

JICA CUP2 Project

NATURAL PROCESS



5. Natural

Advantage of the process	• Offers high potential for complex and distinctive flavor profiles. • Requires no water, making it suitable for regions with limited water resources. • Minimal equipment investment is needed.				
Recommended conditions	1. Sugar contents >18.0 2. Availability of drying beds (longer drying period) 3. Clean and thorough sorting of cherries before drying				
Steps	1	2	3	4	5
	Harvesting	Sorting	Pre-drying	Drying	Storage
	DAY 1		DAY 1-2	DAY 3- (for 35-40 days)	-
					

Step 1: Harvesting

Purpose: Ripe cherries have good sugars and acidity to create flavors

Recommended equipment



Use **a container** of cherries during harvesting to easily collect cherries



Use **a plastic sheet under the tree** to collect any falling cherry.



Use **clean bags** to hold cherry during harvesting

Key concept

① Harvest **only well-ripen cherries**



Higher quality and heavier

Because well-ripen cherries are heavier



Weight	70kg	100kg
Farmgate price	700rwf	700rwf
Total income	49,000rwf	70,000rwf



② Start to harvest in **the morning**.



③ Deliver cherries to the station **within 8 hours** after harvest



④ Do **not** pick cherries **on the ground** to avoid **contamination**



⑤ Put coffee **under shade** after harvesting to avoid rapid fermentation

Step 2: Sorting – color sorting

Purpose: Classify cherries – Ripen / unripen / overripen

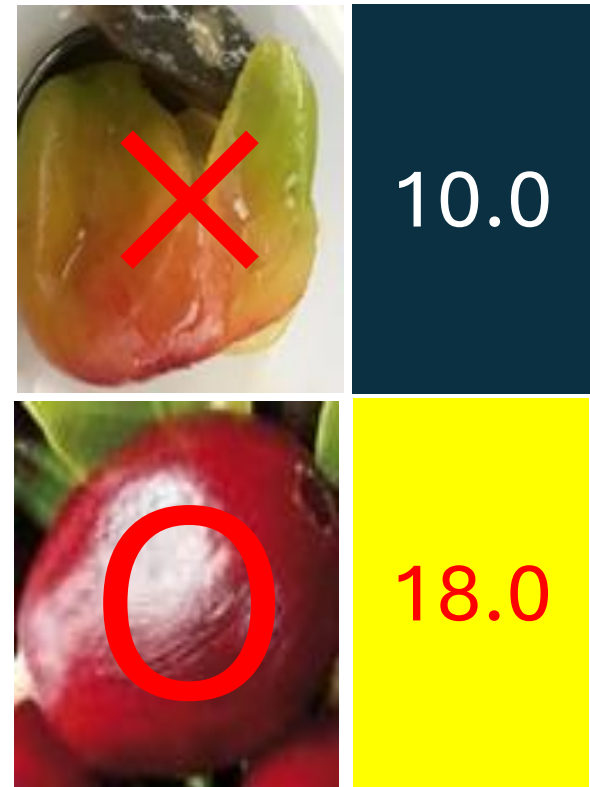
Checking point ①

At least 70% of cherries are **well ripen**



Checking point ②

Sugar contents: above 18.0



Step 3: Pre-drying (36-48 hours)

Purpose: Reduce moisture slowly (Slow dry)

Equipment

Covered drying beds



Key concept

① Place cherries **under shade** to sort bad cherries (unripen/over-ripen/ insect damage) before getting them dry. The layer could be around **3cm**.

② Sort and rest parchments **for 36-48 hours**. Cherries must rest well before sun-dry.

③ Set the **target colors of the defects** to sort:

-Unripen

-Over-ripen



Checking point

Defects are **100% removed**



Step 4: Drying

Purpose: In-fruit fermentation to develop flavors

Equipment



A shade net to avoid strong heat



A plastic sheet to avoid rain and dew



A moisture meter to check moisture

Key concept

① **Control temperature:** Use a shade net to cover from **11:00-15:00** to avoid strong heat.

**Adjust according to the weather condition.*

② **Control humidity:** Cover cherries with a **plastic sheet** to avoid rain and dew.

③ **Resting:** 1 day in a week, **cover cherries completely for resting.**

④ **Uniformity:**

- **Stirring 5-6 times a day** for first 2-3 days. After, **3 times** a day.

- Thickness of the layer: **Thin like 3cm (first 2-3 days) → Thick**



Checking points

① **Moisture contents:**

Aim for **11.0-12.0%** for best condition. Use moisture meters twice a day.



② **Duration:** Typically, **35-40 days**. The drying process must be carefully controlled to avoid rapid or uneven drying.



③ **Cherry temperature:** It should be **kept below 25°C until** moisture content reaches 35%, then after, **below 40°C**.



**Moisture meter must be calibrated before use*

Step 5: Storage

Purpose: stabilize beans post-drying for export or milling

Equipment

Use pallets to avoid damage
(e.g., water, bugs)



Key concept

- ① **Moisture control:** Maintain the bean moisture content at **10-12%**

**Adjust the MC if storage is either very hot or very humid*



- ② **Ventilation:** Control consistent **air flow** to avoid dew and high humidity



Checking point

- ① **Temperature:** Keep temperature at **15–23°C** to avoid damage



- ② **Humidity:** Keep humidity at **50-70%** to avoid mold.



- ③ **Resting:** Beans should rest for **around 3 months** to stabilize MC

