

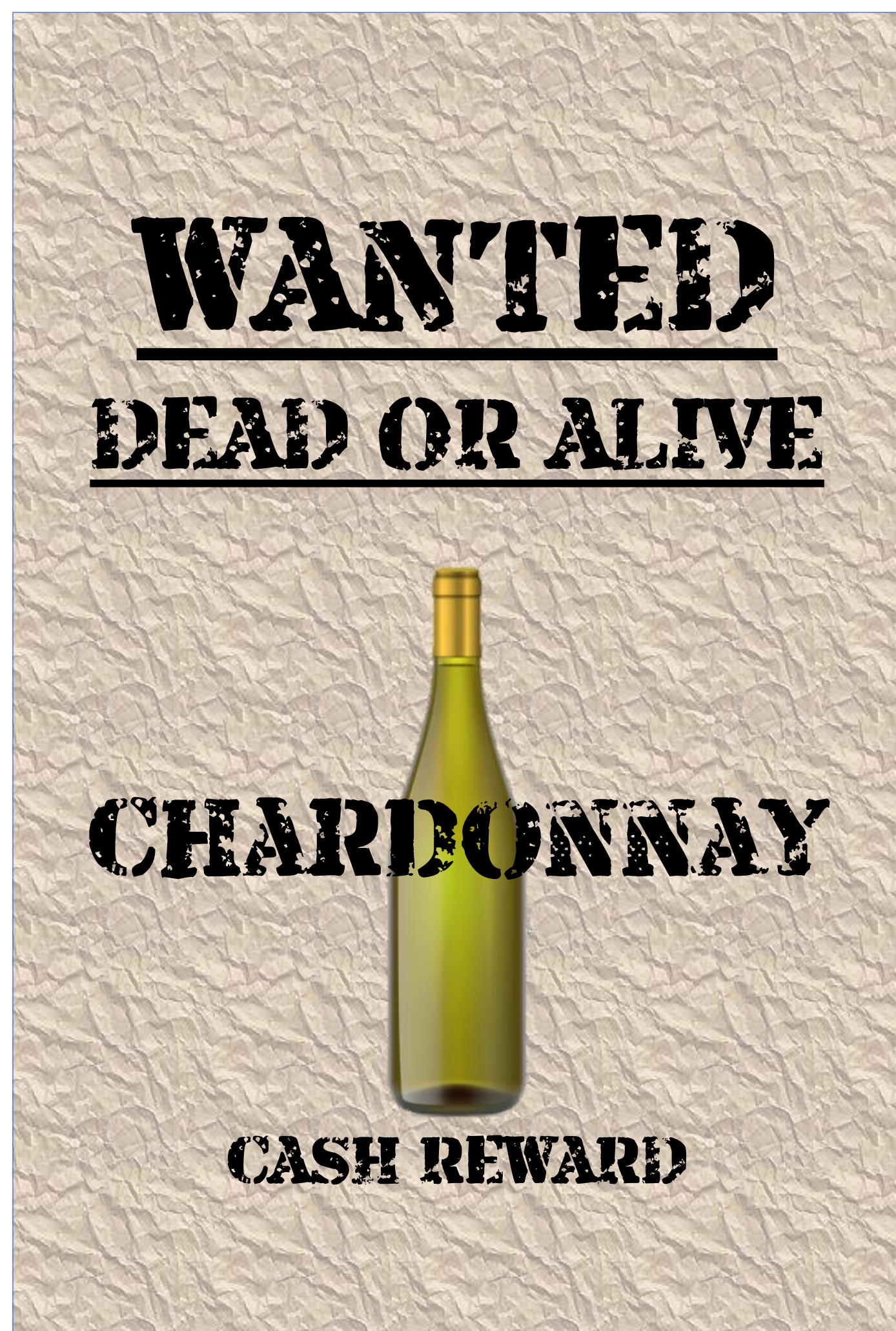
# Compositional correlations with the sensory properties and consumer preference of duelling styles of Chardonnay

AWRI

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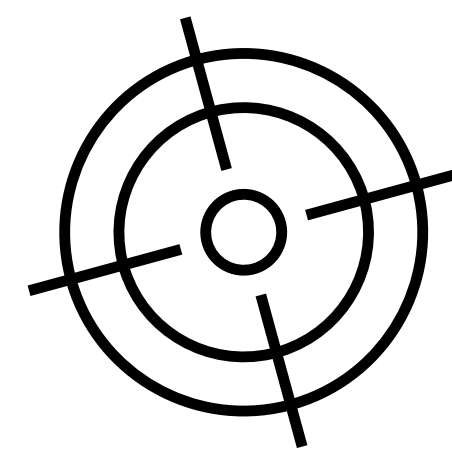
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## Background

Competition among Chardonnay wine styles can be fierce! Some 'ace-high' wines are described as smelling of 'freshly fired gun flint', while others flaunt 'fruity' tasting notes. But these elaborate back label notes can be deceiving. To 'acknowledge the corn', as they say in the wild west, we set out to objectively relate wine chemical composition with sensory properties and link consumer preference.

