TEXAS A&M AGRILIFE EXTENSION

Texas Dairy Matters

Higher Education Supporting the Industry

CHECK WATER QUALITY

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Dairy cows require abundant quantities of good quality water to milk to their potential. Recently, water samples collected from Texas, New Mexico and Oklahoma dairies were evaluated to assess quality factors. Test results were presented at the Mid-South Ruminant Nutrition Conference held in late April in Arlington.

Each of the state's had one or more water samples identified as potentially causing production problems. Although water quality had not been considered a problem for the cows, the water had caused problems with the chemicals used to clean the parlor in several instances.

One sample had an exceptionally high concentration of iron at 7.79 ppm, greatly exceeding the caution level of 0.3 ppm. High levels of iron reduce the water's palatability and consequently decrease consumption. Obviously with dairy cows producing milk, which is 87% water, decreasing water intake is not recommended.

The next concern with high vels of iron is the "slime" formed plumbing and waterers. This ime" can actually reduce the rate d volume of water flow through pes, limiting water availability.

Also, high levels of iron interfere with copper and zinc absorption, resulting in a deficiency of these minerals. Depending upon the form of the iron, oxidative stress may occur. The consequences of oxidate stress are particularly noticeable in fresh and transition cows.

Symptoms include: compromised immune function, increased fresh cow mastitis and metritis, and more retained placentas as well as diarrhea, depressed feed intake, reduced growth and decreased milk production.

Another sample had high levels of sulfate, which also decreases water consumption. Other problems resulting from high sulfate in drinking water include reduced feed intake and milk yield. In addition more retained placentas and displaced abomasums have been observed.

Producers must be aware of any water quality issues on their dairies. Start by taking a sample of the water and having it analyzed. Most nutrition consultants and feed company representatives can help producers find a lab to analyze their samples and more importantly help producers interpret the results.

The complete article on water quality, includes a detailed description of potential water problems, sampling guidelines, and treatment methods is available through the Texas Animal Nutrition Council (2005 Proceedings of the Mid-South Ruminant Nutrition Council) website: www.txanc.org