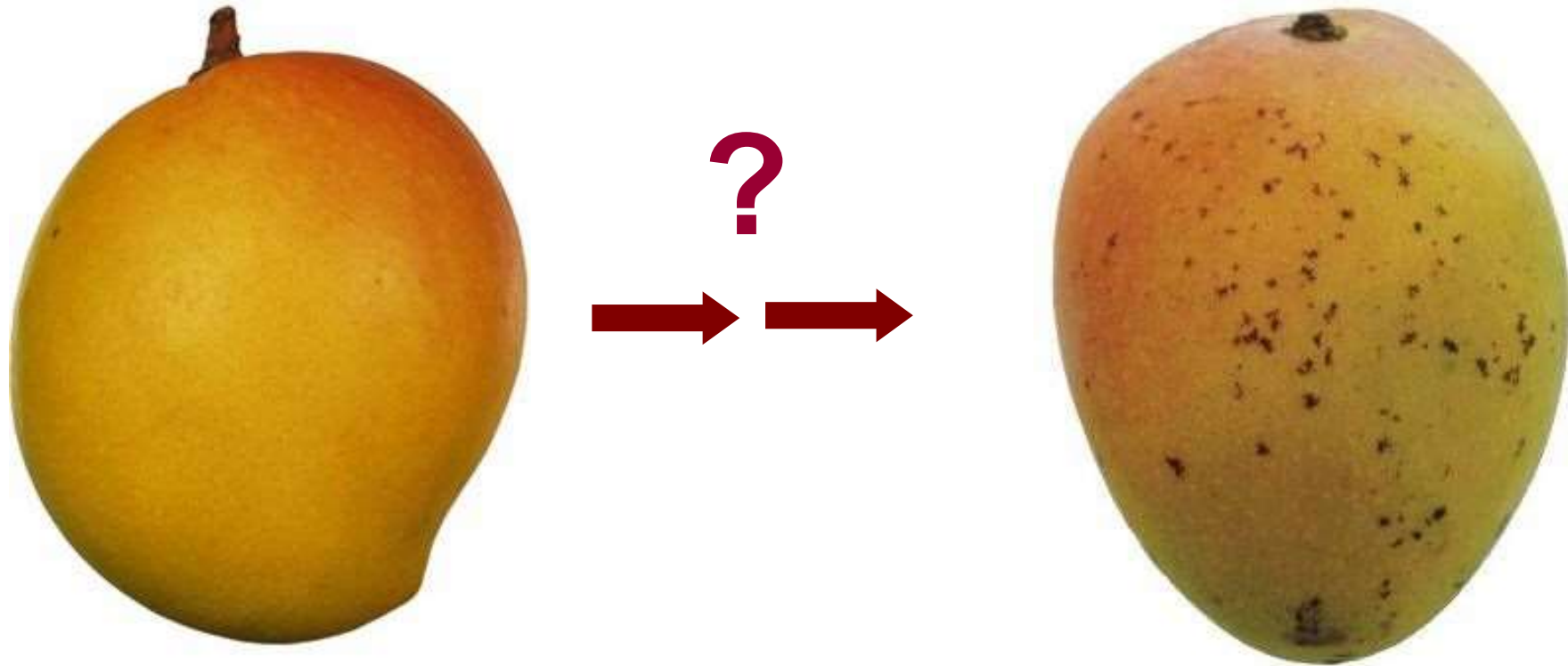


How is mango quality lost?



Training for supply chain members

Jodie Campbell, Scott Ledger, Terry Campbell, Leigh Barker

What affects saleability?

