

# Growing Safely in Philadelphia's Urban Soil

PHILADELPHIA  
FOOD POLICY  
ADVISORY COUNCIL



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# Table of Contents

Introduction .....	page 3
Why We Garden .....	page 4
Soil Safety & Gardening .....	page 5
Know Your Soil .....	page 6
Best Practices for Safe Urban Gardening .....	page 9
#1: Use Compost .....	page 10
#2: Use Raised Beds .....	page 12
#3: Cover Soil .....	page 14
#4: Keep an Eye on Children .....	page 16
#5: Leave Soil in the Garden .....	page 18
#6: Wear Gloves & Wash Hands .....	page 20
#7: Wash and Peel Produce .....	page 22
#8: Know What to Grow .....	page 24
Contact us .....	page 25

# Introduction

Urban gardening produces healthy and low-cost food for residents. However, urban soil may have contaminants from years of human activity.

In this guide you will find best practices for growing food safely in urban soil. You will also learn about local resources to make your garden safe.

Thanks to our partners who made this handbook possible:



# Why We Garden

Urban gardening offers many benefits to Philadelphians. By working in a garden, you get:



Fresh, healthy fruits and veggies for your family and community.



A beautiful green space in your neighborhood.



Exercise!



A fun hobby that kids, parents, and grandparents can do together.

That's why we should all garden! But let's make sure we are doing it safely.

*“If you are living in a city and you are growing fresh fruits and vegetables and you’re doing that physical activity”* then, as one local expert gardener explained, the *“positive benefits”* outweigh *“the potential negative”* aspects of gardening in urban soil.

# Soil Safety & Gardening

Healthy soil is good for your garden. Soil has nutrients that help plants grow. However, urban soil may have contaminants from years of human activity.

Old houses, factories, and gas stations leave behind heavy metals and other chemicals that end up in the soil. These contaminants can hurt your plants and your health.

This guide will show what you can do to protect yourself from possible contaminants in urban soil while gardening.



# Know Your Soil

Knowing more about your soil helps you make smart gardening choices.

## 1) Learn About Your Site's History

Let's say your garden is on a vacant lot where a house used to be. Many old houses had lead paint which may have ended up in your garden's soil. Knowing the history of your garden's land will help you understand if there may be contaminants in the soil. Use the exact address of your garden and the links below to learn about the site history.

- Geographic History Interactive Maps Viewer:  
<http://bit.ly/PhilGeo>
- Philadelphia Zoning Archives:  
<http://bit.ly/PhilZone>
- Sanborn Fire Insurance Maps:  
<http://bit.ly/1920Sanborn>

Hard copy maps are available at the Central Branch of the Free Library of Philadelphia.



The Environmental Protection Agency's Growing Gardens in Urban Soils Report helps you figure out what kinds of contaminants may be left over:

<http://bit.ly/EPAurban>

## **2) Test Your Soil**

Testing your soil will tell you if it is healthy. Nutrient-rich soil helps your plants grow. Tests can also show if your soil has higher than normal levels of heavy metals.

You can send soil from your garden to a lab listed below. You will need to collect and package soil from your garden and mail it to the lab to be tested.

### **Penn State Extension**

- Standard nutrient soil test for \$9
- Basic test for heavy metals for \$65
- <http://bit.ly/PSUtest>

### **University of Massachusetts**

- Standard nutrient soil test for \$15
- Basic test for heavy metals for \$55
- <http://bit.ly/UMassTest>



Five Loaves Two Fishes Garden at 55th and Jefferson.

# Best Practices for Safe Urban Gardening

Following these best practices will help you avoid any contaminants that might be in your soil. They are simple, easy, and affordable actions that many gardeners are already doing. This guide will show why these actions are good for soil safety too!

Contaminants in soil travel into the body mainly through your mouth. Though we all know not to eat dirt, soil can get into your mouth when:

- You breathe in soil dust.
- You touch your mouth after digging in the dirt.
- You eat produce that still has dirt on it.

The following best practices will help you avoid exposure to contaminants. And remember - in the words of one Philadelphia community gardener:

*“Be careful, but ... don’t let it stop you”.*<sup>9</sup>

# #1: Use Compost

**Mix compost into the soil that is already in your garden.**



Gardeners at 55th and Jefferson add compost to their raised beds with compost from the Fairmount Recycling Center.

Compost is an earthy-smelling material full of nutrients. It is created when organic material (such as leaves or food waste) breaks down.

Adding compost to your soil reduces the concentrations of contaminants that might be in the soil. Compost also helps grow healthy plants.

One community gardener in Philadelphia told us, *“We have a huge compost pile in our backyard. Everything is composted at our house.”*



Photo credit: Amanda Conlan

Pick up free compost (up to a 30-gallon bucket) at the Fairmount Recycling Center shown above. It is open Monday through Friday 7:30am - 3:00pm and Saturday 7:30am - 11:30am.

