



Australian Government

Australian Grape and
Wine Authority

PREMIUM
FOOD AND WINE FROM OUR
CLEAN
ENVIRONMENT



Assessing clonal variability in Chardonnay and Shiraz for future climate change

Dr Michael McCarthy (SARDI), Richard Fennessy (DAFWA),
Libby Tassie (Tassie Viticulture Consulting) and John Whiting
(John Whiting Viticulture)





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Project Background

PREMIUM
FOOD AND WINE FROM OUR
CLEAN
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SOUTH
AUSTRALIA

Government
of South Australia
Primary Industries
and Regions SA

SARDI
SARDIA
RESEARCH AND
DEVELOPMENT

- Large areas of single clones of major varieties planted across Australia e.g. Shiraz SA 1654, Chardonnay I10V1
- Do we need a range of clones?
 - Wines of greater diversity/complexity?
 - Will clone performance be modified in a warmer/drier world?
- Can we use existing climatic differences as a surrogate for climate change?
- *This project is not about making recommendations about what clones to plant – just heighten the awareness that “one clone does not fit all now nor into the future”*

Clone	Riverland	Armstrong	Margaret River	Drumborg	Great Southern
277	✓	✓	✓	✓	✓
76	✓	✓	✓	✓	✓
78		✓		✓	
95	✓	✓	✓	✓	✓
96	✓	✓	✓	✓	✓
I10V1			✓	✓	✓
I10V5		✓		✓	
Gin Gin			✓		

All wines made as 50kg ferments to same protocol at WIC Winemaking Services and DAFWA Bunbury

WINE ASSESSMENT

Leigh Francis- AWWRI

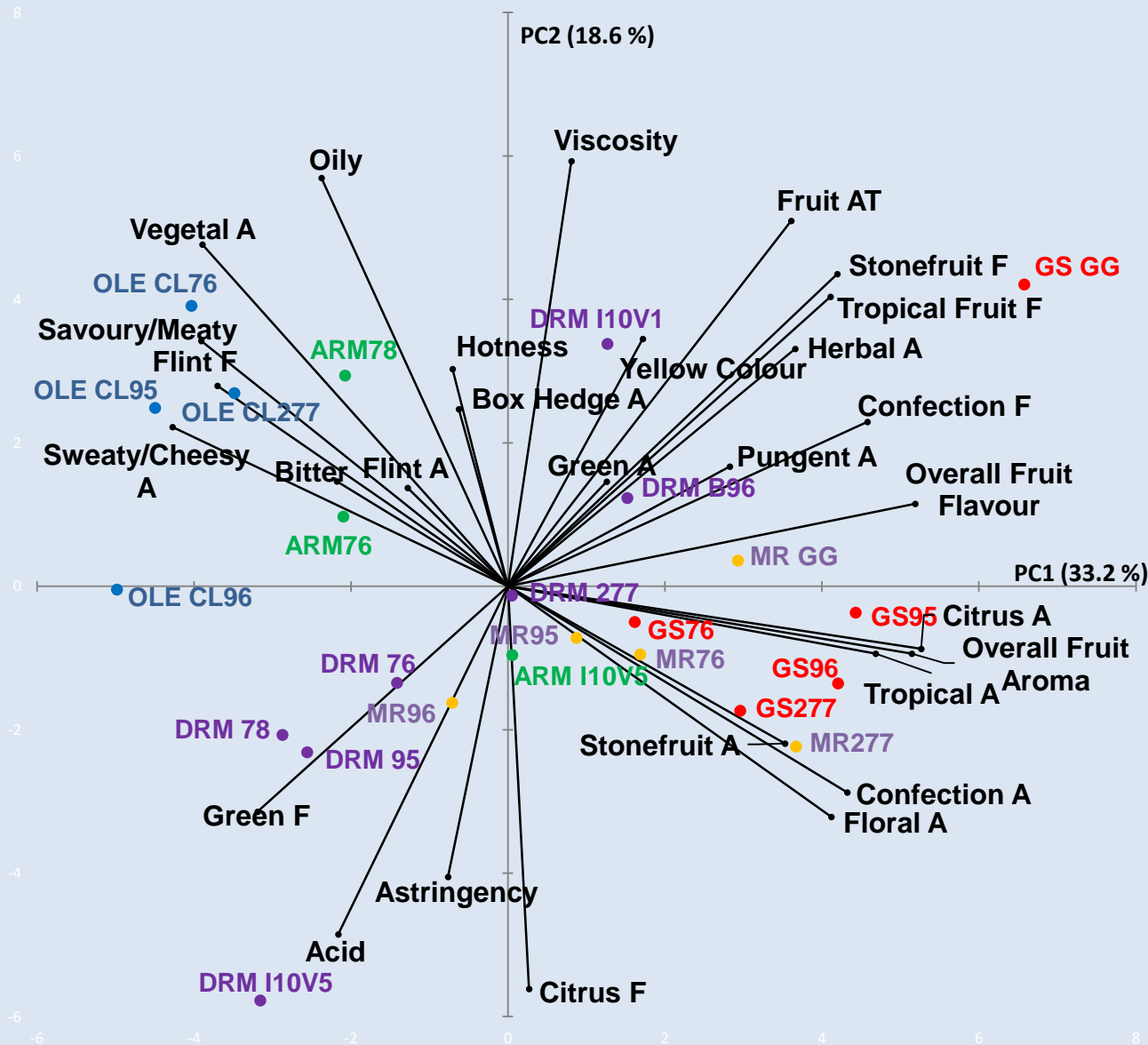
- Trained descriptive analysis panel (10)
- Descriptors determined
- Compare with reference standards
 - Refine descriptors
 - Formal tasting of attributes
 - Assessors rated intensity of attributes
 - Significant differences between regions and clones

