Sherry

Sherry is a fortified wine from Andalucía on the southern coast of Spain. It reached its apex as a British favorite by the 1870s, and it became one of the first protected Spanish appellations in 1933 with the establishment of a *Consejo Regulador*. Jerez, the hottest wine region in Spain and the home of Sherry production, is located within the coastal province of Cádiz, flanked by the Guadalquivir River to the northwest. The town of Chiclana de la Frontera marks the southeastern border of the roughly triangular region. The three towns of Jerez de la Frontera, El Puerto de Santa María, and Sanlúcar de Barrameda are at the center of Sherry production, and DO regulations require Sherry to be matured in and shipped from one of these three municipalities. Sherry is the product of two DO zones: Jerez-Xérès-Sherry and Manzanilla-Sanlúcar de Barrameda. The two DOs share an identical production zone and similar production guidelines, but the latter must be aged in the seaside town of Sanlúcar de Barrameda. On the coast, the cool Atlantic breezes alleviate the heat of the region, but the effect quickly dissipates as one moves inland: summer average temperatures may be nearly 20° F higher in Jerez de la Frontera than in Sanlúcar de Barrameda. The hot, dry *levante* wind intensifies the region's heat. Said to drive men mad, the howling *levante* blows from the east and essentially cooks the grapes on the vine during ripening. The humid Atlantic *poniente* wind alternates with the *levante*, and promotes the growth of ***flor***, a film-forming yeast necessary in the maturation of Sherry.

Towns of Sherry production (9)

- Jerez de la Frontera (Cádiz)
- El Puerto de Santa María (Cádiz)
- Sanlúcar de Barrameda (Cádiz)
- Chiclana de Frontera (Cádiz)
- Puerto Real (Cádiz)
- Rota (Cádiz)
- Chipiona (Cádiz)
- Trebujena (Cádiz)
- Lebrija (Seville)

Three principal soil types characterize the Jerez region: ***albariza, barros,*** and ***arenas***. *Albariza*, a chalky, porous, limestone-rich soil of brilliant white color, produces the best Sherry. The moisture-retentive *albariza* retains water from autumn and winter rains, while the friable soil structure allows vine roots to penetrate deeply in a search for water trapped beneath its baked, impermeable surface during the arid growing season. The snow-white *albariza* soils are concentrated on the gentle slopes of Jerez Superior, a sub-region between Sanlúcar de Barrameda and the Guadalete River, which flows into the Bay of

Cádiz just to the south of Jerez de la Frontera. 80% of the appellation's vines are located in Jerez Superior, and most *pagos* (vineyards) are located within the area of Jerez de la Frontera, including Macharnudo, Añina, and Carrascal. Macharnudo, at over 2000 acres, is the largest *pago* in Jerez. The more fertile—but more difficult to work—*Barros* soils have a higher proportion of clay and are prominent in low-lying valleys. The sandy *arenas* soils are most common in coastal areas.

Albariza Soil, Photo: Tim Gaiser, MS

Three white grapes are authorized for the production of Sherry: Palomino (Listán), Pedro Ximénez (PX) and Moscatel (Muscat of Alexandria). Palomino, a neutral grape that usually yields lackluster, low-acid table wines, is overwhelmingly preferred for Sherry and constitutes approximately 95% of the vineyard acreage in Jerez. Two sub-varieties, Palomino Fino and Palomino de Jerez, are encountered in the region, but the former is more prevalent, prized for its higher yields and disease resistance. Moscatel and Pedro Ximénez are predominantly used for sweetening Sherry; varietal bottlings of either grape are extremely rare in Jerez. Moscatel is mainly cultivated in the *arenas* soils near Chipiona. Plantings of Pedro Ximénez in Jerez have diminished so greatly that the *Consejo Regulador* has granted special dispensation allowing producers to

import Pedro Ximénez must from the nearby Montilla-Moriles DO. Generally, growers submit both varieties to the ***soleo*** process for a period of one to three weeks, in which grape bunches are dried in the sun on esparto grass mats prior to pressing. Palomino may also be "sunned", but rarely for longer than 24 hours and often not at all.

