

SAP FLOW TECHNOLOGY

Two Hands Wines have always pushed the boundaries of the Australian wine industry with innovative and unique initiatives. True to form, the latest development in their estate vineyard Holy Grail in Seppeltsfield is no exception: The introduction of sap flow sensor technology to manage vine health and monitor water use.

In what is believed to be an Australian first, Two Hands Wines has partnered with multi-award winning French company Fruition Sciences to implement sap flow sensors directly onto vines in their Holy Grail vineyard. The technology will measure and monitor the transpiration of the vine and in turn assist the viticulture team to manage irrigation regimes ensuring the vines receive the right amount of water at the optimal time. Installing the technology will see a significant return on investment in a short period of time.

A study conducted by Fruition Sciences in 2014 comparing traditional irrigation strategies to plant-sensor based irrigation, showed that an average of 60% water savings could be achieved using this technology. Friend of Two Hands, Doug Shafer from Shafer Vineyards in Napa Valley has been using this technology for over 5 seasons and in that time confirms the company has seen a 52% saving in water use.



"We have just completed our second dry winter in a row, down 150mm of average rainfall at Holy Grail. With our water allocations being reduced and the price of water going up each season, it's a no brainer to look for a meaningful solution to augment water usage in our vineyards. We love our vineyards and want them to last for many generations to come." said Michael Twelftree, Proprietor and Managing Director of Two Hands Wines.

"At Two Hands, we're inspired by the great wine estates of the world. We came across this technology on a visit to respected wine growing friends in California and recently met the Fruition Sciences team on a study trip to Bordeaux. Their technology is surprisingly affordable so the decision for us to implement was an easy one" Twelftree said.

Like Two Hands, wineries across the world are constantly looking to precision viticulture techniques to manage and monitor climatic conditions in order to ensure that the vineyards of which they are custodians are sustainable for many years to come. Venerated Bordeaux houses Chateau Latour and Chateau Lagrange as well as Shafer, Ridge Vineyards, Duckhorn, Pahlmeyer, Colgin and Daou Vineyards from California are all proponents of sap flow technology, having seen significant reductions in water usage and whilst increasing quality levels.



"Fruition Sciences say the benefits of the technology are numerous. It determines the perfect time to irrigate and defines the correct amount of water required for the site and quality parameters; it monitors vine health and stress levels; it improves the quality of the wine and vineyard performance; allows for a better understanding of the behaviour and response to climate change of different grape varieties; and perhaps most importantly, save water.

Monitoring sap flow in viticulture is not a new concept, but Fruition Sciences have developed a dashboard that allows the data collected by the sap flow sensors to be interpreted in a straightforward manner, to assist viticulture teams in their decision making process.

"There are visible signs that show when the vine is in need of water, but by then, irrigating may be too late, or even detrimental to the vines and grape quality" Travis Coombe, Head Viticulturist says "With this technology we'll be able to monitor vine transpiration in real time and we can irrigate when the vines really need water, with the exact amount required, rather than when we believe they need water."

The sap flow technology was installed by Fruition Sciences and the Two Hands Viticulture team in mid-October 2019, with data being able to be monitored immediately.

ABOUT FRUITION SCIENCES:

Fruition Sciences acknowledges uniqueness, natural abilities and potential growth for plants and people.

While respecting tradition, they provide winemakers with a highly integrated, terroir and vintage specific, data driven web application. Their plant-based solution enables growers to save time and improve both quality and yield, all the while implementing innovative techniques that adapt to climate change.

They are growing a sustainable business that leaves a positive footprint on the environment. Because plants are complex, the team is humble, honest and open to thought provoking ideas worth sharing.

www.fruitionsciences.com