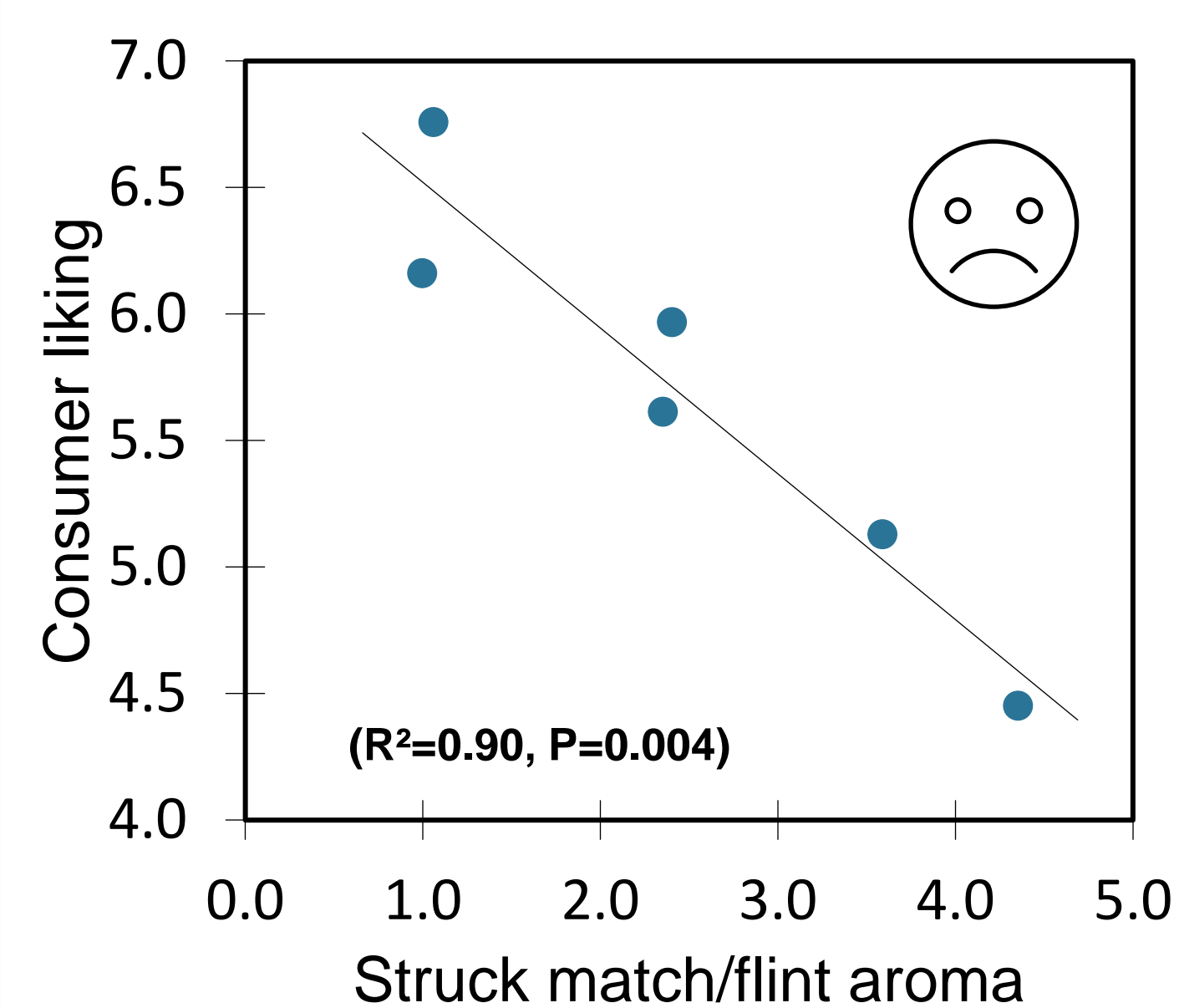


## Targeting wines from flinty to fruity

From 70 wines that were screened (see poster 83), 24 were picked to compete. We aimed to include a style spectrum from 'flinty' to 'peachy', representing warm and cool climates across Australia and New Zealand. From these wines, six Aussie wines were left standing to go onto the sudden death consumer test. Here is how the showdown unfolded.

