

VARIETAL FOCUS:

Sparkling Wine

Lance Cutler

BUBBLES IN WINE HAVE been reported as early as Greek and Roman writings, but no one understood what caused them. There are writings that date to the Middle Ages about still wine from the Champagne region of France with some effervescence, but it was considered a fault in the wine. In fact, it is thought that **Dom Pérignon**'s first orders were to get rid of the bubbles, because the pressure would cause bottles to burst. One bottle that blew up would cause a chain reaction, and wineries could lose a lot of their bottled production to these unwanted explosions.

French wine was often shipped to England in wooden barrels, and then various merchants would bottle it. Cold winters in Champagne could stop the fermentation process before completion, leaving some residual sugar. Once the wine had been shipped to England and bottled, the wine would warm up and continue to ferment in the bottle, creating bubbles. Fortunately in the 17th century, England's glass makers used coal in their glass ovens to make bottles. These bottles were much stronger than the French bottles made with wood fires. Additionally, English merchants were using cork stoppers in their wine. The fermenting wine would create CO₂ in the bottle; and when the corks were pulled, voila! The wine was bubbly.

As early as 1662, an English scientist named **Christopher Merret** wrote a paper that explained how residual sugar in wine was the culprit in bubbly wine. He even figured out that if you added a sugar source to a wine just before you bottled it, you could make any wine sparkle. Once people figured out what caused the bubbles in wine, they set out to control the process. Most famously, the Champagne region produced a sparkling wine that became extremely popular, especially for special occasion celebrations. Soon every place that made wine was also producing some form of sparkling wine, and they were making sparkling wine out of most any grape available to them.

The most famous sparkling wine is called Champagne, and it comes only from the Champagne region of France. Other areas in France produce sparkling wines that go by other names, like Cremant. Italy produces almost as much sparkling wine as France, referring to their dry sparklers as Prosecco and their sweet ones as Spumante. Spain calls their sparkling wine Cava, Germany has its Sekt, and Hungary makes Pezsgö. Chardonnay, Pinot Noir and Pinot Meunier are the most

Lance Cutler has been a working winemaker in Sonoma County for 35 years. He has been a contributing editor for *Wine Business Monthly* for more than 10 years. His unique perspective on winemaking has led to our Industry Roundtable series and our Varietal Focus series. Lance is also the author of four books, including *The Tequila Lover's Guide to Mexico*.

traditional varieties used to produce sparkling wine, but other varieties, like Riesling, Muscat and Pinot Gris, are used as well. Australia makes sparkling wine from Shiraz, Uruguay from Tannat and some producers in Michigan use Vignoles.

Most sparkling wines go through two fermentations. The first fermentation turns grape juice into dry wine, often using grapes with lower sugars and higher acids than grapes for still wine production. Gentle handling of the grapes is critical to avoid excess color and extraction of astringent phenols. Most producers will make a wide variety of base wines and then blend them to form a house style. This blending of base wines is called assemblage. The base wines are often very acidic. One of our winemakers said there is usually so much acid in these wines that his teeth hurt when making the blends.

A second fermentation is what makes sparkling wine different and produces the bubbles. The blended base wines receive a dose of some form of sugar dissolved in wine along with special yeast, and then are placed in a capped bottle. This added mixture is called liqueur de tirage. The yeast consumes the sugar to create CO₂ which cannot escape from the closed bottle. The trapped CO₂ forms the bubbles that give sparkling wines their fizz. In the bottle, the expired yeast cells form lees, which can lend flavor characteristics to the wine in the bottle. The wine will remain on the lees in the bottle for several months up to several years. This time spent on the lees is called en tirage. When the wine is ready to bottle, the sediment formed during this second fermentation must be removed. Disgorgement is the removal of sediment and requires that the wine receive a dosage of fresh wine and some sugar to refill the bottle.

The method described above is the classic, traditional French method of making Champagne and it is called méthode champenoise. While sparkling wine is made almost everywhere and using almost any kind of grape, there are generally just four methods of production: méthode champenoise, Charmat process, transfer method and gas injection.

Méthode champenoise is easily the most expensive way to produce sparkling wine, and the wines produced using this method are almost always the best quality. They tend to have the smallest bubbles (which is good) with the longest persistence and the most gentle mouthfeel. In addition, the time spent on the lees en tirage can provide additional complexity, contributing yeasty aromas and a richer mouthfeel. All of the sparkling wines in this Varietal Focus are méthode champenoise wines.

Each winemaker participating in this Varietal Focus has decades of winemaking experience. **Tom Tiburzi** from **Domaine Chandon** and **TJ Evans** from **Domaine Carneros** represent wineries with ties to French Champagne producers, while **Steven Urberg** of **Gloria Ferrer Caves & Vineyards** is connected to Spanish roots. Two of California's most iconic sparkling wine producers are represented by **David Munksgard** from **Iron Horse Vineyards** and **Sean Thompson** from **Schramsberg Vineyards**. **Penelope Gadd-Coster** has a wealth of experience, serving as winemaker for **Breathless Wines** while working with **Kathleen Inman**, winemaker/proprietor of **Inman Family Wines**. **Larry Mawby** pioneered sparkling wine production in Michigan with his **L. Mawby** wines, and **Christian Grieb** has been working alongside his father at **Treveri Cellars** to make delightful sparklers in Washington state.

Treveri Cellars

NV BLANC DE BLANCS BRUT, 12% ALC., 4,500 CASES, \$15,
100% CHARDONNAY

Christian Grieb earned his B.A. in business administration from **Seattle University** and has translated his business skills to **Treveri Cellars**, where he now works alongside his father. His father, **Jürgen**, graduated from **Trier School of Enology** in Germany before moving to Washington state, where he made wine for 30 years. Christian completed the **UC Davis** Winemaking Certificate program and works as co-winemaker with his father. He also handles the marketing for the winery. Treveri also produces non-traditional sparkling wines from Riesling, Gewürztraminer, Müller-Thurgau and Syrah.



According to Grieb:

“We are trying to have elegance and finesse typical of Blanc de Blancs, with ample notes of green apple and citrus, which is typical of the Chardonnay fruit here in Washington state. Our winemaking is more German in style, which lends itself to slightly riper, fruit-forward flavors while retaining crisp acidity and refreshing mouthfeel. We like small bubbles, which provide a mousse feel and complex palate, while still maintaining simplicity and approachability.

“This wine is 100 percent Chardonnay grown on Warden silt loam soil at an elevation of 1,200 feet. The vines are own-rooted with the Walter Clore Prosser clone. We farm traditionally and use drip irrigation. In the vineyard, we choose to have more shade than the typical vineyards here in Central Washington. Shading the fruit keeps the fruit cooler during the day and helps retain acidity. We pull leaves, trying to create tunnels in the fruit zone to allow air movement but still keep the fruit shaded. We run a higher crop load



as well (about 4 to 5 tons) to help slow ripening and retain acid.

“We use taste to determine when to pick, keeping Brix, acid and pH in mind. We try to keep the Brix figure reasonable (between 18° and 19° Brix) to avoid high alcohol. We want the most balanced fruit we can get. This means some fields are picked at higher Brix while others are picked lower. This allows us to blend until we have a finished wine that is balanced and complex.

“Grapes are partially machine-harvested and partially hand-picked with no sorting, about 60 to 40 percent machine- to hand-picked. Everything goes directly to the press where 30 ppm SO₂ is added to the press pan. An additional 15 ppm is added after racking before fermentation. Our press cuts are determined by phenolics. We aim to keep bitterness at a minimum. With our Pinot Noir programs, it has a lot to do with color.

“The wine will settle for 48 hours at 50° F with a 2 pounds per 1,000 gallons addition of bentonite to help settle the juice. We typically don’t need to add acid. We only use DAP as a nutrient usually between 2 to 3 pounds per 1,000 gallons. We use PDM yeast for the base cuvée and ferment between 58° F to 60° F.

“To blend our cuvée, we look for the yin and yang.

We need two components that complement one another without taking anything away from each other. One wine could have ample acid and body while another might have nice aromatics. Ideally, we can blend to achieve a wine with nice acid/body that is complex and has great aromatics.

“Our wine is cold-stabilized for a month on the lees. More bentonite is added, if necessary, for heat stability. Then we use DE filtration with a cellulose DE substitute followed by a plate and frame filtration to ready the wine for bottling. A riddling aid is added to the tank when we pitch the IOC18-2007 yeast for the second fermentation, along with 20g/L sugar. Fermentation temperatures hover around 60° F and last one to three months. This wine is aged on the lees for a minimum of 24 months, sometimes as long as 28 months. We riddle using a gyropalette for seven days. Our dosage is a house secret typically made up of base wine and sugar. This wine gets three months cork aging before release.”

TASTING NOTES

Grieb: On the nose I get a lot of citrus, Meyer lemon. There is abundant green apple and a tiny bit of pear. There is an interesting minerality component. On the palate there is a bright acidity and some riper apple flavors with a soft bubble that adds a burnt cream character to the texture.

