

# Urban Garden Heavy Metal Study

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Both at the Ecology Action Centre (EAC) and the Nova Scotia Agricultural College (NSAC), we celebrate the joy and importance of growing food in the city. Like many of you, we spent the summer and fall eating tomatoes, greens, and garlic out of our garden and sharing in the work of others across the Halifax Regional Municipality. In response to yours or other gardeners' concerns, we tested the soil of several sites for heavy metal contamination.

Because of industrial practices over the years, natural soil chemistry, lead and zinc in old house paint and motor vehicle emissions for example, some of the soil we tested was contaminated. While this is difficult news, it represents an exciting step towards better understanding our environment and working toward sustainable food systems in our community. With the results of this Heavy Metal Study in hand, we now have the opportunity to be part of an important worldwide effort to identify and develop safe gardening practices for urban environments.

## Recommendations

If you think your garden soil might be contaminated, don't despair! We're in the process of researching remediation - practices that improve soil health – and ways to mitigate the health risk of heavy metal contamination. In the meantime, here are some recommendations:

- If you can afford it (or apply for a small grant), have your soil tested for heavy metals and compare the results with CCME guidelines. We found that lead, zinc, copper, and arsenic are the most important metals to test for.
- If you're not sure, or you know that your site *is* contaminated, you can build raised beds and bring in clean soil from elsewhere. Choose a safe material to

build the beds with (like tiles or untreated wood) and line them with a barrier that reduces the migration of heavy metals from existing soil to your garden.

- In highly contaminated environments, replace the top 3-5 cm of soil in raised beds each year. This removes dust that may have settled from surrounding areas.
- Remember that “eating dirt” is by far the most common way that heavy metals enter the human body. Clean your hands after gardening and wash produce carefully. Avoid weeding on very dry days, or use the “chop-and-drop” method where you cut young weeds just above the soil and let the greenery fall to the ground as mulch.
- Since heavy metals tend to accumulate in roots, peeling root vegetables and growing leafy greens or fruits is a good start.
- Last but not least, adding organic matter to your soil reduces the amount of contamination that is taken up by your plants, as does adding wood ash, lime, or egg shells to neutralize the soil’s pH. These things also help your Nova Scotian garden grow!

**Please be in touch if you have any questions.**

**Contact:**

Carey Jernigan, UGP Outreach Coordinator, Ecology Action Centre

[urbangarden@ecologyaction.ca](mailto:urbangarden@ecologyaction.ca), 442-0202