Sap burn

Skin browning

Fruit rots

Incorrect ripeness

Incorrect grading

Poor skin yellowing

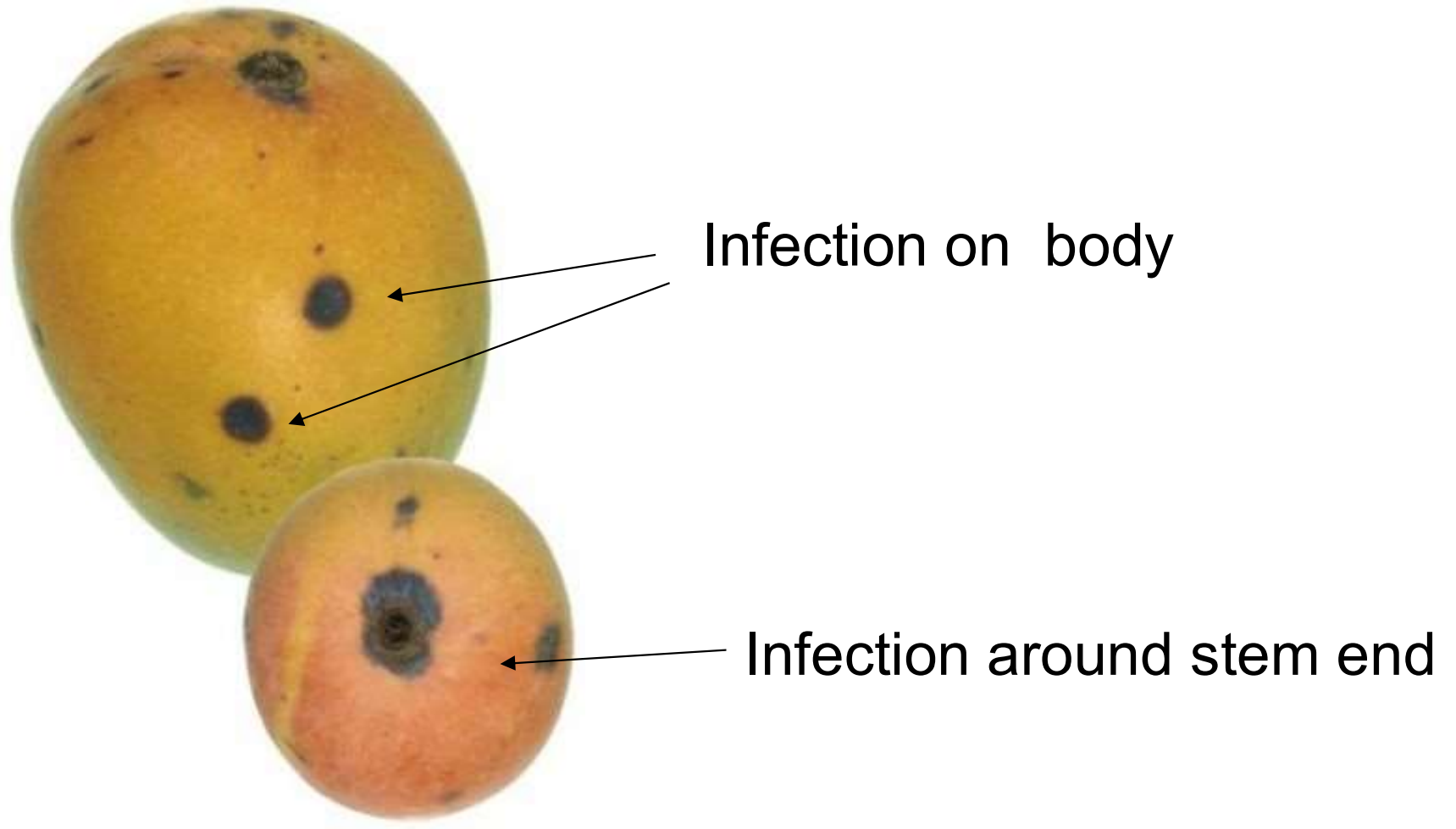
Chilling injury

Bruising

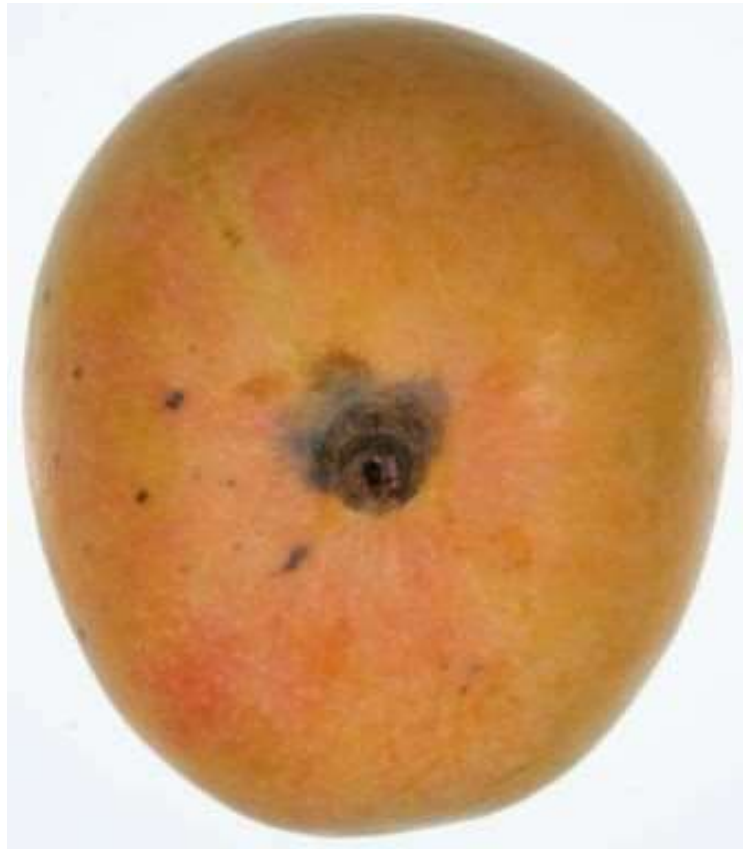
Lenticel spotting



Anthracnose



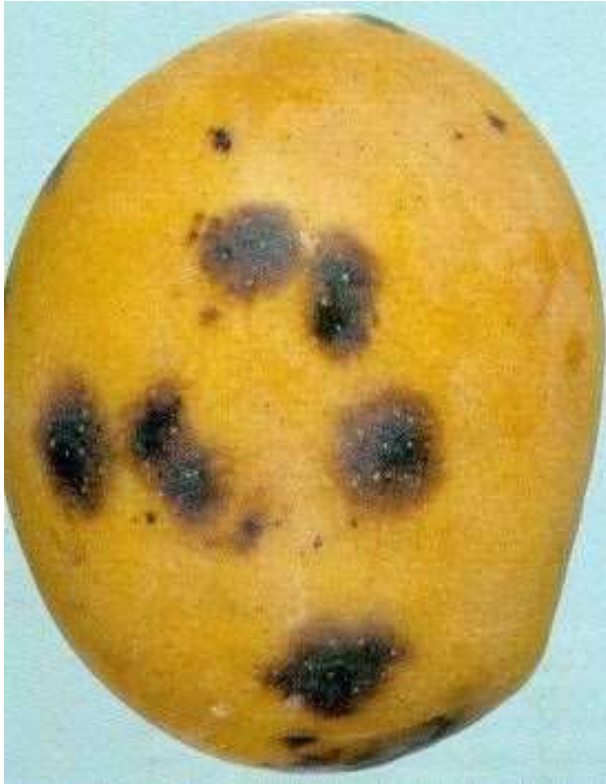
Stem end rot



Dendritic spot



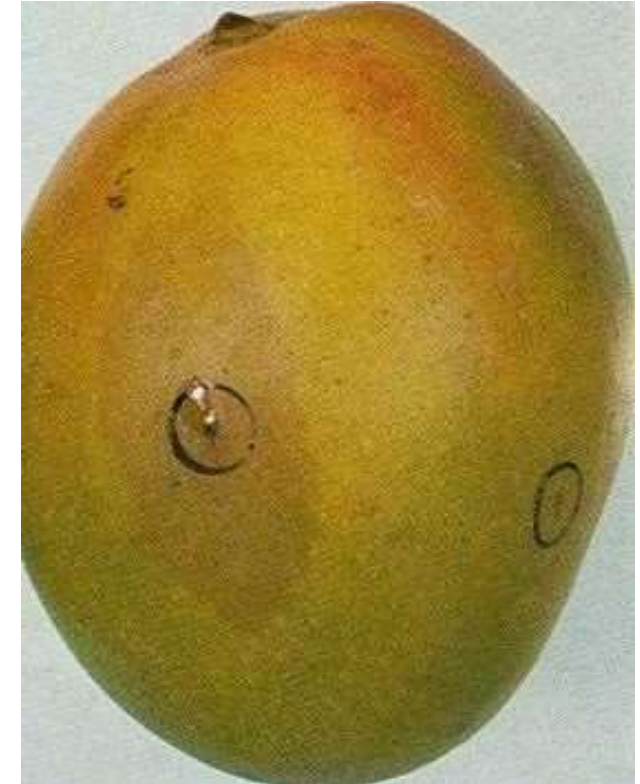
Storage rots



Alternaria



Aspergillus



Rhizopus
(transit rot)

Why do fruit rots occur?

Disease infection on tree

Contamination of dips



What affects fruit rots?

Orchard management

Fungicide



No fungicide



What affects fruit rots?

Postharvest fungicide

SpinFlo at 51-52°C



No fungicide



What affects fruit rots?

Ripening temperature

7 days at 20°C



4 days at 20°C
+ 3 days at 24°C



Why does sapburn occur?

