



Crunch time for cultivars? Rapid cell wall profiling for table grape quality analysis

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Consumers have preferences when buying grapes in stores

Factors affecting purchase include:

- Appearance
- Damage
- Price
- Convenience
- Variety?

Factors affecting repurchase include:

- Taste
- Sweetness
- Crunch factor (firmness)

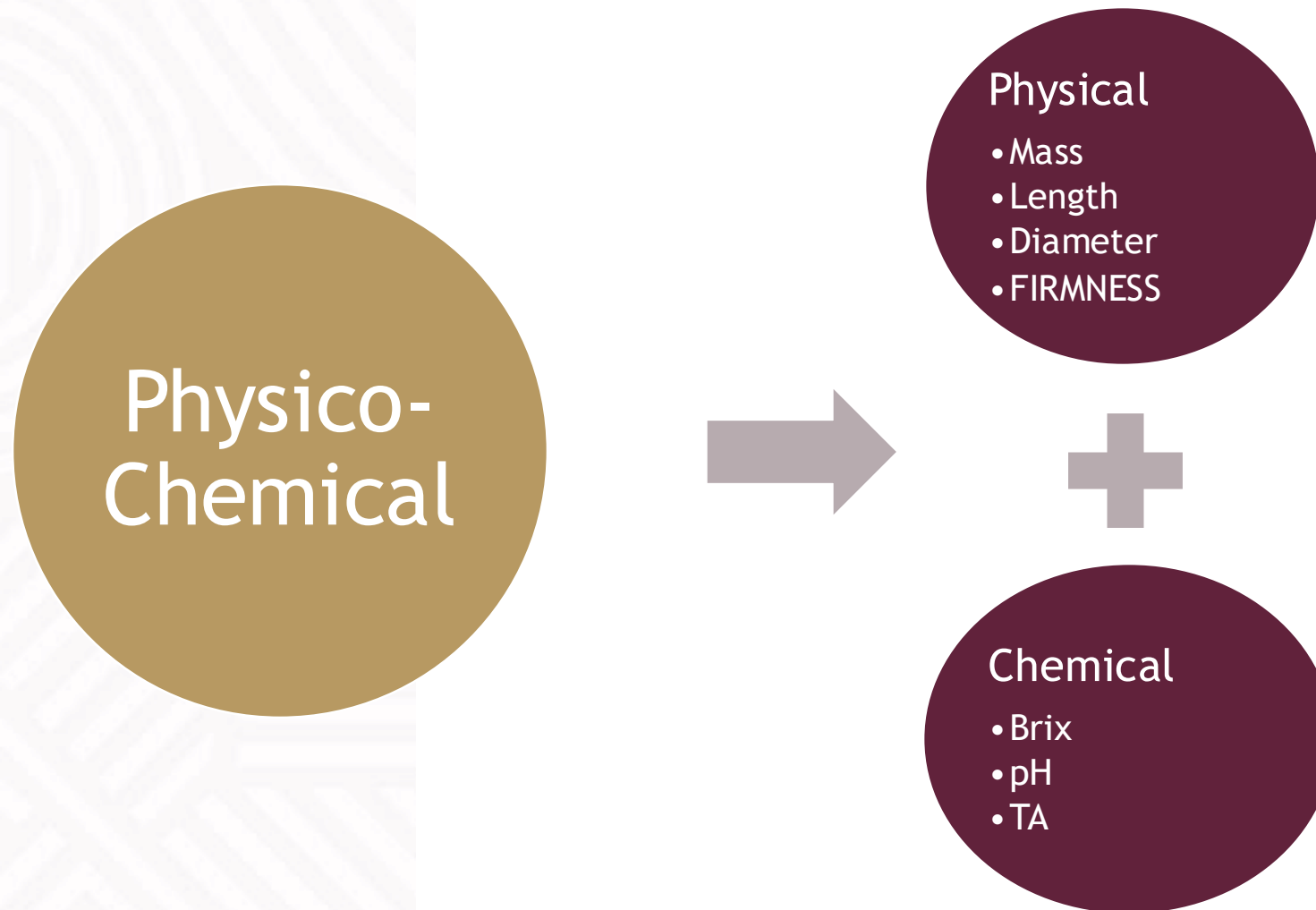


Firmness variations

- Firmness is one of the most attractive qualities in the table grape market
- SA is the 4th largest exporter of table grapes
- Firmer fruits are associated with a longer shelf life and capacity for long-distance transport
- Consumers *typically* prefer crunchy grapes with a firmer texture
- BUT not all cultivars have the same level of firmness