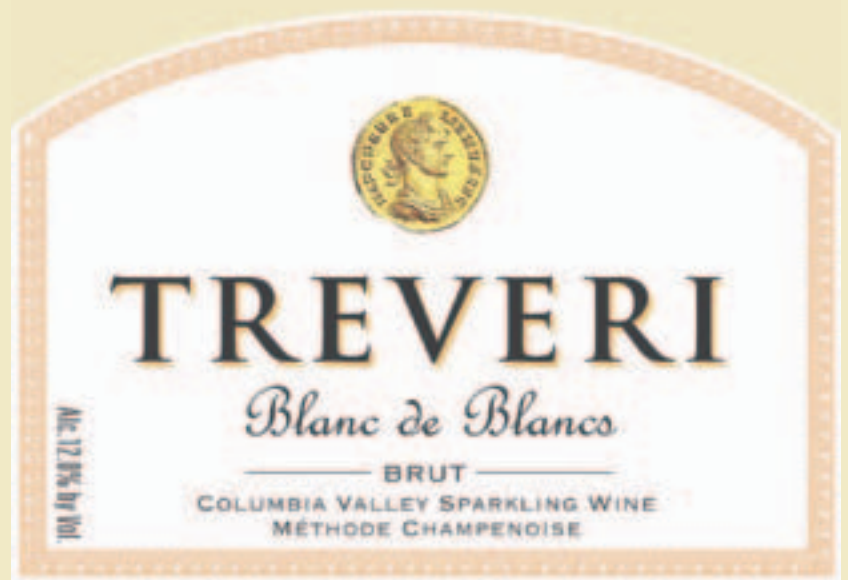
Gadd-Coster: I got a lot of pear out of it, which I really like. I really get the green apple in the mid-palate and on the finish. I like the finish. There is a German bent to it, and it reminded me of some German white wines that are fruit-forward, and a bit of glycerin. I like the balance of it a lot. I like it as non-traditional. It’s fun.



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Tiburzi: I get a Pippin apple, along with hard pear. There is a malty, yeastiness to it with a very firm, fresh structure. There is an aromatic facet to this wine that has quince and cassava melon.

Evans: I was all over the green melon character that is very pronounced, and that is unique. There is some wild fennel character as well, along with the apple and pear. Initially I got some floral character, but it tastes like there is something non-Chardonnay in there. The purity on the palate is an accomplishment. It carried the high dosage. It has a lot of finesse. I got some cidery elements on the palate. There was more primary fruit than secondary.

Munksgard: There is a green apple focus with a bit of citrus in the nose. The focus of the wine is lean, which I like. I would like a little more complexity. I'm not picking up much yeast, and it seems to be a tad on the side of reduction as well.

Mawby: Fresh, clean fruit aromas with no apparent yeast. It has a soft, rounded mousse and soft fruit flavors. Youthful, clean fruit. Very nicely made.

Urberg: I get all kinds of tropical fruit: peach, honeysuckle, tropical character. In the mouth, I get banana character, along with the peach, and it continues all the way to the finish with that tropical fruit. It has moderate body and a clean finish. It may be a bit toward the dose side rather than the crisp side.

Inman: I get pineapple and banana without a strong yeasty character on the nose. I wouldn't have guessed it was Chardonnay.

Thompson: I get more floral, green apple focus. It tastes like a sour apple Jolly Rancher.

L. Mawby

NV L. MAWBY TALISMØN, 11% ALC., 300 CASES, \$37, 33% PINOT NOIR, 25% CHARDONNAY, 38% VIGNOLES, 2% PINOT GRIS

Larry Mawby grew up in Michigan as part of a farming family. While studying for an English degree at **Michigan State University**, Mawby hitchhiked through Europe one summer and developed a liking for French wines. Returning home, he went into the family business but decided to try his hand at grape growing and winemaking on the side. One of the first to plant in the area in 1973, he doggedly worked at learning which varieties would work, and by 1984 he tried making sparkling wines. Since 2000, he has made sparkling wines exclusively. Larry Mawby is one of the true winemaking pioneers of Leelanau Peninsula.

According to Mawby:

“With this Talismøn wine, I am less interested in trying to achieve a style and more focused on discovering what my Talismøn Vineyard is trying to say. Talismøn is a single-vineyard, field-blend sparkling wine. I want the fruit to lose its green flavors and get varietal character without being too fruity.

“Talimøn is a blend of 38 percent Vignoles, 32 percent Pinot Noir, 25 percent Chardonnay and a tiny bit of Pinot Gris and Pinot Meunier. The vineyard sits at a 600 foot elevation with sandy loam soils. Rootstock is a mix of 3309 and own-rooted stock. The clones are unknown. We farm sustainably and dry-farm.



“Because of all the winter snow, the vines have double trunks and a spare cane near the ground that we use as insurance in case of a freeze. Vines are low to the ground to benefit from reflected heat. The top wire is 5 feet and the fruit zone is between 24 and 30 inches. Vines are low vigor and require neither fruit-drop nor leaf-pulling. We spread compost from the pomace through the vineyard, and that’s it. Production is 2.5 to 3 tons per acre.

“Because Talismøn is a field blend, I’m always waiting for the Vignoles to mature because it ripens the most slowly. As soon as it loses that green character and approaches some mature flavor, we pick the vineyard, hoping that the other varieties are not too mature. It’s usually not an issue because, while we pick in late September or early October, we are already losing heat and light so the fruit matures slowly. That gives us a better window for picking.

“We sort in the vineyard, hand-pick and whole-cluster press. Talismøn is 100 percent cuvée portion. Juice settles in the belon (under the press) for

30 to 40 minutes, and then gets racked to a stainless steel tank where 50 ppm SO₂ is added. The juice sits overnight at 55° F to 60° F. We rack again then add DV10 yeast and Fermaid K. We are looking for a clean, neutral fermentation with no VA or H₂S, and want to preserve what varietal character we have. A couple of days into fermentation we add our reserve wine, which makes up about 30 percent of the total and is a kind of Solera blend of previous vintages. The wine ferments at 68° F for about two weeks. We cold stabilize after seeding the tank, keeping wine at 28° F for two weeks. Then we polish-filter at 1.2 microns around the end of December. Finally, we pull about 500 gallons and put it back into our reserve tank for the following year.

“We add clarificant S, solution ST and 24 g/liter of sugar, along with CHP yeast and a touch of Fermaid. This second fermentation lasts four years and is carried out at 60° F to 62° F. Again, we are looking for clean, complete fermentation with no H₂S or VA. After aging on the yeast for four years, we riddle for three days on a gyropalette. We disgorge à la volée then dosage with 6g/liter sugar in H₂O with 20 ppm SO₂. The wine gets three to six months’ bottle aging before release.”



TASTING NOTES

Mawby: There is an aged wine bouquet and a bit of edge to the nose, probably from the Vignoles. It has a soft rounded mousse with yeasty notes beneath aged fruit flavors. There are some older complex, layered flavors and bouquet with a firm acidic backbone. With time there is a cola note in the nose and a bit of oak poking through.

Grieb: I get an earthy quality right off the bat, opening up to a bit of cidery apple. There is not much in the way of citrus. There is a nice steely finish with bright acid. There is almost a tropical, almost pineapple component.

Gadd-Coster: I’m having trouble with the nose. I ask myself, “What is it?” There is a lot of weight but not a lot of fruit flavor. There is some guava, with a fusel note, almost like some French Champagne.

Evans: There is some reduction on the nose, but this has some of that minerality that is pretty classic. I can’t put my finger on the fruit; I wouldn’t call it apple or citrus. But I think where things go sideways for me is in the mouth. It is all elbows, with sweet and sour acidity, almost like high VA.

Tiburzi: It is not a real descriptive fruit; it is more like quince or stone fruit, but it is not real fruity. It is very concentrated on the palate. It is full, structured. There is a little bit of reductiveness. It is an uneven palate, very Pinot Blanc-like. It doesn’t have Chardonnay flavor, but it has that mouth-filling creaminess.

Munksgard: Consistent bubble evolution although not as tiny as I’m used to seeing. Pretty color and a fruit-focused wine. I get melon and citrus quality with a nice sugar/acid balance in the mouth with a relatively clean finish.

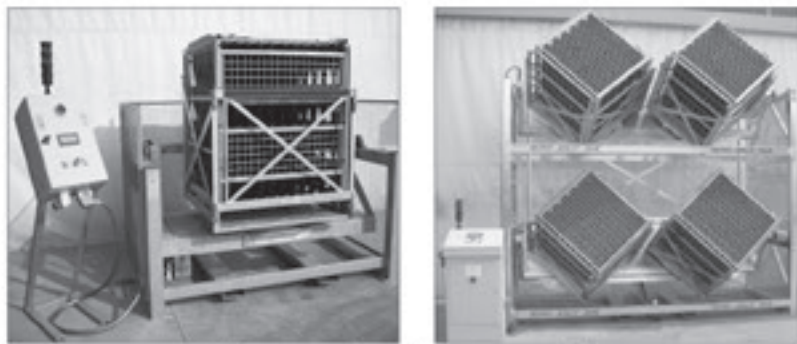
Thompson: I got some stone fruit and more of the savory salt character. It reminds me of a French style, but it is hard to get much fruit past the acid.

Urberg: I get a real herbal nose that continues into the mouth. I get black fruit and some stone fruit coming through. It is very crisp with a crisp red apple finish.

Inman: I get a straw herbal character with grapefruit and lemon in the nose. I think they are repeated on the palate, along with some nectarine stone fruit. It has nice high acid, very refreshing, but not super complex.

