

Cultivars

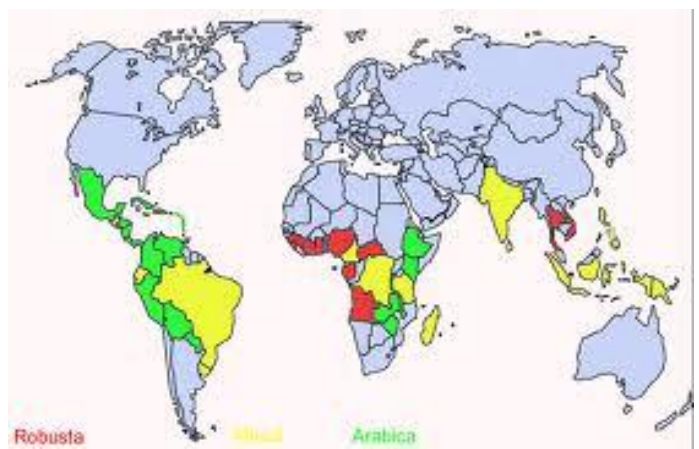
Cultivars (of coffee) are sub-species of the Arabica species of the genus Coffea that have been created through cultivation, as opposed to wild genotypes. The term is usually used interchangeably with the term “varietals” in the industry. Varietal is a wine-industry term used to distinguish a wine that is made from a particular biological variety of wine grape. The coffee industry has co-opted that name to use synonymously with cultivar (although most in the industry will say there is some distinction). Some in the coffee industry will say that Varietals are more location dependent and Cultivars are more genetic dependent; however, on this website, I will use them interchangeably.



There are many species of the genus Coffea. There are probably at least 25 major species, all indigenous to tropical Africa and certain islands in the Indian Ocean, notably Madagascar, but only two are extensively grown commercially: Canephora (a.k.a. Robusta) and Arabica. Two other species which are grown on a much smaller scale are Coffea liberica (Liberica coffee) and Coffea dewevrei (Excelsa coffee). Arabica is the only species of Coffea that is a tetraploid with four sets of chromosomes (44 total) and is self-pollinating; Robusta and all of the others are diploids (two sets of chromosomes). Arabica is far superior in flavor to Robusta, and virtually all specialty-grade coffees are cultivars of Arabica.

Robusta is higher in caffeine (almost twice as much, 2.7% compared to 1.5%), the plants are easier to care for, and they produce a higher yield. For these reasons Robusta accounts for about 20 percent of the coffee market. It is used as filler in production-grade coffee, for dark roasts like French and Italian, and sometimes as a base for espresso drinks. There are no other significant cultivars of Canephora besides Robusta, so all further discussion will be regarding Arabica (although there are a few that have been crossbred with Canephora, like Hibrido De Timor and Catimor).

Arabica accounts for about 75 to 80 percent of all commercially-grown coffee. It was originally found in the southwestern highlands of Ethiopia, and is now rare in its native state due to the influx of cultivated coffee and the impact of cultivars on the wild genotypes. The cultivated form of coffee has spread to more than 70 countries. There are hundreds of cultivars, and with organizations like the Brazilian Coffee Research Consortium, CENICAFE in Columbia, and others working to develop other cultivars, there may someday be thousands.



Typica and Bourbon are the oldest varieties (Bourbon may be a natural mutation of Typica). All modern varieties originate from one or the other. Since there are so many cultivars, I will only touch on a few of the more prevalent ones. For those of you who wish to learn more, there is an excellent source called Coffea, Genus, Species, Varieties by Raimond Feil which can be found at <http://genuscoffea.wordpress.com/coffea-article/>. The following table has been gleaned from that publication.

