Aromas and flavors

The sensory map of Peruvian coffee

Coffees
from Peru

unique
specialties

Perú

INTRODUCTION
PROMPERÚ

Coffee is the world's second most consumed beverage. Fervent devotees enjoy the flavors and the essence of unique grains which carry fresh aromas and exude intense flavors. Coffee consumption is evolving rapidly due to different factors, the most notable of which are concerns about sustainability, biodiversity, and health, and the demand for increasingly sophisticated products.

According to the ICO (International Coffee Organization), in 2018 more than more than 1.4 billion cups were consumed each day. It is in this context that the Peruvian coffee of the new millennium is enjoying its big moment. In 2018, PROMPERÚ presented to the world the Coffees from Peru brand, created to distinguish the diversity, the specialty, and the origin of this beverage, positioning Peru as a coffee producing country capable of delivering the world's finest and most select varieties.

Peruvian coffee is cultivated at elevations in excess of 900 meters where it finds the right soils, the right slopes, and the right humidity levels for the optimal production of high quality harvests just perfect for the consumer in search of a unique sensory experience.

If we are to promote this highly differentiated product, we need deep knowledge about the crop, its particularities, its production process, the land upon which it grows, and the stories of the people who make it possible. So we have dedicated resources to analyze and study the coffee beans produced across Peru's different regions and to determine the notes and nuances that each displays as a result of its place of origin.

This is how, with the help of professional tasters, the sensory map of coffee has been developed as the starting point for discovering the aroma and flavor characteristics found in the principal producing regions. The map also supports the commercial promotion of Peruvian coffee in a dynamic market where the customer requires more information about the different coffee profiles that our country has to offer.

This publication has been possible thanks to the producers, the tasters, and the specialists who have enthusiastically participated and collaborated throughout the entire project. Our special thanks go to the Center for the Promotion of Imports from Developing Countries for its financial and technical support in the framework of the Country Program Peru (2014-2018).

1.

WHAT IS THE SENSORY MAP AND WHY IS IT IMPORTANT?

WHAT IS THE SENSORY MAP?

A sensory map is the representation of a set of elements or categories that have been perceived by human senses. In the case of coffee, a sensory map captures its aromas, flavors, tastes, and textures.

The search for a visual representation of the elements of coffee began at the start of the 20th century, when the Nobel Prize winners Tadeus Reichstein and Hermann Staudinger were first able to identify 13 aromatic components. Over decades the research continued, and the number increased to 600. At present, of the nearly 1000 aroma compounds detected, some 850 have been identified.

Acidity, cup quality, and taste balance are particular characteristics that a coffee's profile highlights. And Peru's different coffee producing regions exhibit the correct microclimates, temperature, and elevation for cultivation that brings them to the fore.

These characteristics have been compiled in this sensory map of Peru's specialty coffees.

WHY IS THE SENSORY MAP IMPORTANT?

The sensory map of quality generates consensus around the attributes that Peru's specialty coffees should display; the tool represents the flavors, aromas, tastes, and textures found in each of the country's producing regions.

It is a guide which, through the experiences gathered by expert tasters from around Peru, highlights and recognizes the diversity of sensations produced by our specialty coffees.

2.

METHODOLOGY AND PREPARATION OF THE SENSORY MAP

Scope and assessment considerations

Green coffee beans

Organoleptic evaluation 2018 harvest

Processing type:
Washed coffees

The SCA[1] quality scale criteria are used:

a) Preparation:
Zero primary defects and no more than five secondary defects

b) Humidity:
10 – 12%

c) Quality:
84 cupping points, according to the SCA standard

d) Size:
Screen size 15 and above

Coffee producing regions

1	Amazonas	**6**	Junín
2	Ayacucho	**7**	Pasco
3	Cajamarca	**8**	Piura
4	Cusco	**9**	Puno
5	Huánuco	**10**	San Martín
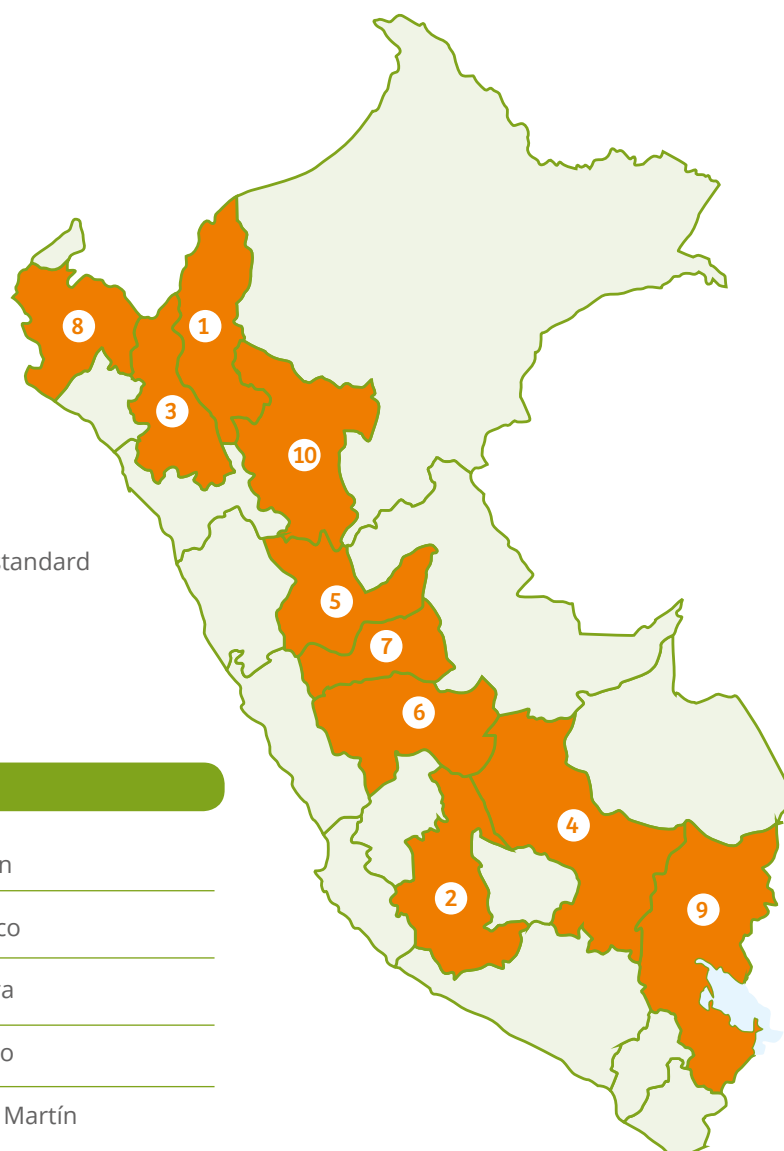
1   SCA is the Specialty Coffee Association.

Methodology

To create a sensory map that contains correct and detailed information about the specialty coffees of Peru, the coffees of the 10 most important producing regions of the country were analyzed.
The steps followed in this study were:

1. Surveys — Company surveys.

2. Interviews — In-depth interviews with tasters who take part on panels for national competitions and in the Cup of Excellence award.

3. Review — Review of secondary sources.

4. Organoleptic assessment — Evaluation of the coffee using physical and sensory means.

5. Descriptive analysis — Identification of the sensory profiles.

6. Comparative analysis — Comparison of the different sensory quality profiles of each coffee producing region.

7. Validation workshop — Validation of the quality map by the promotion committee.

Criteria used for the study

- Description on an individual level of the sensory attributes to be evaluated in the order they appear.

- Identification of the intensity of the special attributes that appear in each sample.

- Global or joint judgment of the attributes.

- Discussion of the results in an open session facilitated by a moderator so as to standardize criteria.

Stages in the sensory assessment

DAY 1
- Physical analysis and coding of the coffee samples.

DAY 2
- Tasting Petit Committee for sample calibration.

DAY 3-4
- Preparation of the calibration test.
- Roasting of the coffee samples.

DAY 5
- Application of the calibration test by a panel of tasters.
- Coffee tasting.

DAY 6-7
- Coffee tasting.
- Definition of the coffee descriptors.

Tools employed

Two instruments were used to analyze each region's specialty coffee: the Washed Arabica Coffee Grading form and the Specialty Coffee Association of America score sheet.
Cropster and Tastify software were used to correctly interpret the information obtained.

