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CUSTOMISED CROP SOLUTIONS

FACTORS FROM BUDBREAK TO HARVEST AFFECTING GRAPE QUALITY

Trix Quixley

Technical and Commercial Manager

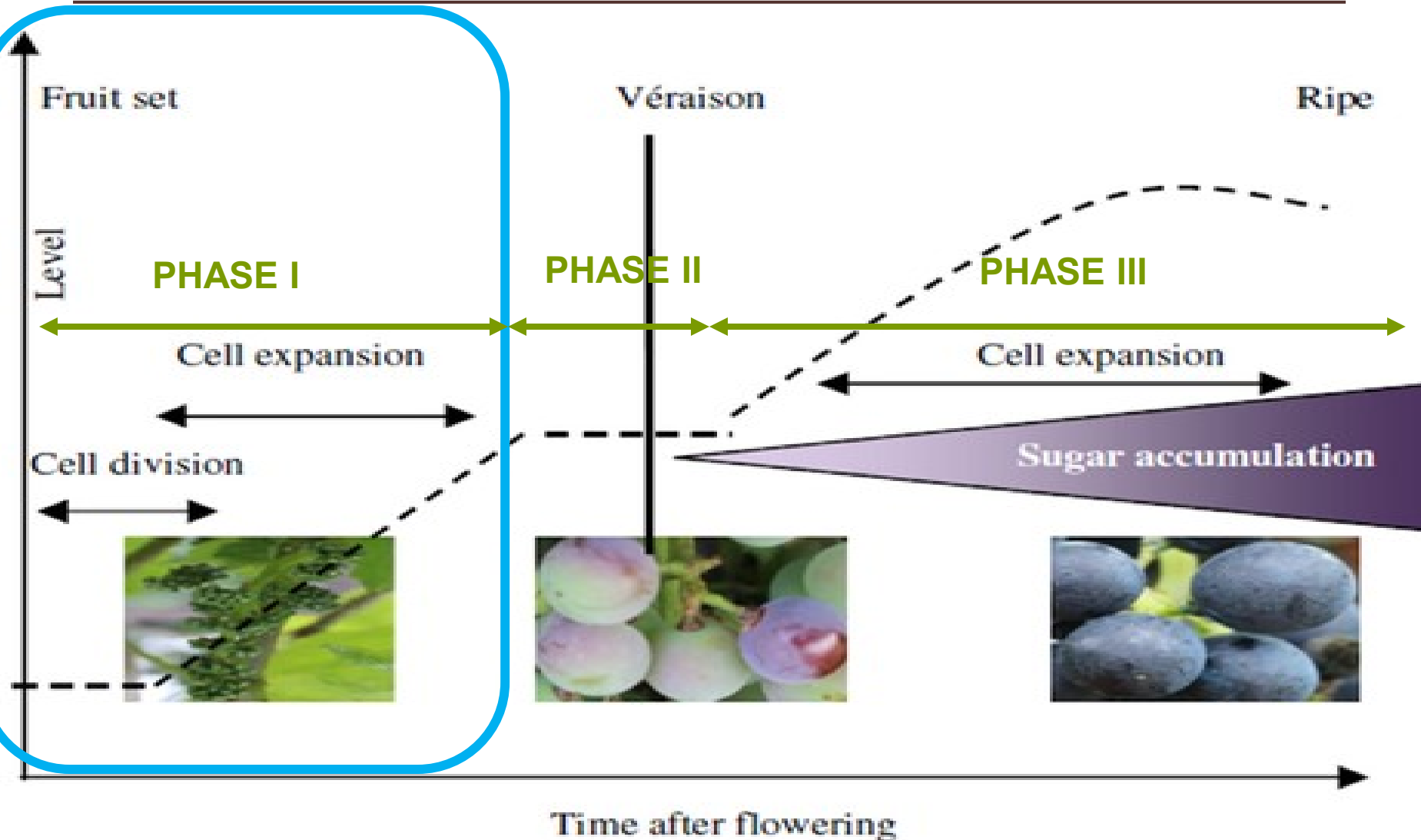
12 August 2021



