

Fusariosis in Pineapple

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Fusariosis in Pineapple Latest News

Indian researchers have identified a key gene in pineapple that may offer a strong, local solution against destructive fungal infection Fusariosis.

About Fusariosis in Pineapple

- Fusariosis is caused by the aggressive **fungus *Fusarium moniliforme*** and one of the biggest threats to pineapple farming.
- The fungus **warps the plant's stem, blackens the leaves** and rots the fruit from the inside out. For farmers, this means heavy losses and unreliable harvests.

Highlights of the Research

- For years, traditional breeding techniques have struggled to keep up with the fast-evolving onslaught of such fungal foes.

- Scientists have identified the gene behind **Somatic Embryogenesis Receptor Kinase (SERK)** that can activate host defences against plant diseases.
- Focusing on the **AcSERK3 gene**, part of the **pineapple's genetic code**, known for helping plants both reproduce and survive stress, enhanced—or “overexpressed” the gene in pineapple plants.
- This genetic tweak charged the plant's natural defences, allowing it to fight off the Fusarium fungus far more effectively than ordinary varieties.

Key Facts about Pineapple

- The pineapple (*Ananas comosus* L. Merr.) is the most economically significant fruit of the Bromeliaceae family.
- **Required climatic conditions:**
 - It is mostly **grown at low elevations in areas** with a **temperature range of 15 to 30°C**.
 - It is **tolerant to drought** because of the **special water storage cells**.
 - **Rain:** It can be grown with a wide range of rainfall from **600-2500 mm/ annum**, the optimum being 1000-1500 mm.
 - **Soil:** It can be grown in a **wide range of soils**, but does not tolerate water logging.
 - It can be grown as a pure crop on plantation scale or as an intercrop in coconut gardens.
 - **Major Pineapple producing states:** The states where pineapple is grown include Assam, Meghalaya, Tripura, Manipur, West Bengal, Kerala, Karnataka and Goa.
 - Countries like Thailand, Philippines, Brazil, China, Nigeria, Mexico, Indonesia, Colombia and the USA produce pineapple.

Source: PIB

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