Washed Arabica Coffee Grading

**Washed Arabica
Coffee Grading Form**

Grader: _____   Date: _____
Coffee Origin: _____   ICO Marks: _____
Sample ID: _____   Container: _____

Green Coffee Grade (350 Gram Sample)

CATEGORY 1		Defect Count	Full Defects
Full Black / Completamente negros	(1:1)		
Full Sour / Completamente agrios	(1:1)		
Dried Cherry / Cerezos secos	(1:1)		
Fungus Damage / Daño de hongo	(1:1)		
Foreign Matter / Materia extraña	(1:1)		
Severe Insect Damage / Daño severo de broca	(5:1)		
Total Category 1 Defects *			

Moisture Reading:	%
Moisture Temp:	°F / °C
Water Activity:	a_w
Water Activity Temp:	°F / °C
Green Color Gradient:	
Bulk Density (optional):	

CATEGORY 2		Defect Count	Full Defects
Partial Black / Parcialmente negro	(3:1)		
Partial Sour / Parcialmente agrio	(3:1)		
Parchment / Pergamino	(5:1)		
Floater / Flotadores	(5:1)		
Immature / Unripe / Inmaduros	(5:1)		
Withered / Arrugados	(5:1)		
Shell / Conchas	(5:1)		
Broken / Chipped / Cut / Cortados / Quebrados	(5:1)		
Hull / Husk / Pulpa o cáscara	(5:1)		
Slight Insect Damage / Daño menor de insecto	(10:1)		
Total Category 2 Defects *			

Total Green Defects:

Roasted Coffee Grade (100 Gram Sample)

Bulk Density (optional)
Color / Roast Development Equipment & Scale
Equipment & Scale Used

# of quakers

Roasted Defects:

Circle the Appropriate Classification

SCA Classification:	Specialty Grade	Below Specialty Grade
CQI Classification:	Q Arabica Grade	Below Q Arabica Grade

To reference SCA coffee standards and training materials please visit www.sca.coffee.

Specialty Coffee Association | sca.coffee

La Asociación de cafés especiales de America Formulario de catación

Nombre: _____

Fecha: _____

Clasificación:

6.00 - Bueno	7.00 - Muy Bueno	8.00 - Excelente	9.00 - Extraordinario
6.25	7.25	8.25	9.25
6.50	7.50	8.50	9.50
6.75	7.75	8.75	9.75

Muestra # — Fragancia/Aroma, Sabor, Acidez, Cuerpo, Uniformidad, Taza Limpia, Puntaje Catador, Total Score

Seco, Cualidades, Espuma, Sabor Residual, Intensidad (Alto / Bajo), Balance, Dulzor, Defectos (subtract) Ligero=2, Rechazo=4

Puntaje Final

Nombre del Catador: _____

Fecha: _____

El presente formato favor identificar los atributos presentes en las muestras e identificar su nivel de intensidad

Componente Sensorial	Atributo Identificado	Nivel de Intensidad Percibido											
		0	1	2	3	4	5	6	7	8	9	10
SABOR	FLORAL												
	Manzanilla, Rosas — Jazmín, Otros												
	FRUTAL	0	1	2	3	4	5	6	7	8	9	10
	Frutos rojos, Frutos amarillos, Frutos cítricos, Frutos secos, Berries — Frutas: Pera, Durazno, Manzana, Uva, Piña, Cereza, Coco — Bayas: Fresa, Arandanos, Frambuesa, Moras												
	DULCE	0	1	2	3	4	5	6	7	8	9	10
	Caramelo, Toffee, Vainilla, Panela — Melaza, Miel, Otros												
	CHOCOLOLATE	0	1	2	3	4	5	6	7	8	9	10
	Cocoa, Chocolate oscuro												
	NUECES	0	1	2	3	4	5	6	7	8	9	10
	Nueces, Almendras, Avellanas — Otros												
	ESPECIES	0	1	2	3	4	5	6	7	8	9	10
	Clavo, Canela, Anís — Nuez moscada, Pimienta, Otros												
ACIDEZ		0	1	2	3	4	5	6	7	8	9	10
	Brillante, Chispeante, Afrutada — Jugosa, Viva, Delicada — Melosa, Compleja, Elegante — Cítrica, Malica, Tartárica												
CUERPO		0	1	2	3	4	5	6	7	8	9	10
	Cremoso, Suave, Redondo — Sedoso, Jugoso, Almibarado — Aterciopelado, Lleno												

0: Ausente
1 - 2 : bajo, presente

3 - 5: Medio, claramente presente en la muestra
6 - 8: Alto, dominante en la muestra

9 -10: Muy alto, enmascara a otros sabores

Cropster

This is software for coffee producers and organizations who require better management information.

It is designed for institutions who need to communicate the quality of their coffee within their organization and to their coffee buyers.
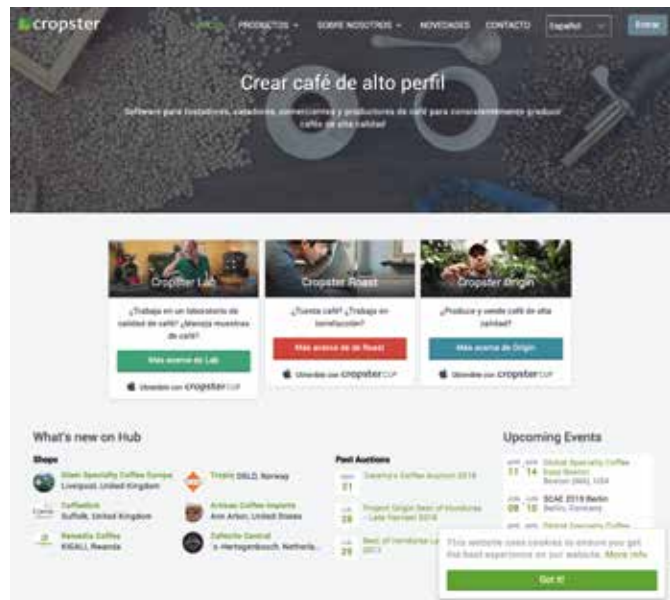
Tastify

This is a platform that creates a visual representation of the coffee's flavor. The system is useful for those involved in the production chain because it is easy to share and is paperless.

3.
RESULTS

The sensory analysis is based on specialty coffees, which the Specialty Coffee Association of America defines as products with distinctive quality attributes associated with a particular place of origin and grown carefully by the producer under ideal conditions.

The following characteristics were also considered:

Location	Cultivated Land (hectares)	Production (MT)	Varieties	Elevation (meters above sea level)
Main harvest	Process	Average temperature (°C)	Annual rainfall (mm)	Soil sample PH
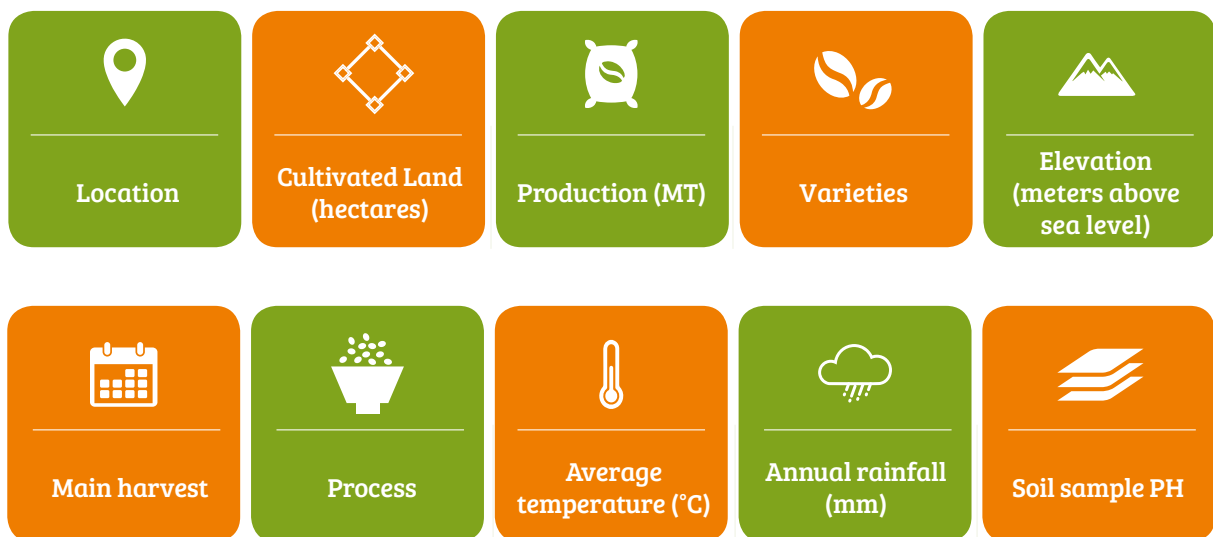
It was through this process that the coffees in this class displayed, through their aromas and flavors, the characteristics that make them recognizable and special. These are the attributes identified for the sensory map: floral, sweet, chocolate, nuts, spicy, body, and acidity.

