Monitor Heat Stress this Summer  
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Summertime heat can be hard on livestock, especially in combination with high humidity. As temperatures heat up, cattle producers need to assess the heat stress their cattle are under. Typically pastured cattle are not as susceptible to heat stress as feedlot cattle. Pastured cattle have the ability to seek shade, water and air movement to cool themselves.

Cattle do not sweat effectively and rely on respiration to cool themselves. A compounding factor on top of climatic conditions is the fermentation process within the rumen generates additional heat that cattle need to dissipate. Cattle accumulate a heat load during the day and dissipate heat at night when it is cooler. During extreme weather conditions with insufficient environmental cooling at night cattle will accumulate heat that they cannot disperse.

**Managing Heat Stress**

Cattle should not be worked during times of extreme heat and only early in the morning. Cattle should not wait in processing areas longer than 30 minutes. Do not work cattle in the evening even if it has cooled off a little. Cattle’s core temperature peaks 2 hours after peak environmental temperature. It also takes at least 6 hours for cattle to dissipate their heat load. Therefore, if peak temperature occurred at 4:00 pm cattle will not have recovered from that heat load until after 12:00 am and it will be later than that before cattle have fully recovered from the entire days heat load.

Shade can be effective in confined areas but there needs to be 20 to 40 square feet of shade per animal. The height of the shade structure should be greater than 12 feet tall to allow sufficient air movement under the shade. Increasing the air flow can help cattle cope with extreme heat events. Although we cannot influence wind speed, producers can increase the ability for cattle to be exposed to air movement.

**Water is Critical**

The water requirements of cattle increase during heat stress. Cattle lose water from increased respiration and perspiration. Additionally, consumption of water is the quickest method for cattle to reduce their core body temperature. Therefore, water consumption will be greater than typical metabolic requirements. Rule of thumb is that cattle need 3 inches of linear water space per head during the summer. Extra water tanks should be introduced prior to extreme heat events so that cattle become accustomed to them. The water supply should be able to deliver 1.5% of body weight of the cattle per hour.
All livestock tanks should be checked and cleaned regularly to encourage cattle to consume adequate water. Bleach cleaning is not recommended, preserving a portion of the thin algae biofilm lining the tank may reduce some pathogens that will naturally occur in livestock tanks. If the water does not look and smell clean the water trough should be cleaned.

Increased water consumption will increase excretion of urine. This will also increase the loss of certain minerals, such as sodium, potassium, and magnesium. Free choice trace mineral salt should be provided. Producers should also control biting flies which will cause cattle to bunch up and decreases cooling.

### Heat Stress

During times of extreme heat, producers may observe an initial drop off in feed intake and cattle becoming restless. As the duration of the heat stress increases, cattle will begin to slobber and respiration rates will increase. Often cattle will stand instead of lying down and eventually begin to group together. When cattle show signs of severe heat stress such as continuous, open-mouthed panting with a labored effort, get these cattle to a shaded area, and cool them with a hose, including their head and body. Supply either a stream of water or large droplets which will penetrate through the hair coat to the skin to provide evaporative cooling.

(Source: Dr. Grant Dewell, Iowa State University Extension)