Water Needs for the Dairy Herd



College of Agriculture, Food and Environment Cooperative Extension Service

By: Hannah Himmelmann and Donna M. Amaral-Phillips, PhD

Most people know that water is required for survival. What people tend to forget is just how important water is. In fact, water is the most important nutrient for the milking dairy cow. Water intake is critical in order to obtain maximum production from dairy cows. Without proper water intake, productivity will decrease, which can lead to economic loss.

Water Amount

The amount of water dairy cows consume is vital. Cows should consume between 30 and 50 gallons per day. This is over 415 pounds of water per day. Why do they need this much water? It takes between 4 and 4.5 pounds of water to produce 1 pound of milk. Milk consists of 87% water. Insufficient water intake will result in decreased milk yield. Dairy cows rely on saliva and other fluids to assist in the digestion of feedstuffs. This increased need for saliva requires water. If water intake decreases, the digestion of the feed decreases. A decrease in water intake results in decreased feed intake. Decreased feed intake can have detrimental effects on dairy cows. Cows get their energy from feed which is needed for producing milk.

Managing the Dairy Herd's Water Supply

Managing water on a per cow basis in a dairy herd can be quite difficult. For this reason, it is best to make decisions that will benefit the herd as a whole. Cows must have access to water when they are in the barn. The water trough should be centrally located or located where all cows in a group can access it easily. Placing the water trough close to the feed bunk allows cows to drink after eating. Cows tend to drink the most after eating and being milked. There also should be plenty of space for multiple cows to drink at once. Each cow should have 3 to 5 inches of water space available to them. The height of the trough should be 2 to 3 feet. The fill rate of the waterer should be a little over 2.5 gallons per minute. If the herd is split into multiple groups, each group should contain its own water trough. One water trough should be present for every 20 cows. The number of cows in the barn will determine the number of waterers needed. The water trough also needs to hold no less than 5 gallons at a time. The trough that holds the water should be clean and provide fresh water at all times. An automatic waterer ensures cows will have the correct amount of water offered to them at all times. However, automatic waterers and float valves still must be cleaned at least once a week.

In conclusion, water is the most important nutrient a dairy cow receives. In order to achieve maximum productivity, cows need to obtain the required amount of water each day. While it is hard to manage water intake per cow, managing the entire herd's water intake is simple and effective.

Educational programs of Kentucky Cooperative Extension serve all people regardless of race, color, age, sex, religion, disability, or national origin.