

SUISUN VALLEY GRAPE GROWERS ASSOCIATION.



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Suisun Valley AVA Climate, Topography, and Wine Grape Characterization Study

By JO DIAZ

March 23, 2009

In May of 2008, Suisun Valley Grape Growers Association hired Terra Spase of Napa, California, to begin the process of scientifically defining their terroir. Proprietor Paul Skinner and his staff immediately initiated the project, which was to inventory and assess the conditions of the available climatic and topographic data for the Suisun Valley AVA.

- Suisun Valley's eight-mile length of Springtime (March-April) Growing Degree Days are very closely aligned to Napa Valley's 30 mile stretch, just in a condensed version.
- Noteworthy climate findings include what was once empirically understood by the farmers and discussed as anecdotal evidence: situated in close proximity to the San Francisco Bay, portions of this area exert influence on the regions' climate.
- The lower portion of the Suisun Valley is subject to steady southwesterly, bay influenced breezes beginning in the late springtime. Annually occurring springtime northwesterly flow along the Northern California coast pushes marine air into the San Francisco bay and up through the San Pablo bay into the Suisun Valley region.
- It is increasingly recognized as a significant player in California's luxury and ultra-premium wine grape market segments.

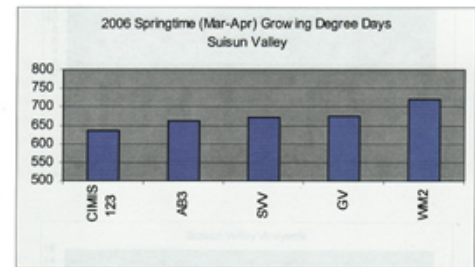


Fig. 5c-11

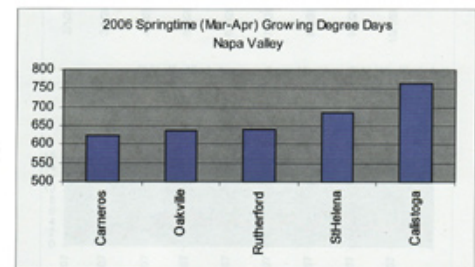


Fig. 5c-12

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On February 3, 2009, Paul W. Skinner, Ph.D. delivered his "Climate, Topography and Wine Grapes in the Suisun Valley AVA" report to the Suisun Valley Grape Growers Association Board of Directors' meeting, commissioned by SVGGA. In his introduction, Skinner indicates that because high intensity climate monitoring has been implemented in Suisun Valley with the installation of several automated weather stations, documentation of mesoclimates within the established AVA has provided a valuable, historical record from which to draw upon, in order to deliver the report.

Skinner writes, "The establishment of their own weather station network to collect weather data on a 24 hr basis by the Suisun Valley grape growers shows forward thinking on their part. It was also an important step forward for the Suisun Valley Grape Growers Association to recognize the value of developing this report for the use of the wine community and their constituents."

It is Skinner's hope that Terra Spase's analysis of the climate data that was collected [to date] will become the basis for an improved understanding of how weather and climate attributes define Suisun Valley AVA's potential for producing world class grapes from different wine grape varieties.

Above is the "short of it." Below is the scientific breakdown: In May of 2008, Suisun Valley Grape Growers Association hired Terra Spase of Napa, California, to begin the process of scientifically defining their terroir.

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On July 8, 2008, Terra Spase delivered Phase 2 to SVGGA, which included the data compilation phase consisting of the various datasets for analysis, including the following:

- Narrowing target climatic parameters
- Processing supplemental PRISM (Parameter-elevation Regression on Independent Slopes Model) weather dataset for analysis and mapping
- Extracting target parameters from PRISM and local climate datasets
- Target parameters summarizing for key time periods
- Processing of elevation data in preparation for mapping the GIS analysis
- Promising trends in data

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Terra Spase recognizes Suisun Valley’s AVA with the following:

- Located in the North Coast AVA, Suisun is one of the oldest, continually producing wine grape zones in the West.
- It is increasingly recognized as a significant player in California’s luxury and ultra-premium wine grape market segments.
- Wine grapes support in-valley wineries, as well as wine companies in Napa and Sonoma.
- SV grape growers produce popular wine grape varieties, such as Cabernet Sauvignon, Sauvignon Blanc, and Chardonnay; as well as specialty cultivars, such as Syrah, Petite Sirah, Barbara, Grenache, Sangiovese, and Zinfandel.

Noteworthy climate findings include what was once empirically understood by the farmers and discussed as anecdotal evidence, and are now validated by this academic study; namely, situated in close proximity to the San Francisco Bay complex, portions of this area exert influence on the regions’ climate.

The report delivers the AVA’s geography in great detail; which to date has yet to be so thoroughly recorded. Considering all aspects of elevation, slope, and distribution aspects, the report recommends that if the wine grape growers take all aspects of the detailed topographical effect into account in the designing and production phases of their vineyards, development will significantly increase their likelihood of producing ultra-premium grapes and wines from their vineyards.

CLIMATE DATA AND MONITORING EFFORTS: The Terra Space report delivers extensive maps, which present a visual account for all of Terra Spase’s findings (examples):

- Suisun Valley AVA and Vicinity
- Separate maps for Elevation, Slope, and Aspect
- Automated Weather Stations in the Suisun Valley AVA
- Separate Precipitation, Humidity, and Temperature maps

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Extensive charts deliver extensive supporting material for all of their findings (examples):

- Seasonal Precipitation (in) 1995-2008; (CIMIS 123)
- Monthly Precipitation (in) 1999 (CIMIS 123)
- Mean Weather Precipitation (in) 1995-2007 - CIMIS 123
- 2007 Monthly Rainfall (in) Williams2 and Abernathy 1 stations.

With data from the following sources, much was demonstrated from the average monthly temperatures from Terra Spase's initial findings. [The map is used with permission of Terra Spase.]

• CIMIS 123 ~ California Irrigation Management Information System: lowest, southwest

- AB1 ~ Abernathy 1: southeast quadrant
- AB3 ~ Abernathy 3: south, mid-valley
- SSV ~ Suisun Valley: west, mid-valley
- GV ~ Gordon Valley; central, upper-valley
- WL2 ~ Williams 2: northwest quadrant
- PRISM ~ Program at Oregon State University

developed by Dr. Christopher Daly, the PRISM group director. Suisun Valley's unique, distinguishing features:

Precipitation ~ Springtime rains can occur after mid March bud burst, but are relatively unusual. This relative absence of late spring rain in Suisun Valley is a climatological advantage the region enjoys over many other winegrape growing regions.

The absence of precipitation during the summer months allows for the early ripening of relatively disease free winegrapes.

Growing degree day data indicate conditions range from Winkler's Region III to Region V, within Suisun Valley AVA in different years, defining the quality of their winegrapes.

As a characteristic of many California coastal valleys opening onto the San Francisco Bay complex, the northern parts of the Suisun Valley region tend to see higher maximum and lower minimum temperatures than are observed in the southern parts of the region.

The lower portion of the Suisun Valley is subject to steady southwesterly, bay influenced breezes beginning in the late springtime. Annually occurring springtime northwesterly flow along the Northern California coast pushes marine air into the San Francisco bay and up through the San Pablo bay into the Suisun Valley region.

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Automated Weather Stations
in the Suisun Valley AVA

