

Grapes

General Information

Recent trends indicate a rapidly increasing interest in production of both wine and table grapes. The European grapes, *Vitis vinifera*, are very sensitive to cold temperatures. Over most of New England, special cultural care must be taken to overwinter *V. vinifera* varieties. *V. labrusca*, which includes Concord and Niagara, is hardier and more resistant to endemic disease problems.

Grapes will do best on a well drained loam soil with a pH of 5.5 to 6.5. Potash, manganese, and iron deficiency problems may develop if soil is limed to raise pH above 6.5. Site selection is critical to success. The ideal site will seldom experience winter temperatures below -5½F, provides freedom from late spring frosts, and offers a frost-free growing season of at least 165 to 180 days.

There are many training system options for grapes; but whatever system is used, the selection of canes well exposed to light and the proper severity of pruning (generally determined using the balanced pruning formula for each specific variety) are the keys to productivity and fruit quality.

The use of multiple trunks (and systematic trunk renewal) is highly recommended in New England to minimize the risk of severe low temperature injury and the development of eutypa dieback disease and crown gall. Overcropping will also significantly increase the risk of winter injury.

Table 40. Recommended optimal soil characteristics for growing grapes.

Soil Characteristic	Desirable Range*
pH	5.5-6.5
Organic matter	4 to 6 %
Phosphorus	20-50 ppm
Potassium	120- 150 ppm Base Saturation >3.0
Magnesium	100-150 ppm Base Saturation >5.0
Calcium	1000 - 1500 ppm Base Saturation >50.0

*Desirable range will vary with soil type (sand, silt, or clay), soil organic matter, and pH.

Table 41. Critical nutrient values for grape petiole analysis.

Element	Deficient	Below Normal	Normal	Above Normal	Excessive
N (%)	1.80	2.00	2.50	3.00	>3.00
P (%)	0.24	0.25	0.35	0.40	>0.40
K (%)	1.45	1.50	2.00	2.50	>2.50
Ca (%)	0.59	0.60	1.70	2.50	>2.50
Mg (%)	0.29	0.30	0.70	0.90	>0.90
Mn (ppm)	45	50	150	200	>200
Fe (ppm)	48	50	150	200	>200
Cu (ppm)	6	7	30	50	>50
B (ppm)	24	25	40	50	>50
Zn (ppm)	18	20	35	50	>50

Source: Cornell University