



PEREIRA D'OLIVEIRAS

"Not just the biggest collection of old wine in Madeira, but in the world of wine, and by a long way"

(Julio Fernandes, winemaker at Justino's.)

Founded in 1850, Pereira D'Oliveiras is the most traditional of houses, and their wines are the most concentrated and earthy of Madeiras, yet brilliantly fresh and persistent. Nowadays, it is run by executive director Luis D'Oliveira, one of 3 brothers in the partnership and direct descendant of founder, João Pereira D'Oliveira. Fellow 5th generation family member Anibal D'Oliveira (along with his son, Felipe) is the winemaker.

PdO have recently acquired Barros i Souza, whose brands will be kept in the market. They had previously taken over 5 exporter-producers whose businesses were failing, and whose stocks have augmented Pereira D'Oliveiras' rich holdings of aged wine. PdO's aim is to oppose the international conglomerate tendency and to maintain a presence of Portuguese family ownership as the face of Madeira.

Each year they buy fruit from about 140 growers in various parts of the island. Production per annum is about 150,000 litres, but the bodega's holdings of mature wine total around 1.5 million litres of rare old gear in addition to current commercial reserves.

They maintain 3 bodega warehouses in Funchal. Should you get a chance to visit, their tasting and sales outlet is in the oldest of these, dating back to 1619, in a former school building at 107 Rua dos Ferreiros.







Pereira D'Oliveira Madeira Wines

FIRST LINE: 5 YEAR OLD RESERVA BLENDS MADEIRAS IN SWEETNESS ORDER

Tinta Negra Dry	\$37.50 luc
Tinta Negra Medium-Dry	\$37.50 luc
Tinta Negra Medium-Sweet	\$37.50 luc
Tinta Negra Sweet	\$37.50 luc

SECOND LINE: 15 YEAR OLD+COLHEITA MADEIRAS IN SWEETNESS ORDER

Sercial Dry Colheita 1999 (bottled 2013, 14yo)	\$100 luc
Verdelho Medium Dry Colheita 2000 (bottled 2014, 14yo)	\$100 luc
Tinta Negra Medium Dry 15yo (Colheita-equivalent)	\$100 luc
Boal Medium Sweet Colheita 2001 (bottled 2013, 12yo)	\$100 luc
Malvazia Sweet Colheita 2002 (bottled 2013, 11yo)	\$100 luc

THIRD LINE: FRASQUEIRA MADEIRAS IN SWEETNESS ORDER (VINTAGES 20+ YEARS IN BARREL)

Sercial Dry Frasqueira 1989 (bottled 2014, 25yo)	\$165 luc
Verdelho Medium Dry Frasqueira 1986 (bottled 2013, 27yo)	\$165 luc
Terrantez Medium Dry Frasqueira 1988 (bottled 2014, 26yo)	\$165 luc
Boal Medium Sweet Frasqueira 1987 (bottled 2013, 26yo)	\$165 luc
Malvazia Sweet Frasqueira 1989 (bottled 2013, 24yo)	\$165 luc

FOURTH LINE: VERY OLD FRASQUEIRA RESERVA MADEIRAS, IN SWEETNESS ORDER

Sercial Dry Frasqueira 1937 (bottled 2011, 74yo)	\$500 luc
Verdelho Medium Dry Frasqueira 1890 (bottled 2013, 123yo)	\$1250 luc
Boal Medium Sweet Frasqueira 1922 (bottled 2013, 91yo)	\$750 luc
Malvazia Sweet Frasqueira 1907 (bottled 2013, 106yo)	\$950 luc

FIRST LINE: 5 YEAR OLD MADEIRAS, IN SWEETNESS ORDER

TINTA NEGRA 5yo DRY (Tinta Negra, 10% Sercial)

Caramel, plantain and lightly grilled Brazil nut, with fine ester and rancio touches that are very delicate on a nose of good depth and lovely freshness. Calm and reposed. Wood gives a bourbon-sweet trace early in the mouth, which fades to herbal and off-dry by mid-palate. Delicately nutty and truffly towards the end, wherein a gently dry finish of good length.

TINTA NEGRA 5yo MEDIUM DRY (Tinta Negra, 10% Verdelho)

Mixed dried fruits and nuts in a soft nose, all gooey and golden. There are dates and jar plums with fine old treacle from a tin can, a flourish of billy tea, and touches of aromatic timber and baking spice. Has a nicely defined palate with fruit extract and developing abstract secondaries providing a drying rail and grooving the palate. Succulence is nicely controlled – the sweetness only makes it halfway through the palate before the acid train takes over ... but by then the mouth-feel is up and about and sugar has done its trick.

TINTA NEGRA 5yo MEDIUM SWEET (Tinta Negra, 12% Boal)

A similar nose to the medium dry version, but deeper and darker: old dried brown dates with grilled bread and caramelised honey heading in the toffee direction. There's a lovely, heady lift of rainforest timbers. Mediumsweet it is, with heightened grapiness and a lovely sense of juicy attack, but dried off by terrific fruit tannin and smoky vine canes. It's rainwater fresh to finish with a lovely rear-quard of enlivening acidity.

TINTA NEGRA 5yo SWEET (Tinta Negra, 10% Malvazia)

Very fine indeed on the nose, which has a lovely brandy lift over tin-smoked billy tea, toffeed banana, sticky red dates and a molasses touch. The nose is fresh and direct, wildly interesting but well-mannered and composed, with beautifully controlled traces of complexing volatile compounds. Smoked tree boughs and truffly earth keep all the dense pruney, plumskin and juicy sweetness very tidy, and a spitfire acid freshness counters every gram of gooey sweetness.

