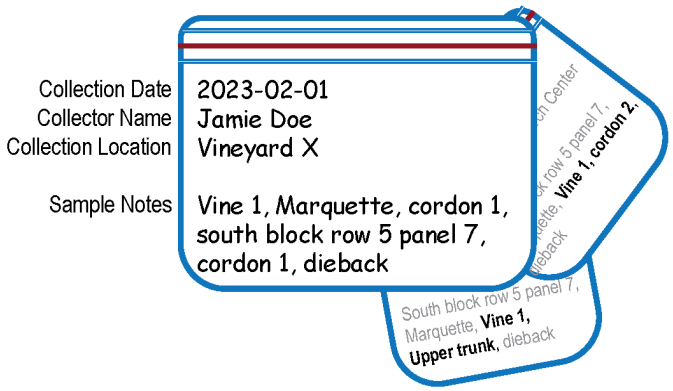
UMN Sample Collection Guide For Grape & Apple Wood

D.H. DeKrey | Updated 2023-02-21 | For the development of a rapid diagnostic test of various wood pathogens.

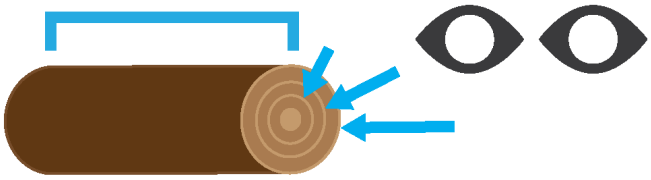
1. **Select a plant and woody part** to send for rapid diagnostics development.
   - i See second page for examples, details, and tips.

2. **Label plastic zip bag**. Each sample bag must include…
   - ✔ Collection date, Collector's name, Collection location
   - ✔ Sequential sample number
   - ✔ Variety of sampled plant
   - ✔ Part of sampled plant such as trunk, cordon, branch, cane, roots, etc…
   - i Put samples of different parts from the same plant in separate bags that are clearly labeled indicating the origin plant.
   - i Additional notes are strongly encouraged.



3. **Take a photo**. Include the whole plant with the labeled sample bag.
   - ✔ Send pictures to Davy.
   - i Additional close-ups are encouraged.

4. **Collect sample**. Samples must include
   - ✔ **healthy** & **unhealthy** vascular tissue.
   - ✔ Woody piece(s) about 4 in long and growth older than 1 year.
   - i Older pieces are more informative.
   - i Mushrooms are desirable but optional
   - ✘ DO NOT sample dry dead wood.
   - ✘ DO NOT sample succulent green shoot or leaf tissue.



5. **Freeze samples** before sending
   - ✔ Freeze for at least 24 hours prior
   - ✔ Send samples as frozen as possible

6. **Priority ship or deliver samples to lab**

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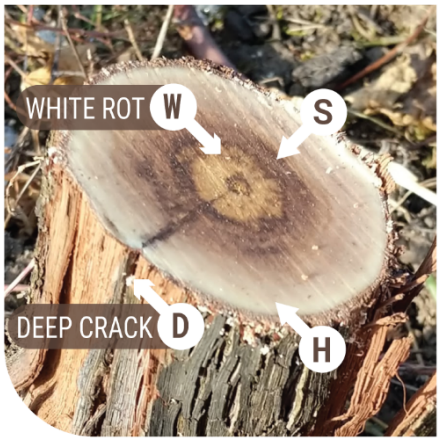
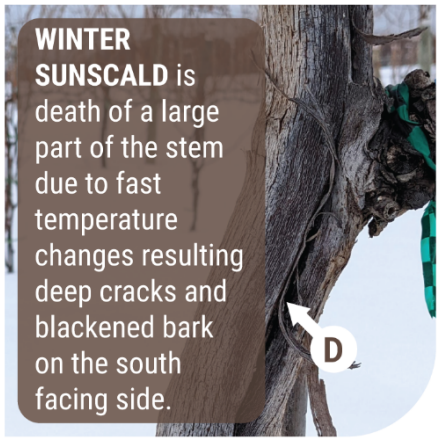
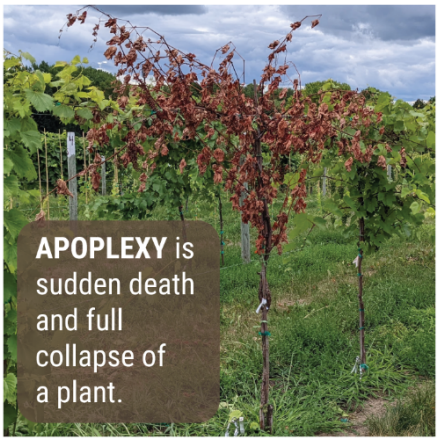
SYMPTOMS are the *reactions* or the *results* due to stress.