According to the National Federation of Coffee Growers of Colombia, specialty coffees fall into the following categories:

- **Coffees of origin:** regional, farm and exotic.
- **Sustainable coffees:** certified.
- **Process coffees:** according to preferences and / or customer requirements.
- **Variety coffees:** geisha, bourbon, caturra, etc.

AMAZONAS
REGION

Amazonas is located in the north east of the country. It borders the Republic of Ecuador to the north, Loreto and San Martín to the east, La Libertad to the south, and, to the west, Cajamarca. Politically, the region is divided into seven provinces. Its capital is the city of Chachapoyas. Coffee grows in all seven provinces. Amazonas has two natural regions: mountains and jungle. The latter is home to the coffee growing areas, where the elevation ranges between 900 and 2100 meters above sea level. The climate is warm and temperate in the valleys and warm in the gorges. Traversed from south to north by the western Andes, the terrain is relatively rugged.[2]

Characteristics

Location	Cultivated Land (hectares)	Production (MT)	Varieties	Elevation (meters)
North	53 285	34 966	Caturra, typica, and catimor	900-2100
	Source: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	Source: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	Source: In-house.	Source: In-house.

Main harvest	Process	Average temperature °C	Annual rainfall (mm)	Soil sample PH
March-August	Complete fermentation and washing	20.6	1801	5.0
Source: Agrobanco, coffee growing, December 2007.		Source: SENAMHI.	Source: SENAMHI.	Analysis of producer soil sample.

2   Source: Economic and financial situation of the Amazonas RegionCentral Reserve Bank of Peru.

Cropster evaluation

General
Fragrance / aroma
7.75
7.75
Flavor
8
Acidity
7.75
Body
7.75
Aftertaste
7.5
Balance
8

Tastify evaluation

brown sugar
molasses
honey
sweet
nut
malt
floral
jasmine
apple / pear
fruit
chocolate
dark chocolate
stone fruits
cherry
peach
cocoa powder
Grains/ cereals
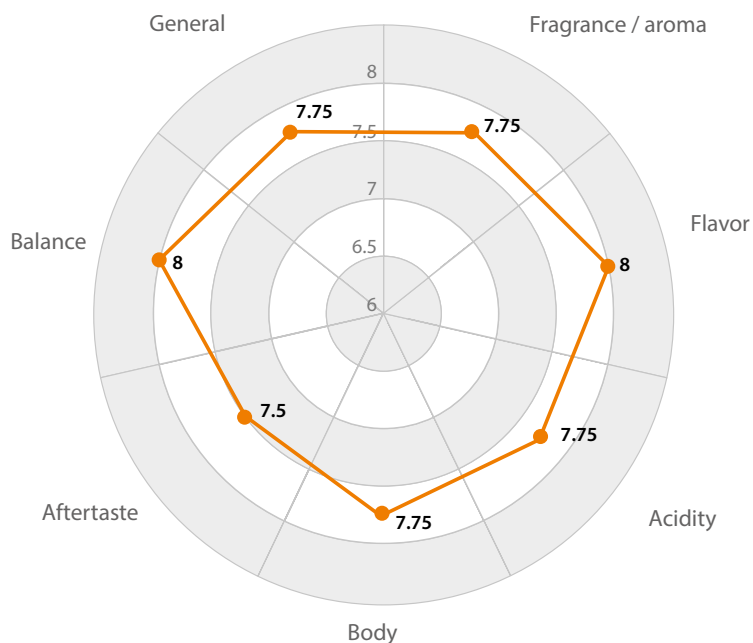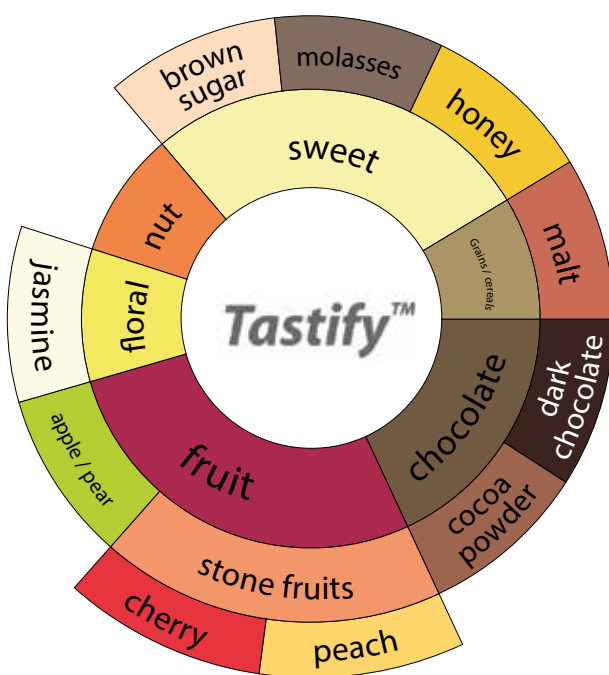
Red fruits and yellow fruits

Quality	Weighted intensity	
Floral	3.32	
Fruit	7.47	
Sweet	7.42	
Chocolate	5.68	
Nuts	3.79	
Spicy	2.74	
Acidity	7.32	
Body	7.00	

AYACUCHO
REGION

Ayacucho is located in the southern and central area of the Andes. It borders Junín to the north, Huancavelica to the northwest, Ica to the west, Arequipa to the south, Apurímac to the east, and, to northeast, with Cusco. Politically, the region is divided into eleven provinces. Its capital is the city of Cusco. Its coffee grows almost entirely in the provinces of La Mar and Huanta. Ayacucho has two natural regions: mountains and jungle. The latter is home to the coffee growing areas, where the elevation ranges between 900 and 1600 meters. The climate in the jungle area is tropical. Due to the diversity of altitudinal floors, the region possesses a wide variety of climates and phytogeographic landscapes.[3]

Characteristics

Location	Cultivated Land (hectares)	Production (MT)	Varieties	Elevation (meters)
South	5866	3875	Caturra, catimor, and typica	900-1600
	Source: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	**Source**: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	Source: In-house.	Source: In-house.

Main harvest	Process	Average temperature °C	Annual rainfall (mm)	Soil sample PH
April-July	Complete fermentation and washing	21	2000	4.5
Source: Agrobanco, coffee growing, December 2007.		**Source**: SENAMHI.	**Source**: SENAMHI.	Analysis of producer soil sample.

_____

3   Source: Economic and financial situation of the Ayacucho Region, Central Reserve Bank of Peru.

Cropster evaluation

General

Fragrance / aroma

Flavor

Acidity

Body

Aftertaste

Balance

8
7.5
7
6.5
6

7.5   7.5
7.5
7.5
7.75
7.5
7.5
7.75

Tastify evaluation

Tastify™

blackberry
hazel
nut
jasmine
floral
honey
sweet
caramel
citrus
fruit
tropical fruit
pineapple
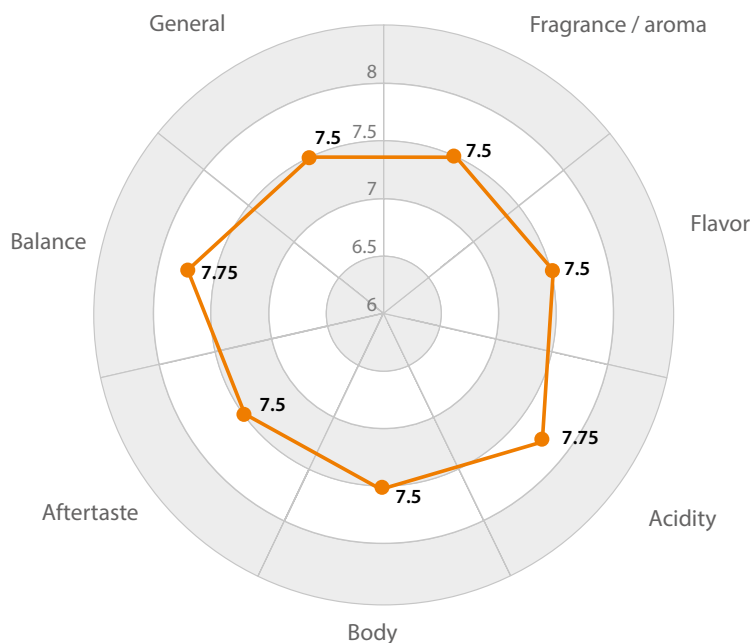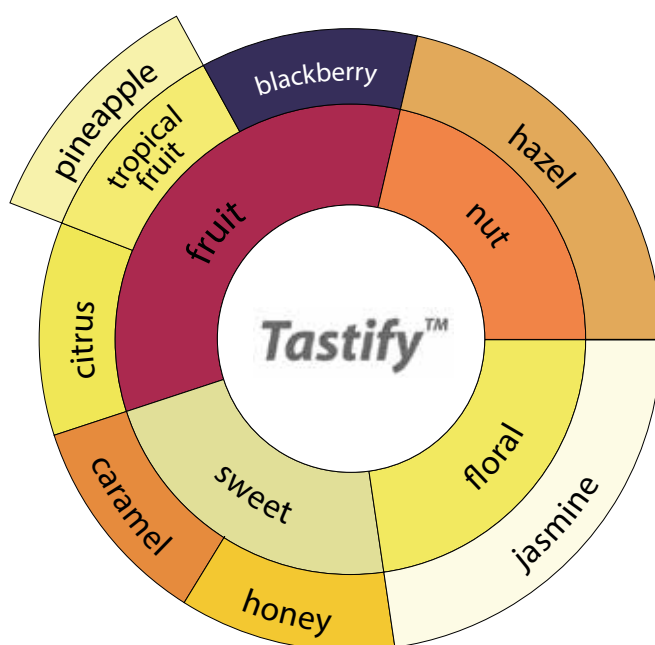
Red fruits and yellow fruits

