

## Pepino Mosaic Virus (PepMV)

### What is it?

Pepino mosaic virus (PepMV) is a virus belonging to the genus Potexvirus, causing disease in the Solanaceous crops – mainly tomatoes, but also eggplant and potatoes. Basil can also be affected.

### What does it look like?

On tomato plants, the initial symptoms of PepMV include small yellow leaf spots (Fig 1). At a later stage, older leaves may show mottling and top leaves may show slight curling (Fig. 2). Symptoms may depend on climatic conditions and become more visible under (relative) low light conditions. Sometimes the fruits of infected plants may show an orange marbling but these symptoms can be very inconsistent and may differ between trusses on a single plant (Fig. 3). Fruit can also become split, shortly after setting causing seeds to be visible.

Eggplants can be easily infected but do not show visible symptoms. For potato, some cultivars may show no visible symptoms while other cultivars may react strongly and become necrotic.

Basil plants may display interveinal chlorosis.

### Why is it important?

PepMV infection does not always result in significant economic impact as fruit symptoms may be absent. It has been suggested that yield may be affected and fruit setting may be delayed. When present it is easily transmitted by mechanical contact.

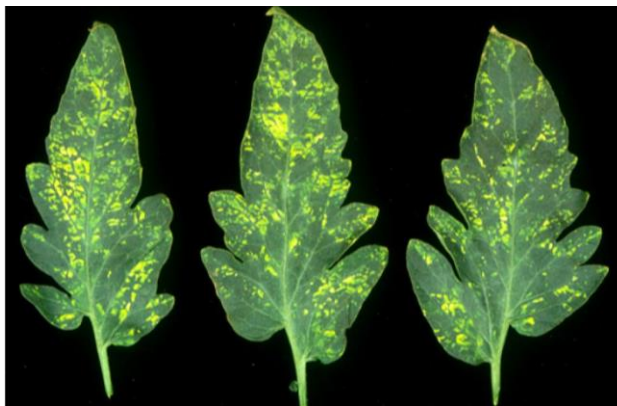
### How does it spread?

PepMV is transmitted by mechanical contact, including contaminated tools, hands, clothing, direct plant-to-plant contact, and propagation (grafting, cuttings), as well as by seeds. Bumblebees (*Bombus* spp.) used as pollinators can also spread the virus. It is not thought to be transmitted by aphids.

### Where is it present?

PepMV originated in Peru, and is present in North, Central and South America, Europe, Canary Islands, Morocco, Turkey, Israel, Syria, Egypt, South Africa, China, South Korea and New Zealand.

In April 2021, an incursion of the Chilean 2 (CH2) strain of PepMV occurred in commercial greenhouses in the Auckland area. TomatoesNZ has been working towards long term management of this strain of PepMV. PepMV remains a regulated organism.



**Fig 1.** Yellow leaf spots - characteristic symptoms of PepMV infection.

Image: R. van der Vlugt. Copyright WUR. <https://gd.eppo.int/taxon/PEPMV0/photos>

### How can I protect my industry?

Check your production sites frequently for the presence of new diseases and unusual symptoms. Make sure you are familiar with common pests and diseases of your industry so you can recognise something different.



**Fig 2.** Infected plant (right) showing slight leaf discoloration. Image: DPV411 Fig. 13



**Fig 3.** Tomato fruit symptoms showing uneven ripening and surface 'marbling' (left), healthy with normal appearance (right). Image: DPV411 Fig. 6

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