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Growing Cabernet Franc in the Mid-Atlantic

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A Concise Guide to Wine Grape Clones for Professionals by John Caldwell

“this is a very old variety widely used in Gironde and Loire. The wine has more aromatic character than Cabernet Sauvignon and is slightly less tannic and less colored. Often blended, with CS and Merlot, Cabernet Franc is also produced as a varietal in some areas. It is a very perfumed variety, characterized by raspberry and violet aromas with structure for long aging.”

Where is it made?

- Bordeaux/St Emilion (Bouchet) – concentrated, elegant, savory blended red wines (Merlot)
- Loire (Breton) – varietal, bright, fruit-driven wines
- California and Washington – dense, extracted, fruit driven wines (sweet?)
- Finger Lakes and Ontario – red wines grown in cool to cold climates: it does well in warm/dry vintages, but can be acidic, donut, and herbaceous in cooler ones
- Mid-Atlantic – CF is still very much in development but has demonstrated potential

Characteristics of Cabernet Franc

- More cold hardy than Cabernet Sauvignon and Merlot
- 2011-12 bud LTE50 in the Finger Lakes at -13F
- Upright growth that adapts well to VSP training
- Grows vigorously in fertile soils
- Bud break very similar to Chardonnay – mid to late April in SE PA
- Indicator variety for leaf roll virus
- Susceptible to bunch stem necrosis and crown gall
- Tight clusters can be a problem in wet vintages with fruit rots
- Site and viticulture are important to management of *methoxypyrazines*
- A lot like Pinot Noir, not quite as finicky, but needs lots of attention to make fine wines
- Mostly a blending wine, falling in less favor in Bordeaux, being pushed by Merlot
- CF can make fine wine, rose or ice wine but wines in between lack character



Site for Cabernet Franc

- Looking for heat to ripen and drainage to regulate growth
- First determine type, style and price point of the wine being made. CF should be for premium to ultra-premium wines.
- For premium (boutique) wines
 - Soils: low to moderate capacity, well to excessively well-drained, moderate nutrition, pH 5-5 to 6.5, organic matter 2-4 percent
 - Climate: low to moderate rainfall, especially after veraison
 - Slope: more the better
 - Aspect: southeast to west exposure
 - Elevation:
 - Absolute: 200-500 feet
 - Relative (local topography): avoid frost-freeze and wet areas
- For higher production wines: more fertile soils

Cabernet Franc Clones and Rootstocks

- According to recent experience, clones really matter!
- Until mid-90s, FPS 01 from Montpellier (Olmo selection) was the only clone available
- Etablissement National Technique pour l'Amelioration de la Viticulture (ENTAV) clones arrive in the 90s
- Carl Helrich (Allegro), Nelson Stewart (Karamoor), Lucie Morton (Virginia)
 - FPS 01: wine can be charming in very warm vintages, otherwise lacking in depth
 - ENTAV 214: a high performance warm vintage clone with dark fruit flavors, tannin structure and less green, herbal flavors
 - ENTAV 327: weaker of the two ENTAV clones, higher acid, brighter fruit, tends to be more herbaceous towards dill, muddy flavors
- For high quality wine production: low to medium vigor rootstocks
 - Riparia Gloire, Slate Quarry Riparia, 420A, 101-14
 - Higher production: 3309, SO4, 5C

Rootstocks, continued. . .

- John Caldwell (again): this vigorous variety needs moderate vigor ones like 101.14MG, 3309C, or 420A. Under certain conditions, such as in rich deep soils, use the weakest rootstock Riparia Gloire and for shallow soils 5BB and 3309C are recommended. In dry conditions (gravelly soil), very warm climate and dry farming, it is recommended to use 110R. In experimental trials in the south of France with 3309C, SO4, 110R, 100Ru and 5BB; it looks like from this specific experiment that the combination of Cabernet Franc/3309C is producing the best wines but the yields were the lowest. 110R was also interesting with average to high quality wines and high yields. 5BB and SO4 were in between.

Vineyard Design for Cabernet Franc

- Vine density and spacing: achieve a balanced vine!
 - Depends on grape destination: for premium quality on low capacity site
 - 20 to 35 square feet per vine (7x3/2074 to 8x4/1361)
- Training and trellis system
 - Vertical shoot position, although high wire is possible
 - Head/cane or cordon/spur are used. Spur in CA, cane in Gironde, canes should be < 2'
 - Fruit wire height – 24-36 inches
 - Top of VSP canopy 6-6.5 ft
 - On more fertile sites, a divided system like Lyre or Scott Henry is suitable
 - Above M-D line 2 trunks, below 1 trunk
- Supplemental drainage and drip irrigation

Cabernet Franc Viticulture

Cabernet Franc tends towards big canopy and potential crop that must be carefully managed. Balance prune in winter then manage vine vigor/size.

- Shoot thin early
- Shoot position aggressively
- Leaf and lateral removal, morning side first, afternoon later, tunnel if necessary.
Note: Early leaf removal (pre-bloom, 5-7 leaves by Poni and Hed), may reduce cluster size and weight and improve fruit metrics and chemistry
- Hedging – depending on the amount of rainfall
- Nutrient additions only as indicated by vine or test, be especially vigilant of nitrogen
- Water only in drought conditions
- High quality, full-bore, season-long IPM program
- Careful crop estimation and cluster thinning if necessary
- Fruit zone management, especially cluster position, wing removal, multiple passes to remove unripe berries/clusters.
- Critical post-veraison viticulture (disease, birds, leaves, temperature, etc)

Cabernet Franc Yields

- Very fine threshold for high quality wines: Fine wine: 2-3 tons per acre or 2.0 to 3.5 lb per vine
- Too heavy yields will dilute the wine and result in more green, herbal flavors
- Production wines: bigger vines, lower vine density, more leaves, more fruit.



