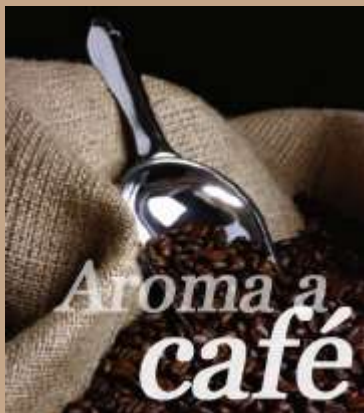


Coffee Varietals - Coffea arabica L. Cultivated in Costa Rica



***Centro de Investigaciones en Café
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Varietals and genetic diversity



Coffee Botany

Kingdom

Plantae

Type

Espermatofites

Sub-type

Angiosperm

Class

Dicotiledóneas

Sub-class

Gamopétalas inferioriadas

Order

Rubiales

Family

Rubiáceas

Genus

Coffea L.

Sub-genus (section)

Eucoffea

Sub-section

Erythrocoffea

Species

arabica, canephora, liberica



Genetic Conservation **(Germopalsm Bank – CATIE – COSTA RICA)**

Description of the International Collection in CATIE

Turrialba, Costa Rica.

MATERIAL TYPE	<i>Number of origins, types, families</i>	<i>Number of introductions</i>	<i>Number of plants</i>
Forest Genotypes			
- Collected by FAO ¹ <i>In Etiopia</i>	432	433	1,650
- Colected by ORSTOM Etiopia	69	148	420
- Collected by IPGRI in Yemen	11	11	20
- <i>Diploid species</i>	22	211	592
<i>SUB-TOTAL :</i>	534	803	2,682
Varietals , mutants, selections :			
- Varietals of Etiopia	115	191	950
- Varietals of Typica and Bourbon	107	288	1,810
- Variedades introgresadas por <i>C. canephora</i>	6	312	1,804
- Mutantes y otras selecciones	30	84	650
- Variedades sin clasificar	25	43	250
<i>SUB-TOTAL 2:</i>	283	918	5,464
Hybrid s:			
- Híbridos inter específicos	5	19	90
- Híbridos intra específicos	107	165	820
<i>SUB-TOTAL 3:</i>	112	184	910
TOTAL (1+2+3):	929	1,905	9,056

Fuente: Eberth, Astorga y Anthony, 2004.



Varietal:

Coffee varieties refer to the genetic subspecies of coffee.

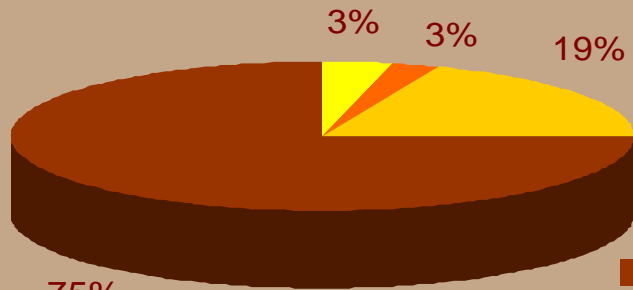
Coffee beans from two different places usually have distinctive characteristics such as flavor (flavor criteria includes terms such as "citrus-like" or "earthy"), caffeine content, body or mouthfeel, and acidity. These are dependent on the local environment where the coffee plants are grown, their method of process, and the genetic subspecies or varietal.

Synonym: cultivar.

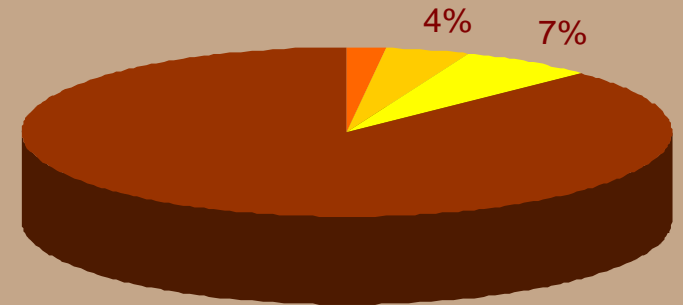
Introduction of the principal varieties of coffee (sub-species), Coffea arabica in Costa Rica.

