

The Journey of cocoa butter

CHOCOLATE. WE ALL KNOW IT, ALMOST EVERYONE LOVES IT, and you probably have a favourite type, flavour or brand. One of its main ingredients is cocoa butter, which comes largely from Ivory Coast. But before it reaches the shelves as chocolate, cocoa butter goes on quite a journey.





SOLID VERSUS LIQUID

During the transshipment from Africa to Europe and the United Kingdom, the cocoa cools to about 20 degrees Celsius, and because of this temperature drop the cocoa butter solidifies. But most buyers (such as ofi) want to receive the cocoa butter in liquid form at a temperature of about 55 degrees. That's why we already start heating the cocoa butter in Hull and continue doing so during the domestic leg, so that the cocoa butter is at the right temperature when we reach the unloading location.



The West African republic of Ivory Coast accounts for about two-thirds of the world's production of cocoa beans - from which cocoa butter is made. Since most chocolate is not eaten in African countries, the lion's share of all cocoa butter travels a long way before it's processed into chocolate products. "Our company plays a significant role in that journey," says Ivar van der Stam, Operations Manager for Van den Bosch DMCC (Dubai).

Theobroma cacao

It takes several years before that long journey gets going. And the Theobroma cacao - or cocoa tree - plays a starring role in the story. This tree grows in humid, tropical weather conditions. After two years, it bears fruit containing the precious cocoa beans. Harvesting these fruits is done by hand because pickers can feel which fruit is ripe and ready.

After picking, the cocoa beans are fermented on the plantation. The process takes between two and five days. Beans are then

dried in the sun, after which they are roasted in factories and then finely ground. By grinding the cocoa, the fat in the bean is released, leaving a liquid substance: cocoa mass. When this is pressed, you get cocoa butter.

Weeks at sea

"We ship cocoa butter from African countries to the UK and mainland Europe," Van der Stam continues. "It's mainly from San Pedro and the port of Abidjan in Ivory Coast, but countries such as Nigeria, Ghana and Cameroon are also important cocoa butter producers. We use our ISO tanks for transport. After a journey of several weeks by sea, the tanks reach land again in the British port of Hull, for example, from where we transport them by truck to their final destination of Goole. One of our most important customers is located there: Olam Food Ingredients (or 'ofi' for short), a global leader in natural food and beverage ingredients, such as for coffee. You'll actually find ofi beans or ingredients in a third of all chocolate bars!" →



PRINCIPAL DESTINATION: EUROPE

There's a big difference between cocoa production and cocoa consumption. Cocoa is mainly grown on plantations in Africa, South America and Asia. But chocolate is hardly eaten in these places. Europe is the largest market where almost half of the chocolate produced worldwide is consumed. America is also a chocolate-loving superpower coming in fifth place.

PHILIPPINES: COCOA IS BOOMING

Although Filipino people have been familiar with cocoa for hundreds of years, the Philippines only really got serious about cocoa production at the beginning of this century. A good example is Davao Island where cocoa trees are made to fit in with the local ecosystem by planting them next to coconut palms.



More cost-effective transport

Once the cocoa butter has been unloaded, the food industry takes over. Van der Stam: "Our customers, including ofi, require that we clean, rinse and seal our tanks according to European standards before we use them again. We are now able to do that in Ivory Coast too. We just opened a new tank cleaning facility in Abidjan. This is our second on the African continent: in 2016 we opened one in Ghana - the second largest cocoa exporting country in the world after Ivory Coast. By being able to clean tanks in Abidjan we'll boost our logistics efficiency and sustainability ambitions even further. Bart van de Vorst, Managing Director of Van den Bosch in Dubai says: "Cleaning in Ivory Coast means there are always clean, empty tanks available. We have built our new facility entirely in accordance with European quality standards for food, kosher and halal cleaning. We are now tapping into new markets and connect Africa and Europe."

Outward full. Return full.