Methoxypyrazines

- Cabernet Franc is an indicator variety for the green flavors, bell pepper, dill, asparagus that are considered ill-suited to high quality red wine production
- MPs must be managed carefully in site selection, vineyard design and management
- Dr. Gavin Sacks, enology researcher at Cornell has done yeoman's work on MPs. Canopy management can help to reduce the total amount of accumulated MPs

Harvesting Cabernet Franc

- Mid to late season ripening in late September to mid-October in SE PA
- Easy to pick by hand, big cylindrical clusters
- Machine harvest with medium shaking causes light juicing
- Protect grapes from birds, deer and other threats
- Needs late season protection from downy and powdery mildews



Louis-Marie Blanchard

Cabernet Franc Wine Making

Not my area but. . .

- Grapes must be clean and fully ripe!
- Sort the grapes in the field and on the crush pad, especially in bad vintages
- Very careful fermentation management: temperature, cap management, maceration period, yeast selection
- Barrel selection is critical. The correct amount of new/old wood, toast level, etc. Do not mask the fruit!
- Blending according to vintage conditions, the goal of the wine and what is available
- Elevage period

Regional Examples of Cabernet Franc

- Mid-Atlantic: Barboursville, Linden, Karamoor
- Long Island: Sherwood House, Bedell, Raphael
- Finger Lakes: Shalestone
- Ontario: Stratus, Southbrook, Hillenbrand, etc.



Is Cabernet Franc the Signature Red for the Mid-Atlantic?

- No less a wine maker than Stephane Derenoncourt says it is
- Find the right places where it can consistently ripen fully
- Find the right soils to achieve a small to moderate balanced vine

Benchmark Cabernet Franc Wines

- Right Bank - St Emilion
 - Chateau Cheval Blanc
 - Chateau Ausone
 - Chateau Lafleur
 - Vieux Chateau Certan
- Loire - Chinon
 - Charles Joguet
 - Bernard Baudry
 - Pierre Breton



Vigne-Chinon Photo: Marc Jauneaud

Reference Resources

- *Wine Grape Varieties in California*. Wolpert et al. UC Ag and Natural Resources.
- *Guide to Wine Grapes*. Jancis Robinson. Oxford Press
- Pennsylvania Wine Grape Network
 - This presentation
 - Adam's presentation and seminar summary
 - *A Fresh Look at Cabernet Franc in Bordeaux* by Anthony Hanson
 - Cabernet Franc from *Wines, Grapes and Vines* by Jancis Robinson



You are here: [Home](#)

About PWGN

The purpose of this website is to give commercial wine growers in Pennsylvania and the non-western wine states access to current and relevant viticulture news, information, and events that will enable them to grow high quality wine grapes. It will be a source of locally produced materials but also a portal to the amazing wealth of viticulture information available on the internet. The resources that reside on this site are carefully selected by the viticulture educator. It is central to our extension mission to discover and transfer practical research-based knowledge to the grape growing industry, but we also seek the best new ideas and technologies from innovative grower/practitioners. We hope you will find it useful and we welcome your comments and feedback. Thank you for visiting and please return often for more news and information.

I welcome your comments and suggestions about this website. Please send your ideas for future topics and how cooperative extension can help you and your vineyard to mlc12@psu.edu.

A brief summary of the

Spotlight



The Finger Lakes is on a roll. I had not been to this lovely wine region for a couple of years and a recent visit reminded me what great white wines can be made here. As fine as the wines are, the people are even more remarkable. I tried to summarize my visit in my

[Finger Lakes Notes](#).

It's meeting season, a time to learn about new ideas, practices and technologies in viticulture and enology, and to network and meet with friends. To decide where and when to go, browse through the 2012 [EVENTS CALENDAR](#) and [access meeting registration materials and information](#).

I try to explain the complex relationship between [Vine Size and Balance](#). This is a goal that is achieved in all great vineyards and wines. You cannot properly develop or prune a vineyard without understand these principles.

Features

Featured Article(s):

[Notes from Long Island](#): a January visit to [Shinn Estate Vineyard](#); a vineyard tour and grower discussions with Alice Wise; and from the Long Island Ag Forum excellent information about botrytis, sour rot and other grape diseases from Dr. Wayne Wilcox and Dr. Wendy McFadden-Smith. Dr. Tim Martinson reported on the affects of vineyard nitrogen on yeast assimilable nitrogen in juice and wine, and its affect on botrytis ([article](#)).

Featured Web Site(s): Cornell University's viticulture and enology program is a leader in the East in research and extension education. It's no surprise that the [Cornell Fruit: Grapes](#) website is chock full of great information. It's well worth a visit and some time browsing through topics like production, IPM, enology, labor and others.

Denise Gardner, Penn State extension [enology website](#)

Previous featured websites: [Linden Vineyards](#) (see vintage summaries and article archives), [Texas Winegrape Network](#), [Cornell](#)

<http://pawinegrape.com>