

BLAST DISEASE OF RICE



J. Mahanta and Tanmay Samajdar



**Krishi Vigyan Kendra, Tura
ICAR RC for NEH Region
Sangsangiri, West Garo Hills District
Meghalaya -794005
Ph-03651-222535(O)**

Year of Publication:2013

Blast is a fungal disease caused by *Magnaporthe grisea* which is endemic in North-Eastern states. It can occur in all seasons and at all stages of growth causing heavy and at times total loss of yield. Most of the traditional cultivars and many of the high yielding varieties are susceptible to this disease.

SYMPTOM:

The disease produces four types of symptoms which are given below:-

1. **Leaf Blast** - Typical spots are spindle shaped with both ends pointed. The centre of the spot is grey while the margin is brown.
2. **Collar Blast** - Brown lesions appear at the joining of leaf blade and leaf sheath resulting in hanging down of the affected leaf blade
3. **Nodal Blast** - The nodes of stem turn black and crack open during drying. All the plant parts above the infected node will dry off
4. **Neck Blast** - The neck region of the panicle turns black due to rotting. The grains may be half-filled or chaffy. The affected panicle breaks off at the neck and remains hanging.

HOW TO MANAGE RICE BLAST

Cultural practices:

1. Sowing and planting stages should be adjusted in such a way that the seedling and active tillering stages of the crop growth should not fall during 3rd week of September to 2nd week of November in kharif season and 2nd week of February to 1st week of April in rabi season as these periods are most vulnerable for blast developments.
2. High doses of nitrogenous fertilizer (more than 60 kg per hectare) should not be used. Potash and phosphorous should be used (30 kg/hect each) along with nitrogenous fertilizers to reduce the epidemic.
3. Weeds like *Panicum repens*, *Leersia*, *Echinochloa*, *Digitaria* etc. should be removed from the nearby areas of rice fields as these serve as alternative hosts for the pathogens.

4. As the mycelia and conidia overwinter on diseased rice straw, it should be burnt after the crop harvest.
5. The seeds also serve as primary source of infection, therefore, disease free seeds should be sown.

Resistant varieties:

Use of disease resistant varieties like IR50, IR36, Ratna, Vandana, Hira, Savitri, Gayatri, Udaya, Sarasa etc helps to get effective control of rice blast.

Chemical control:

1. For seed treatment 1 kg of rice seed should be mixed with 3 gms of fungorin and kept for 24 hours before it is sown.
2. Hinosan, Edifinphos and organophosphate esters are reported to be active against rice blast in different countries. Spraying should be done fortnightly beginning from first appearance of disease.
3. Kitazen, another organophosphatic fungicide is also highly effective against blast. It should be sprayed at the rate of 400-500 gms per acre.



For further information please contact:

Krishi Vigyan Kendra, Tura
ICAR RC for NEH Region
Sangsangiri, West Garo Hills District
Meghalaya -794005
Ph-03651-222535(O)

Published by:

Krishi Vigyan Kendra, Tura
ICAR RC for NEH Region
Sangsangiri, West Garo Hills District
Meghalaya -794005
Ph-03651-222535(O)