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Sensory Characterisation of old-vine Chenin blanc wine

A **Scientific Perspective** on the **in-mouth sensations** in **old-vine Chenin blanc** wines and sensory profiling of this category

Valeria Panzeri

Renée Crous (MSc)

Dr Hélène Nieuwoudt



SASEV-WINETECH 41st International
CONFERENCE

2-4 Oct 2018 | NH Lord Charles Hotel, Somerset West, South Africa

What is novel and innovative in Grapevine and Wine Sciences?



Context for this study

- **Old-vine Chenin**

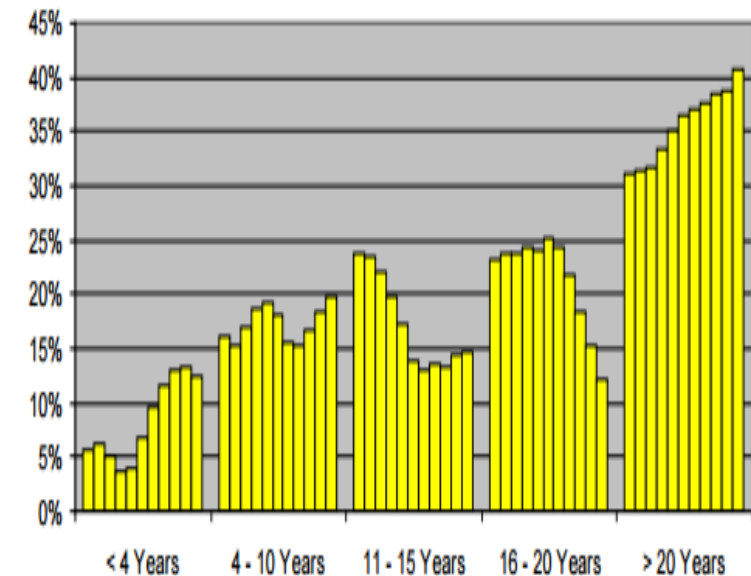
- Majority of SA Chenin blanc vineyards are older than 20 years
- Old-vine wines are produced from vineyards >35 years
- 18,56% of these is Chenin blanc – The most abundant white variety grown in SA (SAWIS, 2017)

Previous research on this variety focussed **on aroma only**:

- Chemical and Sensory profiling of aroma dry and semi-dry South African Chenin blanc wines (van Antwerpen, 2012)
- Chemical, sensory and consumer profiling of a selection of South African Chenin blanc wines produced from bush vines (Hanekom, 2012)
- Classifying South African Chenin blanc wine styles (Bester, 2010)
- Characterisation of Chenin blanc wines produced by natural fermentation and skin contact (Weightman, 2014)
- Chemical evaluation and sensory relevance of thiols in South African Chenin Blanc wines (Wilson, 2016)



Chenin blanc age distribution (1998 - 2008)
Industry





Problem Statement

- Variety of different Chenin blanc styles have been profiled – an important category is lacking : Old-vine Chenin blanc
- Clear: Wine should not only be analysed i.t.o. aroma, also on **in-mouth sensations**.

But - seldom included in descriptive sensory analysis (DA) and profiling of wine, especially white-

- **Why?** **Abstract and complex** concepts; difficult to standardise; individuals' own perceptions; difficult to reach panel consensus



Research objectives & tasks

1. Investigating the **in-mouth sensations** of Old-vine Chenin blanc wines
 - Mining Platter's Wine Guide Data
2. Training of DA panel to **Profile** the selected samples of Old-vine Chenin blanc
 - Establish Reference Standards (Aroma & in-mouth sensations)
 - Test the panel for consistency and discriminating abilities
3. Profiling the selected samples of Old-vine Chenin blanc i.t.o. Aroma & in-mouth sensations
 - Expand Chenin blanc data base
 - Update Sensory wheel

Platter's Wine Guide: in-mouth sensations >40 year Old-Vine Wines



By: Sensory evaluation by **Experts** in the field of wine

Sensory characterisation **in-mouth sensations** : Old-vine Chenins

By: **trained panel**

19 Wines



- DA
- Consensus training
- Ballot training

✓ in-mouth sensations significantly different between old-vine and young-vine wines

✗ in-mouth sensations NOT significantly different between old-vine and young-vine wines