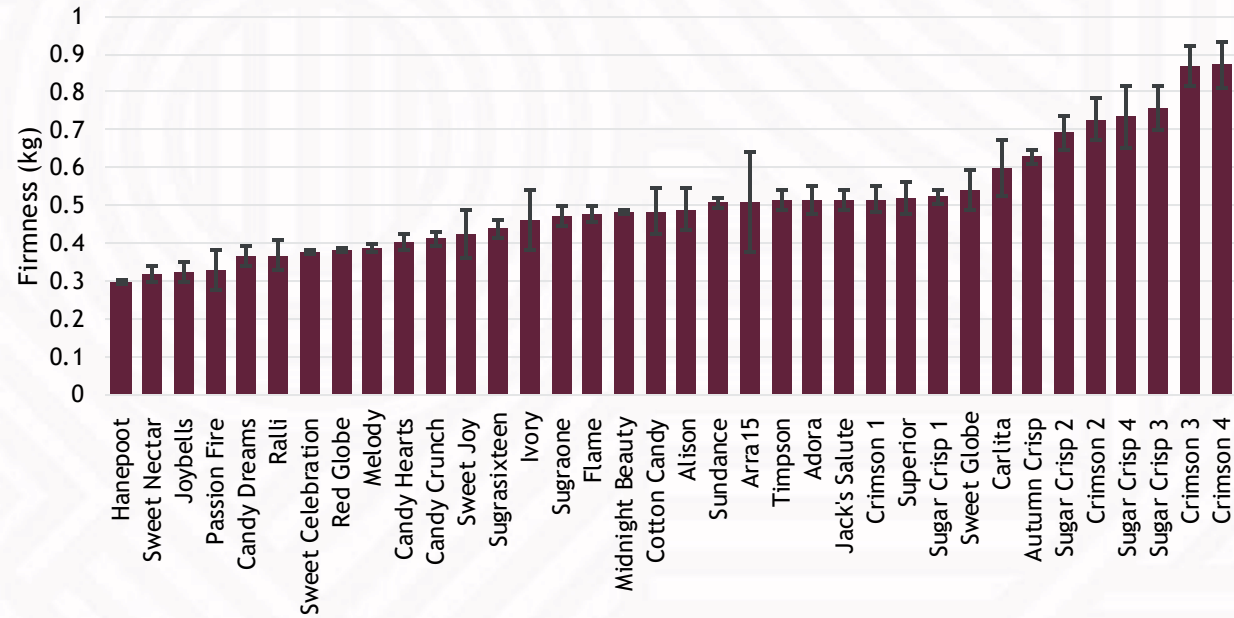


What can be correlated with firmness as a primary reference variable, such as cell wall polysaccharide quantities, physical or chemical measurements?

