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DISEASES OF GUAVA



WILT OF GUAVA

Causal organism:

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Fusarium oxysporum f. sp. Pisidi

Symptoms

- The affected plants show yellow colouration with slight leaf curling at the terminal branches, becoming reddish at the later stage and subsequently premature shedding of leaves takes place.
- Twigs become bare and fail to bring forth new leaves or flowers and eventually dry up. Fruits of all the affected branches remain underdeveloped, become hard, black and stony.



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Symptom cont.....

- The entire plants becomes defoliated and dies. A few plants also show partial wilting, which is very common symptom of wilt in guava.
- The finer roots show black streaks which become prominent on removing the bark.
- The roots also show rotting at the basal region and the bark is easily detachable from the cortex.
- The cortical regions of the stem and root show distinct discolouration and damage.
- Light brown discoloration is noticed in vascular bundles. Bark splitting can be seen in wilted plants in later stages.
- The disease can be categorized into slow wilt and sudden wilt. In slow wilt, plant takes several months or even a year, to wilt after the appearance of initial symptoms and in sudden wilt, infected plant wilts in 15 days to one month.



Wilting symptom



Slow wilt



**Sudden
wilt**



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Hard, black and stony fruit on plant





FAVOURABLE CONDITIONS

➤ pH 6.0 is optimum for disease development. Both pH 4.0 and 8.0 reduces the disease.

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- Disease is more in clay loam and sandy loam compared to heavy soil.
- Higher disease incidence in monsoon period.
- Disease appears from august and increases sharply during September-October.
- The presence of nematode, *Helicotylenchus dihystera* spread the disease.
- Trees of age 5 years are normally affected ,10-20 years old plant are highly susceptible to disease.



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MANAGEMENT

CULTURAL

- Proper sanitation of orchard.
- Wilted plants should be uprooted, burnt and a trench of 1.0-1.5m should be dug around the tree trunk. Treat the pits with formalin and cover the pit for three days and then transplant the seedlings after two weeks.
- While transplanting seedlings avoid damage to the roots.
- Maintain proper tree vigour by timely and adequate manuring, inter-culture and irrigation.
- Intercropping with turmeric or marigold.



HOST PLANT RESISTANCE

- Resistant variety: **Apple guava**

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- Guava species, *Psidium cattleianum* var. *lucidum* and *Syzigium cumini* (Jamun) are resistant to wilt.

- *Psidium cattleianum* (*P. molle*), *P. quianense*, Chinese guava (*P. friedshthalianum*) and Phillippine guava are recommended as resistant root stocks.

BIOLOGICAL

- *Aspergillus niger* strain AN 17, *Trichoderma viride*, *Trichoderma harzianum* and *Penicillium citrinum* can used as biocontrol agents.



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CHEMICAL

- Stem injection with 0.1% water soluble 8-Quinolinol sulphate.
- Drench with 0.2% Benomyl or Carbendazim, four times in a year and spray twice with Measystox and Zinc sulphate.
- Disinfestation of soil with Metam-sodium at 252 ml/10m² area to control nemtodes.