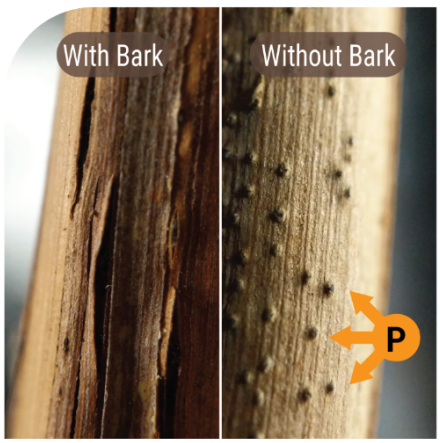
STREAKING (S) is discolored vascular wood, and more specifically, a *reaction* of the plant due to stress from the environment or from pathogens.

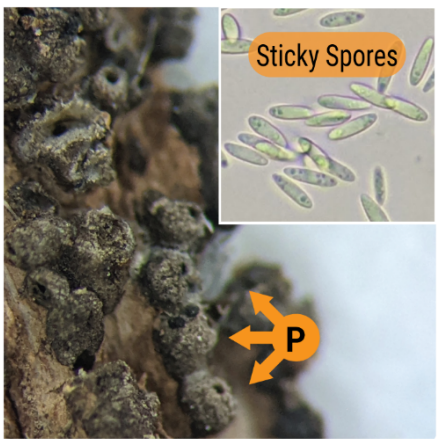
CANKERS (C) are sections of dead plant stem often the *result* of a fungal infection.

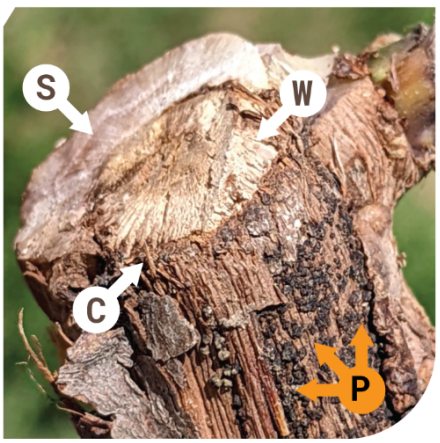


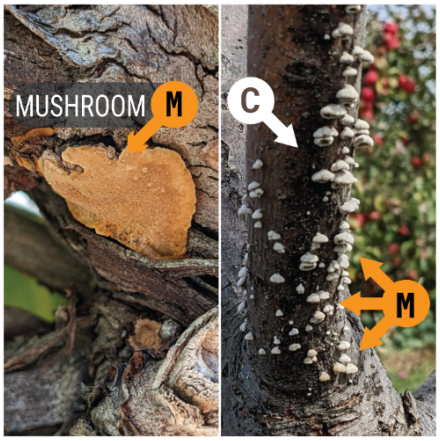












SIGNS are the physical evidence of pathogens.

PYCNIDIA (P) are black crusty spots, and more specifically, itty-bitty sporulating fungal bits.

- Often found under the bark or emerging from a *canker*.
- When it rains, it spores.
- Spores can be very sticky.