

*Cacao Selection Felchlin*



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## Cacao and sustainability

Felchlin Switzerland set itself guidelines to guarantee the sustainability of its cacao beans. These guidelines include the complete traceability of the cacao beans to their origin.

### **Felchlin Switzerland cacao charter**

- We know the farmers who cultivate the cacao beans we buy.
  - We remain in close contact with both the cacao farmers and our local partners, including visiting them regularly.
  - This contact and the regular visits allow us to be familiar with their work and production conditions.
  - To ensure the high quality of our cacao beans, we always pay prices above those recommended by Fairtrade.
- We place a strong emphasis on the fact that cacao cultivation should be produced in harmony with nature as well as being financially beneficial for the farmers and their families.
  - Our long-term commitment should ensure the livelihood of future generations of cacao farmers.
  - We respect environmentally sensitive issues such as the optimal use of natural resources (air, water energy etc.) during our transportation and manufacturing processes and constantly strive for improvement in this area.



# *The cacao tree*

## Worldwide cacao cultivation

Cacao trees grow best within the tropical belt between 15 degrees north and 15 degrees south of the equator.

The tree requires optimal vegetative conditions, including rich soil, in order to grow. A consistent climate with temperatures averaging 25°C and high rainfall areas with high humidity are also necessary. Ideal regions for the cultivation of cacao trees can be found near mountains, coasts and on islands.

Despite their preference for warmth, cacao trees shun direct sunlight and have evolved to be an understory rainforest tree requiring

a canopy. They are often cultivated under such trees as the plantain, banana, rubber and mango.





# *Noble, fine flavour cacao*

## **Cacao varieties**

A distinction is made between noble, fine flavour cacao and commodity cacao.

### **Fine flavour cacao (Criollo and Trinitario)**

The exclusive, aromatic Criollo and Trinitario cacao beans represent less than 10% of all cacao beans grown. It is almost impossible to find pure Criollo, as this sort has been crossed with the resistant Forastero to aid in the battle against disease. As a result, a hybrid of Criollo and Forastero, called Trinitario, has been cultivated on the island of Trinidad during the 18th century. Trinitario contributed greatly to the restocking of cacao trees on Trinidad after the industry was largely incapacitated through a number of epidemics that swept through the cacao trees.

### **Commodity cacao (Forastero)**

The most common and wide spread cacao type, Forastero, is known as a commodity cacao. This hardy, high yield cacao is mostly grown in Africa and is used for the mass production of industrial chocolate. This typical, bland tasting cacao can sometimes surprisingly reveal strong, aromatic flavours.

# *Selection of the cacao bean*

## Purchasing philosophy

### **Direct purchasing**

Cacao Selection Felchlin is a quality distinction for couverture, on which Felchlin Switzerland bases its cacao charter and guarantees its content. Representatives of Felchlin Switzerland personally and regularly visit the farmers, cooperatives and partners. Felchlin Switzerland offers cacao producers interesting long-term contracts and agreements in consideration of ecological and economical aspects.

### **Fair price**

The company strategy is to secure high quality and intensely flavoured cacao beans directly from the origin. As a result, cacao farmers are rewarded for their improved performance and better know-how through higher prices.

### **Defined origin**

Felchlin Switzerland only imports cacao beans with a clear designation of origin. This requirement forms the basis for the production in Schwyz, Switzerland: the manufacturing of couvertures with the designation of origin. In this way, it is possible to guarantee the traceability of the cacao beans to their origin.

### **Quality**

The selection of cacao beans is of major importance. A sample is sent by courier to Schwyz before each delivery is dispatched. The sample undergoes an analysis and sensory evaluation. Only when the high standards and requirements are met, does the purchasing manager, Felix Inderbitzin, place the order.



