

The Useful Life of a Commercial Wine Grape Vineyard

Planning horizons, the production curve, and what actually drives the replant decision in California

The commercial life of a California wine grape vineyard is generally planned at 25 years, with a practical range of 20 to 30. That figure is an underwriting convention rather than a statement about vine mortality, and the distinction is unusually important right now. The current wave of vineyard removals in California has very little to do with vine age.

WHERE THE 25-YEAR FIGURE COMES FROM

The reference point is the series of wine grape cost and return studies produced by UC Cooperative Extension, the UC Agricultural Issues Center, and the UC Davis Department of Agricultural and Resource Economics. The northern San Joaquin Valley Cabernet Sauvignon study uses a 25-year economic life for a grower-owned-and-operated vineyard on a hypothetical 200-acre farm in Crush District 11.¹ Parallel studies exist for the southern San Joaquin Valley covering Cabernet Sauvignon, Chardonnay, Rubired, and Colombard, all built around near-full mechanization.² A separate study covers Cabernet Sauvignon in the North Coast and Napa Valley.³

These studies exist explicitly to support production decisions, budgeting, and the evaluation of production loans.³ Because lenders, appraisers, and farm managers all work from them, 25 years has become the default assumption in vineyard underwriting and valuation regardless of what any particular block is doing.

The mechanization assumption embedded in the newer studies is worth noting on its own. UC Cooperative Extension viticulture advisors describe the studies as reflecting mechanical pruning, leafing, shoot thinning, and harvest, on the expectation that growers will keep shifting that direction as farm labor becomes scarcer and more expensive.² A vineyard that cannot be mechanized is being measured against a cost structure it cannot reach.

THE PRODUCTION CURVE

STAGE	YEARS FROM PLANTING	WHAT IS HAPPENING
Establishment	1	Vines planted. Trellis, stakes, and irrigation installed. No crop, and the heaviest single year of capital outlay.
Early growth	2 to 3	Vine training and canopy development. A light first crop typically comes off in year three.
First full crop	4 to 5	The first commercial crop a winery will contract against at normal tonnage.
Full production	5 to 20	The plateau. Yield, quality, and cost per ton are at their most favorable across this span.

STAGE	YEARS FROM PLANTING	WHAT IS HAPPENING
Decline	20 to 25	Vigor and uniformity fall off, missing vines accumulate, and trellis and irrigation infrastructure reach the end of serviceable life.
Replant window	20 to 30	Removal and redevelopment. Driven by economics, disease status, or market position rather than by vine death.

The front end of this curve is fast relative to other permanent crops. A block carries a light crop in year three and a full commercial crop by year four or five, so the capital drawdown period is comparatively short. The back end is where the compression happens: the same block gives itself back to the replant decision within roughly 25 years.

Removal is rarely a horticultural decision. The vine is seldom the thing that has run out.

WHAT ACTUALLY DRIVES THE REPLANT DECISION

Virus

Grapevine leafroll disease and grapevine red blotch are the dominant biological drivers, and neither has a cure. Once a vine is infected it stays infected for the rest of its life. Cornell research set the economic threshold for red blotch at roughly 30 percent incidence: above that level the recommendation is to remove and replant the entire vineyard rather than rogue and replace individual vines.⁴ Independent modeling of leafroll reached a similar structure, finding that at prevalence above 25 percent, replacing the whole vineyard is the economically optimal response.⁵

The magnitudes are substantial. Leafroll disease has been associated with losses ranging from \$25,000 to \$226,000 per acre across a 25-year vineyard life, with the annual statewide impact of grapevine leafroll virus 3 in California estimated at \$90 million. Red blotch losses in Napa have been modeled at roughly \$69,500 per hectare.⁶ Shortened vineyard life span is listed as a direct consequence of leafroll, alongside yield reductions of up to 40 percent and delayed fruit maturation.⁷ Virus does not simply reduce yield. It moves the removal date forward.

Interviews with wine grape industry decision makers in California and Washington found that the capital expense of redeveloping a vineyard was a universal economic barrier, and that the value of every other management practice was measured by how long it could delay large-scale replanting.⁸ That framing tells you where the pressure actually sits.

