Postharvest decay

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The major postharvest decay diseases are:

- Green mould (caused by the fungus *Penicillium digitatum*),
- Blue mould (caused by *Penicillium italicum*), and
- Sour rot (caused by *Geotrichum citri-aurantii*)

Green and blue mould that are the most important postharvest diseases, particularly in production areas in in-land Australia. Other postharvest diseases include brown rot (caused by *Phytophthora* spp.), Alternaria rot (*Alternaria* spp.), stem-end rot (*Diplodia natalensis*, *Phomopsis citri*), grey mould (*Botrytis cinerea*) and anthracnose (*Colletotrichum gloeosporioides*).

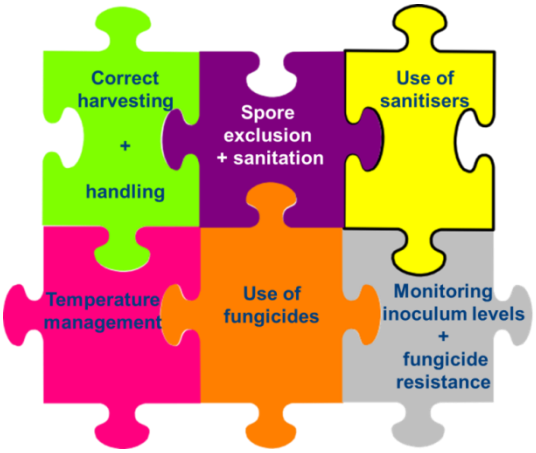
Green and blue mould are wound pathogens that only infect the fruit through peel injuries produced in the field during harvest and during packing and handling. When not adequately controlled, the postharvest losses caused by Penicillium can be enormous. But these losses are variable and depend upon climate and orchard factors, citrus cultivar, the extent of physical injury to the fruit during harvest and subsequent handling, the effectiveness of postharvest fungicides and treatments and the storage environment. Green mould typically causes larger losses throughout the supply chain as it tends to dominate at ambient temperatures, but blue mould becomes more important when citrus fruit are cold-stored for long periods, as blue mould grows faster than green mould below 10 °C.

Sour rot (*Geotrichum citri-aurantii*) is another major postharvest decay in many areas especially during fruit degreening and in wet and high rainfall seasons. However the control of this disease is more difficult as there are relatively few postharvest fungicides available.

The control of all decay after harvest requires an integrated approach. There are a range of different steps to take to control postharvest decay and include:

1. Care is required for correct harvest and handling of the fruit, as many rots rely of damage (wounds) to the skin for entry and infection.
2. Hygiene and sanitiation within the packinghouse. Keeping fungi out of the packinghouse and coolrooms is critical to reduce the risk of decay.
3. Use sanitisers in the washwater and packingline.
4. Use appropriate fungicides and follow the label.
5. Keep the fruit in the coolroom.
6. Monitor the levels of spores and fungicide resistance levels.

Each of these different management steps are critical to manage postharvest decay. While postharvest fungicides are very useful tools in controlling decay, it is not possible just to rely on postharvest fungicides alone for successful decay control. The rest of this article will focus on the successful use of sanitisers and fungicides to control decay during storage.



For additional information, please see related articles on fungicides in 'Australian Citrus News' and the 'Packer Newsletter'.

Disclaimer

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