

OFFICE OF THE CHIEF MEDICAL OFFICER OF HEALTH

HOME GARDENING AFTER A FLOOD

Given the extent of this year's flood, particularly in the central and southern Saint John River valley, and the uncertainty of what may have been in the flood water, the Office of the Chief Medical Officer of Health is providing information to those whose gardens have been flooded. This information is meant to assist residents in making decisions regarding this year's planting of their personal gardens.

How long should I wait to go into my yard?

We recommend that people avoid recreational activities and cutting the grass in areas that were impacted by extensive flooding for at least a week after flood water has receded. Sunlight, rain and soil will help destroy harmful bacteria and any excess risk to health should disappear. Wear closed-toe shoes to avoid bringing soil into the home. As always, wash your hands well after playing or working outside.

What is the risk from gardening in soils affected by flood waters?

- Flood waters are likely to have contained various contaminants at the peak of the flood and may include raw sewage or chemicals such as petroleum, since the much larger amount of water may have resulted in different types of waste getting into the river than in previous flood seasons.
- Microbial pathogens that could be in flood waters include bacteria, viruses, and parasites, these can make people sick, especially the young, old, pregnant or immune-compromised.
- There is no way to determine exactly what was in the flood water this year, or what may be in your impacted soil.
- In most cases, microbes and chemicals in flood waters are likely to be diluted and at low levels. Soil that is highly exposed to chemicals can sometimes be recognized by signs such as staining, sheens, or beading of water on the soil surface; water taking longer to soak in; vegetation that doesn't look well; or chemical odors. However, sometimes there may be nothing noticeable by sight or smell at all.

Should flooded produce be discarded?

- If the edible portion has come in contact with flood waters, yes, the produce should be discarded due to the risk outlined above.

My property has large depositions of silt and debris. Do I need to remove this, test it, or can I till it in?

- Large debris in your fields should be removed, but the silt deposited by flood water and smaller debris do not need to be removed.
- Soils should be allowed to dry sufficiently and then tilled to at least 15 cm (6 inches) deep before planting crops.
- Adding compost or other organic matter when tilling will be beneficial to the soil's biological activity, which can promote decomposition of some contaminants.

When can I plant my flooded garden with edible crops?

- Current literature recommends waiting a minimum of 30 days (and up to 90 days) before planting. The longer you can wait, the better, and it is not advisable to plant without a waiting period. The following should be considered:
 - If you believe your land was heavily contaminated by sewage due to your proximity to sewage lagoons or other potential sources, you may wish to follow the USDA National Organic Program Regulations for direct manure applications. The recommendation is as follows:
 - Waiting 120 days before *harvesting* a product whose edible portion has direct contact with the soil surface or soil particles,
 - Waiting 90 days before *harvesting* a product whose edible portion does not have direct contact with the soil surface or soil particles.

Tillage, sunlight, air and soil microbiological activity will break down most contaminants over time. The following can help reduce risk when replanting:

- Allow the soil to dry out completely.
- Till thoroughly. Soil should be turned over to at least 15 cm (6 inches) in depth.
- Maintain soil pH at or close to neutral (6.5-7.0).
- Incorporate organic matter such as compost to the soil before planting.
- Mulch paths and walkways between your planting beds. This helps prevent dust that can contain contaminants.
- Wear gloves and closed-toe shoes to avoid bringing contaminated soil into the home.
- Wash your hands well after working in the garden, and wash the hands of children playing in the garden.
- Consider planting crops that are meant to be consumed raw (e.g. leafy greens, onions, carrots) or other crops whose edible parts grow near the soil surface in containers filled with fresh soil.
- Wash all produce well before eating it.