

Canes and Casks: Vine Balance

You may hear winemakers describe their vineyard as being “in balance”. What does this mean? Does it mean that there are equal amounts of white and black grapes in the field? Does it mean that the plants are growing upright and not falling over? Of course, we don’t want vines falling down in vineyards so maybe the grower is talking about evenly supporting the weight of the plants with wires and stakes. Perhaps it is a spiritual thing, like the concept of Yin and Yang in Chinese Taoist metaphysics, where opposite or contrary forces are balanced (light and dark, sun and moon, male and female, etc.)?

There may be many concepts about grape growing and winemaking that are mysterious or difficult to explain, but vine balance is not one of them. To put it simply, a vine is “in balance” when it has just enough leaves on it to ripen the amount of crop it is bearing. Balance is measured by a ratio of leaf area to fruit weight. To get a balanced grapevine, the viticulturist (grape grower) will need to determine the appropriate amount of fruit that can be ripened by the vine in a typical season (after a couple of years of trial-and-error). Once the optimal crop load is determined, the grower just needs to adjust his crop to this level. Not quite as easy as it sounds, this process may require viticulturists to go against conventional wisdom and invent new ways to manage their vines.

One of my heroes, in the field of viticulture, is a man who did just that and by his efforts has contributed to the improvement of grapevine management around the globe. I’ll tell you his name (eventually) but first I will explain the problem he solved. My hero had planted a vineyard that would grow too big every vintage. The plants would send shoots up and over the trellis and into the rows. Cutting the plants back worked for a while but they eventually grew again. The fruit he harvested did not taste as good as he expected and the yield was declining each season.

My hero did not give up and plow his vineyard under; he came up with a unique solution. His solution was based upon balanced vine growth. He knew that vines would direct their annual growth in one of two pathways: vegetative or reproductive. Vegetative growth produces plant parts that are not fruit (leaves, shoots, roots, wood, ect.) and reproductive growth only produces fruit. Some vineyards will grow large plants (like his) and others will grow smaller plants (like vineyards he had seen in Northern Oregon). My hero knew that size is not important here – the only thing that matters is balance. He needed to find a way to set larger amounts of crop on his plants (increasing the reproductive) so that his shoots would not grow as large (reducing the vegetative).

To do this, he doubled the number of shoots per plant and turned half of the shoots on his plants downward. This was very controversial. Most of the university researchers that heard about his system said that it would never work; plants wouldn’t grow upside down. But because he had improved the ratio of leaf area to

fruit weight, because he brought his vines in balance, the fruit quality improved and his yields increased.

If you have not already guessed, my hero is Scott Henry of Henry Estate Winery in Umpqua. The “Scott Henry Trellis System” that he employed to bring his vines in balance has been adopted by viticulturists world-wide (including about 10,000 acres in Australia) to solve the same problem that Scott faced, getting his vines “in balance.” I encourage you to go out to Henry Estate Winery and meet one of my heroes. Go ahead and ask him about vine balance, I’ll bet you will have an interesting conversation.