



Pacific Pests, Pathogens & Weeds - Mini Fact Sheet Edition

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Pineapple wilt disease (380)



Photo 1. Pink, inwardly curling leaves of pineapple with pineapple mealybug wilt disease.



Photo 2. Plants showing pink, rolled, leaves typical of pineapple mealybug wilt disease. The 'wilt' symptoms are due to root decay, caused by virus infection.



Photo 3. The two stunted plants in the foreground are showing symptoms of pineapple mealybug wilt disease.



Photo 4. Many plants with severe symptoms of pineapple mealybug wilt disease.

Summary

- Worldwide distribution. In Oceania, Australia, Cook Islands, Fiji, and viruses recorded in quarantine from American Samoa and Samoa. Known from pineapple and false pineapple (*Pseudananas*).
- Damage: reddening (later pink), downward curling and tip dieback of leaves, and root collapse. Symptoms in young plants after 2-3 months; older plants after a year.
- Spread: Pineapple mealybug wilt-associated viruses are spread by *Dysmicoccus* species. Complex disease: PMWaV-2 most important virus but feeding mealybugs necessary. Mealybugs spread by ants, wind, and in consignments of fruit and planting material.
- Natural enemies: ladybird beetles and parasitoid wasps. Effective if ants controlled.
- Biosecurity: fresh fruit subject to import risk analysis; propagating material quarantined and tested for pineapple viruses.
- Cultural control: use plants freed from viruses (meristem culture or hot water 50°C for 30 mins), or select from fields with <10% disease. Avoid planting new crops next to old, or where disease present previously; plough around fields destroying ants' nests; weed around borders; remove infected plants.
- Chemical control: dip crowns in white or horticultural oils; destroy ants with baits or use synthetic pyrethroids against ants and mealybugs.

Common Name

Pineapple wilt

Scientific Name

Mealybug wilt of pineapple

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Information from Sether DM *et al.* (2001) Differentiation, distribution, and elimination of two different Pineapple mealybug wilt-associated viruses found in pineapple. *Plant Disease* 85:856-864.

(<https://apsjournals.apsnet.org/doi/pdf/10.1094/PDIS.2001.85.8.856>); and J Hu (2002) Detection, Characterization, and Management of Pineapple Mealybug Wilt-Associated Viruses. (<http://www2.hawaii.edu/~johnhu/pineapple.pdf>); and Subere C *et al.* (2009) Vector transmission of Pineapple mealybug wilt associated virus-2 by *Dymicoccus neobrevipes* and *Pseudococcus ingispinus* in Hawaii. *Phytopathology* 99: SI25; and from Subere CVQ *et al.* (2011) Transmission characteristics of pineapple mealybug wilt associated virus-2 by the grey pineapple mealybugs *Dymicoccus neobrevipes* in Hawaii. Proceedings 7th International Pineapple Symposium. Eds: Abdullah H *et al.* *Acta Hort.* 902, ISHS (<https://www.actahort.org/ezproxy.library.uq.edu.au/members/showpdf?session=12083>). Photos 1&2 United States National Collection of Scale Insects Photographs, USDA Agriculture Research Service, Bugwood.org. Photos 3&4 United States National Collection of Scale Insects Photographs, USDA Agriculture Research Service, Bugwood.org.

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