

KVH Information Sheet

Psa-V Sample Collection and Testing



Background

To help determine the infection footprint of Psa-V in New Zealand kiwifruit orchards, KVH requires growers to report suspected Psa-V. Verifying the Psa-V footprint is important to our managing of Psa-V in New Zealand.

Sample size and collection

Psa-V may be more difficult to find in orchards during warmer temperatures.

The recommended sample size is three samples—ie three sets of five leaves', three canes or three vials of exudate; or a combination of sample types.

Samples can also be a mixture of leaf, cane or exudate.

Sample types

Leaf sampling

The recommended sample size is three sets of five leaf samples.

Please collect your sample as follows.

1. Collect five leaves from one location.
2. Do not touch the leaves with your hands during the collection process.
3. Seal the five leaves in a re-sealable bag.
4. Label the bag with the KPIN, block, row and bay details.
5. Mark the sample site with tape and record the sample number, date and sampler name on the tape.
6. Collect five leaf samples from each of three symptomatic areas—repeating steps 1–5 above.



Cane sampling

The recommended sample size is three cane samples.

Select vines/bays where there are obvious symptoms related to Psa—i.e. obvious cane dieback and/or exudate.

1. Collect canes from each affected vine.
2. If exudate is present, include the cane with the exudate in the sample.
3. Do not touch the canes with your hands during the collection process.
4. The cane samples should be no longer than 20cm. Ensure you have included part of the healthy tissue as well as the dieback—as this is where the infection will be strongest.
5. Ensure tools used are disinfected before and after cutting canes.
6. Seal wounds with pruning paste.
7. Seal each cane sample in a re-sealable bag.



Exudate sampling

The recommended sample size is three exudate samples.

Select vines/bays where there are obvious symptoms related to Psa—i.e., obvious cane dieback and/or exudate.

- If the exudate is present on a cane it may be preferable to **include the cane** with the exudate in the sample.

- Vials are used for collecting exudate samples to be tested. Contact [Hill Laboratories](#) for appropriate vials to be used.
- Assess if the exudate sample can be collected straight into the vial from the drip of exudate, or if a utensil is required to transfer the exudate from the cane into the vial.
 1. If it can be collected by dripping:
 - a. unscrew the lid and position the vial so the exudates run directly into the vial;
 - b. screw the lid back on and place the vial in a re-sealable plastic bag; and
 - c. Use a new vial for each sample.
 2. If the exudate is sticky and can't be dripped/collected straight into the vial:
 - a. use a scalpel, knife or toothpick to transfer the exudate into the vial;
 - b. use a new item for each sample or disinfect the item between samples; and
 - c. place each sample in a re-sealable plastic bag.
 3. Seal the exposed wound with sealing wax applied with a spatula.



Sample labelling

- Clearly label each bag with the KPIN, sample number, location and date.
- Record on the lab submission form where each sample was collected from.
- Mark the sample site with tape. Record sample number, date and sampler name on the tape.

Sample dispatch

- Clearly label all bags with the KPIN, date and sample location to match details on the lab submission form.
- Seal all small sample bags in a large outer bag.
- Label the outer bag with the KPIN and date.
- If collecting several samples from different orchards, place samples inside a 'chilly' bin and send within four hours of sampling.
- If sending by courier, enclose the samples in a cooler pack.

Lab sample information

- Contact [Hill Laboratories](#) to obtain their lab submission form.
- Make comprehensive notes on the level of symptoms seen on the orchard.
- Ensure all areas of the lab form are completed in full—including block, row, bay and variety.
- Indicate whether the sample is from a male or female vine
- If the sample is from a male vine, include variety if known.
- Ensure the name of the packhouse and Psa manager (or other suitably qualified person) confirming symptoms are on the form.
- Record spray information, including the date of last spray and chemical used.
- **Please note the Hills Laboratories Psa testing service is provided each Wednesday on a weekly basis.**

Budwood collection sampling

- When collecting samples for budwood collection if no symptoms are identified then random samples can be taken across the area where budwood is to be collected. This may include one block or several.
- If any symptoms are identified then the process for taking three cane samples applies, as detailed in Cane sampling earlier in this document.
- Sampling must be completed within **six weeks** of budwood collection occurring.
- As leaves will have begun to break down it is preferable to take cane samples.
- Take three cane samples (as for cane sampling method above) across the area and place into the **same** sealed bag.
- Label the bag clearly with KPIN and date collected
- Complete lab forms as above but the forms needs to be clearly labelled "Budwood Collection samples"
- Send to [Hill Laboratories](#) as in Lab sample information above.
- Refer to [KVH Protocol: Budwood](#).

Hygiene requirements

- Comply with the requirements detailed in [KVH Best Practice: Orchard Hygiene](#), on the KVH website.
- Individual growers may have specific hygiene requirements. Please observe these.
- Ensure you do not remove any plant material from the orchard (except for officially-collected samples which have been double bagged).

Kiwifruit Vine Health Incorporated (KVH) makes no warranty or representation as to the accuracy or completeness of the information, photographs or other published material in this publication. KVH shall not be liable to any person for loss, injury or damages arising from a person's reliance on the published material. Published material authored by a person other than KVH reflects the view of the author and not necessarily the view of KVH. The published material may be subject to copyright and shall not be reproduced in any manner without first obtaining the permission of KVH.