

LEAF ANALYSIS

Analyses:

N, S, P, K, Ca, Mg, Cu, Zn, Mn, Fe, B, Na, Mo, Cl, & NO₃.

As a general rule you should collect the youngest fully expanded leaves available.

General sampling instructions

- In designing your sampling plan try to select trees/ bushes etc of the same variety along the sampling path. Pick a random pattern to collect the leaves from and mark the trees you collected the samples from. This way, when sampling again, you can collect from the same trees or trees within that area to get more consistent historical sampling data
- Exclude pollinators and diseased or otherwise abnormal trees and bushes.
- Exclude dusty or soil contaminated plants and do not sample fields within 3-5 days after being sprayed with pesticides or foliar nutrients.

IMPORTANT - UNLESS OTHERWISE ADVISED, PLEASE ENSURE THAT YOU SEND AT LEAST ABOUT 200 GRAMS (ABOUT TWO HAND FULLS) OF FRESH PLANT MATERIAL FOR EACH SAMPLE REQUIRING LABORATORY ANALYSIS.

Method:

- Collect youngest mature leaf at mid portion of the current seasons non-fruiting laterals (extension growth), taken at shoulder height.
- Collect 4-5 leaves per tree from a total of 25-30 trees and collect at least 200g of leaves
- Select first year leaves that have formed the waxy surface (especially important in January). Do not collect the brand new leaves from the tip, collect leaves behind those brand new leaves that are fully formed first year leaves
- Mark the trees you collected from so future samples can be collected from the same trees

- Analyse the leaf sample results against the soil sample results to marry the results together. This will help in analysing the soil biology's performance in making the soil nutrients available, the total nutrients that are in the soil and what the tree is taking up and using.
- This will give you a more precise understanding of what nutrition is required (soil and/or foliar nutrition) and not only save you money but improve your tree and soil health performance.
- Over fertilising can lead to soil issues and overall tree and soil health under performance

Table. Critical nutrient levels from July (November in Australia) olive leaf tissue analysis from sub terminal leaflets of current year's non-fruit bearing growth.

Element	Deficient	Sufficient	Toxic
Nitrogen (%)	1.40	1.50 – 2.00	
Phosphorus (%)		0.10 – 0.30	
Potassium (%)	0.40	> 0.80	
Calcium (%)		> 1.0	
Magnesium (%)		> 0.10	
Manganese (ppm)		> 20	
Zinc (ppm)		unknown	
Copper (ppm)		> 4	
Boron (ppm)	14	19 – 150	> 185
Sodium (%)			> 0.20
Chlorine (%)			> 0.50