

Passionfruit

Sampling Notes

The nutritional status of passionfruit is monitored using soil tests and plant analysis. Annual monitoring is important to help sustain optimum levels and avoid nutritional disorders. If disorders do occur, rapid diagnosis is necessary to assist correction.

There has not been very much research undertaken for the growing of passionfruit in New Zealand. Information in this Guide is based largely on published Australian data.

Leaf

Sampling Time: September, prior to active vegetative growth and fertiliser application.

Plant Part: Youngest mature leaf (blade & petiole).

Collect From: Well developed, actively growing laterals from vines selected at random from throughout the block.

Quantity per Sample: 20 - 30 leaves.

Recommended Tests: Basic Plant (BP).

Comments: To help diagnose an obvious problem, leaves showing the first signs of the distinctive symptoms should be collected as soon as abnormalities appear. If sampling outside the normal sampling time it is useful to take a second sample of similar, healthy leaves from nearby unaffected vines for analysis as a comparative standard.



Soil

Sampling Time: Prior to crop establishment and annually at any time of the year, although autumn to early winter is recommended.

Core Depth: 15cm.

Collect From: From the root zone of the vines.

Quantity per Sample: 12 - 20 cores.

Recommended Tests: Basic Soil (BS).

Comments: Separate samples should be taken from blocks that differ in age, cultivar types, tree performance, soil types, topography and fertiliser history.

Where fertiliser has been broadcast, sample from the root zone of the vines. Where fertiliser has been banded, samples should only be taken from areas under the vines which have previously received fertiliser.

If the orchard has herbicide treated strips, then it is best if these are sampled separately from the grassed areas between rows. Quite different nutrient levels may exist between these two areas.

When sampling prior to orchard establishment, a 15 - 40 cm depth sample should also be taken, primarily to check the sub-soil pH.

Comments

Problems with excess nitrogen have been reported. Luxurious growth may occur, and this may adversely affect fruit quality.

Known nutritional deficiencies in New Zealand include zinc and manganese deficiencies.

Zinc deficiency manifests in small leaves, distorted growing tips and yellow interveinal mottling of young leaves.

Passionfruit require free draining soils to minimise the risk of root disease.

Manganese deficiency is usually induced by high soil pH (pH>7).

There is little published data on optimum soil test levels. The Normal Range levels shown above are those typically found in high producing orchards.

References

Fertiliser recommendation for horticultural crops. HortResearch HortNET, 1997.

Blackmore, L.C; Searle, P.L and Daly, B.K. 1987. Methods for chemical analysis of soils. NZ Soil Bureau Scientific Report 80. NZ Soil Bureau, DSIR.

Reuter, D. J. and Robinson, J. B. (Eds) 1997. Plant analysis. An interpretation manual. Second edition.

Disclaimer

Normal Range levels shown as histograms in test reports relate specifically to the sampling procedure provided in this crop guide. The Normal Range levels in test reports and Comments provided in this Crop Guide are the most up to date available, but may be altered without notification. Such alterations are implemented immediately in the laboratory histogram reports. It is recommended that a consultant or crop specialist be involved with interpretations and recommendations.
