

Rice Yellow Mottle Virus (RYMV)

Causal agent: Sobemovirus

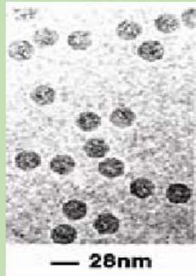


Fig 6:
Electron
micrograph
showing
structure of
Rice mottle
virus

Favorable conditions for disease development

- The host range for the virus includes Asian rice (*Oryza sativa*), African rice (*Oryza glaberrima*), wild *Oryza*, grasses including those in the genera *Eleusine*, *Eragrostis*, *Echinochloa* and *Cyperus* species.
- The disease is spread by several species of beetles (Coleopteran). The virus is picked when the insects feed on diseased plant and transferred to healthy plants when the insects feed on a healthy plant.
- The virus is also spread mechanically by contaminated farm tools e.g. sickle during harvesting. The virus may also spread by contaminated hands or close contact between plants.

Geographical distribution

- The disease was first reported in Western Kenya in 1966 and has subsequently been reported in all rice growing regions in East Africa.

Crop damage and associated losses

- Crop loss ranging 10-100% have been reported depending on plant age and level of disease resistance in the host plant. The highest yield losses occur when plants are infected early in the growing seasons.
- The disease symptoms are observed 1 to 2 weeks after infection.
- The disease initially starts as small yellow-green lesions on the leaves which later form yellow streaks or mottling giving the plant a yellow orange appearance. The infected plants are stunted and often have spirally twisted leaves.
- When plants are infected early in the growing season they may die or fail produce to produce grains.



Fig 7: Yellow-green colouration on rice leaves infected by yellow mottle virus.

Photo: Nyongesa, KALRO Kibos



Fig.8: Scatted yellow patches in a yellow mottle virus infected field.

Photo: Nyongesa, KALRO Kibos

Management Strategies

- Use of tolerant varieties such as Basmati 370 and 217, ITA 310.
- Proper weed management to ensure that there are no alternate hosts of the virus. (Refer to weed management factsheet).
- Disinfect hand tools used in rice cultivation using bleach (sodium hypochlorite).
- Ensure that the vector (beetles) are controlled using appropriate methods (Refer to pest management factsheet).
- Ensure proper agronomic practices are maintained (Refer to agronomy factsheet)