## Consumer insights

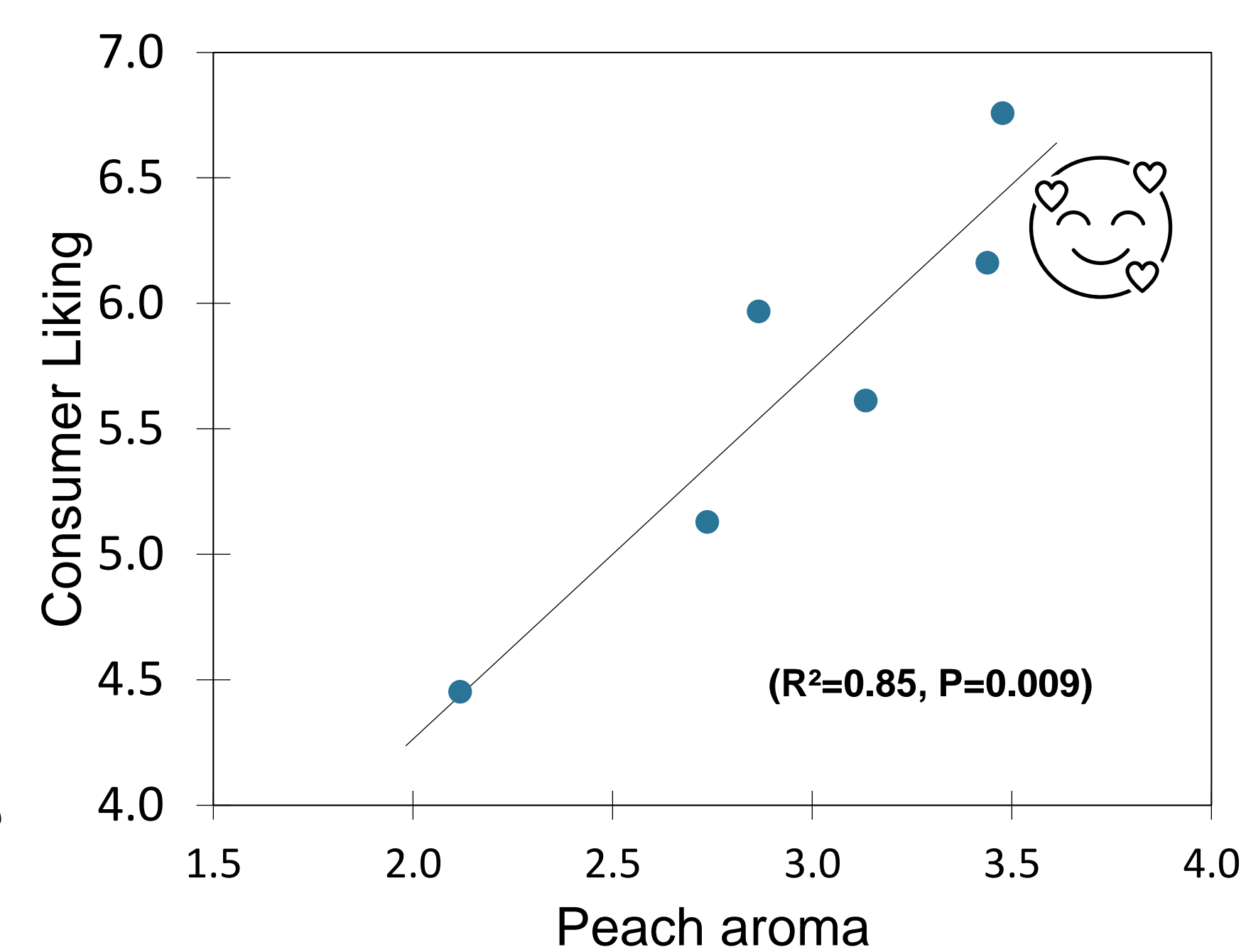
Overall consumer acceptance decreased as the intensity of 'flint/struck match' aroma increased. Consumers preferred 'fruity' wines high in 'peach' aroma, sweetness and viscous mouthfeel and low in 'flint/struck match' aroma.



