
Anatomy of a Brandy Distillery: Germain-Robin

BACKGROUND

The author and his wife made a trip to northern California which included a visit to the Germain-Robin (GR) distillery at 1110 Bel Arbres Road in Redwood Valley, Mendocino County. The facility represented a significant upgrade for GR; the building was previously occupied by the 12,000 cs/yr Fetzer Winery before Fetzer relocated to their 120,000 cs/yr location in Hopland. GR moved here from their initial facility located on a narrow dirt road 12 miles west of Ukiah.

A very generous and open tour was given to us by Joe Thomas Corley the Director of Production and Distiller for Alambic, Inc. Alambic Inc. is the production company for GR. Joe was very open in discussing the distillation operation at Alambic, answering all question posed. The tour comprised the production operations and barrel aging area, but did not include the bonded packaging and finished goods areas which are closed to visitors.

The facility in Redwood Valley has 2 operational alembic (pot) stills. The larger still has a charge capacity of about 750 gallons and was purchased (new) in the 1990's for about \$100k. Current cost was estimated to be about \$150k. A smaller still of approximately 300 gallons is also in operation. This still dates to the early 1900's; there is a second, identical still in storage. Their original still of approximately 200 gallons remains in operation at the old Ukiah site. The last 3 stills were purchased in Cognac as used equipment. A small 5 gallon still (Portuguese) is available for experimentation. All these stills are of copper construction.

GR was founded by way of a chance meeting between Ansley Coale a UCB history professor, and Hugh Germain-Robin in the early 1980's. Mr. Germain-Robin came from a family which had been making Cognac in France but had sold their operation to Martell. Mr. Coale had a ranch near Ukiah and he and Mr. Germain-Robin developed the idea to make brandy from premium grape varieties rather than use the more common grape, ugni blanc, which is used in Cognac.

The small still was installed at the remote ranch location and brandy production was begun. The distilled product from the premium grape varieties proved to be an extremely good idea. While the quantities were low, the quality was very high. The product compared favorably against premium Cognacs in blind tastings often surpassing their French competitors.

In the intervening years since then, Mr. Germain-Robin left the company (2006) and Joe Corley, a Germain-Robin apprentice, took over the distillation operation in Redwood Valley. The small still in Ukiah is being operated by Crispin Cain, another Germain-Robin apprentice, and is used to make an absinthe and rose liqueur, a concoction which uses 108 lbs of rose petals per 300 gal of the liqueur. This operation is called Greenway Distillers, Inc.

THE GERMAIN-ROBIN REDWOOD VALLEY FACILITY

First Impressions

Upon arriving at the Bel Arbres facility, there are several striking differences noted between this facility and a typical wine making facility. First, there were very few (2) vehicles in the parking lot. Second, there were no crushing or grape receiving equipment in place. It was a very quiet place with an, almost hidden, side entrance.

THE OPERATION OF THE DISTILLATION PROCESS

Upon entering, one was immediately presented with a view of the large still manufactured by Chalvignac Prulho Distillation in Chateaubernard, France, see Figure 1. This figure is similar to GR's in size and coloration; GR uses painted iron supports rather than brick shown in the Figure. The GR still is propane fired. See appendix A for a schematic of the pot still.

