

# Important citrus diseases

- Citrus canker
- Gummosis
- Tristeza
- Greening

## Citrus canker (*Xanthomonas axonopodis* pv. *citri*)

**Survival:** On cankers present in leaf, stem and fruits

### IPM practices:

- **Cultural:** Prune badly infected twigs before the onset of monsoon
- Wind breaks are helpful
- **Chemical:** Streptomycin sulphate 500-1000 ppm; or Phytomycin 2500 ppm or Copper oxychloride 0.2% at fortnight intervals. Control leaf miner when young flush is produced



*canker on fruit*



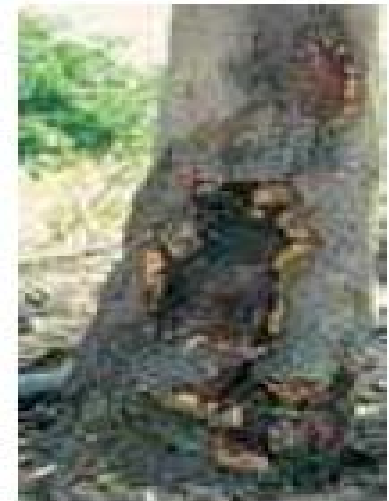
*canker on leaf*

## Gummosis (*Phytophthora parasitica*, *P. palmivora*, *P. citrophthora*)

**Survival:** As oospores in soil

### IPM practices:

- **Cultural:** Injuries to crown roots or base of the stem during cultural operations should be avoided
- If the lesion has girdled less than half the girth, remove the diseased bark with a knife along with half un-invaded bark
- **Chemical:** The bark of the trunk should be coated with Bordeaux paste (Copper sulfate, slaked lime and water in 1:1:10)



# Tristeza (*Citrus Tristeza virus*)

**Survival:** Infected citrus

**IPM practices:**

- **Cultural:** Avoid susceptible root stocks for sweet orange and mandarin cultivation
- Use seedling pre-immunized with mild strain of tristeza.



## Greening (*Candidatus Liberibacter asiatica*)

**Survival:** Infected citrus trees

### **IPM practices:**

- **Cultural:** Use pathogen free bud wood for propagation
- **Chemical:** Control psyllids with insecticides
- 500 ppm tetracycline spray, requires fortnightly application

