Blast

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Rice Fact Sheet

What it does

Blast is caused by the fungus *Magnaporthe oryzae*. It can affect all above ground parts of a rice plant: leaf, collar, node, neck, parts of panicle, and sometimes leaf sheath.

Why and where it occurs

It occurs in areas with low soil moisture, frequent and prolonged periods of rain shower, and cool temperature in the daytime. In upland rice, large day-night temperature differences that cause dew formation on leaves and overall cooler temperatures favor the development of the disease.

Rice can have blast in all growth stages. However, the incidence tends to lessen as plants mature and develop adult plant resistance to the disease.

How to identify

Leaf blast	Collar blast	Neck blast	Node blast
1. Initial symptoms appear as white to gray-green lesions or spots, with dark green borders. 2. Older lesions on the leaves are elliptical or spindle-shaped and whitish to gray centers with red to brownish or necrotic border.	1. Infection at the junction of the leaf blade and sheath results in collar blast 2. The symptoms appear on collar region as white to gray-green lesions or spots, with dark green borders.	1. Lesions on the neck are grayish brown and can cause girdling, making the neck and the panicle fall over. 2. If infection of the neck occurs before milky stage, no grain is formed, but if infection occurs later, poor quality grains are formed.	1. Node infection occurs in banded pattern. 2. Lesions on the node are blackish to grayish brown. 3. Infected nodes can cause the culm or the part of the plant that holds the panicle to break.
			

- Neck and node blast can also cause whiteheads or white panicles, similar to stem borer infection. Whiteheads caused by stem borers can be pulled apart from the plant, the stem will separate at the point where the insect bored into it.
- With neck and node blast, tugging on the stem will not result in removal
- Blast lesions can commonly be confused with Brown Spot lesions. Leaf blast lesions are usually elongated and pointed at each end, while brown spot lesions tend to be more round, brown in color and have a yellow halo surrounding the lesion.

How to manage

The primary control option for blast is to plant resistant varieties. Contact your local agriculture officer for available varieties.

Other crop management measures can also be done, such as:

- Adjust planting time, sow seeds early, when possible after the onset of the rainy season.
- Split nitrogen fertilizer application in two or more treatments. Excessive use of fertilizer can increase blast intensity.
- Flood the field as often as possible
- Spray tricyclazole 75%WP@6g/10 L of water, kitazin 48%EC@2 ml/L of water, kasugamycin 3%SL@3ml/L of water, tebuconazole 25%WG @1.5g/L of water.