April 19, 2007 Update of Muscadine Freeze Damage in NC

Connie Fisk, Extension Associate – Muscadine Grapes, NCSU

Based on visits by Whit Jones, Bill Cline, and I in southeastern North Carolina this week, extensive crop loss (>50%) is anticipated this season for the Carlos variety of muscadine grapes. Other varieties were not hit as hard in southeastern NC, but I've received varying reports from other areas of the state. It will be a few more weeks before we can judge the full extent of the damage.

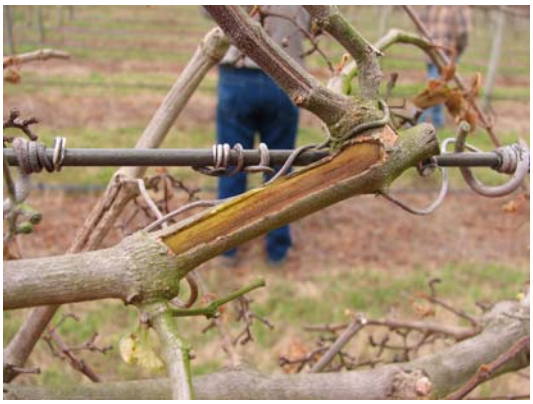
I have included a few photos on page 2 of what we are seeing in Carlos. On last year's growth (where this year's fruit should arise) the outer layers of tissue, including the phloem, vascular meristem and possibly the new xylem, are splitting and separating from the older xylem tissue. (Phloem provides the "food pipes" and xylem the "water pipes" for plants. The vascular meristem is the tissue that generates new xylem and phloem tissues.) The wood underneath appears water-soaked or is already drying out. Healthy tissue in this outer layer would be bright green without any brown flecks. Even if new buds have broken or break on this damaged wood, they may collapse within the next few weeks as the limited reserves in the tissue are depleted.

On young vines in some vineyards we are seeing this same splitting of cordons and even some trunks (notably on vines in grow tubes). Older vines seem okay. Also, vines sheltered by woods appear to have less damage.

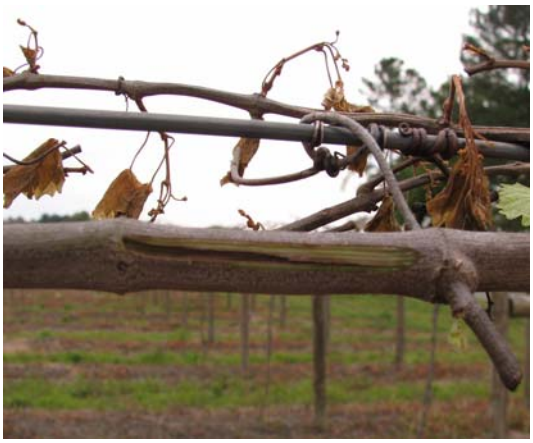
Again, it will be a few weeks before we know the true degree of damage. For now, just watch out for this splitting. New buds should break further back on these damaged vines so that new shoots or cordons can be trained where necessary. However, there is not much hope for this year's Carlos crop.

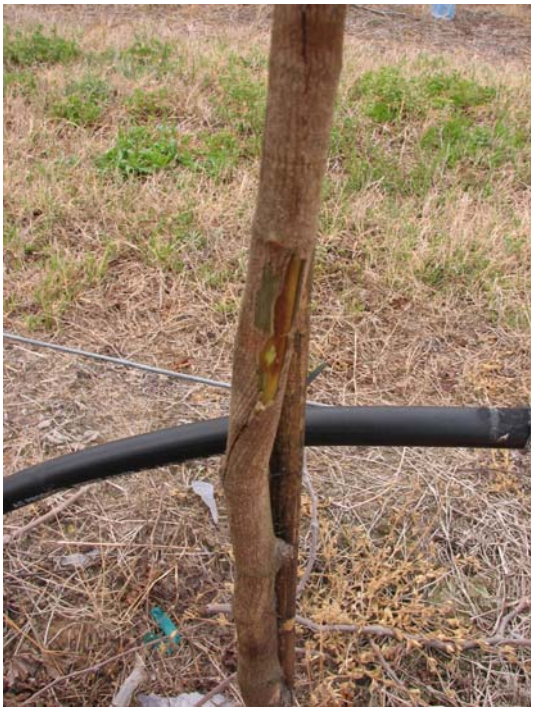
Fortunately, even with trunk damage, muscadines can send up a sucker to replace the dying vine. If the situation for *Vitis vinifera* growers is similar, there will be no option, but to replant because their vines are grafted onto rootstocks.

We will continue to monitor the situation and provide updates to the industry as we learn more. If you have any questions or are seeing other symptoms that you would like looked at, please contact Connie Fisk, Extension Associate – Muscadine Grapes (connie_fisk@ncsu.edu or cell 910.271.3125).



↑Before and ↓ after I picked at the wound





Trunk damage from inside grow tube