



# Muscat of Alexandria

## Synonyms

Muscat d' Alexandrie and Muscat Romain are used in France, Moscatel Gordo and Moscatel Gordo blanco in Spain, Zibibbo and Moscatel romano in Italy, Muscat Gordo Blanco in Australia, and White Hanepoot in South Africa.

## Source

Muscat of Alexandria is believed to have originated in North Africa and spread around the Mediterranean from the port of Alexandria, Egypt, possibly during the Roman Empire. It is widely known as a multipurpose variety; it is used as a table grape in Spain, Italy, Japan, and South America; a dessert wine and blending variety in southern Europe, Africa, South America, California, and Australia; a brandy (Pisco) variety in South America; as well as a raisin variety in the Old and New World.

The variety reached California in the mid 1800s, reportedly first brought in 1852 by Antoine Delmas, a member of the colony of French growers in Santa Clara County. It was also included in Agostin Harazthy's large variety importation from Europe in 1861. It became the dominant raisin variety in California until the early 1920s. These plantings added to the tonnage used by wineries for the production of muscat dessert wines

when seedless varieties came to dominate the raisin market. Fresh shipment for home winemaking is another common outlet for California growers. Presently, acreage is fairly stable, after gradual losses from declining markets of muscat raisins and dessert wine.

## Description

**Clusters:** large; long conical, can be winged; loose to straggly; relatively long peduncles.

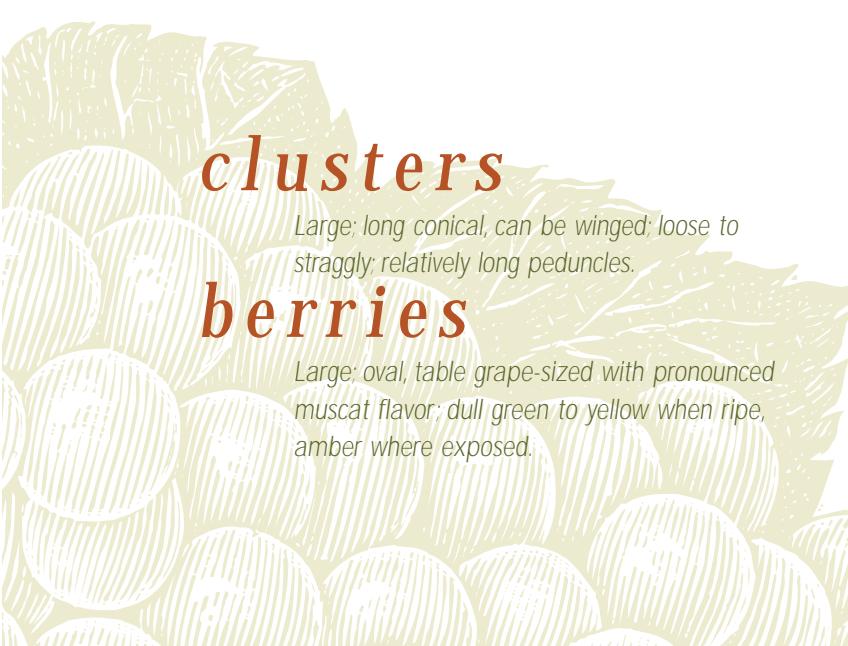
**Berries:** large; oval, table grape-sized with pronounced muscat flavor; dull green to yellow when ripe, amber where exposed.

**Leaves:** medium to large; 3- to 5-lobed with narrow U-shaped petiolar sinus; large apical lobe; relatively sharp 2-ranked teeth; sparse tufted hair on lower surface; older leaves often have scattered patches of yellow tissue.

