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Bacterial Leaf Blight of Rice and Their Management

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Rice (*Oryza sativa* L.) is one of the most important staple food crops of more than half of the world population and cultivated on the largest areas in India. In India, rice occupies the first position among the cereals in respect of both area and production. It is most important components of carbohydrate (Starch). In rice crop attack by various diseases like rice blast, brown spot of rice, bacterial blight of rice, false smut etc. in which Bacterial leaf blight caused by *Xanthomonas oryzae* pv. *oryzae* is found worldwide and particularly destructive in Asia. Reduction in rice yield may be as high 50% was also recorded, when the crop was severely infected. (Mew *et al*.).

SYMPTOMS:

***Kresek* phase:**This appears in nursery,during early tillering stage. The yellowing and sudden wilting is the common symptoms.The fast movement of bacteria along the xylem vessels in a systemic manner causes rapid wilting**.**

Leaf blight phase: Water-soaked lesion appears on leaf blade starting at leaf tips,which later becomes whitish or grayish.The lesions gradually moves downwards with and increases in lenth and width with a wavy margin. Lesions turn necrotic with tend to dry quickly.

Seedling wilt-Kresek

Leaves with Wavy yellow marginal necrosis

Drying and curling of leaves

Wavy yellow marginal necrosis.

Predisposing Factors:

Rainy weather, dull windy days, and a sutaible temerature of 20-26 ^{o}C favour the incidence of the disease. Claim that the cloudy weather with a shower or high humidity is most conducive for disease development.

Disease Cycle:

Inoculum: Inoculum can be present in rice stubble and weed hosts. The pathogen may be present for a short time on infected seed and in soil, but these are not considered important inoculum sources.

Transmission: The bacterium spreads by irrigation water, rain, plant-to-plant contact, and tools used for transplanting seedlings. Typhoons are associated with rapid spread of the disease.

Infection: The bacterium enters leaf tissues through natural openings such as hydathodes and stomata on leaf blades, growth cracks caused by the emergence of new roots at the base of the leaf sheath, and wounds on leaves and roots. When there is sufficient bacterial multiplication, some bacteria invade the vascular system and may ooze from hydathodes.

Management:

Culturel Control:

Keep fields clean. Remove weed hosts and plaw under rice stubble,straw and volunteer seedling, which can serve as hosts of bacteria.

ResistentVaritey:
Use of resistant cultivars having polygenic resistance, like Improved Pusa basmati-1, NH-56, Joythi etc.

Seed treatment:
Seed soaking for 8 hours in Agrimycin (0.025%) and wettable eceresan (0.05%) followed by hot water treatment for 30 min at 52-54ºC. Seed soaking for 8 hours in ceresan (0.1%) and treat with Streptocyclin (3g in 1 litre).

Chemical method:
Seed treatment with bleaching powder (100g/l) and zinc sulfate (2%) reduce bacterial blight.

Conclusion:

Problem is a rice crop where.Weather condition are usually favourable for its appearance and development. Reduction in yield due to this disease was recorded as about 50%. So the management of BLB is most importent for reducing the yield losses through cultural practices. Resistent variety and chemical methods**.**

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