

Exotic Pest Alert: Rice blast

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Plant Biosecurity & Product Integrity, Orange

Rice blast (*Magnaporthe grisea*) is an exotic plant pest **not present in the New South Wales Rice Biosecurity Zone**

This disease is a serious threat to Australia's **rice industry**

If symptoms are seen it must be reported promptly to the **Exotic Plant Pest Hotline 1800 084 881**

Rice blast

Rice blast is a fungal disease caused by *Magnaporthe grisea*. This fungus is also called *Pyricularia grisea*.

Rice blast is considered the most important disease of rice worldwide. Rice blast is present in the tropical wetlands of northern Australia. In 2011 rice blast was found on a rice crop in northern Western Australia.

Under the *Biosecurity Act 2015*, rice blast is classified as prohibited matter. The NSW Rice Biosecurity Zone has been established for the long term management of various pests and diseases, including rice blast.

Symptoms

Rice blast spores can infect plants at all growth stages, from seedlings to maturity. Symptoms develop on all above ground plant parts.

Lesions or spots are the most common symptom. Lesions are usually 1-1.5 cm long and 0.3-0.5 cm wide.

Leaf blast

Leaf lesions start as small white, grey or blue-tinted spots. Under moist conditions lesions enlarge quickly to either oval or diamond-shaped spots or to linear lesions with pointed ends, grey or white centres and narrow brown borders (Figure 1).



Figure 1 Rice blast lesions on leaves



Figure 2 Collar rot symptoms of rice blast



Figure 3 Node infection symptoms of rice blast



Figure 4 Neck rot symptoms of rice blast



Figure 5 Panicle blast symptoms of rice blast

Severe infections may lead to death of leaves and whole plants. Leaf blast infections provide inoculum for panicles to become infected.

Collar rot

If a rice blast lesion is located at the junction of the leaf blade and leaf sheath the entire leaf can be killed. The leaf collar lesion discolours to brown and the leaf blade dies (Figure 2).

Node infection

Infected nodes appear black-brown and dry (Figure 3). An infection at the node often results in the stem breaking.

Neck rot

Neck rot may result in death of an entire panicle (Figure 4). Symptoms appear at the base of the panicle, starting at the node. The tissue turns brown and shrivels causing the stem to snap and lodge.

Panicle blast

Panicles which do not break or fall off as a result of neck rot may turn white to grey. Partially infected panicles may show grey-brown lesions among the panicle branches and on the stems of florets. Unfilled florets turn grey (Figure 5).

Hosts

Rice (*Oryza sativa*) is the main host of rice blast. Although the fungus can live on many grass plants.

Disease cycle

The rice blast pathogen overwinters as fungal strands or spores on diseased rice stubble or seed or in living plants.

Infection in a new season may originate from the fungus overwintering on rice straw.

Rice blast spores are transported by wind and water and can infect rice plants after landing on them. Many infection cycles may occur within a cropping season if weather conditions are favourable.

Actions to minimise risks

Put in place biosecurity best practice actions to prevent entry, establishment and spread of pests and disease:

- practice “Come clean, Go clean”
- ensure all staff and visitors are instructed in and adhere to your business management hygiene requirements
- source propagation material of a known high health status from reputable suppliers
- keep records

Reporting

If you suspect rice blast:

Call the Exotic Plant Pest Hotline on
1800 084 881

Email clear photos with a brief explanation and contact details to biosecurity@dpi.nsw.gov.au

An **exotic plant pest** is a disease causing organism or an invertebrate not present in Australia and which threatens agricultural production, forestry or native and amenity plants.

Resources

Plant Health Australia (2009) Pest Risk Review – Rice blast

Plant Health Australia Factsheet – Rice blast

Figures 1 to 5 courtesy of Donald Groth, Louisiana State University AgCenter, Bugwood.org

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