

The sorting of green vanilla.. © Ndali Estate, Ouganda

Few crops are as labour-intensive and time-demanding as vanilla. After saffron, vanilla is the most expensive spice in the world. Still, it brings farmers in Madagascar and elsewhere little more than dire poverty. The vanilla value chain is a complex one and competition from synthetic vanilla is deadly. Fortunately, thanks to fair trade, some vanilla producers are hopeful for the future.

Vanilla orchids

Vanilla is a flavour derived from orchids that originated in Central America. This orchid is actually the only one worldwide to produce edible fruits. In pre-Columbian Mexico, the Totonac were the first to use vanilla on a large scale. At the heights of the Aztec empire, taxes were paid under the form of vanilla to the Aztec ruler who added it to his famous 'xocoatl' cocoa drink.

Cortez and his conquistadores brought the vanilla pods to Europe, where they were received enthusiastically by the European nobility.

But only halfway the 19th century, after the discovery that the hermafroditic flower could be hand-pollinated, did European colonists disseminate the tropical plant throughout the tropics. Until then, the plant did not bear fruit outside Central America since only certain bees could naturally pollinate the orchids.

A labour - intensive crop

Still now, every vanilla flower has to be handpollinated. Also, this must be done within eight hours after the flower has opened. In other words, it is a delicate and very labour-intensive job. Moreover, the fields need to be almost permanently monitored. After pollination, it takes about 6 months before the long, odourless, yellow-green fruit – which look like pods, but are actually berries – are ripe. The moment the pods are harvested – just as the pods begin to split – is also very important.

Next, the berries are cured. This fermentation process again takes a few months and requires a great deal of know-how: too much sun means the pods might dry up; a shortage of sun might ruin the aroma and taste. If all goes well, the final result are black vanilla sticks. The strong odour and taste are determined by several components, but the main one is vanillin, an aromatic compound that is attached to and in the sticks in the form of fine crystal needles.

Natural versus synthetic

Vanilla has often been listed as the second most expensive spice after saffron. But because it is a labourintensive product, which is sensitive to weather conditions, varying supplies and increasing demand, prices tend to fluctuate. Also, the competition on the market is fierce. Synthetic vanilla – actually it would be more correct to say artificial vanillin – is made from lignin, which is found in wood. Before the paper industry can make paper, it must extract the lignin from the paper pulp. Lignin



Vanilla before the crop in a farm of spices in Zanzibar © Kevin Harber.

has many industrial applications, making synthetic vanillin being one. Because natural vanillin has many more odour qualities and flavour there is a huge difference in quality. But the price makes up for that: The synthetic form is up to 15 times cheaper than the natural form. Also, the price remains stable.

It should not come as a surprise that the food and cosmetics industry usually uses the synthetic form. When Coca Cola introduced 'New Coke' with synthetic vanilla in 1985, the vanilla market collapsed. The situation only improved when the product was withdrawn from the assortment. Today, a global market of 2,000 to 3,000 tonnes of vanilla pods, which stands for approximately 50 tonnes of natural vanilla, co-exists with a market of more than 50,000 tonnes of synthetic vanilla. So quite likely your ice cream, cake, softdrink, yoghurt, chocolate or sweets contain lignin-based vanillin. The same applies for the bottle of vanilla essence at the supermarket. Only when the label says 'vanilla extract' will you have actual natural vanilla.

Expensive spice, dire poverty

There is a double near monopoly on the natural vanilla market. On the demand side, the United States are an important player which means it has a huge influence on the prices. On the supply side, Madagascar stands for two-thirds of worldwide exports. An estimated 80,000 farmers, mainly from the north-eastern end of the island, depend upon vanilla. And even though vanilla is valuable, their share consists of hard work and dire poverty only. In its recent report, *Recipe for Change. The Need for Improved Livelihoods of Vanilla Farmers in Madagascar*, the NGO Fairfood states that three-quarters of farmers must survive on less than a dollar per day and in the dry season do not know where their next meal will come from.

Fairfood distinguishes several reasons. The vanilla sector in Madagascar is very complex and not transparent at all. A big tangle of *wholesale buyers, gatherers* and *middlemen* go to remote villages and buy unfinished or (half)-processed black vanilla. The negotiation position of the isolated farmers is extremely weak and formal sales contracts are rare. Often farmers need money on short notice and harvests are processed too quickly and poorly. The theft of vanilla pods in the fields is another issue against which farmers can hardly defend themselves.

Boom and bust

The situation is unstable outside Madagascar too because the global market is subject to huge price fluctuations. Ten years ago cyclones caused the price to briefly boom to 500\$/kg. During the 2007–2011 'crisis years', prices dropped to 25\$/kg, and over the past years they stabilised at approximately 100\$/kg. In 2002, the export of vanilla from Madagascar amounted to 136 million dollars of revenue whereas in 2010 it hardly amounted to 17.5 million dollars.

There are two *boom and bust* cycles at work here. With high prices, farmers in Madagascar and elsewhere

Vanilla, a GMO ?