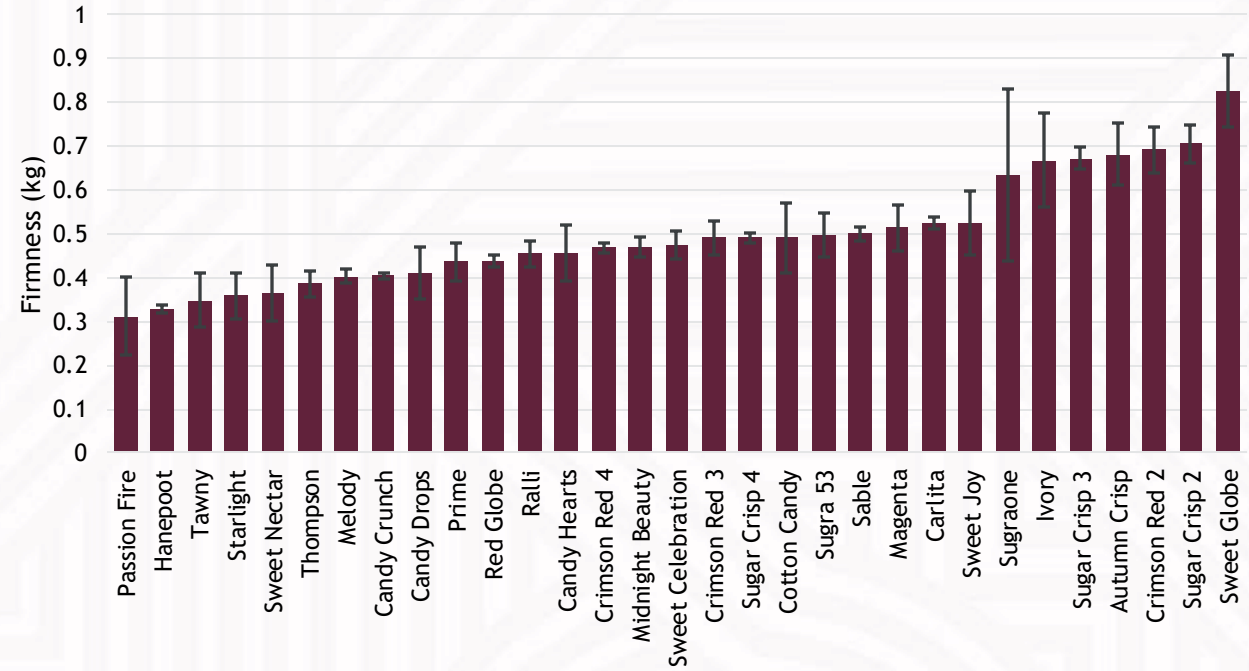


Continuum of firmness measurements in 2024 and 2025

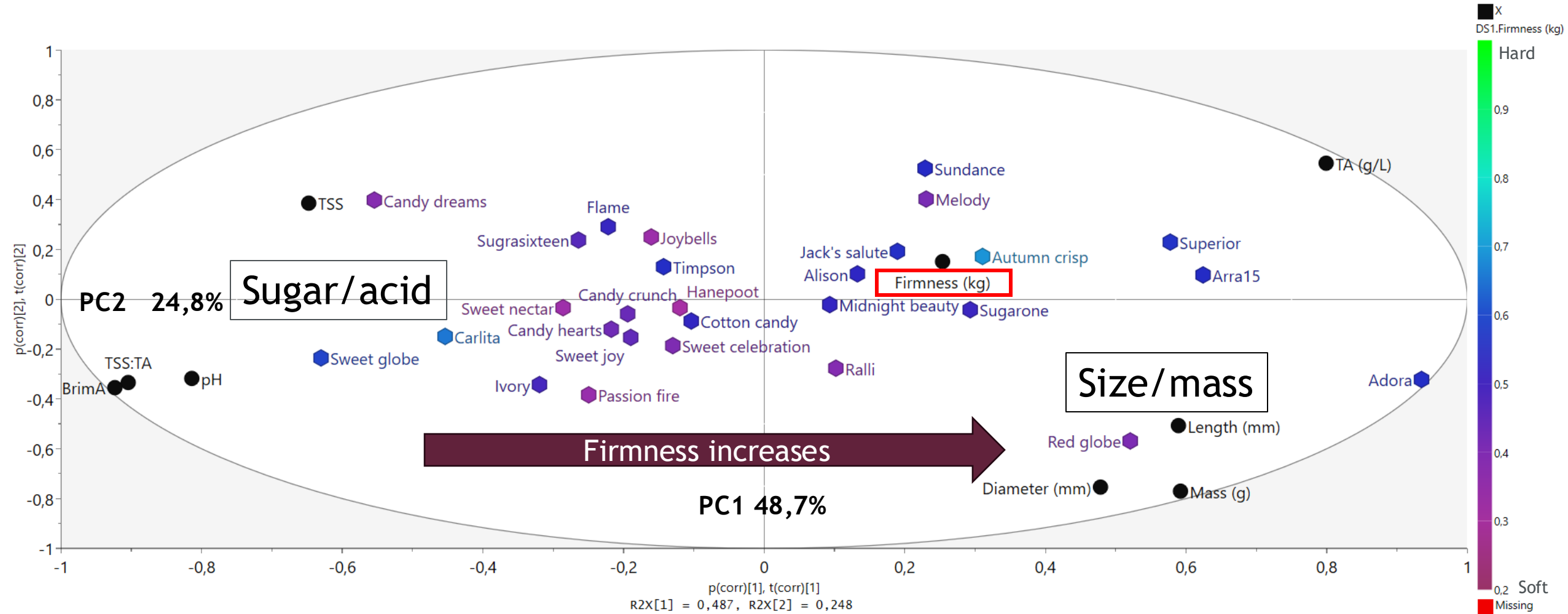
2024



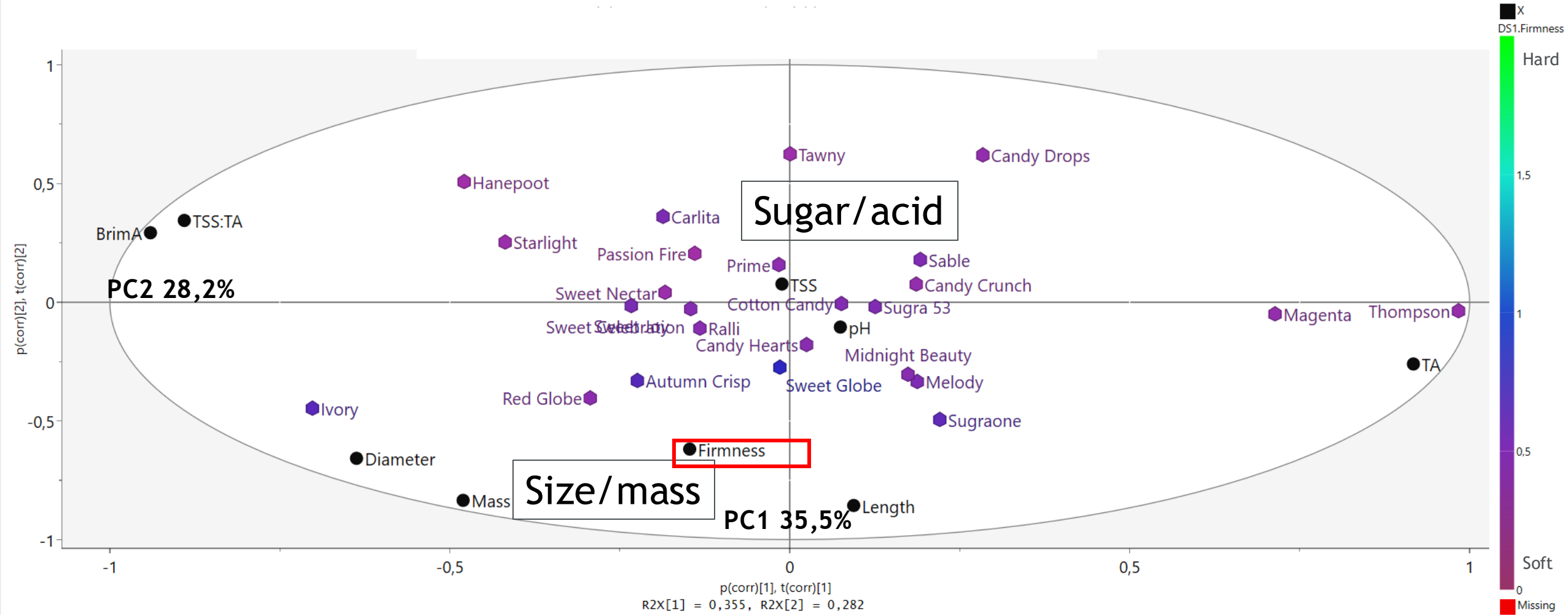
2025



