Cocoa of Excellence Programme &
2019 Edition of the International Cocoa Awards

Chocolate Sensory Evaluation
Guidelines & Tips

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www.cocoaofexcellence.org
September 2019
Cocoa of Excellence Programme & the International Cocoa Awards

The Cocoa of Excellence (CoEx) Programme is the entry point for cocoa producers to participate in the International Cocoa Awards (ICA), recognizing the quality and exceptional flavours of diverse cocoa varieties produced around the world, as well as the knowhow of those who produce it.

This unique Programme is celebrating its 10th year anniversary in 2019. It is coordinated by Bioversity International, jointly organized with Event International, in partnership with Guittard Chocolate, Cacao Cocoa & Chocolate Advisors, Barry Callebaut, Puratos, the Cocoa Research Centre of the University of the West Indies (CRC/UWI), Valrhona, and with contribution in-kind of CocoaTown.

What Matters to Us

The Cocoa of Excellence Programme recognizes and values the work of cocoa producers by providing a global recognition to producers of high-quality cocoa and celebrating the diversity of flavours from the different origins of the world. It offers market opportunities and provides incentives to safeguard cocoa diversity for the benefits of the entire value chain, from the farming communities to the consumers.

Our vision is to ensure the sustainability of the cocoa supply chain.

Our objectives are to:

- Increase awareness and promote education along the cocoa value chain on the opportunity to produce high quality cocoa and preserve flavours resulting from genetic diversity, "terroir" and know-how of the cocoa producers.
- Facilitate communication and linkages between cocoa producers and operators in the supply chains to promote market opportunities.
- Increase capacity of producing countries to recognize, seek out, value and preserve cocoa quality and diversity.

The CoEx Programme celebrates much more than just a few flavour attributes associated with what is referred to as “fine flavour cocoa” but celebrates artisanship and excellence in the production of cocoa wherever it is found in the four cocoa-growing regions of the world, giving all cocoas equal opportunity to be recognized.

For this 2019 Edition, we received 223 cocoa bean samples from 55 countries. These beans were converted into liquor and evaluated by the members of the CoEx Technical Committee during the months of March to July 2019, to select the 50 best bean samples processed into chocolate. These chocolate samples are then evaluated by a broader sensory evaluation panel constituted of the members of the CoEx Technical Committee and an additional 30 cocoa and chocolate professionals.

The evaluation of the 50 best samples in chocolate is carried out from 10 to 27 September 2019. The sensory evaluation data is then analysed and the International Cocoa Awards are selected to be celebrated, together with all the 50 best samples, at the Salon du Chocolat in Paris, France on 30 October 2019. See Annex 1 for a summary of how the CoEx Programme works.

Below are guidelines for the evaluation of these 50 best chocolate samples. These guidelines and tips are good practices for sensory evaluation to minimize biases, maximize panellist’s sensitivity and reduce extraneous influences.
CoEx 2019 – the 50 Best Samples – Chocolate Sensory Evaluation

The 50 best samples are selected from the 4 cocoa producing regions of the world: Africa, Asia and the Pacific, Central America and the Caribbean, and South America.

All bean samples were analysed for physical and bean sensory quality and processed into liquor by Seguine Cacao Cocoa & Chocolate Advisors. The chocolates were then prepared from the liquors by Barry Callebaut and Cacao Cocoa & Chocolate Advisors, each producing the chocolate from 2 of the 4 regions using the CoEx standard chocolate processing protocol. The bean roasting conditions for the liquor and the chocolate recipe are detailed in Annex 2.

The purpose of the sensory evaluation of the 50 best samples is to:

1. Identify the specific flavour attributes of the sample and rate their intensities on a scale of 0-10
2. Consider all aspects of the sample, including balance and presentation of flavours
3. In addition to the attributes, assign a Global Quality Score to the sample, on a scale of 0-10
4. Provide comments and feedback on the sample's key attributes, balance, and presentation of key flavours to be shared anonymously to the cocoa producer, in a confidential detailed feedback report.