**Shoot tips:** downy white; young leaves yellow-green with bronze highlights.

## Growth and Soil Adaptability

The vine is moderately vigorous to vigorous when grown on its own roots on medium- to fine-textured soils (sandy loam to clay loam); sandy soils cause very poor vigor. Shoot growth is semi-erect. Recommended in-row spacing is 6 or 7 feet and row middle spacing is 10 or 11 feet.



clusters

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berries

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## Rootstocks

Harmony and Freedom are successful in nematode-prone sites. They should be considered for use in sands to sandy loam soils due to Muscat of Alexandria's moderately high susceptibility to root knot nematode. These variety and rootstock combinations require close monitoring for potential zinc deficiency. A moderately vigorous to vigorous phylloxera rootstock should be used to assure adequate vine vigor and for leaf cover to avoid fruit sunburn.

## Clones

FPS selections 02 and 03 (77- and 119-day heat treatments, respectively) are registered in the California certification program and have good fruiting characteristics. Selection 03 has been tested against two Australian selections, New South Wales J2 and G5. It demonstrated superior vine vigor, fruitfulness, and productivity with comparable fruit composition.



## leaves

Medium to large; 3- to 5-lobed with narrow U-shaped petiolar sinus; large apical lobe; relatively sharp 2-ranked teeth; sparse tufted hair on lower leaf surface; older leaves often have scattered patches of yellow tissue.

## Production

Production is usually 7 to 10 tons per acre. Young, cordon-trained vines often produce more.

## Harvest

**Period:** A late-season variety, harvested in early September to mid-October.

**Method:** By hand, harvest is easy to medium with medium to long, green cluster stems that are easily cut. Canopy shaking harvest is easy to medium; with light juicing. Trunk shaking is usually not the preferred method due to the low cordon heights of many vineyards.

## Training and Pruning

The variety is most commonly trained to bilateral cordons and pruned to 12 to 18 spurs with one to two nodes each. The permanent vine framework should be fully formed before normal cropping to avoid overcropping and weak growth at the end of the cordon. Shoots and clusters should be thinned for crop adjustment through the training period. Cordon development over a 2- to 3-year training period may be required for vines of moderate vigor.



# *shoot tips*

Downy white; young leaves yellow-green with bronze highlights.

Head training is common in older vineyards; the vines are pruned to 8 to 20 one- and two-node spurs, depending on vine size. Vineyards trained to this system are usually preferred for fresh grape shipments. Many of the older, cordon-trained vineyards traditionally used cordon heights of 30 to 36 inches. New, cordon-trained vineyards should use cordon heights of 42 to 52 inches to facilitate machine harvest.

## Trellising and Canopy Management

Exposed fruit is subject to sunburn, particularly during early summer hot spells. A foliage support trellis to shade fruit is recommended.

## Insect and Disease Problems

Muscat of Alexandria is moderately susceptible to powdery mildew, black measles, and Pierce's disease and has low to moderate susceptibility for Phomopsis cane and leaf spot. Leaves may occasionally show blisters with densely hairy inner surfaces due to the feeding of the grape erineum mite. This tiny eriophyid mite is normally suppressed by sulfur application, but Muscat of Alexandria is more susceptible to the pest than most varieties. Leaves commonly show characteristic "muscat spot" symptoms in mid-to late summer. Symptoms appear as irregular, yellowish-chlorotic interveinal spots on the older leaves. Affected portions may also become necrotic or brown. This disorder is thought to be a genetic characteristic of some muscat varieties and is not related to any known disease, nutritional, or physiological problems. Certified, virus-free planting stock should always be used in new vineyard plantings due to leafroll-associated viruses in some existing vineyards.



## Other Cultural Characteristics

The variety is susceptible to zinc deficiency, which results in poor fruit set and shot berries. This can be corrected by foliar spraying with neutral zinc or zinc oxide products before or during bloom. It is somewhat susceptible to overcropping. Exceptionally large yields—13 to 15 tons per acre—will shorten vineyard longevity, particularly in young, cordon-trained vineyards.

## Winery Use

Muscat of Alexandria is used for muscat dessert, table, and sparkling wines, mostly in the warm districts of the San Joaquin Valley. It is also used in blending table and sparkling wines for the addition of fruity, muscat flavor and is a popular variety for fresh shipment for home winemaking.

—L. Peter Christensen