

## The Sangiacomo family constantly works to improve quality. That work never ends.

The Sangiacomo family has worked hard for many decades to learn how best to farm each and every row of their vineyards. Many vineyards have different microclimates and multiple soil profiles. Through research, trial and error in the field, and critical evaluation of the resulting wines, they have learned how to select the right varieties, clones and rootstocks, as well as row spacing and orientation for more than 100 individual sites. This approach, paired with the appropriate pruning, irrigating, canopy management, and nutrients is what enables the family to tease an extraordinary range of flavors out of their Chardonnay and Pinot Noir grapes.

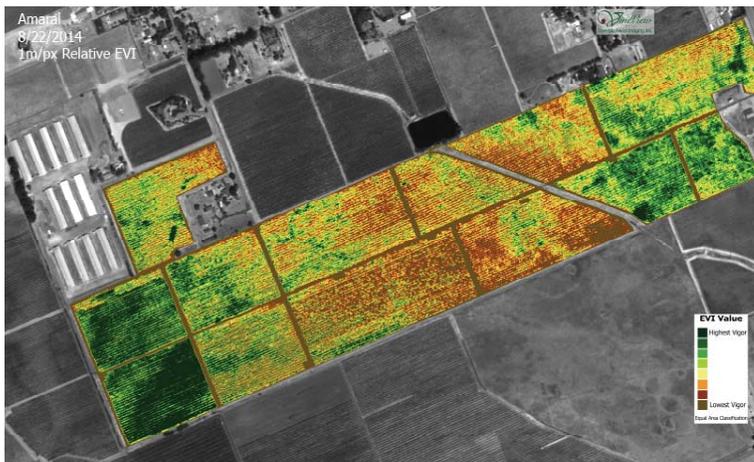
When the vines go dormant in the winter they assess vine growth to determine length and weight of canes as they prune. This data helps determine how many buds to leave for the upcoming growing season. As the buds break in the spring, they shoot thin and head sucker the extra buds, leaving only the primary buds.

Of prime importance amongst their ongoing viticultural practices is irrigation. Too much water and the vines put more energy into growth than flavor development of the grapes. Too little water and the vines are unable to produce enough growth to develop richness of flavors.

The Sangiacomos use small drip irrigation blocks to conserve water and to give increased irrigation control, block by block. They are continually experimenting with and implementing new irrigation monitors such as pressure bombs and surface renewal technology (TULE) that integrate plant, soil and atmospheric measurements of evapotranspiration rates to determine total water loss. These tools help them analyze and make site-specific irrigation decisions on a day-by-day basis.

Likewise, bloom and veraison petiole analyses allow the family to assess plant nutrition during the growing season. If the analyses indicate that the vines need nutrition, they put together a plan to dial-in the exact required nutrients. That may include planting cover crops with nitrogen fixing plants, adding organic matter to the soil, or adding fertilizer thru the drip irrigation system (fertigation). The Sangiacomos use NDVI infrared maps to evaluate the long-term health of all of their vineyards. Data from these maps guides decisions on which blocks, rows, or vineyards should be replanted, fertilized or irrigated. *(continued)*





*NDVI infrared map used to evaluate the vigor and long-term health of vineyards.*

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But all the technology in the world cannot replace the visual cues gained by walking row-by-row. There are many sets of eyes -- the family's own plus many "scouts" --- out in the fields to visually monitor for signs of pests, vine health, and general grapevine phenology. This subjective data is captured immediately in the field and input via a wireless handheld device into a web-based database. The gps-enabled device codes the data to the exact spot where the sampling took place, enabling follow-up actions to be targeted to the exact blocks, rows, or even individual vines. Other data such as pressure bomb readings, yield estimates, bunch weights, and cluster counts is also input into the handheld device from the field. Multiple years of data for each block helps the family identify trends and gauge vine maturity during the growing season compared to previous years.

At harvest, the Sangiacomos maximize grape quality by harvesting 60-75% of the fruit during the cool hours of the night and early morning. Grapes are also sorted in the field prior to being delivered to the wineries.

At every step of the way they seek to produce the highest quality fruit with the lowest environmental impact possible. This is achieved by reducing the amount of inputs required to grow premium grapes while continuing to improve quality. That means using cover crops to stem erosion during the rainy months and provide nutrients during the growing season. In areas where inputs can no longer be reduced, they are dedicated to finding and implementing alternatives that have less environmental impact. These inputs range from electrical usage to the nutrients in the soils beneath the treasured vines. They look to these, and other growing techniques, to align with the needs of their customers.



*Harvesting at night keeps the grapes cool, maximizing quality.*