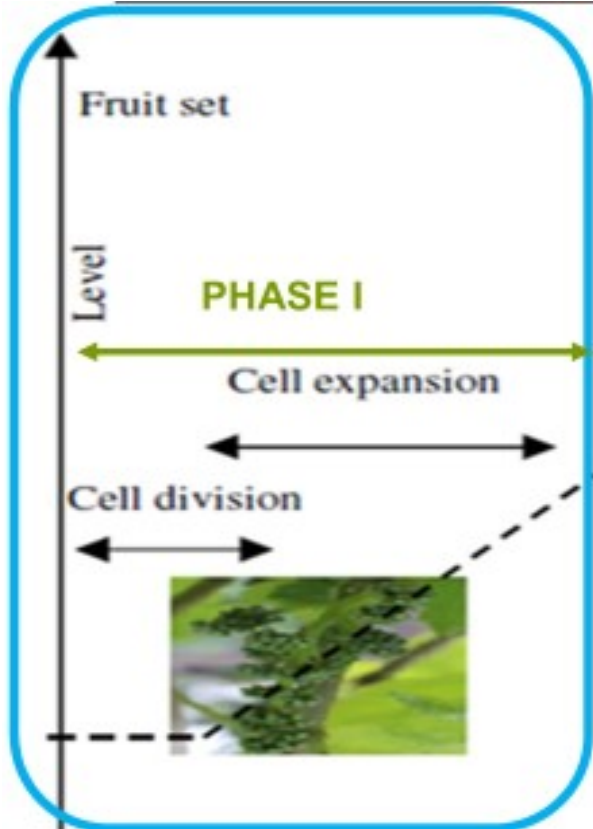
GOOD QUALITY GRAPES STARTS IN THE VINEYARD



BERRY DEVELOPMENT

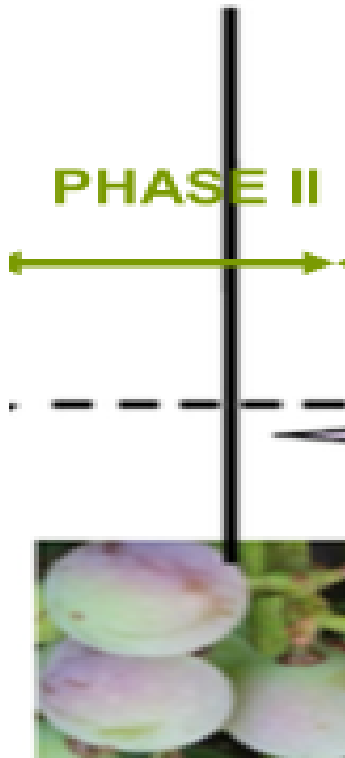


BERRY DEVELOPMENT – PHASE I



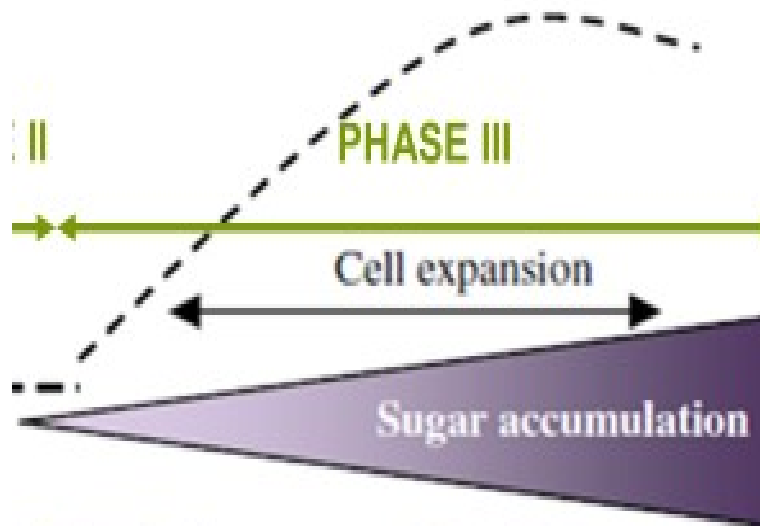
- **CELL DIVISION!!!!!!!**
- Some cell enlargement

