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A Day in the Life of a Coffee Roaster

Presented by Rocky Rhodes in coordination with CQI, BCAA and PhilCAFE

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Your Presenter: Rocky Rhodes

Coffee Professional for 25 Years
Owned ROCKY ROASTER
How runs INTERNATIONAL COFFEE CONSULTING
Published over 100 articles on Coffee
Taught or consulted in 16 countries
Q Arabica and Q Robusta Instructor
Author of "Profiling Practicum" - the main content for this class.



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Content of the Class

In the next 7 weeks we will cover:

- 1) Your role in the supply/operational chain.
- 2) How to evaluate and buy and sample roast green coffee.
- 3) The operation and the variables of your roasting machine.
- 4) How heat gets into the bean and what happens to the bean during roasting.
- 5) Cupping as an evaluation tool.
- 6) Controlling variables to progress through a roast profile development.
- 7) How to take care of your equipment.

A combination of:
LECTURES
DISCUSSION GROUPS
HOME WORK
and A FINAL EXAM

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GREEN GRADING

In order to roast, you must buy green coffee.

To understand the quality you need to grade the coffee.

To grade the coffee you must know about defects.

To know about defects you must read 'The Arabica Green Coffee Defect Handbook'

Specialty Coffee Association of America
ARABICA GREEN COFFEE
DEFECT HANDBOOK

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Classification of Defects

STANDARD CLASSIFICATION METHOD

SAMPLE WEIGHTS
Green Coffee 350 grams Roasted Coffee 100 grams

TABLE OF DEFECT EQUIVALENTS

Category 1 Defects	Full Defect Equivalents	Category 2 Defects	Full Defect Equivalents
Full Black	1	Partial Black	3
Full Sour	1	Partial Sour	3
Dried Cherry/Puff	1	Parchment/Pergamingo	5
Fungus Damaged	1	Flocifer	5
Foreign Matter	1	Immature/Uripe	5
Severe Insect Damage	5	Withered	5
		Shell	5
		Broken/Chipped/Cut	5
		Hull/Husk	5
		Slight Insect Damage	10

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PRIMARY DEFECTS

FULL BLACK / PARTIAL BLACK
Primary Defect / Secondary Defect

Harvesting fallen fruit
Bacterial infection



FULL BLACK YOUR SAMPLE 1 Bean = 1 Defect YOUR SAMPLE 2 Beans = 3 Defects PARTIAL BLACK

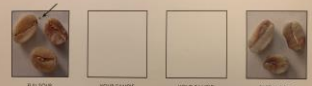
PHYSICAL DESCRIPTION: Black beans are distinguished by their opaque color.

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PRIMARY DEFECTS

FULL SOUR / PARTIAL SOUR
Primary Defect / Secondary Defect

Overfermentation
Unclean Processing Water



FULL SOUR YOUR SAMPLE 1 Bean = 1 Defect YOUR SAMPLE 2 Beans = 3 Defects PARTIAL SOUR


PHYSICAL DESCRIPTION: Sour beans are recognized by their yellowish or yellowish brown to reddish brown color. Usually the entire bean plate inside the bean is dark or black if the bean is as described, it sour or stange. (Big small is relevant) Once roasted and ground one single full sour bean can contaminate an entire cup of coffee.

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PRIMARY DEFECTS

FUNGUS DAMAGED
Primary Defect

Mold Spores introduced to seed



FUNGUS DAMAGED YOUR SAMPLE 1 Bean = 1 Defect

PHYSICAL DESCRIPTION: Fungus damaged beans, as they are commonly called, are recognized by yellow to reddish brown "fuzzed" spots (open) on every edge of the bean, which grow to size until covering the entire bean. The larger damaged beans release spores that will contaminate other beans.

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PRIMARY DEFECTS

FOREIGN MATTER
Primary Defect
Anything NOT Arabica coffee in the sample.

POLL Question
What is the strangest thing you have found in your coffee?

STICKS
1 Non-Coffee Object = 1 Defect

YOUR SAMPLE

STONES
1 Non-Coffee Object = 1 Defect

PHYSICAL DESCRIPTION: Foreign matter includes all non-coffee items found in the green coffee such as sticks, stems, seeds, etc. which give the green beans a bad appearance, and are signs of post-harvesting and grading. Foreign matter can damage equipment, especially grinders.

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PRIMARY DEFECTS

DRIED CHERRY POD
Primary Defect
Cherry skin dried intact and was not hulled.

CHERRY PODS

YOUR SAMPLE
1 Bean = 1 Defect

PHYSICAL DESCRIPTION: The dried pulp usually covers part or all of the parchment layer, sometimes with the presence of white spots or powdery residue, which is a sign of mold that affects the quality of the cup and the appearance of the coffee.

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PRIMARY DEFECTS

FULL INSECT DAMAGE / PARTIAL INSECT DAMAGE
Primary Defect / Secondary Defect
Broca Infestation

SEVERE INSECT DAMAGE
3 Beans = 1 Defect

YOUR SAMPLE


YOUR SAMPLE
10 Beans = 1 Defect

SLIGHT INSECT DAMAGE

PHYSICAL DESCRIPTION: Broca larvae, as they are commonly called, are distinguished by small (2.2 - 2.5 mm dia) dark holes, often an opposite sides of the bean. The path can be at any angle, including lengthwise. Some beans may have extended damage and these or more perforations are common. They are scored as 2 defects = 1 defect for badly damaged beans (2 or more perforations) or 10 beans = 1 full defect for slightly damaged beans.

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SECONDARY DEFECTS




BROKEN / CHIPPED / CUT
Secondary Defect

Beans dried too dry or too soft.

PHYSICAL DESCRIPTION: Chipped or cut beans usually have a dark reddish color due to oxidation of the area where the cut chips took place during the peeling. This can lead to fermentation, mold development, and insect activity, resulting in a wide variety of mycotoxins. Chipped broken beans occur during the dry mill process. Fragments of the bean are usually clean with no signs of oxidation.

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SECONDARY DEFECTS




IMMATURE BEAN
Secondary Defect

Cherries picked too early

PHYSICAL DESCRIPTION: Immature or unripe beans are distinguished by the pallid, yellow-greenish color of the segment or outer skin. The outer skin is tightly attached to the bean. They are often swollen, curved inward in a concave shape with sharp edges.

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SECONDARY DEFECTS




WITHERED BEAN
Secondary Defect

Water deprivation

PHYSICAL DESCRIPTION: Withered beans are usually smaller and flattened with wrinkles that resemble those of a raisin.

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SECONDARY DEFECTS



HULL / HUSKS
Secondary Defect

Pieces of cherry skin remain after hulling of Natural Process coffee

PHYSICAL DESCRIPTION: Husks are a fragment of dried pulp that has a dark red color.

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Counting the defects / giving a grade

SPECIALTY COFFEE
ZERO Primary Defects

Up to and including 5 full secondary defects.

TEST SAMPLE 1

- 3 Partial Sour
- 9 Floaters
- 7 Withered
- 9 Slight Insect damaged
- 4 Floater

How Many
PRIMARY DEFECTS: _____
SECONDARY DEFECTS: _____
Specialty or Below Specialty?

POP QUIZ

If the only physical defect was **SLIGHT INSECT DAMAGE**, How many beans could I count with this defect and still be specialty?

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THE TRUTH IS IN THE CUP