Cocoa fruit pulp: the fruity component of the cocoa pod

Cocoa Bean | Cocoa Fruit Pulp | Cocoa Juice | Cocoa Pod | Import Promotion Initiative |

The cocoa pod is more than just a bean. Cut open the thick shell of the cocoa pod and you will find the white edible flesh and the rows of cocoa beans inside. While cocoa beans are on everyone's lips, the white flesh is little known. It tastes exotic, fruity, and sour-sweet. There is no recognisable flavour relationship to cocoa or chocolate. In many cocoa regions, the pulp is processed into a juice. A few companies also produce cocoa liquor for the European market. The Import Promotion Desk (IPD) supports cocoa producers from Ecuador, Colombia, Peru, Côte d'Ivoire, Ghana, and Madagascar. This import promotion initiative, a project of the German Federal Ministry for Economic Cooperation and Development (BMZ), quides the companies into the EU market and connects them with European buyers. Two companies in the IPD programme, Hacienda Palo Santo from Ecuador, and Sambirano from Madagascar, produce high-quality cocoa beans as well as cocoa fruit pulp.

The cocoa fruit: shell, pulp, beans

The cocoa fruit is between 15 and 25 centimetres long. In the unripe stage, the skin is green. The skin of the ripe fruit is yellow, yellow-red, red-brown to purple. The thick shell makes up most of the cocoa fruit. Inside the pod is the white flesh, the pulp. The almond-shaped seeds, or cocoa beans, are embedded in the pulp.

A small amount of the pulp that adheres to the bean is used to ferment the cocoa beans. The majority of the pulp is not normally used as a by-product and is discarded. Since about half of the cocoa fruit is made up of the shell and another quarter is made up of the pulp, almost 75 per cent of the cocoa fruit remains unused in cocoa production.

"There are great opportunities for cocoa farmers in the commercialisation of cocoa pulp or juice", says María Paula Gomez, expert for Sourcing + Markets at IPD. "The added value in cocoa production is increased. Many small farmers and their families in South America and Africa can generate additional income in this way."

Edible fruit

The ripe cacao fruit is ready to eat without further processing of the beans or pulp. The fruit is cut lengthwise







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RAW MATERIAL





However, the pulp can be processed without hindering the fermentation of the beans. The pulp is then turned into the fruit pulp in several production steps. This is a white, viscous liquid.

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and spooned out. The pulp has a fruity, tropical flavour and is rich in fibre, minerals and vitamins. The fresh seeds are said to taste like beechnuts. The Maya knew that the white flesh could be eaten with the beans.

With this in mind, it is not surprising that the pulp is often processed into drinks. In Brazil, the juice is called "suco de cacao". Central America also has a long tradition of making alcoholic drinks from cocoa juice.

Due to its high fructose content, it is also used as a sweetener in desserts, ice cream and baked goods. Some chocolate manufacturers use the pulp as a sugar substitute in their chocolate. Cocoa fruit pulp has been approved as a food ingredient in the EU since 2019.

Cocoa juice fruit: no cocoa flavour

The pulp has a distinctive flavour profile with a fruity note. Its flavour is not reminiscent of cocoa beans or chocolate. Its flavour is sour-sweet and reminiscent of a mixture of fruits such as lychees, quinces and white peaches. The pulp or juice extracted from the pulp can be drunk straight or as an ingredient in smoothies, lemonades, iced teas, cocktails and other alcoholic drinks.

Production of fruit pulp and juice

To produce the fruit pulp or fruit juice, the shell and pulp are first separated from the cocoa beans. The cocoa beans are tightly bound to the pulp. The pulp is therefore not easy to separate, and the cocoa beans also require some pulp for fermentation. However, the pulp can be processed without hindering the fermentation of the

beans. The pulp is then turned into the fruit pulp in several production steps. This is a white, viscous liquid. To preserve the product, it is pasteurised in the final stage of production. Pressing the pulp produces a slightly cloudy juice. It is also preserved by the application of heat. Cocoa juice is considered as sensitive as milk. Although pasteurisation loses some of the nutrients in the pulp, it retains important vitamins and minerals such as magnesium, iron and zinc.

Local production: Example Ecuador and Madagascar

Processing the beans is complex and must be done quickly to pre-

serve the special flavours. Hacienda Palo Santo, a family-owned business in Ecuador, produces organic cocoa bean products as well as cocoa fruit pulp. The modern production facility is located in the heart of the company's cocoa plantations. This allows the pulp to be processed quickly. This is important because the pulp has to be quickly separated from the beans and preserved before fermentation begins.

The company Sambirano in Madagascar has also decided to process the beans and pulp directly. For Madagascar, in-country and local processing is something special. Due to the remoteness of the co-coa region and the lack of infrastructure, most Madagascan cocoa producers concentrate on the production of cocoa beans. Only last year, however, the company invested in a



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new plant that enables it to produce cocoa derivatives such as cocoa mass and cocoa juice. The company sources its cocoa beans from over 1,500 farmers in the Sambirano Valley, who are organised in cooperatives. Sambirano is organic and Fairtrade certified.

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