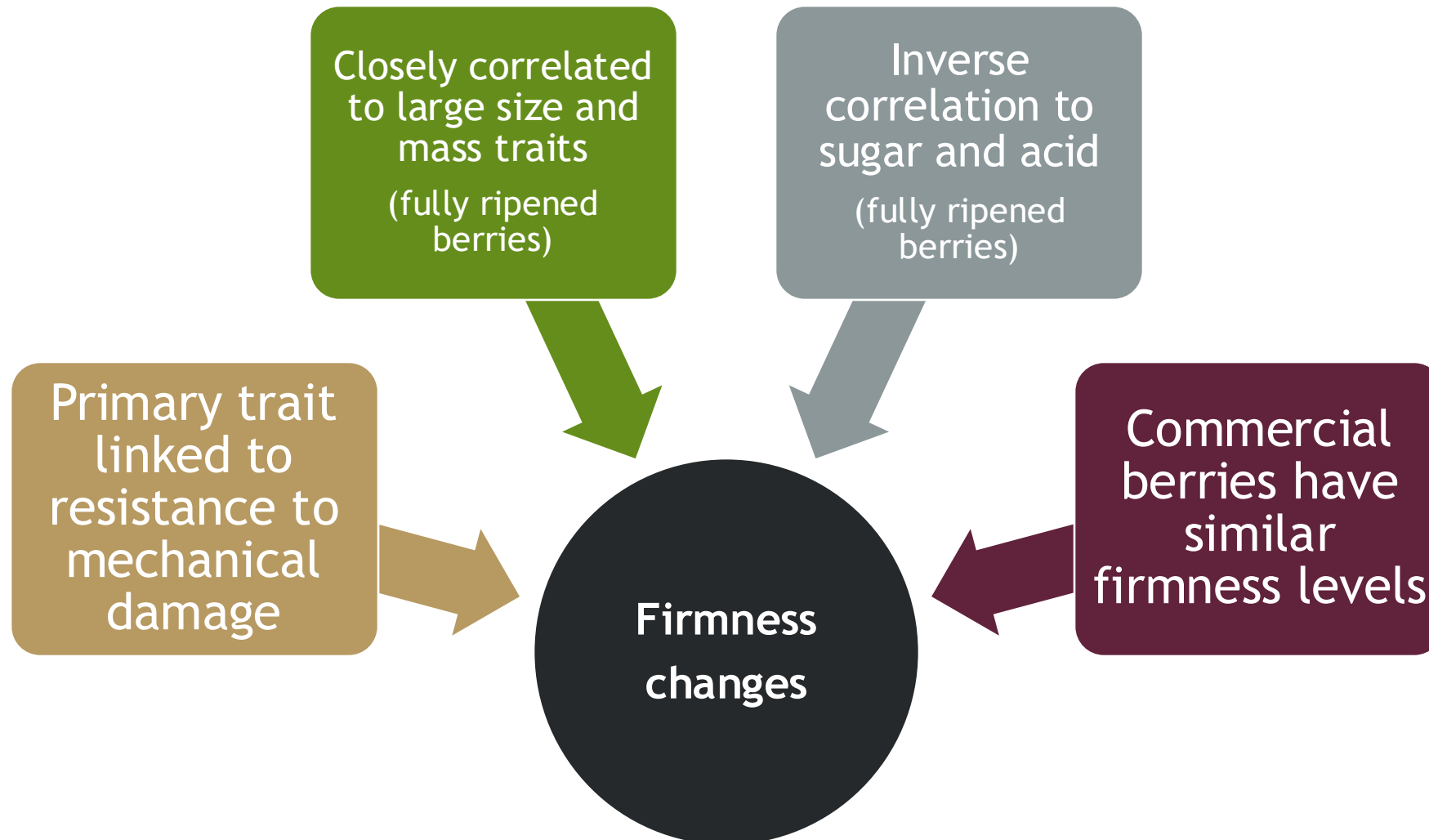
Physico-chemical measurements in 2024



Physico-chemical measurements in 2025



Concluding remarks



Acknowledgements

- Dr John Moore
