WESTERN WEATHER GROUP

Sonoma County Winegrape Growers

WWG weather forecasting helps Sonoma County Winegrape Commission members

Case Study Summary

Location: Sonoma County

Participating Organization: Sonoma County Winegrape Commission

Problem: In 2010 Western Weather Group was contacted by the Sonoma County Winegrape Commission in regard to providing weather information services for its members who had a need to know future, present and past weather.

Solution: To make accurate weather forecasts in rural areas local weather stations would be needed. Working with the Commission and the grape growers a network of weather stations was installed in vineyards around the county and data from these stations was then used to prepare the daily weather forecasts.

Products Used: Campbell Scientific CR800 Dataloggers, RM Young Wind Monitors, Rain Gauges & Temperature/Relative Humidity Sensors

Sonoma County is the most diverse premium winegrape growing region in the United States. Sixty-six varieties of winegrapes are grown in the county. Sonoma County is also very diverse in topography with hills, valleys and mountains. Great wines begin in the vineyard and knowing the weather that will occur in the future and has occurred in the past are valuable vineyard management tools.

To make accurate weather forecasts it is important to be able to initialize and then verify the forecast and this requires local weather information. If a forecast for a specific location is a low of 32F then that forecast must be verified with local weather data. The local data is then used to initialize the following days minimum temperature forecast. This process continually improves the forecast accuracy.

Western Weather Group established a network of automated weather stations in Sonoma County for use in the weather forecasts and for growers to be able to monitor real-time as well as historical weather data. The weather stations are solar powered and communicate via the cellular network making them ideal for remote locations. Temperature, humidity, winds are all parameters measured by the stations. Important weather related variables are then computed by the weather stations such as growing-degree days, ETo, grape powdery mildew index and others.