

Rice Leaf Diseases: Information & Management

1. Bacterial Leaf Blight

Overview

Bacterial leaf blight is a common and destructive disease of rice caused by *Xanthomonas oryzae* pv. *oryzae*.

Symptoms

- Water-soaked streaks on leaf tips/edges.
- Yellowing and wilting of leaves.
- V-shaped lesions starting at the tip.

Causes

- Spread by wind, rain, irrigation water.
- Often enters through wounds or natural openings.

Prevention

- Use disease-free seeds.
- Practice crop rotation.
- Avoid over-fertilization with nitrogen.

Impact

- Can severely reduce yield (up to 70% in severe cases).
- Weakens plants, predisposing to secondary infections.

Treatment

- Use resistant varieties.
- Application of copper-based bactericides if recommended.
- Remove and destroy infected plant debris.

2. Brown Spot

Overview

Brown spot is caused by the fungus *Bipolaris oryzae*.

Symptoms

- Small, circular to oval brown lesions on leaves and seeds.
- Lesions have a lighter center and dark border.

Causes

- Warm, wet conditions favor spread.
- Infected seed and debris.

Prevention

- Use healthy, certified seeds.
- Balanced fertilization (especially potassium and phosphorus).

Impact

- Grain quality and yield losses, especially in nutrient-poor soils.

Treatment

- Seed treatment with fungicides.
 - Remove and destroy crop residues.
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3. Healthy

Overview

No signs of disease or abnormality. Healthy rice leaves are green, robust, with no lesions or spots.

4. Leaf Blast

Overview

Leaf blast is caused by the fungus *Pyricularia oryzae*.

Symptoms

- Diamond or spindle-shaped lesions with grayish centers and brown margins.
- Lesions can join, causing plant death.

Causes

- Frequent in high humidity and cool temperature.
- Susceptible varieties more affected.

Prevention

- Use resistant varieties.
- Avoid excessive nitrogen use.
- Maintain proper field drainage.

Impact

- Can destroy leaves rapidly, resulting in reduced grain production.

Treatment

- Application of recommended fungicides at early stages.
 - Field sanitation.
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5. Leaf Scald

Overview

Leaf scald is caused by the fungus *Microdochium oryzae*.

Symptoms

- Irregular, water-soaked lesions that coalesce into large, white, paper-like areas.
- Margins of lesions may be purple to brownish.

Causes

- High humidity, continuous leaf wetness.
- Wounds facilitate infection.

Prevention

- Use resistant cultivars.
- Proper plant spacing.

Impact

- Typically limited impact unless conditions are highly favorable.

Treatment

- Improve field sanitation.
 - Avoid overhead irrigation when possible.
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6. Narrow Brown Spot

Overview

Caused by the fungus *Cercospora oryzae*.

Symptoms

- Narrow, linear, brown lesions mainly on leaves, occasionally on stems/sheaths.
- Older leaves most affected.

Causes

- Banked water, poor field drainage.

Prevention

- Good water management.
- Use resistant varieties.

Impact

- Usually minor but can reduce yield in susceptible cultivars.

Treatment

- Remove and destroy infected plant material.
- Apply fungicides only if recommended.

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- Replace the above details with more scientific or region-specific data if available.