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Water Wise

As we enter the summer season and think about water, the first thing that might come to mind is splashing in the pool. For the livestock producer, there is no more important nutrient to keep in constant supply than water. Summer weather with increased heat and humidity creates an increased demand for water. Today we will look at ways to be waterwise with livestock.

Water is a vital nutrient needed to sustain all forms of life. Livestock use water in the body for growth, reproduction, lactation, and regulation of body temperature, along with many other processes. Without adequate supplies of water, these functions slow down or perhaps stop, causing reductions in performance or possibly even death. Given the importance of water to the body, it is necessary to understand the factors that influence water intake.

Water consumption varies amongst animal species and within animals of a species, given age, stage of production and other biological factors. Recently, technology has been developed to collect information on water intake on an individual animal basis and has proven extremely useful. These developments in technology have allowed researchers to study water intake patterns and amounts.

Researchers are working to develop equations to predict water intake in beef cattle. These equations utilize predictors, including weather, feed intake, and growth parameters to estimate water intake. While equations are not exact, they supply important insight into estimated water intake levels. These estimations can be used to ensure adequate supply is met for cattle.

Water intake levels can be influenced by environmental conditions, such as weather. While weather's impact on water intake is more often considered during the warmer summer months, it is important to recognize that weather plays a vital role in animal behavior during the colder winter months as well.

During periods of hot temperatures, water intake increases to aid in cooling the body and to replenish water loss due to sweating, respiration, and urination. In contrast, wintry weather causes an increase in feed intake, as animals look to maintain internal body temperature. Therefore, water supply should never be restricted no matter what the weather conditions are at hand.

The rule-of-thumb for beef cattle is that non-lactating females and bulls require one gallon of water per 100 pounds of body weight. In a lactating female, the requirement is increased to two gallons per 100 pounds of body weight. These requirements are estimations, and animals can drink above or below this amount given the environmental conditions they are facing. Space at a water source and water flow should also be accounted for, based on expected weather conditions. Typically, 1.5 inches of waterer space per animal is sufficient, however, a general guideline is that cattle require three linear inches of water space per animal during the summer months.

An abundant, clean, fresh water supply is an essential part of a beef cattle production system. Considerable work has been conducted to determine water intake and factors influencing water consumption for dairy cows, growing cattle, and finishing cattle; however, relatively little research has been published to provide estimates for water consumption of beef cows. To address this, the Kansas State University publication ["Estimating Water Requirements for Mature Beef Cows" MF3303](#) was developed in collaboration with Oklahoma State University and provides some useful information for the cow-calf producer.