

CONNIE'S NOTES: 2008 VINEYARD PRUNING TIPS

One of the most common questions received by County Horticultural Extension Agents and University Specialists is how to prune muscadine grapevines. On top of that, this dormant season we also need to address pruning on a vineyard-by-vineyard basis to tackle the lingering effects of the 2007 Easter Freeze. (Visit <http://www.ces.ncsu.edu/disaster/freeze/> for our recommendations for managing freeze-damaged vines during the 2007 growing season.) Here are some tips for pruning this season:

In General

- Prune later to delay budbreak. Based on observations from 2007, growers should wait until February/March, if possible, to prune their vines.
- "Bleeding" does not harm the vines. Pruning later may cause the vines to "bleed" more, but studies have shown that the "bleeding" is just a sugar water solution and does not harm the vine.
- Choose the best wood to leave for fruiting. Growers should prune out bull canes and 1-year-old wood less than pencil width in diameter. The best fruiting wood is about a pencil width in diameter and has good color.
- Growers should aim to leave 3-4 count buds per shoot, with spurs spaced every 4-6 inches.
 - If a cordon has not yet reached desired length, the spurs can be cut more severely (leaving 1-2 count buds) to direct vine resources into extending the cordon.
- Shoots around the head of the vine are often more vigorous and can be pruned harder, in attempt to force more even vigor and productivity down the cordon. This is an area of current research and observation, so growers interested in trying this should do so on a limited scale and in consultation with their local Extension Agent.
- Mechanical pruning is an efficient method of pruning for wine production. Most growers prefer mechanical pruning due to cost savings in time and labor.
 - Recent studies have shown that mechanical pruning is acceptable for fruit yield and quality, but growers should devote time every other year or so to perform some additional hand pruning to remove dead wood and shoots with poor orientation, and select or encourage new fruiting "bearers."
 - Fresh muscadine growers need to perform this additional hand pruning yearly to maintain an open canopy and optimize fruit quality.
 - Studies are ongoing at NCSU to determine the key number of buds per vine to leave for maximum yield and fruit quality for both the fresh and processed markets - stay tuned for updates!
- Be sure to remove tendrils that may be girdling the trunk or cordon. These tendrils become very hard and eventually act as a tourniquet, preventing the flow of water and nutrients from the roots to the fruit-producing shoots of the vine, and preventing the flow of carbohydrates from the photosynthetic regions of the vine (leaves) back to the roots.
 - Remember, the more stress a vine is under, the more prone it will be to disease and cold injury.
- Also learned from the 2007 season, wait to apply fertilizer and irrigation until April so as not to encourage the vines to start growing and risk damage from another late frost/freeze event.



Freeze-Damaged Vines

- In addition to the above recommendations, growers should remove any dead wood that wasn't removed last summer and choose a new shoot with proper horizontal orientation to retrain cordons, if necessary. This should be done prior to mechanical hedging so the new cordon can be securely attached to the wire, away from hedger blades.
- For cordons that have varying degrees of splitting, recommendations are a little trickier. The vines are very resilient and in many cases have tried to repair themselves.



- On cordons where the splitting exposes less than 40% of the circumference, you may want to leave the cordon this season in hopes that it survives to produce fruit, but also lay down a new shoot to replace the existing cordon when you prune next year.
 - If the tissues are split exposing 40 to 50% or more of the circumference of the cordon, it will be best to remove the damaged wood and train a new cordon using a shoot with good orientation. Keep cutting back until the cross-section of wood is all bright, healthy green (no brown wedges of dead wood).
- If the vine is in really bad shape, with splits in the trunk, or doesn't seem to perform as normal this season, do not remove all the suckers as you normally would as you may need them to re-train the vine's trunk next season. If you know the trunk is dead wood, remove it now and use this season to re-train.
(See http://www.ces.ncsu.edu/disaster/freeze/Musc_Update_5.pdf for more information on re-training from suckers.)
 - Be on the lookout for the pathogens crown gall and *Botryosphaeria*, and vine borers this season as they are attracted to damaged vines.



Notes submitted by Connie Fisk, Extension Associate for Muscadine Grapes at NC State University, January, 2008.

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