

## About Psa

Psa—*Pseudomonas syringae* pv. *actinidiae*—is a bacterial disease of kiwifruit vines. Psa carries no risks to human or animal health and does not affect plants other than kiwifruit vines.

Psa has been identified in numerous kiwifruit growing regions across New Zealand. A virulent form, known as Psa-V, poses a significant risk to New Zealand kiwifruit orchards.

## About KVH

KVH is leading the industry response to Psa-V. Our vision is to re-establish a thriving and profitable New Zealand kiwifruit industry. We provide research-based updates, practical orchard information and biosecurity protocols to help growers and the wider kiwifruit industry manage the Psa-V risk. Where Psa-V is detected on orchards, we set up a Priority Zone around the infected orchards. This is to ensure biosecurity precautions are taken to contain Psa-V and prevent the disease from spreading.

## KVH Mission

*Our mission is to minimise the financial impact of Psa-V on the New Zealand kiwifruit industry. We will develop a pathway for the re-establishment and future growth of the New Zealand kiwifruit industry.*

## How we operate

**Prevention:** Use biosecurity measures to prevent the establishment of Psa-V in disease-free areas.

**Readiness and response:** Early detection of any new outbreak of Psa-V and preparation for a rapid and effective response.

**Containment:** Contain Psa-V by reducing and controlling inoculum through orchard best practices.

**Solutions:** Manage a world-class research and development programme and capture grower innovation to result in effective solutions.

**Recovery:** Enable orchards that have been affected by Psa-V to return to viable production.

Psa is a bacterial disease that affects kiwifruit vines. It is a serious threat to the kiwifruit industry. Psa was first identified in New Zealand in November 2010. Kiwifruit Vine Health Inc (KVH) is the organisation leading the kiwifruit industry response to the Psa bacterial incursion.

KVH is an independent, non-profit, pan-industry body established in December 2010. KVH works with kiwifruit growers and exporters, ZESPRI, New Zealand Kiwifruit Growers Inc, the post-harvest industry and MAF Biosecurity New Zealand.

For more information:

[www.kvh.org.nz](http://www.kvh.org.nz)

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# Psa

## INFORMATION



check



clean



control





## check

- Before going onto an orchard check with the orchard owner or manager for permission to enter
- Only enter the property for essential orchard activities
- Be aware you are in a high Psa-V risk area
- Before entering or leaving an orchard check and remove any plant material from shoes, clothes and vehicles
- Ensure the orchard has adequate wash-down facilities for equipment and vehicles
- Park your vehicle well away from orchard plantings
- Restrict movements under or around kiwifruit vines



## clean

- Clean equipment and vehicles of soil and plant fragments
- Before starting orchard work, wash and disinfect your hands and scrub the soles of your shoes—repeat this before leaving the orchard
- Sterilise all tools with disinfectant frequently
- Clean picking bags and equipment thoroughly of all plant material before leaving an orchard
- Used disposable clothing should not leave the orchard, ie overalls, hairnets, gloves, booties
- Use the washdown area to clean vehicles and equipment



## control

- Minimise orchard work in wet or damp conditions
- Dedicate orchard tools to one property—do not move them to or use them on another orchard
- Avoid picking leaves and stalks
- Ensure fruit bins used for harvesting are free of plant debris before they enter or leave an orchard
- Securely cover all loads of kiwifruit before transporting from a Psa-V Priority Zone
- Do NOT take any plant material from the orchard, ie plant cuttings, flowers, leaves
- Follow industry protocols\* when transporting budwood or nursery stock

## Help prevent Psa-V spreading

Psa-V can spread rapidly across kiwifruit orchards without signs of infection. It can survive on plant material and equipment for long periods. Only those people and vehicles required for essential orchard activities should go onto kiwifruit properties. Everyone entering an orchard must follow strict orchard-hygiene protocols\*. This includes all orchard staff, pickers, pruners, contractors, transporters and visitors. Everyone can help by checking and ensuring no plant material or contaminated tools are transported from one orchard to another or between kiwifruit growing regions.

**\*Orchard-hygiene and industry protocols—**  
talk to the orchard manager and see the KVH website at [www.kvh.org.nz/hygiene](http://www.kvh.org.nz/hygiene) and [www.kvh.org.nz/industry\\_protocols](http://www.kvh.org.nz/industry_protocols).

## Psa-V risk factors

- Kiwifruit flowers, pruning waste and plant debris
- Nursery stock
- Budwood and cuttings



- Rain and wind



- Vehicles and equipment used in orchard processes, eg pruning/cutting equipment, mulchers, spraying equipment, shelter trimmers



- Orchard staff, contractors and visitors under the canopy—through hands, gloves, clothing, footwear, headwear
- Contamination of non-kiwifruit plant material, eg grass clippings, weeds
- Fruit bins



- Visitors, vehicles and equipment parked on orchard roads and driveways



- Wild or abandoned kiwifruit
- Contact KVH on 0800 885 625 for information on what to do with kiwifruit garden plants

