



# Riesling

## Synonyms

Riesling or White Riesling are the approved synonyms. In the United States the name Johannesburg Riesling has been used to distinguish the variety from other non-Riesling varieties such as Grey Riesling (whose correct name is Trousseau gris) and Emerald Riesling (a Riesling × Muscadelle hybrid).

## Source

Riesling is the noble wine grape variety of Germany, where, in the Rhine and Moselle regions, the grapes have produced distinctive, quality wines for centuries. The cultivation of Riesling in Germany is believed to date back to the time of Roman occupation. It has been grown in California since the late 1800s. It is most commonly grown in the cooler production regions, with the majority of the acreage found in the Central Coast.

## Description

**Clusters:** small; cylindrical to globular, can be winged, compact; short peduncles.

**Berries:** small; round; white-green with prominent lenticels.

**Leaves:** small; 3- to 5-lobed and often overlapping to appear entire; closed U-shaped petiolar sinus, purple petioles and nodes on growing shoots; leaf surface bullate; short, rounded teeth; light scattered hair on lower leaf surface.

**Shoot tips:** downy, green-white tips; young leaves yellowish with bronze-red patches.

## Growth and Soil Adaptability

Vine vegetative growth can vary significantly from weak to moderately vigorous depending on the climatic region, soil characteristics, moisture availability, and rootstock selection. Adaptable to a wide range of soil types, the vine's highest vigor will be on fertile soils with high-moisture availability. Shoot growth on non-positioned canopies is fairly upright, but vines develop long, trailing shoots when growth is vigorous. Vine in-row spacing can vary from 4 to 6 feet.

## Rootstocks

Riesling has no known incompatibilities when certified budwood is used to propagate the planting stock. Rootstock selection should be based on the pest situation, soil characteristics, and potential vine vigor of the site. In the coastal areas Riesling has been successfully grown with the rootstocks Teleki 5C, Kober 5BB, 3309C, 110R, and Freedom. Rootstock experience is limited due to the low acreage replanted to the variety in the late 1980s and 1990s. Rootstocks may have more influence on sites where anticipated vigor is low, and the choice may have a greater effect on vine growth and development.

## Clones

The clonal selection of Riesling began in 1921 at the Geisenheim Research Center in Germany. The goal was to preserve the genetic diversity and to select for consistent



## clusters

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## berries

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yield and high wine quality. In Germany, clonal selection has been used to promote higher production and evenness in the vineyard. Many there believe that to produce quality wines there should be a blend of clones to increase complexity of flavors. In Germany, the Geisenheim selections 24Gm, 64Gm, and 94Gm are noted for light fruitfulness and good balance between all flavor components. Geisenheim selection 110Gm has an extremely fruity, slightly muscat flavor, and in warmer sites it is regarded as not typical of German Riesling wines. Geisenheim selection 198Gm has lower crop yields with wines of elegant fruitfulness and pronounced flavor, but with all components in good balance. Geisenheim selection 239Gm is the most widely distributed selection in Germany and produces wines with a range of turpenes, resulting in a spectrum of fruitfulness.

In California, White Riesling FPS 02 is sourced from the Geisenheim selection 198Gm. White Riesling FPS 03 and 09 are from Geisenheim selection 110Gm. White Riesling FPS 12 origi-

nates from clone 90 from Neustadt, Germany. Other registered White Riesling selections include FPS 04 from an unknown source, and FPS 10 from the Martini Vineyard.

## Production

Vine yield can vary considerably by climatic region, site influences, and cultural practices. Crop size can range from 4 to 8 tons per acre. Riesling tends to overcrop when it is grown on deep, fertile sites.

## Harvest

**Period:** A midseason variety, harvested in mid-September in the warmer areas and mid- to late October in the cooler production areas.

**Method:** Hand harvest is easy using knives or shears. Horizontal rod or bow machine harvest is easy to moderate with fruit coming off as single berries with moderate juicing. Bow-rod picking heads used on well-trained vines on vertical-shoot-positioned trellises have lower shoot and spur breakage than straight rods. Trunk shaker machine harvest is easy with fruit coming off as single berries and light to medium juicing.



## leaves

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## shoot tips

*Downy, green-white tips; young leaves yellowish with bronze-red patches.*



### Training and Pruning

Due to the small cluster size the variety was traditionally head trained and cane pruned. Cordon training with spur pruning has been used successfully in many areas. In vineyards where bud fruitfulness is low, cane pruning may result in higher production.

### Trellising and Canopy Management

For low- to moderate-vigor sites the use of vertical-shoot-positioned systems is most appropriate. For high-vigor sites the use of Smart-Dyson or Scott Henry for vertical systems or the use of a horizontal (GDC or lyre) system may reduce canopy shade.

### Insect and Disease Problems

The fruit is highly susceptible to infection by *Botrytis cinerea*. Pre-harvest rain can cause high levels of bunch rot at harvest.

### Other Cultural Characteristics

In some seasons blind buds may occur in the mid-cane area. Riesling leafs out approximately one week after Pinot noir.

### Winery Use

Riesling can produce table wines that are distinctive in aroma and flavor. The wines can have intense fruit aromas of apricot or peach. Wine styles range from dry to very sweet dessert wines. The highest quality is achieved when the grapes are grown in the cooler production areas. It is well suited for the production of late-harvest dessert wines. The susceptibility to *Botrytis* infection and the retention of acidity through the very late stages of ripening allow the grapes to become concentrated by dehydration and still retain sufficient acidity to balance the high residual sugar.

—Larry J. Bettiga