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Introduction

The floods have passed, the floodwaters have receded, and now you, as a home or community gardener, are wondering what to do next. This info sheet may help you navigate next steps for handling flooded edible garden plants including annual vegetable crops and edible perennial plants like herbs, rhubarb, brambles and blueberries, tree fruit, etc. This information is intended for home and community gardeners; commercial growers should consult the UVM Extension Vegetable and Berry program. First, be sure to review “Flood-Recovery Guidance for Lawns and Gardens” available at: go.uvm.edu/lawngardenfloodrecovery which provides safety tips and general guidance on flood recovery for lawns and gardens.

Floodwaters likely contained debris and contaminants like household and hazardous waste, heavy metals and chemicals, as well as disease-causing bacteria, viruses, and parasites from raw sewage and animal manure, and other sources. Therefore, the guidance provided is intended to keep gardeners safe and minimize the risks of food-borne illnesses, especially among vulnerable populations like children and elders.

If...

Any edible parts of vegetables and/or edible perennials came into contact with floodwaters...

Edible parts include fruit, stems, roots, berries, leaves, etc. of vegetables, brambles, herbs, melons, rhubarb, root crops, and other plants. Contact with floodwaters includes submerged in (both above AND below ground), splashed by, or otherwise touched by floodwaters.

If...

Any edible parts were NOT in any way touched by floodwaters...

These would include tall, upright crops where only portions of the plants were touched by floodwaters, like staked tomatoes, pole beans, and corn.

If...

Edible parts of plants have not yet developed...

These would include flooded vegetables and edible plants that had no fruit OR flowers on plants at the time of flooding.

Then...

Throw them out.

The edible parts are considered “adulterated” and should be discarded or tilled in. Do not harvest for consumption.

Then...

They are considered safe to eat.

Be sure they were not splashed by floodwater or the silt left behind. The adage “when in doubt, throw it out” definitely applies here.

Then...

Weigh the risks of harvesting or not.

The FDA does not provide hard and fast rules here so the decision to harvest or discard garden plants will depend on your level of comfort, the specific conditions of the flood your garden experienced, and the growth stage of the individual garden plants. The major concern here is microbial contamination on the surface of plant parts.

In these cases, it really comes down to weighing your risks about the potential of food-borne illnesses. Floodwaters are likely to have contained microbial and chemical contaminants that have the potential to make people sick. The US Food and Drug Administration (FDA) says, “Even if the crop is not completely submerged,



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there may still be microbial contamination of the edible portion of the crop. There is also the potential for plants to take up chemical contaminants.”

Risks of contamination are lower where floodwaters did not contain sewage from septic systems and manure pits, petroleum leaks, chemical spills, etc. The goal is to be confident the crops can be harvested without cross-contamination from flood silts, mud, and contact with contaminated plant parts.

If we look at public health risks, consider who will be eating the produce. If you are feeding just your own family, risks to public health are lower. If produce is intended for others, especially those at higher health risks of food-borne illnesses like elders and children, then the risks may be higher.

The adage, “when in doubt, throw it out” applies here and gardeners acting out of an abundance of caution should consider the safest practice for floodwater-contaminated vegetable gardens -- till in the plants to a depth of at least six inches, adding in compost to increase tilth and dilute contaminants, and then plant cover crops to speed the decline of pathogens before planting vegetables in the garden the next season. Edible perennials like rhubarb, asparagus, herbs, etc. should be cut down and considered for next year’s harvest.

If you decide to keep garden plants where edible parts have not yet developed, remove all flowers and immature fruit that have been touched by floodwaters. Minimize risk of microbial spread by thoroughly washing the silt from each plant and providing a barrier, like straw, plastic and other mulch, to prevent splashing and dust from silted soils. Discard any plants or plant parts that are cracked, bruised, or blemished. Wet, humid conditions are likely to exacerbate plant diseases so be sure to provide plenty of airflow and monitor for disease symptoms like yellowing leaves, leaf spots, fruit rot, and wilt, and treat as needed.

Replanting Now and Planning for the Next Growing Season

Gardeners considering replanting during the current growing season should weigh the risks of safety from microbial contaminants. Risks will be high for crops that are in direct contact with flooded soils; these include leafy greens, melons and cucumbers, and root crops typically consumed raw such as carrots, radish, etc. Risks will be lower for crops where edible portions do not have direct contact with the soil. Typical guidance from Cooperative Extension is to wait *at least* 30 to 60 days before replanting in flooded soils, the longer you wait to replant, the lower the risk.

Before replanting, whether later this season or next year, gardeners should consider the potential of chemical contaminants (eg., lead and other heavy metals) that floodwaters may have deposited in their gardens. Soil testing can screen for these heavy metal levels – the UVM Extension Agricultural and Environmental Testing Lab provides screening for a modest fee, see go.uvm.edu/soiltest. If results show no or very low levels, there is no need to be concerned about heavy metals, such as lead, and gardening can proceed as normal. An elevated lead level doesn’t necessarily spell the end of gardening but here, efforts should be made to avoid exposure to soils by following practices like maintaining a high pH, adding organic matter, installing raised beds, avoiding growing certain crops, and not growing a garden in the location if levels are too high to grow food.

Questions?

If you have questions, contact the UVM Extension Master Gardener Helpline at go.uvm.edu/gardeninghelp. We are open 24/7/365 for online questions (where you can submit photos of affected plants) and on Thursday mornings for phone inquiries during the season at 802-656-5421.

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