

Natural Systems



Science-Driven Solutions for Livestock Water Safety



Saskatchewan continues to invest in practical, research-based solutions to support livestock health and farm sustainability. In 2017, cattle deaths were linked to dugouts that dried down, leading to higher concentrations of sulphate in drinking water. In response, Ministry of Agriculture specialists partnered with University of Saskatchewan's Livestock and Forage Centre of Excellence researchers to better understand how water quality affects cattle health.

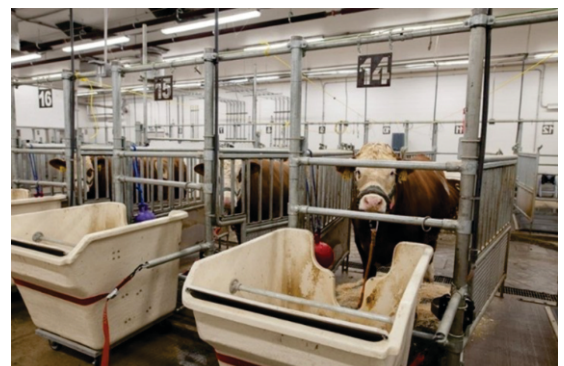
Two research projects examined the connection between sulphate levels in water and animal health. The findings showed that while cattle are affected by sulphate, they can safely tolerate higher sulphate concentrations than earlier guidelines suggested. This research provides producers with greater flexibility when managing water supplies, particularly during periods of drought when clean water options may be limited.

Building on this work, further research is underway to identify ways to reduce the effects of high-sulphate water on cattle. The ministry continues to support studies at the University of Saskatchewan focused on trace mineral supplementation to help maintain cattle health. In addition, ADF-supported research at the University of Regina is exploring what causes high sulphate levels, developing test kits to help producers monitor water quality, and assessing natural treatment options for dugouts and wells. Together, these efforts are expanding access to clear, science-based tools that help protect herd health and long-term farm productivity.

Why It Matters

Reliable access to safe drinking water is essential for healthy livestock and resilient farm operations. This research has helped identify water sources that were once considered unusable but may now be safely managed, reducing pressure to develop new water sources on the landscape.

The findings also supported the creation of a water sulphate Beneficial Management Practice under the Sustainable Canadian Agricultural Partnership. This practice offers financial support for water treatment technologies in high-sulphate wells and dugouts. By improving existing water supplies, producers can better manage risk during dry periods, support animal well-being and advance responsible land stewardship.



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