BERRY DEVELOPMENT – PHASE II

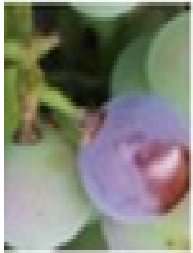


- Lag phase - No cell division
- Veraison – chlorophyll breakdown
- Cell walls ‘softens’ to prepare for cell enlargement

BERRY DEVELOPMENT – PHASE III



- Cell expansion phase
- Due to the import of water and sugars



**ALL DEVELOPMENT PHASES
ARE IMPORTANT BUT FOR
QUALITY, PHASE I IS KEY**

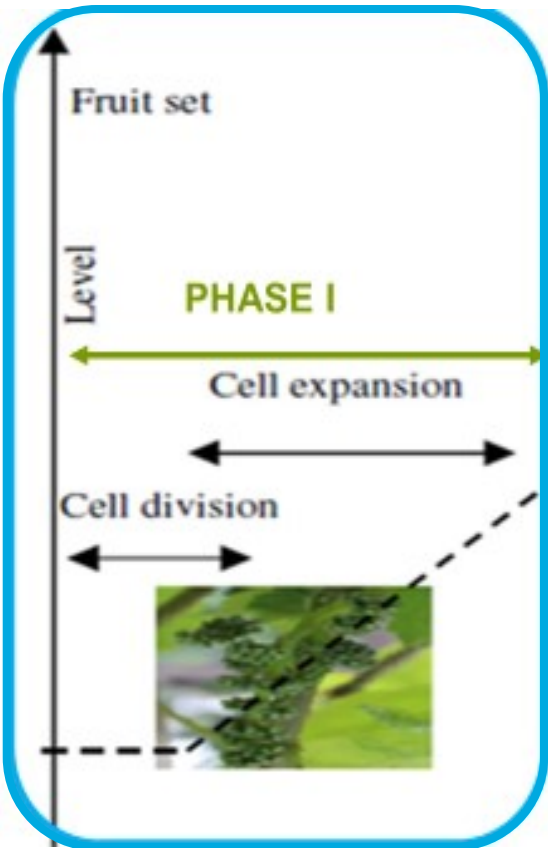


WHY IS MORE CELLS BETTER??

- Amount of cells in a berry affect:
 - Berry firmness
 - Dry mass
 - Lower susceptibility to fungal attack and decay

