

## Taro leaf blight (014)

### Summary

- Worldwide distribution. On taro and some other edible aroids. An important disease.
- A blight caused by a water mould, an oomycete, not a fungus. Leaves die early and corm yields are low.
- Corm infections occur at harvest, resulting in firm, brown rots.
- Spread is in wind-driven rain, and 'tops' for planting.
- Cultural control: isolate gardens, far from those with leaf blight, preferably >500 masl; avoid planting suckers with leaves attached; inspect regularly, and remove infected leaves; harvest when leaves are dry; store corms in plastic bags (or plastic-lined boxes); tolerant (bred) varieties are main method of control.
- Chemical control: copper, chlorothalonil, or mancozeb (protectants); metalaxyl or phosphorous acid (systemics).

### Common Name

Taro leaf blight

### Scientific Name

*Phytophthora colocasiae*



Photo 1. Spots of taro leaf blight at the margins and inside the leaf blade. Note that some of the centres of the spots are falling out. Many have a characteristic yellow margin, or halo.



Photo 2. A taro leaf blight spot showing where the spores are formed at the margin.



Photo 4. Droplets associated with taro leaf blight spots on the underside of the leaf which hardens into pellets as they dry. Leaf spots of other fungi infecting taro do not do this.



Photo 5. The underside of a taro leaf blight spot showing the liquid which 'bleeds' from the leaf when it is infected; this liquid dries during the day and becomes hard and dark brown.



Photo 3. The spore of the water mould, *Phytophthora colocasiae*, has a characteristic shape to the top (arrow).



Photo 6. The spots are not only very large on this susceptible variety (Niue) in Samoa, but they have joined together to form a blight.

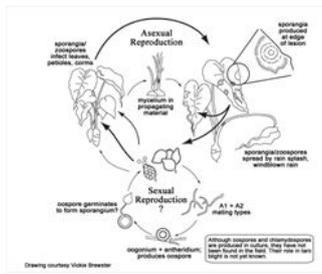


Diagram. Life cycle of *Phytophthora colocasiae*. Note that the sexual phase of the life cycle has not been seen in Pacific island countries; this is because two mating strains are needed to form the oospore, and only the A2 strain has been found. The oogonium and antheridium are the equivalent to female and male parts which fuse to form the oospore (or resting stage).



Photo 7. A brown firm rot in the top part of a corm caused by the water mould, *Phytophthora colocasiae*. The white cottony growth at the lower left side is caused by the fungus *Athelia rolfsii*.

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Information from Jackson G (2020) Taro leaf blight - My 50-year part in its downfall. (<https://www.pestnet.org/the-taro-leaf-blight-story/>); and Carmichael A, et al. (2008) TaroPest: an illustrated guide to pests and diseases of taro in the South Pacific, ACIAR Monograph No. 132, 76 pp. (<https://lrd.spc.int/about-lrd/lrd-project-partners/taropest/>); and Gollifer DE, Brown JF (1974) Phytophthora leaf blight of *Colocasia esculenta* in the British Solomon Islands. Papua New Guinea Agricultural Journal 25: 6-11; and Singh D, et al. (2012) Taro Leaf Blight - A Threat to Food Security. Agriculture 2: 182-203; and Third taro symposium. Edited by Guarino L, et al. (2003) Report of a meeting (technical). Secretary of the Pacific Community, 242 pp; and from Tyson JL, Fullerton RA (2007) Mating type of *Phytophthora colocasiae* from the Pacific region, India and South-east Asia. Australasian Plant Disease Notes 2: 111-112. Photos 1&6 Brooks FE (2005) Taro leaf blight. *The Plant Health Instructor*. DOI:10.1094/PHI-I-2005-0531-01. Diagram Vickie Brewster.

Produced with support from the Australian Centre for International Agricultural Research under project PC/2010/090: Strengthening integrated crop management research in the Pacific Islands in support of sustainable intensification of high-value crop production, implemented by the University of Queensland and the Secretariat of the Pacific Community.

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