The future of fine wines in the Applegate

BY ALAN JOURNET

Most Applegate Valley residents involved in agriculture and forestry know their future success depends on the climate. All plants require the climate in which they have succeeded historically. Substantial deviations from these conditions result in depressed growth and yield.

Comparing historic patterns with projected trends in regional temperature and precipitation reveals potential problems. This discussion focuses on one of my favorite attributes of our region: wine varietals.

Internationally known wine-terroir expert Dr. Greg Jones (former Southern Oregon University professor, now back with his family's Abacela Winery in Douglas County) studied the optimum growing season temperature of wine varietals important in Oregon's winegrowing areas and produced the graph depicted on this page. The historical (1981-2010) average temperature for the grape-growing season was 58.1 degrees Fahrenheit in Jackson County and 60.1 in Josephine County, appropriate for varietals towards the upper left. The business-as-usual climate projection assumes we continue the current trend in accelerating use of fossil fuels and greenhouse-gas emissions. According to the U.S. Geological Survey, projections for 2050-2074 are close to 64 degrees and 67 degrees for Jackson and Josephine counties, respectively. By 2075-2099, these values reach 66.6 and 68.3, respectively, indicating a climate more suitable for varietals on the lower right of the chart with a worst-case future climate suitable for table grapes and raisins.

If we lower the emissions trajectory substantially, we should find these counties experiencing less severe warming. By 2050-2074, Jackson County will likely reach 61.5 degrees and Josephine 63.8. By 2075-2099, Jackson will reach 62.7 and Josephine 64.6, which is still above the 1981-2010 baseline. This lower trajectory indicates the Applegate climate would be appropriate for varietals in the mid-range of the chart.

Another climatic challenge is the shifting pattern of water availability. The Oregon Climate Change Research Institute projects drier growing seasons in the summer with winter snowpack also declining. This will further compromise summer stream flow and availability of irrigation water. In addition, the potential for extended droughts and heat waves poses an extreme weather threat while smoke from wildfires adds a further complication.

The question I pose here is: How are regional winegrowers responding to the dilemma? Explaining the local prevalence of intermediate- and warmseason varietals, Greg Jones suggested that "growers have historically made pretty sound decisions about what to plant that fits the climate."

In terms of attitudes towards climate science, the majority of the dozen winegrowers I polled who responded accept the science and have been following projections for 15 to 20 years. These growers have been adjusting their management accordingly, especially in terms of irrigation. Traute Moore from South Stage Cellars said they have



Area vineyards may have to change the varietals they grow to adapt to a changing climate. Photo: Alan Journet.

AVERAGE GROWING SEASON TEMPERATURES THE RANGE IN THE ABILITY TO RIPEN VARIETIES

Northern Hemisphere (Apr-Oct), Southern Hemisphere (Oct-Apr)



Graph: Greg Jones.

adjusted from frequent short watering periods to fewer, longer periods. Craig Camp, from Troon Winery, said they may soon be dry-farming and that they recently added Certification in Regenerative Agriculture to being Demeter Biodynamic. Additionally, climateconscious growers are aware of climate

adjustments across the United States and the world and are themselves adjusting to warmer climate varietals or moving plantings to higher, cooler elevations.

Meanwhile, one grower rejected climate science altogether and, unsurprisingly, reported an inability to predict what climate change will bring to the vineyard. Consequently, his is a fluid climate response with varietal plantings based on trial and error.

Like other plant species, wine varietals are dependent on climate. The future climate will have parallel impacts on all Applegate agriculture and forestry. Local land managers should consider local climatic projections and the optima of their chosen crops and plan accordingly. We often hear folks hope that the climate will soon return to normal. A normal climate is now a meaningless concept we should consign to history. The key to adjustment is to understand the trend and what that trend indicates for our future.

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