Name	Derivation	Attributes
<i>Acaia</i>	<i>Bourbon</i>	<i>a hybrid of Mundo Novo from Brazil. The plant has big leaves and berries. Its main shortages are sensibility towards various coffee diseases and bug attacks. Acaia is a rather rare variety.</i>
<i>Arabigo</i>	<i>Typica</i>	<i>a natural mutation of Typica, which can be found in South and Latin America.</i>
<i>arusha</i>	<i>Bourbon</i>	<i>a sub-variety of Bourbon originating from Papua New Guinea.</i>
<i>Bergendal</i>	<i>Typica</i>	<i>a sub-variety of Typica. One of the few that managed to survive the Leaf Rust epidemic in Indonesia in 1880s.</i>
<i>Blue Mountain (Jamaica Blue Mountain)</i>	<i>Typica</i>	<i>is claimed to be a mix of Typica and various other varieties. Originally was grown in Jamaican Blue Mountains. Over time people started to call it after its place of origin or Blue Mountain. Now it is being cultivated too on Kona Island in Hawaii, where it is known under the name Guatemala. Genetically these two are undistinguishable. Beginning from 1913 it is being cultivated also in West Kenya (in other parts of Kenya the variety didn't begin to grow). Blue Mountain is resistant to coffee berry disease and capable of growing on great heights. Nevertheless, it is not capable of acclimatizing in all climate conditions and keeps the high taste qualities irrespective of location.</i>
<i>Bourbon (French Mission)</i>	<i>Typica</i>	<i>a natural mutation of Typica, originates from Bourbon island (nowadays called Réunion, since 1848), where the Frenchmen planted it in 1708. The plant was brought in from Yemen (according to some sources it was acquired from the Dutch. There is also a possibility that this plant originates from Yemen and was passed on by the Dutch). Bourbon is also known under the name French Mission after the French missionaries who brought the coffee variety from the island to the East African mainland in 1897. Bourbon's productivity is 20-30% higher compared to Typica, but it is nevertheless considered to be a variety with small productivity compared to other common coffee plants. Bourbon is less conical of shape than Typica but has more secondary branches. The angle of secondary branches towards the trunk is smaller and the arrangement of branches is side by side or close. Leaves are wide and fluctuant on the edges. Berries are rather small and thick and stand in clusters in intervals of one knob. They ripen quickly and will drop easily in the periods of strong wind and rain. The berries can also be: red, yellow or pink, according to the sub-variety. Red, yellow and pink Bourbon are varieties with natural mutations of one recessive gene. Color of the berry is affected by the mentioned gene. The best coffee quality is achieved when the plant's growing ground stays in the range of 1050-2000m above sea level. Bourbon is known for its complex acidity and wonderful balance. Fullness is low. According to Willem boot, the acidity of Bourbon is intense and aftertaste winy and sweet. Bourbon grown in highlands is said to include always some floral aroma.</i>

Catimor	Bourbon/Robusta	<p>hybrid of Hibrido de Timor and Caturra that was bred in 1959 in Portugal. Breeding gave a plant with high productivity and resistance towards coffee berry disease and leaf rust, which was the main goal of the scientists. Berries ripen early but in order to guarantee high productivity the plant needs correct fertilizing and shading. In low growth heights there is little or no sensory difference between Catimor and other <i>C. arabica</i> varieties. Distinction in taste comes to the fore when the plants are planted higher than 1200m above sea level. In such case Caturra, Bourbon and Catuaí have better taste qualities than Catimor. The plant was introduced in Brazil in 1970. Some years later it was widely spread in Latin America by „experts“. Later it appeared that this variety lacks the quality needed for wider marketing, leaving many farmers growing Catimor in great difficulties. In Indonesia, Catimor has a short life span – around 10 years. Its branch is ramified similarly to <i>C. canephora</i> plants. Acidity features often some bitterness, astringency and somewhat salty aftertaste.</p>
Catuai	Typica/Bourbon	<p>a hybrid of Mundo Novo and yellow Caturra originating from Brazil from late 1940s. Forms ca 50% of all the coffee varieties grown in the country. The plant is low in height, therefore it is considered to be a dwarf. It is very resistant towards elemental forces like strong wind and rain as its berries will not drop easily. Other branches form an acute angle in relation to the stem. Catuaí is a plant of high productivity and it can be planted very closely. For best results it needs sufficient and correct fertilization and care. It is widely spread in Latin America. Berries can be red or yellow. It is a common opinion that there is no difference in taste of the seeds from yellow and red berries, but some sources¹⁷ claim the taste qualities of yellow Catuaí to be lower, as the coffee cools down, the aftertaste acquires unclean mouthfeel reminding petroleum, as red Catuaí preserves the purity of its taste. The most stable taste quality is its sweetness, which is mainly dependent on fertilization. Right fertilization gives greater sweetness. Natural compost also intensifies the sweetness and improves the overall taste.</p>
Caturra	Bourbon	<p>a mutation of Bourbon discovered in Brazil, near town called Caturra in 1937. Originally it was grown in Minas Gerais region in Brazil, later Caturra was spread all over the Latin America. Caturra has high productivity (it tops the productivity of Bourbon by 200kg /ha and in good conditions even by more than two tons per hectare) and good quality but it needs constant care, trimming and fertilizing. It can be planted very closely, up to 10 000 trees per 1 ha (usually 6000 trees per ha). The plant is short, with stout trunk and has many secondary branches. Due to its small growth it is considered to be a dwarf. Caturra has big leaves with wavy edges. It acclimatizes well with various surroundings but best results are achieved at 800m, with average rainfall of 2500-3500mm. Greater heights raise the taste quality but reduce its productivity. Today, Caturra is most common in Columbia, Costa Rica and Nicaragua, but not in Brazil, its country of origin. Caturra is a coffee with rich acidity, with top notes of citrus fruits and orange, low to medium fullness and with less purity and sweetness compared to Bourbon. Acidity increases with greater heights.</p>

