

EXOTIC PEST FACT SHEET 6

Cucumber Green Mottle Mosaic Virus (CGMMV)

What is it?

CGMMV is a virus belonging to the genus Tobamovirus, members of which are known for their long-term survivability. CGMMV reduces fruit yield and quality. Once the virus infects a plant, there is no known cure.

What are the main hosts?

CGMMV is associated with Cucurbitaceae including watermelon, zucchini, squash, pumpkin, cucumber, gherkin and melon.

What does it look like?

Depending on the strain of the virus and the plant, symptoms can vary greatly. Symptoms include light green mottling or mosaic patterns, blistering, distortion, and occasionally stunted growth (Fig 1, 2). At low temperatures, when plants grow slowly, leaf distortion is more severe. Mature leaves can become bleached and fruit drop is common. Fruit are usually unmarked, but some strains cause severe fruit mottling and distortion (particularly in cucumbers) while others may cause yellow or silver-coloured streaks and flecks on fruit, especially at high temperatures.

Why is it important?

CGMMV is a destructive disease of cucurbits worldwide and can cause severe loss in yield in varieties of Cucurbitaceae such as squash, pumpkin, cucumber and melon. The financial loss from CGMMV on cucumber has been reported as being up to 24% based on reduced yield and reduced fruit quality.

How does it spread?

CGMMV is a seedborne virus transmitted from contaminated seed to seedlings and from plant to plant by mechanical contact. Imported seed for sowing is the most likely pathway of entry. CGMMV can also be transmitted mechanically by wounds made with cutting tools, farming equipment, or on the mouth-parts of chewing insects such as beetles. Sucking insects (e.g. aphids, mites, whiteflies) do not transmit this virus.

Where is it present?

CGMMV is widespread in Europe and across to Russia, Asia, and the Middle-East. It is present in North America (Ontario, Alberta and California), Nigeria, and Australia (New South Wales, Northern Territory, Queensland, and Western Australia).



Fig 1. Symptoms of Cucumber green mottle mosaic tobamovirus on young cucurbit leaves.

Image: <https://aggie-horticulture.tamu.edu/vegetable/problem-solvers/cucurbit-problem-solver/leaf-disorders/cucumber-green-mottle-mosaic/> - 9/11/17

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. Typical CGMMV symptoms on greenhouse cucumber plants.

Image: The source of the materials is <http://www.agriculture.alberta.ca>.