

Oregon Wine Advisory Board Research Progress Report

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Soil Testing and Grapes

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Soil testing for a perennial crop, especially a crop new to Oregon such as grapes, raises three common questions from growers: is a soil test desired, how many samples are needed and what do the results indicate?

Soil samples are needed before planting a vineyard. These samples provide a record of initial soil test levels and an indication as to whether fertilizers or lime may be required prior to vineyard establishment. If needed, lime and some fertilizers should be applied at this time since they can be mixed into the soil without damaging existing roots.

The number of soil samples required depends upon the soil variability. The more variable the topography, soil types, and drainage, the more samples will be needed. Generally, separate soil samples are taken for different areas that can be fertilized separately. A hill may require several samples, e.g., crest, slope, and foot slope, depending on the shape of the terrain and its size. A soil survey will provide general ideas about soil variation, but it will not replace an on site evaluation for changes in soil color, texture, and depth. If you have questions about soil sampling contact your local extension agent or request OSU Extension Circular 628.

Soil testing can provide approximate threshold values below which fertilizer or lime should be applied. Some guidelines for minimum soil test levels at grape stand establishment are:

pH	5.3-5.8
P	5-10 ppm
K	75-100 ppm
B	.25 ppm

Nutrient deficiencies are generally rare for grapes grown in Western Oregon. However, if your soil test values are near these levels at establishment, a fertilizer application may be beneficial to prevent deficiencies and promote early growth. A soil test and fertilizer application at this time are a small expense when the cost of vine establishment is considered.

Once initial soil samples are taken and vines are established, tissue testing or visual deficiency symptoms provide a better indication of next year's fertilization needs than does annual soil testing. With grapes, monitoring soil test levels by periodically testing every 3 to 4 years will allow you to anticipate possible problems. A record of soil test levels combined with yield, weather, and tissue analysis data can provide an indication of nutritional trends that may exist. These records are also important when trying to assess and solve problems. Soil testing does not replace one's experience,

however, but is used as a supplement to it. This is especially true for crops such as grapes where research is limited and recommendations are knowledgeable guesses.

In summary, soil testing for vineyards is most useful before establishment, when amendments such as lime can be easily applied and incorporated into the soil. Once vines are fruiting, soil testing should be used for records and as an indication of trends that may be occurring. These are guidelines, use good judgment in their application.