

Q: Am I seeing Psa-related vine damage or is it phytotoxicity?

Background

There have been several reports of vines expressing phytotoxicity following Psa protectant spraying practice. With a recent outbreak in new Psa-V related leaf-spot symptoms growers are left asking the question “Am I seeing phytotoxicity or Psa-V related leaf spot?” This is a very important question because the symptoms of Psa-V and phytotoxicity are similar.

The most characteristic phytotoxicity symptoms are leaf burn along the leaf margin. However, leaf speckling, cupping, the death of buds, oozing and cane death can also be seen as severe instances of phytotoxicity. This creates the potential for a misdiagnosis of Psa, as many of these signs are also Psa symptoms.

What causes phytotoxicity?

Phytotoxicity is usually associated with excessive absorption of a chemical into the leaf, or excessive application of a chemical onto the leaf to the point of run-off. Some key factors that play a role in phytotoxicity problems are listed below.

- Using products that are not designed as agrichemicals.
- Excessive chemical rates.
- Tank mixing of multiple chemicals.
- Poor tank agitation.
- Slow drying conditions.
- High temperatures during application.
- An excessive use of spreader/super-spreaders at high water rates.
- An excessive build-up of chemicals on leaves.

Phytotoxicity can express itself with the following symptoms (see photo illustrations on the following pages that correlate to the symptoms listed below).

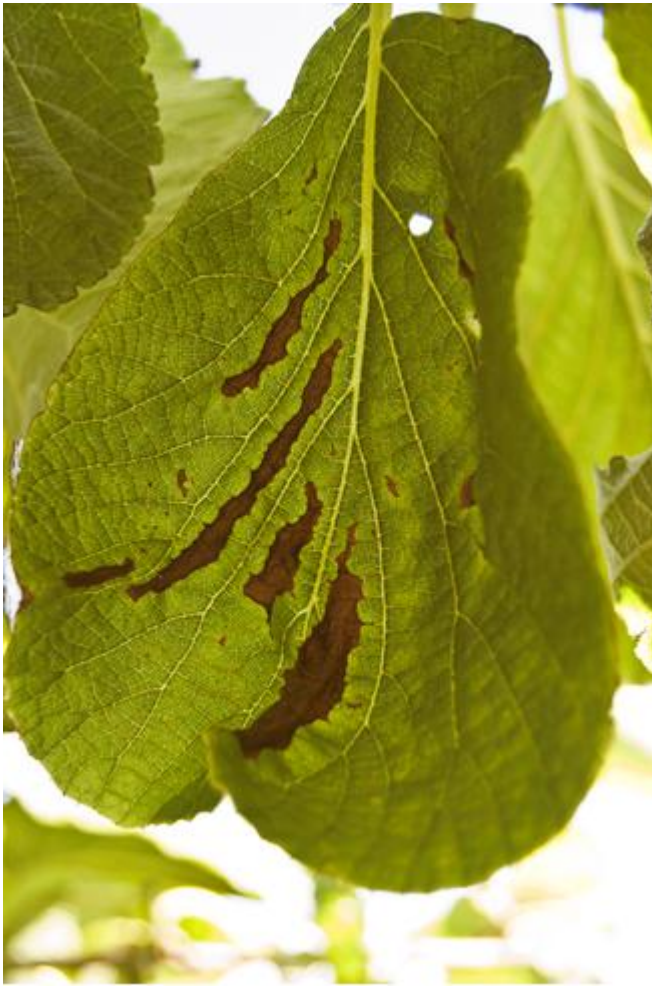
- A) Leaf speckling.
- B) Leaf burn seen at the leaf margin.
- C) Large dead areas between the veins of leaves due to chemical run-off (with or without leaf rolling).
- D) Premature leaf-drop (photo to be supplied).
- E) Bronzing of the upper leaf surface.
- F) Brown staining of leaf veins.
- G) A combination of the above symptoms.



A) Leaf speckling—GOLD



B) Leaf burn at the leaf margin—GOLD



C) Large dead areas between the veins of leaves due to chemical run-off—GOLD



E) Bronzing of the upper leaf surface—GOLD



F) Brown staining of leaf veins—GOLD



G) Phytotoxicity, leaf spot or both?

Image G, was photographed on an orchard with severe phytotoxicity symptoms. The spots look typical of Psa-V leaf spot with a yellow halo. Before attributing these symptoms to phytotoxicity consider the following points.

- Are you also seeing leaf burn at the leaf margins, brown vein staining and large dead areas between the veins on other vines within your block/orchard?
- Are you in a Psa-V affected region?
- Are you seeing leaf spot without typical phytotoxicity damage anywhere else in your block/orchard?

Growers should contact their Packhouse Psa Manager to confirm if the symptoms they are seeing are Psa. The Packhouse Psa Manager may organise sampling and testing. KVH's [Identification of Psa symptoms](#) is a useful tool for growers who are not familiar with the symptoms expressed by Psa-affected vines.

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.