

Soft rot of Jackfruit

Recognize the problem

Jackfruit is a popular garden species prized for its edible flowers, fruit, and seeds for fresh consumption or cooking. Rhizopus rot is a common fungal disease of jackfruit flowers and fruit in the tropics. As a result of this disease, a big portion of the national revenue can be lost.

At first, soft, watery, brown spots develop on the flowers and fruit. Subsequently, a powdery, fuzzy-looking mass of black spores and white fungal mycelia covers the jackfruit surface. The pathogen engulfs the young fruit, resulting in the characteristic black, rotten, shrunken, and sometimes mummified fruit remains. Fruit symptoms can appear on the tree or can develop on fruit in storage or transit. Warm, humid, rainy conditions favour the development of soft rot. Wind, rain, and insects dislodge and spread the tiny fungal spores. The infection produces a layer of black spores on the fruit surface to start secondary cycles of infection and disease.

Background

Although wounds can predispose the fruit to infection, unwounded flowers and young fruit are also susceptible. Rhizopus can survive on decaying plant litter or in the soil to initiate new infections. Rot is more likely to occur in high-rainfall areas or during and after stormy periods. When warm, humid, wet weather coincides with the flowering and fruiting season, Rhizopus rot can cause total loss of fruit in jackfruit trees.

Management

- Prune the tree to encourage good ventilation and to reduce relative humidity in the canopy
- Remove and destroy diseased fruit from trees and the ground. Clear up decaying organic debris within and around the tree. Water stagnation at root zone should be avoided.
- Intercrop jackfruit with trees that are not susceptible to infection by Rhizopus
- Avoid storing fruit after harvest in hot, poorly ventilated containers
- Before fruit setting or 10 days after fruit setting, spray with carbendazim e.g. Bavistin, or mancozeb e.g. Indofil M-45 @ 2 gm/L water, 2-3 times at 10-day intervals

If spraying after flowering, spray with tebuconazole e.g. Folicur @ 0.05%, or metalaxyl + mancozeb (e.g. Ridomil MZ-75) or Indofil M-45 @ 2.5gm/L water, 3 times at 15-day intervals

When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, and pre-harvest interval.

Scientific name(s) > *Rhizopus artocarp*

Initiation of soft rot infection on jackfruit. (Photo by Anwar Hossain)



Completely damaged young jackfruit. (Photo by Scot Nelson CC BY-SA)



The recommendations in this factsheet are relevant to: Bangladesh



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