By investing in our cleaning facilities in Africa we enable us to optimise the supply chain. Van der Stam: "Because we can clean the tanks that import liquids to the African continent locally, we can use them directly to transport cocoa butter from Africa to

the rest of the world. This makes the chain more sustainable, cuts costs for us and our customers, and allows us to operate much more flexibly. Suppose ofi increases its production and therefore wants to bring in more cocoa butter, then we are able to use our local stock straightaway: cleaned to the highest standards and ready for a new journey."

Sustainability ambitions

The new tank cleaning facility was music to the ears of Warren Hardcastle, Head of Cocoa Logistics and Supply Chain for ofi's cocoa platform. He says: "We're constantly looking for ways to transport our cocoa ingredients even more sustainably from our cocoa processing facilities in Ivory Coast to the UK, and possibly to other destinations in the future. So, the partnership with Van den Bosch is very important. Their ISO tank cleaning facility means we can use less packaging and energy, while reducing the need for additional storage and transport. All while sticking to the 'on time and in full' delivery that our customers expect from us. This latest partnership builds on measures we have already put in place across many of our cocoa processing facilities to make them more environmentally friendly - from circular biomass boilers run on cocoa shells to solar panels and wastewater recycling." →



THE TRADITIONAL WAY

In many African countries, cocoa butter is still transported in the traditional way. This involves pressing the butter into one large 25-kilo block. These blocks are then put on pallets for transport.

Bulk transport

We now transport cocoa butter in our ISO tanks as bulk liquid rather than in blocks, the traditional way. This has some major advantages, Van der Stam explains: "With bulk transport we can simplify the logistics process and make it more sustainable. Bulk transport, for example, has the advantage that local African parties no longer need an additional storage location for cooling blocks of cocoa butter. The cocoa butter can go straight from the factory into the tanks - which is when we take over."

Block product versus fluid delivery

Hardcastle particularly appreciates this because ofi has generally transported cocoa as a standard block product relying on transport in containers, then storage in warehouses, and then transport by road. Hardcastle: "We have now converted 20 percent of cocoa butter shipments coming from our Ivorian plants to the UK to a more cost-efficient fluid delivery model. And we're convinced this is only going to increase - especially since we take advantage of the tank cleaning in Abidjan. Van den Bosch's global presence in freight procurement also brings added value. That allows us to use various alternatives to shipping as we work towards an increasingly sophisticated intermodal transport model."

Future opportunities

Van der Stam sees plenty of opportunities for Van den Bosch to further increase market share in cocoa butter bulk transport in the near and farther future. "There are opportunities," he says, "but you can't capitalise on that potential overnight. All logistics partners involved at the loading and unloading locations must also be operationally ready for that transition. In addition, we are investigating the possibility of doing even more of the processes ourselves. Heating the cocoa butter before we arrive at the unloading location is a good example. We currently work with a third party, but why not do it ourselves? This way we get even more control over the entire process, plus we can communicate more directly and act more quickly."

Chocolate chip cookies

Now let's jump to the moment when all those beautiful chocolate products appear on the shelves. "That's still nice to see," says Van der Stam, "especially when you buy some chocolate chip cookies and discover that the cocoa butter in them was shipped in our tanks. For some, bulk transport is just something they never think of. And why should they? It's a long journey from tree to treat. But many chocolate products do have our signature on them when it comes to transport. And that makes me proud. Every time I come across such an end product, it makes me happy." ←

COCOA BUTTER TRANSPORT ON THE UP

Bart van de Vorst, Managing Director of Van den Bosch DMCC, describes how activities in Africa are increasing. He says: “We now know the African market well. We have grown from transporting a small number of tank loads to serious volumes. We are also actively committed to development in other countries in Africa.” Our operating results reflect this increase. In absolute terms, we are transporting more cocoa butter than in 2021, for instance. Consequently, this also increases the number of transport movements – with a rise of 25% in the past two years compared to 2021.

