

Some practical considerations to remember about drinking water for dairy animals

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Of all farm animals, lactating cows require the greatest amount of water in proportion to their size, primarily because of the volume of water secreted in their milk. For big cows, during summer time water consumption can be more than 40 gallons/cow/day (151.4 L). Today, without question water is considered the most essential nutrient for lactating dairy animals. However, water of acceptable quality is a scarce commodity in many areas of the country and the world. According to Dr. David Beede in USA (Western Dairy Management Conference, Reno Nevada, 2005), the availability of abundant, clean drinking water may become a challenge in the future as dairy farms are pushed farther and farther from population centers and relocate. Some of the most practical recommendations which Dr. Beede has indicated in his Conference are:

1. Provide 1 to 2 ft of linear trough space per cow in return alleys or breezeways from the milking parlor. Cows consume 50-60% of the total daily water intake immediately after milking. Use warm water from the heat exchange unit. Cows prefer to drink warm water, even in environments with warm ambient temperatures, if the supply is insufficient another water source to supplement the water cooler will be required.

2. Provide a minimum of two water sources per group in areas where cows are housed. Cows should never have to walk more than 50 ft to get a drink of water. Place water sources in close proximity to the feed bunk and protected from the sun. Provide sufficient space to cows for maneuver around the water trough, in some existing facilities removing a couple of free stall spaces might be necessary.

3. Cleanliness is crucial! A good rule of thumb is: "Base on appearance of water in the trough, would you be willing to cup your hands and take a drink"? If not, the water is not clean enough for your cows. Cleaning water sources daily is very important, so not to limit water intake. Tanks or troughs should be drained or dumped easily to make the cleaning process quicker and more effective.

4. Be certain that the water filling capacity of the system is sufficient, so the cows never have to wait for water to be available. If cows ever have to wait for water, changes are needed immediately!

5. Use troughs or tanks that provide a filled water depth of only 6 to 12 inches. The advantages of these are: a) prevent stagnant water, b) they are easier to clean, and c) they fill rapidly assuming proper flow rates.

6. Use of water cups or small receptacles (12 inches diameter) is discouraged strongly for groups of cows. In tie-stall barns, one cup for each cow will ensure to meet her drink water needs. But, two cows sharing on water cup will result in a submissive cow not receiving the amount of water to maximize her performance potential.

7. Head clearance around water trough should be at least 2 ft., less than that may impede optimal water consumption.

Finally, a recent survey carried out in Merced County indicates that almost 40% of the dairy farms have medium to high concentration of salts in the drinking water for animals, mainly sodium and chloride. High producing dairy cows can consume almost 30% of their sodium and chloride requirements in the drinking water. In some situations high amounts of salts are excreted in urine, which can affect the soil quality by a slow salinisation process, which may affect crops production in the near future. Salinisation is the build-up of salt within the soil, and it is one of the greatest environmental threats facing many dairies today.

It is highly recommended that: a) assess water quality by a complete analysis, b) talk to your nutritionist and include minerals in the water on the total mineral dietary balance, and c) if you have high concentration of salts in the water, avoid using free choice salts and/or make a strict control of free choice salts consumption. In any situation, minimize future problems including all the minerals offered to cows in the feeds, free choice salts and water, and balanced according to animal's requirements.