

## SOIL SAMPLING FOR GYPSUM REQUIREMENT

When water penetration problems are apparent, the gypsum requirement test should be run. If penetration problems are not reported, look for the following symptoms: stunted, poor growth in groves that are expected to appear healthier than they do, areas that are irrigated with a water high in bicarbonate, and hard pan areas that are not a result of mechanical compaction. Another indicator of the need for the gypsum requirement tests, is a soil report showing an SAR above 5.0. If SAR was not run, a pH above 8.4 may indicate a need for gypsum.

### SAMPLING

If a problem layer of soil can be identified, collect a quart-size soil sample from this area. For example, if it is known that irrigation water is not penetrating below six inches, sample the upper six inches of soil.

When problem layers cannot be identified, take composite core samples throughout an area, mix these well, and send the lab at least a full quart of volume. As always, use a coarse screen to eliminate stones and debris. Penetration problems seem to occur in the upper two feet of soil, so cores taken 0-2 feet are appropriate if a problem layer is not identifiable.

To properly test a soil for gypsum requirement, a sample of the water used to irrigate that soil should be used. For each soil sample submitted to the lab, one-half liter of water is needed.

Additional soil tests are desirable in determining if there is a chemical problem with a soil. Alkalinity, SAR, pH, lime, saturation percentage, and particle size distribution all help to interpret a problem. When requesting additional tests, provide additional soil (usually one more quart of volume).

### When in doubt

If you have any questions or require assistance relating to the above, please visit [www.fglinc.com](http://www.fglinc.com) or call Fruit Growers Laboratory's Agronomic Services.

