Nebraska VineLines

University of Nebraska Lincoln EXTENSION

University of Nebraska Viticulture Program

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Spring Has Sprung, Can Bud Break be far Behind?

Your University of Nebraska Viticulture Program (UNVP) is making a few suggestions as your vineyards begin growth this spring.

- Be sure to make the first spray to vines at the one to three-inch stage. Wayne Wilcox, now retired grape pathology guru, has always said the first sprays are the most important in controlling Phomopsis cane and leaf spot, black rot, powdery mildew, and downy mildew.
- Mancozeb and Captan are both effective for controlling Phomopsis. These early sprays are especially critical for Phomopsis, and Mancozeb will be a good choice for black rot.
- Repeat at 7 to 10-day intervals, or according to label directions. (**Always follow the label instructions, the label is the law.**)
- Early sprays can include an additional fungicide (Abound, Sovran, others) for cultivars that are especially susceptible to powdery mildew because primary infections can occur during this early period.
- If using strobilurin fungicides, such as Abound, Sovran, Flint or Pristine, remember to not use them in more than two consecutive sprays and do not use them more than four times per year, in order to avoid build-up of downy mildew (and possibly others) resistance.
- For insect problems (flea beetle, climbing cutworm), scout frequently and if present, spray with Sevin, Danitol or other approved insecticides.
- If foliar phylloxera has been a problem, Admire Pro can be soil-applied from bud swell to the first fully expanded leaf. It is systemic, so it needs to be available as soon as grape roots begin water uptake.
- As you wrap up pruning, consider spraying with Rally or Topsin to help prevent grapevine trunk disease (GTD) spores entrance through pruning wounds.
- If you have reason to believe that primary bud damage has occurred during the dormant season, delayed pruning can provide the opportunity to determine bud survival and thus help with number of buds to leave for potential harvest.
- Speaking of pruning, be sure to collect all prunings and destroy them. They can be repositories for fungal inocula (spores), insect eggs, and insects such as Apple Twig Borer (aka Grapevine Cane Borer). For the timing of sprays for borers see this topic on the UNVP web site http://viticulture.unl.edu.

Educational programs. Educational program planning by your UNVP is aiming to provide summer tailgates (if COVID 19 allows), or perhaps field days, and is asking for your suggestions for topics and locations. Some topics that have been suggested so far include:

- Vine Spacing
- AgriOzein - successes, problems, effectiveness
- Projecting yield, crop management
- Diseases, especially Phomopsis
- Bunch rots, including Sour Rot, Botrytis
- Herbicide drift
- Fertilization, soil management
- YOUR IDEAS? Send to pread@unl.edu or sgamet@unl.edu

FROST - I am sure that some Nebraska and other Midwest growers are concerned about frost, so here are some helpful comments from Imed Dami and Maria Smith at The Ohio State University.

Methods prior to frost event:

- Delayed pruning: since we have had a mild winter, vines have more advanced phenology than normal and buds are pushing earlier as a result. Delayed pruning helps with delaying budbreak.

- Double-pruning: the rationale is similar to delayed pruning. With 1st pruning, you leave extra buds per vine. Due to apical dominance, apical buds push earlier than basal buds. If frost occurs, basal buds (which are delayed to grow) will not be injured. With the 2nd pruning, apical shoots (injured or not) will be pruned by retaining a final bud count per vine.
- Row middle and cover crop: bare ground in row middles provide more heat to keep vines warm during a frost event. Mowed grass cover crop will also do the same. So, it is crucial that you mowed your grass as short as possible for added frost protection.
- Products that delay budbreak: Dami presented this topic at the 2020 OGWC. Some products can be effective, but it is too late to apply now if you have not already done so.
- KDL (0-0-24) fertilizer: Even though growers would like to use this product, research has shown that KDL does not protect shoots against frost injury once vines resume growth. Therefore, it is not recommended. Dr. Smith researched this product and can be contacted directly for more information.
- Copper: has been shown to protect young shoots against frost injury by killing ice forming bacteria present on vine foliage. You may start spraying as soon as budbreak and repeat every 5-7 days (washes off easily and must be reapplied after an inch or more of rain) until you're out of the frost threat period (2 – 3 weeks) in your vineyard. Read the label for the application rate. In CA, 0.75 actual copper per acre was used. **Read the label to avoid plant injury**. To avoid injury, apply when not cold or wet (slow drying) and use formulation with lime.
- More info about copper is in the Midwest fruit pest management guide (p 90-91):
- https://ag.purdue.edu/hla/Hort/Pages/sfg_spraygui de.aspx. Sensitive varieties are listed on p. 94-95 of the same guide.

Methods during a frost event:

- Wind machines: wind machines, although expensive, are effective against radiative spring frost events (clear, cold nights with temperature inversions).
- Overhead irrigation (sprinklers): None of our growers in OH has this system. Having said that, **DO NOT SPRAY YOUR VINES WITH WATER USING A SPRAYER**. You will cause more damage than doing nothing.
- Heaters: same as above; not a common method in Ohio. When temperature inversion exists, heaters are effective alone and best with wind machines. However, cost of fuel and pollution are main limitations.

If you have experienced frost injury during the previous week**, the best course of action is to survey primary shoot injury and await emergence of secondary buds**. There is still cropping potential on secondary shoots in the event of frost injury, although fruitfulness of secondary shoots will vary by variety.

Closing Remarks

Finally, we wish you a great growing season and perhaps by harvest-time we can gather to celebrate another great Nebraska vintage. Cheers: Paul, Steve, Ben, Mustafa, Diane, and Kaye

Reminder Calendar:

NOTE: Due to the pandemic, any or all events may be postponed or canceled. Please contact the organizers for further information.

July 25-29, 2021, International Cool Climate Wine Symposium -CCOVI at Brock University –St. Catharines, Ontario, Canada. **This event has been postponed to next year.** Details: http://iccws2020.ca/