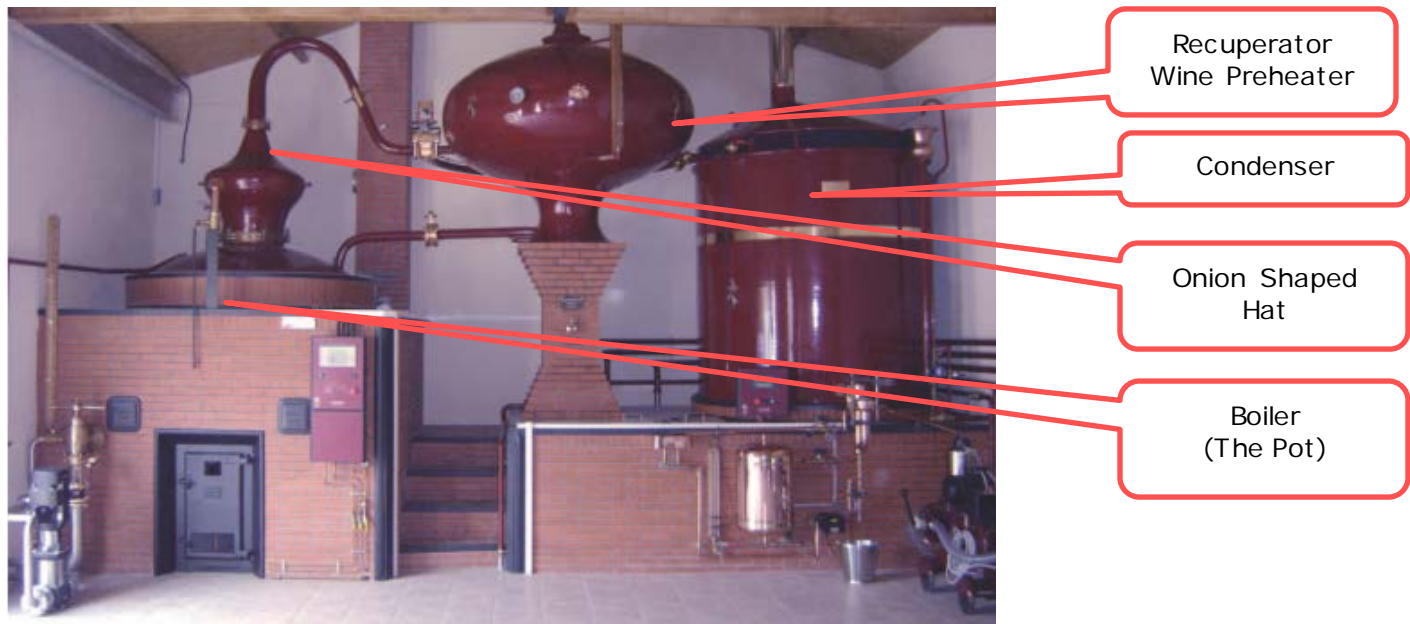


Figure 1: A Pruhlo Alambic (Pot) Still, Similar to GR's

The brandy product is produced using a double distillation process. In the first step the boiler is charged with about 750 gallons of clear fresh wine and heated to boiling and the recuperator is charged with the next batch of wine¹ headed for distillation. Since fresh wine is required by GR for their brandy production, the still is typically only operated from mid-September through sometime in January for the brandy product.

¹ The wines are made under contract to GR at GR's specifications. These include no sulfuring of the grapes after July 4.

Three cuts of the distilled product are made. The first cut of several 10's of gallons contains the highly volatile components such as acetaldehyde and any sulfurous components. The second cut is the heart cut of about 200 gallons and is collected for the second distillation. The third cut contains the residual alcohol and volatiles. The 1st and 3rd cuts are saved, combined with those from other runs and re-distilled.

The distilled product is monitored by an electronic densitometer for cut delineation. In the first distillation this electronic unit is the only control, thus the first distillation can be run, more or less, unattended and is typically set to go overnight. After cooling the pot residuals are pumped out to a settling tank for volume reduction (evaporation) before disposal. Several initial distillations are needed to accumulate enough liquid for the second distillation. The middle cut material is called *eau de vie* and is colorless and runs about 70% alcohol.

The second distillation is performed using the previously captured *eau de vie* to charge the "pot" with 705 gallons and is an operator present process. Again three cuts are made. The first contains the most volatile materials and is saved. The second cut contains the material which will become the brandy product. The art of the distillation process enters at this stage and is used to determine the cut-off between the middle cut and the residual. While the distillate product is monitored by the densitometer, the actual cut-off is determined by the operator through a combination of aroma sensing and visual observation. The cut-off point is determined visually by watching the distillate for "bubble" formation. When the distillate will support 3 liquid bubbles on the surface, the cut is made. Apparently, this visual effect is a centuries old observation by still operators.