Quality	Weighted intensity	
Floral	5.62	
Fruit	6.00	
Sweet	6.08	
Chocolate	2.00	
Nuts	2.31	
Spicy	0.77	
Acidity	6.38	
Body	6.08	

CAJAMARCA
REGION

Cajamarca is located in the north of the country. It borders the Republic of Ecuador to the north, Amazonas to the east, La Libertad to the south, and, to the west, with Lambayeque and Piura. Politically, the region is divided into thirteen provinces. Its capital is the city of Cajamarca. Its coffee grows almost entirely in the provinces of Jaén and San Ignacio. Cajamarca has two natural regions: mountains and jungle. The latter is home to the coffee growing areas, where the elevation ranges between 900 and 1950 meters. Traversed from south to north by the western Andes, the terrain is relatively rugged.

Characteristics

Location	Cultivated Land (hectares)	Production (MT)	Varieties	Elevation (meters)
North	53 038	48 182	Caturra, typica and bourbon	900-1950
	Source: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	**Source**: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	Source: In-house.	Source: In-house.

Main harvest	Process	Average temperature °C	Annual rainfall (mm)	Soil sample PH
April-August	Complete fermentation and washing	18.8	1457	4.5
Source: Agrobanco, coffee growing, December 2007.		**Source**: SENAMHI.	**Source**: SENAMHI.	Analysis of producer soil sample.

_____

4   Source: Economic and financial situation of the Cajamarca Region, Central Reserve Bank of Peru.

Cropster evaluation
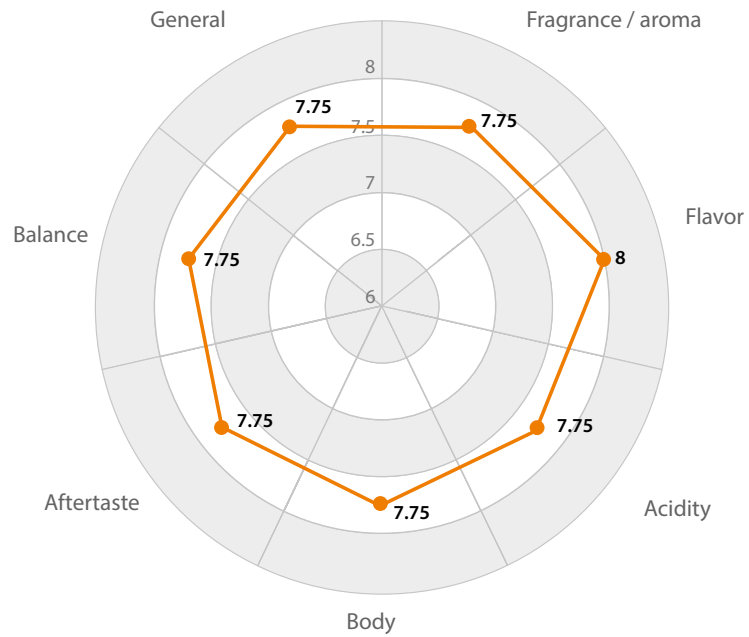
Tastify evaluation
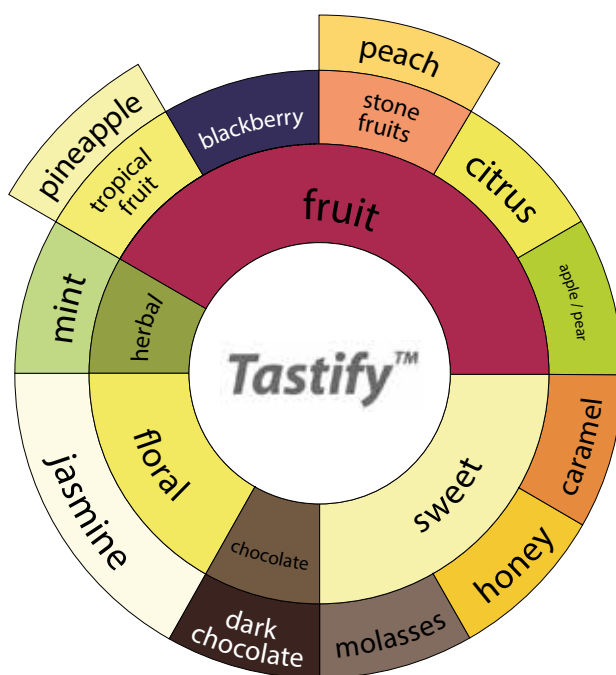
Red fruits and yellow fruits

Quality	Weighted intensity	
Floral	6.16	
Fruit	6.00	
Sweet	7.21	
Chocolate	5.26	
Nuts	0.42	
Spicy	0.79	
Acidity	6.89	
Body	6.89	

25

CUSCO
REGION

Cusco is located in the south east of the country. It borders Ucayali to the north, Arequipa and Puno to the south, Madre de Dios and Puno to the east, and, to the west, with Arequipa, Apurímac, and Ayacucho. Politically, the region is divided into thirteen provinces. Its capital is the city of Cusco. Its coffee is grown almost entirely in the province of La Convención. Cusco has two natural regions: mountains and jungle. The latter is home to the coffee growing areas, where the elevation ranges between 900 and 2000 meters. The climate is temperate in the valleys and warm in the gorges. Due to the diversity of altitudinal floors, the region possesses a wide variety of climates and phytogeographic landscapes.[5]

Characteristics

Location	Cultivated Land (hectares)	Production (MT)	Varieties	Elevation (meters)
South	53 850	30 318	Typica, caturra, and bourbon	900-2000
	Source: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	**Source**: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	Source: In-house.	Source: In-house.

Main harvest	Process	Average temperature °C	Annual rainfall (mm)	Soil sample PH
March-September	Complete fermentation and washing	16.4	1361	4.4
Source: Agrobanco, coffee growing, December 2007.		**Source**: SENAMHI.	**Source**: SENAMHI.	Analysis of producer soil sample.