SECOND LINE: 15 YEAR OLD and COLHEITA MADEIRAS, IN SWEETNESS ORDER

SERCIAL DRY 1999 Colheita (bottled 2013, 14 years barrel age)

With age comes a fuller array of complex wood-volatile-ester secondaries: here, the beautiful smell of an old cricket bat embalmed in linseed oil, along with deep grilled nut edged by citrus rind, with brandy snap and ginger cookie touches. In the mouth, marmalade and grilled nut lead into a rainwater shower of juicy acid so typical of these beautiful wines. Firm spirit dryness gives the mid-palate a hold, at which point it's almost peaty sweet and then comes a long, fine earthily dry end, which is almost ruler-straight, but gentle - unforced, and not forceful, a wine of considerable grace.

VERDELHO MEDIUM DRY 2000 Colheita (bottled dec 2014, 14 years barrel age)

Faded tropicals, sweet old persimmon with its citric edge, rancio and complex wood-oxidative characters. This is a great wine – slowly lengthening sweetness is guided by typical sweet-fresh acidity. The palate has a subtle line, is gently plush, full of persimmons' perfumed sweetness, velvet-textured, golden and round with tart fruit skin and jagged citric acidity giving penetrating run.

TINTA NEGRA 15yo MEDIUM DRY (Tinta Negra, 10% Verdelho)

Olive brine, cake fruits and balsam among fine old wood aromas (ship timbers, oak cupboards) and smoky tea. The palate is perfectly balanced and as close to an archetype of Madeira as you could hope for: grapey, with dried and preserved fruit elements and rainwater-fresh acid giving a sparkling line without any harshness. Fine praline toffee character is lissom, textured and effortless, slightly sweet yet not a tad sticky. Medicinal bitter secondaries take the opening sweetness to a beautifully sour place and the wine ekes along low and slow, brandied fruits among all sorts of volatile secondary balms and timber perfumes.

BOAL MEDIUM SWEET 2001 Colheita (bottled dec 2013, 12 years barrel age)

A delightful nose combines dark honey with herbal/vegetal, red date, hazelnut, smoke and wood-aged aromas. There's a range of forest smells (wood, damp foliage, sweet, fresh clean air ...), faded plum and a maritime pungency (very much a Boal character) of iodine engendering an umami rich-savouriness. The palate is incredibly subtle and unforced, a wine of natural delicacy where great aged character gives a medium-sweet mid-palate with considerable power. Deliciously sweet jar fruits with lovely tart fruit-skin pucker release softly and gently into a round but nimble finish ... wood-alcohol developmental characters break and radiate to all points, releasing and fading into a delicate swoosh of saline-acid freshness, directional, beautifully balanced.

MALVAZIA SWEET 2002 Colheita (bottled 2013, 11 years barrel age)

Aromatic interest is great here, with complex tea smells lifting out of caramelised date richness. There's a waft of herb and grilled bread, nuts and polished timbers all adding significant interest to the sweetness. The palate is rich and lush, perfectly balancing old concentrated pruney sweetness with fresher, grapier, perfumed and lifted sweetness, yet no heaviness or cloying. There's graceful earthiness in the sweetness and the acid outruns the sugar, carrying iodine and nut past the caramel into a fresh, perfumed finish.

THIRD LINE: FRASQUEIRA MADEIRAS, IN SWEETNESS ORDER (VINTAGES 20+ YEARS IN BARREL) SERCIAL DRY 1989 Frasqueira (bottled 2013, 24 years barrel age)

More time in wood equals more complex wood-and-balsam volatile secondary beauty. The fruit characters are raisined, dried, preserved and citric all at once, wandering through a sky-wide nose of fine aromatic timber, grilled bread and nuts. Dry Sercial's vegetality is largely subsumed by fine old wood perfume. It's complex as all get-out, but with great harmony and composure. Dry and saline in the mouth, it's almost austere but with a nice textural generosity through the palate, marked by complex herbal-woodiness and juicy palate acidity.

VERDELHO MEDIUM DRY 1986 Frasqueira (bottled 2014, 28 years barrel age)

Really decadent, voluptuous nose, heaps of deep dried fruit concentration, golden treacly richness with a vegetal lining, with marmalade and billy tea for complexity and relief from density. Typical Verdelho plush citric mouth-feel, and typical Madeiran buzzing acid relief. Delicately round with toffee sweetness cut entirely by zippy fruit-skin tartness and electro-tingle acidity.

TERRANTEZ MEDIUM DRY 1988 Frasqueira (bottled 2013, 25 years barrel age)

The rare Terrantez variety can be bottled as medium dry or medium sweet. This medium dry version is a remarkably complex, fascinating wine. Bitter medicinal herb aromatics with bracken, spiced wood, salted caramels, faded jar preserves, old straw and a touch of the maritime. The palate is sweet at first, with inseparable elements suggesting honey, brick, earth and wood. There's an incredibly layered juicy acidity, which carries sweetness along in the form of the memory of the skins of fruit that has given it up as a preserve. Gloriously gathered in the mouth, it is very complex yet deft, dancey, effortlessly balanced to off-dry.

BOAL MEDIUM SWEET 1987 Frasqueira (bottled 2012, 26 years barrel age)

Rich, raisined fruits are figgy with touches of maraschino and fat walnuts in a jam-packed, luscious nose with toast and carob. It's grapey and succulent, but there's lift and freshness, too - the smell of first rain after a long dry spell over fine old balsamic timber complexity. The twin-tracked sweetness is beautifully rounded through two-thirds of the palate, then planes out and becomes lighter, drier and more lingering. Nuts and dates slide along a praline slick to a long, salt-braced drying finish.

