

FOOD & DRINK

From Foot-Stomping Grapes To Robots, Clos De La Tech Winery Embraces New And Ancient Technology

Liz Thach, MW

Contributor

I write about wine business, strategy and marketing.

Follow

May 17, 2022,07:00am EDT



Clos de La Tech Pinot Noir Vineyard in Santa Cruz Mountains with Pacific Ocean in Distance

In the 1990's, T.J. Rodgers visited the tiny village of Vosne-Romanée in France and fell in love with the Pinot Noir grape used to make red Burgundy

wine. Inspired by the taste of these wines, he decided to plant one acre of Pinot Noir grapes in the Santa Cruz Mountain AVA (appellation) near his home in Woodside, California. However, as the CEO of Silicon Valley based Cypress Semiconductor, he made the novel decision of combining ancient winemaking practices, such as foot-stomping of grapes, with cutting edge technologies like drones and robots in the vineyards. Thus [Clos de La Tech Winery](#) was born.

“I am a fan of the knowledge of the ancients,” explains T.J. Rodgers, now retired from Cypress, but serving as a venture capitalist for several solar companies. “My winemaking process includes the best of the ancient practices, but is enhanced by technology - after all I am a scientist,” states Rodgers.

Indeed Rodgers has a Ph.D. in electrical engineering from Stanford University, and has studied winemaking techniques at UC-Davis, but he believes in combining the best of ancient and new technologies. This also accounts for the name of the winery: “Clos” is a French term to describe a small walled vineyard, but “La Tech” celebrates Rodgers’s Silicon Valley heritage. Until two years ago, each bottle of Clos de La Tech pinot noir (ranging from \$65 to \$125 per bottle) was adorned with a semi-conductor chip, but due to the global shortage of chips, this practice has been discontinued.

Cutting Edge Technology in Clos de La Tech Vineyards

Over the years Clos de La Tech has expanded to include 40 acres of prime pinot noir vineyards, spread across three sites. The traditional French tight spacing of one meter by one meter is used between the vines (around 4150 vines per acre), and the highest vineyard sits on top of the mountains at 1800

feet with a 180 degree view of the Pacific Ocean. The vineyards are organically farmed, but not certified organic.

If you are fortunate enough to secure an appointment to visit the private mountain top vineyard with three caves dug deep into the hillside, make sure to use a four-wheel drive vehicle. The twisting dirt road to the top of the mountain is very steep with hair-pin turns, and can bring on a case of car sickness.

“We have 22 full-time employees here to tend the vineyards and work in the cellars,” announces David Goldfarb, Winegrower for Clos de La Tech, a role that incorporates both vineyard and cellar operations. He gestures to the very steep vineyard hillside where employees balance themselves on the slope as they carefully sucker (pull extra leaves) off the vines. “We do a lot of hand-work here, but we also use drones to map the vineyard,” he states.

“The drones,” Rodgers explains, “will map the vineyard and use artificial intelligence to store the memory of the vineyard.” This allows Clos de La Tech to create a very reliable computer database of vineyard conditions by season and vintage. Combined with ground probe technology that monitors ground water status, Rodgers is moving towards a goal of precision viticulture, where each vine can eventually be monitored. Rodgers’ team at FarmX has also figured out a way to equip the drones to spray the vines by attaching a second tanker drone to a pilot drone.

“We are very efficient with water,” states Rodgers. “We use less than one-fourth of an equivalent vineyard.”

In addition to ground probes and drones, Rodgers has designed an over the row tractor that can transverse the incredibly steep hillsides and tend the

vines by riding in between them. It is pulled up the hill by cables and therefore does not need a motor. Manufactured by German agriculture firm, Clemens GmbH, it is the only tractor in the world that can handle vertical and steep side slopes in such a closely spaced vineyard. “This tractor,” states Rodgers, “is a pre-cursor to what the vineyard robot of the future might look like.”



Specially Designed Tractor to Work in Steep Vineyards of Clos de La Tech

CLOS DE LA TECH

With investments in several solar companies, it is not surprising to find that Rodgers has installed solar panels in the vineyard. “We have designed them to be all black,” reports Rodgers, “so this way neighbors do not complain about solar panel reflection.”