In Jerez, each vine is commonly trained in the traditional manner of *vara y pulgar*, in which growers prune alternate spurs each year: one year's *vara* (stick) will be pruned back after harvest to become the following year's *pulgar* (thumb). The harvest typically occurs in early September, and around 85% of Jerez is harvested by hand. Maximum yields are set at 80 hl/ha in Jerez Superior and 100 hl/ha elsewhere in the region. Although modern mechanical methods now reign, grapes were traditionally crushed and pressed under the feet of *pisadores* (laborers) wearing *zapatos de pisar*—cowhide boots with angled nails on the soles. Palomino Fino, the grape used for the majority of Sherry wines, must be pressed quickly after picking as it is prone to rapid oxidation. A maximum 72.5 liters of juice may be pressed from 100 kg of grapes; any additional amount is relegated to the production of non-classified wines or distillate. The pressed must (*mosto de yema*) is divided into three stages of quality—the *primera yema*, *segunda yema,* and *mosto presna*—that are usually fermented separately. Before fermentation commences, the must is usually acidified and sulfured, then allowed to settle. Traditionally, producers adhered *yeso* (plaster) to the grapes prior to pressing, which aided clarification and—when combined with cream of tartar—produced tartaric acid. Today, most producers add tartaric acid directly and utilize a system of racking (*desfangado*) to clarify the must before fermentation begins. Classically, Sherry base wines underwent alcoholic fermentation in new American oak butts of 600 liters, a seasoning technique that would both impart tannin to the wine and leech oak flavor, neutralizing the wood before it was employed in the aging processes. Today, however, most Sherry is fermented in temperature-controlled stainless steel tanks of 50,000 liter capacity. In either case, the fermentation is divided into two stages: the tumultuous fermentation, a hot and vigorous initial phase lasting up to a week, and the *lenta*, or slow fermentation, in which high temperatures subside and any remaining sugar in the wine is converted to alcohol over a period of weeks. The low-acid, delicate base wine of 11-12.5% abv is then separated from its lees, and the process of transformation begins.

Two divergent paths of biological and oxidative aging divide Sherry wines. At the conclusion of fermentation, the wine is classified: each tank is either classified as *palo* and marked with a vertical slash, or as *gordura*, marked with a circle. Wines marked as *palo* are fortified to 15-15.5% abv and are destined to become the more delicate *Fino* or *Manzanilla* styles. Wines marked as *gordura* are fortified to 17-18%—a high level of alcohol that will not permit the growth of *flor*—and will become *Oloroso* Sherries. Neither wine is fortified directly with spirit, rather a gentler mixture of grape spirit and mature Sherry, *mitad y mitad*, is used to avoid shocking the young wine. Both sets of wines are transferred to neutral Sherry butts. *Fino* and *Manzanilla* styles undergo biological aging, whereas *Oloroso*

Sherry undergoes oxidative aging. At the heart of the biological aging process in Sherry is the film-forming yeast known as the *flor del vino*—the "flower". While the normal yeasts responsible for alcoholic fermentation die as the wine's sugar is wholly consumed, a specialized set of yeast species (of the genus *Saccharomyces*) arrives to metabolize glycerin, alcohol, and volatile acids in the wine. Humid air carried on the *poniente* wind, a moderate temperature between 60°-70° F, an absence of fermentable sugars, and a particular level of alcoholic strength (15-15.5% abv) are prerequisites for the development of *flor*. As *flor* requires contact with oxygen, it forms a film on the surface of the wine that will protect the liquid from oxidation. The *flor* grows vigorously in the spring and autumn months, forming a frothy white veil over the wine's surface; in the heat and cold of the summer and winter it thins and turns gray. In the past, the growth of *flor* determined a particular wine's future; it was a mysterious gift. Today, producers are much more aware of the process, and plan each wine's future accordingly. Wines destined to undergo biological aging are sourced from grapes grown in the finer *albariza* soils, and are produced from the *primera yema*, whereas those destined for the oxidative aging path of the *Oloroso* are more often sourced from *barros* soils, and produced from the coarser *segunda yema* must.