- Talitha Venter
- SATI
- SASEV
- SAGWRI



SASEV

South African Society for
Enology & Viticulture

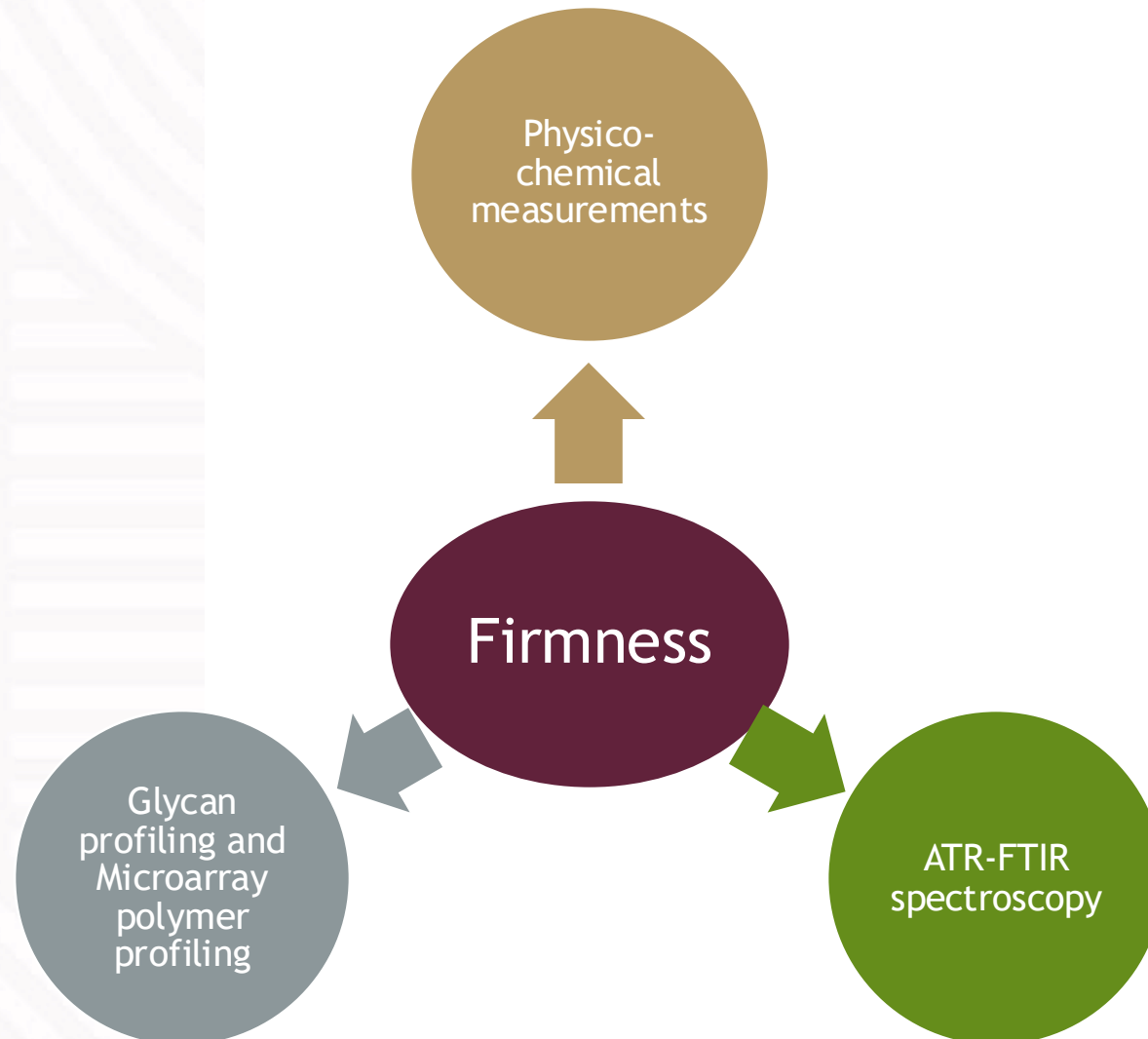


SATI
SOUTH AFRICAN TABLE
GRAPE INDUSTRY

