

CROP ESTIMATION

Estimating potential crop that will be harvested can be of immense value to a winegrape grower. When interacting with the winery to whom the grapes will be sold it is helpful for scheduling the handling of grapes at the winery. Harvest labor requirements can be better estimated also if the grower knows approximate amounts that need to be harvested. Crop load adjustments can be better accomplished if the grower has an accurate estimation of potential yield. It may be desirable to reduce the crop by “dropping fruit”, that is, removal of clusters to adjust the ultimate harvest. It is important to remember that the earlier one removes clusters, the greater will be the impact on the vine’s physiology and thus the quality characteristics of the grapes at harvest.

KEEP GOOD RECORDS! Conventional crop estimation depends upon a reasonably accurate projected cluster size. The average weight per cluster for a given cultivar harvested from a particular vineyard is crucial to good crop estimation. The more years for which data have been acquired (a sort of “track record”), the better the accuracy of crop estimation.

What do you need to know?

1. Number of clusters per vine. Select a random sample of vines (one expert recommend 5% of the vineyard), count the number of clusters for each vine and determine the average number of clusters per vine (do at least 20 vines).
2. Number of bearing vines per acre (455 if spacing is 8’ x 12’; 543 if spacing is 8’ x 10’).
3. The average cluster weight for that cultivar from that vineyard (in pounds).

The simple formula is:

clusters per vine x vines per acre x weight per cluster

For example, if ‘Edelweiss’ has a track record of half-pound clusters for a vineyard planted at a spacing of 8’ x 10’ and the average number of clusters per vine is 40, then the expected yield would be 10860 pounds per acre (or nearly 5.5 tons per acre).

$$40 \times 543 \times .5 = 10860$$

Adjustments need to be made for missing or non bearing vines.

Alternative “Lag Phase” Crop Estimation

Lag phase crop estimation is based on the assumption that cluster weights double from the lag phase weight until the harvest weight. Lag phase occurs typically about 55 days after first bloom. Again a representative sample of clusters needs to be collected and weighed then the weight doubled and used as the cluster weight in the above formula. Again, **KEEP GOOD RECORDS!**

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