

# If We Knew Then What We Know Now: *establishing an East Coast vineyard*

Christine Carroll

In 1986, my husband Tom and I purchased a 200-year-old property in the heart of historic Bucks County, Pa. We planned to raise horses there. Our 10-year-old son, Tom Jr., had a different idea. On moving day he declared, “This place would make a great vineyard and winery.” His dad and I winked at each other. Today a grapegrower, tomorrow, an astronaut.

Fast-forward to 1999. After spending three years in California, Tom Jr. again proposed the idea of turning our Pennsylvania horse farm into the vineyard he’d always dreamed of. Then he presented his business plan. We started smiling again, this time for a different reason. Could we really establish a viable vineyard and winery on the East Coast? Could we grow quality fruit and produce world-class wines in Pennsylvania?

To find the answers, we did extensive research, visited other vineyards, tested and amended our soils and enlisted the help of experts. Still, like many new vineyard owners, we made critical and sometimes irreversible decisions without sufficient knowledge.

Establishing Crossing Vineyards and Winery in Washington Crossing, Pa., took four long years of planning and hard work. Included below are nine tips for prospective East Coast grapegrowers. While they may seem obvious to seasoned growers in more



Laser-assisted planting keeps rows orderly.

established wine regions, these are lessons the Carroll family learned the hard way. If only we’d known then what we know now...

## Tip 1: Consider Site Selection

Site choice, the decision from which all others flow, is ironically one over which many growers have no control. If you’re working with a tract of land you already own, take time to research the site. Test soils with the help of professionals to determine whether the composition and drainage are conducive to growing

quality winegrapes. Get expert advice on whether it will make a good vineyard.

If you’re fortunate enough to select the site, you’re probably better capitalized than most. That’s a good thing. Elevation is important when looking for the ideal location. On the East Coast, 1,500-1,800 feet above sea level is the upper limit for growing grapes. An elevation of 820-1,500 feet is considered most desirable. Drainage is also important. Grapes don’t like waterlogged soil.

Sloping ground helps to accelerate the dispersion of water and cold air. A south-facing slope is best; 3-10% is preferable.

### Tip 2: Utilize State Resources

Some of the most practical advice we received was from the cooperative extension office of Pennsylvania State University. Initially, local agent Scott Guiser advised us to take soil samples from multiple locations on our 20-acre parcel. In a few weeks, we received a full report on the soil composition, each sample representing a potential vineyard block.

Based on the test results, Guiser helped us develop a plan for improving the soil. In the future, he advised us, we could do petiole samples to determine whether additional soil amendment would be required. His services were free of charge.

Guiser put us in contact with Mark Chien, winegrape agent for the state of Pennsylvania, also an employee of Penn State's extension service. Chien's experience included a graduate program in viticulture at UC Davis, work at research vineyards in Napa Valley and Amador County and vineyard management jobs at Pindar Vineyards on the North Fork of Long Island and a 220-acre farm near Salem in Oregon's Willamette Valley.

Chien helped us make some important decisions, such as varietal selection, spacing and rootstock/clone choices. Our original vineyard is now four years old, and we still seek Chien's advice regularly. He is a valuable resource who has become a mentor and friend. He visits our site at least twice per year, and is always available for phone or e-mail consultation. His expertise is offered free of charge through Penn State's agricultural extension office. Most state universities have support services available. Seek them out early and often.

### Tip 3: Tackle Potential Problems Early

Our preliminary research turned up an important deficiency in our site. Although the soils were deep and well drained, a few critical spots showed standing water and signs of erosion after a heavy rain.

We were advised to determine exactly where the run-off was coming from, re-direct the water flow and install tile drainage. We simply didn't have the time or money to address the problem—or so we thought. Instead, we planted varieties we believed could tolerate the moisture. We were wrong.

The vines in the moist areas did not thrive. We eventually disassembled the trellis system, tore out the vines and installed drainage. In short, we reconfigured the entire site on which an active vineyard existed.

### Tip 4: Choose The Right Varietals

Varietal selection was one of the most important decisions we made in the establishment of our vineyard. Again, we enlisted the help of experts and other local grapegrowers.

We received conflicting advice, much of it driven by an individual grower or consultant's philosophy. Some believe only *vinifera* makes good wine. Others staunchly support the worth of both Labrusca and French hybrids.

The best advice I can give on this subject is: know your site. A higher elevation will promote better air drainage. A south-facing slope will encourage maximum sun exposure for late ripening varieties. A record of high and low temperatures will help a grower decide if successful *vinifera* cultivation is possible. For example, if frequent, sustained temperatures below -5°F occur more than once in 10 years on your site, growing *vinifera* may not be realistic.

Ours was a split decision. We planted Steuben, Chambourcin, Vidal Blanc, Cabernet Sauvignon, Cabernet Franc, Chardonnay and Viognier. For the *vinifera*, we studied clones and rootstocks and tried to find the most cold-hardy varieties. We chose Chardonnay Dijon clones 76, 95 and 96 on 101-14 and 3309 rootstocks and Cabernet Franc, Clones 1 and 4 on 101-14, Riparia Gloire and 3309.

