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SUMMARY

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Soil Testing

by Emma Connery, UC Master Gardener Program Coordinator

Soil testing can save you money and protect the environment.

Q. I am interested in having some soil testing done on my property. Do you offer this service? If not, would you be able to recommend someone who does? I would like to improve my soil by planting a cover crop this fall and have heard that it would be best to have my soil tested so as to plant the correct crop for the best benefit.

A: Unfortunately, Master Gardeners do not perform soil testing for the general public. We do have a list of commercial soil testing laboratories that will perform soil tests for home gardeners but we cannot recommend one over another. You can download the list from the UC Master Gardener Program of Contra Costa County website at the following link:

<http://ccmg.ucanr.edu/files/51308.pdf>

Soil testing is an important element of nutrient management. Test results will indicate nutrient availability, thus

taking the guesswork out of fertilization. Soil testing eliminates the over-use of fertilizers, thereby saving money and protecting the environment while maintaining good soil and plant health.

Commercial testing:

Commercial lab tests are more accurate and test for more parameters than home soil test kits. They typically have standard packages for which nutrients and other soil parameters are tested, and those test packages may vary among laboratories. We suggest you contact several on the list and ask them which tests they perform or recommend for your situation, the cost of those tests, and whether they provide interpretation of the results including fertilizer guidelines and other recommendations.

If you suspect that you have a soil contaminant such as heavy metals or petroleum distillates, etc., you will want to discuss this with the lab. All inquiries



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should be made prior to taking any soil samples as each lab may have their own sampling recommendations. The soil sampling process is important because test results are only as good as the soil samples taken.

Typical tests might include the plant availability of macronutrients - nitrogen (N), phosphorus (P), potassium (K), calcium (Ca), magnesium (Mg), and sulfur (S); some micronutrients like boron (B) and zinc (Zn); pH, which influences the availability of macro and micro nutrients; sodium (Na) and soluble salts, organic matter (O.M.); and cation exchange capacity (CEC) which measures the soil's capacity to retain or release elements.

Home testing kits:

A test from a commercial laboratory can be relatively expensive but it is a good investment if you are planning a large or costly garden project or if your current landscape is not performing well. If your project is relatively small though, a home soil test kit may suffice. Home soil test kits are available at garden and home centers and are inexpensive and quick. There is variability in the accuracy of these kits but they are probably accurate enough to get you started. A home kit will only test for N, P, K, and pH. The kits include detailed instructions which may vary from brand to brand, so follow the instructions that come with the kit you purchase.