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Midwest Wine Grape Growing Guide

Introduction

Planting and growing your own grapes for home winemaking can be one of the most rewarding steps in a home vintner's process. With a little planning, education and luck, one can produce enough grapes to keep your household in wine for the whole following year. People have been growing their own grapes for wine and food right where they live for thousands of years with great success. We hope you will too!

This guide is intended to get you started on the path of home viticulture and give you a taste of the lifelong partnership that you and your vines will share. Contained here will be the information you need to select your vineyard site, plant your new friends, and care for them for the first few years.

This is not, however, the ultimate grape growing guide. There are literally hundreds, if not thousands, of grape growing resources available to you. Like anything with a high degree of art, style and science involved, opinions abound. By far the best source of quality information on growing grapes in your area will be the community that has started down this path before you. Seek out your local grape growers, wineries, state extension services, and your grape growing neighbors. Chances are they more than willing to guide you on your way. There are also several excellent books which we will list at the end of this guide.

Site selection

Site selection is one of the most important factors in successful grape growing. The top considerations for your site will be:

- Sun exposure
- Soil type
- Good air flow
- Water drainage
- Access to water

Since most people reading this guide will be using their back yard, a lot of these factors may be decided for you, but don't fret. There are steps you can take to maximize your harvest quality.

First, choose the sunniest site you have available. Grape vines need full sun to fully ripen the fruit and build the energy stores for the following year's growth and fruit production.

The soil type will determine several things for you: the vigor of the growth of the vine, how much you will need to water as the vines become established, how much preparation the rows will need, and the type of trellis and pruning system you will choose. For now you only need to be concerned about whether the soil is more sand or more clay. The more sand that is in the soil composition, the less water it will hold; the more clay there is, the more water it will retain. Your watering needs will vary based on your soil composition, but most back yards are composed of a good mix, and will require no alteration (more on watering in the planting section).

Site vigor refers to how mellow or rambunctious your vines will be in their growth over the season. If you have very fertile soil, the vines will grow with gusto. If you have medium to low fertility, the vines will grow accordingly. The type of trellis and pruning style you will employ will depend on site vigor. (This topic will be covered later). You will know very quickly how vigorous your soil is.



Pick a spot with good air flow. Keeping the leaves and fruit free of excessive moisture is key in disease and pest control. The varieties offered by Midwest have very high resistance to both, but there's no reason to give anything a foot hold. On the flip side of this coin, an area with high winds or frequent strong gusts can damage young and tender vines. Good canopy management will take you 80% of the way to a healthy vineyard.

Next, avoid planting in low spots. Even shallow low areas can hold cold air in the spring during bud break, stunting or injuring the vine in cold climates. Low areas can also retain excess water in wetter years and cause shallow root growth that can be problematic. Grape vines like "Dry Feet", so avoid areas that have a history of standing water or high water tables. The ideal site should have a southern exposure with a slight to medium slope, and good clearance from woods and roads. However, grapes have been very successful at adapting to their environment, so all but the darkest, wettest sites will afford you acceptable growing conditions.

Site Preparation

Now that you have your dream location selected (or at least the "primo" spot in your yard), it's time to get a little dirty. The easiest way to start a site is to spray round up in a three foot wide row, as long as the intended row when your grass starts growing in the spring. The dead grass will act like a natural mulch blanket, inhibiting weeds and holding moisture for the new vines. Unfortunately this can only be done on soil that has little or no compaction, and if you know that the soil is well drained and ready to plant into.

