



# Nebraska VineLines

UNIVERSITY OF  
**Nebraska**  
Lincoln | EXTENSION

**University of Nebraska Viticulture Program**

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## EARLY SUMMER VINEYARD TASKS

As spring moves into summer, it is important to remain vigilant and persevering with vineyard management tasks. Although it might be tempting to sit on the veranda and sip one or more of those great Nebraska summer wines (Edelweiss, one of the many lovely “blushes”, Lacrosse, Traminette and Brianna, to name a few) and contemplate the meaning of life (it’s a great life here in this paradise we call Nebraska!), it is critical to follow your vines as carefully as at other times of the year. In particular:

1. Walk your vineyard rows and monitor for insect and disease problems. Remember, a hornworm can strip a cane of all green vegetation overnight.
2. If insect or disease problems are apparent, follow recommendations found in the Midwest Commercial Small Fruit and Grape Spray Guide.
3. Provide irrigation as needed, especially in dryer areas of the state. Avoid excessive irrigation.
4. Discontinue fertilization with nitrogen and potassium. Excess vegetative growth is encouraged by excess nitrogen and excess moisture.
5. Evaluate your vines for obvious symptoms of micronutrient deficiencies, especially if your vineyard site is on soils of high pH. Correct by application of appropriate foliar micronutrient sprays.
6. Continue weed control measures. Weeds compete with the vines for water and nutrients.
7. Canopy management. Remember Richard Smart’s admonition that our goal is to turn the light energy of the sun into chemical energy via photosynthesis, that is, turn “Sunlight into Wine”. This requires good fruit and leaf exposure. When leaves shade each other, very little light strikes the lower (shaded) leaf, so minimal photosynthesis takes place. Ideally, the flower/fruit

clusters have been exposed to light since fruit set, thus avoiding sunscald problems.

8. Consider taking petiole samples at veraison for tissue analysis by an appropriate laboratory. It will still not be too late for correcting micronutrient deficiencies, but major nutrient problems (nitrogen, potassium, phosphorus) will need to be addressed with your next year’s fertilizer program.

9. Evaluate potential crop load. Is it predicted to be at or near desired yield levels? Count clusters on several vines for a given cultivar, multiply the average cluster number by the number of vines per acre and then multiply that number by the average weight per cluster for that cultivar based upon records for that vineyard.

10. **Keep good records.** As you approach harvest, be sure that you have all necessary harvest equipment clean and ready, including a scale to determine cluster weights.

## CROP ESTIMATION AND ADJUSTMENT

Why worry about crop estimation? Why not just harvest when the grapes are ready and get them to a winery for processing? If you operate a winery, the ability of your growers to estimate (and perhaps adjust) the amount of crop on the vines is essential to managing the winery operation. Scheduling winery projects absolutely requires that amounts are known and when they will be available in order to conduct winery operations in an efficient fashion. If you are a grower, it is important to be able to know, with a reasonable degree of accuracy, what size crop you will be harvesting and transporting to the winery. This knowledge helps the winery, but also helps with other vineyard management decisions and of course the ability to estimate cash flow of your enterprise.

So how do we estimate crop load? Two methods in usage for predicting yields are:

- The **traditional method** is based upon a running historical record of cluster weights for a specific cultivar on your vineyard.
- The second method is based upon “**lag phase**” cluster weights. This is based upon evidence that cluster weights will double from lag phase to harvest. The lag phase, as the name suggests, is the period when growth of the berries slows temporarily (usually about 55 days after bloom).

In both cases, the importance of accurate record-keeping cannot be stressed enough. **Keep Good Records!** For a grower to successfully estimate yields, it is critical to have an accurate estimation of cluster weights at harvest.

For the traditional method, it is necessary to have the following information:

- Number of bearing vines per acre (or area being evaluated).
- Number of clusters per vine (to get a representative sample, count clusters in a sample area, perhaps 20 randomly selected vines) count the clusters in that area and multiply by the appropriate number (e. g., 30 if you have 600 vines per acre).
- Historical average weight of clusters for that cultivar (based upon harvest records from your vineyard). This figure will become more accurate when averaged over several vintages (harvest years).
- Use the following formula:

Estimated Yield/Acre = vines per acre x clusters per vine x average cluster weight at harvest (pounds or grams).

For the “lag phase” method, use the same formula (use lag phase cluster weight instead of cluster weight at harvest) and multiply by two.

Note that crop estimation relies on accuracy of cluster weight records at harvest, a correct number of vines per acre (or area for which estimates are desired) and a careful counting of clusters per vine. Also remember to adjust for missing or damaged vines (or replants).

## A FEW FURTHER THOUGHTS

Your University of Nebraska Viticulture Program (UNVP) team has been busy, in spite of coronavirus restrictions. We have (finally) been allowed to travel to sites in the state to begin implementing or continuing research projects. One such study is an investigation of the impact of reducing the crop load on subsequent wine quality. For this research, we have been removing clusters to **approximate a 25% reduction** or a 50% reduction for comparison with wines that will be made from grapes with no crop reduction (“Control”). The theory behind examining this approach is that if fewer grapes are being matured per vine, the grapevine's energies will be concentrated on developing the smaller number of berries, thus concentrating metabolites such as sugars and flavor components, therefore leading to better wine. This project is being conducted in collaboration with UNL Food Science scientists Dr. Changmou Xu and Xiaoqing Xie, in addition to Milettavista Winery and Prairie Creek Winery.

The UNVP is also continuing our usual research thrusts such as cultivar evaluation, including several new selections from Cornell University, the University of Minnesota, North Dakota State University, and from private breeders Ed Swanson, Tom Plocher and Max Hoffman. We are also looking at further study of growing table grapes in high tunnels and are considering the potential of growing vinifera type grapes in high tunnels. More on these efforts and other projects will be highlighted in future issues of the Nebraska VineLines and at “Tailgate” type field days. Watch our web site and the Nebraska VineLines for announcement of the Tailgates.

**JAPANESE BEETLE ALERT!** Japanese Beetles have appeared in vineyards in southeast Nebraska and even in home gardens in Lincoln, so it's time to be vigilant. As always, the best management tool is your “boots in the vineyard”, that is, walking your vineyard rows to scout for any disease or insect problems and to take appropriate action if numbers are significant.

Enjoy your long weekend and celebrate a potentially great 2020 vintage. Cheers!

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## 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. **The 2020 event was postponed to next year.** Details: <http://iccws2020.ca/>

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