Foot-Stomping Grapes Deep in the Caves of Clos de La Tech

If technology and the human hand work side by side in the vineyard, once the grapes arrive in the deep caves of Clos de La Tech, the human foot takes over. “There’s an aesthetic beauty about foot-crushing,” says Rodgers, “but it is also beneficial to the wine because it is a more gentle process than using a destemmer/crusher. We use 100% whole grape clusters, and because the seeds do not get crushed and stems do not get scarred, we can control the tannin structure better, resulting in a better wine.”

The winemaker at Clos de La Tech is Valeta Massey - also T.J. Rodgers’ wife and co-owner. She participates in foot-treading the grapes along with the cellar team. First the grape clusters are sorted by hand, and then gently placed in a small open-topped stainless steel tank that holds around 800 pounds of grapes – enough to make one 60 gallon barrel of wine, or 300 bottles. Then one person stands in the short tank and starts stomping, their feet covered by food-grade plastic booties.

“It takes six workers approximately one hour to perform the sorting and foot-stomping to fill up one tank,” reports Goldfarb, who also assists during crush. “The beauty of the design of these small tanks, developed by T.J., is that we foot stomp, ferment, and press off the skins all in the same tank.”

The wine is fermented using natural yeast, and once finished, it is gently transported in a gravity flow system to the next cave, which serves as the barrel aging room. Here the wine is aged 16 to 18 months in French oak, before being gently moved by gravity to the third cave, reserved for bottling and storage. Here it rests for 3 to 4 more years in bottle, before being released 5 to 6 years after harvest.



Wines of Clos de La Tech Winery

THACH

Pinot Noirs That Exhibit Complex Fruit and Santa Cruz Soil

So what do the Pinot Noir wines of Clos de La Tech taste like? Rodgers' dream of bringing a small part of Burgundy to the Santa Cruz Mountains seems to have paid off in the complex fruit and earthiness that can be found in most of the vintages of Clos de La Tech.

The wines, coming from five separate vineyard blocks, such as *Domaine Lois Louise Twisty Ridge* (produced from the oldest vines on top of the mountain) to the *Domaine du Docteur Rodgers* (produced from the original one acre plot near Woodside), all seem to have a taste of the Santa Cruz Mountain AVA soil,

along with complex fruit. Some are more full-bodied with notes of black cherry, spice, potting soil and truffle, while others are more elegant with plum, rose petal, raspberry, granite and slate.

Producing less than 5000 cases per year, vintages are frequently sold out. Customers usually have to join the wine club, or journey to the Half Moon Bay Wine & Cheese Shop to purchase Clos de La Tech wines. The journey to the top of the mountain to the actual winemaking facility is only by rare appointment, or to attend occasional wine club events.

In the end, Rodgers' vision of combining the best of ancient technology with the cutting edge science of the modern era seems to have created a wine that straddles the New and Old worlds. But it is also a wine that takes much labor, time, and money to produce. Many hands, minds, hearts, and feet go into its creation, along with technological knowhow.

“So many vineyard and winery operations do not want to put in the time it takes to create great wine,” states Goldfarb. “Fortunately Clos de La Tech has the financial patience to make wine that takes time to be great.”



T. J. Rodgers, Founder of Clos de La Tech Winery and Retired CEO of Cypress Semiconductors

MO SAITO

I had a chance to visit Clos de La Tech vineyard high on the top of the Santa Cruz Mountains with a view of the ocean. It is truly a unique vineyard in California, with tight vine spacing like Burgundy, but with hillsides as steep as the Mosel in Germany. It is also filled with wildlife, with hawks and eagles soaring overhead, and rabbits, foxes, and an occasional mountain lion said to be roaming the slopes.



Liz Thach, MW

I am a Professor, Wine Writer and Consultant based in Napa and Sonoma, California. As an award-winning author and educator, I specialize in wine business strategy, marketing, leadership/executive development, and wine lifestyle. My passion is wine, and I have visited most of the major wine regions of the world and more than 65 countries. I teach part-time in the Wine MBA program at Sonoma State University, and also teach a wine business class for Stanford Continuing Education. My publications number over 200 articles and 9 books, including *Call of the Vine*, *Best Practices in Global Wine Tourism* and *Luxury Wine Marketing*. I completed my Ph.D. at Texas A&M University in Human Resources, and became a Master of Wine (MW) in May 2011, after passing the most rigorous wine exam in the world. In my free time, I enjoy hiking, golf, reading, and wine dinners with family and friends, as well as serving on several non-profit wine boards and being a wine judge.