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WINERY	Treveri Cellars	L. Mawby	Breathless Wines
Wine	NV Blanc de Blancs Brut	NV L. Mawby Talismøn	NV Breathless Brut
Blend	100% Chardonnay	38% Vignoles, 33% Pinot Noir, 25% Chardonnay, 2% Pinot Gris, 2% Pinot Meunier	Pinot Noir, Chardonnay, Pinot Meunier
Winemaker	Jürgen and Christian Grieb	Larry Mawby	Penelope Gadd-Coster
Style Goals	Elegance and finesse of typical Blanc de Blancs with notes of green apple and citrus. Small bubbles to provide mousse feel and complex palate while still maintaining some simplicity and approachability.	Looking for the sustained voice of my Talismøn Vineyard.	Elegance of French style with the wonderful fruit of California.
AVA	70% Yakima Valley, 30% Columbia Valley	Leelanau Peninsula	Sonoma County
Vineyard	Various	Talismøn	Various
VINEYARD DATA			
Predominant Geology (Soil Type)	Warden silt loam	Sandy loam	Alluvial, sandy loam
Elevation	1,200 feet	600 feet	Sea level
Rootstock	Own-rooted vines	3309 and own-rooted	Mixed
Clones	Walter Clore Prosser clone	Unknown	Mixed
Irrigation or Dry-farmed	Drip irrigation	Dry-farmed	Irrigated
Farming (Organic, Biodynamic, Traditional)	Traditional	Sustainable	Traditional
Production	4 to 5 tons per acre	2.5 to 3 tons per acre	4 to 5 tons per acre
Vineyard Practices	Minimal leaf pulling to maintain shade; Heavier crop to slow ripening and maintain acid	Double trunk vines, low fruit zone, no leaf pulling, part spur on ground as frost insurance	Two clusters per shoot, drop second crop, minimum leaf pull
WINEMAKING DATA			
When to Pick	Watch Brix so alcohol in wine remains in reason; Go by taste looking for balanced fruit; Will pick some lots low Brix and others high to balance wine	Wait for Vignoles to lose enough acid to pick and hope the other varieties will still work; Field blend	Pick Pinot with slight fruit flavor when it tastes barely of strawberry; Wait for Chardonnay to lose green flavor and change to citrus of lime and pink grapefruit
SO₂	30 ppm to press pan; 15 ppm after racking, before fermentation	50 ppm at settling	30 ppm after primary fermentation finishes
Crush Format	Machine- and hand-picked, direct pressed	Hand-picked and whole-cluster pressed	Hand- and machine-picked, whole-cluster pressed
Settle	48 hours at 50° F	Settle gross lees in belon under press, then overnight at 55° F to 60° F	24 hours at 50° F; Leave some solids
Yeast	PDM base cuvée, IOC18-2007 secondary	DV10	EC1118-PDM
Fermentation Temperature	58° F to 60° F	68° F	55° F
Fermentation Technique	Normal	Add reserve wine 2 days into fermentation	Normal
Nutrients	DAP	Fermaid K early in fermentation	Fermaid O at start of fermentation
Blending Cuvée	Components that complement one another without taking anything away from each other	For this wine, it is done in the vineyard	Flavor balance with acid that highlights fruit
Cold Stability	Chill in tank on lees	Seed and chill to 28° F	Traditional with KHT before tirage
Heat Stability	Bentonite at settling and after fermentation, as needed	None	None
Adjuvants and Sugar Addition	Riddling aid and 20g/L sugar	Clarificant S, Solution ST, 24 g/L sugar	Adjuvant 83 and cane sugar
Second Fermentation Time and Temperature	4 to 6 weeks at 60° F	Whatever it takes at cellar temperature: 60° F to 62° F	60 days at 55° F
Time for Lees Aging	24 months minimum	4 years	16 months
Riddling Time	7 days by gyropalette	3 days by gyropalette	5 days
Dosage	A house secret, using base wine and sugar	6g/L sugar in water with 20 ppm SO ₂	Sugar and water; Sometimes wine, sometimes grape concentrate
Bottle Age Before Release	3 months	3 to 6 months	16 months

WINERY	Iron Horse Vineyards	Inman Family Wines	Domaine Chandon
Wine	2010 Classic Vintage Brut	2012 Brut Rosé	2009 Vintage Yountville Brut
Blend	69% Pinot Noir, 31% Chardonnay	100% Estate Pinot Noir	74% Pinot Noir, 36% Chardonnay
Winemaker	David Munksgard	Kathleen Inman	Tom Tiburzi
Style Goals	Looking for the perfect balance by nose and mouth of fruit, aged tones and autolyzed yeast, with pinpoint bubbles. Decidedly dry, but rich and creamy.	Create a classic Brut Rosé that has balanced acidity and represents the Olivet Grange Vineyard.	Try to show vintage effects on the Yountville Ranch site with a blend dominated by Pinot Noir for red fruit, structure and weight, with Chardonnay contributing front palate fruitiness, creamy mouthfeel and elegance.
AVA	Green Valley, Russian River Valley	Russian River Valley, Sonoma County	Yountville, Napa Valley
Vineyard	Various	Olivet Grange Vineyard	Yountville Ranch
VINEYARD DATA			
Predominant Geology (Soil Type)	Gold Ridge sandy loam	Sandy loam with gravel in all profiles	Moderately fertile gravelly silt loam and rocky/gravelly alluvium
Elevation	170 feet	90 feet	125 to 225 feet
Rootstock	420-A, Riparia, 101-14, 110R	101-14 and 420A	Pinot on 110R, Chardonnay on 5C
Clones	Pinot 13, 777, 115, 667; Chardonnay 4, Rued, CHW-6, AH-96, AH-75	PN 114, 115, 777, 667	Moet-Hennessy clone for Pinot; UCD 4 clone for Chardonnay
Irrigation or Dry-farmed	Drip irrigated as needed	Dry-farm except for fertigation with organic teas	Drip irrigation
Farming (Organic, Biodynamic, Traditional)	Traditional	Organic	Sustainable with Fish Friendly/Napa Green Certification
Production	2 to 5 tons per acre, depending on vine health	Target 6 pounds per vine	Pinot: 3.4 tons per acre; Chardonnay: 7 tons per acre
Vineyard Practices	Shoot thin and cluster thin by shoot length and strength; Green fruit drop, leaf pull as needed	No leaf removal, only lateral shoots; No fruit drop, except wings	Pinot Noir on horizontal cordons with VSP, thin to 2 shoots per position, leaf thin on sunset side; Chardonnay is horizontal cordons thinned to 2 to 3 shoots per position
WINEMAKING DATA			
When to Pick	Based on color of Pinot, Brix and taste; Wait for flavor to change from Sweet Tart to berry; Wait for Chardonnay to shift from grapefruit to tangerine	According to flavor, look and feel; Look for cranberry character to move toward strawberry	Optimize for 18° to 20° Brix, pH 3.0 to 3.25, TA 9 to 12 g/L; Like green flavor absent from fruit, before significant color bleeds from skins when squeezed between fingers for Pinot Noir
SO₂	20 ppm for low-pressure fraction; 30 ppm for high-pressure fraction	None until primary fermentation completes	To 0.8 molecular post-primary, then maintained between 13 ppm to 21 ppm
Crush Format	Hand-picked and whole-cluster pressed	Hand-picked and whole-cluster pressed	Hand-picked and whole-cluster pressed
Settle	Settle for 24 hours at 45° F	Settled 36 hours, then racked to fermentor	24 to 36 hours at 60° F
Yeast	EC1118	Quartz for primary; PDM for secondary	DV-10
Fermentation Temperature	60° F to 65° F	51° F until 2° Brix, then turn off cooling to finish	62° F
Fermentation Technique	Start a bit warmer, then go to temperature and turn off chiller at 2° Brix	Normal	To mitigate reduction we will use DAP above 5° Brix or macro-oxygenation at end of fermentation
Nutrients	Go Ferm to yeast hydration. Fermaid and DAP when 5° to 10° Brix depleted	Fermaid O at start of primary and at 10° Brix; Bit of DAP for secondary	Aids to juice before primary, as needed, along with DAP, sometimes Dry Yeast Extract
Blending Cuvée	Looking for lots that are neither too austere nor too fruity; Looking for red fruit to balance the citrus	Blending for aromatics, structure, texture and balance limited by single-vineyard winemaking	Look for harmonious round palate structure, vibrant acidity, complementary fruit flavors with broader palate structure and riper fruit flavors
Cold Stability	Chill at 25° F and seed with cream of tartar	Chilling in tank	Electro-dialysis after blending and cross-flow filtration
Heat Stability	None, except in riddling aids	None until primary fermentation completes	0.01 Kg/hL at primary fermentation
Adjuvants and Sugar Addition	Sugar before bottling day; Yeast added 24 hours before bottling; Adjuvants added day of bottling	Adjuvant 83, sugar mixed in wine; 3 percent barrel-aged Pinot finished ML; PDM and a bit of DAP	Adjuvant 92, plus 24 g/L sugar, proprietary yeast and some DAP
Second Fermentation Time and Temperature	3 to 6 weeks at 63° F	About 3 months at cellar temperature	About 2 months at 50° F to 55° F
Time for Lees Aging	3.5 to 4 years	22 months	3 years
Riddling Time	1 week in machine riddler, additional agitation when needed	4 day cycle by machine	5 days by VLM
Dosage	Use Chardonnay and Pinot Noir syrups, some still Pinot Noir; No SO ₂	0.8 g/L sugar dissolved in wine, not water	75% Chardonnay, 25% Pinot Noir, 540 g/L sugar liqueur
Bottle Age Before Release	N/A	3 months	3 months