# Harvest

## Harvest and post-harvest handling

### Harvest

In most countries, the cacao fruit, known as a “pod”, is ripe at the end of the wet season and is ready to be harvested. The farmer uses a sharp knife to carefully cut the ripe fruit from the tree. He pays particular attention not to damage the trunk, flowers or any unripe fruit. The pods are then opened using a machete. In African countries a wooden stick may also be used.



### Fermentation

The pulp and seeds are then removed, placed in large wooden boxes and covered with large leaves, such as banana leaves. Due to the high sugar content of the pulp, a fermentation process begins, resulting in a rise in temperature. Acetic acid is produced, which evaporates with time. During the fermentation process, the cacao beans must be regularly mixed to ensure a constant fermentation and sufficient aeration. This can take up to five days.



### Sun-drying

Once the fermentation process is complete, the farmer lays the cacao beans under the tropical sun to dry. A wooden rake is used to regularly mix the beans. The flavour of the bean is further developed during the drying process, which can take between five and six days. The moisture content of the cacao bean must be less than 6.5% to prevent mould growth. This is controlled by cutting a sample of 100 random beans horizontally.



## Calibration

The cacao beans are then sorted into size and quality. This is accomplished by hand or by using simple selecting appliances that filter out the large and small cacao beans. It is important during the roasting process to have similar sized beans to ensure a uniform roasting. The sorted cacao beans are filled into jute bags or special plasticized, air-permeable fabric bags, weighed and then sewn shut. The cacao beans are now ready to be transported in containers on ships to Europe.



## Transportation

Transportation of the cacao beans presents its own challenges. It is important that no insects infest the cacao beans and the containers need to be sufficiently ventilated to prohibit the formation of mould due to the large temperature variability encountered during such long sea journeys. These measures, which directly affect the quality of the cacao beans and later the quality of the chocolate, are additional investments for a premium product.

Usually, the cacao beans purchased by Felchlin Switzerland arrive in Basel per boat via Rotterdam. The cacao beans are then stored under ideal conditions in rented storage rooms in Basel until needed.



# Processing

## From the cacao bean to chocolate

### Cleaning

Upon arrival in Schwyz, the delivered cacao bags are cut open and the quality of the cacao beans is assessed. The cacao beans then undergo a cleaning process, removing foreign objects such as stones, pieces of wood and metal. Bacteria and germs are killed when the cacao beans are sterilized using steam heated to a temperature of 170°C. This process doesn't influence the flavour of the chocolate.



### Roasting

Traditional roasting of the cacao beans is carried out slowly and gently in small batches. The roasting temperature and roasting time depends on the characteristics of the cacao bean and the desired roast flavour of the chocolate. The process occurs without time restrictions, allowing to unfold the uniqueness of each cacao bean to unfold.



### **Cracking and grinding**

The cooled cacao beans proceed to the winnower, where they are broken into pieces and the shells are removed through suction. These pieces, called nibs, are then ground in the triple mill to a fineness of between 25 $\mu$  and 30 $\mu$ . 150kg of small ceramic balls in the ball mill further reduce the texture of the cacao mass to a fineness of between 15 $\mu$  and 20 $\mu$ .

### **Mixing**

The recipe for chocolate is mixed in the kneading machine for a short period of time. Liquid cacao mass, liquid cacao butter, granulated sugar and, when the recipe specifies, a touch of vanilla from Madagascar, are mixed and kneaded for dark chocolate. The same process and recipe, with the addition of milk powder and/or powdered cream, is used for milk chocolate.

### **Rolling**

The kneaded mass passes through the pre-refiner to the 5-roll refiner. In the 5-roll refiner, five counter rotating rolls grind the mass to a fineness of 16 $\mu$ . The result is a powdery cacao mass that feels smooth on the tongue, without any grittiness.