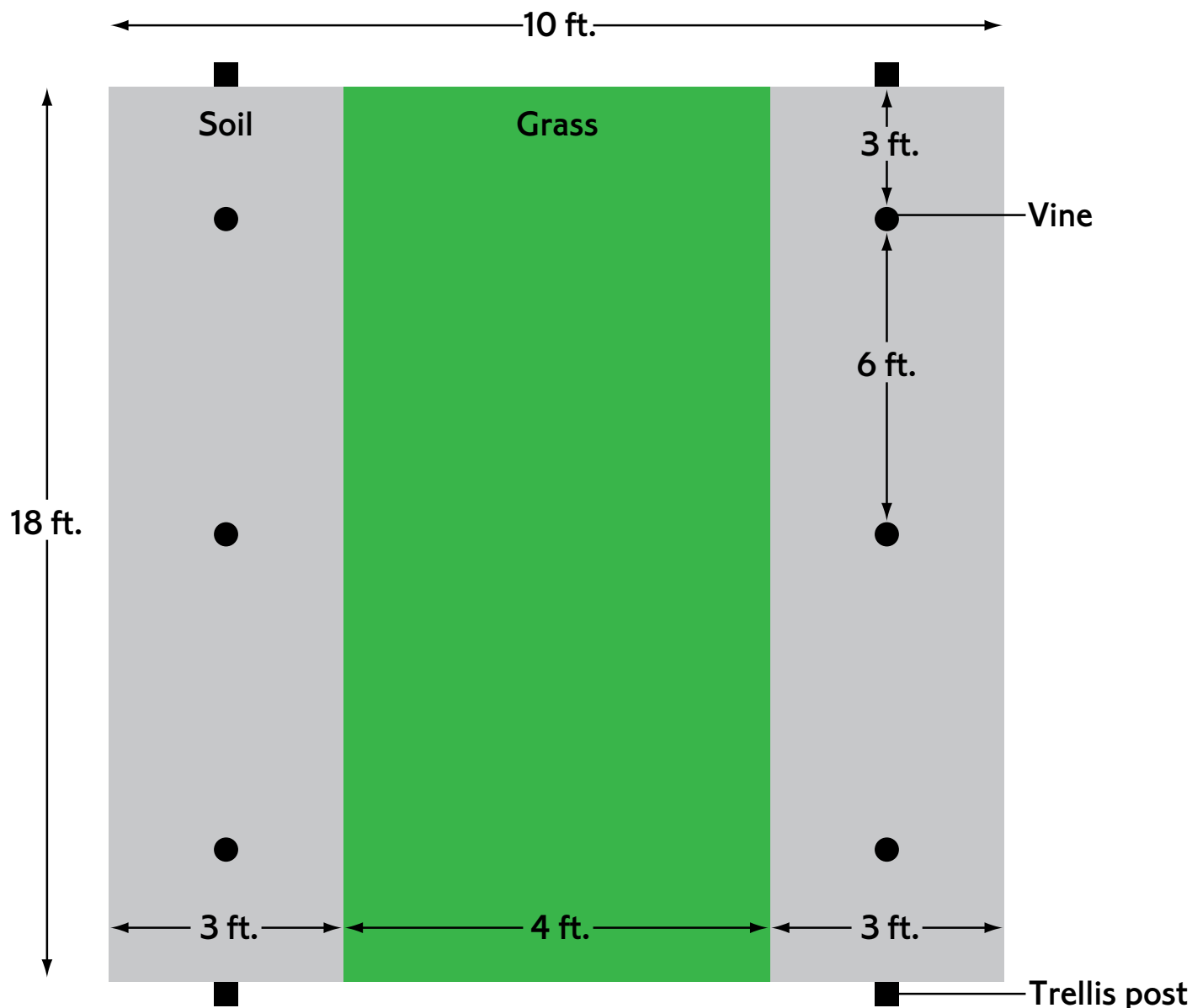


Diagram showing an example of how you might set up your vineyard using a space 10' x 18', growing six vines.

For the rest of us, it's going to take a little more work.

This would be the time to determine how you will lay out your vineyard. In the northern climates it is most common to run the rows north to south. A slight turn in the orientation to NW-SE in far northern climates can help squeeze the last little bit of sun out of your site for the vines.

Row spacing will depend on the type of lawn care equipment you have. If you have a small hand mower you can place your rows as close as 4 or 5 feet apart, if you use a large riding mower you may consider 10 or 12 foot row spacing. The row width is measured from cultivated row center to cultivated row center. The cultivated portion of the rows should be three feet wide. Each row will consist of 1.5' exposed soil bordering each side of the remainder of the row width with grass or the cover crop of your choice. Start to measure the rows from the corner of the first row that you will expose, place a stake, measure 3' place a stake, measure the inter-row space and place a stake. Just repeat for number of rows. For example; a 7 foot row will have 3' dirt and 4' grass, as shown in the diagram on the previous page. Yep, it's that easy.

The next step is to decide row length, the vines should be spaced at a minimum of 4' apart, ideal would be 6', and maximum would be 8'. Given a 6' spacing you need 18' for every 3 vines.

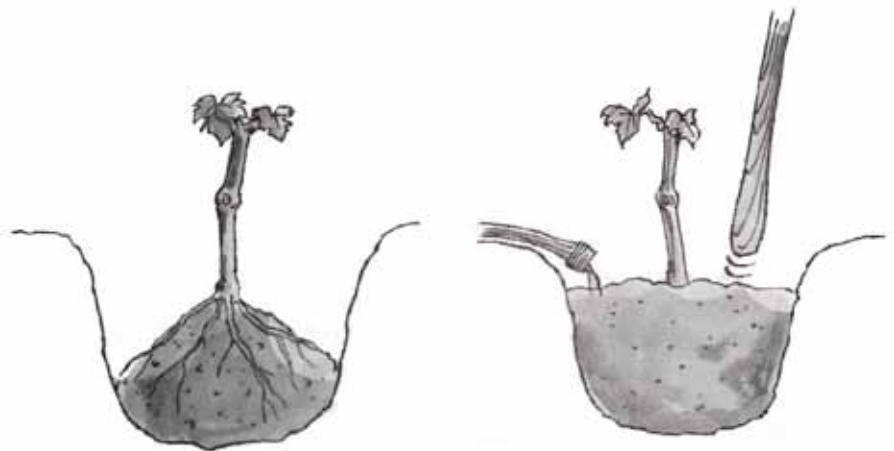
The actual row length is measured from end post to end post. The trellis won't go in until the fall of the first or second year, but you could just place a stake to mark it. For example, a row might be spaced like this: trellis end post, 3' space, first vine, 6' space, next vine, 6' space, next vine, 3' space, trellis end post. For a row of 6, 9, 12, or 15 vines just repeat with vines every 6' and when it's time for the trellis to go in posts every 18'. Stake out the ends of the rows and run string along the long side of the 3' sections, this will help guide the tilling or spraying. If you plan on having one row of vines, you should place it with the possibility that you will "catch the vineyard bug" and plant more rows next year.

