Here's the hot topics of vintage 2014

The AWRI helpdesk has received more than 420 winemaking-related queries so far during the 2014 vintage.

This article presents a snapshot of some of the 'hot topics' of 2014. The most frequent query topic to date has been smoke taint.

It has been by far the biggest challenge of 2014, representing nearly 25 per cent of all calls received by the AWRI's helpdesk during the early stages of vintage. Some of the other main questions that came across the helpdesk this vintage are detailed below:

Q. How do I test for smoke taint?

A. As reported previously, most wine-grape varieties are highly sensitive to smoke taint from seven days post-veraison to harvest.

This means if a vineyard has been exposed to smoke sometime after the point when the berries are pea size, the recommendation is to sample the vineyard two weeks prior to the harvest date and conduct a small-lot fermentation.

The wine resulting from this fermentation can be subjected to sensory assessment and chemical analysis (for both volatile phenols and their glycoside precursors) in order to gauge the potential risk of any smoke taint that might arise from the smoke exposure.

The AWRI's website provides links to a range of resources on smoke taint (www.awri.com.au/information_services/current-topics/smoke-taint/) as well as further information about the susceptibility of grape varieties.

Results from a limited number of small-lot ferment samples analysed this vintage have shown that when volatile phenol results are low, glycoside precursor levels can still be above those seen in a previous study of baseline concentrations.

It is therefore recommended that all analytical data (i.e. volatile phenols and their glycoside precursors) be compared with sensory results to give a true picture of any effects due to smoke.

Q. What are the recent regulatory changes for wine exported to China?

A. China is now imposing maximum regulatory levels for manganese, copper and iron in wine. These levels are 2.0 mg/L for manganese, 1.0 mg/L for copper and 8.0 mg/L for iron.

Q. When should I analyse my wine for manganese, copper and iron?

A. It is recommended that all wine intended for export to China should undergo analysis to confirm that it complies with the limits set. While excessive levels of copper and iron in wine have been shown to decrease the shelf life of wines and in some cases promote the formation of unpleasant sulfides, manganese has limited impact on wine chemistry. For all three metals there are no health concerns at the prescribed levels.

Q. I heard about the new *Metschnikowia pulcherrima* AWRI1149 yeast that can produce lower alcohol wines when used in sequential inoculation with a standard wine yeast. Is it available yet?

A. To the best of the AWRI's knowledge, this yeast is not currently commercially available. A pilot-scale trial is being conducted during vintage 2014. For more information, please contact Paul Chambers on paul.chambers@awri.com.au.

Q. My fruit has high pH and low acid. When is the best time to add acid?

A. It is not ideal to leave must at high pH before fermentation as this reduces the impact of sulfur dioxide and favours bacterial spoilage and undesirable microbiological activity. Adjusting acidity levels before fermentation commences is recommended. As alcohol is formed during fermentation, the solubility of potassium bitartrate (KHT) decreases, which in turn has an impact on the pH. Depending on whether the initial pH is above or below pH 3.65, the pH will either rise or fall as KHT precipitates out - this should be kept in mind when adjusting acidity levels.

Q. Which acid should I add?

A. Acidity adjustment can be made with either tartaric acid, or a mixture of tartaric and malic acid. The latter can give better natural acidity balance; however the final decision should be always be based on taste, and guided by bench trials.

Q. Is it possible to analyse for hydraulic oil in juice or wine?

A. No, unfortunately analysing for these types of compounds is currently not possible. The waxy coating on grape skins contains compounds with a similar structure to the compounds found in hydraulic oil, making them very difficult to distinguish even with high contamination levels. If a contamination issue occurs, the best approach is to isolate the batch, take photos of the presence of oil and contact your insurance company.

Further queries: Contact the AWRI Winemaking Services team on 61 8 8313 6600 or winemakingservices@awri.com.au. GW