Timing and deadlines

- The boxes of the 50 chocolate samples are shipped between 9 and 13 September 2019 from Bioversity International’s office in Montpellier, France
  - Silvia Araujo de Lima: s.delima@cgiar.org
- **DEADLINE - to receive the evaluation Excel form - Friday 27 September 2019**
  - The evaluation Excel form should be sent by email to:
    - b.laliberte@cgiar.org - Brigitte Laliberte (CoEx Programme Coordinator)
    - i.drouault@cgiar.org - Ines Drouault (CoEx Programme Research Assistant)
- Between 1 and 4 October– the data from all jury members is analysed statistically
- By 7 October, the 15-20 International Cocoa Awards (ICA) are selected.
- Between 8 and 15 October, the ICA and participation certificates are produced
- Between 15 and 25 October, the CoEx Coordination prepares the information, presentations and visuals for the celebrations in Paris.

**IMPORTANT - Adherence to this timing is critical to allow the CoEx Coordination to prepare for the celebrations of the International Cocoa Awards at the Salon du Chocolat in Paris on 30 October 2019.**

Chocolate Sample Labels

Each of the 50 chocolate sample is labelled with a three digit blind code. Below is an example of the label from the 2019 Edition.
**Evaluation Recommendations**

The recommendations below are to guide the sensory evaluation and are adapted from the references:


**Annex 3** includes the CoEx 2019 Glossary of Terms for Cocoa Bean Flavour Evaluation as Liquor and Chocolate, developed by the CoEx Technical Committee, to be used for the definition of the flavour attributes with matching descriptors and examples of origins typical of intensity level.

We recommend that all tasting sessions are carried out in the same conditions, following the same procedure, and if possible in the same place and at the same time of day.

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### Tasting area:

- Chair to sit comfortably and a clean table surface.
- Quiet room, preferably alone or in an individual booth.
- Area free from distractions such as wall with neutral colours and silent, without people interruptions and noise – no phones or on silent mode.
- Free from strong odours.
- Comfortable temperature for the panellists: not too hot or too cold - preferably at 20-22°C.
- Good ventilation and lighting – similar to office light (500-800 lx).

### Avoid as much as possible:

- Strong scents. Do not use perfumes, lotions, deodorants or aftershaves unless these are odourless.
- Smoking, drinking alcohol, coffee or eating food within 60 minutes prior to tasting session.
- Strenuous exercise within 60 minutes prior to tasting session.
- Colds. Any person suffering from colds or any illness affecting senses of smell and taste should not participate in tasting sessions.

### Before tasting, prepare the following material:

- All the chocolate samples to be evaluated during the tasting session. If cold stored, bring them out of storage one hour before the tasting to bring them to room temperature.
- Put the samples in a RANDOM order. DO NOT order them by CoEx Code.
- A glass of water at room temperature.
- The CoEx 2019 Chocolate Evaluation Excel Form – printed or to be filled directly in a computer.
- The CoEx 2019 Glossary of Terms – in Annex 3

### During the tasting:

- Taste the chocolate samples in random order - do not order by code.
- Break 2 small pieces to assess the sample over 2 bites, to go through the full list of characteristics during the scoring.
- Place one chocolate piece in the mouth, chew 3–4 times and let it sit on the tongue to melt.
- Move the chocolate sample around the mouth and breath air during the tasting to allow full development and circulation of aroma.
In the mouth, notice the different attributes that become apparent at 3 contiguous time intervals: (1) initial, (2) middle, and (3) residual end flavour notes.

Score the intensity of attributes by order of perception on the palate. Attributes will not necessarily follow the order in the Glossary of Terms (Annex 3). Any of the attributes may become apparent in the different time intervals and disappear. Score them as soon as you perceive them.