Rootstock

Rootstock is chosen once and constrains a block permanently, and California has a well-documented example of the downside. AXR-1 was recommended by UC Davis from the 1960s for its vigor and ease of grafting despite containing *Vitis vinifera* parentage that limited phylloxera resistance. A more virulent phylloxera biotype identified in Napa in the early 1980s overcame that partial resistance and could destroy root systems within three to eight years. UC Davis formally withdrew the recommendation in 1989, by which point AXR-1 was planted across the majority of North Coast vineyards.⁹ Nurseries stopped propagating it by 1992.¹⁰ Estimates place the resulting replanting at roughly 50,000 acres

statewide at a cost well above \$1 billion.^{9, 11} Blocks that were nowhere near the end of their planned life came out anyway.

Trellis, spacing, and mechanization

Older blocks were laid out for equipment, spacing, and canopy practices that have since changed. Trellis systems, stakes, and drip infrastructure also carry their own service life, which tends to expire on roughly the same schedule as the vines. When labor cost makes mechanical pruning and harvest the assumed baseline, a block that cannot accommodate the equipment faces redevelopment rather than repair.²

Contract and program position

This is the factor most often underweighted from outside the industry. Wine grapes are generally sold to a specific winery for a specific program, not into an anonymous commodity market. A block can be agronomically sound at year twelve and still lose its reason to exist if the contract is not renewed or the variety falls out of the buyer's program. The current market is a large-scale demonstration of exactly this.

THE CURRENT REMOVAL WAVE IS NOT ABOUT AGE

California is working through a structural oversupply correction, and healthy productive vineyards are being removed. Between October 2024 and August 2025, growers took out more than 38,000 acres statewide, roughly 7 percent of California acreage, according to the Standing Winegrape Acreage report commissioned by the California Association of Winegrape Growers and conducted by Land IQ.^{12, 13} Industry participants described an explosion of removals across 2024 and 2025 compared with prior years.¹⁴

Allied Grape Growers president Jeff Bitter had called on growers to remove 50,000 acres per year in 2024 and 2025. Roughly 37,000 acres came out in 2024 and another 40,000 after the 2024 harvest, offset by about 20,000 acres of new plantings coming online in each of those years. Bitter estimated the industry was tracking toward another 40,000 acres of removals.¹⁵ Industry estimates suggest future demand supports only about 410,000 acres.¹⁶

The volume of unharvested fruit shows how far demand fell. An estimated 400,000 tons went unpicked in 2024, rising to roughly 820,000 tons the following year. Winery finished-goods inventory had reached 21.7 months by the end of 2023 against an 18-month target, which is what pushed wineries to cut grape purchases.¹⁶

Regional concentration

The pressure is not evenly distributed. Lodi has removed roughly 10 percent of its vineyards, about 8,000 acres, and Fresno County lost the largest proportion in the state at more than 6,000 acres, an 18 percent reduction.¹³ Lodi's exposure is structural: the majority of its buyers are large wine companies, and the Lodi Winegrape Commission has pointed to those buyers importing bulk wine in place of purchasing local fruit.¹³

A caution on the acreage figures

Published acreage numbers conflict, and the difference is methodological rather than factual. The USDA National Agricultural Statistics Service and CDFA report published in April 2026 put California wine grape acreage at 540,000 acres in 2025, down from 580,000 in 2024 and 610,000 in 2023, with bearing acreage at 510,000, a 5.6 percent decline, and non-bearing acreage down 25 percent to 30,000 acres. Those findings are based on responses from about 6,500

growers.¹⁷ The figure of approximately 477,000 acres cited in the removal reporting comes from remote sensing.^{12, 16} The two should not be combined in the same model.

WHAT TO CARRY FORWARD

The vine outlives the vineyard. Century-old blocks are still producing fruit in Lodi and the Sierra foothills. The 25-year figure describes the point at which capital tied up in an existing block is better redeployed, not the point at which the plant material fails. Three constraints set that point in practice: virus status, which can pull the date forward by a decade or more; infrastructure and mechanization fit, which degrades on a predictable schedule; and market position, which can change in a single contract cycle.

For anyone underwriting, valuing, or planning the transfer of vineyard ground in the current environment, the third of those is doing most of the work. Recovery timing remains contested. Some analysis suggested productive acreage could align with demand as early as 2026, though 2027 or 2028 is considered more likely.¹⁶

A vineyard planted today is a 25-year commitment underwritten against a demand picture that has moved twice in the last five years.

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