Geisha (Gesha)	Typica	<p>a very rare variety that was rediscovered in Panama in 2005. In 1931, a British ambassador of that time picked (probably from different coffee trees) a bunch of coffee berries in the southwest part of Ethiopia, near a town called Geisha¹⁸ to use them in his research. In 1932, the seeds were exported to Kenya to Kitale centre under the name of Abyssinia or Geisha. In 1936, the sprouts from Geisha seeds were sent to Kwanda station in Uganda and Lyamungu station in Tanzania. In 1953 (1956), the Geisha seeds were sent from Tanzania to Costa Rica CATIE centre¹⁹ where the attempts to grow Geisha began. In 1963, first Geisha seeds were brought from Costa Rica to Panama by a man called Don Pachi Serracin. Original attempts to grow Geisha in Panama and Costa Rica were aborted as the plant gave poor taste qualities. Later it appeared that the bad taste quality was caused by too low growing altitude. Geisha is considered to be a coffee with „the most brilliantly complex and intense flavor profile of all“²⁰. Nowadays, Geisha is mainly grown in Panama and Costa Rica. Best quality is achieved when the growing height goes above 1500m, but for the perfect taste, the height has to be quite punctual. Trees are high and rarefied. Leaves are oblong and narrow. Oblong are also berries and seeds. Geisha is considered to be a plant of low productivity. It is resistant towards leaf rust and also a fungus called Ojo de Gallo. During roasting, Geisha is claimed to act similar to Harrar coffee of Ethiopian origin. After the first crack it tends to roast quickly, therefore it is recommended to roast it on medium heat in the first phase of roasting. Geisha has rich and sweet, extremely pure taste and intensive aroma of berries, citrus fruits, mango, papaya or peach</p>
Java	Typica	<p>has gotten its name after Java Island. P. J. S. Cramer brought a selection of varieties of <i>C. arabica</i> in 1928 from Ethiopia to Java Island. Later the descendants of those varieties were taken to Cameroon. The seeds and berries of Java are oblong. Young leaves are bronzed. In Cameroon conditions it gives 1,5-2 tons of coffee per 1 ha, whereas Caturra and Mundo Novo give only 1 ton of coffee per 1 ha in same conditions.</p>
Kent	Typica	<p>according to one source, Kent is a natural mutation of Typica discovered in India. According to others it was bred in Kenya in 1911. During the breeding different varieties of Tanganyika were used from Mysore, India. From 1920 Kent was planted widely in India. In 1934, Kent was planted to Meru in Kenya. Sort has high productivity and partial resistance towards the leaf rust disease.</p>
Kona	Typica	<p>a hybrid of Typica, grows on the islands of Hawaii.</p>
Maracatu(ra)	Bourbon	<p>a Brazilian hybrid of Maragogype and Caturra. It can mainly be found in Brazil, El Salvador and Nicaragua. It has big leaves and berries. In terms of taste Maracatura has strong and with diverse mature fruity acidity.</p>
Maragogype Maragogipe	Typica	<p>a mutation of Typica, which was discovered in Brazil in Maragogipe region of Bahia state. Maragogype is a big and high plant with very big leaves. Its berries and seeds are at least twice the size of a normal coffee berries/seeds. Despite its size, the plant has a low productivity. Maragogype acclimatizes the best in heights of 600-750m above sea level. The plant is spread all over Latin America, but it is most common in Brazil, Guatemala and Mexico. Maragogype can have a heavy body in mouth-feel and citrusy and flowery in taste. Taste qualities of Maragogype are often unstable.</p>
Mayaguez	Bourbon	<p>a sub-variety of Bourbon, grown in Rwanda and Burundi. Also known under the name of Bourbon Mayaguez.</p>