MAKING THE BRANDY

The heart cut from the second distillation, still the colorless 70% *alcohol eau de vie*, is made into brandy through the aging process. The *eau de vie* is put into newer French oak barrels which have been allowed to sit, unused, for several years before use. The barrels² are made from Limousin oak and have a volume of about 95 gallons (350 liters). The oak barrels are retained and used as long as they are sound, i.e., they don't leak. GR has many, >50, 100 year old barrels from Cognac in their aging room. Brandy production is a process which requires extreme patience.

The distillate is allowed to age in the first barrels for 1 to 2 years before moving into the second set of older oak barrels. The timing of the move is determined by sampling of the liquid for color and aroma. The colorless *eau de vie* charge picks up the desired brandy coloration in the aging process. The now juvenile brandy is moved every 1-2 years to other older sets of barrels. GR uses a 4 to 6 year aging

² GR now uses only new barrels or barrels out of Cognac. Other brandy producers may also employ used barrels from the whiskey industry. Used wine barrels are never used as these may impart a bitter taste to the distilled spirits.

process (patience) before a product is considered for release. At this point some of the aging product may be bottled for sale³.

The liquids, no solids! in the distilled liquid, are transferred between drums by pumping. The barrels remain in place, no need for cleaning or topping up or even any scheduled replacement. A much simpler operation compared to barrel aging of wine.

Depending upon color, taste and aroma some distillate batches are reserved for further aging to end up in the higher value products. Bottle retail prices range from \$48, the standard product, up to \$350 per bottle for select products. The higher valued products are typically aged longer and may also be single varietal products. These can include brandies made from pinot noir, muscat or viognier sourced distillates.

The aging room at GR is not held at a constant temperature, they actually embrace the seasonal temperature variations which occur in Redwood Valley. The humidity of the aging room is, however, controlled to around 70% RH. At this humidity, the barrels remain tight and the alcohol loss is controlled. The alcohol loss from the barrels ranges from 1% (the bottom of the stack) to 2% for the top barrels in the stack (of 3). This lost alcohol is termed the "angel's share".

While the starting *eau de vie* has an alcohol level of 70%, the final product is sold as a 40% alcohol brandy. If, when ready for bottling, the alcohol level is above 40%, the brandy is cut with collected rainwater at GR to give the desired (and legal) level of 40%.

OTHER DISTILLED SPIRITS AT GR

As noted earlier, GR operates their stills for brandy from mid-September through January. Rather than letting the stills sit idle for 7 months until needed for the next year's wine crop, other distilled products are made. GR also makes an apple brandy, price range \$65 to \$95 per bottle. A grappa product is also produced from zinfandel, syrah and zinfandel-syrah mixtures. The grappa runs at \$55 per 375 ml! Unlike traditional grappa's which are distilled from the must, GR uses a wine that contains only about 4% solids. Any higher solids materials muck up the pot, making it very hard to clean.

In addition to making the GR products, still time is rented to a whiskey producer, Tamar Distillery, a partner company in Ukiah run by Mr. Crispin Cain, see above.

GR also sells the 70% alcohol *eau de vie* in barrels to fortified wine producers for the making of port and sherry wines. GR purchases *eau de vie* from the Korbel distillery for use as a component of circulating coolant in their chilled tanks. Apparently the GR product commands a significant premium over the Korbel

³ Here GR also differs from many wineries in that a contract bottler comes in with truck to bottle the product. Production is somewhere in the 3,000 to 4,000 cs/yr.

product to warrant this purchase. Mr. Coale also is part owner of the Hanger One distillery in Alameda. This operation is housed in a former hanger at the Alameda Air Station. Hanger One is primarily a vodka producer.

