



Triumph from the laws of disaster

California's growers have used the most recent incidence of phylloxera to reassess their approach to terroir. Larry Walker reports

There have been dramatic changes in the typical California vineyard as we head towards the turn of the century. The 21st century California vineyard has been under development for the past decade and has been shaped to a large extent by a tiny bug - specifically the nasty grape root louse called phylloxera.

Beginning in the 1980s and reaching a peak in the early- and mid-1990s, the little beast was happily gnawing away at vine roots in vineyards throughout California, forcing vineyard owners to uproot vines planted only a few years before during the memorable wine boom years of the late 1970s and early 1980s. By the year 2000, well over half of the vineyards on California's North Coast will have been replanted.

It isn't the first time phylloxera, which kills the vine in the course of a few years by destroying the root system, has devastated vineyards. In the 19th century, the malady spread from American vineyards across the Atlantic and did huge damage in the vineyards of Europe. More than a century later, the versatile little bug learned to enjoy roots previously believed immune and the cycle of replanting began again throughout the state of California.

"It turned out to be a marvellous opportunity," says Andy Beckstoffer recently. Beckstoffer has been farming wine grapes in California since the early 1970s and owns almost 3,000 acres of vineyards on California's North Coast. He regularly supplies grapes to about 40 different wineries annually and is the largest seller of grapes on the whole of the North Coast.

"The usual life cycle of a California vineyard is maybe 40 years," Beckstoffer explains. "If you start real young and get lucky, you might be able to replant a given vineyard twice in one lifetime. But because of phylloxera, we were pulling up vines that had been planted only ten or 15 years before. And we've learned a lot in the past decade about what varieties grow best and where to plant them, about what rootstocks to use, what clones to use, what trellising systems to use. Now, I admit, it cost a lot of money but it means that California's vineyards in the next century will be a generation ahead on the curve."

New market view

Beckstoffer's views were echoed by growers in other parts of California. Some areas, like Monterey County and Santa Barbara County on the Central Coast, were not as hard hit by phylloxera, but with thousands of acres of new plantings, viticulturists were able to use the up-to-the minute technical

developments inspired by the fight against phylloxera to improve grape quality.

The vineyard of the next century will also be shaped by market forces - well what isn't these days? It's Beckstoffer's view that in the next century, California wine will be sold on the basis of the appellation and the vineyard rather than by grape variety.

'Now, the most important question is, "Do you have Cabernet?" In future the question will be, "Where is your vineyard. " And that, of course, will have an effect on varieties planted since we will be free to grow the right variety in the right place without concern about satisfying demands for the latest "hot" variety,' he said.

Beyond the question of phylloxera, there has been a key shift in vineyard technology over the past decade, which is reflected in many of the new plantings. The old technology - wide spacing, one rootstock, one trellis system, clonal selection rarely considered - was very much production-driven. The view in the 1960s and 1970s, largely inspired by research at the University of California, Davis Department of Viticulture and Enology, was that the vineyard was a production unit and should be standardised on the basis of costs and quantity. One piece of soil was exactly like the next and the best rootstock was the one that gave the highest yield with the least amount of trouble.

That 'universal' rootstock was AXR1 and it turned out to be susceptible to phylloxera and the 'hey, guys, back to the drawing board' scenario. The new vineyard technology is very much driven by quality.

'There are a number of things we are doing in the vineyards that are aimed at quality,' Beckstoffer explains. 'We are matching rootstocks to clones, then matching both to soil types. We are using vertical trellis systems that open the vine up to more sunshine, to better air movement. All of these are labour intensive and costly, but we can't hope to compete in the global wine market without having good quality wines.'

Will it pay off in the end? Beckstoffer believes it will. 'I have this dream for Napa that sometime fairly early in the next century, Napa will be recognised as consistently producing the best wine in the world and it will be red and it will be based on the Cabernet family.'

About 100 miles east and south of Napa is the Lodi-Woodbridge appellation. It's at the north end of California's vast Central Valley, a sea of table, wine and raisin grapes best known in the past as the source of California's cheap and friendly jug wines.

The new vineyard technology is bringing about major changes in Lodi, according to Mark Chandler, head of the Lodi-Woodbridge Vintners Association.

'Our growers are constantly experimenting with clonal selection and rootstock, looking for the combination that produces soft, rounder and more approachable fruit, which is what Lodi is known for,' Chandler said. He added that, like many parts of California, new vineyards were being planted to closer spacing (see boxed information on page 28).

The Lodi appellation is the largest supplier of premium varietal Chardonnay, Cabernet Sauvignon, Sauvignon Blanc and Merlot and the second largest supplier of Zinfandel in California. Chandler expects those varieties to continue to dominate, with the addition of Syrah and Viognier.

In Monterey County, part of the huge Central Coast appellation which sprawls all the way from San Francisco almost to Los Angeles, vineyard acreage has soared from 30,000 acres five years ago to an estimated 40,000 acres by the turn of the century.

Howard Tugel, the vineyard manager for Estancia's Monterey estates, has been growing grapes in Monterey since 1967.

'When I first came, everything was traditional spacing,' says Tugel. 'Now as we replant we're going to six, eight or ten foot rows.' Tugel is also working on row directions. Some rows run east to west, some north to south.

He was a pioneer in Monterey on the effect of windbreaks, working with several different trees and

completely boxing in the vineyard. 'I think I can definitely improve grape cluster size and number with windbreaks in combination with vigorous rootstocks, Tugel said.

Premium domination

It would be easy, after 30 years dedication to the cause to ease up a bit, but Tugel stays out at the edge, running a constant series of experiments on rootstocks, vine spacing, clonal selection, windbreaks and other such projects. He has a 50 acre vineyard entirely devoted to various experiments.

For example, Block 20 in the Pinnacles Vineyard was planted in 1996 to 10.4 acres of Pinot Noir on clones 115 and 777 and on three different rootstocks, 101 14, 44-53 and 420A. The spacing dimensions are six by four feet with 1,720 vines per acre on a unilateral vertical trellis.

Block 20 is a very good example of the complexity of trying to match clone and rootstock to different soil types in California, where soil types are often a volcanic jumble compared to the more stable soils of the European vineyards. One vineyard might have more than a dozen soil types, changing literally from row to row and unfortunately there are no easy ensembles of mix-'n'-match clone, rootstock and soil.

Pinot Noir is beginning to loom larger in Monterey, especially in the cool northern reaches of the Salinas Valley where Pacific fogs will often tend to linger until noon. Dan Karlsen, the winemaker at Chalone, was trained as a marine biologist so he is no stranger to fog. However, Chalone's vineyards at an elevation of about 2,000 feet above sea level are well above the fog level.

With more new vineyards being planted at Chalone, the clonal question came up. 'I don't think it's really about clones,' says Karlsen. 'Clones are fine tuning, but you aren't going to make great Pinot Noir just because you have the right clone.'

'It comes back to the site and the microclimate. Each site will give what it can. The problem here, as it is all over California, is excess sugar, over-ripe grapes. I don't have the answer to that, but I may try leaving on more leaves to raise the malic acid level.'

So the hunt for perfection goes on as the 21st century vineyards begin to take shape. What seems to matter is that the questions being asked are to do with improved wine quality. At this point in time though, there are clearly more questions than answers and it will no doubt remain so for a long time to come. In the meantime, the best place to look for the positive results is in the glass you are holding in your hand. •