

Food Safety and You:

MICROBIAL SAFETY OF FRESH PRODUCE IN HOME GARDENS AFTER FLOODING



What is the microbial risk to fresh produce in your home garden after flooding?

Floodwaters commonly contain microbial contaminants and can directly affect public health. Microbial contaminants may include bacteria, viruses and parasites. Common foodborne pathogens reported in floodwater include norovirus, *Salmonella*, *Escherichia coli*, *Cryptosporidium* and *Giardia*. Following Hurricane Katrina, fecal coliform concentrations increased in floodwater at all locations tested in New Orleans.

Floodwater exposed to raw sewage, farm animals (such as chickens or goats), river or pond water and agricultural runoff is likely to carry harmful pathogens and parasites and thus spread health risks to fresh produce in your home garden.

Gardeners and other people who handle and/or consume fresh produce exposed to floodwater are at risk of gastrointestinal ailments (vomiting, stomach cramps and diarrhea) or other severe illnesses. In addition, infants and young children, elderly, pregnant women or people with compromised immune systems are at higher risk of becoming ill from handling or consuming contaminated fresh produce.

What produce can I save, and what should I discard?

- All fresh produce in direct contact with floodwater should be discarded. It is important to note that produce does not have to be completely submerged in floodwater to become contaminated.
- Discard fresh produce that is injured, bruised, cracked or diseased.
- Fresh produce that was splashed with floodwater can be saved. Wait at least 72 hours before harvesting fruit. Make sure you peel, clean, sanitize and cook it thoroughly. Take extra caution when handling to prevent cross-contamination to other foods in the preparation area.
- Immature fruit, fruit that did not come into direct contact with floodwater or newly developing fruit can be salvaged.

What produce is the most at risk of becoming contaminated?

- Leafy greens – lettuce, spinach, collard greens, cabbage. Leafy greens are almost impossible to clean and sanitize because of their tender leaf structure, which is prone to wounding. Leafy greens should always be discarded.
- Cantaloupes. Cantaloupes have rough surfaces that provide small protective spaces for harmful bacteria to grow and survive. These surfaces are very difficult to clean and sanitize.
- Berries and other soft fruits. The quality of berries and other soft fruits such as blueberries degrades quickly when exposed to water at maturity. Contamination by floodwater significantly increases the risk of contamination by foodborne pathogens and parasites.
- Roots or tuber crops. Edible portions of root and tubers are not protected from floodwaters. Soil saturated with floodwater is a source of these same pathogens.

Can I safely consume produce that comes into contact with floodwater if I cook it first?

- Cooking fresh produce that was in direct contact with floodwater is not recommended. The levels of pathogens and parasites in floodwater is unknown, but assumed to be high.



- When initial microbial loads are high, conventional cooking recommendations may not destroy all the pathogens on the produce.

Can I preserve the produce I saved after flooding? No.

- Foods used for preservation should be of top quality. If plants were exposed to flooding conditions, they are less likely to yield a good quality produce.
- If fresh produce was contaminated by the floodwater, you may cross contaminate your kitchen by bringing it in.
- The recommended processing time and temperature may not be sufficient to kill pathogens since the produce may carry higher microbial load.

When can I replant my crop?

It is best to wait until the soil has fully drained and the top 2-3 inches of the soil has completely dried out before replanting.

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