

Food safety matters at farmers' markets

Safe food handling tips for farmers' market managers, leaders and vendors

Farmers' markets are a very important part of local life in communities all across Ontario. Few things are better at bringing people together than food – especially the wide range of high quality food produced by farmers and farm businesses in this province. But food can also be a way of sharing things that are **not** wanted – things like bacteria (germs) that can make people sick. Sickness caused by bacteria in food is called foodborne illness or, more commonly, “food poisoning.”

This guide provides information about how to handle food safely, including special food safety tips for farmers' market managers, leaders and vendors. It describes the best ways to prepare, handle, transport and store food.

What is foodborne illness and why does it matter?

Most foodborne illness is caused by bacteria. But it can also be caused by:

- viruses
- parasites
- toxins (or poisons) produced by some bacteria
- chemicals that may get into food

Although not traditionally considered a foodborne illness, allergens (like peanuts) in certain foods may also cause mild to severe reactions in some people.

You cannot see, smell or taste bacteria or other germs that can cause foodborne illness. They can multiply to millions in a few short hours at the right temperature.

Symptoms of foodborne illness can include:

- nausea
- vomiting
- diarrhea
- fever
- stomach cramps

It is not always easy to tell if your symptoms have been caused by food. You can start feeling sick anywhere from hours to weeks after the food has been eaten. Most often, people get sick within a couple of days after eating food that has become contaminated.

Foodborne illnesses are often mild, but sometimes there can be long-term complications and even death.

People most likely to become very sick are:

- seniors
- young children
- pregnant women
- people who are already unwell

If you think you have a foodborne illness, visit your doctor and notify your local public health unit right away.

Are some foods riskier than others?

All foods can cause foodborne illness if they are not properly handled. However, bacteria can grow better in some foods than others.

Foods that can support the growth of bacteria or other germs are called “potentially hazardous” (or high risk) foods. Be sure to cook these foods to a high enough temperature and for a long enough time. Then keep these foods hot enough until serving them, or store them in the refrigerator or freezer, so that they are out of the danger zone. The danger zone, where bacteria grow rapidly, is between 4°C (40°F) and 60°C (140°F).

Examples of high risk foods include:

- dairy products (e.g. milk, cream, cheese, yogurt, and products containing them such as cream pies and quiches)
- eggs
- meat or meat products
- poultry
- fish and seafood

In contrast, “non-potentially hazardous” (or lower risk) foods generally do not need to be refrigerated (until opened) and tend to be high in sugar, salt or acid and/or low in water content. Many examples of lower risk foods are sold in farmers’ markets. They include fresh fruits and vegetables, bread and most baked goods, candies, pickles, honey, jam and preserves, syrups and vinegars.

Lower risk foods such as fresh fruits and vegetables can still become contaminated through food handling or production processes. Be sure to follow safe food handling practices and wash fresh fruits and vegetables thoroughly under running water before eating or preparing them.

Reduce the risk of foodborne illness by following these four steps: Clean, Separate, Cook, Chill.

STEP 1: CLEAN

Clean your hands, surfaces and equipment. Do it often and do it well! Bacteria can get onto your hands, countertops, containers, dishcloths, utensils, and the food itself.

Cleaning your hands

Wash your hands **before** preparing, handling, serving or eating food.

Wash your hands **after**:

- using the washroom
- sneezing, coughing or blowing your nose
- touching your face, mouth or hair
- handling raw meat or other uncooked foods, or the surfaces they have been on (e.g., cutting boards, countertops)
- handling dirty utensils or dishes
- handling money
- smoking
- touching pets
- cleaning
- handling garbage

When washing your hands:

1. Wet your hands with warm water.
2. Lather your hands with soap for 15 to 20 seconds.
3. Rinse hands thoroughly and pat dry with a paper towel.
4. Use the paper towel to turn the tap off.

Wherever possible, use a proper hand washing station to wash your hands. This includes a sink with hot and cold running water that drains into a proper sewage system.

If a hand wash station is not available, use a clean water container filled with warm water from a safe drinking water source. The water should flow out of the container through a valve that you can turn on and off. This could be a plastic jug with a spigot. Provide liquid soap in a dispenser and paper towels. You will also need another container to hold the waste water. Pour the waste water into a sanitary sewer, private sewage system or other approved receptacle.

Water for hand washing and preparing food

- Use a safe drinking water source (such as a municipal water supply or a tested private source) for hand washing and food preparation.
- Wash, rinse and sanitize drinking water containers before using them.
- If you are using a temporary water supply line connected to a drinking water supply, sanitize and flush the line before use. Make sure the line is composed of food-grade material (not a garden hose) and install a one-way valve to ensure the water cannot flow back.

Cleaning dishes and utensils

When cleaning dishes, utensils and containers by hand, use the three compartment sink method.

Sink #1: WASH –
Warm water, dish detergent.

Sink #2: RINSE
Clean, warm water.