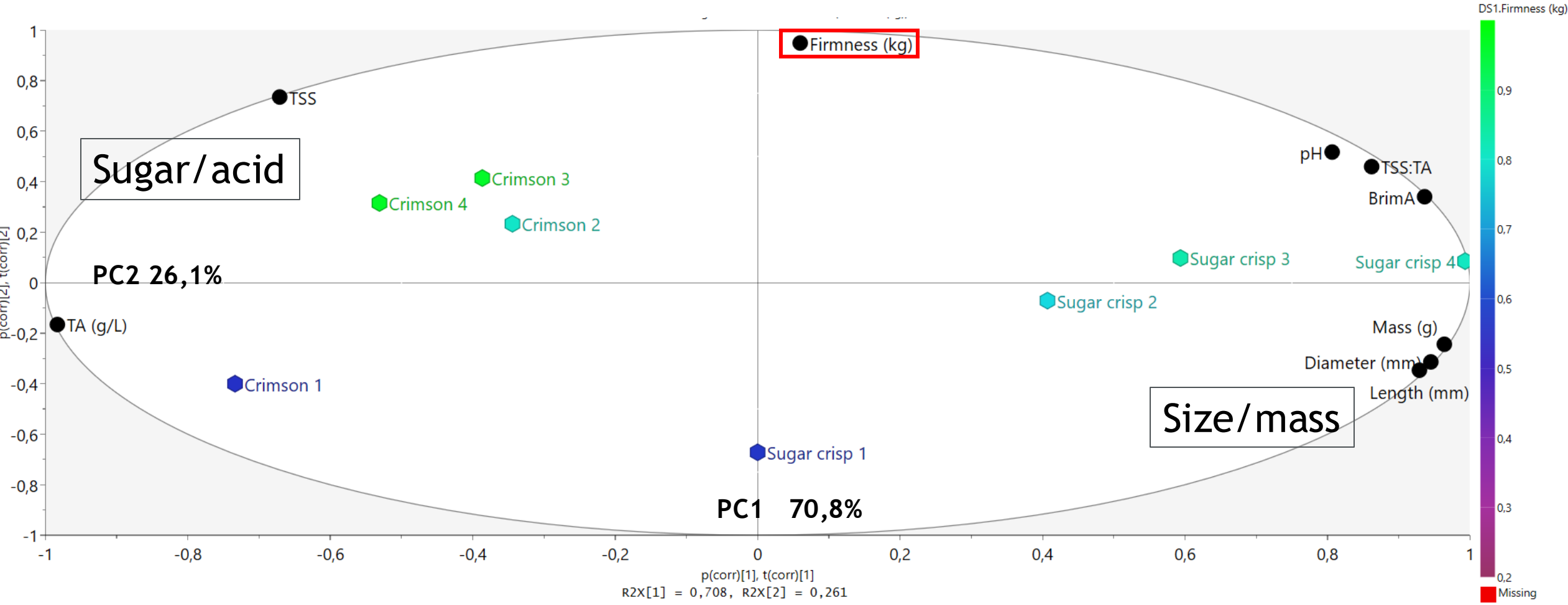
SAGWRI

South African Grape and
Wine Research Institute

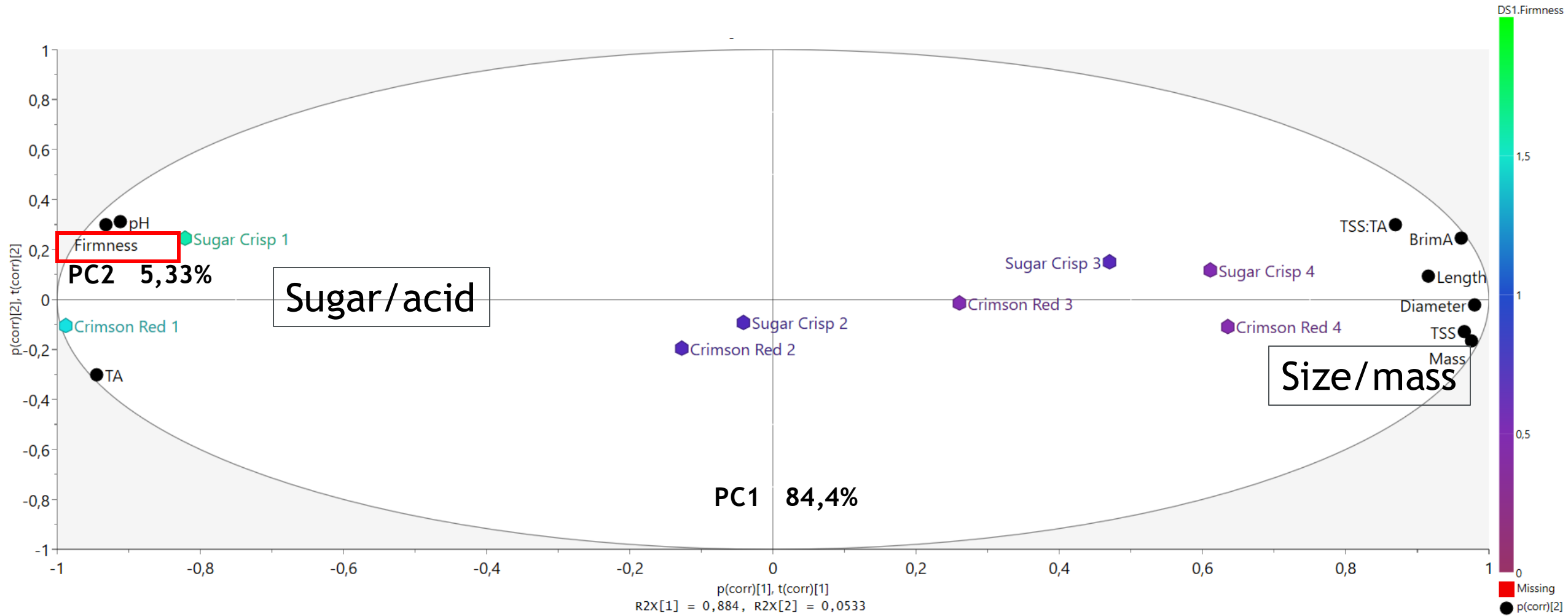
Thank you
Enkosi
Dankie



Physico-chemical measurements in 2024