GRAPES USED

GR uses many varietals including, French Colombard, semillion, sauvignon blanc, pinot noir, viognier and muscat. All grape wines used by GR are sourced in Mendocino County. I'm sure other varietals are used but not identified to me. French Colombard is their workhorse comprising about 60% of the base product. Other varietals are used in both mixtures and single varietal brandies which typically are sold at a premium. We were able to taste a bit of the muscat product, very new. It had the distinctive muscat nose and aftertaste. (Sales and tasting activities do not occur at the distillery.)

Supplies of French Colombard, in Mendocino County, are limited today, although this varietal was abundant several decades ago. I suspect (personal opinion) that most of the county's French Colombard acreage was converted to chardonnay. However, GR has several long term 10-15 year contracts with Mendocino County producers to secure their immediate supply. (Again, GR buys newly fermented wine and not grapes.) One supplier is McNab Ridge wine located near Hopland. McNab is run by the Parducci, an old name in Mendocino wines. It was founded after Mr. Parducci sold the original wine operation and name to some investors.

COMPETITION

There are 618 active operations with an FAA Basic Permit or a combination of a Basic Permit with an operating permit. (Plants with only an operating permit are excluded from this number; these plants do not produce potable materials.) There are 8 such permit holders in Mendocino County of which 5 are held by GR or one of their associates. Many of these permit holders appear to be making their own *eau de vie* for fortified wine production.

Few of these permit holders are in the same artisanal class of producers as GR. Gr's direct competitors include: Jaxon Keys Winery and Distillery, Hopland (formerly Jepson Wines), and Oscalis Distillery, Soquel, a GR copy. Other craft distillers in California major in fruit brandies, grappa and/or vodkas.

Other competitors include: imported products, mainly French, Gallo, Korbel and other large producers. Most of these employ continuous distillation processes with fractionation. As distillation does not provide perfect component separations especially with continuous operation, there will always be some of the more volatile undesirable components in products made by this procedure. (Headaches, anyone?) See appendix B for a breakdown of volatile components in selected distilled beverages. Wine alcohol, *eau de vie*, and Cognac appear to have the lowest amounts of the congeners often associated with bad aftereffects...the hangover.

PERSONNEL

The actual brandy making operation is not labor intensive. In addition to Joe Corley, there appeared to be only 3 to 5 additional employees at the distillery for the distillation and aging operations. There are additional employees at the management, sales, marketing and hospitality (tasting) operation in downtown Ukiah.

THE GOTCHAS

While this segment of the beverage from grape industry eliminates the need for vineyards, wine making equipment and the elaborate aging and racking processes used for wine, it still has many of the same hurdles. The same barriers faced by the small premium wine producers in product marketing, product acceptance and retail presence also face the artisanal brandy producer. There is, however, an increasing interest in brandy in the commercial (high end) bar and cocktail industry. Brandy is becoming a new basis for mixed drinks; who would have thought.

UPDATE AUGUST 16, 2017

E&J Gallo Winery in Modesto announced that the company has purchased the Germain-Robin Brandy operation in Ukiah, CA. Terms of the deal were not disclosed. Ansley Coale, Jr. and Joe Corley will remain as part of the acquisition.