We have experienced great success with the Chardonnay and the Cabernet Franc, as well as with the Native American and hybrid varieties. The Cabernet Sauvignon and Viognier have proven a greater challenge.



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Seek and listen to expert advice to avoid costly re-construction.

### Tip 7: Irrigation? Don't Bother

We gave serious consideration to installing an irrigation system in our vineyard. We decided against it, mostly because of the cost.

Our first growing season was dry, which is great for established vines, but not for newly planted ones. The second and third years were the wettest on record.

Bottom line: Don't install irrigation on the East Coast. Growers in this part of the country are much more apt to wrestle with mildew-, fungus- and moisture-related disease. Insufficient water is unlikely to be a problem.

### Tip 8: Practice Pest Management

Every site has "pest pressure." In our case, the enemy was an out-of-control deer population. The area had changed in the 15 years we'd lived there, going from fertile farmland to suburbia. The deer simply had no place to go and nothing to eat.

We decided to install a deer exclusion fence, constructed of wood posts and wire mesh panels, around the entire perimeter of our 20-acre parcel. The Penn State experts suggested an 8-foot height. The cost exceeded \$20,000.

We checked the zoning codes, which allowed for a maximum fence height of seven feet. We then consulted an attorney who advised us to obtain a variance from the local zoning board. From start to finish, this process took an additional four months.

Another problem grapegrowers are likely to confront, especially in the fall, is bird pressure. Our experts recommended netting the vines about a month before harvest, at least around the perimeter. Unfortunately, we waited too long. Our local suppliers were sold out of the netting we needed.

We decided to try a "bird scaring" device, which mimics distress calls

from wounded birds. We were skeptical, but since the trial was free and we had no choice, we plugged it in and hoped for the best.

The device worked well. The downside: It's noisy and not 100% effective. The upside: It's cheaper and easier to use than netting, and controls the bird pressure just about as well.

A cautionary note: Certain types of birds are not repelled by MFGs (multi-frequency generators) or AV alarms. If thrushes and blackbirds are prevalent in your area, netting may be a better choice.

### Tip 9: Bring Lots Of Money

A crusty old grower once warned us to watch our spending, especially in the beginning. "You might wish you had that money back someday," he groused.

I remember discussing the "need" for a quad-runner to better manage our vineyard. Now I can think of a thousand more important ways to spend the money we don't have—a temperature-controlled warehouse, three-phase electric, office space somewhere other than our house.

Growing grapes on the East Coast is a risky, difficult business. No matter what budget you come up with for starting your vineyard, triple it.

Crossing Vineyards and Winery celebrated its second anniversary in October of 2005. In that brief time, our

### New Book Deconstructs The 100-Point System

If you've ever wondered exactly how the 100-point winetasting system works, *Tasting and Grading Wine* provides "original and rigorous instruction in practical tasting" from author Clive S. Michelsen, founder of Sweden's Malmö Wine Academy. It covers essential aspects of viticulture, winemaking and styles of wine, defects and flaws, sensory analysis and grape varietal characteristics, and examines marketing principles and features of world wine markets. The hardbound book has 166 pages and retails at \$49.95 exclusively from Wine Appreciation Guild at [wineappreciation.com](http://wineappreciation.com).

Choosing which grape varieties to plant is a business decision, so do your homework and be realistic. Remember, creating a profitable enterprise is the goal.

### Tip 5: Plan Before You Plant

If we could do it again, we would limit our initial planting to 2 acres, an acre each of two different varieties. Caring for 1 acre of grapes requires 200 man-hours per season. Finding seasonal workers for planting, pruning and harvesting can be difficult. Much can be learned about a site from that first planting. To minimize costly mistakes, keep it small.

Before planting the first vine, think also about placement. Spacing affects how grapes will be harvested and how many vines can be planted on the site.

Another important consideration is the choice of a trellis system. Although divided canopy methods are currently preferred, we constructed our trellis to support Vertical Shoot Positioning and have been pleased with the results. For higher-vigor sites or more aggressive varieties, Scott Henry or Smart Dyson might be preferable. Again, knowing the site is critical. Converting the trellis after the fact can be costly and disruptive.

### Tip 6: Consider Metal Posts

If we could do it over, we would use metal posts. They last forever, and the catch wires can be moved much more easily. The downsides: aesthetics and expense. Buy metal if you can afford it; we plan to do so for future plantings.

business has captured 19 wine awards, partnered with a local college to offer courses, launched a summer concert series and started its own "Wine Institute." Crossing has earned kudos from wine writers, judges and Jonathan Newman, *Wine Enthusiast* magazine's 2003 Man of the Year, who called it "one of the most impressive and innovative start-up organizations" he has ever seen.

If we could do it again, we would follow the same basic formula. The recipe for success in any business is proper planning, hard work and sufficient capitalization. Growing

grapes on the East Coast is no exception. ■

*(Christine Carroll is a wine columnist, wine educator and one of the principals of Crossing Vineyards and Winery in Washington Crossing, Pa. She is a member of Penn State University's Enology Program advisory committee and the secretary of Bucks County Wine Trail, Limited. Contact her through [edit@wines-andvines.com](mailto:edit@wines-andvines.com).)*



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