Physico-chemical measurements in 2025



Physico-chemical measurements in 2025

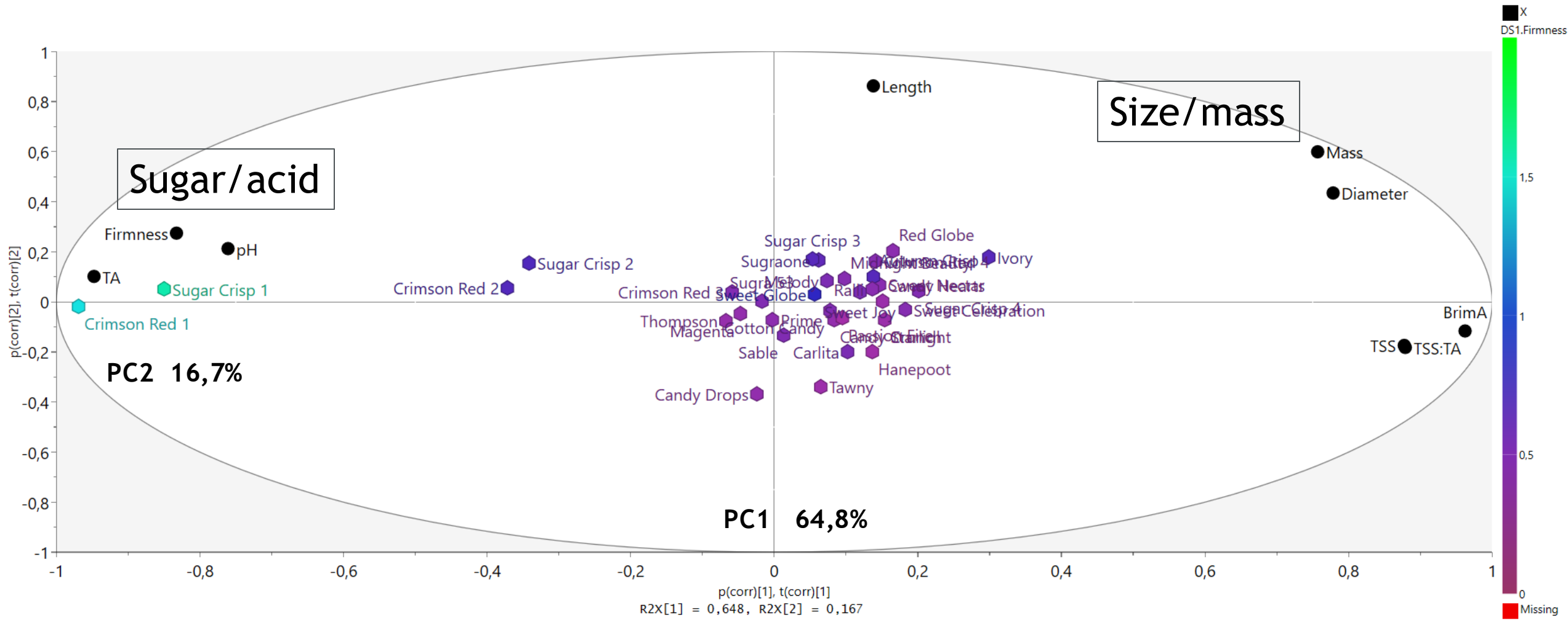


TABLE GRAPE EXPORTING COUNTRIES
2024 TOP 10 BY VOLUME (TONNES)