Attribute		Definition/Synonyms	
Appearance			
Yellow colour intensity		yellow colour.	
Aroma			
Overall Fruit Intensity Aroma		Intensity of the fruit aromas in the sample.	
Tropical		Intensity of the aroma of tropical fruits; passionfruit pineapple, mango, melons, banana, mango, lychee, guava.	
Stonefruit		Intensity of the aroma of stonefruits: peach, apricot both fresh and dried, nectarine, pear.	
Citrus		Intensity of the aroma of citrus fruits; lemons, limes, grapefruit, oranges, mandarins.	
Confection		Intensity of the aroma of confection: musk, banana lolly, red lolly.	
Floral		Intensity of the aroma of flowers: violets, rose, geranium, jasmine and blossoms	
Green		Intensity of the aroma of green grass, green stalks, green leaves, snow peas, fresh green vegetables.	
Herbal		Intensity of the aroma of eucalypt and mint.	
Vegetal		Intensity of the aroma of cooked vegetables, dirty tea towel, drain.	
Box Hedge		Intensity of the aroma of box hedge	
Flint		Intensity of the aroma of flint, wet stones, metals, toast, smoke.	
Sweaty/Cheesy		Intensity of the aroma of sweat and cheese, barnyard.	
Savoury/Meaty		Intensity of the aroma of savoury, meat, sausage roll, peanut oil, cooked rice, vegemite.	
Pungent		Intensity of the sensation of pungency and alcohol.	

