

Background

It is important to limit the spread of new genetically distinct strains of Psa that can impact on the efficiency of control products and kiwifruit productivity. An ongoing resistance monitoring programme has identified Psa strains showing a genetic diversity and a level of resistance to protectant spray products. The potential impact of these new strains of Psa varies dependent on the genetic makeup.

Properties identified with copper resistance at 0.64mn or less , or streptomycin resistance caused by horizontal gene transfer and not by mutation, are considered to be low risk and will not have movement restrictions placed upon them.

Orchards that have higher levels of copper resistance, or resistance to copper or streptomycin caused by mutations, will be required to adhere to this protocol and will be contacted by KVH.

Scope

Orchard strategies should aim to reduce the risk of any resistance to a Psa protectant spray developing, and to minimise the build-up and spread of resistant populations when present. Regular monitoring and reporting when there is evidence spraying is not providing Psa control, will assist in early identification.

Once an orchard has been identified with another strain of Psa, strict hygiene and movement controls will assist in reducing spread both within the orchard or to other orchards.

Requirements

1. Reporting

Growers should contact KVH if they identify:

- any unusual Psa-like symptoms; or
- unacceptably high levels of Psa symptoms despite spray treatments.

KVH will organise samples and have them tested to identify any new Psa strains at KVH cost. If a strain of Psa showing resistance to control products has been confirmed by KVH, the following should be adhered to:

2. Movement restrictions

No plant material is to be moved off the orchard without KVH approval. This includes:

- Budwood
- Flowers for pollen milling
- Rootstock/plants
- Kiwifruit wood for firewood
- Kiwifruit vines or pruning
- Seedlings and seeds for propagation

3. Hygiene

Ensure strict orchard hygiene measures are in place:

- Visitors/orchard workers/contractors to remove all plant material from clothing and sanitise hands and footwear before leaving the orchard.
- Sanitise tools regularly
- Remove and dispose of infected material by burning or burying on site.
- Restrict vehicle movement into the orchard to essential vehicles only.
- Clear all vehicles leaving the orchard of plant material and sanitise if going to another orchard.

Implement best practice harvest hygiene practices:

- Take steps to minimise plant debris entering the bins during harvest.
- Check full bins before transporting to the packhouse and remove obvious plant material.
- Clear all harvest equipment including picking bags of plant material. Sanitise before use on another orchard.

4. Additional requirements

- Implement any additional requirements advised by KVH – e.g. crop protection product choice, orchard monitoring etc.

5. Update Orchard Biosecurity Orchard Management Plan

- To include all requirements above

Also refer to: [KVH Best Practice Advice: Managing resistance to Psa control products.](#)