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Important Disease of Guava and Its Management

Manmohan Singh Bhooriya¹, Sanjay Kharte¹, Dinesh Kumar Kuldeep^{1*}, N. R. Rangare¹, Maneesh Kumar¹, and Vishvash Uikey²

> ¹JNKVV, Jabalpur (MP.) 482004 ²RVSKVV, Gwalior (MP) 474002



Corresponding Author Dinesh Kumar Kuldeep

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INTRODUCTION

The famous tropical fruit guava, also known as *psidium guajava*, is prized for its juicy and nourishing flesh. In addition to being consumed raw, it is also utilized in a variety of culinary applications, including juices, jellies, and jams.

India is a country that grows guavas. Uttar Pradesh, Madhya Pradesh, Bihar, Haryana, Punjab, Maharashtra, Chhattisgarh, Gujarat, and Karnataka are the main states that produce guava. The state that produces the most guavas is Uttar Pradesh. India also exports high-quality guava to nations in Central Asia, the Middle East, and Europe.

Disease control is one of the biggest problems guava producers have, although guava growing is not without its difficulties. We will go into further detail about common guava illnesses, their symptoms, and practical preventative measures in this extensive article to make sure your guava orchard is vibrant and fruitful.

Anthracnose (Colletotrichum gloeosporioides): Symptoms:

Small, black, sunken lesions with pinkish spore masses are the main symptoms of anthracnose infection on fruit. Brown or black patches with uneven borders may be seen on infected leaves. Fruit declines and yield loss may result from severe infection.

Management:

Traditions practices: Removing fallen fruit and pruning diseased branches will help to lessen the cause of the illness. To enhance air circulation, keep trees spaced appropriately apart.

Fungicides: To avoid infection, use the proper fungicides prior to the flowering season. Spraying often when fruit is developing also works well. For improved management, use spray.



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Guava Wilt (Fusarium oxysporum):

Symptoms:

Wilt is a disease that is harmful to the guava plant. The first outward sign of the disease is the terminal branches' leaves turning a faint yellow hue and curling. Plants eventually exhibit thriftiness as their leaves become yellow to reddish in hue. As a result, leaves start to shed early. Eventually, some of the twigs dry out and become naked, unable to produce new leaves or blooms. All of the impacted branches' fruits are still immature, stony, and hard. Afterwards, the entire plant loses its leaves and withers away. The bark is readily separated from the cortex, and the roots exhibit rotting in the basal area as well. Vascular tissues are also seen to be discolored a light brown hue.



Management:

- Select guava types that are resistant to Fusarium wilt.
- Soil Sterilization: To eliminate pathogens, solarize or steam-sterilize the soil prior to planting.
- Fungicides: In trees that are seriously afflicted, fungicidal drenches may help manage the disease.
- Sufficient Irrigation: Make sure the soil is sufficiently moist, but not too wet, since this might worsen wilt.

Powdery Mildew (*Oidium psidii*): Symptoms:

- Leaves, immature branches, and fruit with powdered white specks.
- The impacted foliage may prematurely curl, wither, and fall.
- Lower quantity and quality of fruit.

Management:

- Pruning: Cut back on impacted branches to increase sunshine penetration and airflow.
- Sulfur-Based Fungicides: Use fungicides with a sulfur basis in order to prevent problems.
- Neem Oil: Powdery mildew is another condition that neem oil helps with.

Anthracnose gloeosporioides):

(Colletotrichum

Symptoms:

Die back phase: Starting at the top of a branch, the plant starts to wither away. When they are still fragile, young shoots, leaves, and fruits are easily connected. The developing tip's greenish color changes to dark brown, then black necrotic patches that stretch



backward and cause the die back. The petiole and young leaves are the next areas where the fungus grows after the infected twigs. The dry twigs may lose their leaves as a result of these drooping or falling. August through September is when the disease first manifests as an outbreak.

Phase of fruit and leaf infection: Rainy season crops are typically affected by fruit and leaf infection. Unripe fruits first have pinhead spots, which progressively get bigger. The spots are round, dark brown, sunken, and include tiny black stromata in the core of the lesion that, when wet, create white spore masses. Larger lesions are formed when many spots combine. On unripe fruits, the diseased region becomes corky and tough; in cases of severe infection, cracks are common. Diseases that induce shedding also damage buds and blooms that have not opened. The fungus develops necrotic lesions at the margins or tip of leaves. These lesions often include fruiting bodies and are ashy gray in color.

Management:

Spray either copper oxychloride (0.3%) or Bordeaux combination (3:3:50) as soon as the sickness starts.

- Dipping in 500 ppm tetracycline for 20 minutes works well as a post-harvest treatment.
- Use of a bioagent, namely Streptosporangium pseudovulgare, on fruits prior to the onset of symptoms.

Phytophthora fruit rot (*Phytophthora parasitica* Dastur):

Symptoms:

During the wet season, the symptom first appears at the fruit's calyx disc. When the fruit ripens, the affected region is covered with white, cotton-like growth that grows quickly. with humid temperatures, the pathogen can cover nearly the whole surface in 3–4 days. The fruits closest to the soil's surface and covered in thick foliage are most negatively impacted by high relative humidity. There is severe damage to the falling fruits. Beneath the pale, cottony growth, the fruit's skin goes somewhat mushy, changes from light to dark brown, and releases a disagreeable odor. Eventually, these fruits either stay on the tree or fall off.





Management:

- To control foliar infection, it has been discovered that Dithane Z-78 (0.2%), Ridomil or Aliette (0.2%), or Copper oxychloride (0.3%) are effective.
- Soil treated with a solution of 0.2%, 0.3%, or 0.4% of either Ridomil or Aliette.
- It is important to control plant spacing and fertilizer schedules to prevent an overly thick canopy of plants.

Stylar end rot (*Phomopsis psidii* De camara and. *P destructim*):

Symptoms:

The discoloration in the area immediately below and next to the persisting calyx is the outward sign of the disease. This region progressively becomes bigger and turns dark brown. The damaged region softens with time. The epicarp tissue is not the only part of the mesocarp tissue that is discolored; the sick section of the mesocarp is distinguished by its pulpy, light brown hue, which contrasts with the dazzling white color of the healthy area. The fruit reduces in size and the skin begins to wrinkle in concentric circles at an advanced stage as a result of the internal damaged tissues becoming disorganized. Dark-colored pycnidia eventually envelop the afflicted fruit. Ignorance of disease can lead to serious losses in the orchard, as much as 10%.

Management:

- Before winter fruiting begins, apply 0.1%, 0.3%, or 0.5% of copper oxychloride, carbendazim, or thiophonate methyl.
- Care must be taken, nevertheless, to ensure that no spraying is done 15 days before harvesting.
- Steer clear of fruit injuries.

Cercospora Leaf Spot (*Cercospora sawadae* Yamamoto):

Symptoms:

The disease manifests as uneven, dark, watersoaked spots on the bottom leaf surface and a yellowish color on the top leaf surface. The majority of impacted leaves are older, and those that are badly impacted curl before dropping off.

Management:

Apply Dithane-M-45 (0.2%) or mancozeb once a month.