Sink #3: SANITIZE
Add 2.5 mL (1/2 teaspoon) of household bleach to every 1 litre (4 cups) of warm water you put in the sink. Soak dishes and cutting boards for at least 45 seconds. Let them air dry completely before use.

If sinks are not available, use tubs or basins instead.

Alternatively,

- Use single serving methods such as toothpicks, paper cups and disposable plates, forks, knives and spoons.
- Keep a back-up supply of clean utensils (tongs, scoops, etc) to replace soiled or contaminated ones. Back-up utensils should be wrapped or kept in a clean, sealed container.

Cleaning countertops and other food contact surfaces

Using a sanitizing spray is a safe way to kill harmful bacteria left on surfaces after regular washing. To sanitize countertops, tables, taps, sinks, meat slicers and other appliances, follow these steps:

- Mix 5 mL (1 teaspoon) of household bleach per litre (4 cups) of water.
- Put mixture in a labeled spray bottle.
- Squirt the mixture on countertops and other surfaces.
- Wipe with a clean cloth or paper towel.
- Make a fresh solution often.

General

Do not:

- Do not handle food when you are sick – especially if you have been vomiting or have diarrhea.
- Do not sneeze, cough or blow your nose over unprotected food or surfaces.
- Do not pet animals when handling food.
- Do not allow smoking near food handling areas.

Do:

- Wear clean clothing.
- If you have a cut or wound on your hands, bandage it and wear clean, disposable gloves.
- When handling food, tie your hair back or cover with a hair net, bandana or baseball cap.
- Provide garbage disposal bins.
- Provide enough washrooms for the size of the market.
- Consider food safety training for anyone who will be preparing or handling food.

STEP 2: SEPARATE**Do not cross-contaminate**

Cross-contamination occurs when bacteria spread from one food item to another. This can easily happen when cooked or ready-to-eat foods come into contact with raw meat or other uncooked foods, dirty hands or contaminated utensils. **Keep raw meats and ready-to-eat foods separate!**

Common sources of cross-contamination are:

- cutting boards, countertops, plates and other food surfaces
- slicers, mixers and grinders
- serving utensils, knives and tongs
- hands, gloves or mitts
- insects
- containers, bags or crates used for food storage
- covers used for table tops
- food probe thermometers (these are used to test the inside temperature of food)
- juices from raw meats dripping onto cooked or ready-to-eat foods

To prevent cross-contamination follow these tips:

- Wash hands often and well!
- Store raw meat, poultry and seafood on the bottom shelf of the fridge.
- Separate produce, nuts and herbs from raw meats and other high risk foods. Similar foods should be stored together.
- Use separate cutting boards if possible – always the same one for raw meats and a different board for vegetables, fruits and other lower risk foods.
- Wash, rinse and sanitize cutting boards, utensils and food probe thermometers before re-using.
- Never put cooked food on a plate, cutting board or surface used for raw meat, poultry, seafood or eggs. Keep them separate!

- Tightly cover baked goods and ready-to-eat foods (e.g., processed meats and dry cheeses) with plastic wrap.
- Handle ice with tongs or a scoop (not directly with hands).
- Use sneeze-guards over food displays or samples to limit contamination from insects, sneezing and dust.
- Provide clean tongs with any customer self-service bins for bread or buns.
- Keep food containers off the ground – including boxes of fruits, vegetables, nuts and herbs.
- Do not smoke while preparing food.

Food samples:

- If offering food samples:
 - Use single-serving methods such as toothpicks, paper cups and disposable forks, knives and spoons.
 - Put samples out immediately after preparing them and display only a few at a time, so that there is frequent turn-over.
 - Keep control of sample distribution to reduce excessive contact by customers.

STEP 3: COOK

Cook food to a high enough temperature and keep it out of the danger zone! The danger zone, where bacteria grow rapidly, is between 4°C (40°F) and 60°C (140°F).

Using a food probe thermometer

- Use a food probe thermometer to measure the inside temperature of cooked foods (e.g., meat, poultry, fish) to check that they are cooked to a high enough temperature.
- Push the thermometer into the thickest section of the meat you are cooking, but make sure that it is not touching bone, fat or gristle.
- Wash, rinse and sanitize the food probe thermometer between uses.

For cooked or ready-to-eat food, be sure to **keep your hot foods hot!**

- To properly cook meat, poultry, fish or eggs, heat them to a high enough temperature for a long enough time to prevent harmful bacteria from multiplying (see temperature chart).
- After cooking, keep hot food at 60°C (140°F) or hotter until it is served.
- Serve hot food while hot, or put it in the fridge, freezer or in a cooler with ice as soon as possible once cooled (within two hours of preparation).

Some additional cooking tips include:

- Make sure that food and water come from safe and reliable sources.
- Do not eat or serve hamburgers rare. Always cook hamburgers and other ground meat to the correct inside temperature.
- Cook fish to the correct inside temperature and until it flakes easily with a fork.
- Use a microwave oven properly by first covering the food, then stirring and rotating for even cooking. This will help to avoid cold spots in the food.
- Bring sauces, soups and gravy to a full boil every time you re-heat them. Heat other leftovers thoroughly to 74°C (165°F).