Once a wine has been marked to become *Oloroso*, its future is certain. Wines that develop under *flor* will enter an intermediary stage, the ***Sobretablas***, for a period of six months to a year, during which the course of the wines' evolution may be redirected. The wines, now kept in used 600 liter American oak butts, will be monitored and classified for a second time. The classifications are as follows:

- ***Palma***: Fine, delicate Sherry in which the *flor* has flourished, protecting the wine from oxidation. Such wines will generally develop as *Fino* styles.
- ***Palma Cortada***: A more robust *Fino,* which may eventually emerge as *Amontillado*.
- ***Palo Cortado***: A rarity. Although *flor* is still present, the wine's richness leads the cellar master to redirect the wine toward an oxidative aging path. The wine will be fortified after *Sobretablas* to at least 17% abv, destroying the veil of *flor* that protects it from oxygen.
- ***Raya***: Despite its initial promise, *flor* growth is anemic, or the protective yeast has died completely. The wine's robust character is reinforced by further fortification to 17-18%, and the wine emerges from *Sobretablas* as an *Oloroso*.
- ***Dos Rayas***: The wine's *flor* has disappeared, but its character is rough and coarse. Characterized by high levels of volatile acidity, these wines are either blended and sweetened for lower quality Sherry or removed from the Sherry-making process, often finding new life as Sherry vinegar.

After the second classification, the Sherry wines are ready to begin the long aging process—DO regulations require a minimum three years of aging prior to release. Rarely are Sherry wines marketed as vintage wines; most enter a system of fractional blending known as the ***solera***, wherein new *añada* (vintage)

wines enter an upper scale, or tier, of butts known as a *criadera*. Several descending *criadera* scales separate the young wines from the *solera*—the tier of butts from which wine is drawn and bottled. There may be as few as three to four *criaderas*, or as many as fourteen. For every liter of wine drawn from the *solera*, three must remain; thus the *solera* butts are only partially emptied, and refreshed with wines from the first *criadera* in movements of wine known as *trasiegos*. The first *criadera* is then refreshed with wines from the second *criadera*, and so forth. In this manner a *solera*—derived from the Latin *solum*, or "floor"—will theoretically continue some small portion of its original wine, regardless of its age. S*olera* wines are often marked with the year the *solera* was started. The *solera* system is integral to biological aging, as *flor* requires certain nutrients and oxygen to survive. The movement of wine from one butt to another provides oxygen; the addition of *añada* wines provides a constant influx of nutrients for the *flor* to prosper. While not necessary for oxidative aging, many *Oloroso* wines are nonetheless aged in their own *solera* systems.

Amontillado Solera, Photo: Tim Gaiser, MS

Fino Sherry is a light, delicate, almond-toned style characterized by a high concentration of acetaldehydes, a salty tang, and a final alcohol content of 15-18%. As *Fino* matures, the *flor* may finally disappear. In this case, the *Fino*

begins to age oxidatively, taking on a more robust, hazelnut character and slowly increasing in alcohol. If the loss of its protective veil is not ruinous and the wine is of good quality, it has the capacity to evolve into a *Fino-Amontillado*, finally becoming an *Amontillado* as its flavor, strength and color deepen. The final alcohol content of *Amontillado* must be between 16% and 22%. The production of true *Amontillado* is a laborious process, and *soleras* devoted to the wine are expensive to maintain. The darker *Oloroso,* meaning "fragrant", demonstrates spicy, walnut tones and a smooth mouthfeel. *Oloroso* must range from 17% to 22% abv. The rare *Palo Cortado* combines the rich body and color of an *Oloroso* with the penetrating yet delicate bouquet of an *Amontillado*, and is greatly prized by Sherry aficionados. These styles—*Fino, Amontillado, Oloroso,* and *Palo Cortado*—are *generoso* wines, totally dry in character. Sanlúcar de Barrameda has its own classifications for *generoso* wines: *Manzanilla Fina*, *Manzanilla Pasada,* and *Manzanilla Olorosa*. *Manzanilla Fina* is similar in style to *Fino*, although the harvest occurs about a week earlier, and the resulting wines are lower in alcohol and fortified to a lower degree. In addition, *Manzanilla* wines are entered into—and moved through—the *solera* more quickly than a standard *Fino*. *Manzanilla Pasada*, like *Fino-Amontillado* wines, lose the protection of *flor* and begin to show some oxidative characteristics.

