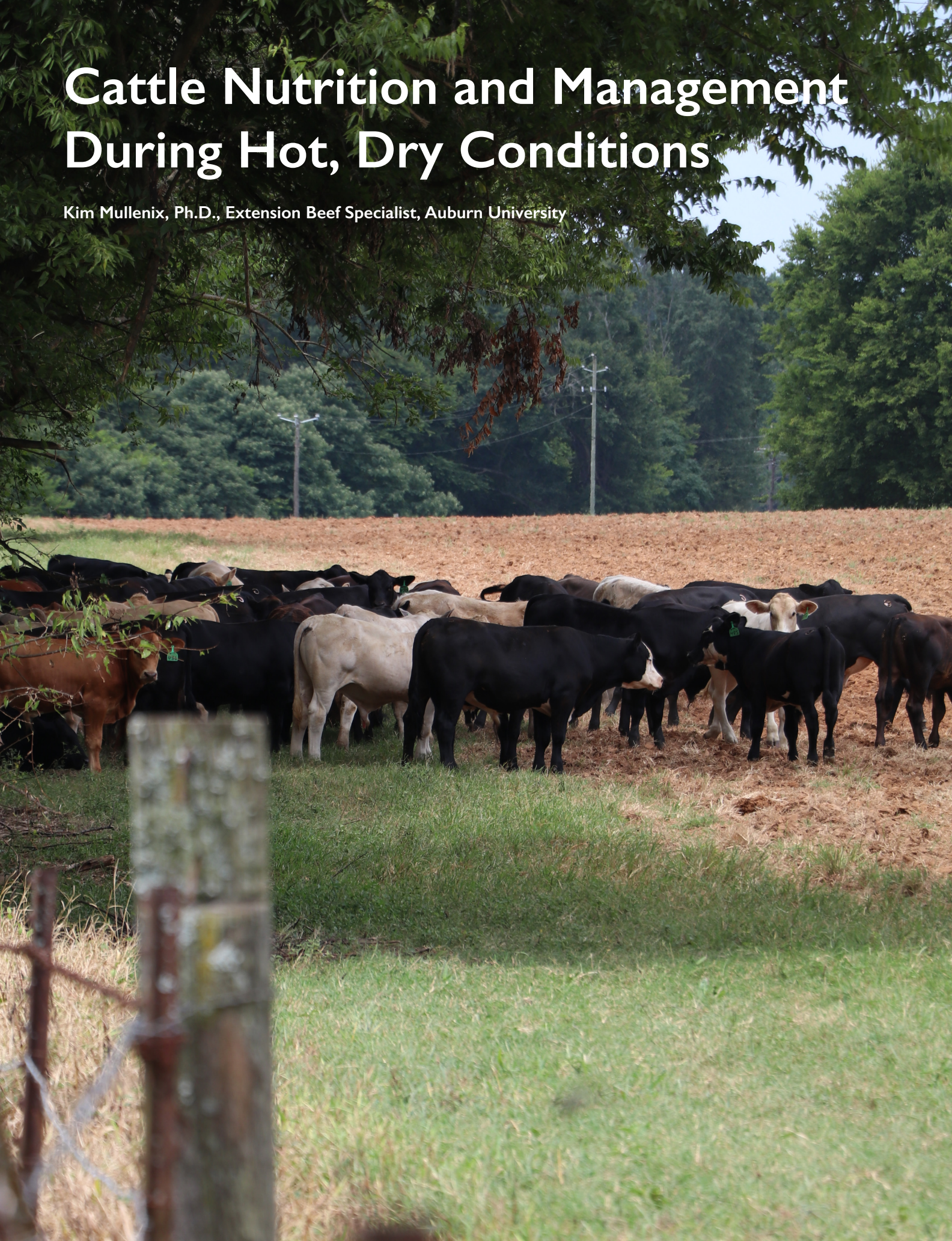


Cattle Nutrition and Management During Hot, Dry Conditions

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Hot, dry weather can bring its own set of challenges to cattle producers, which often includes heat stress and limited forage conditions. Below are some tips for ensuring we meet cattle nutritional demands during these times:

Meeting Daily Dry Matter Intake Needs

Cattle consume between 2 to 3% of their body weight per day in dry matter on a daily basis. As an example, a mature cow weighing 1,300 pounds will eat about 25 to 30 pounds of dry matter per day. This is the amount of forage intake per day without any water associated with it (i.e. if the forage was 100% dry). In grazed pastures, forages in Alabama often contain 50 to 80% water. When we account for the moisture in our forages, this may be more like 80 to 100 pounds of forage being consumed per head per day. The rumen of a mature cow is roughly the size of a 40-gallon drum. Imagine the amount of forage and water that goes through this “drum” per day to help meet nutritional demands. This is a good visual for us during dry periods, where forage resources may be more limited. Take a good, hard look at pastures to ensure that there is adequate forage available to meet their dry matter needs. If pastures are short, provide an alternative forage source. Think about the phrase “if it’s just a haze, don’t graze”. In other words, if there is minimal forage, it is better to allow pastures to rest and be able to rapidly recover when rains come rather than grazing the small amount present.

Think about Stocking Rates

The number of animals per unit land area influences forage availability and quality for grazing. A good rule of thumb is two to three acres of forage per cow-calf pair. This is a “rule of thumb” because when pastures are very productive, we may be able to increase our stocking density to use excess forage. However, in dry conditions, we need greater land area to meet cattle needs due to lower forage availability. You might think that this much acreage per cow-calf pair is a lot for your operation, but when we account for weed pressure, trampling, etc., the land area needed to provide adequate forage dry matter starts to add up. A heavy stocking rate on pastures with limited forage availability can further stress forage trying to grow during dry conditions, and hurt forage persistence over time.

Make Sure Cattle Have Access to A Reliable Water Source

While this may seem like common sense, ensuring that cattle have a consistent water supply is especially important during hot, dry conditions. A general rule of thumb is that beef cattle need two gallons of water per 100 pounds of body weight each day. This amount may increase or

decrease depending on:

- Weight and Age
 - o As calves grow and reach maturity, there is as much as a two-fold increase in their daily water requirements (see Table 1).
- Stage of Production
 - o A cow that is lactating will consume more water per day in order to support milk production for the calf. A dry, pregnant cow or a cow preparing to wean a calf may begin to decrease their consumption of water over time.
- Temperature
 - o Water requirements increase as temperatures increase throughout the summer. Cattle may drink less water during the winter months. Cattle prefer water between 40- and 65-degrees F. They will reduce consumption of water warmer than 80 degrees F. The table below shows how animal needs may change based on these conditions.

Table 1. Daily water requirements for various classes of livestock based on air temperature conditions.

Size class	Daily Water Needs† Gallons/head	
	50°F	90°F
400 lb calf	4	10
1,000 lb steer	8	17
Mature cow (1,000 lb)	8	20

†Source: Nutrient Requirements of Beef Cattle (2016)

Shade Can Reduce Heat Stress

Adequate shade is important in grazing systems, especially during the summer months. Cattle prefer natural shade rather than constructed structures. Trees help reduce the solar radiation load and moisture evaporating from leaves can help cool surroundings. Rotating cattle through naturally shaded pastures can help reduce heat stress. Silvopasture is a type of agroforestry that involves integrating trees and grazing livestock on the same land to create a managed woodland. This can help more strategically distribute trees on the landscape and provide greater uniformity in shade, but takes time and intention. Over the last decade, there has been an increased interest in portable shade structures. Portable structures can be built or purchased from many different companies. These structures are useful tools for manipulating grazing management. The table below provides some information on suggested shade requirements for cattle using a structure (Table 2):

Table 2. Shade requirements for cattle when using a shade structure.

Animal Type	Space Requirement (square feet/head)
400-pound calves	15-20
800-pound calves	20-25
Mature cows	30-40

†Modified from Higgins et al. (2024)

Continued

Reducing Animal Stress

Strategies for reducing stress during hot, dry periods can help cattle maintain body weight and health status. Handle cattle early in the morning if you need to move them to a new location. Handling cattle increases body temperature of calves by about 3°F. If moving cattle to new pastures, consider moving them in the morning or evening time as the day begins to cool down. Cattle often graze the most during the early morning and at dusk, which provides an opportunity for them to eat forages high in water content, and help meet their nutritional demands.

Summary

During hot, dry conditions, ensure cattle nutritional needs are being met through adequate forage and water intake. Reducing stress in cattle during hot weather is important from a maintenance standpoint, and helps them better withstand environmental conditions.

For more information on beef cattle management or drought, visit the following resources:

Alabama Drought Reach Program



Or visit

www.alabamabeefsystems.com



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