MALVAZIA SWEET 1989 Frasqueira (bottled 2013, 24 years barrel age)

Here's Crazy Mary-Jane! A big herbal hit on the nose takes away any possibility of candy over-sweetness. Caramel and grilled nuts run around in a complex of wood notes, and excellent freshness partners aged and developed secondary characters. Herbal-columbine, toffee-tobacco, sweet but smoky and caney. Sweet, yes but it carries a lashing of acid squeak that teases out a long and almost savoury tea-like finish, with sugar memories tumbling along behind.

FOURTH LINE: VERY OLD FRASQUEIRA RESERVA MADEIRAS, IN SWEETNESS ORDER

SERCIAL DRY 1937 Frasqueira Reserva (bottled 2011, 74 years barrel age)

Darker of course from all that extra oxidative age, it's all olive and deep amber to regard, with astonishing limpidity and brightness however. Straw, toffee, grilled nuts, old tobacco, resinous compounds, old clay pipes, cold coffee grounds, extreme spice in back yet still with citric freshness. Typically full and gathered front and mid palate is sweet-and-sour, a herbal-woody-incense amalgam. The trickle-release finish is juicy with fresh rivulets of sweet, sparkling, spicy acidity.

VERDELHO MEDIUM DRY 1890 Frasqueira Reserva (bottled 2013, 123 years barrel age)

Wonderful old ceramic, adobe, terracotta smells with fresh herbals and deep soft citric fruit character - it really is hard to credit how complete and vital, how un-quirky and immediate this old-timer is to smell. An amazing nose! The palate, true to its off-dry designation, has lavish citric-floral sweetness without weight. The acid freshness, with just a couple of layers of secondary volatility and such is really (really, really) remarkable. Aftertaste like a shot heard 'round the world.

BOAL MEDIUM SWEET 1922 Frasqueira Reserva (bottled 2013, 91 years barrel age)

88 g/l sugar, 9.5 grams ta, 1.35 VA (1.8 max allowed), 19.0 a/v, 33 g/l dry extract

Musky, concentrated old jar preserves lead the nose of sweet plums layered with earth and bourbon wood, and freshened with olive brine and smoked tea. Balsam and old cupboard timbers give depth and relieve the sweetness. The palate has great complexity, mixing old hay, silk, tobacco, tea leaf, resin and fine choc-nut. Full but nutty sweetness and concentration hit a peak just past mid-palate and then slowly grade out and back. Has a leathery, haggard beauty from growing old (dis)gracefully that otherwise only Keith Richards could hope for.

MALVAZIA SWEET 1907 Frasqueira Reserva (bottled 2013, 106 years barrel age)

(147 g/l sugar, 10.6 ta, 1.52 VA, 19.0 a/v, 49 g/l dry extract)

Deeply woody and bricky, this opens to tea, fine adobe, honey and pippy sweetness, with lantana herbals and chocolate. The treacly richness exists within an amazing aromatic liveliness, thanks in part to a rainwater-juicy freshening lift. Very deep in the mouth, the palate interplays marmalade and molasses, with lots of complex volatile development character and wood-spice, yet still showing primary citrus through fine toffee. The palate leads with power then becomes increasingly mellow and ultimately outright fresh, with a juicy line. It's vibrant and delicate with toffee, spice and acidity in a persistent dancery. This masterpiece perfectly sums up the complex sugar-acid wood+time dancey delicacy of Madeira. Cane sugar, herb, jar fruits, nuts, lavish timber aromas, spice, sugar and acid are woven into a complex, effortless, magisterial amalgam. Unbelievable wine.



Madeira is the main island of a small archipelago in the Atlantic, about 1000km south of Lisboa in Portugal and 600km off the coast from Casablanca. It was "discovered" in 1419 by Portuguese naval adventurers and became a Portuguese colony soon after. By the second half of the 15th century it was a thriving producer of wine, sugar cane and wheat. Today, it is a famed producer of (most often) sweet fortified wines, which age amazingly well. Fancy an 1875? Madeira's the place to look ...

MADEIRA WINE (like electric rainwater)

Madeiras are fortified wines produced at four levels of sweetness. They are made from relatively low sugar, high acid grapes grown in an extreme maritime climate which makes mainland-level ripeness extremely difficult to achieve. The wines are a complex interaction of sugar, acid, wood, alcohol, heat, oxidisation and time (fruit too). Despite the apparent focus on sweetness in categorising Madeira, in truth the key is the acidity of the wines – how else to understand a wine carrying 60 grams/litre of residual sugar as 'dry'? Sugar is fostered, acid is the given. Madeira is juicy and tingling, flowing, delicious, like electric rainwater.

Outside of sugar and acid, fortification and cooking of the wine are key stylistic factors. Early exports in the 15th and 16th centuries relied on sugar-acid for protection of the wines from the heat in the holds of boats bound for the Americas. Occasional 'round trip wines' (Vinhos da Roda, aka Vinho Torna Viagem) accidentally returned to Europe from trips to the New World, and some of these were considered vastly enhanced by the journey, made richer and more complex by the ongoing 'cooking' inherent in the hot shipping conditions. This led to the 18th century adoption of a cooking process as part of raising Madeira wines. From the mid-1700s, cooking and the parallel preservative practice of fortification became the twin pillars of the Madeira style. There are two forms of cooking in play today - 'Canteiro' and 'Estufagem'.

As with fellow fortified wine producing regions, Porto and Jerez, the local national owners have long been partnered by merchants from elsewhere in Europe in the production, marketing and shipping of Madeira wines. The 1703 Treaty of Methuen between Portugal and England was of considerable importance in this, although of more benefit to Port than Madeira, which heavily favoured trade in the Americas, particularly the USA. The golden days of Madeira exports to the USA ended in the mid-1800s, with the US Civil War from 1861 reducing demand, while the opening of the Suez Canal lead to westering ships no longer having to pass by Madeira on their way.

