



Preparing for New Plantings

Planting a new vineyard block or even the expansion of an existing block takes months of preparation. It is presumed here that the proposed vineyard site in development is cleared of brush, and the soil is ready for planting preparation (bare soil or cover crop in place). Be prepared for the tasks ahead of time and *get your grapes in a row* with the tips provided in this Grower Guide!

Ground Preparation

1. Sample soil in new planting blocks:

Whether you are planting a vineyard for the first time or planting new vineyard blocks in your existing vineyard site, a soil sample for the new planting area is important for determining soil pH and the balance of mineral nutrients.

The number and location of soil samples will depend on the number of changes in soil series (unique soil textures and structures) in the desired planting area, and the number of desired vineyard blocks. A *block* is a unique planting zone generally separated by soil type, grape variety, topographical boundaries, or aesthetic preference. For soil that is considered uniform in texture, structure, and soil series classification, **a good starting point is to sample about 5 locations per acre** (more samples will be required for non-uniform soils).

Resources:

Members:

[Soil Analysis Form – Acidic Soil](#)
[Soil Analysis Form – Alkaline Soil](#)

Clients:

[Soil Analysis Form – Acidic Soil](#)
[Soil Analysis Form – Alkaline Soil](#)

For basic soil sampling, use a soil probe or spade to extract samples from the surface to 12-18 inches deep. Place the samples in labeled Ziploc bags, and send them to the laboratory for analysis.

It can also be helpful to take samples in deeper soil, from 18-36 inches to determine if soil pH and nutrient availability change with depth. If soil color, texture, or structure changes over the 36-inch depth, the samples may be further broken down to reflect those changes. For example, a grower may choose to take separate samples from 0-12, 12-24, and 24-36-inch depths. **Be sure to label the depth of each sample!**

➤ **Ideal Timing:** 14-24 months before planting (24 months is optimal).

Tip: If this is your first time planting a vineyard, a thorough evaluation and risk assessment of the proposed planting site should be conducted to determine that the climate, topography, soil drainage, and soil chemistry are suitable for growing grapes and that the resources to farm them are available **before the first vine is ordered from the nursery.**

Note: Custom grafted vine orders for dormant bench grafted rootstock must be placed about **18 months** ahead of the proposed planting date.

>> For a comprehensive overview of site evaluation, risk factors, economics, and marketability of wine grapes check out our [Prospective Wine Grower Course!](#)

2. Establish a winter cover crop:

If your soil is bare, planting a winter cover crop is important to prevent erosion and maintain soil structure. The type of cover crop will depend on what grows well in your climate and soil. Examples of common cover crops include annual or perennial grasses, legumes, or grains.

➤ **Ideal Timing:** Plant cover crops in the fall (before the first freeze) before you intend to plant.

3. Add needed amendments such as lime, fertilizer, or compost additions:

Based on your soil sample results, broadcast & incorporate lime, fertilizers, or compost if needed to create a favorable environment for new vine growth. For best results, amendments should be incorporated into the soil to work them closer to the intended root zone of the newly planted vines.

➤ **Ideal Timing:** Most vineyards are planted in the spring, so it is best to add soil amendments in the late summer or fall (before the first freeze) before you intend to plant.

4. Final cultivation of soil:

Deep plowing, disking, or ripping of soil is commonly done after the initial clearing of a site and to incorporate soil amendments such as lime or fertilizer. However, it is common to make a final cultivation pass in the soil before planting to loosen soil and facilitate ease of vine planting and hasten root establishment. In regions that practice clean cultivation or if there is a need to establish a permanent cover crop, the grower may need to cultivate the entire block. If a permanent cover crop is in place, a grower may choose to only cultivate in a narrow strip where the vine rows will be planted. The latter is more common if the block is on a slope and erosion must be mitigated.

Examples of common pre-plant soil cultivation tools include single-shank implements for subsoiling or ripping, soil cultivators or rototillers, and disking attachments. In general, the implements that disrupt the soil to the greatest depth are followed by those for shallower soil tilling and smoothing.

➤ **Ideal Timing:** 3-4 weeks before planting



Vine Infrastructure Preparation

1. Order trellis supplies and layout vineyard rows:

You will need to determine the vine training system and row spacing for your new blocks to procure the correct style and number of end posts, line posts, and trellis hardware.

Row direction, vine spacing, rootstock, and variety selection can vary greatly depending on your soil, slope, and region. It is highly recommended that you consult with local experts and a knowledgeable viticulturist to select the best design for your site!

