CONGRATULATIONS ON TAKING THE FIRST STEP BY HAVING YOUR SOIL SCREENED FOR LEAD!

Understanding your results and taking appropriate actions are crucial for safe gardening or other land use. While lead occurs naturally in soils at low levels, urban soils and areas impacted by human activities often have higher levels due to historic practices (e.g., leaded gasoline and lead paint).

Gardening offers numerous benefits, but it's essential to minimize potential risks. An estimate of your soil lead levels can help you make more informed decisions about changes to your current land use, gardening practices, or other behaviors. **Important Considerations:**

1. **COLLECT ACCURATE SAMPLES**

   - Ensure your soil sample accurately represents your gardening area. Levels of lead can vary across a site or even in a small area.
   - Please refer to the “Collecting a Single Soil Sample (XRF screening)” factsheet for guidance on correctly collecting a sample.

2. **COMPARE TESTING METHODS**

   - **Home Soil Lead Test Kits:** Quick results but provide a wide range of estimated lead levels. Use as a screening tool only.
   - **X-Ray Fluorescence (XRF):** Quick results, done by a trained professional, but can be affected by soil conditions. Also, for screening purposes.
   - **Certified or university laboratories:** Provide the most accurate results but may take longer. Recommended if screening methods suggest high lead levels.

   **Note:** Soil lead levels are reported in parts per million (ppm) or milligrams/kilogram (mg/kg). They both show the concentration of lead in the soil, just in different units. A value of 1 ppm means that for every million parts of soil, there is 1 part of lead contaminant.

### TESTING METHOD COMPARISON

<table>
<thead>
<tr>
<th>Testing Method</th>
<th>Speed</th>
<th>Accuracy</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Soil Lead Test Kits</td>
<td>Quick</td>
<td>Wide range</td>
<td>Screening</td>
</tr>
<tr>
<td>X-Ray Fluorescence (XRF)</td>
<td>Quick</td>
<td>Moderate</td>
<td>Screening</td>
</tr>
<tr>
<td>Certified Laboratories</td>
<td>Slower</td>
<td>High</td>
<td>Laboratory</td>
</tr>
</tbody>
</table>

3. **FOLLOW UPDATED FEDERAL GUIDANCE**

   In January 2024, the US Environmental Protection Agency issued new guidelines regarding soil lead contamination. These guidelines are not regulatory but serve as regional screening levels (RSL) for residential areas.

   **Key Changes:**

   - **Lowered RSL:** The recommended threshold for soil lead contamination in residential areas has been reduced from 400ppm to 200ppm.
   - **Stricter Standards:** In areas with additional lead sources like housing or drinking water contamination, a more stringent limit of 100ppm is advised. This is particularly crucial in locations where children might face elevated risks.

   This change reflects updated science and assessments of health and environmental risks, particularly for children, from exposure to soil contaminants in various settings.
4. REVIEW LEAD LEVEL RESULTS AND TAKE NEXT STEPS

It's important to take appropriate actions based on your estimated soil lead levels. Follow the suggested actions in this table, along with the list of additional health and safety practices:

<table>
<thead>
<tr>
<th>Estimated Soil Lead Levels</th>
<th>Category</th>
<th>Suggested Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 63 ppm</td>
<td>Within typical background levels</td>
<td>No additional precautions necessary. No restrictions to crops grown.</td>
</tr>
<tr>
<td>63-99 ppm</td>
<td>Levels are above background levels</td>
<td>Increase use of soil amendments and barriers. Consider not growing root crops.</td>
</tr>
<tr>
<td>100-199 ppm</td>
<td>Levels suggest lead contamination</td>
<td>Increase use of soil amendments and barriers. Utilize raised beds with clean soil. Consider not growing leafy greens or root crops but focus on fruiting vegetable crops.</td>
</tr>
<tr>
<td>200-399 ppm*</td>
<td>Levels are above the USEPA guidance levels. Suggests significant contamination.</td>
<td>Only grow crops in raised beds with clean soil. Keep all other soil covered.</td>
</tr>
<tr>
<td>400–1,200 ppm</td>
<td>Designated as a 'soil lead hazard' by USEPA for bare soil in residential or child-occupied play areas, or if the average soil lead level in surrounding areas is 1,200 ppm.</td>
<td>Only grow crops in raised beds with clean soil. Keep all other soil covered. Clean-up may be required in some cases.</td>
</tr>
</tbody>
</table>

* Based on USEPA regional screening level guidance updated January 2024.

ADDITIONAL HEALTH & SAFETY PRACTICES

Regardless of your soil lead test results, follow these practices to keep lead from being ingested and minimize contact with contaminants:

Take steps to avoid ingesting lead:
- Minimize contact with soil dust.
- Wash hands thoroughly after gardening.
- Wash produce, especially root and leafy vegetables, before eating.

Healthy garden bed guidelines:
- Use raised beds with clean soil and compost, adding clean organic materials regularly.
- Avoid treated or painted wood, railroad ties, or telephone poles to prevent chemical migration.
- Cover garden beds with organic materials (compost, straw, bark mulch) to reduced dust and soil splash onto vegetables.
- Use stones or woodchips in pathways and non-growing areas for added protection.

Remember children are more affected by lead:
- Supervise children closely while gardening.
- Encourage regular handwashing after outdoor activities.
- Consider routine blood lead testing for children, especially if lead exposure is suspected.

Balance Soil Nutrients and pH
- Maintain a good soil nutrient balance and a pH near neutral (6.5-7).
- Test soil pH regularly using a soil pH test.
- Adjust pH levels as needed by adding amendments.

For additional resources and references, please scan the QR code or visit lead.newyorksoilhealth.org

This information is for educational purposes only and provides guidance based on the best available knowledge at this time. 4/2024