

## 1 Growing



Farmers grow cocoa trees on small farms in tropical environments, within 15-20 degrees north and south of the equator. Cocoa is a delicate and sensitive crop, and farmers must protect trees from the wind and sun. They must also fertilize the soil and watch for signs of distress including attack from pests and disease – a silent killer that can come in the form of a fungus or a pest and wipe out entire crops. Every year an estimated 30-40% of the cocoa crop in West Africa is lost to pests and disease.

## 2 Harvesting



The growing season in the tropics is continuous. Ripe pods may be found on cocoa trees at any time, however, most countries have two periods of time per year of peak production, with the main harvest lasting several months. Changes in weather can dramatically affect harvest times, causing fluctuations from year to year, even on the same farm.

With proper care, most cocoa trees begin to yield pods at peak production levels by the fifth year, which can continue for another 10 years. A farmer can expect 20-50 beans per pod, depending on the variety of cocoa.

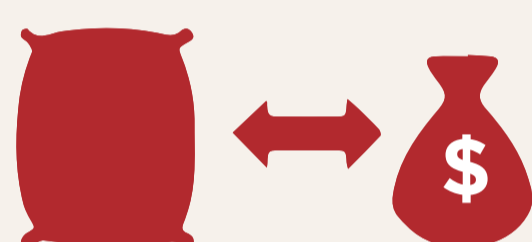


## 3 Fermenting & Drying



Once the beans have been removed from the pods, the farmer packs them into boxes or heaps them into piles. The layer of pulp that naturally surrounds the beans heats up and ferments the beans. Fermentation is an important step, lasting three to seven days, that produces the chocolate flavor we know when the beans are roasted. The beans are then dried. In some months, the cocoa farmer can dry his beans simply by laying them on trays or matting, and leaving them to bask in the sun.

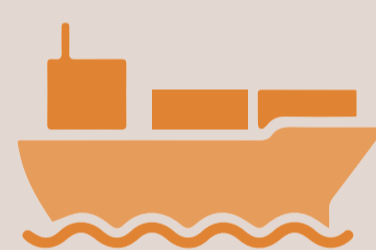
## 4 Marketing



After the beans are dried and packed into sacks, the farmer sells to a buying station or local agent. The buyer then transports the bags to an exporting company. The exporting company inspects the cocoa and places it into burlap, sisal, or plastic bags. The cocoa is trucked to the exporter's warehouse near a port. Sometimes additional drying is necessary at this point.