Mocha	Typica	<i>(some sources have mentioned it as a separate variety) originates from Yemen and is one of the oldest coffee varieties known. It's a short tree with small berries and leaves; same can be said of its productivity.</i>
Mokka	Typica	<i>a mutation of Typica. Grown in Brazil and Hawaii. At some time it was considered to be a species, but actually it is just another C. arabica variety, as the plant has four pairs of chromosomes (as common to C. arabica plants).</i>
Mundo Novo	Typica/Bourbon	<i>is a natural hybrid of sub-variety of Typica – Sumatra and Bourbon, which was originally discovered in 1940s in Brazil by Instituto Agronômico de Campinas. The plant is strong and resistant to diseases. Productivity of Mundo Novo is high (about 30% higher compared to Bourbon) but the berries ripen a bit later than other varieties' average. Its best growing heights are between 1050-1670m, with rainfall of 1200-1800mm per annum. Mundo Novo is common amidst Brazilian coffee cultivators, forming ca 40% of all grown coffee varieties. Its taste often lacks sweetness and there might be some sense of bitterness. Rich fertilization and adding nutrients might improve the taste qualities. However, Stephen Leighton describes its taste qualities as sweet, with intense fullness and low acidity.</i>
Pacamara	Typica	<i>a hybrid of Pacas and Maragogype, which was bred in 1958 in El Salvador. Size of the bean comes from Maragogype meaning it is very big. The taste qualities of Pacamara improve in greater growing heights. Its taste profile can be outstandingly good with dominating sweet citrus flavor and well balanced taste, sometimes revealing some flowery notes.</i>
Pacas	Bourbon	<i>a mutation of Bourbon or a hybrid of Caturra and Bourbon. It was discovered in El Salvador in 1949 by a man called Pacas. The productivity of Pacas is rather good in higher growing grounds and it resists diseases better than Bourbon. The taste profile of Pacas shows usually elevated acidity and medium body.</i>
S795 (Jember)	Typica/Liberica	<i>was bred by Indian botanists from Kent and S228 in 1946. S795 has a SH3 gene which probably originates from C. liberica. This variety is called Jember by Indonesian farmers as it was first introduced to them by the members of Jember Coffee Research Center. The center was located in the second biggest city, Surabaya, in Indonesia, in eastern part of Java. S795 is being widely grown in India and Indonesia. Tasters attribute the Jember the taste of maple syrup, caramel and brown sugar.</i>
Typica	Typica	<i>the oldest variety of C. arabica and also the ascendant of many modern varieties like: Jamaican Blue Mountain, San Ramon, Pache, Villalobos, Java, Jember etc. Typica is a plant of conical shape with vertical trunk and slightly inclined primary branches. Its secondary branches are at a slant of 50-70° in respect to trunk. The plant is high and can grow up to 3,5-4,6m in height. Typica has low productivity with thin coppery leaves and oblong oval berries. It prefers higher growing conditions. Its taste is usually sweet, full and clear. Typica's acidity is clear and it becomes more intensive on greater heights.</i>