Year of Introduction	Subspecie	Varietal	Other	Year of release
Century XVIII	Typica	Arábigo - Criollo	San Ramón Villalobos	
1920 -1946	Bourbon	Bourbon Salvadoreño Híbrido tico Villa Sarchí	H - 33	
1952		Caturra		1960
		Mundo Novo		1967
1966		Catuaí rojo	Catuaí Amarillo	1976
1972 - 1980		Derivados del H íbrido de Timor	Variedad Costa Rica 95 Catimores Sarchimores Cavimores HT1343	1995

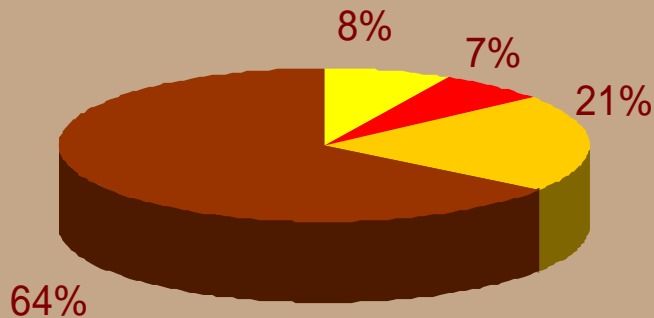
Varietal distribution per region



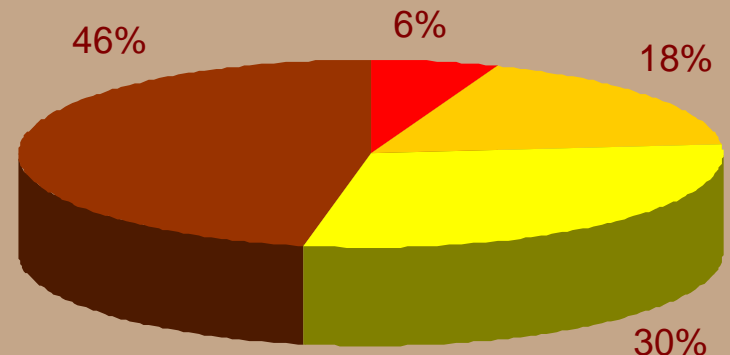
Central Valley region



Turrialba Region



West Valley Region



Brunca Region

- Caturra
- Catuaí
- Costa Rica - 95
- Villa Sarchí
- Other: typica, bourbon, geisha

Varietal (sub-specie) description

Typica

- ▀ Arabico or Criollo
- ▀ First beans introduced in 1792
- ▀ The most cultivated for over 100 years
- ▀ High size (4 meters)
- ▀ Brown tip
- ▀ Angle between 50° y 70°
- ▀ Long distance between nodes
- ▀ Elongated leaves, brown tip
- ▀ Elongated fruits and high yields
- ▀ Nice, elegant cup quality
- ▀ Low productivity, biannual cycle really present



San Ramón

- ▶ Mutant of Typica
- ▶ Small size and irregular.
- ▶ Short distance between nodes
- ▶ Branches highly populated, dense.
- ▶ Known as jardinero or San Lorenzo
- ▶ Small cherries, late ripening.
- ▶ Low yielder, low production.

Villalobos

- Mutant of Typica+San Ramón
- Medium size
- Short distance between nodes, younger leaves are of brown color .
- Efficient radical system.
- Late ripening.



Bourbon

- Secondary diffusion of Typica
- Originated in Reunion Island (Bourbon)
- Introduced in Costa Rica in 1920.
- Similar structure to Typica
- Branches with more verticality (60°)
- Green tips.
- High yield plant and complex cup quality
- In Costa Rica, a selection process in 1949-1950 between Typica and Bourbon, give origin to Híbrido Tico (Híbrido Tico). Green tip, early ripener and breaks easily.
- About the descendance of Híbrido Tico, the H-33 material was obtained, with higher productivity and quality, similar to Mundo Novo.



