



Pacific Pests and Pathogens - Mini Fact Sheet Edition

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Cucurbit warts (267)



Photo 1. Collection of gourds in a supermarket in Cincinnati, USA.



Photo 2. Squash from Bolivia, South America, said to be a varietal characteristic.



Photo 3. Wart-like symptoms of a pumpkin caused by oedema.



Photo 4. Oedema on pumpkin. Note that it is on one side, that facing the ground.

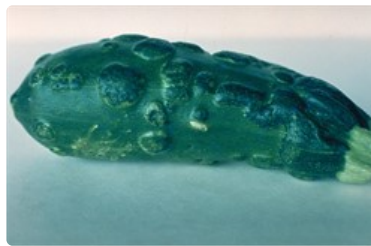


Photo 5. Both *Papaya ringspot virus* and *Zucchini yellow mosaic virus* cause fruit distortions in zucchini and pumpkin.

Summary

- Worldwide distribution. On cucurbits: gourds, melons, pumpkins, squash, zucchini, and others.
- There are a number of reasons for the warts. (i) there are heirloom varieties or varieties that are selected or bred for warts; they are popular for historical reasons and sought for Halloween, Thanksgiving, and for traditional foods; (ii) oedema occurs in cool, cloudy and wet weather. It occurs when there is a build up of water and cells burst, but later heal; (iii) virus infections cause knobbly fruit; (iv) insects chew the fruit.
- Oedema warts on pumpkin can affect marketability; and viruses can cause high (>50%) losses.
- Cultural control: (oedema) control irrigation practices, check drainage; (viruses) avoid overlapping crops, rogue, virus resistant varieties (*Cucumber mosaic virus*); weed. If insects are a problem, use soaps or oils; possibly, synthetic pyrethroids.

Common Name

Warts on cucurbits.

Scientific Name

Biotic causes (variety, viruses, insects) and abiotic causes (oedema).

AUTHOR Grahame Jackson

Information (and Photo 3) from Lindsey du Toit Photo gallery of vegetable problems - Cucurbits. Pacific Northwest Vegetable Extension Group, Washington State University. (http://mtvernon.wsu.edu/path_team/squash.htm); and information (and Photo 4) from Gerald Holmes. What are these bumps on my vegetables? Michigan State University Extension. (http://msue.anr.msu.edu/news/what_are_these_bumps_on_my_vegetables). Photos 1&2 Eric Boa, UK. Photo 5 *Diseases of vegetable crops in Australia* (2010). Editors, Denis Persley, Tony Cooke, Susan House. CSIRO Publishing.

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This mini fact sheet is a part of the app *Pacific Pests and Pathogens*

The mobile application is available from the Google Play Store and Apple iTunes.