WINERY	Domaine Carneros	Gloria Ferrer Caves & Vineyards	Schramsberg Vineyards
Wine	2011 Brut Rosé	2006 Royal Cuvée Brut	2006 J. Schram
Blend	60% Pinot Noir, 40% Chardonnay	67% Pinot Noir, 33% Chardonnay	87% Chardonnay, 13% Pinot Noir
Winemaker	Eileen Crane	Steven Urberg	Hugh Davies
Style Goals	A Rosé that is elegant, ethereal and delicate. Texture is paramount, looking for a seamless, creamy, transparent dry wine with a suggestion of fruit.	We like this wine to show good yeast aging, along with that toasty brioche character while retaining youthful fruit. We like some red fruit from the Pinot, along with citrus from the Chardonnay.	We want focused wines with driving acidic structure to allow for extended aging, both on tirage and post disgorging. We want rich flavors with 40 percent barrel-fermented wines, along with malolactic.
AVA	Carneros	Carneros, Sonoma	North Coast
Vineyard	Estate-grown	Various	100 vineyard sites
VINEYARD DATA			
Predominant Geology (Soil Type)	Clay loam	Varied with clay loam and a variety of gravelly loam	Varies by vineyard
Elevation	20 to 100 feet	50 to 325 feet	Sea level to 1,250 feet
Rootstock	101-14, 3309, St. George	5C, 110R, 101-14, 1103P, 3309C	Varies by vineyard
Clones	UCD 4, UCD 5, Martini, Madonna and 115	Pinot Noir: Martini. Wente, UCD 32, Wadenswil 2A, Colmar 538; Chardonnay 5	Varies by vineyard
Irrigation or Dry-farmed	Drip irrigation	Irrigation	Both
Farming (Organic, Biodynamic, Traditional)	Traditional	Traditional/sustainable	All types
Production	6 tons per acre	3 to 5 tons per acre	Varies by vineyard
Vineyard Practices	Balance crop load to vigor of site and vintage	Light suckering and mechanical leaf pull to open up the vine; Will cut some canes in vigorous blocks	Leaf pull
WINEMAKING DATA			
When to Pick	Flavor development, chemistry, vine status and logistics	Based on analysis with attention to pH; Between 17° and 19° Brix, pH around 3.0, and acids around 1; Final call is taste	Look for various Brix levels at harvest to allow more flavor profiles for winery; Earlier picks for acidic backbone with later picks for complexity
SO₂	20 ppm to 25 ppm after 36 hours	25 ppm after juice is racked, another 30 ppm at dryness	10 ppm to 15 ppm post-fermentation only
Crush Format	Hand-picked and whole-cluster pressed	Hand-picked and whole-cluster pressed	Hand-picked and whole-cluster pressed
Settle	Settle 12 to 24 hours at 50° F	Settle for 8 to 12 hours	Settle for 24 hours at 45° F
Yeast	EC1118	EC1118	EC1118; trials with others
Fermentation Temperature	60° F	55° F to 60° F	58° F to 62° F in tanks; ambient temperature in barrels
Fermentation Technique	Rare	Normal	Normal
Nutrients	Fermaid O	Superfood at inoculation	DAP and Fermaid K post inoculation
Blending Cuvée	Fine-grained texture; clarity and delicacy of fruit	More phenolic structure and low pH for the long haul	The very best of lots based on acidic structure, flavor profiles, fruit intensity and mouthfeel
Cold Stability	Seeded and chilled	Seeded with KHT and chilled in tanks	Chill in tanks
Heat Stability	Post-primary, pre-blend	Bentonite to individual base wines before blending	At end of primary fermentation
Adjuvants and Sugar Addition	Bentonite riddling aids, 23 g/L sugar, proprietary yeast	Clarificant S, 26 g/L tirage liqueur, DAP and proprietary yeast	2.4 percent sugar, phosphate mazure, Clarificant S, Solution ST, yeast and bit of DAP
Second Fermentation Time and Temperature	Time varies, 50° F to 55° F	About 2 months to go dry at 58° F to 60° F	2 to 6 weeks at 55° F to 60° F (cave temperature)
Time for Lees Aging	3 years	7 years on yeast	6 to 7 years on yeast
Riddling Time	4 to 7 days	Few days mechanical riddling	8 weeks by hand riddling
Dosage	8 g/L cane sugar	Cane sugar with same wine used in the blend	1.2 g/L sugar mixed equally with wine
Bottle Age Before Release	Minimum 3 months, often 6 to 9 months	Minimum 6 months	Minimum 6 months

Breathless Wines

NV BREATHLESS BRUT, 12.5% ALC., 1,000 CASES, \$25,
CHARDONNAY, PINOT NOIR, PINOT MEUNIER

In 1986, **Penny Gadd-Coster** landed a job as crush help at **Jordan Vineyard & Winery**, which led to a 13-year stint there. In 1999, she was hired as the assistant winemaker for **J Sparkling Wine**, eventually working her way up to sparkling winemaker. In 2007, Gadd-Coster left J to be winemaker for **Rack & Riddle Custom Wine Services**. She was named “Winemaker of the Year” in 2013, honoring her significant contributions to winemaking. She also has her own brand called Coral Mustang, focused on Tempranillo wines.

According to Gadd-Coster:

“We are trying to produce a wine in the elegant French style while bringing out the wonderful fruit flavors we can achieve in California. This wine is a blend of about 60 percent Pinot Noir and Chardonnay with a touch of Pinot Meunier. The vineyards are at sea level and on alluvial sandy soils, with a mix of clones and rootstocks. The vineyards are irrigated and traditionally farmed. We run two clusters per shoot, drop second crop and leaf pull. We keep spraying to a minimum. Production runs 4 to 5 tons per acre.

“We determine when to pick by taste. For the Pinot Noir I am looking for a slight amount of fruit flavor to develop—when it tastes barely of strawberry. We wait for the Chardonnay to lose some of its green apple character and turn to citrus of lime and pink grapefruit. Grapes come in early and clean, so sorting is not necessary. Grapes are both hand- and machine-picked and then go directly to the press. The goal is to be as natural as possible without manipulation and let the fruit work for us. We allow the grapes to sit in the press before actually pressing. Press cuts are made by taste. We want some tannin for structure, but not too much.



BREATHLESS WINES



“We settle for 24 hours at 50° F and we like to leave some solids. Acid additions are usually not needed. We add Fermaid O at the start of fermentation and use EC1118-PDM yeast because we like the enhanced fruitiness and floral character it gives us. Primary fermentation is carried out at 50° F to 55° F. Most years, we add 30 ppm SO₂ after primary fermentation.

“When making our blends, we look for flavor balance with enough acid to highlight the fruit. We cold stabilize traditionally with KHT seeding before tirage, but we do not heat stabilize. We add Adjuvant 83 and cane sugar and use the same prise de mousse yeast for the second fermentation, but we want that yeast to be in the stationary growth phase. Fermentation takes about 60 days and is carried out at 55° F. We’ll tirage for 16 months, then riddle for five days. Dosage changes depending on the year but is generally sugar and water, although it can be wine or grape concentrate. Breathless receives 16 months cork aging before release.”



TASTING NOTES

Gadd-Coster: I'm getting some peach out of this, which is a surprise. I get white peach, a bit of cherry berry, a little watermelon and rose petal, but then some green apple and lime. There is some light spice, almost like nutmeg. I'm getting a hint of earthy, yeasty brioche bread. It has a nice, creamy finish.

Grieb: There is a nice, mushroom patch earthiness to this, along with the peach and a hint of strawberry and cherry. It is very fun and bright, and on the palate I get a good candy flavor. There is also a bit of apple blossom that is very delicious.

Evans: This wine is fun. It presents more like a Blanc de Noir, and the Pinot Meunier really expresses itself. I get orange blossom and potpourri. In the mouth there is a savoriness to it, like when spice meets earth, but there is a wonderful delicate extract in the mouth that resolves really clearly. You get the tannin along with the jammy sweetness of a Fruit Roll-up.

Mawby: Rose color with clean fruit aromas from the Pinot Noir. No apparent yeast. There is some sweetish fruit, a soft nice mousse and simple round fruit in the mouth. It is youthful, but the acid is too low for my taste.

Tiburzi: The aromas and flavors to me are more like stone fruit, nectarine and plum. I get quite a bit of brown spice and orange blossom with lemon-lime flavor. There is this toastiness and cooked apple in there that reminds me of apple tart because of the brown spice.

Munksgard: Red fruit, citrus and herbal tones. I get a lot of focus on age by nose and by mouth, along with an attractive toasted orange zest, almost as if you were making crepe suzettes. There is a sweet, tart kind of finish, as if the wine had a bit too much acid so they adjusted with dosage. I like the wine.

Urberg: I get dried strawberries, dried cherries and orange zest, along with some herbal tomato character. In the mouth there are dry strawberries with orange zest. It is crisp, finishing with strawberry, and is nicely balanced.

