ʻĀINA in Schools
Growing healthy keiki, schools, and communities
A program of the Kōkua Hawaiʻi Foundation

How to...
Test Your Garden Soil

The University of Hawaiʻi (UH) offers a soil testing service to gardeners, farmers, and schools.

WHY TEST YOUR SOIL?
Testing your school garden soil is important for plant and human health. By understanding the pH and nutrient levels present in your soil, you can save time and money and protect the environment by applying only the right types and amounts of soil amendments. If contaminants are suspected, a test for heavy metals may also be preformed. Note: Be sure to only use organic (e.g., OMRI certified) and non-toxic ingredients in school gardens.

TOOLS
Clipboard, paper, pencil, bucket, trowel, zipper sandwich bags, thumbtack, permanent marker, measuring cup (optional).

METHOD
1. Create a map of the garden where soil samples are being taken. Be sure to number the sample sites and mark the numbers on the sample bags.
2. NOTE: If soils appear substantially different (in color/texture, etc.) submit them for testing as separate samples.
3. Sample the top 8 inches of soil.
4. Take 5 to 10 subsamples (scoops) from different areas in your testing zone and mix them together in the bucket to create a final sample.
5. Scoop the final sample into a labeled zipper sandwich bag (approximately 2 cups).
6. Take samples from other areas as needed; add to separate labeled bags.
7. Use the thumbtack to make several small holes in each bag so the soil can breathe.
8. Complete CTAHR's "Soil Sample Information Form" (up to 6 samples per form) and mail or deliver to the Agricultural Diagnostic Service Center at UH Mānoa.

MAIL OR DELIVER THE FORMS AND SAMPLES TO:
UH CTAHR
Agricultural Diagnostic Service Center
1910 East-West Rd.
Honolulu, HI 96822

RECOMMENDED TESTS TO GET:
- S2 - pH and Extractable Nutrients: This test indicates the soil pH level (a measure of acidity/alkalinity) and the levels of calcium (Ca), magnesium (Mg), phosphorus (P), and potassium (K) in the soil, all of which are important nutrients for healthy plant growth. Cost is $12 per sample.
- S3 - Total Nitrogen: Nitrogen (N) is required in large quantities by most crops; however, as nitrogen does not remain in the soil for very long, this test is not critical based on the fact that nitrogen should be added frequently (choose natural sources of nitrogen such as finished compost, green mulches, composted manures, and vermicast). Cost is $7 per sample.
- S7 - Metals: If there is a possibility of heavy metal contamination in garden soil, this test will discover levels of arsenic (As), cadmium (Cd), chromium (Cr), lead (Pb), and others. Cost is $50 per sample.
- Kōkua Hawaiʻi Foundation Project Grants may be used to pay for soil testing for school gardens. kokuahawaiifoundation.org/projectgrants

CONTACT WITH QUESTIONS:
UH CTAHR, Agricultural Diagnostic Service Center
956-6706, adsc@ctahr.hawaii.edu

IMPORTANT REFERENCE DOCUMENTS:
- Testing Your Soil: Why and How to Take a Soil-Test Sample (CTAHR, 2004) and Soil Sample Information Form: ctahr.hawaii.edu/oc/freepubs/pdf/SCM-9.pdf
- Analytical Service Fees (ADSC): ctahr.hawaii.edu/site/downloads/adsc/price_list.pdf