

Comments on Vineyard Nutrient Test Data

The objective is to compare the main features of the soil, petiole, leaf and juice test data from the vineyards to identify factors that may be influencing fruit yield and quality. Through this process, interpretation criteria currently used for soil, leaf and petiole tests can be critically examined. Analytical testing of juice may be further developed as a management tool.

Tyntesfield:

Fruit yield 12.8 t/ha

- Phosphorus levels in petiole and juices are high despite soil levels at the low end of the suggested range. Increasing P level down the profile is interesting, P usually decreases down the profile.
- Organic Matter level is normal for grapes.
- Ammonium-N in the juice was slightly low.

Gifford:

Fruit yield 10.25 t/ha

- Nitrogen in the petiole was at the top end of the normal range however in the juice was tending low.
- Soil test in the low vigour area showed high phosphorus and potassium and low pH. Indication is that low pH is the issue rather than other nutrients.
- Potassium was very high in the petiole but “normal” in the juice test. Soil test level was not high.

Tohu:

Fruit yield 7.15 t/ha (young vines) and known for quality wine.

- Nitrogen in the leaf blade was quite high in December, dropping back to ‘mid-range’ in February.
- Soil Organic Matter level quite high for grapes and is associated with nitrogen supply to vines during the growing season.
- Juice N level was high and ammonium level was higher than that for the other samples.

What does all this information mean?

- Petiole test levels for nitrogen and potassium at flowering do not predict the status of these nutrients for the whole season. Interpretation of petiole test results should consider soil test results and vine vigour assessment.
- Low soil pH appears more likely to affect vine vigour than the levels of nutrients such as P and K.
- High juice (total) nitrogen level and higher ammonium levels at Tohu compared to the other vineyards may not be bad for wine quality.