- **Ideal Timing:** Vineyard design and layout can begin in the summer about 9 months before your planting date. Order all trellis supplies at the latest in the fall about 6 months before you intend to plant.

2. Install trellis system and irrigation manifolds:

End posts should be installed first and used to guide irrigation manifolds and later vine planting. If you are installing an injector for acid and fertilizer (highly recommended for irrigated vineyards), this should be installed when the main irrigation system is installed.

If you are hand planting, line posts can be installed before planting along with wires for the irrigation line, cordon, and shoot positioning, although most growers prefer to have the wires out of the way when planting. If augering pilot holes for each vine, you may need to come in immediately after planting to install line posts and irrigation. Vines can be hand-watered initially until irrigation is in place.

Tip: If using a soil auger to prepare planting holes, be sure to do this immediately before planting. If prepared too far in advance the fill soil can become hard and dry or wash away by a sudden rain event. This will add significant difficulty and cost to planting.

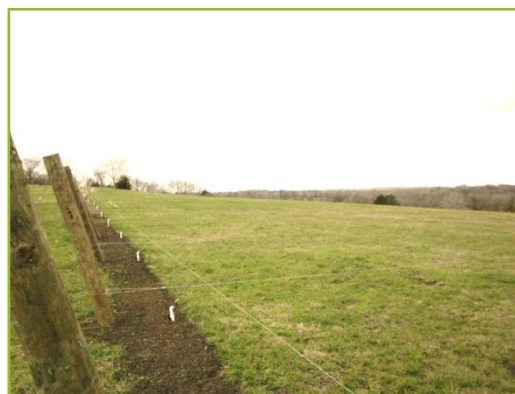
Mechanical planting should be done on an open field, followed by irrigation with flooding or with ground-laid drip tape, which can be moved up to an irrigation wire upon trellis installation.

- **Ideal Timing:** Installation of end posts and irrigation manifolds can begin in the summer and fall before your spring planting date. Drip irrigation lines and trellis hardware such as wires and training stakes are most commonly installed immediately after planting.

Resources:

Visit [Grower Guides](#) and click on **Vineyard Design** for diagrams of 8 trellis designs.

Visit [Vendor Discounts](#) to save on your trellis supplies!



Vine Preparation

1. Order products for vine care:

Even if you have an existing vineyard, your new blocks may need different products than you have on hand, so inventory your products, and order any additional products needed for your new plantings. Products you will want on hand after planting include fertilizers, fungicides, insecticides, herbicides, vine protection tubes, and tying materials.

Resources:

Read all about [Proper Vine Tying](#) in our quick 6-page photo guide.

➤ **Ideal Timing:** 6-8 weeks before planting.

2. Check with the nursey on the vine delivery date and prepare a backup for cold storage:

Vines rarely arrive exactly when you want to plant them, so you must have a plan for cold storage for your vines between arrival and planting. Vines need to be stored in a humid environment with temperatures just above freezing and below 50F with the objective of not allowing freeze damage nor bud burst (ideally about 38-42F for short-term storage and 34F to keep dormant for long-term storage). The packing material near the roots must be kept moist.

➤ **Ideal Timing:** 6-8 weeks before planting.

3. Get the planting date on the calendar:

Contact your crew (or family and friends) to schedule a planting date. Plan to get vines in the ground by about 2 weeks after the expected last hard freeze date for your area.

➤ **Ideal Timing:** 6-8 weeks before planting.



Planting Notes

Dormant, bare rooted vines, grown for one year in the nursery are the most common vine stock planted in the spring. If you are planting grafted vinifera vines, they will come pre-trimmed both on the scion and roots. Growers sometimes ask if it is okay to cut the roots back farther in order to fit them in the hole that they are able to dig or auger. The answer is yes, you can clip the roots back, but leave as much length as you can (at least 8 inches). It is better to have roots that fit properly in the planting hole. Any wrapping of roots around a planting hole or creep up the sidewalls of the hole can cause a problem known as “J-rooting” which can cause problems with vine development and in some cases, sudden vine death years later. Vines should be removed from cold storage 24 hours before planting and roots should be submerged in a water bath at ambient temperature to hydrate prior to planting.

Resources:

[Hand Planting Dormant Grapevines](#)

[Trimming and Planting Dormant Own-Rooted Vines](#)

[Trimming Back Newly Planted Own-Rooted Grape Vines](#)



Was this helpful? - Visit [Virtual Viticulture Academy](#) to learn more and view over 100 more Grower Guides.

