

KVH has now completed two rounds of monitoring in the Whangarei region.

The first round on 26-28 September 2015 focused on the ten orchards immediately surrounding the positive orchard – total of 29.41ha.

Samples were taken from four orchards and all were returned Not Detected.

The second round of monitoring occurred on 19-21 October and focussed on the 16A blocks in the controlled area and the closest orchards to the positive orchard. Total of 11 orchards representing 41.2ha.

Samples were taken from three orchards and these also were returned with Psa Not Detected.

There are several messages for growers from information gathered on these rounds of monitoring.

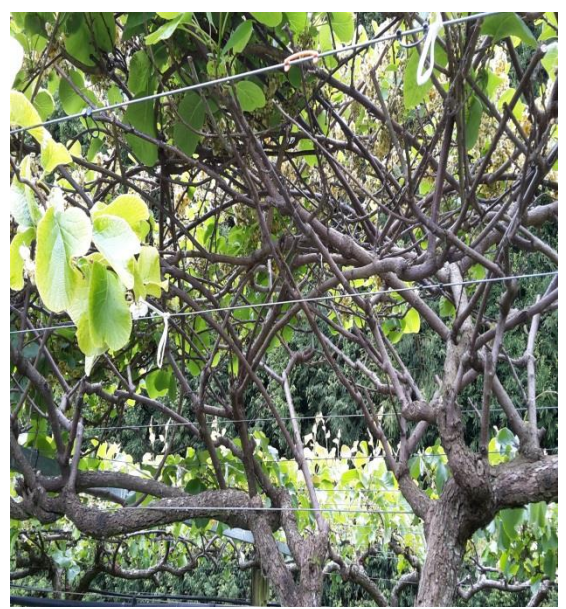
### 1. Male management.

It is important that male vines are managed well. History has shown us that males tend to be more susceptible to Psa once it is in a region- particularly older males such as Matua (present in Hayward blocks) and also M91 (present in many G3 blocks). Many growers in regions where Psa has been present for some time are reducing their risks by replacing susceptible males with less susceptible varieties such as Chieftain (in Hayward blocks ) and M33 (in G3 blocks).

Key messages:

- Manage male vigour to minimise the amount of pruning required throughout the season.
- Tip squeeze new spring shoots and button cut strong canes.
- Maintain medium to low vigour wood.
- Consider applying an elicitor approximately seven days prior to male pruning.
- Continue pruning rounds through summer. In late autumn reduce height of late grown cane.
- Assess the health of your male vines.
- Replace susceptible male varieties with more tolerant varieties where practical
- Ensure you have a plan for future pollination requirements if males need to be cut out.

*Figures 1, 2 3: Whangarei males*





*Figure 4: Well managed male in a Psa environment*



## **2. Gold 3 spotting**

Yellow blotchy spotting was noticed on a number of leaves on Gold 3 vines in many orchards monitored. There was presence of thrips in some of these orchards and the small holes evident on leaves was considered likely to be attributable to insect damage. This spotting was not considered characteristic of Psa.

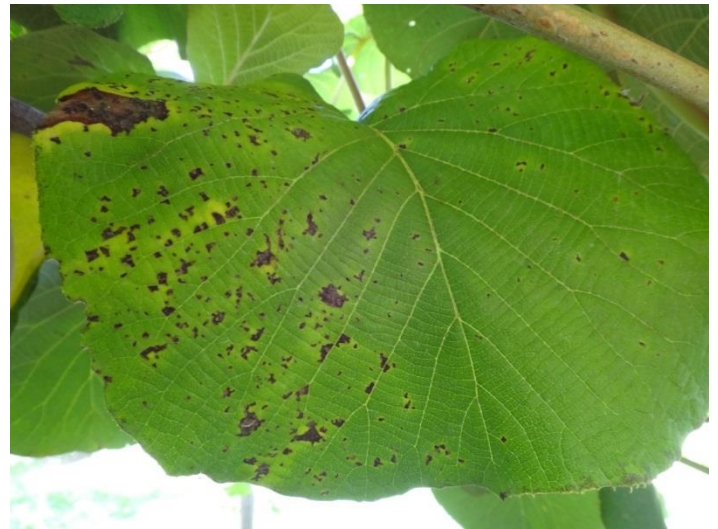
Leaf samples were taken from a couple of orchards and lab results came back Not Detected as expected.