Strive to be independent, follow intuition about a particular flavour attribute and trust your ability.

**Between the samples:**

- Rinse the mouth to avoid saturation and carry over effect of the flavour from one sample to another.
- Take a short break to allow the palate and taste buds to recover.

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Scoring and Recording Data in the Evaluation Excel Form

It is critical that all jury members use the CoEx 2019 Evaluation Excel form to record each score to allow the statistical analysis of the data. The Excel Form sent with the guidelines can be downloaded here: http://www.cocoaofexcellence.org/info-and-resources

Use the following Attribute Intensity Scale

- 0 - Absent
- 1 - Just a trace and may not be found if tasted again
- 2 - Present in the sample but at low intensity
- 3 to 5 - Clearly characterizing the sample
- 6 to 8 - Dominant characterization of the sample
- 9 to 10 Maximum. Over powers some other flavour notes in the sample

IMPORTANT NOTE - ALL ATTRIBUTES must be scored. If not perceived, a “0” should be recorded. If a field is left blank, we assume that the flavour was not perceived and will assign a “0”.

Note the following in the Excel Form:

<table>
<thead>
<tr>
<th>Column</th>
<th>Field name</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Order</td>
<td>Prefilled column from 1 to 50. All 50 samples should be tasted and the table filled by the end of the evaluation.</td>
<td></td>
</tr>
<tr>
<td>B Date Eval</td>
<td>Field for the date of evaluation, to be filled by pressing together “Ctrl and ;” (or enter manually using the format dd/mm/yy)</td>
<td></td>
</tr>
<tr>
<td>C Time Eval</td>
<td>Field for the time of evaluation, to be filled by pressing together “Ctrl and ;” (or enter manually using the format hh:mm:ss)</td>
<td></td>
</tr>
<tr>
<td>E CoEx-Code</td>
<td>Enter manually the 3 digit CoEx Code of the tasted sample in the order of tasting. Double check the accuracy of the CoEx Code from the label of the chocolate to be tasted and that the same sample was not tasted twice.</td>
<td></td>
</tr>
<tr>
<td>F-R Flavour Attributes and Intensity Scores</td>
<td>These are 13 flavour attributes to evaluate for each chocolate sample. These attributes are defined in the CoEx Glossary of terms. The term “flavour” refers to the complex combination of aromas, tastes and other sensations perceived during tasting. All attributes must be scored for each sample. If a score is missing, we will assume that the attribute was not perceived and we will assign a 0. Panellists may note more specific attributes, but for the purpose of standardization, the evaluation of the 50 best samples in chocolate should be based on the proposed categories. The flavour attributes should all be scored from 0 to 10 and only integer values. If a field is left blank, it will be assumed that this attribute was not present and a 0 will be attributed. Examples of origins typical of intensity level are provided. These examples are for illustrative purposes only and they are not meant to be exclusive of any origins/types. Specific lots of individual origins can differ dramatically from these frequently encountered values. They are based on currently available, widely traded and traditionally known origins and may be reviewed in future editions. While we expect that this set of 50 samples would have no Off Flavours, we included it for completeness. Generally, off flavours would be “0”, but if any unpleasant flavour is detected the intensity should be recorded on the scale 0 – 10.</td>
<td></td>
</tr>
</tbody>
</table>
The Global Quality should be the expression of genetics and terroir diversity through the farmer’s knowhow.

A specific set of attributes never fully defines something as ephemeral as the full bouquet and experience that comes from a piece of marvellous chocolate. The Global Quality Score is intended to be an amalgam of how all of the attributes fit together along with those difficult to define elements of complexity, clarity, balance and presentation in the sample.

The objective of the CoEx Programme is to celebrate cocoa bean excellence wherever it is found. It is not just looking for those fruity, floral, nutty, or caramelic samples that have the unique profiles called “fine flavour”. We are also looking for those rich, smooth, complex but clear samples that have been the foundation of the chocolate world.

