Why and How to Test Your Livestock Water

Why test your water?

Ground and surface water sources can contain varying levels of minerals or elements that may impact animal health and production.

What are the common contaminants and what do they do?

Nitrates

Prolonged exposure to high levels may result in symptoms such as rapid breathing, bloat, tremors, staggering, coma, abortion and death.

Sulfates

Continued exposure to moderate levels may cause a copper deficiency and result in decreased fertility and production.

Exposure to extremely high levels may cause major issues for livestock including blindness, polio, and in the worst cases, death can occur.

Iron

High levels may cause secondary deficiencies or reduce bioavailability of several minerals.

Symptoms of these mineral deficiencies include reductions in water intake, production, and fertility.

Sodium

Excess levels may result in reduced water intake, gastrointestinal tract irritation, frequent urination, tremors, or staggering.

Remember, any of these contaminants present in the feed would also have an impact on the animal. We recommend testing your feed sources to mitigate your risk.

Maximum Recommended Levels of Common Water Contaminants						
	Unit	Cattle/Sheep/Bison	Horse	Poultry	Swine	
Nitrate Dissolved	mg/L	100	400	< 12	< 400	
Sulfate Dissolved	mg/L	< 500-1,500	< 2,500	< 500	500-1,000	
Iron	mg/L	< 10	< 0.3	< 0.3	< 0.3	
Sodium	mg/L	800-1,000	2,500	< 400	< 400	

These are only some of the contaminants found in Saskatchewan water sources. While less common, there are many others which may negatively affect livestock health. Testing your water is the best way to protect yourself and your herd from production losses and animal welfare concerns.

What can we do?

The Ministry of Agriculture assists producers in determining if their water is suitable for livestock use. Bring a one litre water sample from the source your livestock are using to a regional office where a livestock and feed extension specialist will work with you to coordinate analysis of the sample. In some cases, a quick determination of quality can be made with equipment available in the office. Some samples may be sent for more in-depth analysis. Once results are received, we will help you with their interpretation and provide you with the information you need to make decisions about how to use each water source.



How to collect a sample:

- Use a clean container to collect your sample.
 - Sample jugs are available at your local regional office.
- Collect one litre of water from the trough or source the livestock are using (dugout, slough, etc.).
- If possible, flush the water lines prior to taking the sample to ensure that it is representative.
- For dugouts, reach out as far as is safely possible.
 - Sampling poles are available in ministry regional offices.
 - If water from a dugout or slough is pumped into a trough, samples can be taken from the trough.
- Avoid getting any dirt, debris, or plant matter in the sample container.
- Label your container as seen on the right and keep cool until it can be delivered to your regional office.

If water is going to be tested for blue-green algae, bacteria or other specific contaminants, please contact your regional office for sampling protocols.

- For blue-green algae testing, samples should be frozen and shipped to the lab as soon as possible to prevent toxin breakdown during transport.
- For bacteriological testing, samples must be received by the lab within 48 hours of sampling to ensure accurate results.



For more information or to bring in a sample, contact your nearest regional office:

Kindersley	Outlook	Swift Current
608 12th Ave. East	410 Saskatchewan Ave. W	101-350 Cheadle St. West
306-463-5513	306-867-5500	306-778-8285
Prince Albert	Tisdale	North Battleford
Room 141, L.F. McIntosh	1105 99th Street	A131-1192 – 102nd Street
Building, 800 Central Ave.	306-878-8842	306-446-7962
306-953-2363		
Humboldt	Weyburn	Yorkton
2414 Westwood Dr.	60-18th Street	38-5th Ave. North
306-682-6701	306-848-2857	306-786-1531

Moose Jaw
Agriculture Knowledge Centre
45 Thatcher Dr. East
Toll-Free 1-866-457-2377
Water sam
Insurance
A Premises
services.

Water samples can also be dropped off at most Saskatchewan Crop Insurance Corporation locations.

A Premises Identification (PID) number is required to access ministry services.

