



Tips for Growing Grapes in the North¹

by

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Grapes are among the most widely grown crops worldwide and have the longest history of all the cultivated crops. Grapes can be grown in almost all parts of Wisconsin with proper care and careful variety selection.

Soils and Sites

Grapes need full sun and heat to ripen fully in Wisconsin's climate. Preferred sites are on southern slopes, and the south sides of buildings and structures. A site that receives at least 80% or more of the sunlight during the day is necessary. Planting grapes in an open area with a slight slope will increase cold and air drainage in the spring and fall, and reduce the chances of a season-shortening frost.

Grapes grow best in soils that are well drained in at least the top two feet, and will benefit from soils that are well drained to at least six feet. The soils need not be highly fertile to grow grapes successfully; a deep well-drained sandy loam is perfect in Wisconsin. Grapes grow best when the soil pH is from 5.5 to 7.0.

Planting

Dormant vines purchased from a nursery can be planted out shortly after the ground thaws in the spring; Early May is a good time in Northwestern Wisconsin. Plants with green growing shoots should not be planted out until the frost danger has passed, temperatures below 30°F can damage a growing vine.

Before planting the dormant vines, wet the roots in a bucket for a few hours. Dig a hole that will accommodate the roots without bending or crowding. Plant the vine so that the lowest buds on the planted vine are 1-2" above the soil. The dormant vine should be pruned back to three or four buds. Water the vine thoroughly after planting. If the soil has a low organic matter

content some compost can be mixed with the soil, but no other fertilization should be used until the shoots are at least ten inches long. Winter-tender vines that will be laid down for the winter need to be planted at the proper angle, 45-60°.

Vine Care

Commercially, grapes are grown on a trellis about 5-6 feet tall with two or more wires. For the homeowner, sturdy fences, arbors, and walls can also be used effectively. Such vines are aesthetically pleasing in addition to the fruit they provide. Vines grown on landscape structures often yield less than trellised vines, and varieties should be selected which do not require extensive disease control near the house. On a fence or trellis, vines are usually spaced 8 feet apart.

Developing a proper vine structure during the first few years is crucial. The first year should be devoted to developing the root system. The second year's growth is dedicated to growing a vertical shoot that will become the future trunk. The first grapes will be produced in the third year. During the first spring let the vine grow in a vertical upright position. Prior to growth in the second spring, prune back all vine growth leaving only 3-4 buds. These buds will grow and then be pruned back in the spring of the third year leaving one trunk and 40 or so buds.

There is a myriad of training systems for grapevines, and books have been written on the subject, but there are a few important principles to consider. Grape clusters are potentially

produced opposite the third to fifth leaves on the current year's shoot, which in turn is produced from an over-wintered bud on the previous season's wood. Also, a mature grapevine will produce an over-abundance of buds, that if left on the vine, will give rise to a lot of leaves and little fruit. The solution is to remove the excess buds by pruning in the dormant season, leaving about 40 buds per vine.

A popular method is to leave four eight-bud canes and the next year's canes will originate from the two-bud spurs, each originating individually from the permanent "trunk" structure. The idea behind this is that the current season's fruit crop will originate from the eight-bud canes and the next year's canes will originate from the two-bud spurs. Buds that develop with some exposure to sunlight will be more fruitful than those produced in an overgrown leaf canopy. It is best for the health of a vine to remove any potential fruit clusters in early summer from one- and two-year-old vines.

Winter Protection

Unfortunately, many grape varieties are not fully hardy in Northern Wisconsin's sub-zero winter temperatures. These winter-tender vines can be grown successfully here if the vines are given winter protection by pinning the pruned vine down on the ground and covering it with soil or plant material (straw, corn stalks, etc.). The key to this technique is to develop a vine that can be put horizontally on the ground. Grapevine growth is relatively pliable during the summer it is formed, but becomes stiff and brittle once it becomes dormant during its first winter. A trunk that will permit the vine to be laid horizontally annually can be created during the first year by training the young shoot nearly horizontally for a foot or more, and then curving

up gradually to vertical. Such a vine should be planted at a 45° angle and the shoot pinned to the ground at about 8-10 inches from the stem when it is longer than 16 inches, and then trained up in a curve. The gradually curved trunk formed this way, like a "J", will have enough flex to be pinned to the ground in the winter for many years. A strictly diagonally trained vine will be less flexible.

Variety Selection

There are well over 10,000 grape varieties known worldwide, the vast majority are ill-suited for Wisconsin. Major criteria for selecting a grape variety are fruit quality, winter hardiness, disease resistance, and the ability to fully ripen fruit in Northern Wisconsin's growing season. Most classical wine and table varieties fail these tests. Recommended table grapes are: Bluebell, Edelweiss and Swenson Red; for juice and jelly: Beta, Valiant and King of the North; and for wine: Foch, Frontenac, Frontenac Gris, Marquette, Kay Gray, LaCrescent, St. Croix, and St. Pepin.

Commercial Viticulture

Wisconsin and Minnesota do have commercial vineyards, most are small-scale, part-time operations, growing both wine and table grapes. Opportunities exist for commercial viticulture in the North, but potential growers are highly advised to establish contact with existing growers. The Minnesota Grape Growers' Association (MGGA) can provide some of these contacts. The association has an informative website at www.mngrapes.org.

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