



napa valley vintners

Press Release

Napa Vintners Release Findings of Climate Study

February 3, 2011

St Helena, CA-The Napa Valley Vintners (NVV) non-profit trade association announced today the release of the Napa Valley-specific climate study titled *Climate and Phenology in Napa Valley: A Compilation and Analysis of Historical Data* by Dr. Daniel R. Cayan, Dr. Kimberly Nicholas, Mary Tyree, and Dr. Michael Dettinger.

In 2006, a researcher garnered national media attention by predicting that Napa Valley would soon become too warm to grow fine wine grapes. These reports noted signs of warming in California and the western United States in recent decades, calling attention to several changing indicators in weather, hydrological and biological systems. Evidence from other Mediterranean climate regions around the world indicated that climate warming may be taking hold in these settings. However, the experience of Napa Valley growers has been contrary to the notion that Napa Valley has warmed substantially. A problem in applying this previous research to the Napa Valley is that it has considered just a few weather station records in Napa Valley, which has long been known for very diverse micro-climates and growing conditions.

This just-released Napa-specific study by Cayan and colleagues scrutinized weather and phenology (the growing cycle of grapevines) records based on many more stations within Napa Valley, and arrived at a number of important new conclusions. Over the four years of the study, more than 12,000 data points were collected from measurements made at geographically diverse sites in the valley, using information ranging from hand-written journals kept by long-time growers to digital data from current-day automated weather stations positioned valley-wide. Most of the observations were from records taken since the late 1970s, but some of the hand-written entries were from as early as the 1950s. The Executive Summary of the study is attached; in brief, it finds that the region has experienced some warming, approximately 1° to 2° Fahrenheit over the past several decades, but considerably less warming than would be inferred from the standard cooperative observer weather stations in Napa Valley. The warming has been primarily in winter, spring and summer, and it has concentrated during nighttime rather than daytime. Over the last several decades in growing season temperatures, there has been little warming in the daytime and the available observations provide little evidence that the growing cycle of the grapevines has changed substantially.

The results, overall, provide good short-term news that consumers are not "tasting" climate change in Napa Valley wines. It reinforces the firmly held belief among growers and winemakers that the taste profile of Napa Valley's wines is driven by its place of origin, as well as by the solid direction of the in-field practices related to viticulture (clonal and rootstock selection, canopy management, irrigation, crop load and hang time, among others) along with stylistic preferences in winemaking.

The Napa Valley-specific climate study began in 2006 when the NVV board of directors created a climate study task force of vintner members who had both interest and knowledge of the issue. The task force identified Dr. Dan Cayan of Scripps Institution of Oceanography at UC San Diego, one of the most experienced climate scientists in the state, to lead a research team. A key member the team was Dr. Kimberly Nicholas, a North Coast native, who at the time was in the midst of her doctoral degree program at Stanford University, studying the potential effects of climate change on high-quality winegrowing in Napa and Sonoma. With this team in place, and working with the vintners and growers in Napa Valley, a set of criteria was designed to collect and investigate as much historical, in-field data as possible to determine climate patterns and trends specific to the Napa Valley appellation.

Vintner and climate study task force member Christopher Howell of Cain Vineyard & Winery said, "We winemakers are farmers--as farmers, we live not by the climate, but much more by the weather, i.e.: day to day, week to week, season to season, and year to year. In order to get clear evidence of climate change, we need to be able to compare trends over decades--this is not a perspective on the usual human scale." Indeed, this study and previous research shows that Napa temperatures are correlated, to some extent, with changing ocean temperatures along the Pacific coast; for example, sea surface temperatures along the central California coast have been unusually cool in recent years, associated with relatively cool air temperatures in the Napa Valley.

Howell continued, "We love the quote attributed to Mark Twain who said, 'The coldest winter I ever spent was a summer in San Francisco.' The Pacific Ocean is our region's greatest temperature control. From living here, we know that the warmer the Central Valley becomes on a summer day, the more intensely the fog pours in from the coast. This is the 'vacuum effect' of the warmer interior valley. We have been blessed to have the perfect mix of warm days and fog/coastal cooling that allow us to grow some of the finest wines in the world."

"Globally, the years 1998, 2005, 2006 and now 2010 were the warmest years on record, but they were some of the coolest for the Napa Valley. There is a suggestion by some climate scientists that, as the interior areas warm in the future, Napa temperatures may actually remain relatively moderate, or even cool as maritime air gets drawn further up the Valley. Either way, warmer or cooler, it's different than what we're experiencing today--so as prudent farmers we need to look at all of our possible scenarios and consider best practices to continue to grow the best wine grapes," Howell concluded.

The new study emphasizes the need for maintaining regular observations at high-quality weather stations around the Valley. Estimates of temperature changes in the Napa region are hampered by local changes in exposure, buildings and paved areas around the longest existing weather stations. For example, the commonly used weather station at Napa State Hospital, with a record going back 100 years, is situated over an irrigated lawn next to a black top driveway and a building with a large window air conditioning unit, and the St. Helena weather station is mounted on the roof of the city fire station, but was moved three times in recent decades. Shorter records collected by Napa weather observers indicate that these long-term stations are registering an artificial warm bias which has likely increased over the last several decades. The study recommends that the Napa Valley farming community should formally assess the adequacy of its current climate observations and establish a protocol to maintain a high-quality, long-term climate monitoring network.

"I am proud of the leadership taken by the Napa Valley Vintners in this climate study. We have strong benchmarks in place that will further allow us to track what changes may occur in our unique climate--really specific to the Napa Valley. Though we are just 4% of California's wine grape harvest, we account for 34% of the value of the California wine industry on the US economy. It's in all of our best interests to ensure a long and healthy future in fine wine from the Napa Valley," said Kathleen Heitz Myers, president of the NVV board of directors.

Additional research beyond this study continues on a number of fronts, looking at what in-field practices could be employed should climate change take the form of regional warming, such as how canopies and cover crops are managed as easy, short-term solutions. Napa Valley growers and vintners are raising awareness of what can be done locally while thinking globally with programs like Napa Green Certified Land and Winery, which are the most comprehensive green initiatives in the wine industry and that have the well-earned reputation for going above and beyond when it comes to environmental best practices.

The Napa Valley Vintners is the non-profit trade association responsible for promoting and protecting the Napa Valley appellation as the premier winegrowing region. From seven founding members in 1944, today the association represents 400 Napa Valley wineries and collectively is a leader in the world-wide wine industry. To learn more about our region and its legendary American wines, visit www.napavintners.com