✓ **Body**

✗ **Heat**

✗ **Acidity**

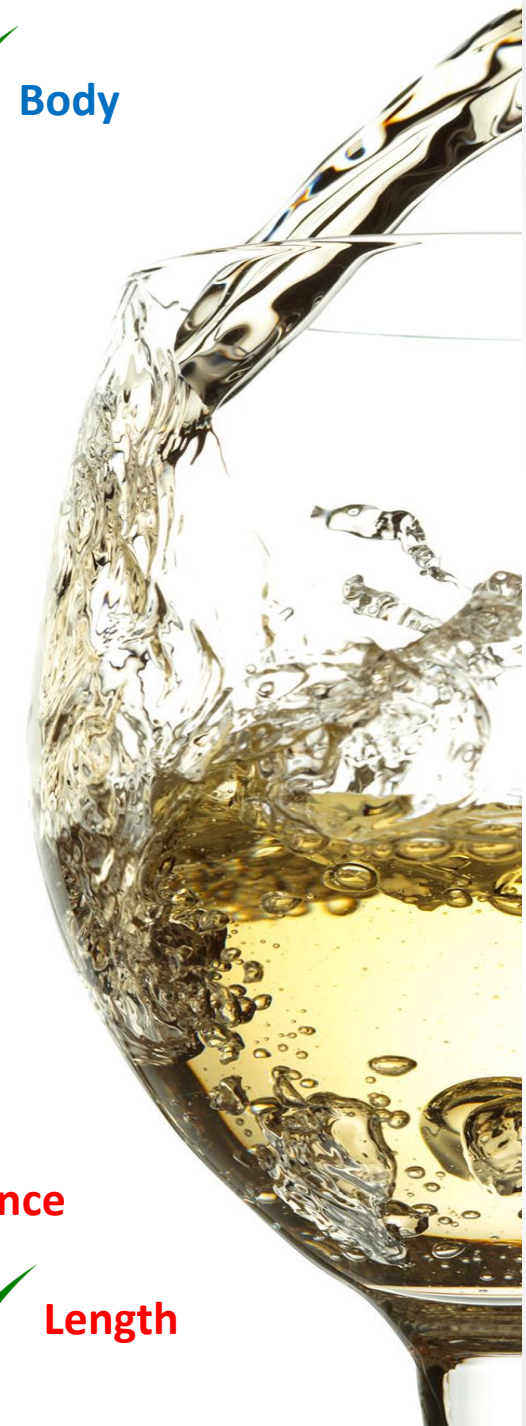
✓ **Concentration**

✓ **Complexity**

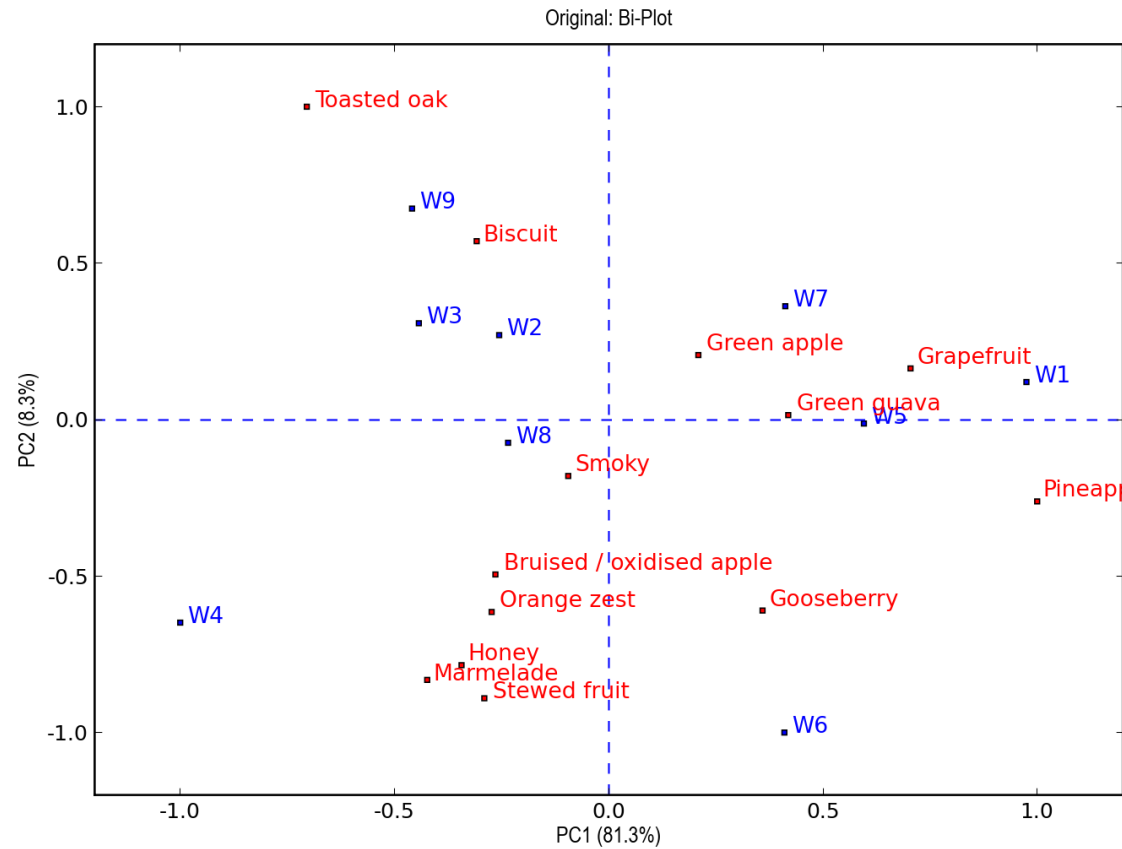
✓ **Integration**

✓ **Balance**

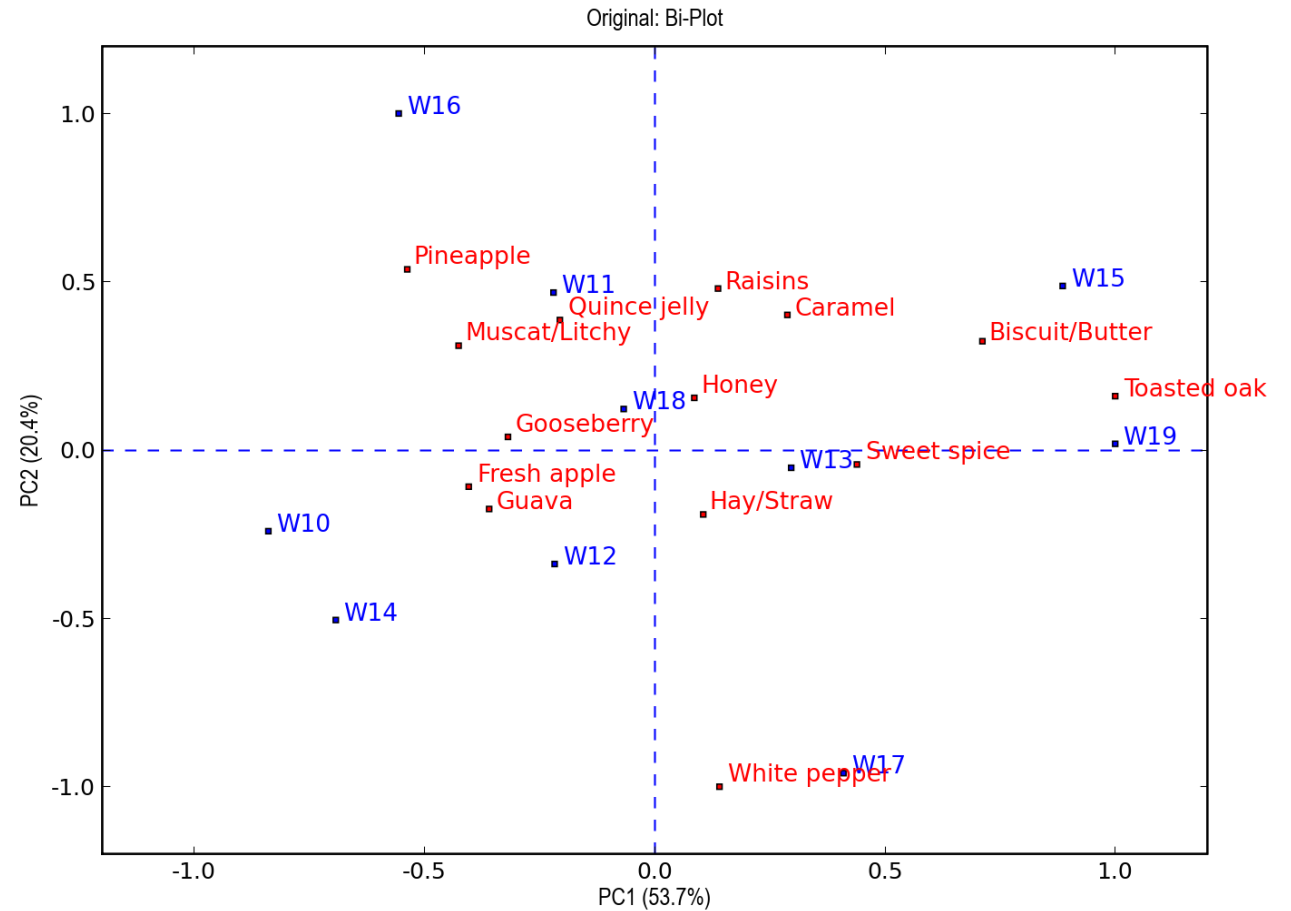
✓ **Length**



Sensory characterisation **aroma:** Old-vine Chenins



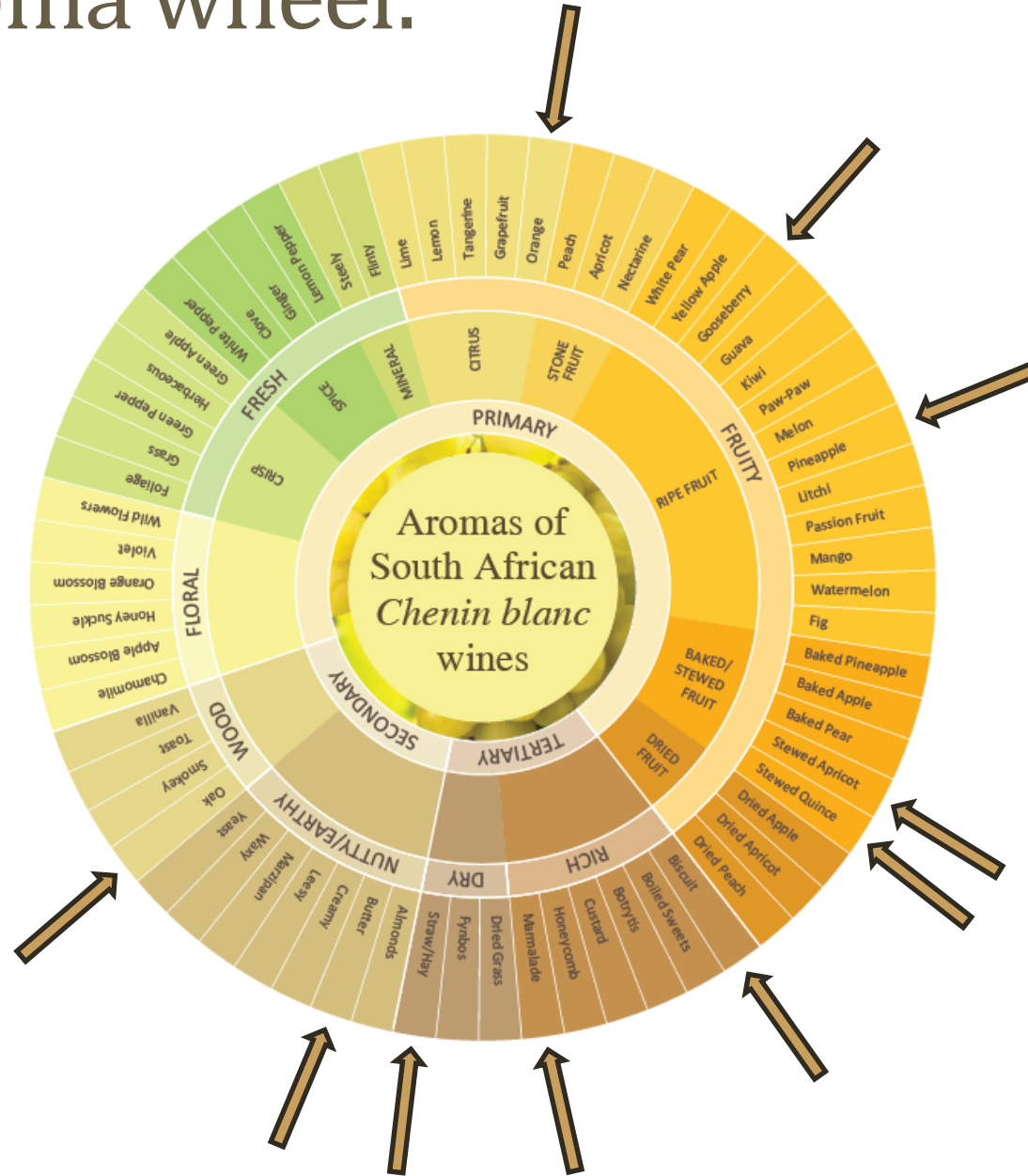
2015



2016

Updated aroma wheel:

↑ Old-vine attributes included based on this research



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