



Miranda Burski
Communications Consultant
Communications Branch

The importance of monitoring livestock water

We rely on regular testing and oversight to catch when the water coming out of our taps might be of poor quality. Such results aren't a regular occurrence, but, when they happen, we look for alternate sources that we know won't compromise our health.

Our province's livestock rely on us to do the same for them. The extent of "poor water quality" may look different for humans than for livestock, but it still makes the water dangerous for livestock to consume.

"It's important for almost all functions in the body, everything from digestion, to thermoregulation, to immunity," said Colby Elford, Livestock and Feed Extension Specialist with the Ministry of Agriculture. In particular, problems arising from poor water quality could range from decreased weight gain to increased levels of diseases such as polio or scours.

In Saskatchewan, the issue most likely to cause poor water quality for livestock is high levels of sulphates, although high levels of any total dissolved solid would compromise quality. "As mineral levels rise, it starts having negative effects on production," explained Travis Peardon, Livestock and Feed Extension Specialist with the Ministry.

A rise in mineral levels could be caused by a number of factors, including spring or summer run-off or a change in temperature. Summer 2017, for example, saw lower water quality than usual across the province, partly due to the summer's unusually hot temperatures. This caused producers' surface water sources to

evaporate at a higher rate than normal, leaving behind dissolved minerals. Any marginally bad water became worse as the summer progressed.

The summer reinforced the importance of testing for water quality, to both producers and Ministry of Agriculture staff.

"We really did a lot more work in trying to educate producers on what was happening with their water quality," said Peardon.

Elford agreed, adding that regional office staff also increased the rate at which they were helping producers test their water quality. "The Ministry also bought some conductivity meters, which can be used in the offices to do quick screenings for water."

A similar type of water quality test is available on-the-spot at the Ministry's booth during Canadian Western Agribition.

In addition, if one of the Ministry's regional specialists is working with a producer's livestock and suspects that the water may be of low quality, the specialist can work with that producer to have the water tested at a provincial lab at no charge. After test results come back, staff can help the producer interpret the results.

Peardon and Elford recommend producers test their water anywhere from once per year to three or four times per year, depending on the source. They also recommend sending the water for testing at least two weeks prior to when producers plan on using the water source, to allow enough time for the results to come back.



Colby Elford testing a water sample at Canadian Western Agribition.

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If the test results do show poor water quality, additional steps will need to be taken.

“Lots of times, it’s really hard to have an alternative water source,” Peardon said. “Sometimes it’s digging a new well or dugout, but a lot of times it might involve hauling water or not using that pasture that summer.”

To help ensure alternative water sources are available, producers can apply for the Farm and Ranch Water Infrastructure Program (FRWIP), available through the Canadian Agricultural Partnership (CAP), a five-year \$388 million investment by federal and provincial governments. Projects approved under FRWIP receive a rebate up to 50 per cent of eligible costs to a maximum of \$50,000, and could include the digging of new dugouts or wells, subject to program criteria.

However, sometimes the quality of a water source can change after livestock have started drinking from it. With that being the case, it’s important to watch for signs of poor water quality intake in your animals.

“They’re not going to want to drink the water if it’s bad, which will usually translate also into low feed intake, which will affect

cow condition and weight gain,” explained Elford. “The minerals that are dissolved in the water will interrupt trace mineral status in the animal, so you’ll get trace mineral deficiencies, which can have effects on all sorts of things.”

These feed intake and trace mineral deficiencies are of particular interest to Ministry specialists. Under the Strategic Field Program, also funded under CAP, the specialists will be

evaluating what effects sulphates have on growing animals. This includes looking at three different levels of sulphates in water given to animals over a particular period of time, then evaluating weight gain, feed intake and mineral status.

“What we’re wanting to do is have good recommendations for producers out there when they’re trying to make decisions,” said Elford.

For more information about water quality

and testing, visit www.saskatchewan.ca/livestock. For more information about FRWIP or the Strategic Field Program, visit www.saskatchewan.ca/CAP. ■



Water quality affects many aspects of your livestock’s health, including their digestion, immunity, thermoregulation and fertility. Make sure to test your water quality regularly.