As well as economic difficulties, disease hit hard in the mid-19th century, with the 1850s outbreak of Oidium (common to most European producing regions) and worse to come ... Phylloxera arrived in Madeira quite early, devastating production from the 1870s and finalising the 19th century decline. Nowadays, thoroughly rebuilt, the Madeira wine industry is planted on towering terraces (Poios) seemingly rising straight up out of the Atlantic. Typically, banana crops take up the lower terraces, but from about 200 metres and upwards agriculture is dominated by wine grapes. A third crop of significance is cane for sugar and rum production.

The grapes grown on Madeira were introduced from various parts – the Minho region among other parts of Portugal, along with Crete which was the 15th century source of Madeira's first planting, Malvasia Candida (named for the capital of Crete, Candia). There is also an emerging trade in Vinhos de Mesa (regular table wines from Madeira), in addition to the traditional fortified styles.

MADEIRA FORTIFIED WINE STYLES - what do I get if I order 'Madeira'.

D.O.P. Madeira, or Vinho da Madeira, is fortified wine with a final alcohol level in the 17-22% abv range, made from fruit sourced on the Madeira and Porto Santo islands of the Madeira archipelago. Madeiras are fortified with 96% pure neutral grape alcohol, not young brandy as is used in Port.

All Madeira wines have a heating/cooking process as part of their evolution - an overlay which distinguishes them from Sherry wines for example. 'Estufagem' is a relatively quick, technological method whereby the Madeira is heated as if in a slow-cooking pot, whereas 'Canteiro' is a slower, perhaps more 'natural' evolution - the wines age slowly in roof spaces at elevated temperatures compared to normal cellars.

There is no distinction between Madeiras which are made from white, black or mixed colour grapes - all are 'Madeira'. Madeira wines are classified and understood in two distinct manners: by sweetness and by age. Wines are classified into dry, medium dry, medium sweet and sweet styles. The minimum age for Madeira is 3 years' barrel ageing. 5 year old Madeira is a desirable minimum, however, with extra complexity and textural interest accruing with time in barrel. Blends of average age 10 and 15 years are extremely high quality, and there are very rare blends bottles with average ages up to 40 years. Even rarer, single vintage bottlings of Vintage Madeira (Frasqueiras) from as far back as the middle 19th century are still occasionally released.

The quantity of residual sugar allowed in the drier styles may alarm at first reading. However, effective dryness is not determined by sugar alone – there are many factors which can mitigate big sugar into relatively dry and savoury wines. Foremost among these is the sometimes dagger-like acidity of Madeiran base wines. Other considerations include component parts - density, glycerol, tannin, alcohol and wood. Emergent properties are important too, such as umami, complex developmental chemical compounds like rancio and volatile acidity.

MADEIRA GEOGRAPHY

Madeira is Portuguese for 'wooded', and its mountainous parts remain heavily so. The population is around 300,000 and the islands are volcanic basalt. Madeira, by far the largest, is 60km from west-to-east and 25km north-to-south. It occupies a mere 732 square kilometres, most of which is mountainous, heavily forested slopes steeper than 25 degrees, with the highest peaks at around 1900 metres. The island is home to about 500 hectares of wine grapes, planted on terraces carved from the lower, but still very steep (10-25 degrees) hill-slopes.

Grapes are grown at up to 750 metres, but in the South grape cultivation commences above 200 metres; from sea level up to 200 metres in the dry and protected slopes of the south is ideal for lucrative banana cropping. Most Madeira wines are grown on Madeira itself, however, the second-largest island, Porto Santo, is also a legal source of fruit for Madeira. For our sake, here, though all references are to the eponymous island, Madeira itself.

A feature of Madeira is its 'Levadas' – an intricate 2150km system of irrigation canals carrying water from the extremely humid to the sub-arid parts. About 40km of these canals are underground tunnels, and the Levadas double as tourist attractions, forming fantastic walking trails.

MADEIRA GROWING REGIONS

Usually, references to region simplify to 'the North' or 'the South', but each of these breaks down into a bunch of sub-regions, and there are several in the centre as well. The main wine sub-regions are Câmara de Lobos (186 hectares on the south coast), and São Vinente (143ha) and Santana (86ha) on the north coast. Rainfall can vary from 3000 mm in the mountains and 2000 mm in the northern vineyards to as little as 500mm in the south.

At the simplest, the North is more ruggedly mountainous, steep, windswept and open to the Atlantic, and tropical winds off Africa. It is more humid, colder and much wetter than the South. Soils in the North are more fertile, and generate much denser and more vigorous tropical vegetation, although this soil fertility is partly due to fertilisation from cattle grazing.

The South is generally drier and less windy. Although not so stunningly steep and mountainous, it's still very steep and hilly. The volcanic basalt soils here are very poor. Irrigation is prohibited, however water from the Levada canals is available for watering vines. In some ripening seasons there is severe hydric stress in the South; in such circumstances the usual prohibition against watering vines is sometimes suspended and relief irrigation is directed to take place.

Madeira refuses simple classification in terms of sub-region, and the relation between terroir and best suited grape varieties. Height and aspect override the simplicities of North-South oppositional classifications. There's really no such thing as the "natural-best" zone or sub-region in which to grow a particular grape variety. The complexities of site, aspect, altitude, exposure and humidity shifts rapidly in the crazy patchwork of mini-terroirs here, and what is optimal for one variety may be overly challenging for another.