---

5   Source: Economic and financial situation of the Cusco Region, Central Reserve Bank of Peru.

Cropster evaluation
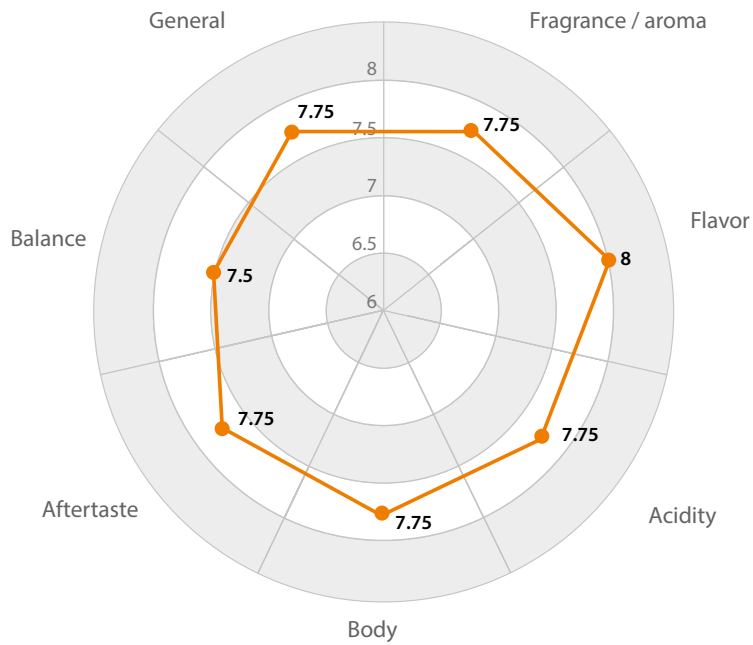
Tastify evaluation
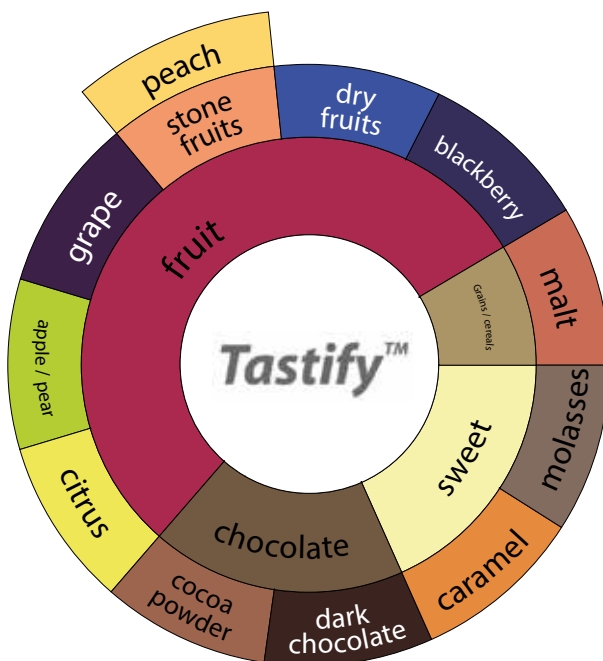
Red fruits and yellow fruits

Quality	Weighted intensity	
Floral	2.85	
Fruit	6.3	
Sweet	5.6	
Chocolate	5.05	
Nuts	1.85	
Spicy	0.3	
Acidity	5.85	
Body	5.65	

27

HUÁNUCO
REGION

Huánuco is located in the central east of the country. It borders San Martín to the north, Pasco to the south, Ucayali to the east, and, to the west, with Áncash. Politically, the region is divided into eleven provinces. Its capital is the city of Huánuco. Its coffee is grown almost entirely in the province of Leoncio Prado, located in Tingo María. Huánuco has two natural regions: mountains and jungle. The latter is home to the coffee growing areas, where the elevation ranges between 900 and 2000 meters. The climate is warm tropical to temperate in the valleys and gorges. Due to the great diversity of altitudinal floors, the surroundings of the coffee-growing areas include landscapes covered with forests, waterfalls, caves, and biological diversity.[6]

Characteristics

Location	Cultivated Land (hectares)	Production (MT)	Varieties	Elevation (meters)
Central	16 202	7850	Typica, caturra, and catimor	900-2000
	Source: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	Source: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	Source: In-house.	Source: In-house.

Main harvest	Process	Average temperature °C	Annual rainfall (mm)	Soil sample PH
March-September	Complete fermentation and washing	18.5	3498	3.8
Source: Agrobanco, coffee growing, December 2007.		Source: SENAMHI.	Source: SENAMHI.	Analysis of producer soil sample.

---

6   Source: Economic and financial situation of the Huánuco Region, Central Reserve Bank of Peru.

Cropster evaluation

General — 7.5
Fragrance / aroma — 7.5
Flavor — 7.75
Acidity — 7.75
Body — 7.5
Aftertaste — 7.5
Balance — 7.5

Tastify evaluation

molasses
caramel
sweet
nut
cherry
stone fruits
chocolate
cocoa powder
fruit
apple / pear
tropical fruit
pineapple
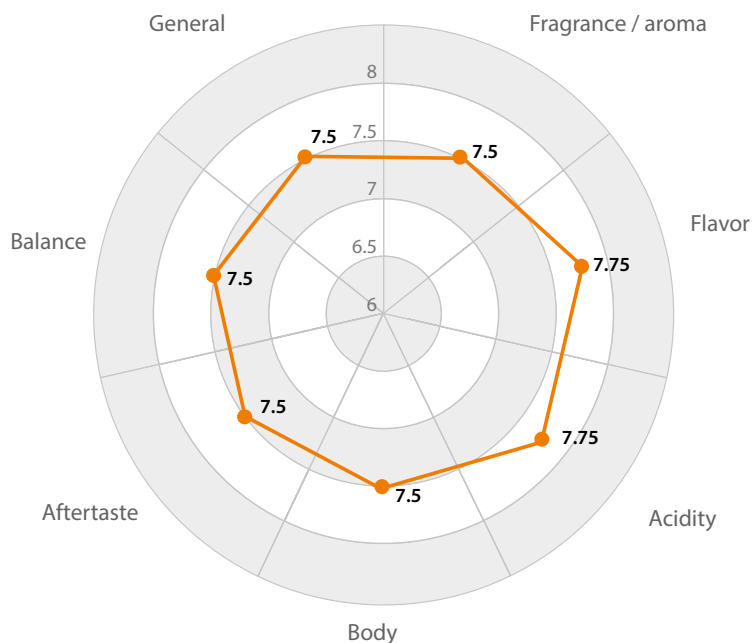
Tastify™
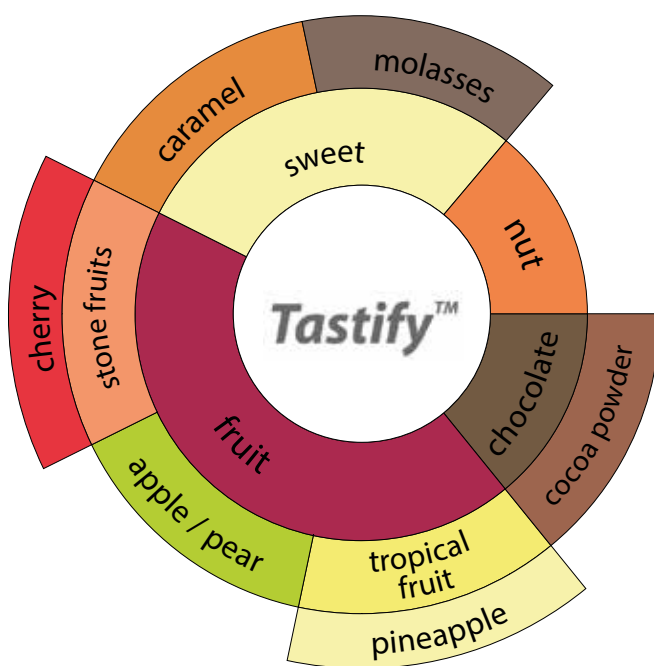
Red fruits and yellow fruits

Quality	Weighted intensity
Floral	3.69
Fruit	5.23
Sweet	5.23
Chocolate	4.08
Nuts	1.62
Spicy	0.62
Acidity	5.62
Body	4.23

JUNÍN
REGION

Junín is located in the central part of the country. It borders Huancavelica and Ayacucho to the south, Pasco and Ucayali to the north, Cusco to the east, and, to the west, with Lima. Politically, the region is divided into nine provinces. Its capital is the city of Huancayo. Its coffee is grown almost entirely in the provinces of Chanchamayo and Satipo. Junín has two natural regions: mountains and jungle. The latter is home to the coffee growing areas, where the elevation ranges between 900 and 1800 meters. The climate is temperate in the valleys and warm in the gorges. Due to the diversity of altitudinal floors, the region possesses a wide variety of climates and phytogeographic landscapes.[7]

Characteristics

Location	Cultivated Land (hectares)	Production (MT)	Varieties	Elevation (meters)
Central	79 808	46 692	Caturra, typica, and catimor	900-1800
	Source: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	Source: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	Source: In-house.	Source: In-house.

Main harvest	Process	Average temperature °C	Annual rainfall (mm)	Soil sample PH
March-August	Complete fermentation and washing	25	1791	4.5
Source: Agrobanco, coffee growing, December 2007.		Source: SENAMHI.	Source: SENAMHI.	Analysis of producer soil sample.

