Evaluate Your Wine Grape Planting Material Before Planting

Fact Sheet FS1252

Cooperative Extension

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Spring is the best time to plant new grapevines in New Jersey. The soil is warm and moist enough to support early growth and the vines have plenty of time to get established during the first growing season. The best way to begin ensuring that you have good, healthy and productive grapevines is to source planting material from nurseries that provide clean materials or certified vines. Planting material from nurseries that follow quality assurance protocols reduces the chances of getting diseased or weak planting material[1]. Once your order of vines arrives you must ensure that your planting material is healthy enough to avoid problems after planting.

Verify quality assurance from the origin of planting material

Quality assurance is best achieved by purchasing 'certified' planting material. Certified nurseries source vines from a 'Foundation Block' that has vines with complete elimination of a set of pathogens. Certified nurseries then propagate the clean plant material in its 'Mother Block'. Minimum standards for 'Mother Block' are determined by the National Clean Plant Network for Grapes (NCPN Grapes) however, the requirement for the 'certified' label is legally defined by each state's department of agriculture[2]. Each certification program is targeted for the set of pathogens and viruses. Knowing what certification program your ordered vines have gone through is important to know the diseases your vines are free of. These nurseries also go through independent third party audits. Make sure that planting material comes with documents or labels that will help in tracing plants back to the original source from suppliers. Each bundle of vines should have proper labels describing primary information such as variety, clone, rootstock and some kind of batch number. Make sure your planting material was shipped promptly after packing and came in a temperature-controlled vehicle[3]. Avoid sourcing planting material from untested source vineyards such as neighboring growers. Symptoms of specific diseases may be unseen in sourced vineyards, however your vineyard could provide perfect conditions to spread that disease, especially trunk diseases such as Phomopsis, Esca, or Crown gall. Presently there are no certified nurseries in New Jersey; however, there are several certified nurseries in California and a few in Oregon, Washington and New York.

Inspect the physical attributes of planting material

Nurseries send planting material on pre-determined dates, therefore you should have enough time for a detailed inspection. Once the shipment arrives:

- Check the labels to make sure you got what you ordered.
- Material (cuttings) that originated from other countries should have a quarantine certificate and hard copy documents.
- Make sure that the planting material came in a dormant condition. The vines should be moist but not soggy or dehydrated during transportation[1, 3].
- As you open your shipment, vines should look clean and have an earthy aroma. If there are bad odors indicative of rotting vines, then identify the batch and avoid planting them. Use the labels and batch information for requesting compensation or a refund from the supplier.
- Vines should be uniform in size, without scars or damaged buds. Shriveled branches or dried vines are indicators of non-vigorous vines.
- Similarly, roots should be healthy, untwined, downward pointing with fibrous cream-colored branch roots.
- Vines with excessively curvy shoots could be difficult to train on the trellis system and should be sorted out.



Figure 1. A bundle of healthy grafted grape vines. These vines are moist, have healthy roots, and are clearly labeled. Photo by Hemant Gohil

Pay close attention to grafted materials

In the case of grafted materials, pay close attention to the graft union; it should be completely healed without bulging. The scion (upper portion) and the rootstock (lower portion) should be of matching thickness. Destructive testing of a few randomly selected vines from the lot will be very useful to determine the quality of grafts or buddings[4]. For example, apply thumb pressure at the graft union to check the strength of the union or check the depth of pith in case of disbudding. You may also visit the nursery before you order materials for the first time. Often, to keep up with the high volume of orders, nurseries may use bench grafting which is more prone to diseases and handling damage than field grafting, which is often superior[1]. Remember that cutting corners at this stage of viticulture can lead to enormous problems as the vineyard matures.

Certified material does not guarantee disease-free grapevines after planting; it only ensures that planting material is clean for the diseases tested before it goes into the soil. You still need to follow proper cultural practices and spray programs to ensure healthy vine and quality wine grapes!

[1]Helen Waite, David Gramaje and Lucie Morton 2010. Grapevine Propagation; Principles and Methods for the Production and Handling of High Quality Grapevine Planting Material. www.englishwine.com/propagation_guide_general_distribution.doc

[2]Ken Eastwell 2014. Before you Buy, Sell, Plant or Trade Grapevines. National Clean Plant Network Center. cpcnw.wsu.edu/grape-program-at-cpcnw/faqs

[3]Tony Wolf (ed.) 2008. Wine Grape Production Guide for Eastern North America, Plant and Life Science Publishing. NRAES 145

[4]Judit Monis 2013. The Impact of Fungal Trunk Pathogens in Grapevine Nurseries: The International Council for Grapevine Trunk Diseases Meets in Valencia, Spain. Wine Business Monthly, November 2012.



Figure 2. A bundle of grape vines that have broken dormancy and started to grow before arrival at the vineyard. These vines will be weakened and should be rejected. Photo by Hemant Gohil



Figure 3. Examples of healthy graft unions on these grape vines. Photo by Hemant Gohil

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