One of the greatest challenges is to resist the temptation of making this Global Quality Score simply a personal preference score. We ask that all panellist step back and consider that many philosophies come into play in the chocolate world and we are looking for those cocoa beans that would fare outstandingly considering the broader ranges of expression philosophies.

0 = means a serious and overwhelming flaw is present. This is not a “veto” but is a clear statement of the quality - or in this case lack thereof.

More than 7 - No off-flavour must be present. Bitterness and astringency must be balanced and fall within a moderate or normal range.

Provide a description of the sample. A few words (more if needed) to convey the essence of the sensory evaluation and description of the flavours perceived for the cocoa bean sample producer and other actors of the value chain.

A few words that describe samples with a Global Quality score greater than 7 related to for example:

- Uniqueness, complexity, harmony, balance, clarity, clean, bright, the quality of the acidity, astringency and bitterness, finish, aftertaste.

Data Analysis and Sharing of Evaluation Results with Cocoa Producers

The jury identification is kept blind during the entire analysis of the data. The evaluation results treated confidentially by the CoEx Programme Coordination and Chair of the CoEx Technical Committee, responsible for the data analysis and the selection of the International Cocoa Awards.

All participating cocoa bean producers will receive a confidential detailed feedback report, including a summary of the liquor and for the 50 best samples, also the chocolate evaluation. The sensory evaluation jury should keep this in mind when completing the evaluation to provide comments that would be valuable to the cocoa producers.
International Cocoa Awards Ceremony, 30 October 2019, Salon du Chocolat, Paris

All actors of the cacao, cocoa and chocolate value chain, including participants in the CoEx Programme and the evaluation of 50 best sample in chocolate, are cordially invited to join the celebrations of excellence and diversity with the cocoa producers at the occasion of the International Cocoa Awards (ICA) ceremony that will take place on Wednesday 30 October evening at the Salon du Chocolat in Paris, France. For an invitation and any additional information, please contact the CoEx Programme and/or the organisers of the Salon du Chocolat, Event International at the email addresses below:

Bioversity International
- Brigitte Laliberte: blaliberte@cgiar.org
- Ines Drouault: idrouault@cgiar.org
- Silvia Araujo de Lima: sdelima@cgiar.org

Event International
- Laure Videau: lvideau@salonduchocolat.fr

Thank you

The CoEx programme is grateful to all members of the sensory evaluation panel for the 50 best samples processed into chocolate, for participating in this journey to recognize and celebrate the finest cocoas and artisanship in the world.
Annex 1: How the Cocoa of Excellence Programme works

START OF A NEW EDITION

Cocoa producing countries invited to participate to the CoEx through their National Organization Committees (NOC)

NOCs evaluate & select bean samples from interested producers

5Kg of well fermented dried beans & information sent to CoEx

Bioversity International receives samples & attributes blind codes

Physical quality & sensory evaluation of fermented & dried beans

Flavour sensory evaluation of cocoa liquor by the CoEx Technical Committee (TC)

Selection of the 50 best samples

The 50 best samples processed into chocolate

Flavour sensory evaluation of the chocolates by the CoEx TC & a broader panel of professionals

Selection of the 15 to 20 International Cocoa Awards (ICA)

Feedback reports (beans, liquor & chocolate) sent to each cocoa producer & NOCs

Contact information of the producers & flavour profiles of the 50 best samples & ICAs made public

Oct 2019

Top 50

October 2019

ICAs celebrated the 30th October 2019 at the Salon du Chocolat, Paris, France

From 30th October to 3rd November
The 50 best samples in chocolate available for tasting for all professionals at the CoEx/ICA stand

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Planning of the next Edition

May 2020

Evaluation of the CoEx Programme with partners, TC members & sponsors

December 2019

Publication of the new Edition Guidelines for participation

July 2018

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Annex 2: Roasting Conditions and Chocolate Recipe

Roasting Conditions:

Each cocoa bean sample is roasted on two trays of 400-415 gm of beans each, in a forced-air convection oven (Binder FD 56). In all cases, the processor of the beans into liquor, Seguine Cacao Cocoa & Chocolate Advisors, remains fully blind as to the specific country of origin of the beans. Only the information on the dominating genetic origin of variety, as provided by the producer, is provided by the CoEx Programme Coordination. Information on date of fermentation and drying in the origin country is also provided to order the processing of samples starting with those that have aged the most, to maximise flavour development.