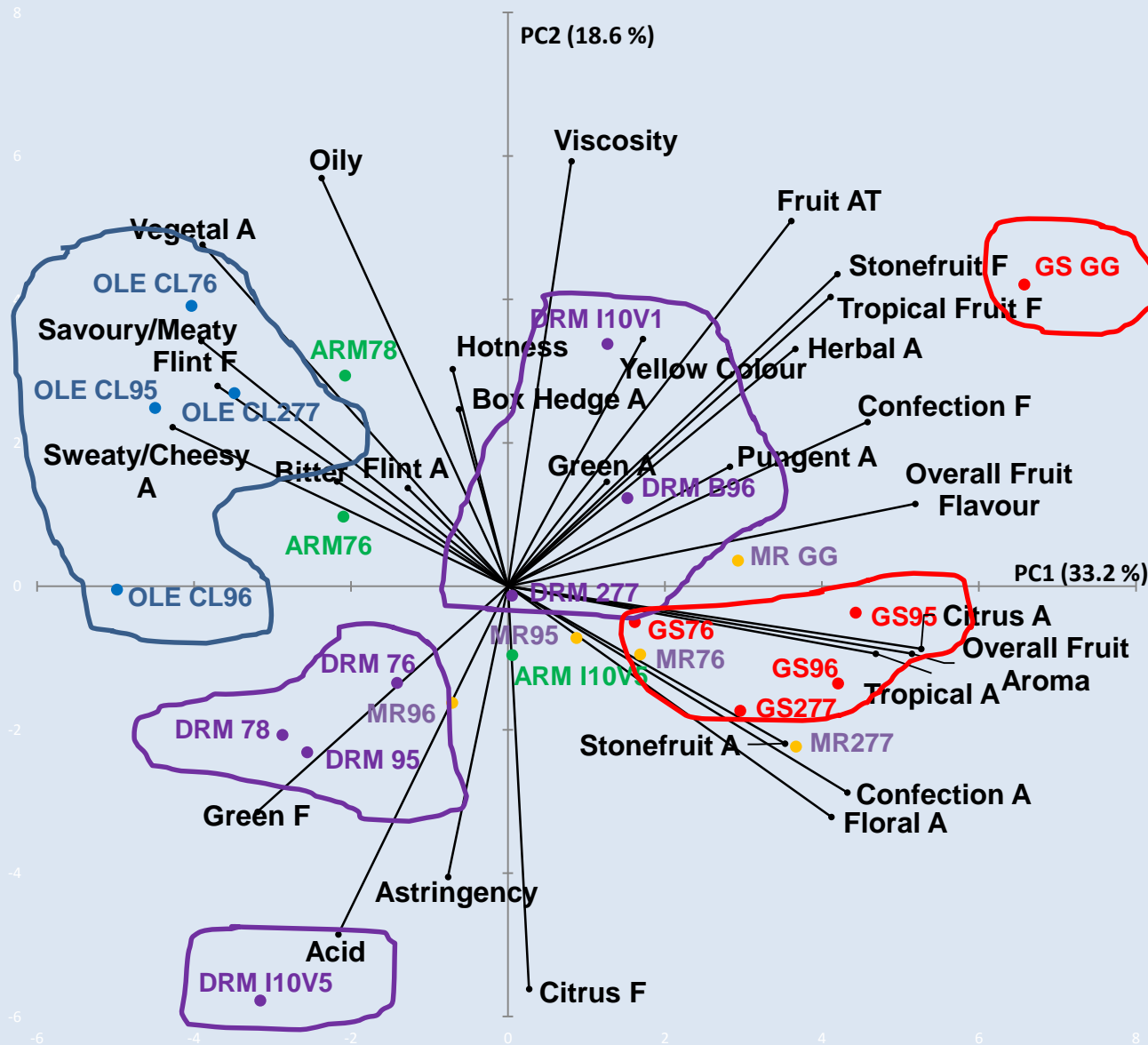
Palate	
Overall Fruit Intensity Palate	Intensity of the fruit flavours in the sample.
Tropical	Intensity of the flavour of tropical fruits; pineapple, passionfruit, melon, mango, kiwifruit, guava, paw paw, lychee.
Stonefruit	Intensity of the flavour of stonefruits; peach, apricot both fresh and dried, nectarine.
Citrus	Intensity of the flavour of citrus fruits; lemon, lime, mandarin, orange, including aftertaste.
Confection	Intensity of the flavour of confectionary; red lolly, banana lolly, musk including aftertaste.
Green	Intensity of the flavour of green grass, green stalks, cucumber, green leaves, herbal and vegetal
Flint	Intensity of the flavour of flint, smoke.
Viscosity	The perception of the body, weight or thickness of the wine in the mouth. Low=watery, thin mouth feel. High= thick mouth feel.
Oily	The perception of oiliness and buttery mouth feel in the mouth.
Acid	Intensity of acid taste in the mouth including aftertaste.
Hotness	The intensity of alcohol hotness perceived in the mouth, after expectoration and the associated burning sensation. Low = warm; High = hot.
Astringency	The drying and mouth-puckering sensation in the mouth. Low=coating teeth; Medium=mouth coating & drying; High=puckering, lasting astringency.
Bitter	The intensity of bitter taste perceived in the mouth, or after expectoration.
Fruit AT	The lingering fruit flavour perceived in the mouth after expectorating, excluding citrus.

