

## Cucurbit wet rot (144)

### Common Name

Cucurbit wet rot, Choanephora fruit rot, Choanephora blossom blight

### Scientific Name

*Choanephora cucurbitarum*

### Distribution

Asia, Africa, North, South and Central (restricted) America, the Caribbean, Oceania. It is recorded from Australia, Cook Islands, Fiji, French Polynesia, New Caledonia, Papua New Guinea, Samoa, Solomon Islands, Tonga, and Vanuatu.

### Hosts

Very wide. Members of the Cucurbitaceae family: cucumber, squash, watermelon, zucchini (fruit rots); also, capsicum, papaya (blossom rots); and many in the Fabaceae (legume family) and Malvaceae (hibiscus family).

### Symptoms & Life Cycle

The fungus is common on dead plant parts - fruits, flowers or leaves (Photos 1-5). In order to infect healthy plants, damage is needed; damage could be caused by feeding or egg-laying insects, by pathogens (Photo 6), by growers during cultural operations, or by weather events. Spores (Photo 7) or other parts of the fungus are splashed from the soil onto the wounds, and infection occurs. Alternatively, flowers become infected as they wilt, and the infections which occur supply the spores to infect the fruits.

The first signs of the disease are pale areas of rot (often said to be 'water-soaked'), which progress rapidly under ideal weather conditions - wet weather, high temperatures and high humidity favour the disease. As the fungus begins to produce spores on long stalks, the affected plant parts look hairy (Photo 1). The spores of the fungus spread over long distances on air currents.

### Impact

The fungus causes fruit, leaf and blossom rots. Usually, the fruit nearest the soil is infected. In very susceptible crops, such as squash (Photos 1&3), a third of the blossoms may be affected. However, although the disease is destructive, it is usually short-lived, and flowers formed later may be unaffected, unless there is a return to the weather conditions that favour the disease. In Samoa, after wet weather, losses of 50% of zucchini fruits are said to be common.

### Detection & inspection

Look for the dark hairy rots on fruit, flowers and leaves that develop very quickly causing wet rots. Note, that the fungus also affects fruit after it has been harvested, and if held in cold storage. In this case, rots may be present, but spores may not be seen.

### Management

For most types of cucurbits, except zucchini and squash, the disease is not sufficiently serious to need control.

#### CULTURAL CONTROL

For zucchini and squash, plant spacing is important. Plants should be spaced so that fruit,

#### RESISTANT VARIETIES

There are no varieties reported to be resistant to the disease.

#### CHEMICAL CONTROL

Control using fungicides is generally not practical because new blossoms open daily and conditions favouring disease development come and go rapidly. Post-harvest decay can be minimised by refrigeration.



Photo 1. Cucurbit wet rot, *Choanephora cucurbitarum*, on fruit of squash near the soil surface. The fungus is forming dark spores giving the fruit a 'hairy' look.



Photo 2. Cucurbit wet rot, *Choanephora cucurbitarum*, on capsicum.



Photo 3. Cucurbit wet rot, *Choanephora cucurbitarum*, on zucchini. Similar to Photo 1.



Photo 4. *Choanephora cucurbitarum*, on dying leaves of capsicum.



Photo 5. *Choanephora cucurbitarum* blossom blight.



Photo 6. Cucurbit wet rot, *Choanephora cucurbitarum*, on capsicum. Possibly, the wet rot has followed damage caused by anthracnose or sunscald.



Photo 7. Spores of cucumber wet rot, *Choanephora cucurbitarum*, on bean.

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Information from Gerlach WWP (1988) Plant diseases of Western Samoa. Samoan German Crop Protection Project, Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH, Germany; and CABI (2019) *Choanephora cucurbitarum* (*Choanephora* fruit rot). Crop Protection Compendium. (<https://www.cabi.org/cpc/datasheet/13038>); and from McKenzie E (2013) *Choanephora cucurbitarum*: PaDIL - <http://www.padil.gov.au>. Photo 1 Gerald Holmes, Valent USA Corporation, Bugwood.org.

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