Temperature rules for safe cooking

Cook until the inside temperature of the food reaches the temperatures shown below and then continue cooking for at least 15 seconds.

Whole poultry (e.g., chicken, turkey, duck)	82°C (180°F)
Stuffing in poultry	74°C (165°F)
Cut or ground poultry <ul style="list-style-type: none"> • Cut poultry (e.g., breast, thighs, wings) • Ground poultry 	74°C (165°F)
Food mixtures (e.g., soups, stews, casseroles, stocks, gravy) containing poultry, eggs, meat or fish	74°C (165°F)
Meat <ul style="list-style-type: none"> • Beef, lamb, veal or goat (roasts and steaks – medium done) • Pork or fresh cured ham • Ground meat other than poultry (e.g., beef, pork) 	71°C (160°F)
Fish	70°C (158°F)

STEP 4: CHILL

Keep cold foods cold! This will reduce the risk of foodborne illness because cold temperatures slow down the growth of bacteria.

It is especially important to keep high risk food such as meat, poultry, fish, eggs and dairy products (including product samples) cold. Never store them at room temperature.

In the refrigerator or cooler: keep food at 4°C (40°F) or colder.

In the freezer: keep food at -18°C (0°F) or colder.

Tips for keeping food cold:

- Refrigerate all high risk foods such as meat, poultry, fish, eggs and dairy products within two hours of purchase or preparation.
- Refrigerate fresh fruits and vegetables within two hours of peeling or cutting.

- Store eggs in the main body of the refrigerator, rather than the fridge door. For display purposes, use only the empty egg cartons.
- If using a cooler, include ice, dry ice or frozen gel packs. Ice should be from a safe drinking water source.
- Use thermometers in refrigerators and coolers to check that they stay cold enough.
- Do not over-pack the fridge or cooler. Cool air must circulate to keep food safe.
- Use sunshades or umbrellas to protect food from the sun

Tips for cooling down hot food:

- Transfer hot food to small, shallow containers before refrigeration. This helps food cool quickly in the fridge.
- To speed up the cooling process for large pots of food, place the pot in a sink full of ice water and stir occasionally. Cover and refrigerate within 30 minutes, once cooled.

Defrosting Tips

Safe ways to defrost food:

- Defrost food in the fridge. Place the food on a lower shelf in a container and allow 10 hours per kilogram to thaw.
- Defrost food under cold running water.
- Defrost food in the microwave. Cook it immediately after thawing.

Never defrost food on the kitchen counter. The outer layers of food will defrost first, before the inside thaws. Bacteria can grow in these conditions.

Tips for transporting food

If transporting food from one location to another, such as from the farm to the market, do it quickly and directly, maintain safe temperatures and prevent contamination.

- Cover the food tightly in clean food containers or single-use food bags, wraps or foil.
- If you are transporting hot food, put the covered food in an insulated thermal container or wrap it in foil and cover with heavy towels. Include a thermometer to check that the food stays at 60°C (140°F) or hotter.
- If you are transporting cold or cooling food, put the covered food in a cooler with ice or frozen gel packs. Include a thermometer to check that the food stays at 4°C (40°F) or colder.
- Keep cold foods in the fridge or freezer until you are ready to go.
- In summer, put the ice-filled cooler inside the car rather than in the hot trunk.
- Separate raw meats from ready-to-eat foods to prevent cross-contamination.

Additional information for farmers' markets

For information on labelling, processing, packaging or display signs, as well as relevant legislation, please refer to the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and Canadian Food Inspection Agency (CFIA) websites provided at the end of this booklet.

Useful sources of information

Canadian Food Inspection Agency

<http://www.inspection.gc.ca>

Canadian Partnership for Consumer Food Safety Education

<http://www.canfightbac.org>

Centers for Disease Control and Prevention

<http://www.cdc.gov/foodsafety>

Environmental Health Foundation of Canada

<http://www.ehfc.ca>

Farmers' Markets Ontario

<http://www.farmersmarketsontario.com>

Foodland Ontario

<http://www.foodland.gov.on.ca>

Ontario Branch of the Canadian Institute of Public Health Inspectors

<http://www.ciphi.on.ca>

Ontario Ministry of Agriculture, Food and Rural Affairs

<http://www.omafra.gov.on.ca>

Ontario Ministry of Health and Long-Term Care

<http://www.health.gov.on.ca>

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- Leeds, Grenville and Lanark District Health Unit
- Ontario Ministry of Agriculture, Food and Rural Affairs
- Ontario Ministry of Health Promotion
- Oxford County Public Health and Emergency Services
- Region of Peel – Public Health
- Thunder Bay District Health Unit
- Toronto Public Health
- York Region Health Services Department

For more information about how to handle food safely, contact your local public health unit, listed in the blue pages of your telephone directory.

Government of Ontario information:

www.health.gov.on.ca

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