

# WHAT DO I NEED TO KNOW ABOUT VINEYARD MAINTENANCE AND HARVEST IN WASHINGTON STATE?

## CHECKLIST OF QUESTIONS TO ANSWER:

Though many of the viticulture practices employed in Washington State are common to other grape growing regions, some of them were specifically developed through research and experience to help sustain grape vines here that are periodically subjected to temperatures cold enough to reduce grape yields and kill vines. The Pacific Northwest is considered a cool climate grape growing region, although some locations are warm enough to ripen varieties typically produced in warm regions. For information about vineyard development issues, see Vinewise sections Vineyard Site Selection and Vineyard Establishment.

## MAINTENANCE/MANAGEMENT OF ESTABLISHED VINEYARDS

Proper management of vegetative growth of established vineyards will help the grower produce high quality grapes and lead to his or her continued economic stability and sustainability. Depending on the vineyard location, growers in western Washington may be interested in controlling vegetative growth to increase fruit exposure, whereas those in eastern Washington may need to adjust canopy management to optimize or balance fruit exposure.

### Canopy

1. Have I assessed the potential vine vigor of my site and variety?
  - Soil characteristics (depth, texture, fertility, water holding capacity)
  - Annual precipitation (amount and distribution)
  - Vigor of selected varieties and phenology (bud break, ripening time)
  - Temperature profile of vineyard location (heat accumulation, frost risk)
  
2. Have I established a goal for my vineyard canopy, considering the following?
  - Uniform vine shape
  - Potential to use mechanical pruners, hedgers, harvesters
  - Control crop load
  - Support optimal fruit quality
  - Promote productive and fruitful buds
  
3. Do I understand how fruit exposure affects cluster quality and what can happen to grape clusters if there is very high or low light within the canopy; low or very high temperatures within the canopy?
  
4. Have I assessed the canopy density within my established vineyard?  
Methods available to assess density include estimating the surface volume (height and width of the canopy), using the point quadrat method, or sunfleck analysis.



## Canopy Manipulation

What is my plan to manipulate the canopy and achieve my desired goals?

Techniques include:

- Training or trellis system
- Pruning
- Shoot thinning/Suckering
- Shoot positioning
- Irrigation
- Other means (leaf removal, hedging, mechanical,)

## Crop load Management

1. Do I have a plan for crop load management, beginning with pruning, shoot thinning, irrigation management, and using cluster thinning and dropping crop as a last resort?
2. Do I annually estimate my crop, keeping data for historical review?
3. Do I revisit my irrigation and nutrient management strategies if I am not achieving desired crop size, berry size or fruit set?
4. Do I understand the need to balance the intended vine size with crop load (yield per vine or per unit pruning weight) and the costs of increasing or decreasing canopy density?

## Harvest

1. Do I understand the minimum and desired maturity parameters used by the winery to determine harvest?
2. Although most wineries will assess crop maturity and determine harvest dates, do I understand what methods are used to assess maturity?
  - Assessment methods include:
  - Grape seed color and hardness
  - Laboratory analysis of berries
  - Refractometer to determine berry sugar or Brix
  - Flavor
3. Do I know the harvest preference (hand or machine) of the winery(ies) purchasing my grapes?
4. Have I planned for the harvest of my crop?
  - If hand harvest is to be used, do I have a labor crew lined up?
  - If mechanical harvesters are used, have I made arrangements with a custom harvester or will I use my own machine?
5. Do I need to deliver the crop to the winery? If so, have I made delivery arrangements?

## Vineyard Health and Productivity

Have I considered maintaining the long-term productivity of the vineyard (retraining, replanting, winter kill)?



## CHECKLIST: BUILDING YOUR VITICULTURE TOOLBOX

- Have I set goals for my vineyard canopy and developed a plan in achieving them?
- Do I assess my canopy vigor and density to help guide my canopy management and manipulation decisions?
- Do I annually set crop load goals in conjunction with the winery, considering past vineyard yields, current growing season conditions? Do I have a crop load management plan to help me achieve my crop load goals?
- Am I actively involved with the winery in the harvest decisions of my vineyard?
- Have I planned in advance for harvest, securing labor or machinery needed for harvest and delivery of my grapes?
- Do I keep records of crop estimation and harvest information to help guide future vineyard decisions?
- Do I keep records of vineyard productivity, reviewing them at year's end to analyze long-term production trends?

### RESOURCES:

Ahmedullah, M. Training and Trellising Grapes for Production in Washington. Extension Bulletin 0637. 1996. Washington State University Cooperative Extension, Pullman, Washington. Available as a PDF file on the Web at: <http://cru.cahe.wsu.edu/CEPublications/eb0637/eb0637.pdf>

Olmstead, M., Williams, K., Keller, M. Canopy Management for Pacific Northwest Vineyards. Extension Bulletin 2010. <http://cru84.cahe.wsu.edu/cgi-bin/pubs/EB2010.html>

Watson, J. Growing Grapes in Eastern Washington. Proceedings from a Washington State University short course for establishing and producing grapes. 1999. Good Fruit Grower, Yakima, Washington.



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