### **Conching**

Felchlin Switzerland uses varying conching technology to add the final touch to its noble chocolate. The original and traditional method in the longitudinal conche allows, through hours of movement and aeration, the best possible unfolding of the delicate aromas in the chocolate. Conching can take up to 72 hours, depending on the recipe and the characteristics of the cacao beans. As a result of the slow and gentle processing of the chocolate, the undesirable flavours evaporate and the desirable aromas such as floral, fruit, spice, cacao, coffee etc can fully develop. This last process also determines the homogeneity and distinct melting characteristics of the chocolate.

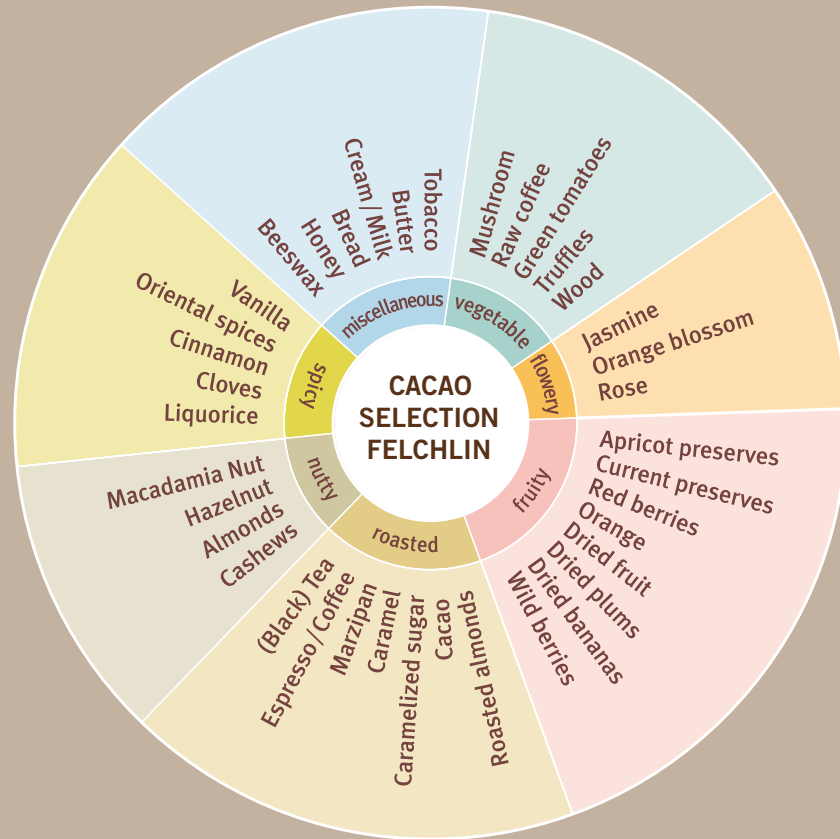


# Degustation (Tasting)

## Aroma Wheel

# Aroma / Fragrance

## Aroma Wheel Guide



### Degustation (Tasting)

To be able to degustate premium quality chocolate, you need to have reached an inner peacefulness that allows you to willingly take the necessary time required to fully appreciate the experience. Degustation appeals firstly to the sense of sight, then the senses of touching, hearing, smelling and finally the sense of taste.

### Procedure

Break off a small piece of chocolate. In doing so, you hear a “snap”, a breaking, of the chocolate, which becomes more distinctive corresponding to the increase in the cacao content of the chocolate. The sound also reveals the fineness and structure of the chocolate. By rubbing a piece of chocolate between the thumb and index finger, the chocolate melts and

releases aromas that can be identified using the Felchlin Switzerland fragrance and aroma wheel as a guide. When the chocolate is bitten, the snap reveals the softness and texture of the chocolate. Milk chocolate is smoother and has a softer snap due to the milk fat content. As the chocolate slowly melts in your mouth, a myriad of aromas are released. Felchlin Switzerland fragrance and aroma wheel can help you identify a few of the over 600 different aromas present.

### Tip

Degustation of chocolate should ideally take place in the morning. You shouldn't smoke, drink coffee or eat spicy food before degustation. The chocolate should have a temperature of 20°C.