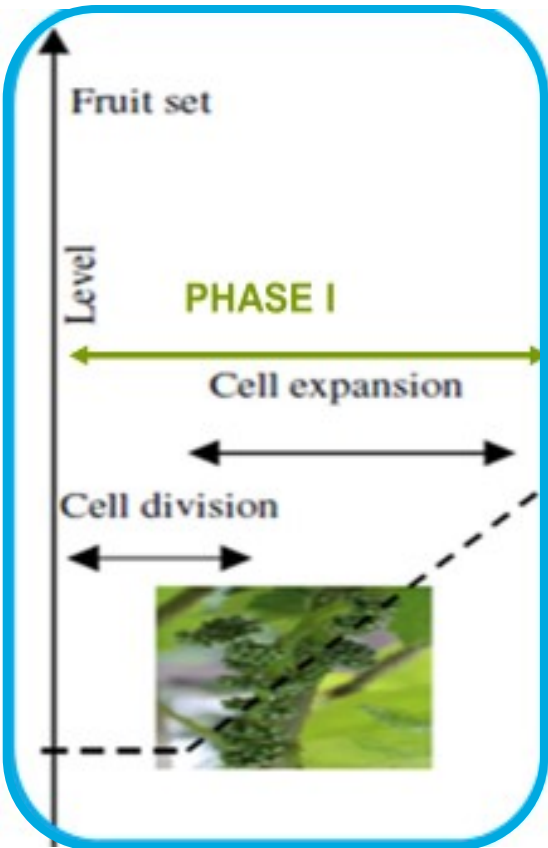
PHASE I – Cell division

- Weather conditions:
 - Optimal temperatures: 20 - 25°C
 - >35°C = smaller berries



PHASE I – Cell division

- Farming practices:
 - Water stress = less cells
 - Poor canopy management = overshading = less cells



PHASE I – Cell division

Roots or shoots?

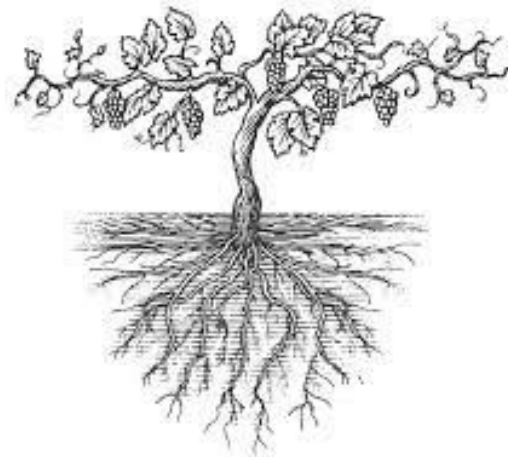


- Farming practices:
 - Poor root development = less cells
 - Suboptimal growth = less cells

INCREASE CELLS BY FARMING PRACTICES

- **Stimulate hair root development**

- Active shoot growth
- Auxin/cytokinin based bio stimulants (kelp products or other)
- Remove competition between shoots/bunches early as possible
- Organic material



INCREASE CELLS BY FARMING PRACTICES

- **Protect hair roots**
 - Nematode control
 - Salinity management – soil and water
 - pH management



