

Pepino mosaic virus (PepMV) Genus: Potexvirus

What is it?

Pepino mosaic virus (PepMV) is a disease of greenhouse tomatoes as well as other Solanaceous crops (e.g. potatoes and eggplants).

How is it transmitted?

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.

What symptoms to look out for?

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

Impact

PepMV infection does not always result in significant economic impact since 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.

Where is it present?

PepMV is present in North, Central and South America, Europe, Canary Islands, Turkey, Egypt, Israel, Syria, Morocco, South Africa, Taiwan, and China (restricted distribution).

In April 2021, an incursion of the Chilean 2 (CH2) strain of PepMV occurred in commercial greenhouses in Auckland. TomatoesNZ is working towards long-term management of this strain of PepMV.

How can I protect my industry?

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

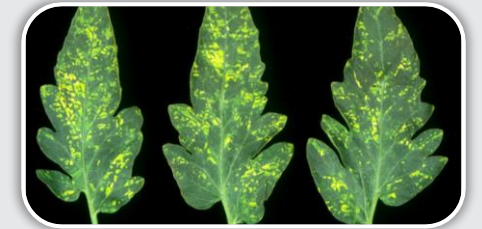


Figure 1. Pepino mosaic virus, yellow leaf spot symptom Image from EPPO (2018) EPPO Global Database <https://gd.eppo.int/taxon/PEPMV0/photos>



Figure 2. Tomato fruit symptoms showing uneven ripening and surface 'marbling' (left), healthy with normal appearance (right). Image from DPV411 Fig. 6



Figure 3. Infected plant on right showing slight leaf discoloration. Image from DPV411 Fig.13