Soil Analysis

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Before making any major decisions about crops, you need to have your soil analyzed for its chemical properties. Many foothill soils are clay or decomposed granite and fairly acidic. At lower elevations, there are more neutral and slightly alkaline soils. For most crops, a slightly acidic soil is fine, but some crops may require a soil more or less acidic than yours, which can require major inputs of amendments.

You need to have your soil tested by a commercial lab that will give you accurate information for a baseline. Your amendment and fertilizer program will depend on the results of your soil tests, so in order to avoid costly errors, it is best to use a commercial lab rather than home soil test kits. UC Cooperative Extension does not do soil testing.

Soil labs often have a specific protocol they want you to use for sampling your soil, so call and ask before sending off samples. Focus on sampling the areas that you intend to plant. Generally, you will sample an area several times and mix the samples. If some areas of your property have visibly different soil or vegetation, you may need to do separate soil samples. If so, do not mix the samples, it may give you misleading information.

To take a soil sample:

1. Choose sample sites by walking in a zigzag pattern over your field, taking about 10 samples. Avoid edges or areas that are obviously different.
2. Scrape the organic matter (grass, leaves, etc.) off the surface of the sample site.
3. Dig a small hole, 6-12 inches deep. Mix up the soil in the hole and place about a cup of the mixed soils in a plastic bucket. Do not use a galvanized bucket as it may contaminate the sample.
4. Mix all the samples together in the bucket. Then take 1-2 cups and put it in a bag to send to the lab for analysis.

You will need a range of lab tests to provide a baseline for soil management. Most labs have a basic package which is fine to start. Have your soil analyzed for pH (acidity or alkalinity), and soil nutrient status (N,P, K at a minimum). You will want to know CEC (Cation Exchange Capacity), a measure of native fertility, organic matter, ppm of Ca, Mg, K, and Na (base saturation %), and the Ca:Mg ratio.

Use a California lab to get accurate information. If you tell the lab before they do the testing what crops you intend to grow, they can provide recommendations on the nutrients or amendments needed. Most labs will give guidance on organic amendments, if you specify that it is an organic farm.

Nearby labs Include:

A & L Western Ag Labs, Inc.
1311 Woodland Ave.,Suite1
Modesto, CA 95351
Phone: 209.529.4080
209.529.4736 fax
http://www.al-labs-west.com/

Fruit Growers' Lab
(formerly Monarch Labs)
563 E. Lindo
Chico CA 95926
Phone: 530.343.5818
530.343.3807 fax
http://www.fglinc.com/

Sunland Lab
11419 Sunrise Gold Cir #10
Rancho Cordova, CA 95742
Phone: 916.852.8557
http://sunland-analytical.com/

Placer County 530.889.7385 Nevada County 530.273.4563
http://ucanr.edu/sites/placernevadasmallfarms

United States Department of Agriculture, University of California, Placer and Nevada Counties cooperating.