

Testing Your Soil



What is a soil test?

A soil test measures soil pH and available nutrients in the soil. It cannot identify insects, diseases, or chemical pollutants, and cannot answer questions about soil composition, drainage or compaction.

Why test the soil?

Testing the soil gives you accurate information about the type and amount of fertilizer or amendment to apply in order to maintain good plant health. This helps protect the environment, and can save you money and time.

Available soil tests

Many different analyses are conducted at the KSU Soil Testing Lab. The most common tests for Kansas soils are for pH, phosphorus (P), potassium (K), nitrate (NO₃), and organic matter.

Package #1 (pH, P, K) This is sufficient for most homeowner lawns, vegetables and flower gardens. Recommend for gardeners using traditional chemical forms of fertilization. \$20.00

Gardeners Package (pH, P, K, Organic Matter and Nitrate levels.) Recommended for organic gardeners or those using compost, manure, or other organic and nitrogen rich products in their fertility program. \$30.00

Package #2 (pH, P, K, organic matter, Nitrate and Zinc). This package is rarely needed for home gardeners unless they grow crops that require zinc such as fruit and nut crops. \$25.00

Package #3 (pH, P, K Organic Matter, Calcium, Magnesium, Sodium and CEC). This package is recommended only for specialty crop growers. (not recommended for home gardeners.) \$25.00

Heavy Metals Testing Local soil for gardening may have the potential to be contaminated with metals from lead based paint, manufacturing, or industry. Gardening in these soils could be potentially harmful. Complete Heavy Metal Panel tests for these heavy metals; Lead, Arsenic, Cadmium, and Chromium \$35.00. First metal \$20.00. Additional trace elements \$5.00.

How to take a good soil sample

Test results will only be as reliable as the sample collected, so proper methods are important. Please follow these steps:

1. Using a clean shovel or soil probe, dig down to a depth of: 3 inches for lawns, 6 inches for vegetables, flowers and small fruits, and 10-12 inches for trees and shrubs.
2. Take at least 4-5 samples from the area to be tested. Mix samples together in a clean, plastic container. Remove all plant material.
3. Bring two cups of the mixed soil to the Johnson County Extension Service in a re-sealable quart-size plastic bag.

Create separate samples for each area you want to have tested. Avoid sampling overly wet soil, and soil that has been recently fertilized. Samples should be dry. **Do not use heat to dry your sample.**

Soil test forms

Forms for **Agriculture, Flowers and Ornamentals, Lawn and other Turf, and Vegetables and Fruit** are available online www.johnson.k-state.edu (click on Lawn and Garden, then Soil testing), or at the Extension Office.

To give you the best recommendations, we need to know about fertilization practices, soil amendments, mowing (turf) and any special problems in the test area.

Special conditions or crops may require special tests. Please ask your Extension agent for advice on special testing.

Salt and Alkali \$20.00, Trace Elements \$5.00 each, Organic Matter \$8.00, CEC \$20.00, Soil Texture \$20.00.

Samples are kept in storage at K-State for a short time so they may be available for additional analysis.