

How Healthy Are Your Roots?

This topic has been mentioned many times but it is the single most important factor that you need to address if you want a viable avocado orchard.



Horticultural
Notes

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Let me begin by saying from the data I have, unhealthy avocado roots remain the primary cause of lower than optimum production in Australia and the situation is not improving.

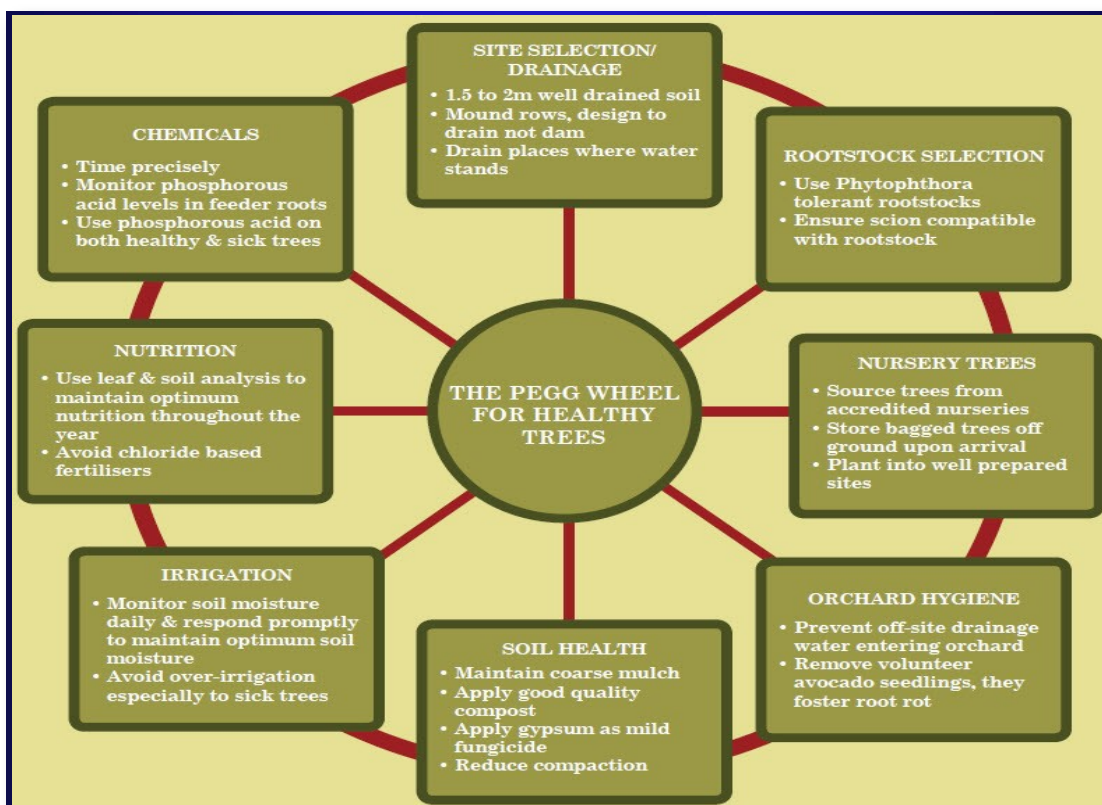
The national average production is hovering around 10 t/ha. I work with some larger growers who have average yield of 22–27 t/ha.

Which means, for the average to be 10 t/ha, there are many producing less.

With the forecast production increases over the next 10 years, resulting from the plantings since 2011, there is only one message. For you all to remain viable, production/ha needs to be up near 20t.

As highlighted in the past, when you increase your production, your unit production cost decreases.

To produce healthy trees you needed to start before planting. This is clearly seen in the integrated approach as outlined by Ken Pegg in his “Pegg Wheel” seen below:



With Agri-Fos applications, it is still surprising how many growers are not getting the treatment rate correct.

I developed the root testing service, as I saw there were many aspects of Agri-Fos applications that were not being carried out correctly. This service has been running for just on 20 years. It is still surprising to note the many samples that are still coming back at levels that are lower than where they need to be at this time of year.

One of the keys to monitoring root phosphorous acid levels is to take a sample early enough in your application period, and

if the result comes back low, you have sufficient time to correct the problem.

Depending on your growing region, by the time this newsletter is published, you will be coming to the end of the most important application period for Agri-Fos.

At this time of year, your root phosphorous acid levels should be well over 100mg/kg. At a recent analysis of the results I have, only 29.7% of the samples that are at 100 mg/kg or above.

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In June, your root phosphorous acid levels should be well over 100mg/kg. A recent analysis of the my results, only 29.7% of the samples are at 100 mg/kg or above.

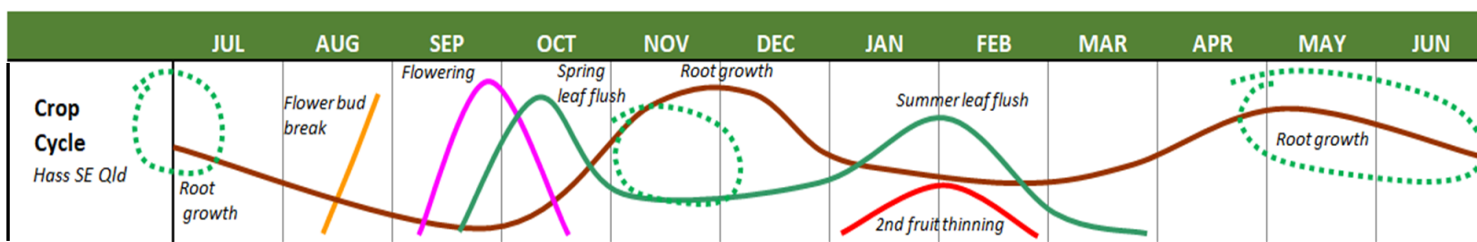
Getting It Right

The errors that growers are making include:

- Spray concentrations are too low
- Spray volume is too low
- Application timing is incorrect – too early or too late
- Number of applications is insufficient

Simon Newett recently put together a graphic illustration to help growers optimise their application times of Agri-Fos.

This is highlighted below.



**Correct
Application
Times:**

The following yields over the last 4 years from one of those growers, show what can be achieved when all aspects of the Pegg Wheel are adhered to and you keep a phosphorous acid root level above 100mg/kg.

To get consistent, good results, you need to do everything right. I have records of five growers who keep their root levels above 100 mg/kg all year round, water to the needs of the trees and fertilise to the crop load.

Season	Yield (t/ha)
2016	21.5
2017	21.6
2018	42.9
2019	26.1