The selection of the roasting condition is NOT based on a series of roasting runs to find the optimum roast. It is based on the following factors:

1. Genetic type - as indicated by the producers
2. Cut test color and fissuring – indicating the genetics
3. Cut test aroma description - smell of the immediately freshly cut beans - indicating the genetics
4. Bean moisture content (%)
5. Bean size - measured as the bean count/100g

The basic roasting temperature and time are first defined based on the following 3 main genetic types of the beans as indicated by the cocoa producer and the cut test aroma:

<table>
<thead>
<tr>
<th>Dominant Genetic Type</th>
<th>Temperature (°C)</th>
<th>Time (minutes)</th>
<th>Basic Roast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forastero</td>
<td>130</td>
<td>25</td>
<td>High</td>
</tr>
<tr>
<td>Trinitario</td>
<td>120</td>
<td>25</td>
<td>Medium</td>
</tr>
<tr>
<td>Criollo</td>
<td>112</td>
<td>25</td>
<td>Low</td>
</tr>
</tbody>
</table>

The specific roasting time and temperature is then adjusted for variation in bean size (expressed as bean count/100g) and bean moisture content (%) from normal values.

The roasting times are measured from -2°C from set point, assuming an oven recovery time of 7 minutes.

Cocoa of Excellence Chocolate recipe:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cocoa Nibs</td>
<td>61.00%</td>
</tr>
<tr>
<td>Deodorised Cocoa Butter</td>
<td>5.00%</td>
</tr>
<tr>
<td>Sugar (sugar cane)</td>
<td>33.65%</td>
</tr>
<tr>
<td>Soya lecithin</td>
<td>0.35%</td>
</tr>
<tr>
<td>% Cacao</td>
<td>66.00%</td>
</tr>
<tr>
<td>Ratio Cocoa Mass (nibs) / sugar</td>
<td>1.81</td>
</tr>
<tr>
<td>Chocolate fineness</td>
<td>14 - 18 µ</td>
</tr>
</tbody>
</table>

Note that the CoEx chocolate recipe is standardized to a formula made regardless of the % of fat of the nibs /liquor. This does result in variations in final chocolate viscosity but preserves the Ratio so that it is the same for all samples.
Annex 3: CoEx 2019 Glossary of Terms

Cocoa of Excellence (CoEx) Programme:
Glossary of terms for cocoa bean flavour evaluation as liquor and chocolate
Cocoa of Excellence Technical Committee
September 2019

<table>
<thead>
<tr>
<th>Attribute Intensity Scale</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Absent</td>
</tr>
<tr>
<td>1</td>
<td>Just a trace and may not be found if tasted again</td>
</tr>
<tr>
<td>2</td>
<td>Present in the sample but at low intensity</td>
</tr>
<tr>
<td>3 to 5</td>
<td>Clearly characterizing the sample</td>
</tr>
<tr>
<td>6 to 8</td>
<td>Dominant characterization of the sample</td>
</tr>
<tr>
<td>9 to 10</td>
<td>Maximum. Over powers some other flavour notes in the sample</td>
</tr>
</tbody>
</table>

Note on the use of the term flavour: refers to the complex combination of aromas, tastes and other sensations perceived during tasting.

