

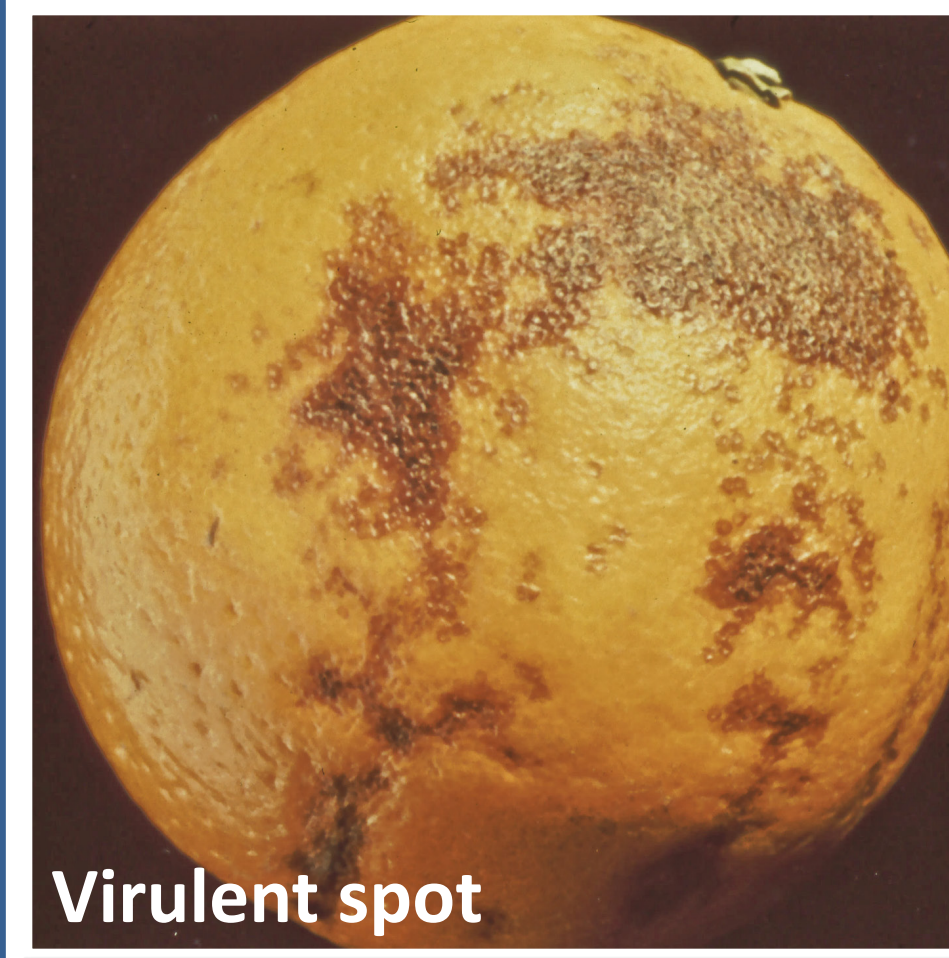
The Many Forms of Citrus Black Spot



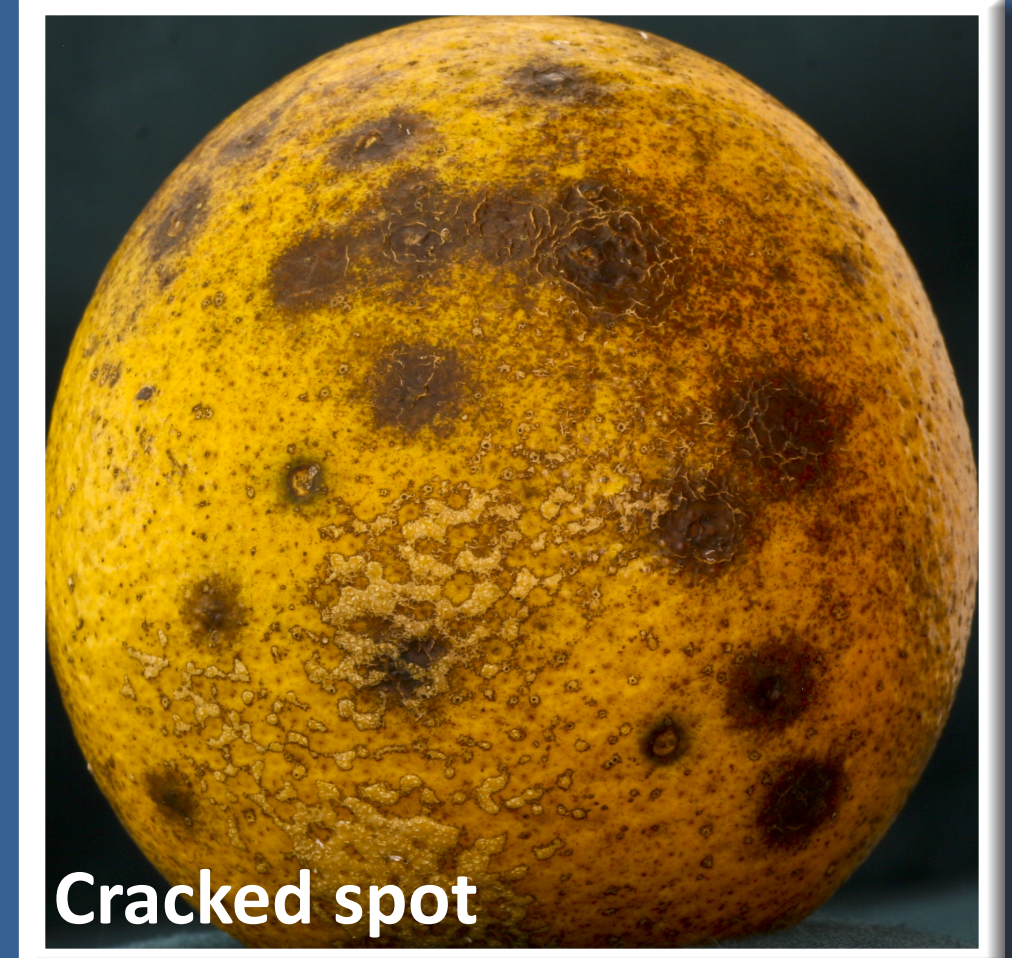
Hard spot



False melanose



Virulent spot



Cracked spot

- **Causal Agent:** *Guignardia citricarpa* (sexual) and *Phyllosticta citricarpa* (asexual)
- Fungus spreads in warm wet conditions in the presence of susceptible fruit when inoculum is present
- Primary inoculum is from leaf litter and spores are released with rain
- Secondary inoculum from fruit is spread by rain splash and is more problematic on late-season fruit

- Sweet oranges, grapefruit and lemons are highly susceptible
- Affects all citrus except Tahiti limes
- Symptomatic fruit is not acceptable in the fresh markets
- Excessive fruit drop occurs on late-maturing varieties such as Valencia
- Lower fruit often have more symptoms
- Symptoms are uncommon on leaves and stems in groves managed for black spot, but serve as a significant source of inoculum

- Symptoms of black spot can take many forms: false melanose, hard spot, cracked spot and virulent spot
- Hard spot most commonly found on sunny side of fruit
- Fungal structures (pencil point dots in center of lesion) often visible in hard spot
- Symptoms often develop in post-harvest storage
- Does not cause internal decay