While different grapes have their peculiarities, it tends to be the case that in any given area there is a site with an altitude/temperature/wind/humidity/soil etcetera matrix which suits each of the gamut of Madeiran varieties. This fosters a complex yield of varying acid-sugar-anthocyanin identities that serve as building blocks for the various Madeiran wine styles.

IVBAM - 'The Institute'

Since 2006, Madeira wine has been regulated by 'The Institute' – IVBAM (Insituto do Vinho, do Bordado e do Artesanato da Madeira - the Madeira Wine, Embroidery and Handicrafts Institute). Madeira was previously regulated by the Madeira Wine Institute from 1979-2006, and prior to that was dictated by the Portuguese military Junta under the dictates of Salazar from 1933.

IVBAM is a progressive bureaucracy, actively engaged in promoting the quality of Madeira wines, not just in promotions. They maintain excellent research vineyards, two each in the South and North which protect and explore some 200 cultivars, and also various training technologies, planting aspects and so on. As well as important research facilities, these vineyards are also nurseries, releasing cultivars of varieties such as Terrantez - in terminal decline until very recently.

MADEIRA 'D.O.s'

There are four types of wine made on the Island, the main three of which use European Vitis Vinifera cultivars. The most important of course is fortified Madeira licensed by 'The Institute' as D.O. Madeira. There's also unfortified Madeiran table wine, or Vinhos de Mesa, under two narrowly distinguished appellations: P.D.O. Madeirense (Protected Denominacion of Origin Madeiran Wine) and P.G.I Terras Madeirenses (Protected Geographical Indication Madeiran Lands). When phylloxera came to Europe in the middle 19th century, efforts were made for some time to grown American vine cultivars (non-Vitis Vinifera). The American species such as Vitis Labrusca and others were quickly deemed undesirable for wine production, however their rootstock provided the needed insurance

against the phylloxera louse. The common practice nowadays, by which delicious wines are made from vines resistant to phylloxera, is the grafting of European Vinifera varietal cuttings onto various American rootstocks. On Madeira, however, there remains a small industry producing wines for local consumption from the grapes of American cultivars, such as 'Cunningham', 'Jacquet' and 'Isabella'. Of the Island's 500 hectares, 470 are Vitis Vinifera. Unless explicitly stated, all references here to 'Madeira' are to the first category – D.O. Madeira fortified wine controlled by IVBAM.

A note in passing on Madeira table wines: this new industry commenced in 1999 and has started well. It's a tiny thing for now, however: Institute predictions are that after another 10 years of strong growth, Madeiran table wines would still only account for 10% of the table wine guzzled on the island by touring British and German geriatrics. In the interim, its impact on mainland Portuguese consumption, let alone the development of a conspicuous export industry will be limited. In its infancy, however, a local version of 'green wines' (white, pink and red) of some charm has commenced, with 10 producers to date. Currently, table wine accounts for 5% of the 4 million kilos of fruit crushed for Madeira.

GROWERS AND PRODUCERS

The entire Madeira industry is limited at present to 500 hectares of Vitis Vinifera distributed among 1750 growers, who in turn sell to just seven producers (there were eight, Barros e Souza having recently been subsumed into Perreira D'Oliveira). One of the local co-ops is in the process of attaining a producer license, and is a couple of years away from emerging into the market, which will make it eight again. In the meantime, there are: Perreira D'Oliveira, H.M Borges, J. Faria & Filhos, Vinhos Barbeito, the Madeira Wine Company and the foreign-owned big companies responsible for nearly 90% of all Madeira, Justino's and Henriques & Henriques (which Justino's own). Generally, the producers do not grow their own fruit.





MADEIRA VITICULTURE

All fruit is hand picked - there's no mechanisation on Madeira.

Some husbandry is on pergola style 'Latada', much like those of Rias Baixas and northern Portugal, whereby the two metre space beneath the canopy allows a secondary agriculture (chickens, cabbages, etc) just as elsewhere. Latada are planted at 2500-4000 vines/hectare and promote soil fertility, often leading higher yield per vine. Curiously, Latada training also tends to promote higher acidity. The tendency nowadays, however, is towards Espaldeira training on trellis - a vertical canopy division cropping 4000-5000 vines/ha.

In the humidity of Madeira, vines do not live as long as we are used to hearing about - they can become feeble and unproductive anywhere between 25-50 years of age. Most vines are 15-30 years old, however some very old plantations can be maintained on Latada. Harvest takes place from early August to mid-October, although most crops are picked before the end of September, after which the predictable October rains bring humidity and rot.





MADEIRA GRAPE VARIETIES

Vitis Vinifera arrived from Crete in the 15th century, in the guise of Malvasia Candida - nowadays a very high quality but equally rare part of the mix of varieties used for Madeira. Most Malvasia is a later arrival, the easier-to-cultivate Malvasia Fina, known on Madeira as Boal. Since the 15th century a range of other cultivars arrived, mainly from mainland Portugal, many of which, including the important Verdelho remain obscure as to origin. As yet, there are no varieties considered Madeira autochthons - natural selection takes time and 500 years or so is just a blink!

As with many other European appellations, Madeira classifies grapes into preferred, tolerated and forbidden. In Madeira, the terms of choice for preferred versus tolerated is a distinction between 'traditional' and 'non-traditional' varieties. The 'traditional' varieties, almost all white are: Sercial, Verdelho, Terrantes, Boal and Malvasia. Moscatel and Bastardo (a black grape) are also traditional, but plantings are insignificant at present, and these varieties are not further discussed here. The main grape grown, in quantity terms, however is a non-traditional black grape called Tinta Negra.