Note on examples of origins typical of intensity level
- These examples are for illustrative purposes only and they are not meant to be exclusive of any origins/types.
- Specific lots of individual origins can differ dramatically from these frequently encountered values.
- Currently available, widely traded and traditionally known origins and may be reviewed in future editions.

<table>
<thead>
<tr>
<th>Descriptor</th>
<th>Description</th>
<th>Examples of origins typical of intensity level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cocoa</td>
<td>Typical flavour of roasted cocoa beans that are well fermented, dried, free of defects.</td>
<td>• 0 - 2: Absent - low intensity - Under-fermented cocoa, ancient Criollos</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 3 - 5: Clearly characterising the sample - Appropriately fermented “Nacional” and Papua New Guinean lots</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 6 - 8: Dominant character - Appropriately fermented cocoa and some West African and some Dominican Republican Hispaniolan lots</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 9 - 10: Strong intensity - Some West African lots</td>
</tr>
<tr>
<td>Acidity</td>
<td>Perception of acidity intensity is particular dependent on the amount of sample in the mouth.</td>
<td>• 0 - 2: Absent - low intensity - Some well-prepared West African lots</td>
</tr>
<tr>
<td></td>
<td><strong>Total acidity</strong> is the sum of the following individual acidities:</td>
<td>• 3 - 5: Clearly characterising the sample - Some Ecuadorian, Peruvian and Central American lots</td>
</tr>
<tr>
<td></td>
<td>• <strong>Acid - Fruit</strong>: citric or other fruit acids</td>
<td>• 6 - 8: Dominant character - Some Dominican Republican Hispaniolan, Papua New Guinean and Malaysian lots</td>
</tr>
<tr>
<td></td>
<td>• <strong>Acid - Acetic</strong>: vinegar (it can be smelled in the sample)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• <strong>Acid - Lactic</strong>: typically occurring in sour milk and yogurt</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• <strong>Acid - Mineral and Butyric</strong>: harsh metallic tasting (mineral) and rancid butter (butyric)</td>
<td></td>
</tr>
<tr>
<td>Descriptor</td>
<td>Description</td>
<td>Examples of origins typical of intensity level</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td><strong>Bitterness</strong></td>
<td>Perception of bitterness intensity is particular dependent on the amount of sample in the mouth. Typically perceived in caffeine, coffee, kola nut, some beers and grapefruits.</td>
<td>- 1 - 2: <em>Low intensity</em> - Some ancient Criollos&lt;br&gt;- 3 - 5: <em>Clearly characterising the sample</em> - normal intensity - Well-prepared West African lots&lt;br&gt;- 6 - 8: <em>Dominant character</em> - high intensity - severely under and unfermented cocoa</td>
</tr>
<tr>
<td><strong>Astringency</strong></td>
<td>Perception of astringency intensity is particular dependent on the amount of sample in the mouth. Could be perceived in 2 ways:&lt;br&gt;• Mouth-drying effect, sharp, perceived between tongue and palate and/or at the back of the front teeth and inside lips and gums - typical of raw nut skins and green banana skins.&lt;br&gt;• Velvety sensation on the sides of mouth and tongue. Typical of tannins in some wines or beers.</td>
<td>- 1 - 2: <em>Low intensity</em> - Some ancient Criollos&lt;br&gt;- 3 - 5: <em>Clearly characterising the sample</em> - normal intensity for most cocoa&lt;br&gt;- 6 - 8: <em>High intensity</em>&lt;br&gt;- 9 - 10: <em>Extreme intensity</em></td>
</tr>
<tr>
<td><strong>Total Fresh Fruit</strong></td>
<td>is composed of the following:&lt;br&gt;• <strong>Fruit - Berry:</strong> red or black currant, strawberry, raspberry, blackberry, acai berry&lt;br&gt;• <strong>Fruit - Citrus:</strong> orange, lemon, lime, grapefruit or generic sensation of citrus-like fruit&lt;br&gt;• <strong>Fruit - Dark:</strong> cherry, plum&lt;br&gt;• <strong>Fruit - Yellow / Orange / White flesh:</strong> apricot, peach, pear or banana&lt;br&gt;• <strong>Fruit - Tropical:</strong> passion fruit, pineapple, mango or soursop</td>
<td>- 0 - 2: <em>Absent - low intensity</em> - many West African lots&lt;br&gt;- 3 - 5: <em>Clearly characterising the sample</em> - Some Central and South American, well fermented Asia and Pacific country lots&lt;br&gt;- 6 - 7: <em>Dominant character</em> - Madagascar, some Central and South American country lots, some Papua New Guinean lots</td>
</tr>