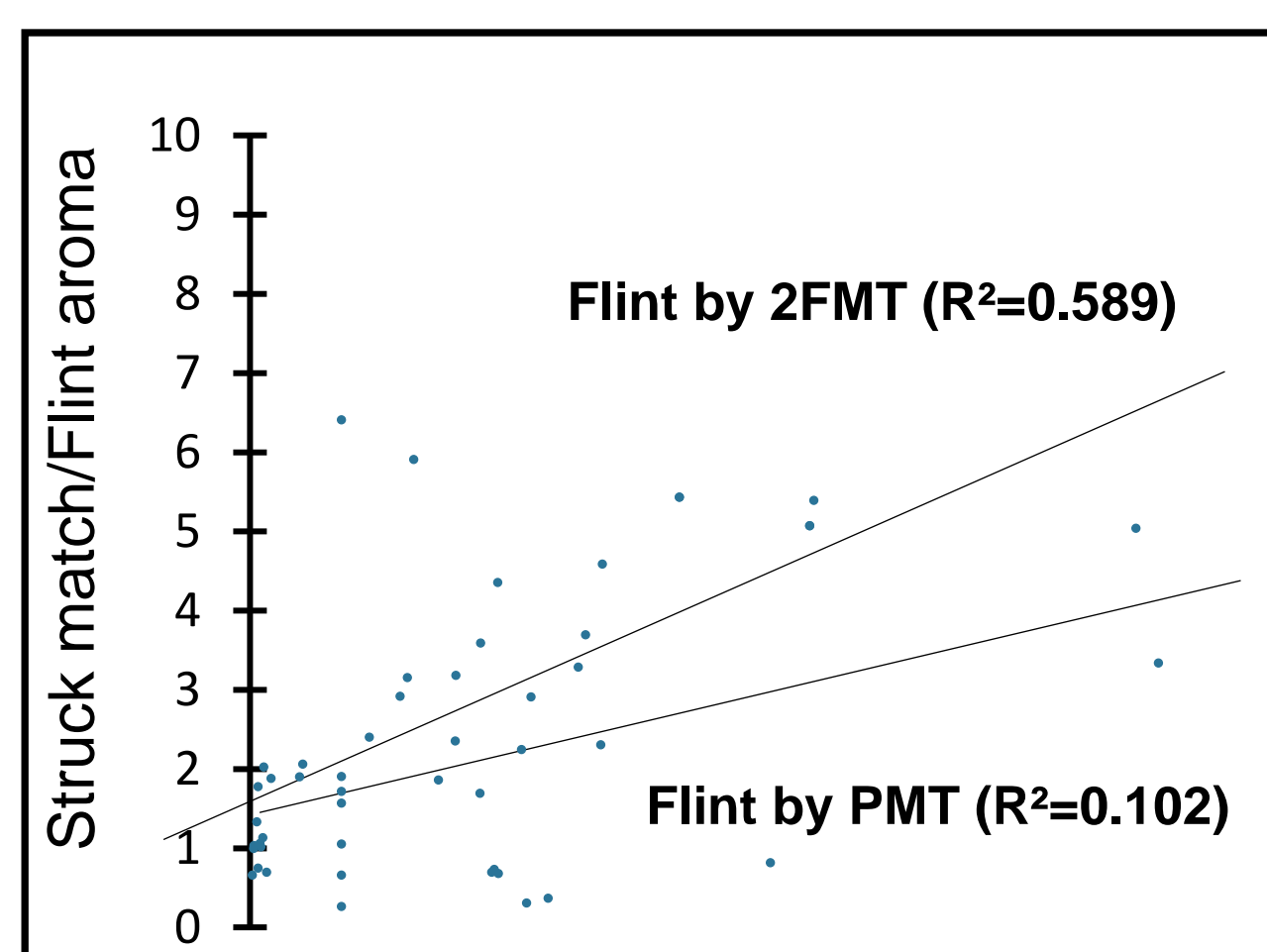
### Consumer segmentation

But, not all consumers disliked 'flinty' wines. A modest sub-group of consumers (32%) tolerated wines with some 'reductive' sulfide odours and liked wines with high 'flint/struck match' aroma.

