

Watermelon - Papaya ringspot (virus-W) (392)

Summary

- Worldwide distribution. In Oceania, Australia, Cook Islands, FSM, Fiji, French Polynesia, Nauru, New Caledonia, Northern Mariana Islands, Tokelau, Tonga, Vanuatu. A virus of crops in the cucurbit family, and weeds.
- Damage: distortions, blisters and light and dark mosaic patterns on leaves; ring spots on the fruits merging into large dark green areas. Yields are reduced and appearance affects sales.
- Spread: aphids, and infected nursery plants. Aphids spread the virus quickly, but do not retain it for long.
- Cultural control: in nursery - check each seedling; in field - avoid overlapping crops; remove weeds and 'volunteers'; limit people entering fields; rogue disease plants; nets or floating covers; mulches to repel aphids; resistant varieties (zucchini); burn debris after harvest.
- Chemical control: insecticides not recommended, although frequent sprays of soap, white and horticultural oils may have potential.



Photo 1. *Papaya ringspot virus-W* on watermelon (Tonga), showing characteristic ring patterns.



Photo 2. *Papaya ringspot virus-W* on watermelon (Fiji), showing characteristic ring patterns.

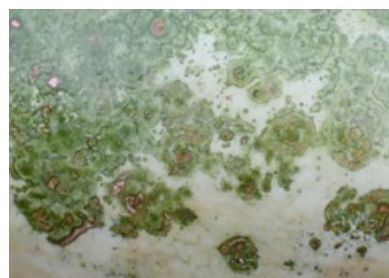


Photo 3. Close-up of Photo 2 to show detail of ringspots, *Papaya ringspot virus-W*.

Common Name

Papaya ringspot (virus-W)

Scientific Name

Papaya ringspot virus-W. Previously, it was known as *Watermelon mosaic virus-1*. However, tests using antisera showed that it was a strain of *Papaya ringspot virus*. The other strain is *Papaya ringspot virus-P*, which infects papaya and cucurbits (see **Fact Sheet no. 194**). *Papaya ringspot virus-W* does not infect papaya.

Note, a third virus, *Watermelon mosaic virus*, also infects watermelon and other cucurbits; this virus causes light and dark mottling on the leaves and a slight roughening of the skin of the fruit. It was previously known as *Watermelon mosaic virus-2*.



Photo 4. Ringspots of *Papaya ringspot virus-W*, on dark-skinned variety.

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Information from Davis RI, Ruabete TK (2010) Records of plant pathogenic viruses and virus-like agents from 22 Pacific island countries and territories: a review and an update. Australasian Plant Pathology 39, 265-291; and Papaya ringspot virus. Wikipedia. (https://en.wikipedia.org/wiki/Papaya_ringspot_virus); and from *Diseases of vegetable crops in Australia* (2010). Editors, Denis Persley, et al. CSIRO Publishing. Photo 4 former Deputy Director and Head of Agricultural Research and Information Division, MAFFF, Tonga.

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