





# Merlot

## Synonyms

Merlot is the common name outside of France, while Merlot noir is officially used in France. French regional synonyms include Merlau rouge, Crabutet noir, or Plant Medoc (Bazadais); Alicante (Podensac); Seme dou flube (Graves); Seme de la Canau (Portes); Semilhouin rouge (Medoc); and Bordeleze belcha (Basque country); and it is Medoc noir in Hungary.

## Source

Little is known of the origin of the variety, but it has been cultivated in the Bordeaux region since the eighteenth century. The first true botanical description was in 1854 by V. Rendue who described it favorably for blending with Malbec and Cabernet Sauvignon and as a component of the great wines of Medoc. A resurgence of planting in France since the 1970s, particularly in the south, makes it the third most planted black variety there. Antoine Delmas imported the first vines to California in the 1850s; only a few acres existed after Repeal. It was included in the California planting boom of the 1970s, and plantings soared after 1987. Merlot acreage grew faster than that of any other world-class variety in the 10 years that followed with the exception of Viognier. It is also widely planted in Italy, Central Europe, and South America.

## Description

**Clusters:** small to medium; long cylindrical with large shoulders, well-filled; short to medium peduncle.

**Berries:** small; round; blue-black with whitish bloom; green rachis prominent.

**Leaves:** medium (often very large in training years); deeply 5-lobed, longer than wide; lateral sinuses often overlapping and occasionally with teeth at base; wide U-shaped petiolar sinus; narrow, sharp teeth; slight tufted hair on underside of leaves.

**Shoot tips:** felty white with rose margin; young leaves cream-yellow and downy.

Merlot is distinguished from Cabernet Sauvignon by young leaf color (cream-yellow versus bronze red), petiolar sinus, and cluster shape.

## Growth and Soil Adaptability

Merlot has medium-high vigor with a trailing growth habit. Excess vigor quickly creates a dense canopy due to lateral shoot development. It is adapted to cool to warm climate regions. Merlot does well on deep, sandy loam or well-drained soils that have good moisture-holding capacity.

## Rootstocks

There are no known incompatibilities; rootstock selection can be largely based on site and soil conditions and cultural requirements. High-vigor rootstocks such as Ramsey and O39-16 should be avoided unless nematode or fanleaf virus resistance is imperative. Freedom should be used with caution but is acceptable for quality production where nematodes are a severe problem. These rootstocks, as well as St. George, may influence high tissue nitrogen levels in the scion that may contribute to fruit set problems. When compared to own-rooted vines, any rootstock



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reduces the tendency for high nitrogen levels in the vine. High nitrogen is thought to contribute to coulure and early bunch stem necrosis.

## Clones

Merlot FPS 03 (an Inglenook Vineyard selection with heat treatment) is a California standard due to its consistency of fruit set, yield, and fruit composition. Selections FPS 01 (Inglenook, no heat treatment) and FPS 06 (Monte Rosso, heat treated) have performed similarly to selection 03. Selection FPS 08, an introduction from Argentina, is of lower yield and fruit-to-pruning weight ratio due to poorer fruit set, especially with cool weather. Clonal introductions from Italy and France have added to clonal diversity and are under evaluation. So far, FPS selection 9 (Rauscedo 3) appears to be very similar to selections 1 through 8. Little information is available on the California performance of Merlot FPS

10, 11, 12, 13, and 21 (all from Conegliano, Italy); Merlot FPS 14 (French 348), 15 (French 181), 19 (French 343), and 25 (French 314). Merlot FPS 18, the Bear Flats clone developed by Sterling Winery and donated to the public University of California collection, is a popular heritage selection. Merlot ENTAV-INRA<sup>®</sup> 181, 346, and 348 are registered selections at FPS. In addition, ENTAV-INRA<sup>®</sup> 182, 314, 343, and 347 are available commercially in California through the ENTAV-INRA<sup>®</sup> trademark program.

## Production

Yields tend to vary from year to year. Production is good to very good: 3 to 7 tons per acre in coastal regions and 5 to 9 tons per acre in the interior valleys.

## Harvest

**Period:** A midseason variety, ripening in mid-September to mid-October.

**Method:** Hand harvest is easy as peduncles are long and easily cut. Canopy shaking results in medium harvestability, but some reports range from easy to hard and light to medium juicing. Most fruit (about 70%) is removed as single berries with some whole clusters and parts. Trunk shaking results in medium harvestability, but with a range of easy to medium-hard and light juicing. Fruit is mostly removed as single berries with some clusters.



## leaves

*Medium (often very large in training years); deeply 5-lobed, longer than wide; lateral sinuses often overlapping and occasionally with teeth at base; wide U-shaped petiolar sinus; narrow, sharp teeth; slight tufted hair on underside of leaves.*

## shoot tips

*Felty white with rose margin; young leaves cream-yellow and downy.*

The addition of straight rods may be needed if clusters are not full. With all harvester types, the fragile, brittle shoots tend to break, and flaccid, ripe berries can be a problem with removal.

### Training and Pruning

Vines are most commonly trained to bilateral cordons and pruned to 14 to 20 spurs with two to three nodes each. Quadrilateral cordon training can be used in medium- to high-vigor sites but with care to avoid overcropping.

### Trellising and Canopy Management

Merlot is usually not quite as vigorous as Cabernet Sauvignon but has similar canopy management requirements. Vertical foliage support is used in low- to medium-vigor vines, while Smart-Dyson, lyre, and GDC systems are suited to medium-high- to high-vigor vines.

### Insect and Disease Problems

Vineyards planted in the 1970s often experienced erratic fruit set and low yields due to poor or virus-diseased wood sources and the use of own-rooted vines. Merlot is slightly susceptible to powdery mildew and Pierce's disease and is moderately susceptible to Botrytis bunch rot with fall rains. It is somewhat resistant to Eutypa dieback.

### Other Cultural Characteristics

Merlot is susceptible to poor fruit set if cool weather occurs during bloom, which often contributes to seasonal variations in productivity. Its own-rooted vines tend to accumulate high levels of nitrogen compounds, including nitrates,



during bloom, especially during cool weather. Thus, judicious and moderate nitrogen fertilization is recommended; post-bloom applications are advisable. The use of resistant rootstocks tends to minimize or even eliminate this problem. Merlot is somewhat sensitive to soil problems that involve zinc deficiency, salinity, and cold, excessively wet conditions.

### Winery Use

Historically, Merlot was primarily used for blending with Cabernet Sauvignon and other Bordeaux varieties to add softness and fruit complexity, shorten aging requirements, and to hedge the risk of cool, late-ripening conditions in Bordeaux. In recent years it has also become popular as a full-bodied, high-quality varietal wine that can be marketed sooner than Cabernet Sauvignon.

—L. Peter Christensen