<tr>
<td><strong>Total Brownd Fruit</strong></td>
<td>is composed of the following:&lt;br&gt;• <strong>Fruit - Dried:</strong> dried apricot, banana, yellow raisin, fig, that has undergone an unsulphured drying process&lt;br&gt;• <strong>Fruit - Brown:</strong> dark raisin, dates, prune&lt;br&gt;• <strong>Fruit - Over ripe:</strong> No longer fresh but severely over-ripe fruit, turning brown inside and outside, as a step towards over-fermentation.</td>
<td>- 0 - 2: <em>Absent - low intensity</em> - many West African lots&lt;br&gt;- 3 - 5: <em>Clearly characterising the sample</em> - fully fermented Indonesian and some Caribbean country lots&lt;br&gt;- 6 - 8: <em>Dominant character</em> - some Papua New Guinean and some Caribbean country lots</td>
</tr>
<tr>
<td><strong>Total Floral</strong></td>
<td>is composed of the following:&lt;br&gt;• <strong>Floral - Grassy / Green vegetal / Herbal:</strong>&lt;br&gt;  o Grassy - freshly cut grass, young green leaves&lt;br&gt;  o Green vegetal - crushed mature leaves&lt;br&gt;  o Herbal - hay, straw or herbal / dried green, herbs like thyme and rosemary</td>
<td>- 0 - 2: <em>Absent - low intensity</em> - West African lots&lt;br&gt;- 3 - 5: <em>Clearly characterising the sample</em> - appropriately fermented &quot;Nacional” and some Caribbean country lots&lt;br&gt;- 6 - 8: <em>Dominant character</em> - some Caribbean country lots and some Peruvian lots</td>
</tr>
<tr>
<td>Descriptor</td>
<td>Description</td>
<td>Examples of origins typical of intensity level</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Floral           | **Earthly / Mushroom / Moss / Woodsy:**  
  - Earthy - smell of dampness rising from soil after rain  
  - Mushroom - smell of fresh mushrooms  
  - Moss - damp moss often associated with earthy  
  - Woodsy - leaves and wood on a forest floor  
**Orange blossom:** specifically orange blossom flavour  
**Flowers:** jasmine, honeysuckle, rose, lilac, lilies, etc                                                                                                                                 |                                                                                                                                                                                                                                              |
| Woody            | **Total Woody** is composed of the following:  
  - **Wood - Light wood:** freshly cut cocoa wood, white pine wood, maple wood, ice cream/popsicle wooden stick  
  - **Wood - Dark wood:** oak, walnut, teak, mahogany  
  - **Wood - Resin:** pitch of pine or other resinous wood                                                                                                                                                                                                                                       | 0 - 2: Absent - low intensity  
3 - 5: Clearly characterising the sample - some “Nacional” and many West African lots                                                                                                                                                                                                 |
| Spice            | **Total Spice** is composed of the following:  
  - **Spice - Spices:** dried coconut, nutmeg, cinnamon, cloves, liquorice, tonka, vanilla, black pepper  
  - **Spice - Tobacco:** dried tobacco leaves  
  - **Spice - Savoury / Umami:** sodium glutamate, umami                                                                                                                                                                                                                                       | 0 - 2: Absent - low intensity - in most origins  
3 - 5: Clearly characterising the sample - in some West African, Central and South American and Caribbean country lots                                                                                                                                                                                  |
| Nutty            | **Total Nutty** is composed of the following:  
  - **Nutty - Nut flesh:** the edible kernel of a light roasted nut - hazelnut, macadamia, pecan, walnut, cashew, almond, brazil nut  
  - **Nutty - Nut skins:** the flavour of lightly roasted nut skins - hazelnut, macadamia, pecan, walnut, cashew, almond, brazil nut                                                                                                                                                      | 0 - 2: Absent - low intensity - in most origins  