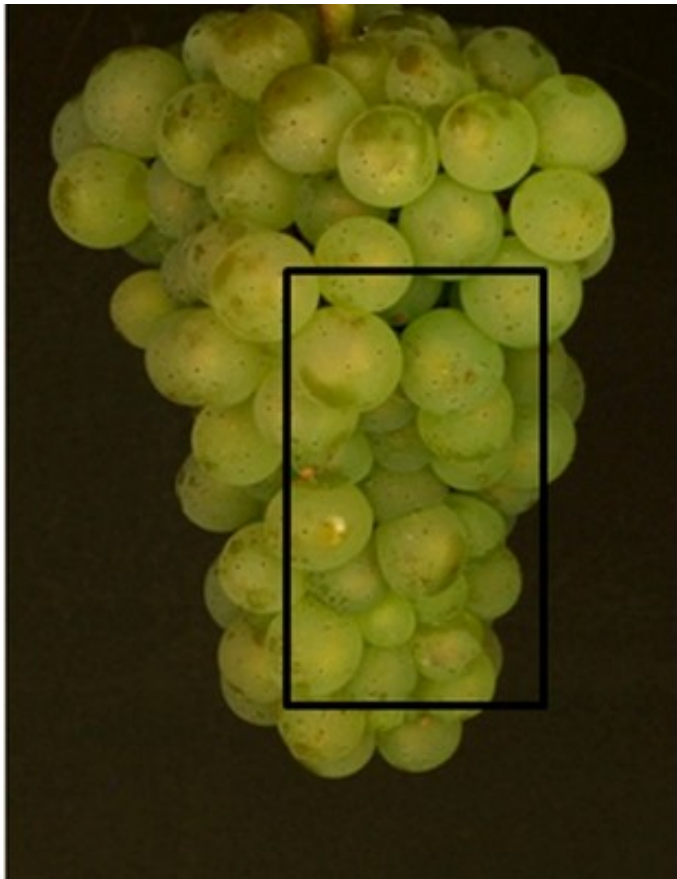
GENERAL FARMING PRACTICES FOR BETTER POST HARVEST QUALITY



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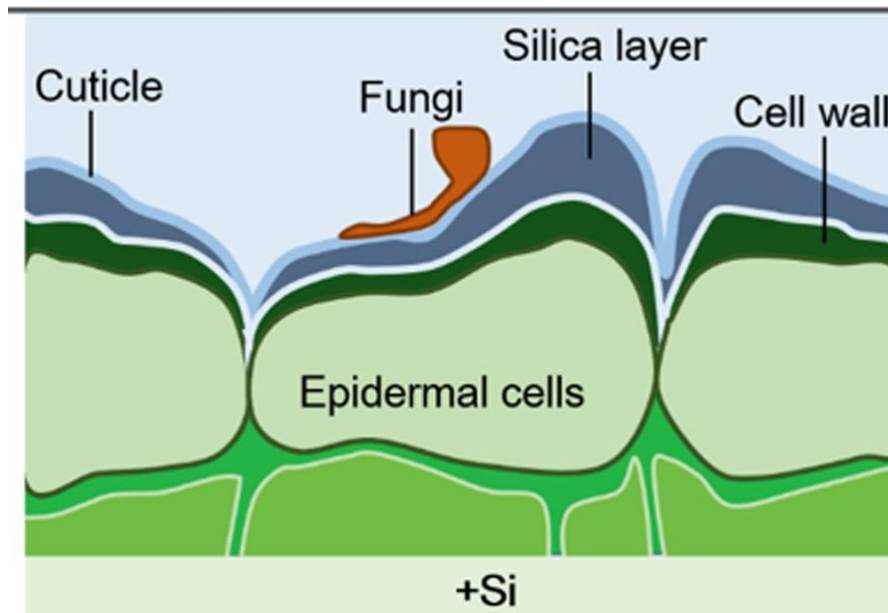
GENERAL FARMING PRACTICES FOR BETTER POST HARVEST QUALITY

- Thinning of bunches



GENERAL FARMING PRACTICES FOR BETTER POST HARVEST QUALITY

- Incorporate enough Ca and Si into cell walls – mechanical barrier to fungal attack



GENERAL FARMING PRACTICES FOR BETTER POST HARVEST QUALITY

- Take care – water status of vine should return to ‘normal’ after rain



GENERAL FARMING PRACTICES FOR BETTER POST HARVEST QUALITY

- Too much Gibb and CPPU may make the rachis stiff and entrance wounds for secondary infections may occur



