

Rice bacterial leaf blight (418)

Summary

- Widespread. Asia, Africa, North, South, Central America, Europe, Oceania. In Australia, Fiji.
- Important disease of rice, causing regular epidemics. Wild grasses are hosts.
- Bacteria enter natural openings and wounds, moving in water conducting tissues, causing streaks with wavy margins – yellowish-white (seedlings), pale yellow (older plants) - joining together, resulting in wilts, drying and death. Droplets ooze from streaks leaving crusts. Spread with irrigation water, wind and rain, possibly seed. Survival in seed, and weeds.
- Biosecurity: import only bacteria-free certified seed, and subject to closed quarantine.
- Cultural control: use certified seed, or select seed from healthy plants; do not clip seedling leaves; do not apply excessive N; ensure good drainage (flooding allows infection); weed (especially *Leersia* species); plough stubble after harvest; fallow fields to destroy bacteria; use resistant varieties - available in Africa and Asia.
- Chemical control: not effective for this disease.

Common Name

Rice bacterial leaf blight; also known as rice leaf blight.

Scientific Name

Xanthomonas oryzae pv. *oryzae*. Different strains exist in Japan and the Philippines and, importantly, differences exist between strains in Asia and Africa.



Photo 1. Bacterial leaf blight of rice, *Xanthomonas oryzae* pv. *oryzae*, as it appears in the field.



Photo 2. Pale yellow-whitish streaks of bacterial leaf blight, *Xanthomonas oryzae* pv. *oryzae*, showing wavy margins.



Photo 4. Crust on rice leaves of dried droplets containing bacterial leaf blight, *Xanthomonas oryzae* pv. *oryzae*.



Photo 3. Droplets oozing from infected rice leaves, containing *Xanthomonas oryzae* pv. *oryzae*, the bacterial leaf blight pathogen.

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Information from CABI (undated) Rice leaf blight (*Xanthomonas oryzae* pv. *oryzae*). Plantwise Knowledge Bank. (<http://www.plantwise.org/KnowledgeBank/Datasheet.aspx?dsid=56956>); and CABI (2018) *Xanthomonas oryzae* pv. *oryzae* (rice leaf blight). Crop Protection Compendium. (<https://www.cabi.org/cpc/datasheet/56956>); and Bacterial blight (various articles). Rice Knowledge Bank. IRRI. (<http://www.knowledgebank.irri.org/search-results?query=bacterial+leaf+blight>); and from *Xanthomonas oryzae* pv. *oryzae*. Wikipedia. (http://en.wikipedia.org/wiki/Xanthomonas_oryzae_pv_oryzae). Photo 1 Chin Khoon, CABI. Photo 2-4 Rice Knowledge Bank. IRRI. (<http://www.knowledgebank.irri.org/decision-tools/rice-doctor/rice-doctor-fact-sheets/item/bacterial-blight>).

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