



Drought and Heat Stress Go Hand in Hand

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The weather conditions that result in drought also adversely affect your livestock. Heat stress is a major problem for cattle that results in lost production and efficiency. This article will explore some of the negative effects of heat stress on cattle and what you can do to help alleviate them.

What is Heat Stress?

Simplistically, heat stress describes a situation of when the body is unable to properly cool itself. As a rule, cattle don't handle heat as well as humans. They are uncomfortable even on days we consider moderate. Just think of those 90° days when we're sitting in air conditioning and our cattle are left to their own devices out in the pastures!

What Does Heat Stress do to Cattle?

One of the first symptoms is reduced feed intake. Cattle spend less time grazing and more time in ponds or in the shade. They tend to suspend grazing until the cooler parts of the day. Add to that the fact that drought-stressed forages are low in nutrient quality and often less digestible, and you can quickly see that cattle don't get their nutrient needs met by pastures under these conditions. As the cow's body temperature rises, she eventually starts using energy to keep herself cool, thereby reducing productivity even more. Under these conditions, cattle start to lose body condition. In previous articles, I've discussed the importance of maintaining cow body condition in order to maintain fertility rates and weaning weights so I won't cover that today.

Heat stress also negatively affects immune function. While the exact relationship between heat and immunity is unknown, we can infer that since a major portion of the animal's maintenance energy is going toward cooling the body that needs for immunity may not be met. It is known that stress response in general depletes essential minerals such as copper and zinc. Copper and zinc are essential for immune function.

Which Animals are Most Susceptible?

Cattle differ in their susceptibility to heat stress. The animals at highest risk include:

- Newly purchased cattle, especially those that have undergone weaning, processing or transportation stresses. Cattle recently transported from cooler climates will be especially hard hit.
- Cattle grazing infected fescue pastures
- Over-conditioned or under-conditioned cattle (BSC over 7 or under 4)
- Heavy bred cows that will calve during summer months

Symptoms of Heat Stress

Cattle producers need to be observant of their cattle taking into account the environmental factors of temperature and humidity to help determine early signs of heat stress. Some symptoms include:

- Decreased feed intake (this includes mineral and supplement intake also)
- Restlessness and lethargic behavior
- Crowding under shade, in ponds, at watering tanks, etc.
- Open-mouthed breathing (panting) and increased salivation

Management Steps to Reduce Heat Stress

1. The most important thing you can do is provide adequate amounts of cool, fresh water at all times. A cow's water intake increases dramatically during hot weather, especially if she is lactating. A non-lactating 1000-lb cow needs over 20 gallons of water per hour during temperatures over 80° F. During drought conditions, ponds and creeks normally used as water sources may dry up or stagnant. Be sure to have back-up water sources under these conditions.

2. The ability to get into the shade during the hottest times of day is critical to maintaining adequate feed intake. To be most effective, shade should be available during the hottest portions of the day. If natural shade from trees is not available, it pays to construct artificial shade. There are many designs available from a variety of materials.

3. Avoid handling cattle at all, especially those at high risk for heat stress. If it is absolutely necessary to process cattle, do so early in the morning during the coolest period of the day. Holding and processing areas used during summer months should have shade available.

4. Because heat stress reduces overall feed intake, it is important to provide supplementation to help bridge the gap between drought-stricken forages and animal needs. Because intake is reduced, it will be necessary to provide a more concentrated ration. See your local Sweetlix® dealer for feed ration options.

Placement of feed supplements is critical in trying to maintain intake. Be sure to place mineral feeders, blocks, tubs, bunks, etc. in or near shady areas to help encourage intake. It is especially helpful to place mineral supplements near water sources during drought conditions to encourage consumption. It may be necessary to switch to formulations containing lower salt content during periods of extreme drought to maintain intake of essential minerals and vitamins needed during heat stress.

Summary

In summary, cattle are susceptible to heat stress during drought conditions. Heat stress reduces feed intake and thus, productivity. Cattle need adequate water and shade to help cool themselves. Avoid unnecessary handling stress, especially in high risk cattle. Because grazing time is reduced as well as forage quality, it often pays to provide supplementation to help bridge this nutritional gap. Minerals are also important to help cattle recover from stress. It is important to offer mineral and feed supplements in shady areas, near water to encourage proper intake.

For information about the Sweetlix® supplement products that will best fit your specific situation, visit your local Sweetlix® dealer, go online at www.sweetlix.com or call 1-87SWEETLIX.

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Figure 1. Stresses induced by drought and heat can negatively affect cattle performance.