Thompson: There is some orange citrus and stone fruit, along with that tomato vine, herbal character. There is a lot of fruit and some peach fuzz in the finish that seems almost fluffy. It is nice wine.

Inman: It has dried red fruit with peach, passion fruit and citrus peel on the nose. The nose reflects the taste with those same fruit components, along with a zesty finish.

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Iron Horse Vineyards

2010 CLASSIC VINTAGE BRUT, 13.5% ALC., 3,555 CASES, \$42,
69% PINOT NOIR, 31% CHARDONNAY

David Munksgard graduated from the enology/viticulture program at **California State University, Fresno**. He had 16 years of experience producing both sparkling and still wine in California's Russian River Valley and New York's Finger Lakes region before joining **Iron Horse Vineyards** in 1996, where he is the winemaker.

According to Munksgard:

"We are trying to make a sparkling wine in the classic French style that shows a perfect balance between fruit, yeast and age tones. This is a blend of Pinot Noir and Chardonnay that has three years aging on the yeast. We look to balance the fruit with the yeast and have small, pinpoint bubbles that rise to form a layer of cap foam. We want a wine, though it might be five years old, that is quite vibrant and youthful.

"We harvest grapes from several different vineyards, and wine style drives our picking choices. Our vineyards have Gold Ridge sandy loam soils and sit around 170 feet in elevation. Pinot Noir clones are 13, 777, 115 and 667. Chardonnay clones are 4, Rued, CHW-6, AH-96 and AH-75. They are distributed among 420-A, Riparia, 101-14 and 110R rootstocks. We farm traditionally, using irrigation as needed, and crop size varies between 2 and 5 tons per acre, depending on the health of the vines. We shoot thin, cluster thin by shoot length and strength, drop green fruit and leaf pull as needed.

"We pick based on the color of the Pinot Noir, Brix and taste. We are trying to get the clusters to ripen evenly. We want all of the Pinot Noir grapes to



be fully colored, and we want the flavor to change from Sweet Tart to berry. In the Chardonnay we wait for a flavor change from Sweet Tart to more citrus, like grapefruit or tangerine. At this point we would see no more vine growth and leaves in the fruit zone would start dropping.

"We pick by hand at first sun, sorting as we go. Grapes are dumped into half-ton bins. Because we are 100 percent estate-grown, grapes arrive within an hour of being picked. The cool temperatures help keep coloration to a minimum. Grapes are whole-cluster pressed in a 3½-hour press cycle. We add 20 ppm SO₂ to the low pressure fraction in the juice pan and 30 ppm to the high pressure fraction. We make our press cuts based on time and juice color. Usually, the low pressure cut is made after 80 minutes with a max of 1.0 bar and the high pressure cut gets another 25 minutes with 1.8 bar max.

"Juice is settled for two days at 45° F to clear visually. We will add Go Ferm at yeast hydration using EC1118. Then we add Fermaid and DAP at 5 to 10 Brix depleted. We use no bentonite. Fermentation starts at 68° F. Once active, I will drop the temperature between 62° F and 65° F. We turn off the chilling at 2 Brix until dry. After fermentation, we chill down to 50° F, adjust the free SO₂ to 0.8 molecular and leave the wine on lees until January.

"We blend in late January or February. For this wine I chose lots of Pinot Noir and Chardonnay that were not too austere or too fruity. Generally, I need more Pinot Noir in the cooler years to bring more of the red fruit tones to offset the citrus character of the Chardonnay. We rough filter with DE. We cold stabilize by chilling the wine to 25° F and seeding with 10 pounds per 1,000 gallons cream of tartar. We do no heat stability. After cold stability, the wine is tight-pad filtered.

"For the second fermentation, sugar is added before bottling day. We use the same EC1118 yeast which is added 24 hours before bottling day, and adjuvants are added the day of bottling. We bottle in spring, and fermentation takes three to six weeks at 63° F. The wine gets 3½ to 4 years bottle aging. It gets a week in a machine riddler. The dosage changes every year, but for this wine we used 5 mls of Brut LEX syrup, 5 mls of Blanc de Blanc LEX syrup and 2 mls of Thomas Road barrel-fermented Pinot Noir red wine. We use only cane sugar in the LEX. No SO₂ is added at dosing."





TASTING NOTES

Munksgard: Visually, it had nice tiny bubbles and a nice foam ring around the edge, which we look for. The color is more golden. By nose I get very, very ripe apples and ripe pear as well, along with baked apple. I also get an herbal tone, probably from aldehydes, which is appropriate for this wine as well. The yeast comes through nicely without dominating the wine. In the mouth the wine is still brisk with a nice level of acidity, without being sharp. In the mouth I get ripe apple and a bit of marmalade with a long, pleasant finish.

Thompson: In the aromatics I get orange peel, cherries, Bananas Foster and a bit of ice cream. There is baked apple, but for me the finish comes up a bit short and seems a little more phenolic. There is a lot of fruit.

Inman: I liked the fine bubbles, and the rose/gold tint was pretty. I get a sort of green fig, melon and golden delicious apples with a floral note on the nose. On the palate I got nice ripe apples, a little bit of cherry and a tiny golden raspberry character with a very nice weight. I got an herbal note on the finish that reminds me of thyme.

Urberg: On the nose I got tangerine and peach and some honey. In the mouth it opened up with baked apple and grapefruit citrus and a lot of peach coming through the whole thing. Mouthfeel is substantial with good acid balance and tannin. It is balanced toward the crisp side and extends into the finish.

Evans: I thought this wine had a beautiful nose to it and a really nice beading to it. Right away on the mouth I get red fruits; I'm getting bits of cherry and raspberry. The nose is amazing, beautiful. There is even a hint of coconut, which makes me wonder if there is a touch of barrel ferment in here.

Grieb: I'm almost getting a cracked white pepper. There is a rich spice to it. It has great acidity. It is pretty wine.

Tiburzi: I get a lot of red cherries, raspberry and strawberry, a lot of red fruit, and it is very complex. There is a citrus element, more of a grapefruit for me in the middle palate. There is a little bit of a phenolic finish that gives it a bit of grip. I don't get a lot of yeastiness; I get a bit of fresh yeast in the nose.

Gadd-Coster: I got a little bit of that coconut and even a bit of strawberry, which is hard to imagine when you look at the color, which is really beautiful, very pale. I get a bit of tea character, which may be that phenolic element you talk about.

Inman Family Wines

2012 BRUT ROSÉ, 12% ALC., 309 CASES, \$56, 100% PINOT NOIR

Kathleen Inman was born and raised in the Napa Valley where she was first introduced to wine culture. She moved to England, married and lived there for 16 years before returning to California. She moved to Russian River Valley and planted 10 acres of her **Olivet Grange Vineyard** in 2000. A small, first vintage followed in 2002. By 2010 she had opened **Inman Family Winery**, constructed of almost all recycled materials. In 2012 she won the Rising Star Winemaker Award from **Women for Wine Sense**.

According to Inman:

“My goal is to create a classic brut Rosé that has elegance, balanced acidity and that represents both the traditions of méthode champenoise and Olivet Grange Vineyard’s Pinot Noir. This wine is made from 100 percent Pinot Noir that comes from our Estate vineyard. Soils are sandy loam with gravel in all profiles. The elevation is 90 feet and we farm organically. We have Pinot Noir clones 114, 115, 777 and 667 planted to 101-14 and 420A rootstock. The vineyard is dry-farmed except for fertigation of compost teas. In the vineyard, we do no leaf removal or fruit drop, but we will remove lateral shoots.

“We select specific rows for our sparkling wine, usually featuring the early ripening clones because I prefer those flavors. Our target for those rows is 6 pounds per vine. We manicure the vines, using secateurs to remove second crop and damaged clusters. We like tight clusters and we look for cranberry flavors to turn towards strawberry before picking. We hand-pick into half-ton bins, getting the grapes to the winery before 9 a.m. Grapes are whole-cluster pressed with free run juice going to the cuvée. The cuvée, first and second cuts are fermented separately. Hard press and unused tailles after blending are thrown away.

“We use no SO₂ at the press. The wine is settled for 36 hours and kept at 52° F to 54° F. We rack to a fermentor and begin fermentation using Quartz yeast, which gives us consistent tiny bubbles. We add Fermaid O at the start of primary and again at 10 Brix. Fermentation is carried out at 51° F until 2° Brix when we shut off the cooling to finish the fermentation. We settle the wine for two to three months on the lees before making our blend. I look for aromatics, structure and overall texture and balance, but this is a single-vineyard sparkling wine made from one pick and one press. SO₂ is added after primary fermentation.

“We cold stabilize, but do not heat stabilize. Then the wine is cross-flow filtered. We add Adjuvant 83, sugar mixed into the base wine, and we tint with about 3 percent of barrel aged, ML complete Pinot Noir from the previous vintage. This tinting helps reduce bitterness or phenolics that could come from fermenting with color in the primary, and it adds texture along with Pinot Noir character. We add PDM yeast along with a bit of DAP. Second fermentation takes about three months. Then the wine receives 22 months of aging on the lees. A four-day mechanical riddling cycle is followed by disgorging. Dosage is 0.8 g/L sugar dissolved in wine, not water. The wine receives three months bottle age before release.”



