

# Grapes

## Soil & Climate

### Climate

Grapes generally require a hot and dry climate during its growth and fruiting periods. It is successfully grown in areas where the temperature range is from 15-40°C. High temperatures above 40°C during the fruit growth and development reduce fruit set and consequently the berry size. Low temperatures below 15°C followed by forward pruning impair the budbreak leading to crop failure.

The fruitfulness of buds is influenced by light. Light intensity of 2,400-ft. candle is essential for optimum growth. However, low light intensities during the active growth stage (45-75 days after pruning) and fruit bud formation adversely affects the crop.

It is most successfully grown at elevations ranging from 200-250m above m.s.l.

Area with annual rainfall not exceeding 900mm well distributed throughout the year is ideal. However, rainfall during flowering and fruit ripening is not favourable as it leads to the spread of downy mildew disease.

High atmospheric humidity is detrimental during vegetative growth and fruiting. At a high humidity the vegetative growth of vines is vigorous which affects the fruit size and quality. Similarly high humidity during 30-110 days after forward pruning favours the development of fungal diseases.

### Soil

Grapes can be cultivated in variety of soils including sandy loams, sandy clay loams, red sandy soils, shallow to medium black soils and red loams. The soil should be well drained, having good water holding capacity and devoid of any hard pan or impervious layer in the top 90-cm, with water table at least 6.5m below. Grapes can also be grown successfully over a wide range of soil pH (4.0-9.5) however, soils having pH range of 6.5-8.0 are considered ideal.

Major Grape Growing Regions	Soil Types
Uttar Pradesh & Haryana	Sandy loams sandy clay loams.
Andhra Pradesh	Red sandy soils.
North interior Karnataka & Maharashtra	Shallow-medium deep black.
South interior Karnataka & Tamil Nadu	Red loams.