Viticulture at Linden by Jim Law

Jim took us on a tour of the vineyard. He mostly addressed red wine production. He prefers:

- NE-SW rows, planted up and down the hill if possible
- Spacing 6.5-7' between rows, 32-48" between vines, depending on soils
- 24" fruit wire height for more canopy height and warmth of fruit zone
- 1:1.2 ratio of canopy height to row width
- Vineyard floor: rip to 18", herbicide vine rows depending on vintage conditions
- Merlot is planted on clay, Cabernet Sauvignon on rock
- Clones are not important, he is moving towards selection massale. He notes that Merlot 181 has lazy growth habit so it may not be planted again. He seeks the viticulture virtues of a clone.
- All dry farmed except for watering new vines
- Vines trained on one trunk, mostly cane pruned.
- Yield on reds – 1 lb/ft of canopy (about 2 kg/vine). It's largely thinned visually and he doesn't believe in thinning to 1 cluster/shoot due to cluster size variability.

Figure 1: Jim Law, wine grower

Jim is trying to keep his red wine vines small. He positions the graft at 6" and keeps the fruit wire low so that he ends up with a 12" trunk. He wants a small amount of perennial wood to limit the opportunity for trunk diseases. Trunk diseases are more of a concern right now than winter injury.

Jim is already making the wine in the vineyard. It's a hot year so he removes fewer leaves and laterals and he is leaving wings on clusters. He is especially concerned about Merlot which may get overripe and one dimensional due to the heat. He wants to preserve the freshness and complexity of the wines and is trying to find the balance between achieving uniformity in the vineyard while not creating a sameness or dull style of wine. He wants to preserve acidity in reds and whites and give some of the herbal character to Merlot. He isn't worried about Cabernet Sauvignon which can use all the heat Mother Nature can offer.

In all things Jim is striving for balance, in his vines, wines, the Linden ecosystem and business.

Jim cluster thins for position (so clusters do not touch) and green harvest is done prior to veraison and at 75% veraision to remove unripe fruit. Later thinning is better, because it helps achieve smaller berries, a major goal for red wine at Linden, as it should be for a wine region such as Virginia.

In a dry year like this only mild shoot positioning is necessary, although Jim used to position individual shoots with ty-tape. Small canopy makes exact positioning unnecessary but the quality of Jim's canopy in size, shape and organization is outstanding. Most shoots are upright. 2-4 shoots per foot of trellis.

Jim is moving back and forth between cane and cordon training. Cane offers less wood for disease and more frequent renewal but has problems with bud fruitfulness and eveness of shoot development. He is trying cordon spur for more even shoot length and smaller clusters (shoots from basal buds). It's possible to get more even ripening. High wire is too hard to pick and gets more disease than low wire systems.

Figure 2: Balanced Merlot vine

Jim strongly urges slope for red wines to improve water and air drainage. He says that "slope trumps soil" in terms of overall contribution to wine quality. It's more expensive and more dangerous but it really pushes wine quality and also helps to create a healthier vine.

Jim referred to "driving the vineyard" which means retaining balance in a wet year. For example, in 2010, a dry season, he is using herbicides to remove cover crop, mowing more often to reduce competition. In 2009, a wet year, he was doing just the opposite and the vineyard looked sloppy but it was all to make better wines. Creeping red fescue is the cover crop of choice although a lot of native plants/grasses are in the vineyard. For example, chickweed is allowed to spread in the spring, it's low growing and mats down well.

He doesn't worry too much about insects and mites although he just had to spray hot spots for mites. GBM can be a problem since he is near woods. He treats with one spray at cluster close, also with a botrytis material. He wants to reduce his chemical inputs. In this dry portion of the season he has not sprayed for four weeks. He looks for signs of disease in hot spots and responds. If the vineyard is too squeaky clean he is spraying too much. He is going to begin farming closer to the edge. It requires being vigilant and observing the vines on a daily basis. June is the critical spray period and he uses the big guns to protect the vineyard but after that it all depends on the weather. He is establishing sentinel vines that will act as indicators of vine problems. It's largely a matter of understanding the disease. For example, phomopsis has been a problems at Linden, so he switched to cane pruning to reduce the amount of basal cane available for the next year. Merlot and CS are resistant to phomopsis so they get only one spray per season at the first leaf. His goal is to spray just 6x per season.

Grapevine yellows is probably the biggest viticulture challenge at Linden. While it affects many varieties, hybrids appear to be tolerant or non-expressive of GY. On the other hand, Chardonnay is by far the most affected, and he is losing 0.5-1% each year. Sauvignon Blanc is already being positioned to replace Chardonnay in his white wine program. Higher density planting makes it easier to replace vines. He is considering putting replants on a higher vigor rootstock to encourage their development among the older plants.

Figure 3: View from the winery deck

I encourage you to visit Linden and taste their wines. Judge for yourself whether this wine growing philosophy is working, and whether it might work for you. You can learn more about Linden Vineyards at their web site: http://www.lindenvineyards.com/.

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