

Soil Testing on Farms and Gardens after Flooding

1. Soil testing can help identify human health risks associated with contaminants in soil, but it is not a way to guarantee there is no risk related to growing food in previously flooded soils.
2. What is "safe" is all about risk assessment. The guidance from federal and state regulators is that any edible parts of plants that were touched by flood waters, above or below ground, pose enough risk that they should not be consumed. This risk comes from potential contaminants that may have been in the water, given all the sites (septic systems, wastewater treatment, fuel tanks, etc.) that may be upstream from where food is grown.
3. A test that screens for heavy metals is a good place to start assessing flooded soil, as it is low cost, and if present, heavy metals do not naturally break down. Testing of a small number of Vermont produce farms after flooding in 2011 and 2023 did not find evidence of elevated metals levels, but it is advisable to test just in case.

The UVM Agricultural and Environmental Testing Lab charges \$10 for a heavy metals "screen" when added to a regular \$17 field soil test (\$27 total). The screen performed alone costs \$17. See <https://www.uvm.edu/extension/agricultural-and-environmental-testing-lab>. If elevated levels of any element are detected, a follow up test using a more rigorous extraction method should be performed. This test costs \$20 for the extraction plus \$10 per individual element (e.g. \$30 for lead only).

More information about testing for heavy metals on farms and gardens is in this fact sheet: <https://www.uvm.edu/sites/default/files/UVM-Extension-Cultivating-Healthy-Communities/soil-tests-heavy-metals.pdf>