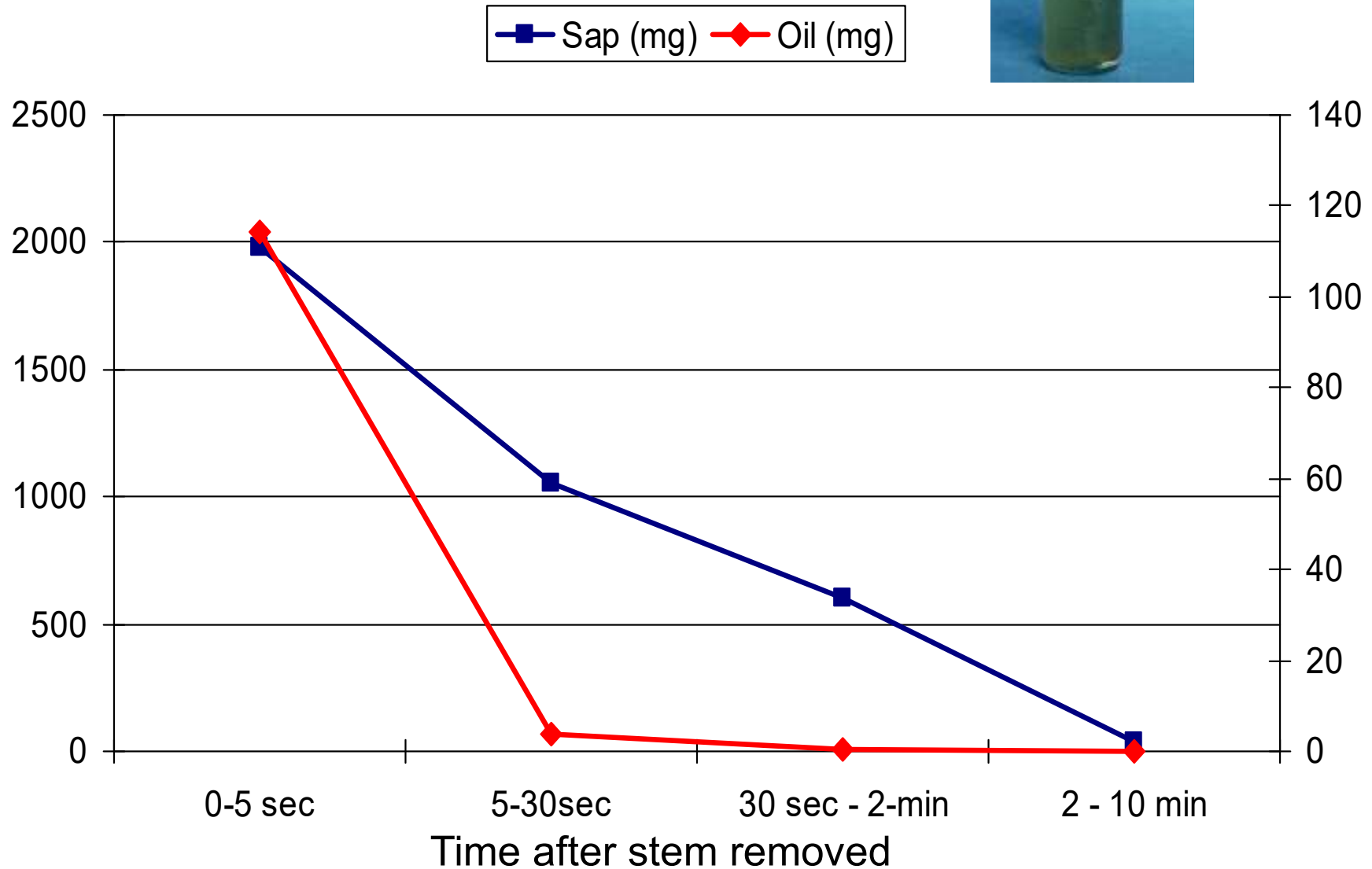


Spurt sap contacts skin when stem is broken below first node.

Damage is caused by oil in sap



Oil content of sap



Where does sapburn occur?

During harvesting



During transport

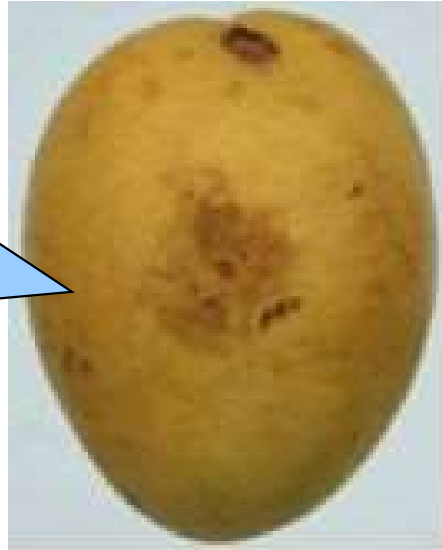


During destemming



Why does skin browning occur?

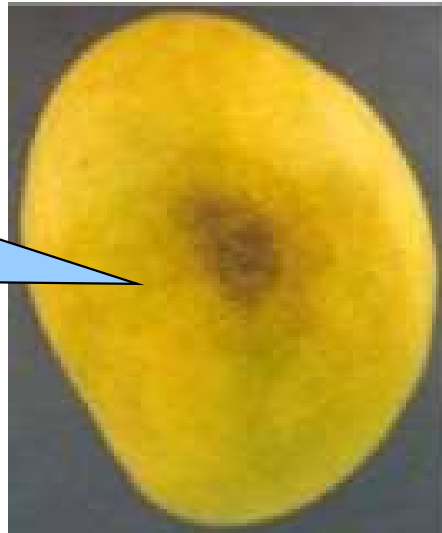
Prolonged contact of sap with low oil content



Abrasion from dirty equipment



Skin stays wet for long time



Heat damage



Where does skin browning occur?

Harvest aid



Shed desapping



Packing line



Incorrect ripeness

- Too ripe
- Not ripe enough
- Mixed ripe

Affected by:

- Temperature
- Ethylene



Why does poor skin yellowing occur?

Production and harvesting

Excessive application
of nitrogen



Picking immature fruit



Why does poor skin yellowing occur?

Fruit ripens at temperatures above or below optimum range or under high carbon dioxide



Where can skin yellowing be affected?