DOMINANT, BUT (FOR NOW) 'NON-TRADITIONAL'

Tinta Negra is a black grape producing wine across all sweetness classifications. It accounts for nearly 90% of Vitis Vinifera plantings. The same variety is known on the mainland as Negra Mole (Mole in Portuguese means 'soft in the middle'). Tinta Negra arrived on Madeira from Portugal in the early 19th century. Tinta Negra's dominance is easily explained - higher yields of easy to grow, disease resistant fruit which is versatile enough to contribute to all the major Madeira styles, from dry to sweet, from young to seriously aged, from inexpensive to off the charts! With its very low anthocyanin concentration combined with the effects of barrel-age oxidisation, its final colour is extremely close to that of the traditional white grapes.

Wines dominated by Tinta Negra are released and classified just by age and sweetness criteria - they are not labelled by variety. However, a law change from IVBAM is anticipated in the near future, whereby the Institute will rule that after nearly 200 years Tinta Negra is indeed now a 'traditional' Madeira variety, and thus varietally labelled Tinta Negras will join the 5 classic white varieties. Unlike the whites, whose sweetness is assumed varietally and not stipulated on the label (Terrantez being an exception), varietal Tinta Negras will still need to be formally labelled by sweetness category.

TRADITIONAL AND WHITE FLESHED

The grapes currently rated as traditional account for only 10% of production and all are white. To be varietally labelled, as Verdelho for example, wines must be at least 85% of that variety when bottled as aged blends, and must be 100% varietals for Vintage or Frasqueira Madeiras.

Sercial (dry by definition, bottled at 20-60 grams/litre residual sugar) a.k.a "strangler-dog", ie it's acidic enough to `strangle a dog'.

Sercial has a very long maturation cycle and is the naturally driest white. Grown in all parts of the island, Sercial is more comfortable in the highest altitude, cool and exposed sites. Sercial's penchant for extremity is best exemplified by a small proportion of the Sercial crush known as 'Vinha no chão'. This is the highest altitude of Madeira grape production at around 700m in the central Jardin de Sera. Vina de Sera is fruit from vines grown in an entirely prostrate form, running along and hugging the ground seeking extra warmth for adequate ripening. The origins of the grape are obscure: while it is commonly thought to be of non-specifically Portuguese origin, there are no records of where, when and how it arrived, nor of its likely genetic parent variety on the mainland. Pereira D'Oliveiras ascribe its origin to the Rhine Valley in Germany.

Verdelho (medium dry by definition, bottled at 60-80 grams/litre residual sugar)
Like Sercial, Verdelho's varietal origin is obscured in history. There is speculation it may in fact be an Atlantic island autochthon (from Azores perhaps) but this is entirely unsure. What, if any, mainland Portuguese variety it may hail from is unknown, however there is speculation of a link to Gouveio. Verdelho grows best in the 200-400 metre altitude range. Good Verdelho features sweet citrus, honey cake, grilled nuts and dried fruits. With acid drive, it's juicy but not tropical (compared to Verdelho table wines as we know them).

Terrantez (medium dry or medium sweet, the only variety whose sweetness is not stipulated by law) Of very high quality, Terrantez is not legislated as belonging naturally to any of the sweetness classifications, but is usually medium, sometimes medium-sweet. Its origin is thought to be a Douro Valley white, Folgasão. It is not related to the similar-sounding but rather dull Spanish and Latin American variety, Torrontes. Extremely low-yielding and viticulturally difficult, Terrantez has small, tight bunches with thin skin that are very prone to mildew, fungus and rots, including botrytis. It's usually grown at lower altitudes, from the bananas up to about 400 metres, much like Verdelho. Until recently, Terrantez had all-but-disappeared from production. The Institute is fostering replanting and in 2013 it accounted for 5 tonnes out of a 4 million kilo harvest. Some comeback!

Boal (medium sweet by definition, bottled at 80-100 grams/litre residual sugar) (sometimes referred to by the anglicisation Bual)

Originated as the Portuguese mainland varietal Malvasia Fina. It grows best low down on the hills, yielding large, heavy grapes which are also very good for the table. Naturally sweet and golden, it will have gently plummy fruit, a savoury maritime line and lots of typical Madeiran character: nut, plantain, honey-cake, wood caramelisation, dried fruit, juicy sweetness, orange peel and barley sugar.

Malvasia (sweet by definition, bottled at over 100 grams/litre residual sugar) (sometimes Malmsey, another British "Sherry, innit?" bastardisation, and some old bottlings are labelled Malvaxia or Malvazia. Note, Malvazia is preferred by D'Oliveiras which we import) The predominant Malvasia is Sao Georges, probably a local derivative adapted from the original Malvasia Candida, which was introduced from Crete in the 15th century. Candida is of very high quality but very difficult to grow. In 2013, Candida accounted for just 4 of the 4,000 tonnes of Vinifera crushed. Like Terrantez, Malvasia Candida is being preserved and promoted by the Institute and will most likely have a small revival in quantity. It has purple skin late in its ripening cycle (but clear white flesh) and is very low in productivity, yielding on average at a third of the rate achieved by Tinta Negra. Nevertheless, it's the foundation of Madeira's fame - the early Vinhas da Ronda were made from Candida. The abiding theory is that it needs to be grown at the lowest possible altitudes - that it "has to be watching the sea". However, the Institute believe that better husbandry may relax this stricture somewhat.

