MANITOBA AGRICULTURE, AGRICULTURE PRODUCTION BRANCH

# Small Scale Animal Farming Bulletin

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## Animals and Water

Water is a vital and often forgotten nutrient that is required for all animals to survive. Water helps to regulate body temperature, transport nutrients throughout the body, aid in digestion and lubricate and protect internal organs. Water is needed to produce milk or eggs and helps the body to eliminate waste. Water makes up approximately 80 per cent of the total body weight of newborn animals and 50 to 70 per cent of the body weight of mature animals, depending on the species.

Animals must always have access to clean fresh water. Healthy animals may survive two to five days without food depending upon conditions like age of the animal and temperature of their environment. However, without water, animals will become dehydrated quickly. Young chicks will not survive more than a few hours without water. Pigs will start to die after being deprived of water for 48 hours. Animals suffering from dehydration are lethargic, may vomit, have dark urine, sunken eyes and belly, birds may have pale combs and wattles, be panting, have low feed intake and will avoid standing or may prefer isolation.

Water source is an important consideration since contaminated water can impact health and productivity of animals. Water may contain pathogens (e.g., bacteria, viruses, molds, protozoa or parasites) or chemicals which can affect animal health. Certain minerals in water can affect taste, leading to decreased water intake. Hard water can cause sludge or scale build up in water lines, drinkers and troughs. Water quality from all sources can change from season to season. Regularly testing water from the source is crucial to ensure that safe, good quality drinking water is provided.

*Pigs using a water bowl connected to a water tank*

## Water Considerations for Pigs

Like people, pigs like to have good quality, fresh water available to them. And like us, they're sensitive to tastes, micro-organisms and toxins in their water. To prevent poor production, water should be tested yearly to ensure that animals are not exposed to anything that could reduce water intake or harm them.

Hardness – while water hardness does not affect pigs, it can cause mineral build up on the inside of water lines and piping. This scale decreases the water flow to your pigs over time, creating issues with intake.

How much water pigs need depends on their age and the weather (Table 1). In hot weather, pigs need access to more clean, cool water than they do in cold weather. This is due to pigs being unable to sweat to cool themselves. Cool/cold water helps the pigs maintain their body temperature.

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| Pig Type | Volume (L) |
|---|---|
| Sows – Lactating | 24-45 |
| Boars and Sows – Dry/Gestating | 12-15 |
| Finishers | 9-12 |
| Growers | 5-7 |
| Piglets | 3-5 |

Table 1: Drinking water consumption for pigs

Pigs are very intelligent creatures and will learn to drink water from a variety of sources. If you don't have the ability to have a water nipple system in your pens/yard, pigs can happily drink from buckets, tubs or troughs. But only if the water is constantly refreshed and the equipment is kept clean.

While pigs are, in general, rather clean animals, not urinating or defecating where they eat/drink, they are sloppy eaters and will contaminate standing water with food particles, saliva and mud. These actions make cleaning watering equipment important. Whatever equipment you use should be easily drained and thoroughly cleaned. Proper cleaning of equipment prevents buildup (biofilm) from potentially making your pigs sick.

Pigs are also easily bored and will 'play' with anything in their pens to alleviate boredom. This means that watering equipment can be destroyed, played in, act as cooling off stations or just kicked around. Because of this, equipment should be inspected every day for wear and tear to ensure functionality.

Look for future Bulletin release dates:

- April, 2026
- July, 2026
- October, 2026

Upcoming topics include:

- Housing,
- Parasites,
- Nutrition…and more!


*Chickens using a hanging water drinker with nipples*

## Water Considerations for Poultry

Water intake for poultry is related to age, body condition, diet, as well as temperature and humidity of the bird's environment. The rule of thumb is that poultry will drink 1.5 to twice the amount of water to feed that they consume. Birds will drink more water as they age and as the temperature of their environment increases. Poultry will pant rather than sweat to moderate their body temperature in hot weather, which can double or triple their water intake. While poultry are less sensitive to taste than people or pigs, they will reduce their water intake with sudden changes in water flavour.

Water should always be provided clean and fresh, and free of pathogens and toxic levels of minerals and chemicals. High mineral content (e.g. sodium) of drinking water can result in higher waste output, leading to wet litter. Moisture promotes mold and bacterial growth within the litter, which increases the risk of disease in the flock. Testing water at least once a year will help to maintain good productivity of your flock and keep them healthy. There are many types of watering equipment available for poultry, such as fountains, bell drinkers, water lines, or pipes with nipples, and troughs. It is best to choose watering

equipment that is closed, meaning that birds cannot sit in, or lie in, the water source. Open water sources might fill with bedding and other debris which introduces bacteria and mold. Very young birds must have water provided close by and in a way that they will not get wet (which would make them chilled) or drown. Ideally, poultry waterers should be placed with the bottom of the drinker at the height of the bird's back. This allows birds to naturally stretch up to drink, and it also helps to keep water clean. Allow two to three linear inches of water space per bird, and place waterers in an outside run whenever possible to maintain low humidity in the coop. Waterfowl, especially, will want to play and splash in their water, so keeping a separate clean drinking water source for waterfowl is recommended. It is important to clean watering equipment frequently (daily is ideal – weekly, if possible) and change water filters regularly to prevent a buildup of slime and microorganisms (biofilm) that can be harmful and prevent water equipment from working properly.