TASTING NOTES

Inman: The color is a pale salmon pink, and on the nose I get mandarin orange and tangerine citrus, dried and fresh strawberry, tart cherry and brioche. On the palate: strawberry, watermelon, a hint of raspberry and mineral. It has a nice, long finish and I like the small bead that it has.

Urberg: At first I got citrus zest and herbal bramble, but the nose has since opened up with dried strawberry. Tasting, it was all big strawberry, watermelon and cranberry with an herbal brambly edge to it and a creaminess. It is big and fruity in the mouth, yet crisp. It has moderate body from the tannins, and finishes off nice, clean and crisp with big, ripe fruit.

Munksgard: I love this wine. I like the way it looks in the glass, a very pretty pink with tiny bubble evolution. The salmon color is very attractive. By nose I got a lot of stone fruit nectarine, peach tones and a bit of watermelon, with raspberry and citrus elements: all the bright things I can think of that I like in a Rosé sparkling wine. It is balanced on the crisp side of the spectrum. It would be a great summer afternoon wine to share with friends.

Thompson: It is great wine. Raspberry, strawberry, fresh bread, a little peach yogurt, more apricots and stone fruit, strawberry and watermelon. It has great acidity. It is fresh and bright and what a Rosé should be.

Gadd-Coster: I like this. I think there is a definite elegance to it with a nice balance. It has a drier dosage. I get strawberry and a bit of rhubarb. It is very clean. Maybe not real complex, but very nice, clean and fresh. Really pretty.

Mawby: Rose color with clean Pinot aromas. It has good mousse with soft rounded fruit. It is clean, very well made and is an attractive soft Rosé. With time, it firms up, and the Pinot character is more pronounced.

Grieb: There is a nice watermelon, strawberry character with a lot of red fruit. It is a fun wine, very bright. It is light and airy with some rose petal. Nice and crisp mouth feel to it with a nice round palate.

Tiburzi: Red apples, strawberry, crisp even structure. There is little complexity, but it is elegant. It is not a big wine.

Evans: I get red fruit, strawberry, rhubarb, cranberry and fresh fig, kind of a green fig. The nose is promising. The color is 100 percent correct. I love that pale onion skin color. The mouth is a little monochromatic. I get a sort of Jolly Rancher watermelon candy with cotton candy, so the palate doesn't really deliver what the nose set me up for. There is a nice balance there.

Domaine Chandon

2009 VINTAGE YOUNTVILLE BRUT, 12.5% ALC., 1,040 CASES, \$45, 74% PINOT NOIR, 36% CHARDONNAY

Tom Tiburzi started at **Domaine Chandon** in 1989, running experimental trials for the winery. He moved into the laboratory, then assistant and associate winemaking jobs before being promoted to winemaker in charge of all sparkling wine production in 2005.

According to Tiburzi:

“It was our intent with this wine to show the effects of vintage on our Yountville Ranch site. The blend is dominated by 74 percent Pinot Noir for red fruit, structure and weight and has 36 percent Chardonnay for front palate fruitiness, mouthfeel and elegance. This 2009 vintage was relatively cool and gave us more acid brightness. For sur lie aging, we gave the wine three years to obtain a creamy mouthfeel and some toasted hazelnut to toasted bread aromas.

“This Yountville Vineyard is composed of moderately fertile gravelly silt loam and rocky, gravelly alluvium. Elevation runs between 125 feet up to 225 feet. The Pinot Noir is Moet-Hennessey clone on 110R rootstock, while the Chardonnay is UCD Clone 4 on 5C rootstock. The drip-irrigated vineyard is farmed sustainably and has earned Fish Friendly and Napa Green Certification.



“The Pinot Noir is on horizontal cordons with vertical shoot positioning. We thin to two shoots per position with light leaf thinning on the sunrise side to open up the canopy for better air circulation because we often have overcast mornings. We want more covered canopy on the sunset side to protect the clusters from developing color and tannin from the direct afternoon sunlight. The Chardonnay is grown with California sprawl and is thinned to two to three shoots per position. We try to minimize color development. We will remove laterals and we want no leaves touching the bunches, lowering disease pressure with better air circulation. In effect we are going for a tunnel effect in the fruit zone. In 2009 we harvested 3.4 tons per acre on the Pinot Noir and 7 tons per acre on the Chardonnay.

“We pick when the green flavor leaves the fruit, the gelatinous pulp around the seeds liquefies, the seeds start to lignify and before full physiological ripeness so we can maintain low color in the juice. We want Brix to be under 20° and pH around 3.1 to 3.2. We often pick between 10 and 11 g/liter of acid, and we usually find ourselves waiting for the acid to drop into that window.

“We pick early in the season, so we always have plenty of labor. We pick without sorting and whole-cluster press. At the time this blend was made, we would add pectinase and settle the juice for 24 to 36 hours at 60° F. Now we still add the pectinase but centrifuge the juice solids down to 1 percent. The juice oxidized through a screen to decrease color, astringency and bitterness, but now we carefully measure the exact amount of oxygen that the juice needs to react only with the phenolic compounds without damaging aroma or flavor. We run YAN tests to determine nutrient additions, usually DAP and sometimes Dry Yeast Extract, along with .01 Kg/hL of bentonite plus vitamin and mineral supplements.

“For primary fermentation we use DV-10 yeast grown in culture or Premier Cuvée rehydrated to the fermentor. We ferment at 62° F. We will add DAP if above 5° Brix or macro-oxygenation if near the end of fermentation to mitigate any reduction that might appear.

“We blend the cuvée looking for a harmonious, round palate structure, vibrant acidity and complementary fruit flavors. After blending the cuvée, the wine is cross-flow filtered and electro-dialysis is used for cold stabilization. We do not heat stabilize wines receiving more than three years sur lie. We add Adjuvant 92 and 24 g/L of cane sugar. The second fermentation takes about two months and is carried out at 50° F to 55° F. This cuvée aged for three years sur lie. It was riddled for 5 days by VLM (Very Large Machine). The dosage was 75 percent Chardonnay, 25 percent Pinot Noir and 540 g/L of sugar liqueur. It received three months cork time post disgorging before release.”



TASTING NOTES

Tiburzi: On the nose I get notes of baked apple, poached pear, along with brown spiciness and toasted hazelnut. There is some savory marmite. There is a hint of orange blossom citrus. The aromas carry through into the flavors. There is additional coffee and cocoa with a nice firm structure from the Pinot Noir and creaminess from the Chardonnay. In the finish there is a long aftertaste dominated by the yeasty characteristics of marmite and hazelnut, almost like brioche.

Evans: I like this wine. This wine has a great drive and persistence. It is over 70 percent Pinot, but I taste more of the Chardonnay in this wine, and that's where the freshness comes from. I get a lot of green and golden apple with quince paste. When bubbles are made with restraint and honesty, you get the kind of purity presented by this wine. It has great depth and length, and I love the toastiness. There is a hint of gun smoke and saltpeter, which I find alluring.

Grieb: There is a pleasant reduction to this that is not cloying. I like the creamy mid-palate. I can't add to Tom's beautiful description of the wine. I notice the apple characteristic of the Chardonnay, almost baked apple. The acidity is bright but not overpowering. It is very enjoyable and I like it a lot.

Thompson: Celery salt, herbal, ginger snaps and a little phenolic for me. It's a little bitter and could use something to knock off the edges.

Gadd-Coster: The Chardonnay really is the star of the show here. I love the balance on this wine. I love these older Bruts and you don't see them out there too often. It is refreshing to get that nice yeasty, aged note without oxidation. Everything is married together, and it is really a treat to taste this.

Munksgard: I'm getting herbal tones with honey, sugar cookie and wine. I like the style and focus of the wine. It is lean and restrained in style, which I like. In the mouth it is balanced toward crispness and leanness with a relatively long persistent finish.

Urberg: On the nose there is toast and earth. It is full in the mouth with a bigger tannic structure. It has plenty of balanced acid that keeps it crisp. It has a lot of the lees-aged character of toast and brioche, along with some black cherry and green apple. It is a toasty driven style that finishes austere with some mineral and a nice phenolic structure that carries the finish.

Inman: I get the salty, mineral oyster shell aromas and some lime leaves in the nose with some toasty, earthy, brown-bread character. There is some cherry and raspberry. It has a very long finish, and the acid is very high so that it doesn't seem totally in balance to me.



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Domaine Carneros

2011 BRUT ROSÉ, 12% ALC., 4,000 CASES, \$37, 60% PINOT NOIR, 40% CHARDONNAY

T.J. Evans grew up in Northern California. After earning his B.A. at **Amherst College** in Massachusetts, he interned at **Robert Mondavi Winery** and **Far Niente**. He graduated with an M.S. from **UC Davis** in 1997 and then worked in New Zealand at **Villa Maria Estates**. From there he went to France to work at **Domaine Jean-Louis Chave**. Returning to the United States, he worked at **La Crema**, focusing on Pinot Noir and then moved to **Alderbrook**. From 2004 to 2007 he worked in Chile. Since 2008, he has been the Pinot Noir winemaker at **Domaine Carneros** with some responsibilities for sparkling wine as well, especially involvement with the farming of the grapes.