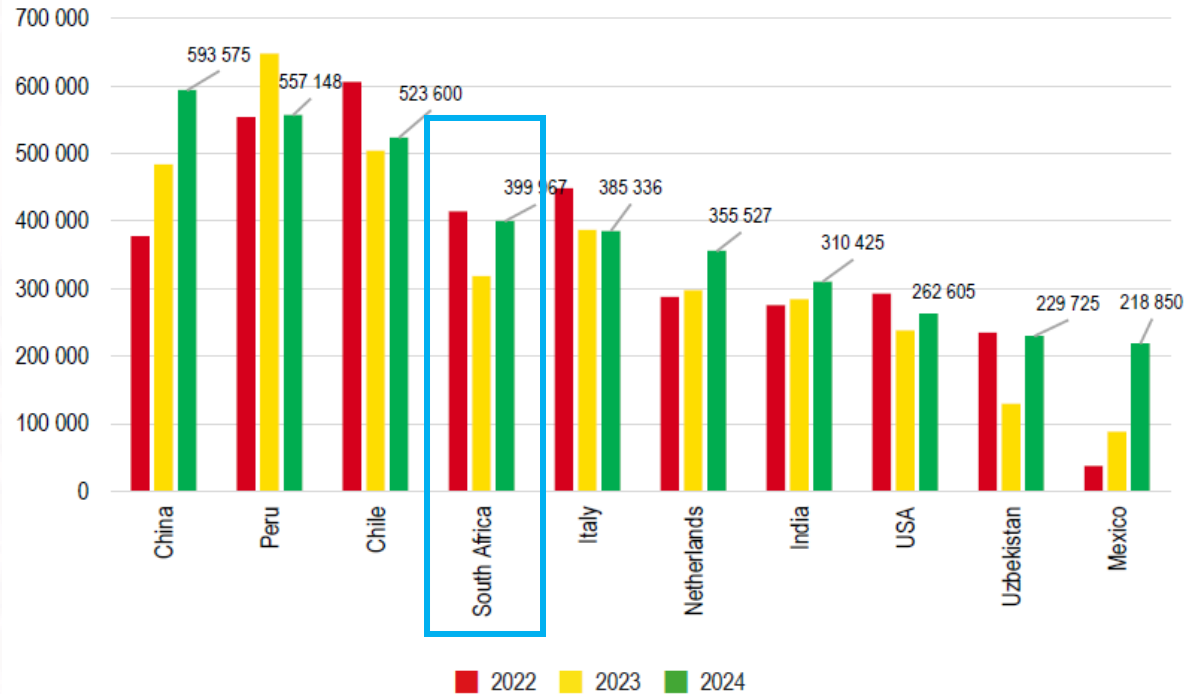
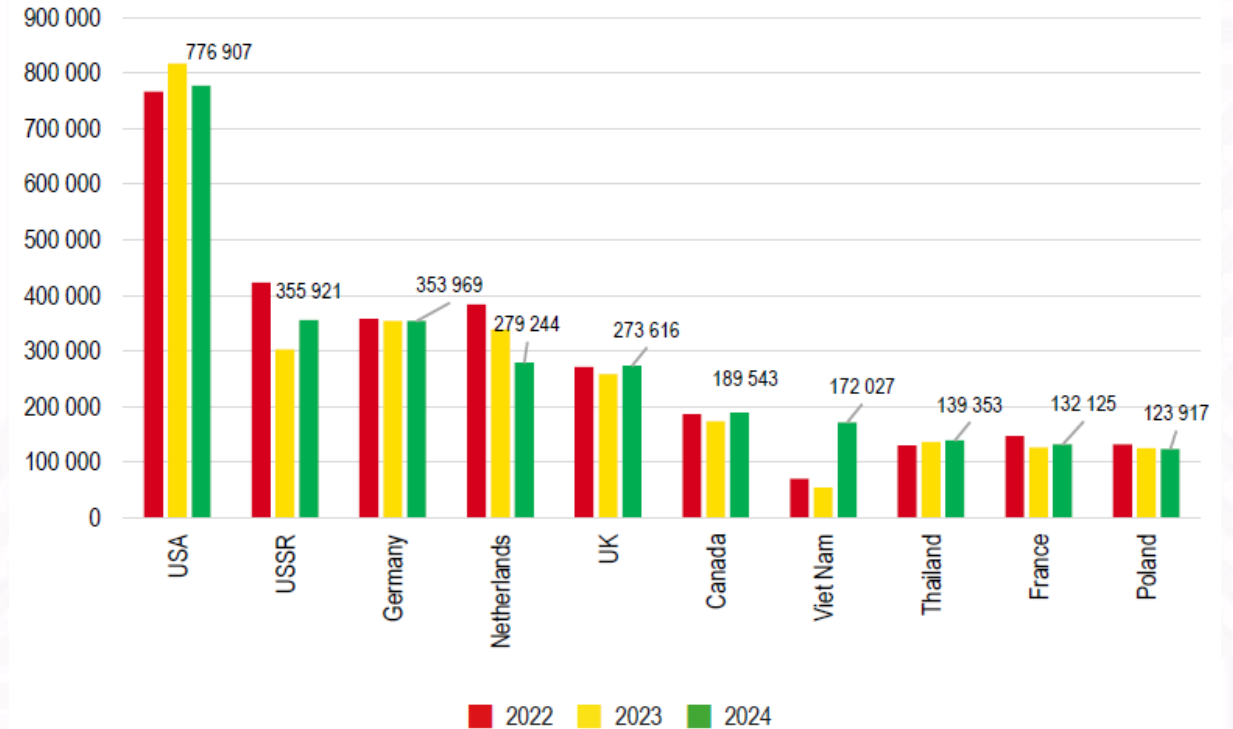


TABLE GRAPE IMPORTING COUNTRIES
2024 TOP 10 BY VOLUME (TONNES)



78.2 million
Cartons exported
COMPARED TO
74.1 million LAST
SEASON

South Africa is the
3rd largest
Southern Hemisphere
exporter