7   Source: Economic and financial situation of the Junín Region, Central Reserve Bank of Peru.

Cropster evaluation

General — 7.5
Fragrance / aroma — 7.75
Flavor — 7.75
Acidity — 7.75
Body — 7.5
Aftertaste — 7.75
Balance — 7.75
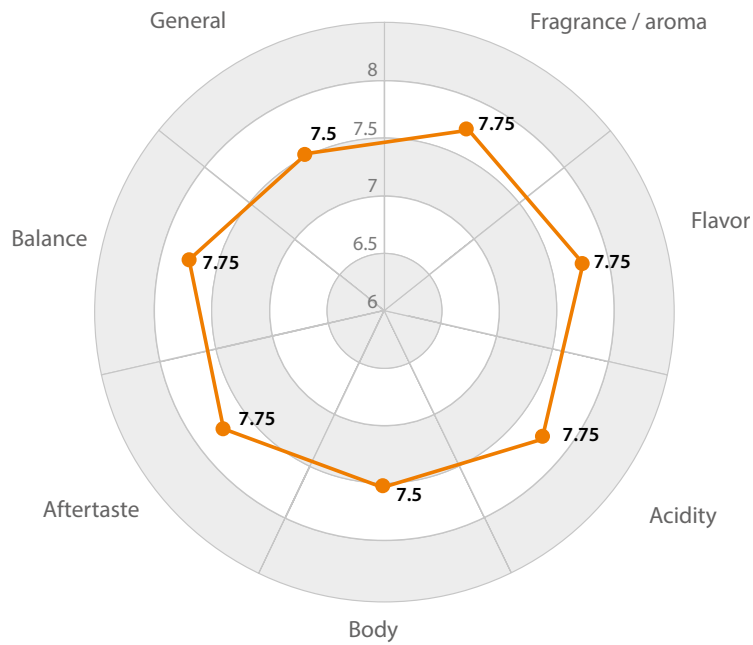
Tastify evaluation
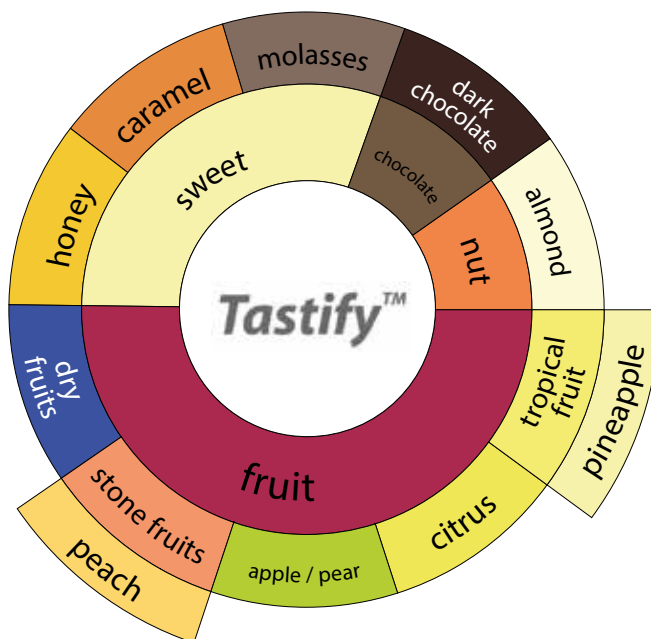
Red fruits and yellow fruits

Quality	Weighted intensity
Floral	2.50
Fruit	6.50
Sweet	6.50
Chocolate	4.57
Nuts	3.29
Spicy	2.21
Acidity	6.29
Body	6.14

PASCO
REGION

Pasco is located on the eastern slopes and central part of the Andes. It borders Huánuco to the north, Junín to the south, Ucayali to the east, and, to the west, with Lima. Politically, the region is divided into three provinces. Its capital is the city of Cerro de Pasco. Its coffee is grown almost entirely in the province of Oxapampa. Pasco has two natural regions: mountains and jungle. The latter is home to the coffee growing areas, where the elevation ranges between 900 and 2000 meters. The climate is temperate in the valleys and warm in the gorges. Due to the diversity of altitudinal floors, the region possesses a wide variety of climates and phytogeographic landscapes.[8]

Characteristics

Location	Cultivated Land (hectares)	Production (MT)	Varieties	Elevation (meters)
Central	10 794	10 094	Caturra, catimor, and typica	900-2000
	Source: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	Source: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	Source: In-house.	Source: In-house.

Main harvest	Process	Average temperature °C	Annual rainfall (mm)	Soil sample PH
April-August	Complete fermentation and washing	18.3	1457	4.7
Source: Agrobanco, coffee growing, December 2007.		Source: SENAMHI.	Source: SENAMHI.	Analysis of producer soil sample.

8   Source: Economic and financial situation of the Pasco Region, Central Reserve Bank of Peru.

Cropster evaluation
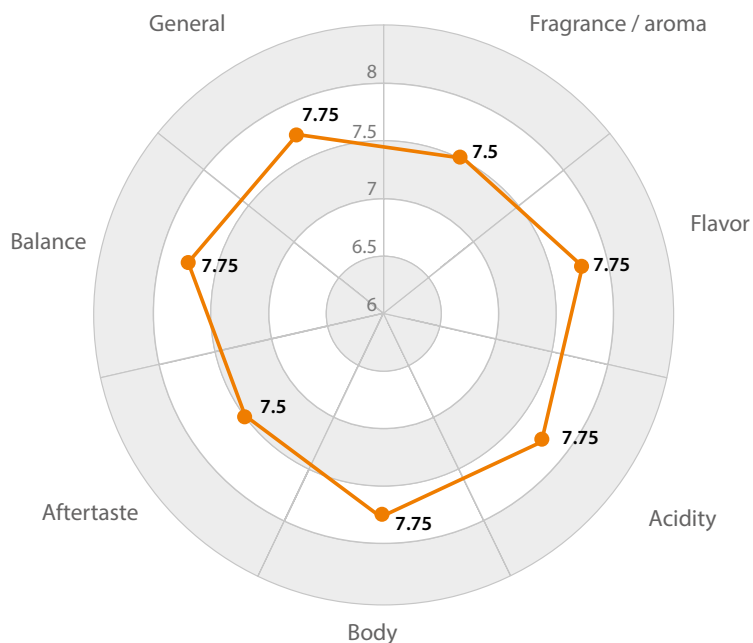
Tastify evaluation
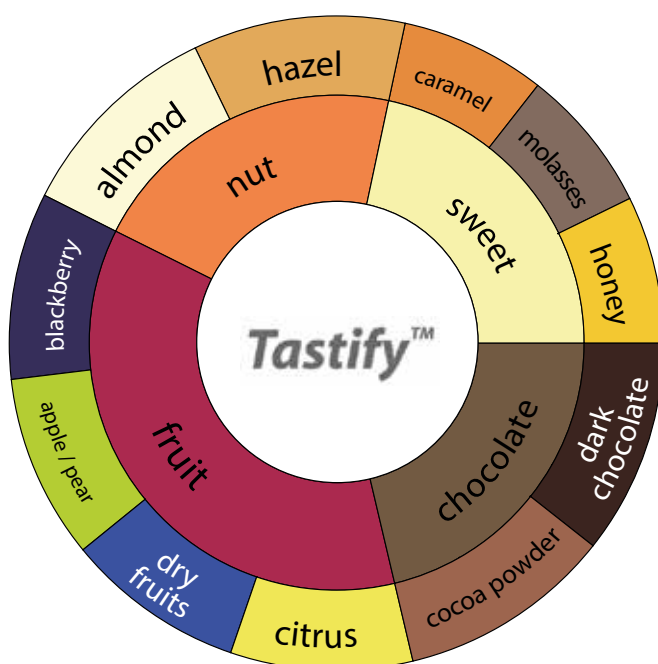
Red fruits and yellow fruits

Quality	Weighted intensity	
Floral	1.07	
Fruit	6.67	
Sweet	5.87	
Chocolate	4.47	
Nuts	2.80	
Spicy	1.00	
Acidity	6.20	
Body	6.00	

