

How to take a leaf and soil sample

Wilna Stones

SUBTROP

A well fertilised litchi orchard will produce the desired yield to sustain profitable litchi farming. The correct time of sampling is during mid-September to mid-November. The following guidelines are applicable.

Leaf samples

- Only fruit bearing trees should be sampled.
- Sample different cultivars separately.
- Select 20 trees throughout an area or orchard, not greater than 3 ha, which is representative of the average trees in that area or orchard. Mark these trees as they will be the indicator trees of that area or orchard. This will enable the grower to keep record of that orchard's nutrient trends and history, which is a very important tool in litchi growing.
- Sample four leaves / tree at shoulder height.
- Sample the middle pair of leaflets attached to a 6 to 8 months old terminal shoot below the litchi fruit cluster as illustrated in Figure 1.
- Sample leaves in the morning after the dew has dried off.
- Sample only healthy looking leaves from healthy looking trees.
- Wait ± 2 weeks after heavy rainfall before sampling leaves. This will provide ample time for nutritional levels to stabilise.



Figure 1. Correct leaves to be sampled for a leaf analysis (Cultivation of Litchi, ARC, pg. 115).

- Leaves should be put in a clean paper bag, delivered immediately to the laboratory if possible, but not later than two days after sampling to the laboratory. The leaves should be kept cool (in the refrigerator, not the freezer) after sampling.

Remember to clearly mark the leaf sample. Information such as the date, the orchard number and litchi cultivar should be indicated. Write this information on masking tape or a label and stick it on the paper bag. Do not write on the bag itself.

Soil samples

- Soil samples should be taken at the same indicator trees as where the leaf samples were taken.
- Clear the soil from any mulch or fertiliser before the sample is taken.
- Take the soil sample 500 mm away from the tree stem at a depth of 300 to 500 mm (where the most feeder roots are situated).
- Top and subsoil can be mixed.
- A sample of about 2 kg is taken from the composite sample and dispatched in a clean, strong plastic bag (not a fertiliser bag).
- Once again, keep the sample cool and marked clearly.

Problem areas within an orchard

Sometimes there are areas within a healthy orchard that has a problem. There could always be a variety of reasons behind this problem, but if malnutrition is suspected, take the leaf and soil analysis of this area separately from the rest of the orchard. The same principles apply to this area with regards to sampling as for the rest of the healthy orchard. ST

Chairman's desk

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to 20 tons/ha achieved by some operators.

- A special mention must be made in respect of all the researchers at the ARC. We are blessed to have a group of very competent interested individuals who are always ready to grapple with our needs.
- The planned restructure of our business model, as mentioned, is proceeding well. Many hours of interaction and advice has taken place with the key players from across the country. The challenge is to resolve the intractable collection of levies / income from 80% of our members who do not contribute a bean to our Association, be it monetary or their participation. Thankfully a hard core of very serious players have managed to keep our Association alive and well. The restructure should allow us to double or treble our expenditure on research, and the gathering of intellectual knowledge. We are determined to improve our abilities for the serious minded players who want to be part of SALGA and a hopefully more productive future.

This year's crop appears to be setting well across the country, although we have had some very unusual weather patterns. It is a serious challenge to understand the drivers of this potentially superior crop.

The eventual melt down in our currency has now started to really bite. This is good news for our exports but will not help us in the long run. Our inept labour legislation and the juvenile antics of the unions will have a serious effect on our operations and the success of RSA inc. The crying tragedy is the consequential lack of job creation, crime and lawlessness.

I wish you well with this year's harvest. Please do not hesitate to contact me or John Spear, if you are concerned about any issue.

Gavin Hardy