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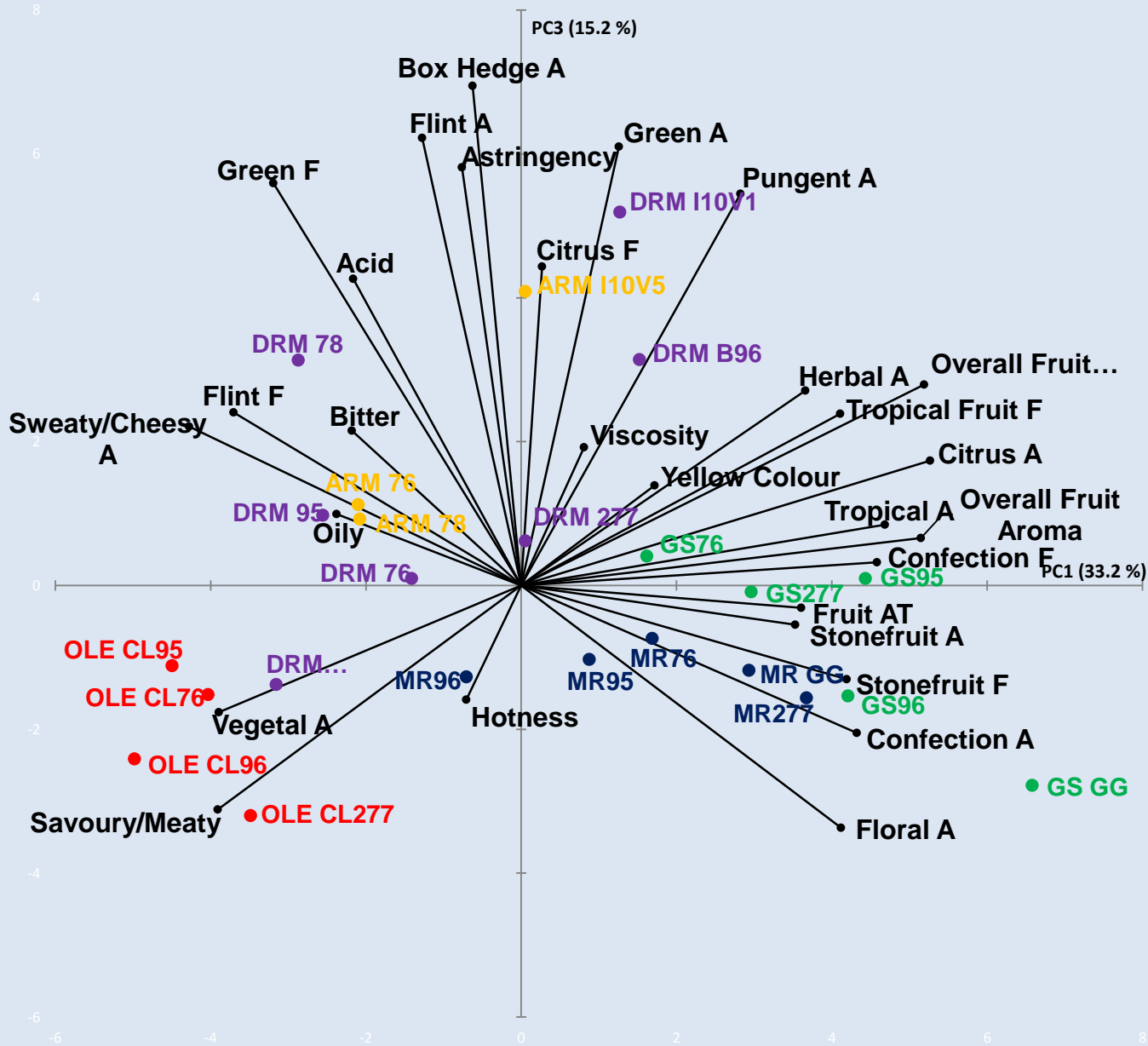
2015 Wines