Fairmount Recycling Center  
3850 W. Ford Rd.  
Philadelphia, PA 19131

You can also compost at your garden or home with these tips from the EPA:

<http://bit.ly/HomeCompostEPA>

## #2: Use Raised Beds

**Plant in raised beds lined with a barrier and filled with clean soil and compost.**



Young gardeners build a new raised bed in their garden.

Raised beds are simple structures that many gardeners use to grow outdoors, but not directly in the ground.

Growing in raised beds filled with compost and store-bought soil reduces your exposure to the ground soil that may be contaminated.

This community gardener explains the importance of gardening in a raised bed: *“You can control the soil you put in, and just put a barrier” between the ground and the bed.*



Gardeners from the Smith-Barrick Garden fill raised beds with compost.

Cover the bottom of the raised bed with cardboard or landscape fabric. This creates a barrier between your garden bed and the soil on the ground.

Visit the Fairmount Recycling Center to get low-cost planks of wood recycled from trees in the Philadelphia Parks System.

## #3: Cover Soil

**Cover walkways and common areas to reduce contact with soil dust.**



Gardeners mulch the walkway to cover the soil.

Use mulch, wood chips, landscape fabric, bricks or stones to cover walkways. You can also plant grass to cover bare dusty areas. By doing this, you are less likely to walk in contaminated soil and bring it back to your home.

You can get free mulch and woodchips at the Fairmount Recycling Center. 14

## Cover the soil directly surrounding your plants using salt hay.



A gardener at 55th and Jefferson covers the soil around her plants with salt hay.

Salt hay is a material that helps keep moisture in your soil. Covering the soil around your plants with salt hay also prevents soil from splashing onto the leaves of the plants that you eat.

One community gardener explains that it is important, *“not”* to have *“a bunch of exposed soil”*.

## #4: Keep an Eye on Children

**Children should follow these best practices too!**



Children are still growing and developing. Because of this, exposure to contaminants like lead can be particularly bad for children.

*One community gardener said, “when I’m playing with kids in the garden ... I’m never really that aware or worried about what they’re doing with dirt, but I feel like now, I will be a lot more conscious of that”.*

**Make sure children wear gloves and wash their hands after playing in the garden.**



Children are more likely to put their hands in their mouths and might accidentally eat the soil. It is important to make sure children wash their hands after playing or helping in the garden.

Talk to your pediatrician about how to keep your child healthy and safe in an urban environment!

## #5: Leave Soil in the Garden

**Leave tools, boots, and gloves that may have soil on them outside your home.**



Gardeners leave their tools behind in their garden.

It is important not to track soil into your home. Soil will turn into dust around the house that you breathe into your mouth. Leaving gardening supplies outside reduces the chances of bringing soil home with you!

## Clean off or take off dirty clothes and shoes before going inside.



These young gardeners take off their gloves before heading home.

One gardener in Philadelphia comments, *“I’ve also learned that it’s important to really clean yourself up through the transition from the garden to the home. I never even thought about that.”*

## #6: Wash Hands and Wear Gloves

**Always wash your hands after gardening and working in soil.**



A young gardener uses soap to wash her hands after gardening.

Washing soil off your hands prevents you from accidentally getting soil into your mouth later! Make sure you use soap and water, not hand sanitizer.

## Wear gloves when you garden.



This gardener shows off her gloves while gardening.

Wearing gloves is a good way to prevent the soil from getting on your hands. Be sure to take your gloves off when you leave the garden so you don't bring soil into your home.

One community gardener explained, *“So I wear gloves. I didn't always do that. I've only started doing that this year, realizing how important that is.”*

## #7: Wash and Peel Produce

**Wash all produce from your garden before eating it.**



Scallions grown at the 25th and Tasker Garden.

Washing and peeling produce prevents you from accidentally eating soil.

It is especially important to wash leafy vegetables like lettuce, collards, spinach and kale. Soil backsplash can be hard to rinse off, so be thorough. Or you can remove the outer leaves of these plants before washing and eating.

## Peel root vegetables before eating them.



This gardener is ready to go home and peel the root vegetables she grows.

Root vegetables, like potatoes, turnips, and beets, grow deep in the soil. They are more likely to have soil on their surface. Peel these vegetables so that you don't accidentally eat soil left on the surface.

If you share what you grow with others, make sure you also tell them to wash and peel! One gardener explains, *“We hand out bags of food”* to our neighbors *“and tell them ... make sure you go home and wash it!”*

## #8: Know What to Grow

**Avoid growing root vegetables and leafy greens in contaminated soil.**



You are more likely to accidentally eat dirt left on root vegetables and leafy greens. Fruiting plants, like tomatoes, cucumbers, squash, apples, and peppers, are less likely to be affected by contaminated soil.

One community gardener wanted to learn, *“more about if you are concerned that your soil is contaminated. Maybe some things are better to grow than other things.”*



Follow these best practices to stay safe!

# Thank you for growing safely!

Questions?

Reach out to the  
Philadelphia Food Policy Advisory Council  
at [fpac@phila.gov](mailto:fpac@phila.gov).



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