The next step is to cut out the rows. Tilling is the most straightforward way to do this. First choose if you will remove the sod or till it under. Removing the sod will make tilling easier but will take a lot of time to do. Tilling the sod under will put all that organic matter back into the soil, but is a bit harder than tilling just soil. Till to a depth of 6-10" if you have normal to light compaction, you may need to trench the soil to 3' deep if you have heavily compacted soil due to recent construction on the property. Once the rows are tilled, rake out or break up the very large clods and level off. Now you're ready to plant.

Planting

It's finally spring and your vineyard is ready for the vines. First measure out the vine spacing and mark where the holes will go. Then dig a 10-12" deep, 6" round hole at each site. Lay out a vine by each hole. By now you should know where you want to plant each variety. Stack a small cone of soil at the bottom of the hole; this will support the roots and bottom of the vine. Just before planting the vine trim off any dead root tips. Place the vine on the soil cone wrapping the roots around the cone. Fill in the soil around the vine, packing it firmly but gently and leaving a 2" depression below the lip of the hole.

This will help hold extra water from watering and rain. Water the vines with 2-3 gallons of water each. Insert a 4-6' bamboo stake next to the vine. This will support the growth of the vine until the trellis is installed. If you will be using grow tubes, install them per the directions for the type you have and secure to the bamboo. Grow tubes are a great way to give your vines a head start in the spring, keep critters from munching on them, and protect the young vines from weed killer before the trunk develops.



First Year Care

The first year for the vine is pretty simple; keep it watered, watch the growth and choose a trunk, keep the deer from eating the tasty young shoots, and enjoy as your vineyard takes shape.



As the new vines get established they need a lot of water. Frequent deep watering should be done at least the first year and into the second. It is better to water more often with less water than less often with more water. Water the vines every 3-4 days with 2 gallons each. If it rains more than a half inch on watering day, skip watering. If you have very sandy soil try watering every other day with 1-2 gallons. If you have high clay soil and you notice that you have standing water in the rows for more than a day, cut back on watering.

As the buds push out of the sick in the ground that is the humble beginning for the mighty vine to come. Take care to watch for the strongest 1 or 2 shoots. Choose these to become your trunk. As they get longer, loosely tie them to the bamboo stake. If you are using grow tubes, tie the

portion of the vine above the tube. Remove the grow tubes from the vine when it sticks out the top 6" or by mid-August to allow proper hardening off for the winter.

The first year will not require pruning. Allowing the vine to grow naturally will help get the roots established in a more robust maner. Just watch how the vines behave and keep an eye out for how the training should progress next year.

Your young vines will want to give you fruit right away; unfortunately it comes at the cost of the long term strength of the vine. For the first 2-3 years the grape flowers should be pinched or pruned off to allow the vine to put all of its energy into producing the woody parts such as the trunk and cordons. This will ensure that the vine has a strong infrastructure to support good grape harvests for many, many years to come.

Trellis systems have been described in great detail in many books and are covered in the books we suggest at the end of this guide. Your choice of trellis should take into consideration a few aspects such as; personal style, building materials available, growth habit of the variety(s) planted, and site vigor. The books contain great information to evaluate your trellis needs. Another great way to check out trellises is to go on tours of your local vineyards and wineries.

Pruning style is linked strongly to trellis style and is also covered elsewhere. There is a forthcoming Midwest guide on pruning and vineyard care for years 2 and beyond.

Pest and disease control has been covered in full detail in many resources and will be highly dependent on your location so we will not get into it here.

Midwest Small Fruit & Grape Spray Guide 2011 pdf is a great source of information:

<http://www.ag.purdue.edu/hla/Hort/Documents/ID-169-2011.pdf>

These topics are touched on it the books that will be listed at the end.

Recommended reading

The Grape Grower: A Guide to Organic Viticulture. L. Rombough, Chelsea Green Publishing Co., 2002. ISBN 1-890132-82-9

[From Vines to Wines](#) – Cox, Jeff; Canada, Storey Books, (1999). ISBN# 1580171052

Sunlight into wine – Smart, Richard & Robinson, Mike, Adelaide, Australia: Winetitles, (2003).

Northern Winework: Growing Grapes and Making Wine in Cold Climates [2nd Edition] – Thomas A. Plocher (Author), Robert J. Parke (Author)

Viticulture, Volume 2 Practices – edited by B.G. Coombe and P.R. Dry

Most state Extension programs have grape growing guides and they can be found online as pdf's.