



\*\* This news release from K-State Research and Extension is available online at <https://ksre-learn.com/garden-soil-test>

Released: Feb. 17, 2025

### **Do I need to test my garden's soil?**

K-State horticulture expert recommends soil testing to prepare for spring gardens

*K-State Research and Extension news service*

MANHATTAN, Kan. — Most gardeners think soil testing only determines nutrient deficiencies, but the tests also help gardeners understand whether the soil contains adequate nutrients. Basic tests check the soil's pH, as well as the phosphorus and potassium levels.

"Most of the lawn and garden soil tests that come out of our soil-testing lab (at Kansas State University) show more than adequate levels of both phosphorus and potassium," K-State horticultural expert Cynthia Domenghini said. "If those nutrients are not needed, applying them is a waste of money and can be a source of pollution."

Domenghini urges gardeners to test their garden's soil before beginning spring gardening, particularly if the soil hasn't been tested in several years.

To do so, she says, take a sample from multiple locations in the garden and lawn. Samples should be taken at a depth between the surface and eight inches, depending on the area being sampled. Next, mix the samples together to total one pint of soil.

More information on taking an accurate soil test is available online from the [K-State Agronomy Soil Analysis lab](#).

According to Domenghini, the soil sample can then be submitted to your [local K-State Research and Extension office](#) to have tests done at the K-State soil testing laboratory for a fee.

"A soil test determines fertility problems, not other conditions that may exist, such as poor drainage, poor soil structure, soil borne diseases or insects, chemical contaminants or damage," Domenghini said. "All of these conditions may reduce plant performance but cannot be evaluated by a soil test."

Domenghini recommends submitting dry soil samples, as wet soil has different precautions.

“Wet soil samples should be air-dried before being submitted for testing,” Domenghini said. “Do not use artificial means of drying such as an oven or microwave as such treatment may result in inaccurate readings of nutrient levels.”

Soil tests should be used as a tool to identify nutrient deficiencies, Domenghini said, but often they do not tell the whole story of other factors affecting plant growth.

Additional factors that can affect plant growth include:

- Not enough sun.
- Poor soil physical characteristics.
- Walnut trees (walnuts give off a natural herbicide that interferes with the growth of some plants, such as tomatoes).
- Tree roots.
- Shallow soils.
- Improper watering.

Domenghini and her colleagues in K-State’s Department of Horticulture and Natural Resources produce a [weekly Horticulture Newsletter](#) with tips for maintaining home landscapes and gardens.

Interested persons can subscribe to the newsletter, as well as send their garden and yard-related questions to [hortsupport@ksu.edu](mailto:hortsupport@ksu.edu), or contact your [local K-State Research and Extension office](#).

-30-

**FOR PRINT PUBLICATIONS:** Links used in this story

K-State Horticulture Newsletter, <https://hnr.k-state.edu/extension/info-center/newsletters/index.html>

K-State Research and Extension local offices, <https://www.ksre.k-state.edu/about/statewide-locations.html>

K-State Research and Extension is a short name for the Kansas State University Agricultural Experiment Station and Cooperative Extension Service, a program designed to generate and distribute useful knowledge for the wellbeing of Kansans. Supported by county, state, federal and private funds, the program has county extension offices, experiment fields, area extension offices and regional research centers statewide. Its headquarters is on the K-State campus in Manhattan. For more information, visit [www.ksre.ksu.edu](http://www.ksre.ksu.edu). K-State Research and Extension is an equal opportunity provider and employer.

**For more information:**

Cynthia Domenghini  
[Cdom@ksu.edu](mailto:Cdom@ksu.edu)