



# Grapes

## About Grapes

Grapes grow as a vine and are used for raisin or fresh markets (table grapes). They do not require wind or insects for pollination, but grapes do require a dormancy period. Grapes produce buds on the previous season's growth (Canes). Bud burst is usually in early spring with flowering 7-9 weeks later. Fruit is normally ready to harvest in autumn 5-7 months after bud burst. Management varies, but in general depends on the grape variety and desired outcome (e.g., raisins or table grapes) and growing conditions (e.g., humidity and sunlight).



## Climate and soil

Temperature	Frost tolerance	Water needs	Tolerance to waterlogging	Drought tolerance
Warm 24°C (best for juice); Hot 35 °C (best for fresh and raisins)	Tolerates -20°C if dormant; else to - 0.5 °C.	Deep rooted, moderate needs	Low in summer, moderate in winter	Good – especially in deep soils
Humidity tolerance	Wind tolerance	Soil needs	Nutrient requirements	
Low – disease control needed in wet environments	Moderate to good	Prefers deep and well drained, Light textured preferred	Avoid heavy fertilization which can cause excess vegetative growth	

## Cultural practices

<b>Propagation</b>	Can use cuttings or rootstock
<b>Rootstocks</b>	Use resistant rootstock if insects (e.g., Phylloxera) or nematodes are a problem or if soils are saline, wet or heavy.
<b>Spacing</b>	Varies, but can use rows: 2.7-3 m apart with 1-2 m between plants. Target: Typically 1,000 – 1,500 plants per ha
<b>Training and Pruning</b>	Keep the canopy open to reduce disease problems and facilitate crop and vine management. Training: Various options– e.g., Vertical shoot positioned. Prune while dormant. The aim is to keep the canopy open to reduce humidity and disease problems
<b>Thinning (or crop drop)</b>	Thin if needed to improve fruit quality and uniformity of harvest. Sometimes done for table grapes and juice.
<b>Tillage and vineyard care</b>	Keep surface between and around vines clean. Grow cover crops - if adequate water - to reduce dust and associated mite problems.
<b>Time to 1<sup>st</sup> harvest</b>	3 <sup>rd</sup> – 4 <sup>th</sup> season
<b>Time to full production</b>	4-5 seasons
<b>Normal productive life</b>	40-60 years
<b>Expected yields</b>	2 years: ± 2 t/ha (Should drop crop to protect vines) 3 years: ± 5 t/ha 4 years: ± 10 t/ha
<b>Harvest</b>	Machine harvest for juice. Hand pick for table grapes.
<b>Storage</b>	3-6 months at 1 °C
<b>Pests and diseases</b>	Insects, nematodes, fungal and bacterial diseases, birds.

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Source: Jackson and Looney, Temperate and Subtropical Fruit Production. 1999.

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