K-STATE Research and Extension | Wildcat District

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Livestock Water and Shade Requirements

What offers refreshment on a hot summer day? Cool water? Resting in the shade? It just so happens that these also provide comfort to livestock! With the recent heat wave in Southeast Kansas, livestock producers should monitor their animals for signs of heat stress and plan their chores according to the animal's comfort.

The signs of heat stress can be obvious. Across the board, nearly all farm animals will pant and breathe heavily. However, some species, like sheep and goats, are more tolerant of heat than other species, think cattle or hogs. Regardless of species, decreased appetite and increased body temperatures can lead to some very serious problems. Interestingly, sweat glands are not all that common with livestock; cattle only sweat on their nose, pigs don't produce sweat at all, but horses are efficient sweaters.

A 1200 lb. cow, nursing a calf, will drink 15 to 25 gallons of water daily, and more in extreme conditions. Growing calves and yearling cattle will need 5 to 12 gallons a day, depending on their size. Mature sheep and goats drink 2 or 3 gallons a day. Hogs consume around a half gallon, up to about 6 gallons. Horses will drink 5 to 15 gallons a day. These amounts are important when choosing a watering system. At a minimum, the water trough should be large enough to supply half of the expected daily needs at one time. But, in an ideal situation, the trough will supply enough water for 2 or 3 days in one filling. This larger amount will provide a cushion against a disaster. Also, be sure the supply is sufficient to fill the tank in a timely manner. If lower ranked animals in the pecking order show up to an empty tank, they will leave without consuming enough, or possibly any, water. Clean water makes a huge difference in consumption and performance.

Researchers have compared natural shade to artificial, compared no shade to natural and artificial. They've looked at growth performance and conception rates. Studies have been conducted throughout the US and in many other countries. Results vary, but I infer that stressed animals need shade. Livestock can become acclimated over time to an environment.

Animals will benefit from producers doing certain chores during cooler temperatures. For example, if you are planning to haul a load of calves in an enclosed trailer, those animals will arrive at their destination under less stress through early morning hours compared to the sunny high temperatures of afternoon. Or, during a weaning event, monitor forecasts for the coolest temperatures of the day, and plan to separate pairs at that time. Often newly weaned animals will be more active right after the weaning event. Provide plenty of shade and clean water for animals under stress.

How much shade is needed? Research in Kentucky looked into space requirements for cattle. For yearling calves, allow 15 to 20 square feet per head. 800 pounders and larger feeder cattle need 20 to 25 square feet and mature cows should have 30 to 40 square feet. Ample space is needed, otherwise, livestock will crowd under the shade and air movement will be restricted.

Shades vary from simple and inexpensive to complex and pricey. Nature's permanent shades are trees, arguably the best option for air circulation. There are portable shades available commercially that can be moved around a pasture. Artificial shades can be rigged up from any about material, just some ingenuity is required.

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