3 - 5: Clearly characterising the sample - some Central and South American and Caribbean countries’ lots and ancient Criollos                                                                                                                                                     |
| Sweet            | **Sweet - White sugar, browned sugar, panela, caramel:** a characteristic sweet flavour from a range of white refined sugar to unrefined caramelized cane juice.                                                                                                                                                                                  | 0 - 2: Absent - low intensity - in most origins  
3 - 5: Clearly characterising the sample - some Central and South American and Caribbean countries’ lots and ancient Criollos                                                                                                                                                                            |
| Roast Degree     | **Roast Degree:** A measure of the extent of the roasting the beans  
Significant under or over roasting alters many of the attribute values.                                                                                                                                                                                                  | 2 - 3: Low roast  
4 - 6: Medium Roast  
7: High roast  
8 - 10: Levels of burnt/over-roasted                                                                                                                                                                                                                                               |
| Off Flavours     | **Off-Flavours** are any unpleasant characters from the following:  
  - **Dirty / Dusty:** not related to texture but an off-flavour  
  - **Musty:** stale, damp, mildew, decaying                                                                                                                                                                                                                                      | 0: Absent - clean, well fermented, dried and stored cocoa beans  
1 - 2: Low intensity  
3 +: Clearly characterising the sample as a defect                                                                                                                                                                                                                         |
<table>
<thead>
<tr>
<th>Descriptor</th>
<th>Description</th>
<th>Examples of origins typical of intensity level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mouldy</td>
<td>characteristic of mould growth</td>
<td></td>
</tr>
<tr>
<td>Meaty / Animal / Leather</td>
<td>- Meaty - cured meat, ham, rendered fat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Animal - dirty animal / farmyard</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Leather - used old leather</td>
<td></td>
</tr>
<tr>
<td>Over-fermented / Rotten fruit</td>
<td>decomposing fruit</td>
<td></td>
</tr>
<tr>
<td>Putrid / Manure</td>
<td>- Putrid - wet decomposing vegetative matter</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Manure - farmyard animal manure</td>
<td></td>
</tr>
<tr>
<td>Smoky</td>
<td>contamination from the smoke (any kind)</td>
<td></td>
</tr>
<tr>
<td>Other Off-Flavour</td>
<td>rancid, diesel, oil fumes, petroleum, tar, paint, tyres, chemicals, etc.</td>
<td></td>
</tr>
</tbody>
</table>

**Global Quality**

The **Global Quality** score reflects the overall impression of the:
- expressed flavour potential
- uniqueness of the sample
- balance of flavour and cleanliness of the finish

It celebrates the expression of genetics and terroir diversity through the farmer's knowhow.

- 0 = means a serious and overwhelming flaw is present. This is not a “veto” but is a clear statement of the quality - or in this case lack thereof.
- More than 7 - No off-flavour must be present. Bitterness and astringency must be balanced and fall within a moderate or normal range.

**Comments on the flavours for the cocoa producer**

- Field for key words related to the description of the flavour that is perceived and feedback to the producers

**Comments about Global Quality for the cocoa producer**

- Field for key words that describe samples with a Global Quality score of ≥7 (Uniqueness, Complexity, Harmony / Balance, Clarity / Clean / Bright, Acidity Quality, Astringency Quality, Bitterness Quality, Finish / Aftertaste)