PIURA
REGION

Piura is located in the northeast of the country. It borders Tumbes and the Republic of Ecuador to the north, Cajamarca and Ecuador to the east, Lambayeque to the south, and, to the west, with the Pacific Ocean. Politically, the region is divided into eight provinces. Its capital is the city of Piura. Its coffee is grown almost entirely in the province of Huancabamba. Piura has two natural regions: coast and semitropical (semi-arid) inter-Andean valleys. The semitropical valleys are home to the coffee growing areas, where the elevation ranges between 900 and 2000 meters. The climate is semi-tropical (semi-arid). The relief is somewhat rugged.[9]
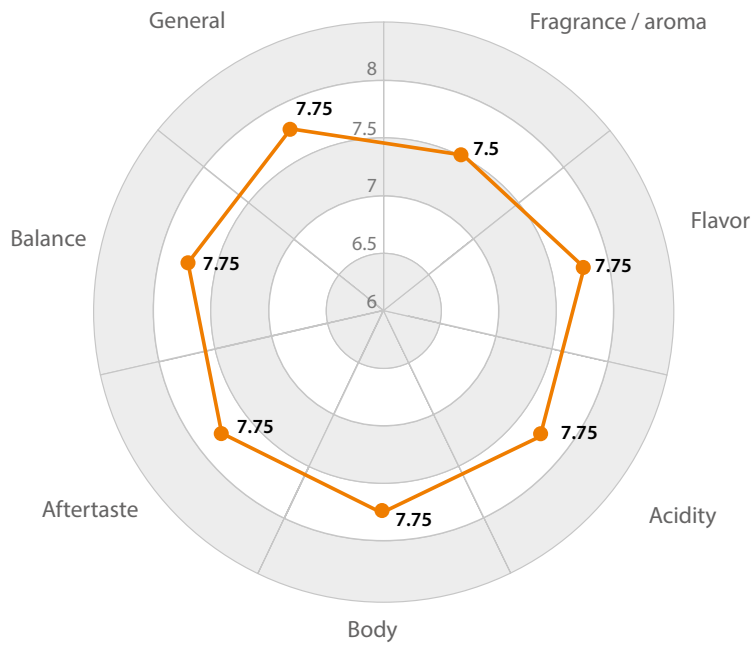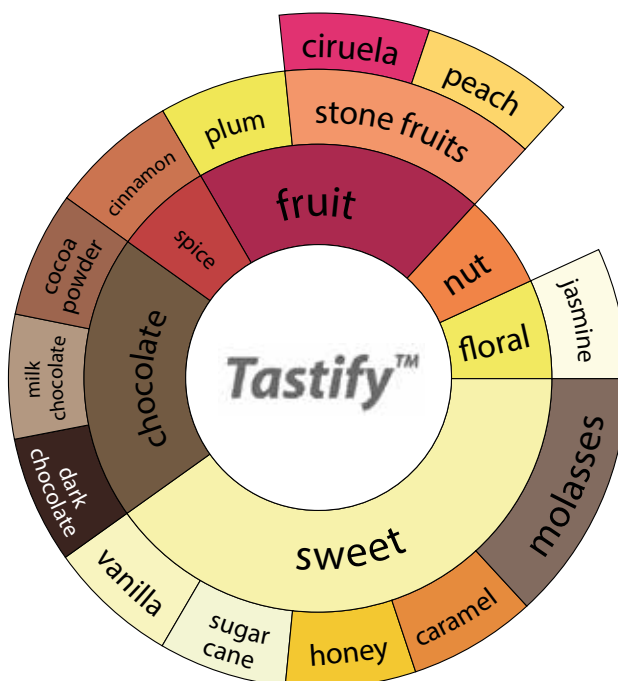
Characteristics

Location	Cultivated Land (hectares)	Production (MT)	Varieties	Elevation (meters)
North	7979	3044	Typica, caturra, and catimor	900-2000
	Source: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	Source: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	Source: In-house.	Source: In-house.

Main harvest	Process	Average temperature °C	Annual rainfall (mm)	Soil sample PH
May-August	Complete fermentation and washing	19.3	868	5.4
Source: Agrobanco, coffee growing, December 2007.		Source: SENAMHI.	Source: SENAMHI.	Analysis of producer soil sample.

---

9   Source: Economic and financial situation of the Piura Region, Central Reserve Bank of Peru.

Cropster evaluation

Radar chart values:

- General: 7.75
- Fragrance / aroma: 7.5
- Flavor: 7.75
- Acidity: 7.75
- Body: 7.75
- Aftertaste: 7.75
- Balance: 7.75

Tastify evaluation

Soft, creamy, citrus, sweet, brown sugar, and yellow fruits

Quality	Weighted intensity
Floral	4.25
Fruit	7.58
Sweet	8.00
Chocolate	4.33
Nuts	2.83
Spicy	2.08
Acidity	7.25
Body	6.67

PUNO
REGION

Puno is located in the southeastern extreme of the country. It borders Madre de Dios to the north, the Republic of Bolivia to the east, Tacna and Bolivia to the south, and, to the west, with Moquegua, Arequipa, and Cusco. Politically, the region is divided into thirteen provinces. Its capital is the city of Puno. Its coffee is grown almost entirely in the province of Sandia. Puno has two natural regions: mountains and jungle. The latter is home to the coffee growing areas, where the elevation ranges between 900 and 1800 meters. The climate is temperate in the valleys and warm in the gorges. Due to the diversity of altitudinal floors, it has a varied geography and cultural diversity.[10]

Characteristics

Location	Cultivated Land (hectares)	Production (MT)	Varieties	Elevation (meters)
South	10 858	6940	Caturra, bourbon, and typica	900-1800
	Source: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	Source: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	Source: In-house.	Source: In-house.

Main harvest	Process	Average temperature °C	Annual rainfall (mm)	Soil sample PH
April-August	Complete fermentation and washing	21	2000	5.2
Source: Agrobanco, coffee growing, December 2007.		Source: SENAMHI.	Source: SENAMHI.	Analysis of producer soil sample.

10   Source: Economic and financial situation of the Puno Region, Central Reserve Bank of Peru.

Cropster evaluation
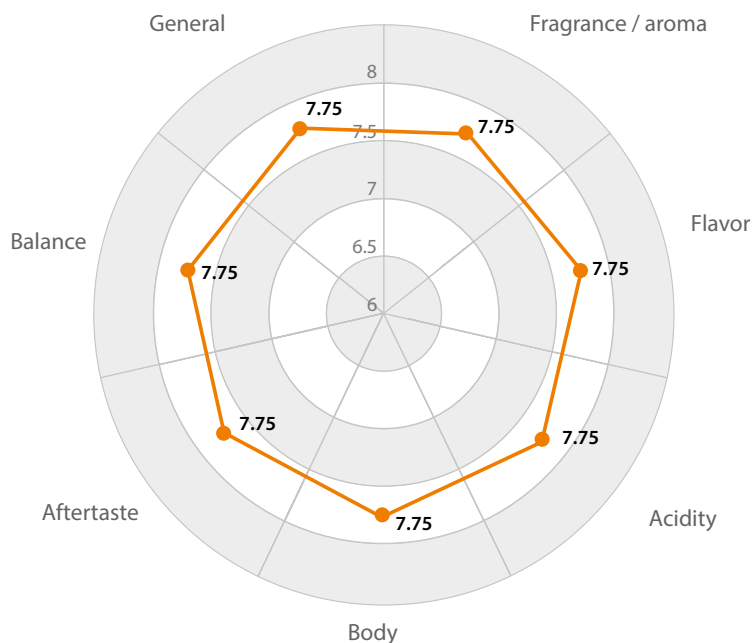
Tastify evaluation
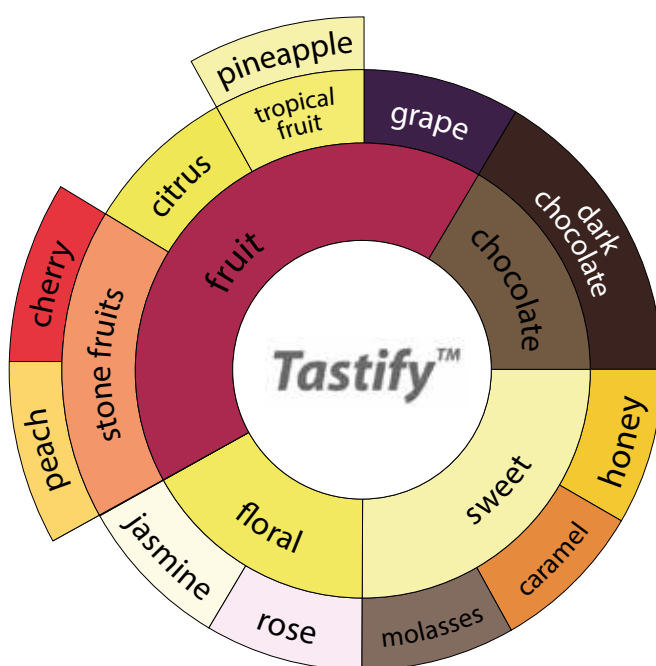
Red fruits and yellow fruits

Quality	Weighted intensity	
Floral	6.77	
Fruit	6.85	
Sweet	6.92	
Chocolate	5.08	
Nuts	0.85	
Spicy	1.23	
Acidity	6.77	
Body	6.23	

SAN MARTÍN
REGION

San Martín is located in the northern and eastern part of the country. It borders Amazonas to the north, Huánuco to the south, Loreto to the east, and, to the west, with La Libertad. Politically, it is divided into ten provinces. Its capital is the city of Moyobamba. Its coffee is grown almost entirely in three provinces. San Martín has two natural regions: mountains and jungle. The latter is home to the coffee growing areas, where the elevation ranges between 900 and 1200 meters. It borders the eastern slopes of the Andes mountain range and, for that reason, has little elevation. Its highest peaks do not exceed 3000 meters. Tropical and subtropical climates predominate.[11]

Characteristics

Location	Cultivated Land (hectares)	Production (MT)	Varieties	Elevation (meters)
North	87 163	82 319	Typica, caturra, and catimor	900-1200
	Source: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	Source: Agricultural Information Directorate, Monthly Evaluation of Agricultural Dynamics, 2016.	Source: In-house.	Source: In-house.

