

Food Safety Program, for Farms

Water Works: Agricultural Water Safety

Good quality water is an important part of on-farm food safety. Clean drinking water is called potable water. Contaminants in water such as excess amounts of toxic pesticides and nitrites or bacteria and algae can affect the whole food chain.

Horticulture

The quality of water used for irrigation is as critical as rinse water for food safety. While cleaners (ex: bleach) are added to rinse water, they disinfect the water. They don't reduce contamination that is already on the surface of food. The rinse water temperature must be warmer than the temperature of the produce. If it's not, the temperature difference in the water can draw micro biotic contaminants through the skin and they can't be removed.



Animal Production

Water is an essential nutrient for livestock. It can affect feed intake as well as production levels if it's contaminated or unpalatable to animals. Bacteria and chemical contaminants in water are a possible health hazard for livestock and an eventual food safety risk to humans.

In the dairy industry, high water quality standards are mandatory for cleaning milking equipment. Also, various water quality indicators will determine the amount of detergent to be used. See the On Farm Food Safety manual for details. Go to www.dairyinfo.gc.ca to download the workbook; or contact your local Manitoba Agriculture, Food and Rural Initiatives GO Office.

Sources of Contamination

There are many potential contamination sources, including:

- wildlife
- agricultural run-off
- industrial waste
- human waste
- soiled equipment

Some strategies to reduce contamination include:

- grading land
- managing manure
- cleaning equipment before use

Water Source

Different water sources have different risk levels. Rivers tend to be less risky than standing water (ex: ponds, dugouts) because it is always being filtered by the environment. Ground water is less risky for bacterial contamination than surface water.

In irrigation systems, drip-based equipment is lower risk than overhead systems. Contaminated irrigation equipment can also contaminate – test a water sample at the point where the water comes in contact with the vegetation (ex: at the nozzle of the irrigation system).



Testing Your Water

Agriculture operations have differing water quality testing needs. On-farm food safety manuals are available through your producer group, who can also help you decide how often your water needs to be tested and which labs they recommend for testing. The lab you choose should be able to help you decide the testing method that's best for your operations.

If you notice that water has changed in color or odor, have it tested immediately. Water that is not potable may need to be treated or a new source found.

For more information on water quality, go to: manitoba.ca/waterstewardship/water_quality or www4.agr.gc.ca/AAFC-AAC/display-afficher.do?id=1187702145201&lang=eng

For information on the Food Safety Program, for Farms, contact your local Manitoba Agriculture, Food and Rural Initiatives [GO Office](#), or visit our website at manitoba.ca/agriculture.