



# Cacao quality evaluation: lessons from social science and producer-centric approaches

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# The cocoa market lacks:

- an industry definition of specialty/craft/fine chocolate,
- standards for defining cacao quality, or specialty or fine cacao,
- differentiation from or within the so-called premium chocolate sector,
- data collection and verifiability on most of the above,
- transparency into cacao and chocolate production size and specialty pricing at the level of individual companies, and
- institutional resources to support collecting and publishing most of these statistics.

# Key questions

- What would a producer-centric approach to cacao quality look like?
- What benefits might full cacao producer engagement in discussions on quality bring to overall global cocoa sector sustainability?

# Major finding

- A differentiated education and communication strategy with full cacao producer engagement (as opposed to solely involvement or non-engagement) is essential, but attention to this is still lacking in most discourse on cacao quality.

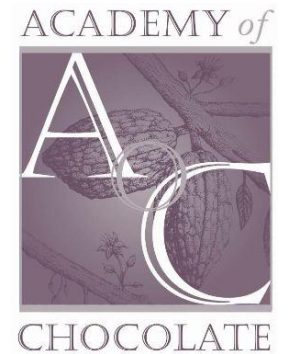


# Ixtutz cacao

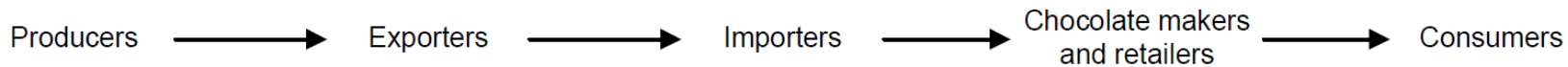


ho' kab' "five honeys", the name for Ixtutz

# Awards systems



# Vision for cacao quality grading



Problems with the current system

Nonstandard link between fine distinction and quality

Lack of differentiation and quality reduces earning opportunities

Procurement is less efficient

Advantages of graded cacao

Improved differentiation and quality

Increased traceability

Increased transparency

Improved value

Components of the fine cacao grading program

Fine cacao grading training

Certification

Market linkages

# FCCI cacao grading goals

- A **cross-culturally relevant communication tool** for cacao quality that engages supply chain stakeholders in providing **objective feedback** to enable informed decision making and mitigate rejections and misunderstandings about quality
- Rigorous training, calibration, and (eventually) certification of cacao graders worldwide
- Instructors teach in their own countries
- Offer cacao quality grading services worldwide
- Justify price premiums
- Contribute data to research on efficacy and relevance of cacao grading standards



# FCCI evaluation of cacao

## Physical evaluation

- External evaluation
- Cut test

## Sensory evaluation

- Organoleptic testing following fixed sampling protocols



# FCCI cacao sampling protocol

- Winnow 30-50 raw beans from a sample
- Grind in coffee blade grinder to ~500 microns
- Taste 1 teaspoon and evaluate



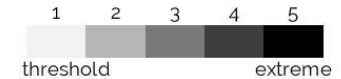
# FCCI Cacao Grader Evaluation

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Sample

Name

Date



## External evaluation, whole beans

### External attributes

#### Basic attributes (100g beans)

- ☐ Bean count
- ☐ Moisture content %
- ☐ Size (qualitative)
- ☐ Detritus % by weight

#### External defects (100 beans, count)

- ☐ Black
- ☐ Severely moldy
- ☐ Germinated
- ☐ Insect damaged
- ☐ Clumped
- ☐ Cut

### Raw bean aroma

#### Positive/Neutral

- ☐ Vinegar
- ☐ Cocoa
- ☐ Nutty
- ☐ Fruity
- ☐ Spicy
- ☐ Floral

#### Defective

- ☐ Hammy
- ☐ Smoky
- ☐ Musty/Moldy
- ☐ Putrid/Garbage
- ☐ Rancid/Cheesy
- ☐ Meaty
- ☐ Animal

### Cut test (100 beans, count)

#### Fermentation level

- ☐ Fully brown
- ☐ Partially brown
- ☐ Violet
- ☐ Violet unfissured

#### Defective

- ☐ Slaty
- ☐ Moldy
- ☐ Germinated
- ☐ Insect damaged
- ☐ Overfermented

#### Other attributes

- ☐ Blond

## Organoleptic evaluation, shelled ground beans

### Taste

- ☐ Acidity
- ☐ Bitterness
- ☐ Astringency

### Aroma

#### Positive/Neutral

- ☐ Cocoa
- ☐ Fresh fruit
- ☐ Dried fruit
- ☐ Vegetal
- ☐ Herbal
- ☐ Floral
- ☐ Nutty
- ☐ Spicy
- ☐ Caramel/Malty/Candied
- ☐ Buttery

#### Defective

- ☐ Hammy
- ☐ Smoky
- ☐ Musty/Moldy
- ☐ Ammonia
- ☐ Putrid/Garbage
- ☐ Rancid/Cheesy
- ☐ Medicinal/Phenolic
- ☐ Sulfurous/Rubbery
- ☐ Pungent
- ☐ Sweaty
- ☐ Metallic
- ☐ Meaty
- ☐ Woody
- ☐ Animal
- ☐ Heated fat

### Overall impression

- ☐ Overall

version 1.0

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# FCCI cacao sampling protocol 2015-2017

- In use in **27 countries**
- Adopted by **>250 stakeholders**, Cacao Quality Consortium
- **Classes in United States (x2), Peru, Brazil, France**; upcoming in **Southeast Asia, Latin America**
- **Research studies** in Brazil, and upcoming in Colombia, Ecuador, Papua New Guinea, and the United States
- **Partnerships**



# What works?

- Advantages over evaluation of liquor or chocolate
  - Simple
  - Repeatable: few variables
  - Inexpensive: equipment costs under \$50 USD
  - Highly scalable
- Grassroots social networks, modeling of use cases
- Differentiated education program
- Multi-stakeholder engagement
- Growing partnerships through policy and research



- Is the specialty market fundamentally transformative of the cacao-chocolate supply chain?

# Thank you!

Please keep in touch:

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