Main harvest	Process	Average temperature °C	Annual rainfall (mm)	Soil sample PH
March-August	Complete fermentation and washing	21	1293	4.6
Source: Agrobanco, coffee growing, December 2007.		Source: SENAMHI.	Source: SENAMHI.	Analysis of producer soil sample.

---

11   Source: Economic and financial situation of the San Martín Region, Central Reserve Bank of Peru.

Cropster evaluation
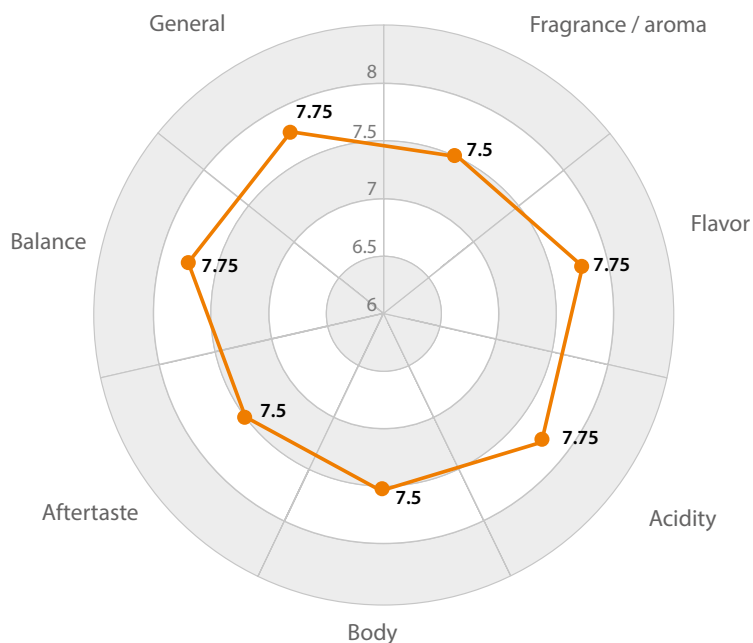
Tastify evaluation
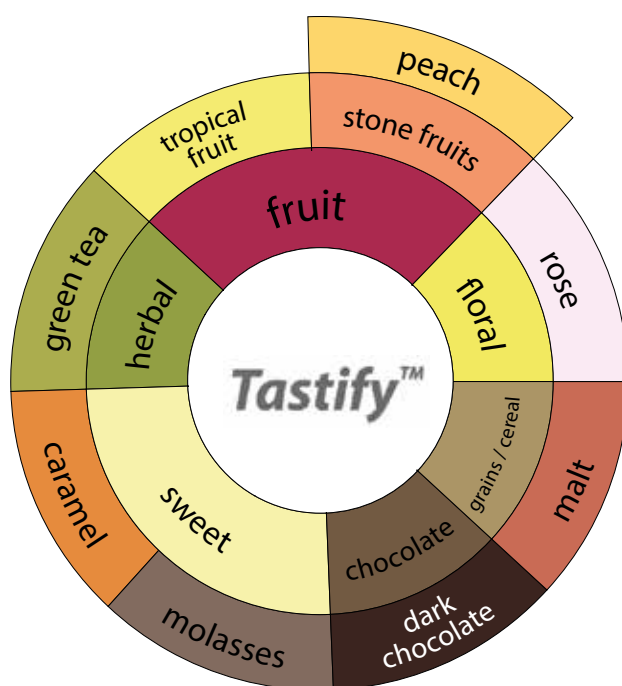
Red fruits and yellow fruits

Quality	Weighted intensity	
Floral	4.00	
Fruit	6.29	
Sweet	7.00	
Chocolate	5.50	
Nuts	0.21	
Spicy	0.00	
Acidity	6.21	
Body	5.29	

4.
GLOSSARY[12]

Acidity

Acidity is often described as "brightness" when favorable or "sour" when unfavorable.

At its best, acidity contributes to a coffee's liveliness, sweetness, and fresh-fruit character and is almost immediately experienced and evaluated when the coffee is first slurped into the mouth. Acidity that is overly intense or dominating may be unpleasant. Excessive acidity may not be appropriate to the flavor profile of the sample. The final score marked on the horizontal tick-mark scale should reflect the taster's perceived quality.

Coffees expected to be high in acidity, such as a Kenya coffee, or coffees expected to be low in acidity, such as a Sumatra coffee, can receive equally high preference scores although their intensity rankings will be quite different.

Aftertaste

Aftertaste is defined as the length of positive flavor (taste and aroma) qualities emanating from the back of the palate and remaining after the coffee is expectorated or swallowed.

If the aftertaste were short or unpleasant, a lower score would be given.

Balance

Balance is the way in which the various aspects of the sample, such as flavor, aftertaste, acidity and body, work together and complement or contrast with one another.

If the sample is lacking in certain aroma or taste attributes, or if some attributes are overpowering, the balance score reduces.

---

12   Definitions of the Specialty Coffee Association of America (SCA).

Body

The quality of body is based upon the tactile feeling of the liquid in the mouth, especially as perceived between the tongue and roof of the mouth.

Most samples with heavy body may also receive a high score in terms of quality due to the presence of brew colloids and sucrose. However, some samples with lighter body may also have a pleasant feeling in the mouth.

Coffees expected to be high in body, such as a Sumatra coffee, or coffees expected to be low in body, such as a Mexican coffee, can receive equally high preference scores although their intensity rankings will be quite different.

Clean cup

Clean cup refers to a lack of interfering negative impressions from first ingestion to final aftertaste, a "transparency" of cup.

In evaluating this attribute, the total flavor experience must be observed, from the time of the initial ingestion to final swallowing or expectoration. Any non-coffee like tastes or aromas will disqualify an individual cup. Two points are awarded for each cup displaying the "clean" attribute.

Final score

The final score should reflect the holistically integrated evaluation of the sample (as perceived by the taster).

A sample with many pleasant aspects, but which is not as good as had been hoped, will receive a low score. A coffee that meets the expectations regarding its character and reflects particular and original flavor qualities will be awarded a high score. An exemplary sample displaying preferred characteristics not fully reflected in the score of each attribute may receive an even higher score. This is the moment in which the tasters carry out their personal evaluation.

Flavor

Flavor represents the coffee's principal character, the mid-range notes, in between the first impressions given by the coffee's first aroma and acidity up until its final aftertaste.

It is a combined impression of all the gustatory (taste bud) sensations and retro-nasal aromas that go from the mouth to nose. The score given for flavor should account for the intensity, quality and complexity of its combined taste and aroma, experienced when the coffee is slurped into the mouth vigorously so as to involve the entire palate.

Fragrance / aroma

The aromatic aspects include fragrance, which is defined as the smell of the ground coffee when still dry, and aroma, which is the smell of the coffee when infused with hot water.

The taster can evaluate this at three distinct steps: sniffing the grounds placed into the cup before pouring water onto the coffee, sniffing the aromas released while breaking the crust, and sniffing the aromas released as the coffee steeps.

Sweetness

Sweetness refers to a pleasing fullness of flavor as well as any obvious sweetness. Its perception is the result of the presence of certain carbohydrates.

The opposite of sweetness in this context is sour, astringency, or "green" flavors. This quality may not be directly perceived as in sucrose-laden products such as soft drinks, but will affect other flavor attributes. Two points are awarded for each cup displaying this attribute for a maximum score of 10 points.

Uniformity

Uniformity refers to consistency of flavor of the different cups of the sample tasted.

If the cups taste different, the rating of this aspect will not be as high. Two points are awarded for each cup displaying this attribute, with a maximum of 10 points if all five cups are the same.

Coffees
from Peru

unique
specialties

prom
perú

Calle 21 n.° 713, San Isidro
Lima - Peru

ALÓ EXPORTADOR
(51-1) 604-5601 / (51-1) 719-2999 / (51-1) 207-1530
(51-1) 616-7400 (Agribusiness Department)

www.promperu.gob.pe
sae@promperu.gob.pe