*Ducks using a portable water drinker*

## 2026 Workshop Series - For Your Freezer: Introduction to Butchery

**Manitoba Agriculture** invites small-scale producers and enthusiasts for a butchery demonstration.

Focusing on post-harvest processing, the session will introduce the principles and techniques used to break down carcasses into primal and retail cuts for your own freezer.

Date: Tuesday, Feb 17th (Portage La Prairie)
Time: 9:00 a.m. – 3:00 p.m.
Cost: $20
Register: For details contact Robyn Harte (Robyn.Harte@gov.mb.ca) or Amy Hawkins Green (Amy.HawkinsGreen@gov.mb.ca).

Water composition can vary within a geographical area and from season to season. Water contamination can occur in surface water and if surface water drains into a well. It is recommended to test your water source regularly, at least annually, using an accredited laboratory. Contact the laboratory to obtain water analysis forms, appropriate sampling bottles, and specific sampling instructions. Manitoba Environment and Climate Change provides a Guide for How to Test Well Water for Bacterial Contamination.

Examples of accredited laboratories that offer water analysis in Manitoba include:

Central Testing Laboratory Ltd.

Horizon Lab

ALS Environmental

General drinking water quality guidelines may be used to evaluate your water test results, although different species of livestock have different content requirements or tolerances. Table 2 provides a guideline for optimal water quality for pigs, poultry and small ruminants. Manitoba Agriculture's livestock specialists can help you interpret your water quality analysis and suitability assessment for your animals.

| Water Quality Item | Pigs | Poultry | Sheep |
|---|---|---|---|
| Sodium (Na) | 400 mg/L | 50 mg/L | 400 mg/L |
| Calcium (Ca) | 1000 mg/L | 500 mg/L | 1000 mg/L |
| Magnesium (Mg) | | 125 mg/L | |
| Chloride (Cl) | | 14 mg/L w/ high Na | |
| Copper (Cu) | 5 mg/L | 5 mg/L | 0.5 mg/L |
| Potassium (K) | | 500 mg/L | |
| Nitrate ($NO_3$) | 100 mg/L | 25 mg/L | 100 mg/L |
| Sulfate | 1000 mg/L | 50 mg/L w/ high Na or Mg | 1000 mg/L |
| pH | 6.5 – 8.5 | 6.0 – 6.8 is ideal but can tolerate 4 - 8 | 6.8 – 8 |
| Colour | May indicate increased mineral or microbial contamination | | |
| Turbidity | Cloudiness, caused by clay, silt or microbial content in water | | |
| Hardness (as $CaCO_3$) | Water over 100 mg/L $CaCO_3$ is hard – does not impact animal health but can cause scale and sludge build up on water equipment | | |
| Total Dissolved Solids (TDS) | Measurement of salinity; >1000 mg/L can cause diarrhea or wet litter; can impact water equipment function | | |
| Phosphates | Indicates possible sewage contamination | | |
| Total Bacteria | <1 CFU/mL is desirable, 100 CFU/100mL maximum | | |
| Coliform Bacteria | <1 CFU/100mL | | |
| E. coli | <1 CFU/100mL | | |
| Heavy Metals) e.g. Lead, selenium, arsenic) | Toxic compounds that should be < 1.0 ppm | | |

Table 2: Recommended Acceptable Drinking Water Content for Livestock

Additional Resources:
Evaluating Water Quality for Livestock - Manitoba Agriculture
Water Analysis Interpretation for Livestock - Alberta Agriculture
Poultry Drinking Water Primer - University of Georgia

# DID YOU KNOW?

Manitoba has a premises identification system that plays an essential role in supporting traceability of livestock and poultry within the province. The Premises Identification Program (PID) links geographic locations with livestock and poultry to support emergency management (e.g., during disease outbreaks or natural disasters).

Under the Animal Premises Identification Regulation, all owners and operators of premises with livestock and poultry must complete a Premises Identification Program Application. There is no cost to participate in the program. Applicants will be required to supply basic land information, as well as numbers and types of animals on their premises. This information is entered into a confidential database, and a unique Premises Identification Number is assigned. The PID database is used to assist with emergency planning, to allow for rapid identification of affected premises, to help track animals in an emergency, and to help reduce the impact of emergencies.

For more information on the PID Program, call 204-945-7684 or email traceability@gov.mb.ca.

Livestock and poultry owners with existing PID numbers should contact the PID program when their information changes, to make sure their information is current or if they are unsure of the animal types and numbers associated with their PID number.

## Manitoba Agriculture Small Scale Animal Farming Contacts:

| Name | Location | Phone Number | Email |
|---|---|---|---|
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If you would like to be added to our information sharing list, please email or text Amy Hawkins Green (Amy.HawkinsGreen@gov.mb.ca, 204-619-4704). Your input and topic ideas are always welcome.

## Contact us

- Go to manitoba.ca/agriculture.
- Email us at agriculture@gov.mb.ca.
- Follow us on X @MBGovAg.
- Visit your local Manitoba Agriculture Service Office