Are you concerned about smoke in your vineyard?

Bushfires and controlled burns can result in smoke in vineyards, which causes concern for growers and winemakers. However, smoke in your vineyard does not necessarily result in taint. Read more about when smoke is most likely to impact your grapes and wine here.

This document provides answers to some of the most common questions raised by growers and winemakers following a smoke event in a wine-growing region. The AWRI helpdesk team is available to provide additional support to growers and winemakers dealing with the aftermath of smoke exposure (contact details below).

I can see or smell smoke near my vineyard. Are my grapes in danger of being tainted?
When vineyards are exposed to smoke, compounds in the smoke are taken up by the grapes, which can result in smoky aromas and flavours in wine. It's not easy to assess the risk of smoke taint based on the visual presence or smell of smoke in a vineyard. If you can smell or see smoke, it doesn't necessarily mean there's a risk of smoke taint.

Wine Australia is supporting the deployment of Wine Industry Smoke Detectors (WISDs) to monitor smoke exposure during the growing season in wine regions around Australia. WISDs located on your property or nearby can give an early indication of whether your grapes and/or wine are at risk of smoke taint. Find out more about them here.

Which factors have an impact on the risk of smoke taint?
Every fire event is different in intensity, size, timing, fuel composition, topography and prevailing weather conditions. The likelihood of grapes becoming smoke tainted is affected by many factors including the smoke concentration and duration of exposure as well as the grape variety and grapevine growth stage.

If I suspect my grapes might be smoke-tainted, what should I do?
AWRI recommends that sampling be done approximately three weeks before harvest to allow for logistics and transport of grapes to Adelaide for testing. Affinity Labs (AWRI's commercial arm) will work with stakeholders and regional associations to optimise sample collection and transport to ensure the smooth flow of samples to testing laboratories and the shortest possible analytical turnaround times.

Sample submission forms can be found on the Smoke analysis web order form – Affinity Labs.
Information on how to collect and send grape samples to Affinity labs, including from interstate, can be found on the Affinity Labs smoke analysis fact sheet. This also includes prices for analytical testing.

How do I interpret smoke taint analysis results?
Results are reported from Affinity Labs as graphical representation of smoke markers in the grapes compared to a background levels database. If all the smoke marker compound results are within the background levels, the interpretation is that there is *no evidence of smoke exposure in the grapes or risk of smoke taint in the wine produced from these grapes*. On the other hand, evidence of smoke exposure does not necessarily mean that there is a risk of smoke taint.

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When one or more smoke marker compounds are higher than the background data, producers should contact the AWRI helpdesk on 8313 6600 or helpdesk@awri.com.au for interpretation and to discuss the risk of smoke taint.

Small-scale ferments to assess smoke taint

In addition to undertaking grape smoke taint analysis, producers may also wish to consider conducting a small-scale ferment of potentially smoke-affected grapes to help make harvest decisions. Once fermented, the wine can be subjected to sensory assessment to help assess the potential risk of smoky characters developing in wine if harvested. It can, however, be challenging to assess small-scale ferments on underripe fruit and account for variation in tasters ability to detect smoke taint. The wine resulting from the small-scale ferment can also be sent to Affinity Labs for commercial analytical testing for smoke marker compounds.

What are the options for managing smoke-exposed grapes?

Following smoke exposure of grapevines, a number of management techniques can be employed in both the vineyard and winery to minimise the impact on wine. These techniques are summarised in this fact sheet on practical management options.

For general information and advice on smoke management:

- Visit Wine Australia smoke resources Fire and smoke - Wine Australia
- AWRI smoke resources Smoke taint - The Australian Wine Research Institute
- Contact the AWRI helpdesk on helpdesk@awri.com.au or 08 8313 6600

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