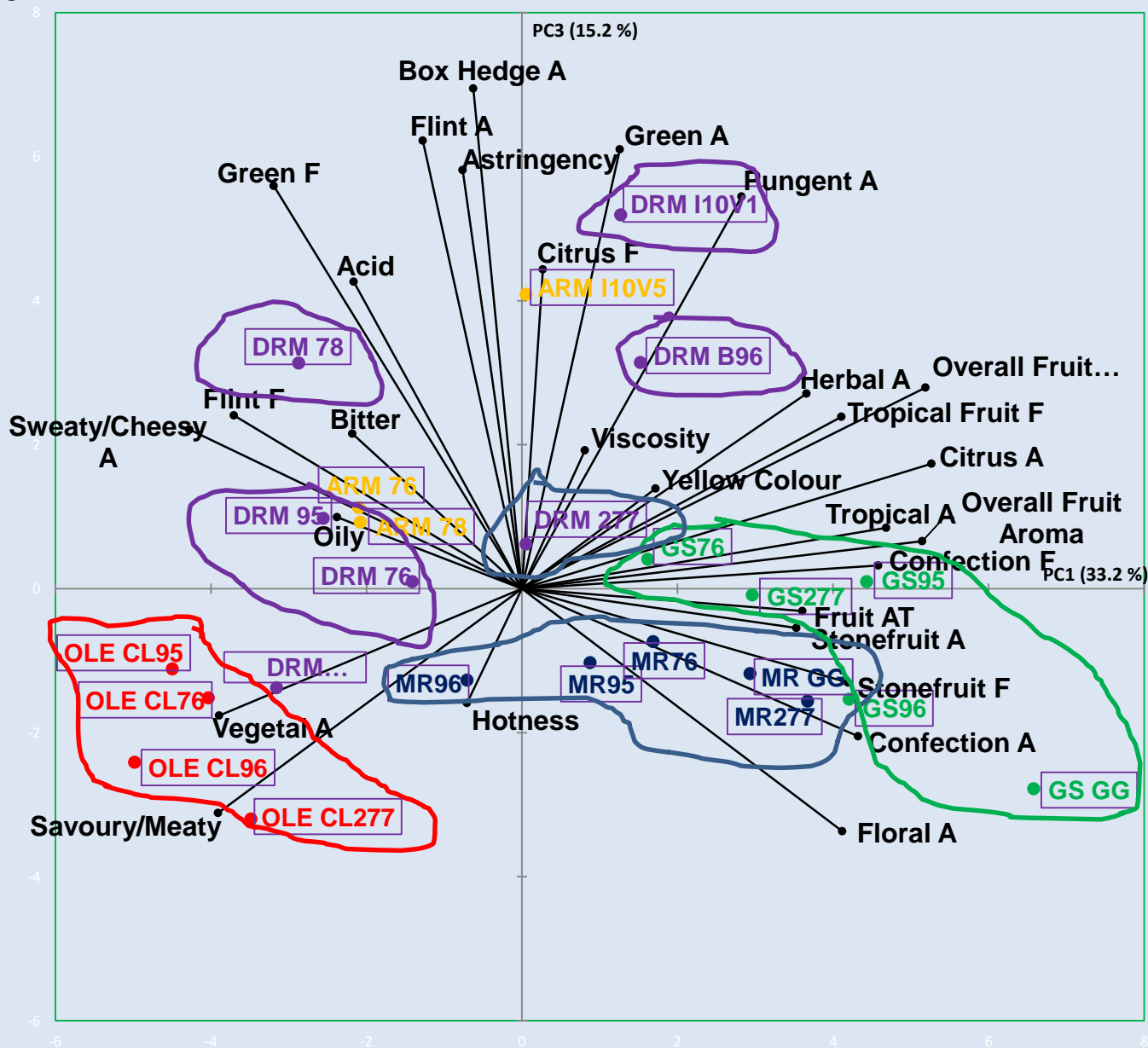
2015 Wines



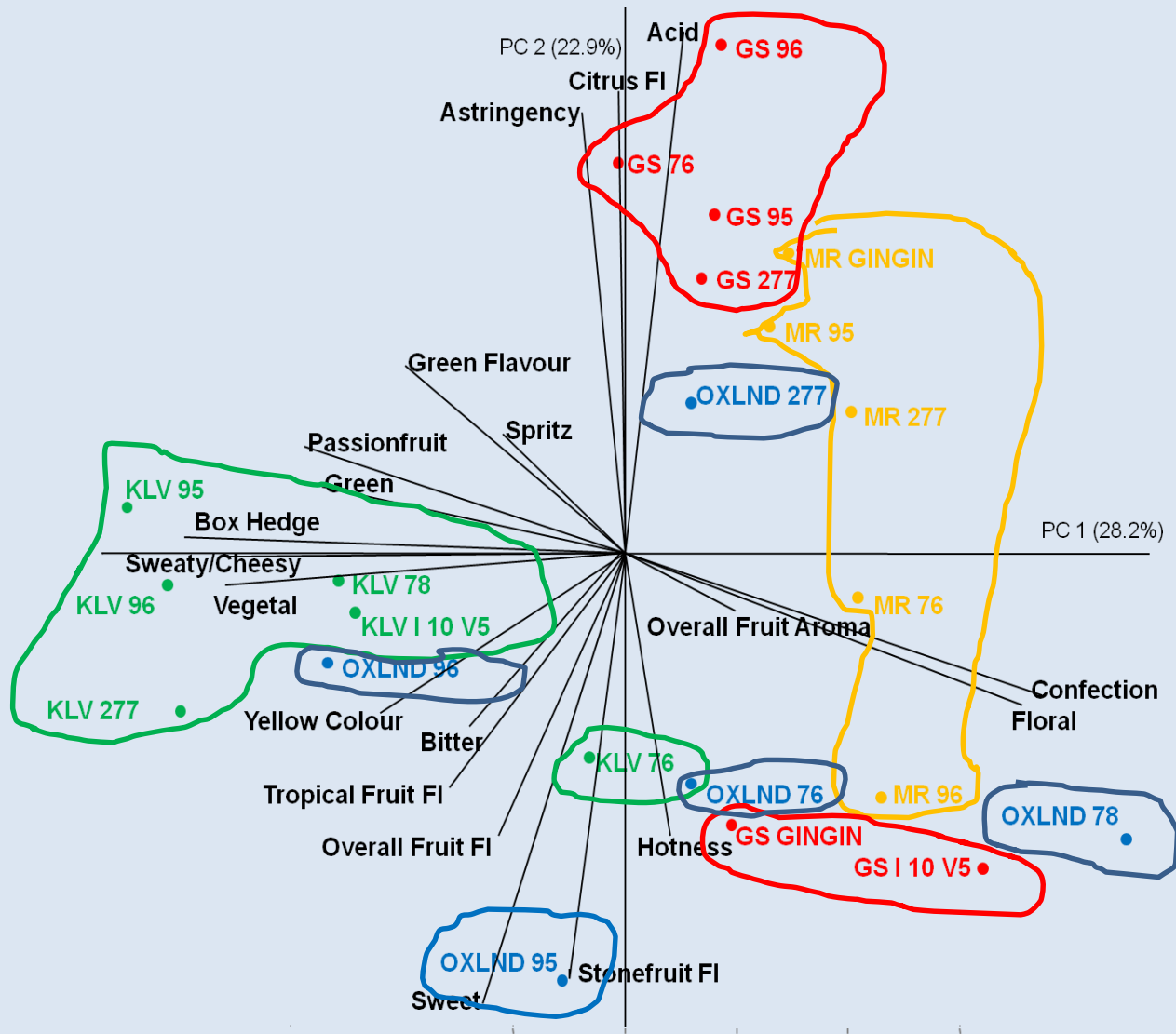
2015 Wines



2015 Wines



2014 Wines



HSD = Tukey's Honestly Significant Difference