UPDATE OCTOBER 11, 2017

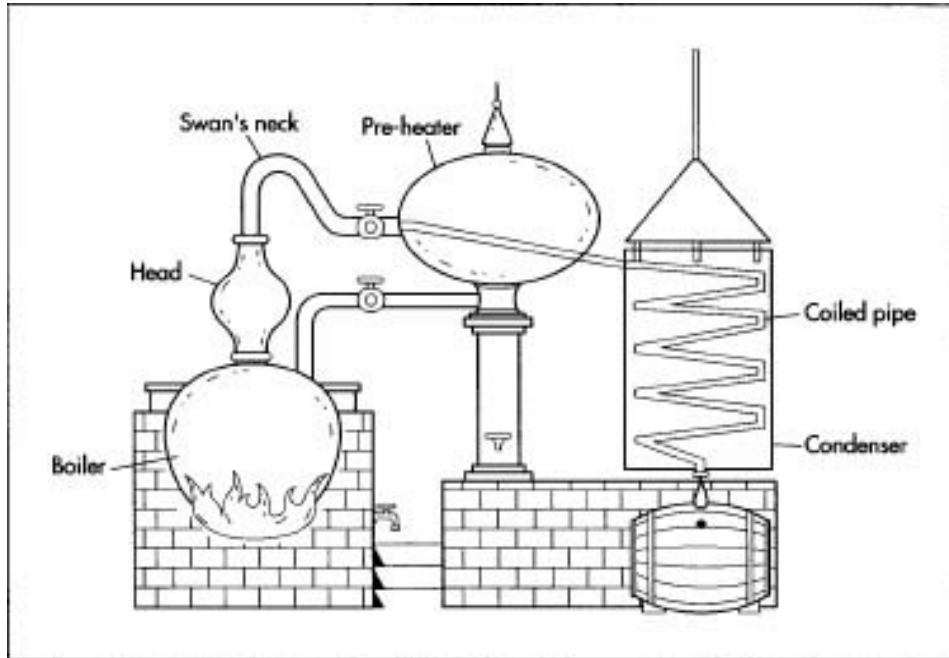
The massive wildfires that are now wreaking havoc in the Napa County, Sonoma County and Mendocino County vineyards and wine production facilities have threatened many winery operations with some seeing total destruction. The Redwood Valley location of Germain-Robin is apparently under an evacuation order. The active fire area does remain east of US-101 while the Germain-Robin location is west of the highway. Evaluations of the damages to the industry are probably weeks away.

Norvell Nelson
Lakewood, CO

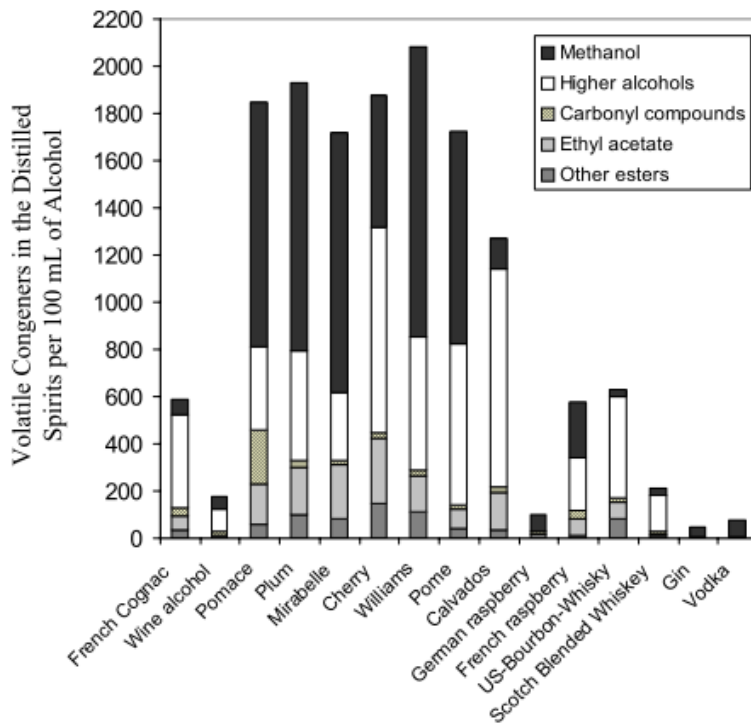
September 7, 2017 and October 11, 2017

<https://www.linkedin.com/in/norvell-nelson/>

Appendix A: Schematic Representation of a Simple Pot Still



Appendix B: Components of Some Distilled Beverages (Other than Ethanol)



Both figures from: Artisan Distilling, a Guide for Small Distilleries, Kris Arvid Berglund, Ph.D. (www.artisandistilling.org/ARTISANDISTILLING1.0.0.pdf)