According to Evans:

“The thing I love about Rosé sparkling wine is that it is both tricky and technical to make right. We are trying to make a Rosé that is elegant, ethereal and delicate. Texture is paramount. We want it



to be seamless and creamy, but dry with a suggestion of fruit, not Kool-Aid.

“This wine is 60 percent Pinot Noir and 40 percent Chardonnay. The vineyard is clay loam lying between 20 and 100 feet in elevation. The vineyard is farmed traditionally and has drip irrigation. We have two Pommard clones (UCD 4, 5), Martini, Madonna and 115. They are planted on 101-14, 3309 and St. George rootstock. We try to balance the crop load to vigor, site and vintage. 2011 was a notoriously cool and stingy vintage. We averaged only 3 tons to the acre across the estate blocks.

“We pick based on flavor development, Brix and acid, vine status and logistics. Generally, the Pinot Noir is picked between 18° and 19.5° Brix, while the Chardonnay comes in around 19° to 20° Brix. The grapes are hand-picked at night into quarter-ton bins. They are not sorted, but are whole-cluster pressed. Press cuts are determined by volume. The juice is settled for 12 to 24 hours at 50° F until solids are below 1 percent. We rarely add acid, but we will add Fermaid O at the start of fermentation and again one-third of the way through. We use EC-1118 yeast and ferment at 60° F.

“The Pinot Noir is destemmed but not crushed. For the color component of the blend we do a maceration with grapes that have a slightly higher Brix to help drive the fruit expression. This portion is cold soaked for three to five days at 53° F where we try to gently pull some color and flavor. We use the free run juice and some of the gently pressed juice from this portion to add alcohol, color, flavor and texture to the blend. This saignée portion made up 14 percent of the blend. We also added 2 percent of Pinot Noir still wine. In making the blend we are looking for clarity and delicacy of fruit and fine-grained creamy texture.

“After primary fermentation, the individual lots are heat stabilized. Once the blends are assembled, we cold stabilize traditionally and filter at 0.45 microns. We use bentonite based riddling aids and 23 g/liter of sugar along with our proprietary yeast for the second fermentation. This fermentation is carried out between 55° F and 60° F, and the time varies. The wine sits en tirage for three years. Riddling takes four days, and then the dosage is made using 8g/liter of cane sugar. The wine gets a minimum of three months cork time, but often as much as six to nine months.”



TASTING NOTES

Evans: There are classic signifiers I associate with this wine. It tends to a bit of rose petal, tangerine and a bit of watermelon, and that's what I want, the suggestion of fruit. Even though this was a notoriously cool vintage, I get some black cherry. I get some orange peel character, along with body from the Pinot Noir, but again there is a crispness to the finish that I think comes from the Chardonnay. I think the Chardonnay provides the skeletal structure, the bones, the angularity, the citrus, the brightness. The Pinot Noir gives you the flesh, the plumpness and the creaminess.

Grieb: It reminds me of the juice you get from strawberries when you are making strawberry shortcake, minus the sugar part, but red fruit character. I like the black cherry note. It is not heavy, just hiding in a good way. It has a creamy bubble, and I like the rose petal character in this wine. There is a really nice freshness.

Gadd-Coster: It reminded me of making strawberry jam with my grandmother. It wasn't so intense, but it triggered that memory. It is not over-ripe, but that perfect sweetness of a fresh strawberry. It is really beautiful.

Tiburzi: There is a floral essence on the nose, some rose petal, and I got raspberry and strawberry carried over to the taste. The aftertaste has that black cherry with a creamy mid-palate. It is really elegant wine.

Urberg: I get cinnamon on the nose and entry. Nice spice, along with dried strawberries and dried cherries. There is a lot of fruit. There is a bit of bramble with a big phenolic structure and a lot of acid so it carries on for a long time in the finish. It is on the crisp side, with plenty of acid.

Munksgard: I like the vivid color. In the nose I find raspberry jam, sherry/citrus, along with some baking spices, like you would use for cookies. It has a crisp entry. It is a big Rosé in the mouth. It has a nice, crisp, long finish.

Inman: I thought it had nice yeasty, dried strawberry aromas along with some herbal character and the baking spice. It was nice, perked my appetite. It is big, age-worthy wine. It has a nice balance of acid, tannin and fruit.

Thompson: I get a kind of wax lips character. There is a lot of cherry, but it is a little too much like still wine for me. It is not as light on its feet as it could be. It's too big for a summer Rosé style. It is different from the other wines they've had in the past.

Gloria Ferrer Caves & Vineyards

2006 ROYAL CUVÉE BRUT, 12.5% ALC., 5,000 CASES, \$37,
67% PINOT NOIR, 33% CHARDONNAY

Steven Urberg was working on his Ph.D. in chemistry from **UC Berkeley** when he decided to take some time off. He went to work at **Hess Collection** in 1995 and fell in love with winemaking. He decided to continue his education at **UC Davis**, focusing on winemaking. Urberg has worked at **Gloria Ferrer Caves & Vineyards** since 2001 and was promoted to the winemaker position in 2009.



According to Urberg:

“This wine receives extended yeast aging, and we want that to show, but we still want plenty of youthful fruit. We like to have some of the red fruit of Pinot Noir, along with the citrus and green apple notes of Chardonnay. We look for a wine that has smooth, full mouthfeel rounded with brioche lees character and a bit of honey without being hard or astringent.

“The blend for our Royal Cuvée Brut changes each year, but usually comes from the same vineyards. Our vineyard has several types of clay loam at lower elevations and a variety of gravelly loam on the hillsides, with elevations starting at 50 feet and rising to 325 feet. This blend is 67 percent Pinot Noir from five different clones and 33 percent Chardonnay clone 5. The grapes are grown on five different rootstocks.

“The vineyard is traditionally farmed to be sustainable and has drip irrigation. We do some light suckering and a mechanical leaf pull. Our intent is to open up the vine, but not too much. We will cut some canes in vigorous blocks. Our production varies between 3 and 5 tons per acre.

“Picking decisions are based on analysis with particular attention paid to pH. We like to see sugars between 17° and 19° Brix with pH around 3 and acids around 1. The final call on when to pick is made on taste. We don’t want the grapes too ripe because that leads to more phenolic and fruit flavors that are more suited to still wine than to sparkling wine.

“Grapes are hand-harvested at night without sorting in 30-pound lug boxes and dumped into quarter-ton bins. The grapes are cold and firm and everything is whole-cluster pressed. We want to get the juice away from the skins as soon as possible. Press cuts are determined by volume, but can be made early if we get too much color. We settle for eight to 12 hours and usually have very low solids. We will rack the juice, add 25 ppm SO₂, 1 pound bentonite, 2 pounds Superfood and inoculate with EC1118 yeast. We look for a long slow fermentation carried out between 55° F and 60° F. After fermentation, we rack the wine and fine for heat stability. Then we rack a second time.

“Because this wine spends a long time on lees, we are looking for a blend with more phenolic structure, sufficient acid and low pH. Our Chardonnay provides bright character with the proper tannic/acid structure to stand up to the years of yeast aging without fading. After we have our blend, we’ll cold stabilize in chilled tanks seeded with KHT and then pressure leaf DE filter. We add Clarificant S for riddling, 26 g/L tirage liqueur and some DAP along with our proprietary yeast. We want a clean, simple fermentation. The warehouse temperature keeps the fermentation between 59° F to 60° F, and it usually takes about two months to go completely dry. This wine spent seven years on the lees.

“We mechanically riddled for a few days before disgorging. A dosage was made from cane sugar and a reserve of the same wine that was used in the blend. The wine gets a minimum of six months cork age, but the current vintage now has 18 months of aging on it.”



TASTING NOTES

Urberg: On the nose you get some green apple, along with toasty brioche character and a little bit of dark black cherry in the background. In the mouth it is more red apple and some honey with a bit of Meyer lemon. It has really nice texture. Towards the finish I get an earthy ginger.

Munksgard: Nice evolution of bubbles. Darker gold in color. Very ripe apple on the nose, almost with warm honey and ripe pear. As it warms, the yeasty quality comes through better. This is right on the nose, filling the triangle of fruit, yeast and age. Very well balanced.

Thompson: Brioche, apple, apricot, wet stone and mineral with baked character. I like the ginger comment, and there is baked pear. Fruit is baked, like English candy.

Inman: My impression is sort of warm apple strudel, not spicy, but pastry character that is very nice. Nice fine bead on the bubble. I got pear and apple on the primary fruit with an almost marmalade character that carries over to the finish. Very nice.

Tiburzi: This wine has a real freshness about it in both the nose and the mouthfeel, despite the yeasty developed character. It has high acidity that has kept this wine alive. It has apple, pears and citrus, which is a very classic blend. It is very refreshing and light.

Evans: I get the same, along with white flowers on the nose and a real precise lemon-lime. This shows very youthful. I thought it carried the dosage a bit heavy. It is a bit sweet on the end, almost like cotton candy.

Grieb: I agree, there is a slight candied flavor from the dosage. There is a lot of pear and apple, which you would expect out of a traditional blend. There is some blossom there as well. It is definitely different from the J. Schram.

Cadd-Coster: Yeah, the J. Schram is sort of brooding while this one is lively. I almost get some candied lemon from this. It is like a citrus flower, but not honeysuckle. It is very lively for an '06.

