

COMMON DISEASES OF RICE



SHEATH BLIGHT

Caused by a soil-borne fungus, *Rhizoctonia solani*. It is most damaging in intense production systems.

Susceptible Stages: Heading to milking and dough stages

Damages:

On leaf sheath

- Oval gray spots that later enlarge with black-brown margins and gray center
- On severe infection, oval white to brown structures (sclerotia) appear on the sheath

On leaves

- Lesions are irregular, banded with green-brown coloration
- Severe lesion has grayish white center with irregular purple-brown borders
- Panicle exertion impaired when flag leaf is infected

Factors that favour disease development:

- Excessive nitrogen fertilization
- Warm temperature, high humidity and lightbrain
- High seeding rate and close plant spacing

Disease Management

When symptoms are observed, drain the field for a few days at maximum tillering stage.

Preventive measures

- Plant moderately resistant varieties.
- Avoid excessive nitrogen fertilization; practice split application of nitrogen.
- Follow recommended rate and planting distance to avoid dense canopy.
- Remove weeds that serve as alternate hosts of fungus.
- Plow dry infected stubbles.



TUNGRO

Caused by two different viruses: rice tungro bacilliform virus (RTBV) and rice tungro spherical virus (RTSV), efficiently carried by the green leafhopper (GLH). RTBV cannot be transmitted by GLH unless RTSV is present.

Susceptible Stages: Seedling to tillering

Damages:

- Mottled young leaves
- Older leaves are yellow to yellow-orange
- Stunted with slight reduction in tiller number

Factors that favour disease development:

- Susceptible varieties
- Late planting time
- Asynchronous planting
- Many GLH and diseased plants

Disease Management

When symptoms are observed, Remove infected plants as soon as disease is detected.

Preventive measures

- Plant resistant variety.
- Regular monitoring of field for presence of GLH and diseased plants.
- Observe a fallow period of at least one month between each cropping to help reduce the GLH's food supply thereby reducing their populations.
- Destroy stubbles right after harvest to eradicate GLH and tungro hosts.
- Practice synchronous planting.

RICE BLASTS

Fungal disease occurring in both upland and lowland environments; made more severe by water deficiency accompanied by high night humidity and low night temperature; the causal fungus, *Pyricularia oryzae*, is air and seed-borne.

Susceptible Stages: Seedling to maturity

Damages:

- Leaf blast
- Node blast
- Panicle blast

Factors that favour disease development:

- High nitrogen fertilization
- Light rain
- High humidity
- Overcast sky
- Long dew period

Disease Management

When symptoms are observed, flood the field when possible to reduce severity of blast.

Preventive measures:

- Plant resistant variety.
- Early sowing of clean seeds after the onset of the rainy season; water seeding is better than drill seeding.
- Destroy infected crop residues; spores can thrive in infected straws and stubbles.
- Avoid high nitrogen fertilization
- Avoid farm activities when plants are wet; spores are easily scattered during farm activities and can spread the disease.

BACTERIAL LEAF BLIGHT

Bacterial disease of rice caused by *Xanthomonas oryzae* pv. *Oryzae*; prevalent in both irrigated and rainfed conditions, particularly during the wet season

Susceptible Stages: Seedling until milking to dough

Damages:

- Kresek or wilting at seedling stage
- Water-soaked to yellow-orange-striped lesions on the leaf blades & tips
- Yellow-orange bacterial ooze from the lesions

Factors that favour disease development:

- Highly susceptible variety
- Deficiency in phosphorus and potassium
- Susceptible varieties
- Late planting time
- Excessive nitrogen application
- Warm, humid, and rainy weather
- Asynchronous planting
- Many GLH and diseased plants

Disease Management

When symptoms are observed, remove infected plants as soon as disease is detected.

Preventive measures

- Plant resistant variety.
- Practice synchronous planting.
- Regular monitoring of field for presence of GLH and diseased plants.
- Observe a fallow period of at least one month between each cropping to help reduce the GLH's food supply thereby reducing their populations.
- Destroy stubbles right after harvest to eradicate GLH and tungro hosts.

Reference: "Courseware on Pest and Natural Enemies"

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