

Case study: Automated weather station – Robert Stein Wines

Tell us about Robert Stein Wines: Jacob Stein

Winemaker, Robert Stein Wines

The vineyard was established in 1976 by myself, with the help of my wife Lorna and son Andrew. The vineyard started to produce fruit in 1980 and the first wine was made on site in 1982. Our cellar door was opened in 1988.

There is currently 17.5 hectares under vine on two sites, with eight varieties. In order of Hectares is Shiraz, Cabernet Sauvignon, Riesling, Merlot, Semillon, Chardonnay, Gewurztraminer and Black Muscat. From these grape varieties we have 24 different wine styles including blends and different quality levels of each variety.

Riesling is the variety we do very well with, and on which we focus a lot of attention. Third generation winemaker Jacob Stein took over winemaking duties in 2009, and now runs the vineyard, winery and farming operations. Jacob completed degrees in viticulture and winemaking in 2006, however his experience overseas instilled a wealth of knowledge and experience, evident in the rapid increase in quality, demand and volume of the Robert Stein Wines.

The winery also produces wines for many other local vineyards and cellar doors by contract winemaking. A recent upgrade to the winery now allows for small batch winemaking, bringing the total capacity of the winery to 350 tonnes per annum. The quality of Jacob's wines and the winery was honoured with Jacob winning the Gourmet Traveller wine magazines Young Winemaker of the Year in 2012. The vineyard, winery and cellar door employs six full time staff, and three casual staff members.

This is very much a family run business with Gina Stein, Jacob's wife, running the office, accounts, wine club and some marketing events. A recent addition to the estate was the opening of the Pipeclay Pumphouse Restaurant, owned by Lara and Andrew Crestani. Lara, Jacob's sister, focusses on marketing and Andy is the chef and operator. The restaurant and winery work well together growing on farm produce, including pork and lamb. This is certainly one of Mudgee's serious producers, a great place to visit, with a bright outlook for future generations.

Location and site specifics

The winery and cellar door is located nine kilometres north of Mudgee on the Ulan Cassillis Road. The cellar door and restaurant offer panoramic views of the Mudgee Valley and sits at 600 m altitude. The main Robert Stein vineyard site sits just below the cellar door, and ranges from 570–590 m altitude, with over 13 individual vineyard blocks offering a variation of styles and soil types. In the higher blocks, where the Riesling and some Shiraz are planted, there is quite deep gravel and is a mix of shale, quartz and lighter soils. The vineyard rows run east-west, and are on a south-west slope. VSP trellising with spur pruning is employed, with numerous foliage wires to manipulate canopies to suit weather conditions. At the bottom of the vineyard, the soil differs to be light loam and with a deep clay base. Drainage is excellent, and water runs off into the grazing and farming paddocks below. Harvest normally starts with Gewurztraminer in the second week of February, then with earlier picked Chardonnay, Semillon and then Riesling. Merlot and Shiraz are normally harvested in March, and Cabernet Sauvignon in late March or early April.



Jacob Stein in vineyard

How has the Weather Station Network assisted your business and the region?

Unfortunately the local Bureau of Meteorology weather station is not always consistent, and has recorded incorrect weather recordings in the last few years. The regional weather station network has allowed a constant supply of accurate weather recording in its first five months of operation. I believe the weather station, in conjunction with the VineWatch program, to be one of the greatest advances in our vineyard operations of the last few years.

A great advantage of the business is that whether I am on or off site, when rain events occur, I get ten minute intervals of rain and daily measurements, and I know it is accurate. This has helped me in my planning, timing and type of foliar sprays and strengths of applications as well. Irrigation scheduling and cancelling of shifts has been another great advantage.

Regionally it has been very beneficial and interesting watching the records throughout the growing season. We now can see the cooler and warmer areas of Mudgee and what areas received the most rainfall, as opposed to the drier areas. Admittedly, this was possibly known or assumed before, but this is now backed up with quantitative results.

I believe the weather station network in conjunction with the VineWatch Bulletin greatly benefits our business. It has made me more aware of certain pest outbreaks, particularly vine moth caterpillars, and

ensured I kept up to date with my spray program before any large outbreaks occurred. For example, we applied Dipel® at normal rates once a month during the growing season to ensure we kept on top of vine moths, whereas normally I would only monitor and spray accordingly and sometimes would miss their outbreaks and have to spray more expensive and harsher chemicals to combat the larger caterpillars.

Regionally I believe the response and result has been excellent. Mudgee has removed nearly 40% of our vineyard area, however most of those vineyards removed were large commercial operations which were contracted to large wineries. What remains in Mudgee are vineyards that focus on single vineyard wines, have a cellar door and are family run operations.

VineWatch Bulletins deliver simple but effective information to the grower, so they can be reminded of important stages across the growing season.

It was also one of our earliest and best growing seasons on record, but the short growing season made vineyard operators' decisions and timing of operations (such as bunch closure sprays) most important.

In smaller companies like ours where I am overseeing the winery plus vineyard, such a program is priceless because it is a constant reminder and backup of what to monitor in the vineyard. I also found that this year's VineWatch Bulletins were very professional, and accurately related to my vineyard, and other sites in the region.

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