GENERAL FARMING PRACTICES FOR BETTER POST HARVEST QUALITY

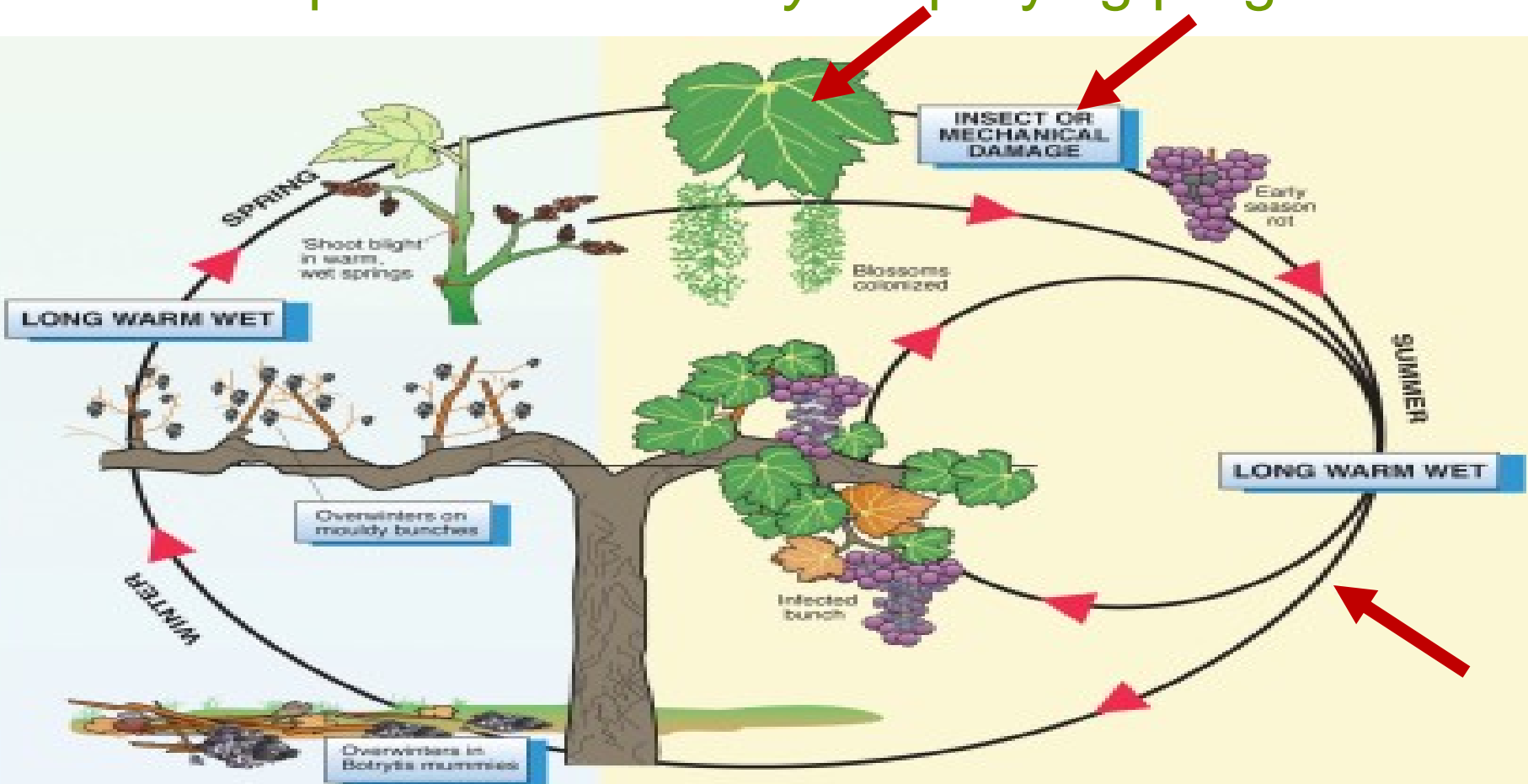
- Manage Nitrogen:

-  N = Ripening takes longer

-  N = Lowers mechanical resistance of berries against *Botrytis* infection

GENERAL FARMING PRACTICES FOR BETTER POST HARVEST QUALITY

- Follow a preventative *Botrytis* spraying program



GENERAL FARMING PRACTICES FOR BETTER POST HARVEST QUALITY

- Prevent/remove any physical damage!!



Powdery Mildew

Anthracnose



GENERAL FARMING PRACTICES FOR BETTER POST HARVEST QUALITY

- Prevent/remove any physical damage!!



Thrips



Bollworm



Fruit fly

GENERAL FARMING PRACTICES FOR BETTER POST HARVEST QUALITY

- Prevent/remove any physical damage!!



Hail



Birds



Sunburn

GENERAL FARMING PRACTICES FOR BETTER POST HARVEST QUALITY

- Prevent/remove any physical damage!!



Calyptra

Baie Dankie | Thank You



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