



SNS COLLEGE OF TECHNOLOGY
(An Autonomous Institution)
Coimbatore – 641035.
Unit 2 Topic 2



Wet and dry method of Coffee

3.3.1. Dry Method

The dry method is the age old and simple method practiced in coffee processing, which requires little machinery. The undried coffee cherry is dried in this method and depends on various factors like plantation size and quality of the product. The processing steps involved in dry method of coffee processing are cleaning, drying and hulling, as described below.

3.3.1.1 Cleaning

The harvested cherries are subjected to sorting and cleaning, for the separation of dockage. Winnowing could be done manually. The ripe cherries are separated by applying the flotation technique in flowing water.

3.3.1.2. Drying

The coffee cherries are sun dried on waist height wire mesh tables. During drying, they are turned to ensure uniform drying for 4 weeks to the optimum 11% moisture content. Machine drying is used on larger plantations to speed up the process with preliminary sun drying for a few

days. The final quality of coffee greatly depends on the drying operation. Improperly dried beans are prone to rapid deterioration due to fungal and bacterial infestation.

3.3.1.3 Hulling

After drying the cherries are kept in bulk in storage silos or in jute bags until they are subjected to hulling to separate the outer layers.

The dry method of coffee processing is majorly used for the Arabica coffee variety

3.3.2. Wet Method

The wet method uses washing equipments and water. This method yields better qualities coffee beans rendering a high quality green coffee. Similar to the dry method the first step of sorting and cleaning



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of the coffee is done by subjecting the cherries to washing in flowing water followed by screen separation.

3.4 Pulping

Pulping is the process of removing the outer skin called as the exocarp from the white fleshy pulp termed as mesocarp that separates the pulp and beans from the sorted and cleaned cherries. This is carried out immediately after harvesting to prevent quality deterioration in the final product. The pulping machine separates the flesh and the skin of the fruit from the beans, by rubbing the surface of the coffee cherry between two plates.

3.4.1 Types of Pulpers

The two types of pulpers widely used are:

- **Drum pulpers and**
- **Disc pulpers**

3.4.1.1. Drum pulpers

This consists of a rotating drum with a slotted surface and a plate that is movable between which the coffee cherries are pulped to remove the pulp and the beans separated. This can be operated manually or by attaching to a motor.

3.4.1.2. Disc pulpers

A rough surface disc is used to remove the pulp from the cherries. Further separation is done in vibrating screens that separate the unpulped or imperfectly pulped cherries. The pulped beans are further passed in water troughs for a separation. In order to remove any adhering sticky residual pulp that may invade microbes, the wet and pulped beans are stored in tanks meant for fermentation to break down the mucilage by enzymes and further washing in 2 to 3 days, determined by factors like temperature, thickness of skin and enzymes. When the end of the fermentation is reached the beans is free of its slithery nature and attains a rough texture.

3.5. Final Washing



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The coffee beans are subjected to complete washing after fermentation. The wet coffee comprises of nearly 57% moisture at this stage.

3.6. Drying

The drying of coffee beans should be done slowly to nearly 10% moisture content to prevent cracking. Immediate drying prevents off flavors in coffee. The beans are dried to decrease the moisture to an optimum of 11 percent, by the following methods

- Sun drying
- Mechanical drying
- Combination of both methods

3.6.1. Sun drying

Vast areas made of cement and bricks or on tables made of netted wire in depth of 2 to 10 cm, and turned uniformly for drying. It is continued for 8 to 10 days depending on the climatic conditions.

3.6.2. Mechanical drying

Hot-air driers are used under controlled conditions to hasten the drying process to obtain good and easy drying to yield best quality of coffee. This wet-processed coffee termed as parchment coffee is stored or passes on to hulling. The dried cherry from the dry process or the parchment coffee from the wet process is allowed to rest for 8 hours in a ventilated area. It is then hulled to separate the pericarp, by a pestle and mortar or in a motorized huller. The mechanically operated hullers comprise a steel screw with an increasing pitch towards the outlet which removes the pericarp.

3.8 Cleaning

Winnowing is the removal of the hull from the coffee bean. The hulled coffee is then passed through a sequence of operations like cleaning, screening, sorting and grading. Electronic sorting machines are utilized for the separation of the broken and damaged beans and stored in jute bags in a cool and dry area.

3.9 Grading



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Cured coffee is graded according to color, odour, size, shape and density.

- **Color grading: Black, greyish beans, foxy red beans, white, opalescent, and glassy beans, blotchy or spotted beans are rejected in a colour sorter.**
- **Based on aroma, coffee beans termed “stinkers” that release a putrid odour and also rancid or acid beans, musty beans and rio flavoured beans are removed since they produce undrinkable coffee.**
- **Other abnormalities including droughted beans, broken and crushed beans, pitted beans, elephant beans and other foreign matter and debris are eliminated in the grading process.**
- **The different grades of coffee are:**
- **Pea berry which are oval shaped beans**
- **or A grade beans that are first size in flats- bold, heavy and well formed**
- **B Grade rendering slightly smaller than O or A**
- **C Grade that are slightly smaller than B and**
- **Triage Grade having pale, discoloured, black spotted beans**