



Pacific Pests, Pathogens & Weeds - Mini Fact Sheet Edition

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Maize Fusarium kernel rot (224)



Photo 1. Pinkish-white cottony (sometimes powdery) growth of *Fusarium moniliforme*, on ears of maize, rotting the grain.



Photo 2. Close-up of Photo 1, showing the powdery growth of *Fusarium moniliforme* on maize grains. The powdery nature of the rot is probably due to spores of the fungus.



Photo 3. Irregular spots and blotches of *Fusarium moniliforme* on the sheath of maize.

Summary

- Worldwide distribution. On maize, banana, pineapple, sorghum, rice (“bakanae” disease), sugarcane, and many more. An important disease.
- Fungus develops in storage on cobs that have not been dried properly. Grey or pinkish-white growth covers the kernels. The grains become reddish-brown. Serious human and animal toxins develop affecting horses (damage to liver and nervous systems) and humans.
- Spread of the spores is by wind and seed.
- Cultural control: tolerant varieties; adequate nutrition, and if possible irrigate during dry weather; control insect damage; harvest when mature and dry to 15% for cobs, and 13-15% for seed. Hygiene in storage: clean bins, and protect from insects.
- Chemical control: use carboxin and thiram together.

Common Name

Kernel rot, bakanae disease of rice

Scientific Name

Gibberella fujikuroi; previously *Gibberella moniliforme*. Known more commonly by the asexual state, *Fusarium moniliforme*. There are several strains of the fungus, and many names. Previously *Gibberella fujikuroi* and *Gibberella fujikuroi* var. *subglutinans* were

considered distinct, but in the CABI database they are recorded under one name: *Gibberella fujikuroi*.

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Information from CABI (2014) *Gibberella fujikuroi* (bananae disease of rice) Crop Protection Compendium. (<http://www.cabi.org/cpc/>). Photos 1,2&3 Kohler F, Pellegrin F, Jackson G, McKenzie E (1997) *Diseases of cultivated crops in Pacific Island countries*. South Pacific Commission. Pirie Printers Pty Limited, Canberra, Australia.

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