*Flint aroma*

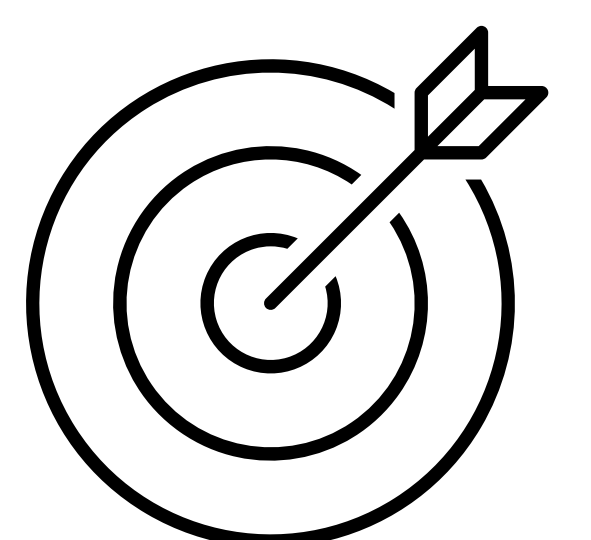
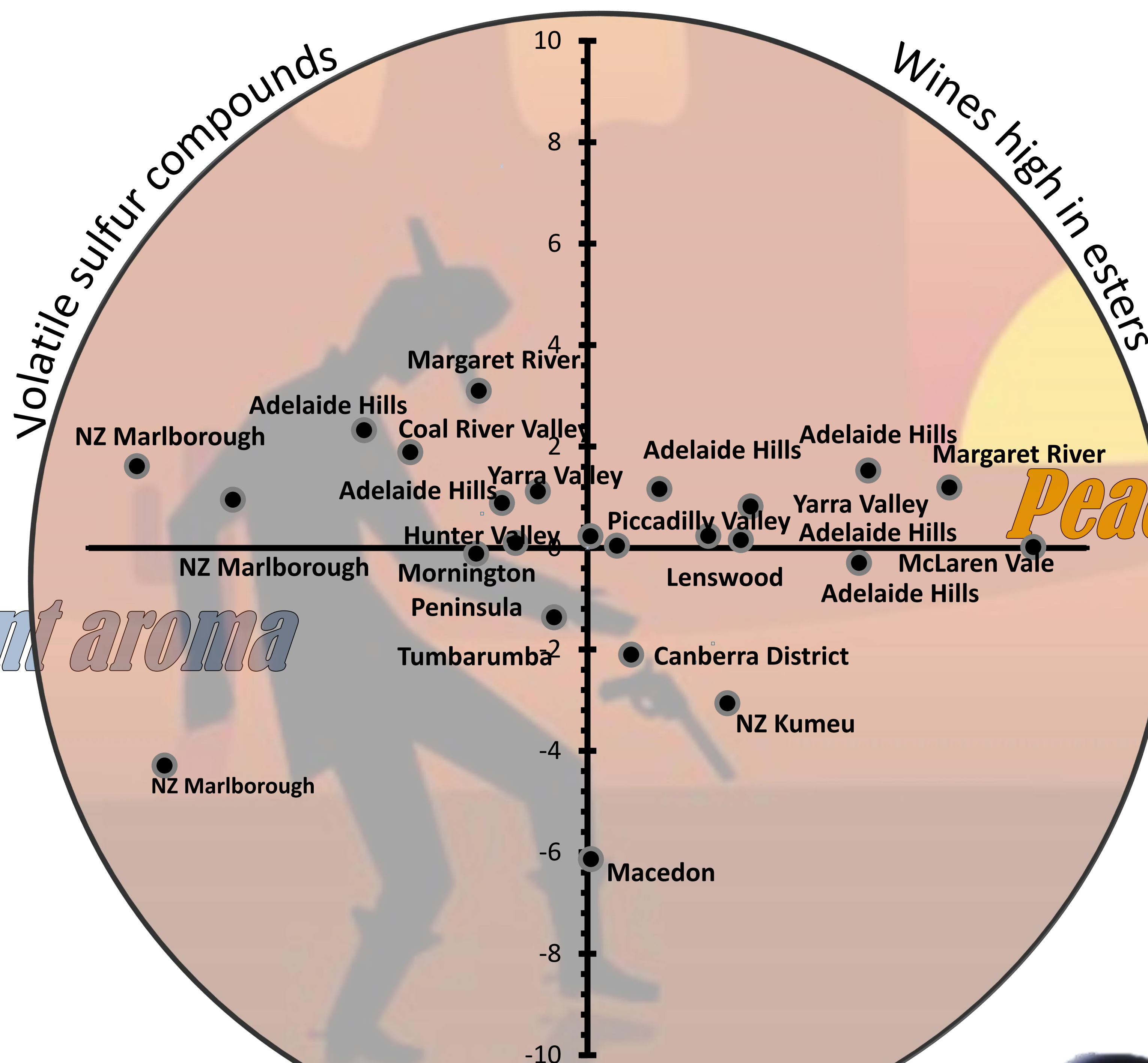


*Peach aroma*



### Chemical composition and winemaking of flinty wines

A relationship between the concentration of the sulfur compounds phenylmethanethiol (PMT) and 2-furylmethanethiol (2FMT) and the intensity of 'struck match/flint' aroma was found. Anecdotally industry practices such as late sulfur sprays, oxidative handling of juice, and reductive barrel fermentation are thought to be involved in producing this character. We have put some of these industry theories to the test (see poster 70).



For more information about 'stone fruit' aroma nuances in white wines and how they might be targeted in winemaking see QR code below:

