



## WOLFF VINEYARDS

### Stewardship Profiles in California Agriculture

Environmental Leadership with Pest Management, Water Efficiency, Habitat Restoration, and Soil Health

Andy MacGregor planted the vines at Wolff Vineyards some 40 years ago, making it one of the oldest in the Edna Valley. In 2000, Belgian-born Jean-Pierre Wolff, an engineer who dreamt of entering the wine business, bought the property outside of San Luis Obispo with his wife Elke. The property's proximity to the coast and a university appealed to Wolff as did Edna Valley's cool climate and its emergence as a popular wine region. Family-owned and -operated, Wolff Vineyards currently spans 125 acres, including 110 acres planted in grape varieties including Chardonnay, Pinot Noir, Teroldego, Syrah, Petite Syrah, and Riesling. A winery resides on the remaining acreage.

### PROBLEM

When the Wolff's acquired the vineyard, they were confronted with a massive mealybug infestation and needed to try several methods of control before finding a solution. Routine drought necessitated halting the use of cover crops in the vineyard to prevent them from competing for moisture with the vines. Implementing conservation practices to improve soil health can be costly, but are critical to keeping Wolff Vineyards productive and its grapes high quality.

### SOLUTION IMPLEMENTATION AND MANAGEMENT

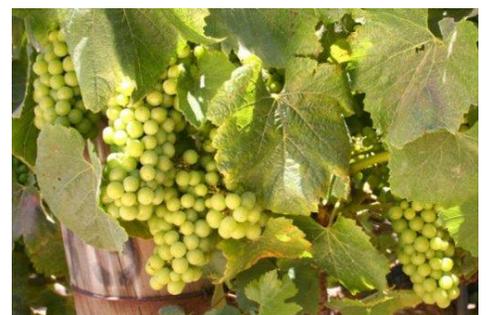
Prior to the Wolff's purchasing the vineyard, mealybug infestations were primarily combatted through the use of powerful pesticides. However, the environmental impact of the pesticides, including killing many beneficial insects, convinced Jean-Pierre Wolff a different approach could be better. He became involved with various universities active in Biologically Integrated Farming Systems to conduct trials of possible solutions to the mealybugs and later transitioned to Integrated Pest Management principles.

Next, to more efficiently utilize scarce water supplies, the Wolff's began to convert a Chardonnay vineyard from drip irrigation to dry farming—a technique used in dry or arid regions that relies on storm water runoff to irrigate crops. Capturing runoff from the surrounding hills, the vineyard built a system of ditches to redirect water to flood lower elevation fields rather than discharge into a nearby creek. Under normal rain conditions, this practice allows Wolff Vineyards to economically dry farm 45 to 50 acres as well as contribute an acre foot of water per acre to recharge groundwater supplies.

To help the dry farmed vineyards thrive, he gives what he calls haircuts to the shallow roots. "We are finding that older roots develop something like calluses

### ACHIEVEMENTS

- Multipronged management efforts used to control mealybug infestations.
- Transitioned 50 acres from traditional irrigation to dry farming
- Reduced overall water usage by over 50%



**"There is no silver bullet [to conservation]. You often have to use a multipronged approach."  
-Jean-Pierre Wolff**

on the outsides of the roots, which reduces the ability for the roots to take in trace minerals and nutrients from the ground, so they are less efficient. By literally pruning underground, you rejuvenate the roots,” says Wolff. Over time with new plantings, Wolff has developed a drought-resistant, salt tolerant rootstock.

In addition to the use of cover crops and monitors to measure soil health, Wolff restored a nearby creek to help improve wildlife habitat and decrease soil erosion. He created resting pools and canopy cover, an important shield against predators, to establish a more vibrant steelhead population, and slowed down the creek velocity using riprap to help tackle erosion. “By having a healthier creek and more biodiversity, that helps your integrated pest management and it has the value of helping the groundwater basin.”

## CHALLENGES/OBSTACLES OVERCOME

The drought has made it difficult for Wolff to pursue many of his sustainability initiatives. The creek has been dry, and the steelhead population has consequently plummeted. He has had to kill the cover crops in the vineyard to prevent them from competing for moisture with the vines.

Cost and time have been two other challenges. Wolff noted it took five years to turn the corner on the mealybug problem. He stressed the importance of patience. On the topic of cost, Wolff estimated he invested \$100,000 to build the infrastructure necessary to retain storm water. “If this was a publicly-traded company, they would say, ‘No way.’ They want a three-year return on investment. In this instance, you have to have a long-term horizon. When you plant a vineyard, you have a quarter-century horizon,” said Wolff. “You reap the benefits in later years, but it doesn’t always translate into your profit. It is more of an internal return on investment over time that is ultimately [realized] by increasing your crop.”

## MEASURING SUCCESS

Wolff Vineyards has almost completely eradicated the mealybugs with its multipronged efforts. “This has been a textbook success story. It hasn’t happened overnight, and it’s been a lot of work and cost,” said Wolff. Wolff Vineyards’ water usage has plunged in the years since the Wolffs took over the property. Wolff says he now uses close to the same amount today on 125 acres as was used in the original planting of 55 acres.

Wolff is constantly monitoring his vines and the soil. He takes soil samples yearly to track nutrient content. In addition, Wolff Vineyards compiles an annual nutrient management budget. Wolff says, “It’s an analysis of the nutrients that you use and you adjust it based on your crop load. We say, ‘OK, if we put compost in on the ground, what is the nutrient and nitrogen content of that? If we put cover crop and disk it, what is the nutrient content of that?’” University researchers have taken measurement further by experimenting with cutting-edge measurement techniques at Wolff Vineyards. For example, researchers from the University of Colorado tested a portable instrument for photosynthesis analysis to indicate vine stress.

Wolff is a past recipient of the Central Coast Vintner of the Year Award, the Air Pollution Control District Green award, and the County of San Luis Obispo Business Green award. Wolff Vineyards is certified Sustainable in Practice (SIP). Wolff says the certification and his sustainability efforts have a positive impact on sales.

## STEWARDSHIP PRACTICES



Pest Management



Water Efficiency



Habitat Restoration



Soil Health

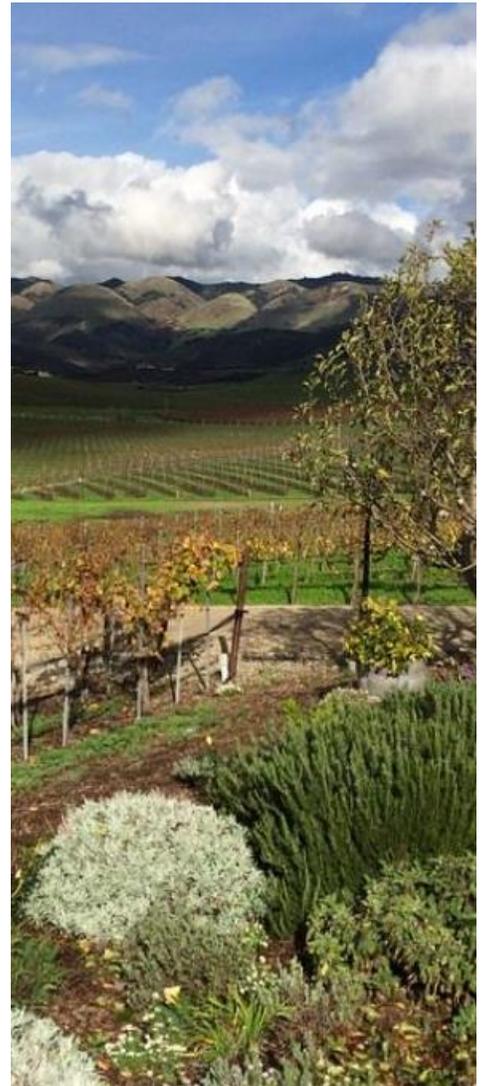


## PROJECT PARTNERS

- U.S. Fish and Wildlife Service
- NOAA National Marine Fisheries Service
- UC Cooperative Extension Farm Advisors
- Natural Resources Conservation Service (NRCS) Environmental Quality Incentive Program (EQIP)
- UC Berkeley Department of Entomology
- Coastal San Luis Resource Conservation District

“We have buyers who have seen the quality results from our growing techniques, so that has been an economic benefit for me,” he said. “On the winery side of the business, it has served us well because we have quite a few customers who join our wine club because they believe in our sustainability program.”

***For more information about the stewardship practices discussed in this profile, please contact the farmers directly. You can reach Jean-Pierre Wolff by phone at (805) 234-8245 or by email to [jp.wolff@wolffvineyards.com](mailto:jp.wolff@wolffvineyards.com)***



This project is supported by a Specialty Crop Block Grant from the California Department of Food and Agriculture and the Agricultural Marketing Service of USDA.

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