

Profit tips: Top 9 reasons water quality matters for dairy cows

Dairy Herd Management, 7 October 2014

9. Calves need good water to thrive. Research conducted by Donna Amaral-Phillips, Ph.D., Extension professor of animal science, University of Kentucky, shows depriving calves of fresh water decreases starter intake by 31% and weight gain by as much as 38% when compared to calves provided free-choice water. Common signs of poor water intake and quality in calves¹ include: increased incidence of scours and digestive upsets; decreased immune competence; depressed daily gain and feed efficiency; and increased off-feed events and erratic eating behavior.

8. The impact of water issues is diverse and far-reaching. Common symptoms that could signal dairy water quality issues include:

- Health or performance concerns in cows
- Digestive upsets or scours in replacement animals
- Deteriorating health status of newly arrived heifers or dry cows
- Off-flavor, smell or color of drinking water
- Digestive upsets in humans drinking from the same water source

click image to zoom

7. Dissolved solids impact dairy cow performance. It is important to test water quality, and total dissolved solids should be one of the first things to evaluate. This single test provides a reading on the sum of all the dissolved and suspended inorganic matter present in a water sample. High concentrations of dissolved solids such as sulfate, chloride, iron, manganese and nitrates are known to significantly affect animal performance (*Figure 1*).

Figure 1. Desired dissolved solids levels for livestock water

Item	Level	Item	Level
Calcium, ppm	< 100	pH	6 to 8.5
Chloride, ppm	< 100	Potassium, ppm	< 20
Copper, ppm	< 0.2	Sodium, ppm	< 50
Iron, ppm	< 0.2	Sulfur, ppm	< 50
Magnesium, ppm	< 50	Sulfate, ppm	< 125

Manganese, ppm	< 0.05	TDS, ppm	< 960
Nitrate - N, ppm	< 20	Zinc, ppm	< 5

6. Drinking water provides 60%-80% of dry and lactating cows’ water needs, while feed provides most of the remaining necessary water. Water requirements vary based on a cow’s level of production and the environmental temperature (*Figure 2*).

Figure 2. Average water intake by dairy cows

		Minimum Temperature, F°		
		40	60	80
Milk yield, lb/d	DMI, lb	Water intake, gal/day		
40	36	17	20	24
75	48	23	27	30
100	56	28	31	35

5. Poor water intake and quality in lactating dairy cows² can impact health. The results range from depressed immune function to decreased fertility and from increased off-feed events to erratic eating patterns.

4. Dairy cows require adequate amounts of water to maintain blood volume, tissue function, rumen activity and proper flow of feed through the digestive tract.

3. Dairy cows spend 4 to 5 hours per day eating and only 20 to 30 minutes per day drinking water. Make water easy for cows to access to meet hydration needs.

2. Water accounts for 87% of the milk a cow produces. Therefore, providing clean, safe water is critical to maximizing production. Remember to clean water troughs daily. Testing water is not a good use of money if water troughs are not routinely cleaned.

1. Following air, water is the nutrient required in the largest quantity by dairy cattle. A cow consumes 30 to 50 gallons of water per day.

For more information about the importance of water quality and analyzing test results, visit www.zinpro.com/waterquality.

Management tips for optimizing water consumption

- Provide direct access to clean water as cows exit the milking parlor
- Ensure adequate flow rate to maintain a minimum water depth of 3 inches in the trough

- Provide available trough space of 3.5 linear inches per cow
- Have at least two functioning water stations available per pen
- Provide access to water within 50 feet of feed bunk
- Monitor stray voltage in areas near water troughs
- Clean troughs are essential to optimal water intake

Raw milk supporters petition Supreme Court

hwww.wkow.com, 7 October 2014

MADISON (AP) -- Supporters of unpasteurized milk are petitioning the Wisconsin Supreme Court to decide whether a person has a constitutional right to purchase and consume raw milk. Food rights activist Gayle Loiselle, of Dousman, says the plaintiffs believe people have a right to choose what they consume and where it comes from, and that dairy farmers who sell unpasteurized milk have a right to sell directly to consumers. The petitions are the result of a state appeals court ruling against Mark and Petra Zinniker, dairy farmers in Walworth County, and Grass way Organics Farm Store in New Holstein. The Milwaukee Journal Sentinel says another petition was filed this summer in a case involving dairy farmer Vernon Hershberger of Loganville. State law generally prohibits the sale of unpasteurized milk to the public because it may carry bacteria that can cause food-borne illnesses.

Raw milk comes with risks, nutritionist warns

Tvnz one News, 8 October 2014

More research is needed before raw milk becomes widely available, a nutritionist says. Manurewa High School student Manisha Paliwal has been looking into the benefits of raw milk and is on a mission to make it available at her local shops.

She told TV ONE's Breakfast this morning her research shows raw milk has more protein, lactose, fat and vitamin C than pasteurized and she believes it's more beneficial for a healthy immune system. But nutritionist Claire Turnbull says there are risks associated with raw milk, especially with food-borne illness.

"The evidence around allergies and asthma is not conclusive...and the evidence is certainly not there to say he, everyone in New Zealand this is a great thing to do," Ms Turnbull says. "We need more research first of all." Pasteurized milk is a safe first choice, Ms Turnbull

told Breakfast."There are too many risks associated and not a process that's been worked around to make it safe for everybody to buy in the supermarket."

Drink milk, drain wallet: St. John's most expensive city to chug 2%

Windsor, Ont. found to have the cheapest average cost of milk in Canada.

CBC News , 8 October 2014

A new survey looking at the cost of two per cent milk in 17 cities across Canada has found the price difference to be anything but homogenized. St. John's was found to be the most expensive milk market, with a two-litre carton of 2% milk cost an average of \$3.92. That's exactly twice as much as what customers in Scarborough can expect to pay. Windsor, Ont., was found to have the cheapest recorded cost of milk in the country, costing about \$3.65 for four litres.

"The general trend is that Newfoundlanders pay about double what residents in Ontario are paying for the same milk product," said Jeff Doucette, general manager of Field Agent Canada, a company that sells a crowd sourcing app that was used to collect data at stores across the country. The company released its survey Monday. Doucette said that the milk industry in Canada is highly regulated "to make sure the dairy farmers in every province are able to produce sustainably."

In St. John's, Doucette said, there is a smaller market for milk when compared to larger cities, particularly in southern Ontario. "There is a mix of those factors, of package size, government regulations, and then a lack, or less competition at both the retailer level as well as at the dairy level," he said.

Government promises dairy sector help as milk prices plummet

The News Poland, 7 October 2014

Poland will push for more aid from the EU, as Russia's embargo and lower prices on the world market hit Poland's dairy sector.

The Ministry of Agriculture wrote in reply to a letter from the Polish Chamber of Milk that falling prices internationally was the cause of declining income for farmers in the sector.

Since the beginning of 2014, prices of skimmed powdered milk and butter have declined by some 30 percent and Edam-style cheese by 25 percent, the ministry wrote.

The wholesale price of milk has declined by 15.4 percent says the report and the Agricultural Market Agency expects a further fall.

The ministry added that Russia's import ban has also caused a fall in prices, by 10 percent in the case of milk and butter and by 6 percent in case of cheese.

The ministry vowed to press the European Commission to increase aid to the sector.

In late August, Poland asked the European Commission to lift levies imposed on member states for exceeding milk quotas in 2013/2014, not impose them in the following year, adjust the multiples used in the quotas and to introduce further aid to the dairy sector, the statement said. The dairy producers' chamber sent its letter to the ministry at the end of August, stressing difficulties that the sector has to face in connection with Russia's embargo on food from the EU. (kw)