FLAVOUR DESCRIPTORS IN MADEIRA

Depending on variables such as style, age, production methodology and variety, Madeira will exhibit varying and highly complex combinations of a range of predictable constituent flavours and compounds:

Nut, wood, 'rancio', balsam

Toffee, brulee, caramel, honey cake, molasses, vanilla, barley sugar

'lodo' (iodine - seaweed, maritime)

Vin cotto, vinegar, balsamic, volatility

Canned and jar-preserved fruits, dried fruits, juicy fruits, figs, plums and pear

plantain, artichoke and other vegetal/herbal matter

citrus, marmalade, orange peel, spice, acidity, alcohol

Mature grape skin extract, hay, grass, adobe

and perhaps, Sotolon, which is a somewhat controversial term, used to denote a form of rancioumami character found in some Madeiras - a spicy emergent property, and a compound that increases in concentration as Madeiras age further - it's a wood-caramelised-sugar character seen more in sweeter styles. Many find the term pretentious and vague.

Whatever the amalgam of such flavour descriptors, a few commonalities can be expected in wines that are in good condition. Sweetness and acidity are always co-operating to define the wine. Acidity is almost always high and clear in the mix, but is always juicy, fluid, delicious and rain-watery, rather than rasping. This acidity will always give lift and flow to the sweetness of the wine. Even when molasses and dried fruit descriptors appear, they will do so in a quite lively, rather than leaden manner: good Madeira is never heavily sweet even when 140+ grams/litre of residual sugar are present.

MADEIRA WINEMAKING

Chaptalisation is not allowed, but 'rectification' (correcting sugar level to defined sweetness bands, ie 60-80 g/l for a medium) by way of adding mosto concentrado (akin to the arrope of sherry) is.

Grapes are picked in a range from 9-12.5 degrees of potential alcohol. They are fermented only to a point where the desired residual sugar is maintained. For example, a Sercial picked at 10 degrees contains roughly 170 grams of sugar. If it's destined to be a dry Madeira with 45 grams/litre residual sugar, 125 grams or about 7 degrees of natural alcohol is fermented, and then the wine will be hit by mixing in the 96% grape alcohol. If 10 degrees worth is mixed in, the resulting wine will be 17 degrees alcohol by volume, which is the legal minimum. All these numbers change depending upon the ripeness at harvest, the desired final degree of alcohol at bottling, and of course the residual sugar dictates of the finished sweetness-style band to be attained.

A central element in production of Vinho Madeira is heating the maturing wine. There are two basic forms. Estufagem (shtoof-aah-zhe), or Estufa de Calor, is heating by modern technology, basically 3 months in stainless steel at 45-50 Celsius aided by internal coils and external jacketing constantly and evenly distributing heated water through the young wine just after fortification. Circulation is essential to distribute oxygen and minimalise caramelisation (note, adding caramel is legal in the form of anthocyanin concentrates which add colour but not flavour).

Young Estufa wines are then barrel aged until they reach at least the minimum age for Vinho Madeira, which is 3 years. However, a great deal of older and more significant Madeira wine is based on Estufa wines which are then barrel aged in warm ceiling locations reaching about 30 degrees in summer in the lodges (bodegas, or ageing rooms) to become 5, 10, 15 year or older wines, including single aged Colheitas of 5-20 years. Colheitas over 20 years based on Estufa wines however are not

allowed to graduate to become vintage wines called Frasqueiras. Aged wines (e.g. a 15 y.o.) based on Estufa wines are called barrel-aged.

Some producers do not avail themselves of the quick start provided by Estufa de calor and instead only use barrel ageing in warm ceiling locations. Such wines, barrel-aged in ceiling for 2+ years without Estufa heating are called Canteiros (the Canteiro itself is the support beam complete with cutaway cradle to hold the base of the barrel, along which the barrels in ceiling are arrayed). Canteiro wines have a slower chemical reaction yielding similar colour evolution and development of concentration and complexity to barrel aged wines that first underwent Estufa.

Barrel ageing requires a relatively dry cellar, allowing water rather than alcohol to evaporate, while facilitating character acquisition through the concentration of extract, alcohol, acidity and sugar, and development of secondary complex chemical compounds (for example esters resulting from the interaction of acid and alcohol). Esters will contribute varnish-balsamic complexors and further interaction of these with wood will yield further vinegary and volatile compounds.

The basis of Madeira style definition is into 4 sweetness bands.

These sweetness levels may or may not be determined by varietal composition. Black (Tinta Negra) grape wines, or blends of black and white, are classified according to residual sweetness, but not labelled varietally:

- Dry wines with up to 60 grams/litre residual sugar.
- Medium dry wines with 60-80 grams.
- Medium sweet wines with 80-100 grams (sometimes called 'medium rich').
- Sweet wines with 100+ grams, often climbing into the 140s (also called 'fine' or 'full rich').

The white grapes naturally fall (and by law are required to fit) into each of these four bands (exception, the very rare Terrantez, which can be medium dry or medium sweet). When labelled varietally, the sweetness level is assumed:

- Sercial is dry naturally, and by law is bottled with up to 60 grams/litre residual sugar.
- likewise, Verdelho must be medium dry, and is bottled with 60-80 grams.
- Boal is medium sweet, and bottled at 80-100 grams.
- Malmsey is quite sweet, bottled at over 100 grams/litre residual sugar.

NOTE: An important change is forthcoming:

The Institute expects to shortly re-classify Tinta Negra as 'Traditional', hence there will soon be varietally-labelled bottlings of Madeira from the dominant black grape. In all cases, however, varietal Tinta Negra Madeiras will still require cross-classification by sweetness.

MATURATION AND LABELLING OF MADEIRA

There are several divisions in Madeira, determined by how the wines have been matured.