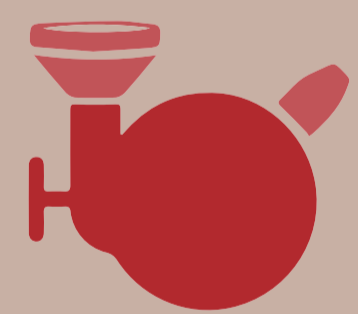


## 5 Packing & Transporting

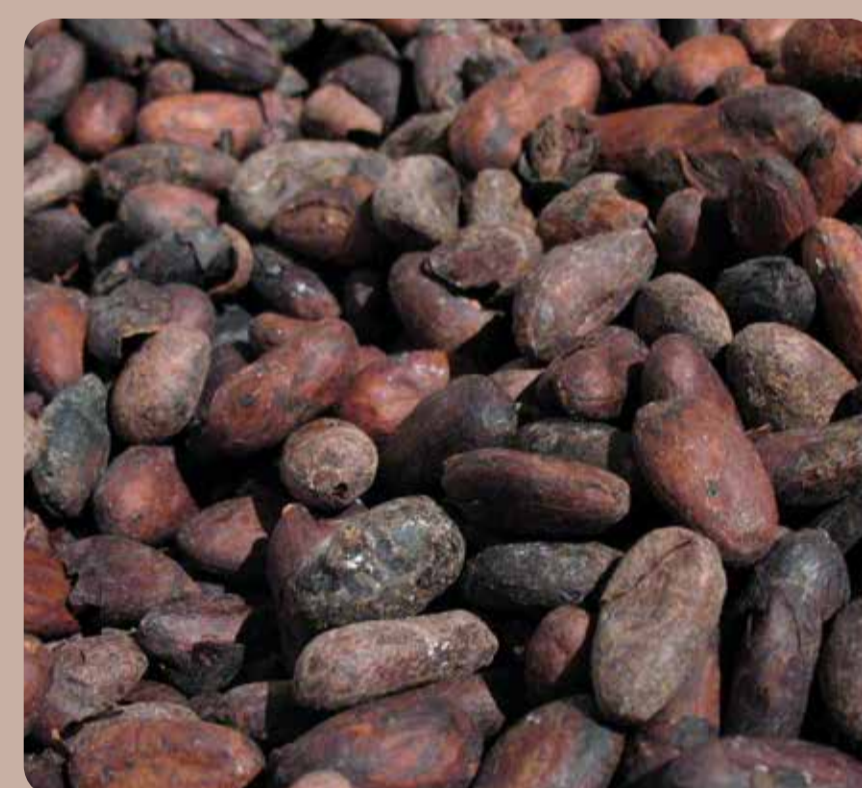


The exporting company finalizes the time and place for shipment and the beans are loaded onto ships. Once the ship reaches its destination, the cocoa is removed from the hold and taken to a pier warehouse. Details of export process vary by country. Cocoa is stored in bags or bulk in the warehouse. The buyer will conduct a quality check to accept delivery, and cocoa is usually stored until requested by the processor or manufacturer.

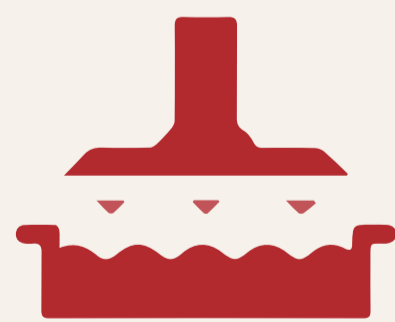
## 6 Roasting & Grinding



Beans are first thoroughly inspected and cleaned. The inside of the cocoa bean is called the nib. Depending on preferences, beans can be roasted with the shell intact, or the nib can be roasted alone. Once the beans have been shelled and roasted (or roasted and shelled), the nib is ground into a paste. The heat generated by this process causes the cocoa butter in the nib to melt and creates "cocoa liquor," which does not contain alcohol.

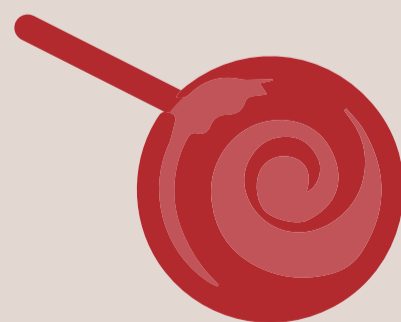


## 7 Pressing



The cocoa liquor is fed into hydraulic presses that divides liquor into cocoa butter and cocoa cakes. The cocoa cake can be sold into the generic cocoa cake market, or ground into a fine powder.

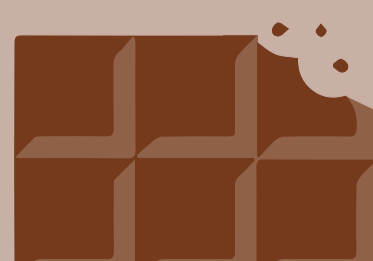
## 8 Chocolate Making



To make chocolate, cocoa liquor is mixed with cocoa butter, sugar and in some cases, milk. White chocolate contains cocoa butter only, and no cocoa liquor. The mixture is then placed into conches—large agitators that stir and smooth the mixture under heat. After conching, the liquid chocolate may be shipped in tanks, or tempered and poured into molds for sale in blocks to confectioners, dairies, or bakers.



## 9 Consumer



Today, people around the world enjoy chocolate in thousands of different forms, consuming more than 4.5 million tons of cocoa beans annually.

The cocoa, chocolate, and confectionery industry employs hundreds of thousands of people around the world and is a key user of other agricultural commodities such as sugar, dairy products, nuts, and fruits.