Bourbón



Híbrido Tico

Mundo Novo

- From Brasil, Sao Paulo
- Identified in 1943, a natural cross of Sumatra (Typica) and Bourbon
- Introduced in CR in 1952 from Brasil
- High size, vigourous.
- Great secondary ramification
- Good production, red or yellow cherries.
- High presence of vain beans
- Realeased in 1967, used for 2 decades and desestimated due to size



Villa Sarchí

- Native varietal, also called La Luisa and Villa Sarchi-Bourbon.
- Mutant of Bourbon in Costa Rica
- Highly impulsed in the 50´s
- Small size, short distance between nodes.
- Fenotype similar to Caturra.
- Strong radical system.
- Vigorous and productive
- Smaller bean than Caturra
- Susceptible to rust disease



Caturra

- Bourbon mutant, determined in Minas Gerais, Brasil (1915-1918)
- Small size (dwarf), (genetic factor CTCT), short distance between nodes, abundant secondary branching.
- 1953, first studied in CR
- Released in 1960.
- High production.
- Adapts easily to different regions.
- Starts the intensive coffee production in CR.
- In Guaraní language caturra means: small size



Agroproductive study

Varietal	Typica	Villalobos	Híbrido Tico	Villa Sarchí	Mundo Novo	Caturra
Qq/Ha	74,5	84,7	103	110,6	111	117

1 Qq = 100 lbs. Green bean

Catuai

- In Guaraní language: really good!
- Cross between Mundo Novo and Caturra
- Released in Brazil in 1966
- Short nodes and medium size
- High productivity and uniformity of beans.
- Easy adaptatation
- Good cup quality
- Different lines, red, yellow.



Timor Hybrid

- ▶ Plant discovered in a *coffea arabica* plantation, in the Island of Timor (south of India).
- ▶ Its a natural cross between *C. Arabica* and *C. Canephora*
- ▶ It is used in many cross breedings due to its rust resistance



Resumen de los derivados del Híbrido de Timor

Caturra CICF 19/1
X
HdT CIFC
832/1



CATIMORES
CR-95
IHCAFE 90
MIDA 96

Villa Sarchí CICF 971/10
X
HdT CIFC
832/2



Sarchimores
IAPAR 59
T 5296

Caturra CCC 135
X
CCC43-1574
(CIFC 1343)



Variedad Colombia

Catuaí rojo
X
Híbrido de Timor
Catimores



Cavimores

Costa Rica 95

- Cultivar developed by the Genetic Improvement Dept. of ICAFE, Costa Rica.
- Selection of two lines of catimor T8600, introduced in 1981.
- Rust resistant
- Susceptible to other plagues such as *ojo de gallo*, *chasparria*
- Adapts easily to most coffee regions
- Excellent production
- Cup attributes not acceptable in specialty and boutique coffee markets

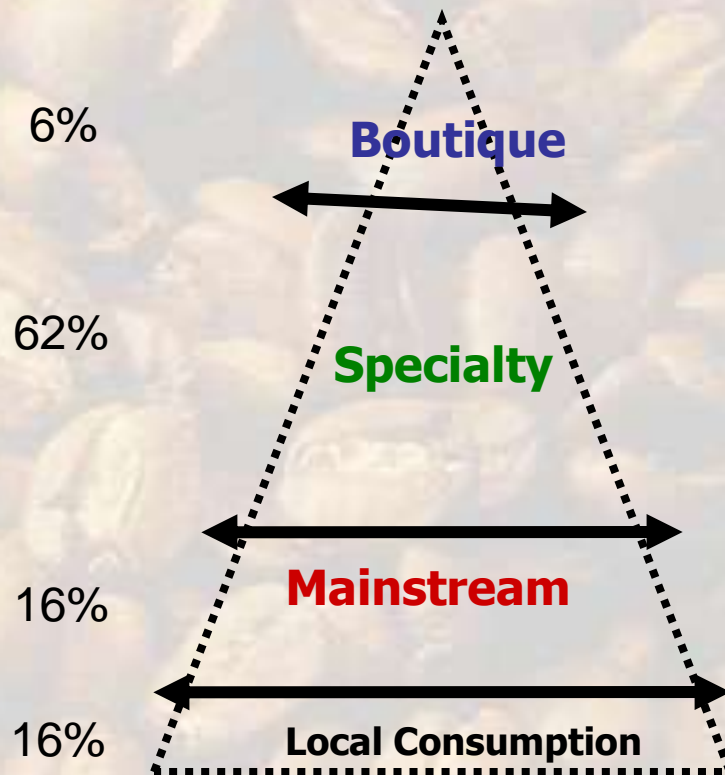




Thank you!
Translation by F. Mena
Exclusive Coffee S.A.



COSTA RICA's Coffee Exports Pyramid up to 2008/2009 crop





Quality Terminology used in Exclusive Coffees based on SCAA score sheet