Generoso Sherry Styles

- Fino
- Amontillado
- Oloroso
- Palo Cortado
- Manzanilla Fina
- Manzanilla Pasada
- Manzanilla Olorosa

Although Sherry may be bottled as a dry *generoso* wine directly from the *solera*, it is more likely to be sweetened and blended before sale. The final blend is assembled on a small scale—often in a glass or test tube—and then applied proportionally to the wine at large. This process is known as the *cabeceo*. Base wines entered into the *cabeceo* must have a minimum abv of 17.5%. Several sweetening agents are available to the Sherry producer: *dulce pasa, dulce de almíbar,* and *mistela* produced from the must of "sunned" Moscatel or Pedro Ximénez grapes. Pedro Ximénez is preferred, but expensive. *Dulce pasa*—*mistela* produced from "sunned" Palomino—is the most common sweetening agent in modern Jerez. *Dulce de almíbar*, a blend of invert sugar and *Fino*, is rare. A Sherry house may also adjust the color of the final wine with *vino de color*, a non-alcoholic concoction produced by a combination of boiled, reduced syrup and fresh must. If reduced to one-third of its original volume, the syrup is called *sancocho;* if reduced to one-fifth, the syrup is called *arrope*. *Vino de color*, naturally, also adds a level of sweetness to the wines. *Generoso Liqueur* wines produced by this blending process include Pale Cream, a lighter, fresher style blended from *Fino* wines; Cream, a darker, denser product of blended *Oloroso*; Dry, a paler style that actually contains a fair amount of sweetness; and Medium,

a rich amber Sherry that may include *Amontillado* in the blend. Producers may legally label Medium Sherries with additional traditional terms, such as “Golden”, “Milk”, or “Brown”. Such terminology reinforces the longstanding importance of the British market—and the historic British control of the shipping houses and *bodegas* of Jerez. In the past, shippers relied heavily on *almacenistas* when configuring their blends. Like the *partidistas* of Madeira, *almacenistas* would purchase young wines, age them, and sell the wines to shippers at proper maturity. The role of *almacenistas* today is minor, and the term itself has been trademarked by Lustau.

Although the role of Moscatel and Pedro Ximénez in Sherry production is often supporting, wines produced solely from “sunned” grapes are occasionally sold as *Vino Dulce Natural*, or “naturally sweet wine”. The moniker is misleading, as the wines are fortified after a partial fermentation. Sugar content for both wines ranges from 180 to 500 grams per liter.

In 2000, the *Consejo Regulador* for Jerez created two new categories for Sherry Wines of Certified Age: VOS and VORS. VOS—*Vinum Optimum Signatum*, or “Very Old Sherry”—may be applied to *solera* wines with an average age of over 20 years. For every liter of VOS Sherry drawn from the *solera,* at least 20 liters must remain. VORS—*Vinum Optimum Rare Signatum*, or “Very Old Rare Sherry”—may be applied to *solera* wines with an average age of over 30 years. 30 liters must remain in the *solera* for every liter withdrawn. A tasting panel certifies all VOS and VORS wines, and only *Amontillado, Oloroso, Palo Cortado*, and Pedro Ximénez wines are authorized for consideration. Approval to use either label only applies to an individual lot of drawn wine, not the entire *solera*. The *Consejo Regulador* may certify an indication of age of either 12 or 15 years for use on a label; in such cases the certification applies to the entire *solera*, not just a particular lot of wine.

The Sherry-making process is a complicated venture, littered with many tiers of classification. The above information is best digested over a glass of *Fino*, properly served in a *copita*, with some of its traditional tablemates: olives, Iberian ham, almonds, and a plate of shellfish, grilled sardines or Spanish mackerel.

For information on the other fortified wines of Spain, **click here**