Schramsberg Vineyards

2006 J. SCHRAM, 12.2% ALC., 3,231 (9-LITER) CASES, \$120, 87% CHARDONNAY, 13% PINOT NOIR

Sean Thompson had a B.S. in chemistry before getting his degree in viticulture and enology at **UC Davis**. He has close to 30 years' experience working in the wine industry, starting at **Beringer's** old **Italian Swiss Colony** facility. He worked at **Rutherford Hill Winery**, focusing on Merlot production. In 2006, Thompson started working for **J. Davies**, running the Cabernet Sauvignon program, and he was soon elevated to run the entire red wine program. He added finishing sparkling wines to his duties and in May of 2015 was named senior winemaker for all of Schramsberg and J. Davies.



According to Thompson:

“Our goal for J. Schram is to offer the best of California’s North Coast in a way that competes with the best sparkling wines and Champagnes in the world. Our model is to highlight the fruit that comes from cool-climate growing pockets of the North Coast, as well as the acid and length of this region’s Chardonnay and Pinot Noir. We want to compete at the highest level while remaining unique. We want focused fruit with toastiness and brioche character from extended aging on the yeast, and we want a wine that will continue to develop in the bottle.

“We source from more than 110 different vineyard sites across the North Coast, so we draw from a wide variety of soil types and use dozens of different clones and rootstocks. Our vineyards can be at sea level or as high as 1,250 feet, traditional, organic or biodynamically farmed, and irrigated or dry-farmed. As we harvest those sites, our goal is to develop lots in special ways to give us the greatest flexibility when making our blends.

“We vary harvest times, looking for the best acidity. The goal is to achieve various Brix levels at harvesting to allow for more flavor profiles in the winery for final blends. Some earlier harvest picks provide superb acidic backbone to our wines, while later “riper” picks provide complexity and flavor for the final cuvées. We often have as many as 130 different lots of Chardonnay and 120 different lots of Pinot Noir. Additionally, some of those lots are tank fermented at colder temperatures yielding more acidic wines. About 40 percent of the lots are barrel fermented, and half of those go



through malolactic. Each year J. Schram is made by selecting the best lots of the myriad lots we have.

“We pick into half-ton bins at night, if possible. We do not sort, nor do we use SO₂ during processing. Grapes are whole-cluster pressed in a **Bucher Vaslin** bladder press. We determine press cuts by using past historical data and tasting the juice while looking at pH and tannin levels. Generally, the first cut is all free-run juice. We will chill the juice for 24 hours at 45° F, getting down to about 2 percent solids.

“After settling we will rack, warm the juice to 50° F to 55° F and inoculate with EC1118/PDM although we experiment with other yeasts as well. Twenty percent of the juice will go to barrel, and half of that will eventually get malolactic. After inoculation the juice receives DAP and Fermaid K. We ferment cold in the tanks and at ambient cellar temperature in the barrels. Fermentation takes seven to 10 days, but different lots can take longer. After fermentation we will use bentonite and fine if necessary to remove bitterness or high phenolics. Tanks will be racked and barrel lots will be topped up weekly, but all lots are kept separate. SO₂ is added at this point and kept at 10 to 15 ppm.

“In January or February we make our blends. We rank each of the lots, with only the highest ranking lots going to J. Schram. We are looking for acidic structure, flavor profiles, fruit intensity and mouthfeel. We will blend and taste for about three weeks before making our final decisions. We might adjust with small lots to add spice elements and we save some base wine for the dosage.

“Once we have the blends, the wine goes through cold and heat stability and is sterile filtered, because parts of the wine have gone through malolactic, while others have not. We add 2.4 percent sugar, phosphate mazure, Clarificant S and Solution ST along with yeast and a bit of DAP. The second fermentation takes two to six weeks, and is carried out at ambient cave temperatures of 55° F to 60° F. Lees aging is six to seven years.

“All of these wines are hand riddled, which is an incredible amount of work and takes close to eight weeks. After disgorging, dosage is a 50/50 mix of sugar (1.2 g/L) and wine. J. Schram receives a minimum of six to eight months cork aging before release.”

TASTING NOTES

Thompson: Baked apricot, apple English candy in the aromatics. It has the toasty brioche that we are looking for, getting close the finish of apple pie. It has great acidity and length. We have that Sweet Tart ratio where you look for that juiciness in the back of your mouth, but it also has that toasty, brioche richness. It is big: in the style of **Krug**, but with that fresher fruit you get out of California.

Inman: This is a much richer style with a rich nose, some aldehydes, brioche and honey. The palate has some apple pie character with a touch of spice. It has honey, pear and a very savory quality, almost like Asian Yuzu.

Urberg: At first it was light earth and graham cracker. Now I get a lot of that toasty brioche which really comes through. On the mouth it has a real big honey, honeysuckle, baked apple, dried apple character. It is like crème brûlée, which gives a nice creaminess. It is lush in the mouth with mature character as evidenced by the baked/dried fruit character and wraps up at the end with little orange zest zing.

Munksgard: I really like the dark color and the nice tiny bubbles. It is strong on herbal elements, a step away from fruit focus. The yeast and extended age are really the focus on this wine. Aromatically I get a warm honey or sugar cookie that is heavy on the herbal elements, along with wonderful, rich aldehydes. It is richer, leaning toward the dose end of the spectrum. As it warms up, that dose character dissipates.

Evans: They were swinging for the fences, and this is a monster. It has poached pear and golden age honey. This wine shows a lot of flesh on it and some notes that I would think come from oak. We’re doing this wine a disservice, if we don’t give it time to open up.

Gadd-Coster: I get a lot of coffee in the nose. I wonder if some of these wines spent time in barrel. I still get nice creaminess in the mid-palate. There is not a lot of fruit for me. A little citrus, but mostly I’m getting the aged character and a lot of coffee.

Grieb: I’m getting baked bread. A lot of poached, spiced pear for fruit. There is some reductive aged character to it. I get some candied lemon in a good way. It has a creamy texture and I think it is quite bright for its age. There is still good acidity.

Tiburzi: This has a lot of the marmite from sitting on the lees. It has a little bit of reduction, but is sherrified, so it needs to open up. There is a lot of honey, caramel and coffee. It is very creamy. The fruit is cooked almost like apple sauce or compote. The reduction is starting to blow off already.

Mawby: It is yeasty with an aged fruit nose that reminds me of canned peas. I get some premature aging Chardonnay notes or the aging character of prise de mousse yeast. It has a fine mousse, with good balance and rounded fruit atop an acidic backbone. With time there is more richness, a bit of oak and yeast. Later still and it is fine and complex, and any hint of off aromas has disappeared.

SPARKLING WINE IS A party in a bottle. From the unwinding of the wire hood, to the pop and whoosh of removing the cork, sparkling wine triggers our celebratory genes. But in its heart of hearts, sparkling wine is fine wine and should be handled as such. Making sparkling wine is a much more complex process than making still wine. It is more technical, involves more steps and there is a lot more that can go wrong.

Two primary elements make sparkling wine different from still wine: acidity and bubbles. Acidity is essential to good sparkling wine, so grapes are usually picked with high acid (9 to 12 g/L), low potential alcohol (10.5 to 11.5 percent) and low pH (3 to 3.2). Acidity acts as the skeleton of the wine, supporting the fruit, body, flavor and finish. It keeps the wine fresh and bright. Bubbles make sparkling wine special, but they also magnify every individual element of the wine, both good and bad. For this reason fermentations need to finish clean without strong reductive character. Phenolics need to be kept in check. Alcohol needs to be relatively low, and sugar has to be in balance with the acidity. If not managed, any one of these elements can be amplified by the bubbles, making the wine unpleasant.

Winemakers in the Varietal Focus work hard at selecting the grapes and vineyards for making their various base wines. While all agreed that having several base wines to work with at blending time was essential, some chose to work with just one or two varieties, using sections within a vineyard or separate vineyards to provide diversity. Others preferred to use several different varieties and vineyards to make their base wines, thus providing a much broader pallet from which they could blend.

Settling juice, selecting yeast, adding nutrients, using clarifying agents and stabilizing the wine are mandatory, because the finished base wines have to be clean and stable lest the bubbles get ahold of residual tartaric crystals and foam, or capture cellulose fibers from a filter and gush from the bottle. The type of yeast, the sugar preparation and the adjuvants for future clarification all have to be selected with great care for the second fermentation. It is imperative that this in-the-bottle fermentation finishes completely and cleanly with just the right amount of bubbles and pressure. Mess this up and as one winemaker explained, "You might as well be working with hand grenades." Winemakers must decide how long to leave the bottles en tirage, weighing the additional complex yeasty character versus the fresh vibrancy of fruit.

Riddling the bottles to slide yeast, lees and sediment into a position where they can be removed always seems to be a hassle, according to our winemakers. Once achieved, the wines are disgorged and a dosage (often with a bit of SO₂) is added. The make-up of that dosage influences a lot of the finished wine and represents the winemaker's idea of style and finesse.

Worldwide, there is a complaint that many wines are starting to taste the same. The reality of méthode champenoise sparkling wine is that the very way it is produced—fermentation in individual bottles—guarantees that each bottle is different from the next. If you are the type of winemaker or consumer that finds that variation delightful, then all you have to do is pop a cork and have at it. **WBM**

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