

Technical Soil Services for Community Gardens



About NRCS

Originally established by Congress in 1935 as the Soil Conservation Service (SCS), NRCS has expanded to become a conservation leader for all natural resources, ensuring private lands are conserved, restored, and more resilient to environmental challenges, like climate change.

NRCS works with landowners through conservation planning and assistance designed to benefit the soil, water, air, plants, and animals that result in productive lands and healthy ecosystems.

Objective

There is a renewed interest in community gardening and urban agriculture, as locally-produced fruit and vegetables are an important source of fresh food and nutrition and can foster a sense of community and accomplishment. NRCS New Jersey is committed to help communities ensure the safety and improve the quality of locally-produced fruits and vegetables, and to protect and conserve our soil and water resources in urban and suburban areas, as well as the rural environment.

Technical Soil Services

Healthy and successful community gardens require suitable site and soil characteristics. A general soil characterization can provide an overall evaluation of your soil conditions and identify potential problems. A Ground Penetrating Radar scan can determine depth to bedrock or the presence of any large buried artifacts. As soils in urban areas often contain high concentrations of lead and other trace metals which can be hazardous to plants, animal, and humans, portable X-ray Fluorescence (PXRF) analysis can determine the concentration of trace metals onsite, and whether there is a need for raised beds. Several soil health tests can assess if your garden soil is performing optimally from the physical, chemical and biological perspectives, ensuring the quality and quantity of your produce as well as the health of the local environment.

HELPING PEOPLE HELP THE LAND
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General Site and Soil Characterization

- Slope, aspect, surface stoniness
- Ground Penetrating Radar scan
- Gen. Physical & Chemical Properties
 - Texture, structure, consistence
 - Depth to restrictive layer
 - Depth to seasonal high water table
 - soil pH
- Trace Metal content (with pXRF)

Soil Health Indices

Physical

- Penetration Resistance (compaction)
- Infiltration (water movement into soil)
- Saturated Hydraulic Conductivity (water movement through soil)

Chemical

- pH and Salinity
- Cation Exchange Capacity
- Base Saturation
- Nitrate-Nitrogen, Potassium, Phosphorus

Biological

- CO₂ respiration

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