

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Green and Blue Mould

- **Green Mould**
- **Symptoms**
- This is considered to be a destructive fruit rot of citrus.
- Early symptoms include a soft water-soaked area on the peel, followed by the development of a circular colony of white mould, up to 4 cm diam. after 24-36 hours at 24°C.
- Green asexual spores (conidia) form at the center of the colony, surrounded by a broad band of white mycelium.
- The lesion spreads more rapidly compared to those caused by *P. italicum*. The fruit rapidly spoils and collapses.
- If citrus fruit is fully covered by green conidial mass then one billion conidia may be present on fruit.
- **C.O.** *Penicillium digitatum*
- The disease develops most rapidly at temperatures near 24°C.

Green Mould on Kinnow



Blue Mould

- **Symptoms**
- Postharvest rotting caused by *Penicillium italicum* Wermer is responsible for significant economic losses of citrus.
- Early symptoms include a soft water-soaked area on the peel, followed by development of a circular colony of white mould.
- Bluish asexual spores (conidia) form at the center of the colony, surrounded by white mycelium.
- The lesions spread more slowly than those caused by *P. digitatum*.
- Water soaked area surrounds the lesion. In case of severe infection, the fruit is rapidly spoiled.

Blue Mould



Green and Blue Mould on Fallen Kinnow Fruit



Spread

- Spores of these fungi are common in the atmosphere and spread through wind.
- The fungi infect through wounds in the fruit, but infection by contact can also occur.

Management of Green and Blue Mould

- **Cultural Control**
- Fruit blemishes and injuries need to be minimized.
- Infected fallen fruits should be removed and properly destroyed.
- Disinfectants can be used to clean equipment in packing and storage facilities.
- Harvest following rain is discouraged because wet fruit are more prone to injury.

Chemical Control

- Fungicides are used commonly as dips or sprays to prevent *Penicillium* rots.
- Thiabendazole (TBZ) is effective as postharvest dip against both moulds.
- Fruits are dipped, without rinsing, in the product at the recommended dosage for 30 seconds, within 24 hours of harvest.
- At commercial level, in Kinnow factories, following fruit dipping is done to control Blue and Green mould and other postharvest diseases:
TBZ 01 liter + Imazalil 01 liter / 200 liter of wax.

*Sources

- 1. Recommended books.
 - 2. Latest research articles downloaded from Google.
 - 3. Google images.
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- *Solely for academic purpose and guidance of students.