The three pictures below indicate the type of spots observed.





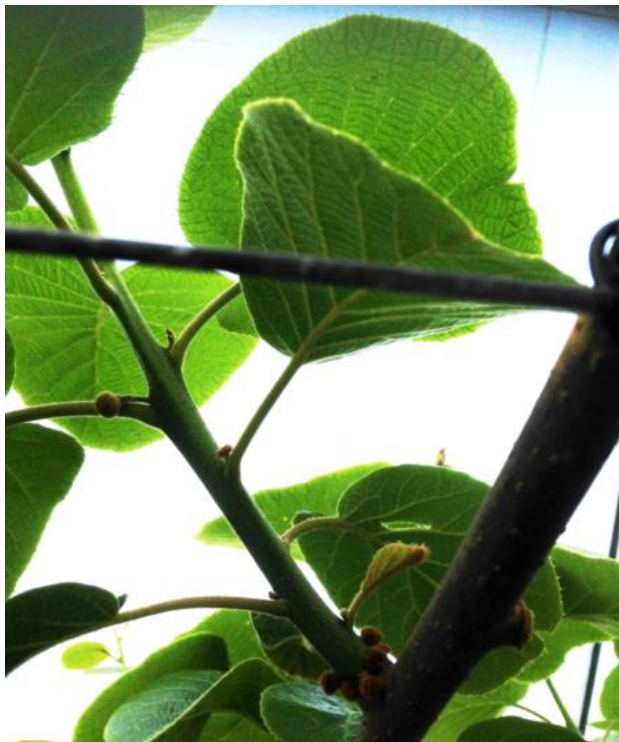
*These pictures are of Psa-V leaf spot on G3 in Te Puke. While leaf spot is a less common symptom of Gold3, leaf-spot is found in situations where Psa inoculum is high. Growers are recommended to continue monitoring for these symptoms.*



### **3. Cold and stress symptoms**

A number of symptoms of vine stress were noticed while monitoring. Leaf cupping, yellowing of leaves and small leaves could be attributed to cold temperatures in whole or part blocks. Aborted flower buds for one colder Gold3 site similarly indicated cold effects.

High flower numbers in some locations were also likely to be adding to vine stress. Growers were generally adding foliar supplements to address these challenges. Reducing crop load will also be important to ensure vine health is maintained.



*Buds aborted due to cold weather*



*Excessive flower numbers*





*Yellow leaves*



*Cupped leaves*



#### 4. Grafting in a Psa environment

In orchards and regions where Psa-V is not present, early notch-grafting to more tolerant varieties may reduce production loss if growers are forced to cut out as a result of Psa-V infection arriving in the orchard. More tolerant male varieties are likely to provide ongoing pollen supplies. If present, Psa-V multiplies rapidly in high-risk weather and Psa-V can move into vines through wounds. Establishing grafts prior to the arrival of Psa is hugely valuable.

Consider keeping suckers as a plan B. Suckers may be grafted during the summer period or maintained for re-grafting into the future, providing an insurance policy against poor graft take or infection occurring.

When trunk grafting, it is not advisable to graft onto susceptible inter-stock – especially 16A but also other susceptible varieties such as G9.



*Grafting to inter-stock is not advisable*



*Grafting of suckers*



*Multiple grafts means quicker canopy development*



## 5. Orchard hygiene

The Whangarei region and its KVH committee are to be congratulated on the focus they have put on orchard hygiene over the past 4 years. However it is noticeable that on some orchards the attention to this important Psa preventative measure has lapsed.

Growers are reminded that entry to their orchards is an area they can control.

Tool hygiene is another key area of defence against the introduction and spread of Psa. Psa can be present for some time before symptoms show - tool hygiene reduces the chance of inadvertent spread if disease is present.







## 6. Local market orchard

Concern has been expressed to KVH about a local market orchard in the region and whether this orchard poses a Psa risk to other orchards.

KVH included a visit to this orchard in the October monitoring round and found that it was well-managed and the growers keen to do what they could to keep Psa out of their orchard.

The orchard is organic and the growers were to apply a Botryzen spray at the time of our visit.

They are prepared to apply a copper spray if the orchard ever gets Psa.