Fruit ripens at high or low temperature during transport or storage

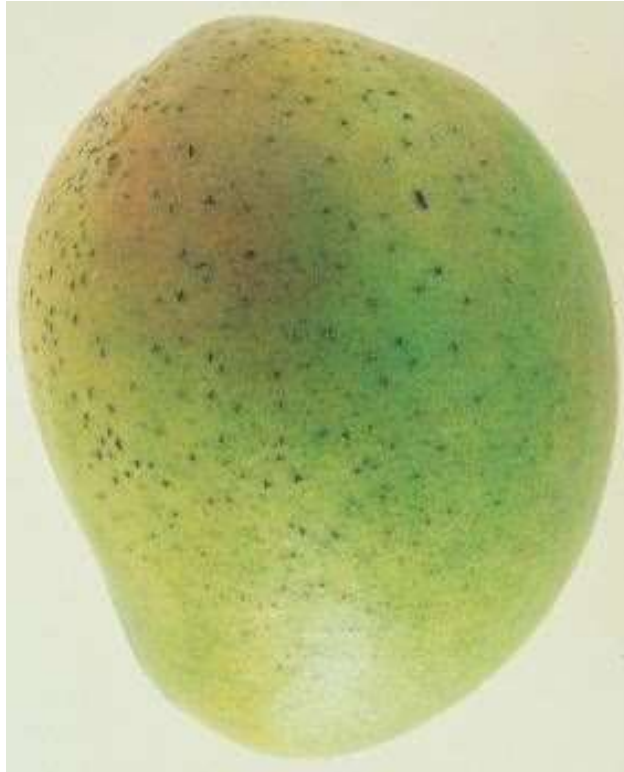


Poor temperature management or not enough venting during ripening



What causes lenticel spotting?

Pre-harvest



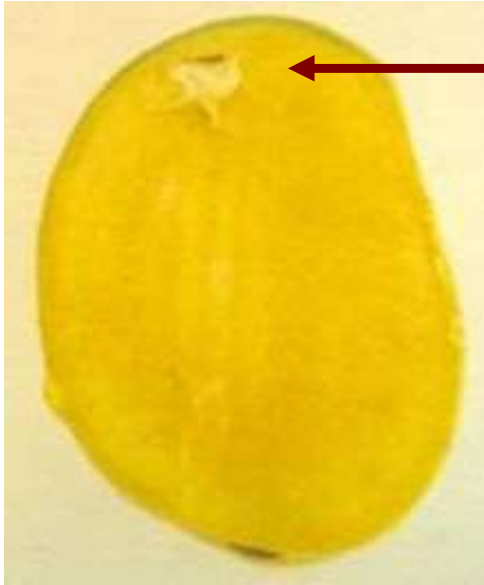
Caused by dry hot conditions during production

Postharvest



Caused by excessive heat treatment, fruit staying wet with detergent or sap, holding ripe fruit for too long

What causes bruising?



Impact of mango from dropping or knocking against hard surface during picking or handling in packing shed



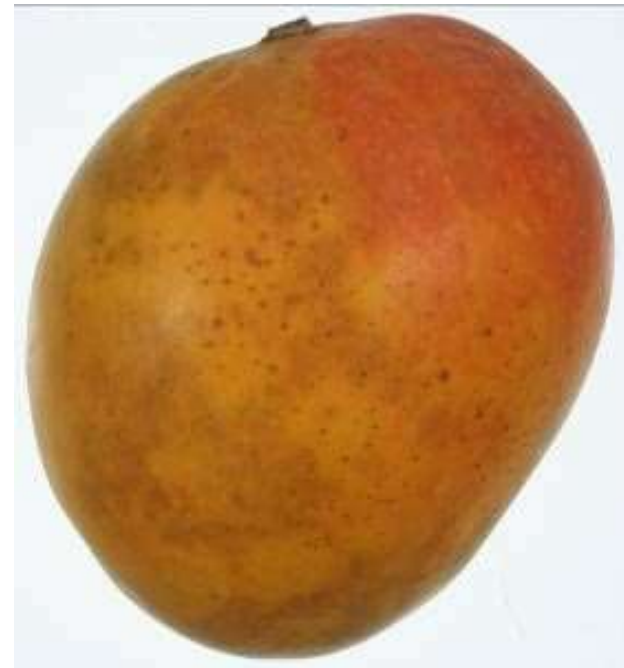
- Overpacking
- Collapsed cartons
- Sagging carton bases
- Stacking fruit too high in retail display

What causes chilling injury?

Injury to unripe fruit



Injury to ripe fruit



Temperatures below 10°C during storage and transport cause chilling injury

Incorrect grading

Mangoes need to be graded and packed to specification



Acknowledgements

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- Asian Markets for Horticulture Initiative, DPI&F Qld