DETERMINING MADEIRA AS AVERAGED-AGE BLENDS OR VINTAGE-SPECIFIC WINES

Firstly, and most commonly, there are 'aged blends': wines released at an average age: 3, 5, 10, 15, 20, 30 and 40 years' average age Madeira blends are all released, with 3 years being the legal minimum. [The age of the blend only appears on blends 5 years and older]

Second, come wines determined by their year of harvest. These are Colheitas when bottled with 5-20 years' barrel age and Frasqueiras (Vintage Madeira) if barrel-aged more than 20 years. [There is more to the story than this, but for introduction's sake, we'll keep it this simple!]

AGED BLENDS

Madeira wine is required to be a minimum 3 years of barrel age prior to bottling – sometimes these young wines are termed 'Current Madeira'. These simple wines are not allowed to be labelled varietally, and likewise they are not allowed to be called Canteiros. They are largely made from Tinta Negra, and are simply classified as dry, medium, medium sweet and sweet. Their age is not mentioned either, they are simply generic Madeiras.

From blends of average age 5 years old, through 10 years old, 15, 20 and older Madeiras develop more complexity with more time ageing in barrel. They may be Canteiro or Estufagem wines.

Average-aged blends are to be understood and labelled by up to 3 distinct criteria:

- Average age
- Sweetness
- Varietal composition

Sweetness and varietal composition are inter-related notions.

Firstly, they are blended and labelled according to the average age of the composite material. A 5 year old wine will have a minimum average age of 5+ years. It will most likely contain a significant amount around that age, plus some younger material for freshness and some old, perhaps quite old gear for character, depth and complexity. 10 year old, 15 year old and older blends follow exactly the same rules - averaging the stated age from parcels of several different ages, blending freshness and wizened character.

For an aged blend to mention variety, it must be at least 85% single varietal composition. Take a 5 year old dry Madeira as an example: this will be in the range of 20-60 grams per litre of residual sugar and noticeably high in acidity. If it is labelled varietally, it will be from 85%+ of the white Sercial. If it is not labelled as Sercial it will contain a considerable amount of Tinta Negra, indeed may be entirely composed of the black grape, but it will be below 60 grams residual sugar and at least 5 years' average age.

5 year blends are called 'reserva', and can be made in all 4 sweetness bands, varietal or otherwise 10 year blends are 'reserva velha', and can be made in all 4 sweetness bands, varietal or otherwise 15 years plus are 'extra reserva', and can be made in all 4 sweetness bands, varietal or otherwise.

YEAR OF HARVEST WINES: COLHEITA and FRASQUEIRA

Unblended wines bottled from a single harvest are called Colheita or Frasqueira wines depending upon age and varietal composition:

- A Colheita is a single harvest bottled unblended after 5 years or more barrel age. Usually, Colheita wines are Canteiro-aged, but it is not mandated.
- A Frasqueira, or Vintage Madeira is a monovarietal single harvest with over 20 years barrel age. Both Colheita and Frasqueira wines must be 100% Canteiro-aged.

Often, a Colheita will be a varietal blend based on Tinta Negra and simply labelled by harvest date, bottling date and sweetness category. Colheitas can also be labelled varietally (but for these wines the varietal bar is set to 100%).

Thus, we can see a Dry Madeira Colheita 1988, which will be Tinta Negra or a varietal blend with residual sugar in the 20-60 gram range; or we can see a Sercial Madeira Colheita 1988 which will be dry wine in the 20-60 gram range but from unblended Sercial grapes only. And so on through the other sweetness band/varietal combinations.

As ever, a (rare) Tarrentez Colheita will be labelled varietally AND have a sweetness designation on the label as Tarrantez is not designated a specific sweetness band by law, and in this instance sweetness is to be stipulated rather than assumed.

The age of a Colheita is determined by deducting the harvest date from the bottling date (both will appear on the labels). The very same Colheita could in theory be released through a broad spread of ages as repeat bottlings take place after ever-increasing amounts of time ageing in barrel.

At more than 20 years' barrel age, and if they are Canteiro mono-varietals from traditional varieties, they can be called vintage Madeiras, or Frasqueiras (sometimes called Garrafeiras).

Single harvest mono-varietal Solera wines

Thankfully uncommon, as this is a trickier concept, a Solera Madeira is from an unblended base wine which must be at least 5 years of age - a Canteiro-aged, monovarietal Colheita. But from here it may be bottled and re-blended annually. 10% of the wine is allowed to be withdrawn annually, and replaced by younger Canteiro wines of the same variety, and this process is only allowed to be repeated 10 times before the entire Solera is required to be bottled and sold - sometimes with great accumulated age. Thus there could be 1914 Solera Sercial from a given producer bottled in 1924 at 10 years, repeated every 10 years until the Solera is bottled off at 100 years' age in 2014.

So, all Colheita, Frasqueira and Solera wines have their cask-aged-character determined both by year of harvest *and* year of bottling, with the underlying criteria that they have a minimum of 5, 20 and 5 years' barrel age character respectively, but commonly much more than this.

PRODUCTION FIGURES

In 2012 the breakdown by type of the 3.41 million litres produced was:

BY STYLE

Dry 14.2% 1.1% Sercial Dry Medium Dry 22.5% Verdelho Medium Dry 0.9% Medium Sweet 22% **Bual Medium Sweet** 1.7% Sweet 35.2% Malvasia Sweet 2.3% Terrantez 0.08% Bastardo 0.02%

BY AGE

Madeira no Additives 5.7% (sold off to confectionary producers)

Modified 23.2% (sold off salt-and-peppered to food industry for Madeira sauce)

Current 59.1% (3 year old generic Madeira)

5 years 7.9%
10 years 2.8%
15 years 0.4%
20 years 0.006%
30 years 0.001%
40 years 0.009%
Colheita and Frasqueira 0.85%