Is there a third contender? Evolva, a Swiss biotech company has announced it wants to produce Synbio Vanilla on the basis of yeast via synthetic biology. Friends of the Earth, an environmental network, considers this experimental technique an extreme version of genetic engineering: "Synbio vanilla was designed to replace natural vanillin flavouring from vanilla beans, and is made in labs using synthetic DNA and reprogrammed, genetically engineered yeast." They ask major ice cream companies to commit to not use synbio vanilla in their ice cream.

boost their production. New producer countries push their farmers to grow vanilla too. Oversupply means the prices go down again a few seasons later and farmers and producer countries abandon the crop again. But there is a second *boom and bust* cycle at play. If prices go up too high, processors in the North switch to synthetic vanilla even more which means demand drops quickly again...

Sustainability ?

Fairfood asked vanilla chain companies such as Nestlé, Unilever, McCormick, General Mills, Symrise and International Flavors & Fragrances Inc to take their responsibility and switch to sourcing vanilla from sustainable initiatives and labels. Some are doing so, the organisation admits, even though this is mainly to secure a supply of high-quality vanilla. "We realised that something needed to be done," says Clemens Tenge of Symrise. "More and more producers abandoned the crop because of price fluctuations as a result of which more and more forest – the natural habitat of the vanilla plant – is cleared. That is why we bought out our supplier in Madagascar and installed a sustainability team." Other companies focus on educating and training farmers.

But not all of these initiatives are received with enthusiasm. New techniques that focus on cost efficiency are sometimes at odds with local values and traditions. "Although 'sustainability' continues to be the buzz word in the industry, certain companies in Madagascar practise the exact opposite," says one market report of Aust & Hachmann, which is itself active in the vanilla business. "One such initiative, the Sustainable Vanilla Initiative, which is supported by the same companies who practise green vanilla bean extraction, cites all sorts of problems such as child labour, human trafficking and environmental degradation to name a few, which to the best of our knowledge do not occur on any significant scale within the vanilla industry in Madagascar. Yet at the same time the initiative says nothing about respecting the traditional growing and curing methods which are essential to protecting the vast economic benefits vanilla farming produces. Better infrastructure, education and health care is what the north-east of Madagascar needs."

The political chaos in Madagascar is not unimportant in this respect. After years of poor control, Madagascar finally has an elected president again. Hopefully for the vanilla farmers and the whole sector the new government upholds the ban on green vanilla exports to keep the added value of processing in the country.

Fairtrade and organic

A tropical product, marginalised producers and fluctuating prices: vanilla perfectly suits the fair trade story. In 2005, Fairtrade International (FLO) launched its spice and herb standards. Currently, 21 vanilla producers are FLO certified in 5 countries: Madagascar, the Comores, Uganda, India and Sri Lanka.

Many European fair trade organisations such as Ethiquable, Gepa and world shops in Belgium sell vanilla from the Association of the Planters of Mananara (Kooperativa Mpamboly Ambanivolo Mananara, KO-MAM). This cooperative brings together 900 families from over 30 villages in Mananara Nord, an area in Madagascar's northwest which is established as a Biosphere Reserve by Unesco. With a combination of plants such as clove, pepper and vanilla, farmers make a living from the forest and at the same time fight illegal logging.



Thanks to their organic and fair trade certification they are paid prices up to 40% higher than usual prices in the region. With the fair trade premium a meeting room and storage place have been built.

Hope near Mount Ndali

Uganda was an alternative producer country eyed by the industry. But the low prices during the years of crisis reduced both the quantity and the quality of vanilla production. Nevertheless, the Ugandan farmers of the Mubuku Vanilla Farmers Association were the first vanilla producers to boast fair trade certification.

On the slopes of Mount Ndali, close to Rwanda and Congo, a British major developed Ndali Estate into a major tea plantation. In the 1970s, the estate was confiscated by Idi Amin Dada's militia. Only after twenty years was the land returned to a grand-niece who soon associated with the local farmers.



Sticks of dried vanilla ©;Ndali Estate, Ouganda

1.200 producers joined forces in the Mubuku Vanilla Farmers Association, which was recently renamed the Rwenzori Farmers Cooperative Union (RFCU). Ndali Estate purchases their green vanilla and processes and markets it. Beside fair trade certification the cooperative also obtained organic certification, and farmers gradually saw their revenue increase. The first fair trade premiums were spent on education projects as the quality of government schools in the area is relatively poor.

With the support of the Trade for Development Centre of the Belgian development agency an action programme was launched with a double objective: on the one hand, providing training and education to farmers to bring about improved quality in vanilla cultivation, and on the other hand, work towards diversification to coffee and cocoa. Meanwhile, both objectives have been achieved. Farmers believe in vanilla more than ever and have increased their acreage. The main reason is the hike in sales of vanilla under fair trade and organic conditions, thanks to which the farmers' revenue has significantly increased over the last two years. Thanks to Ndali Estate's marketing efforts, British top chefs recommend their quality product and they have landed some major new customers such as Ben & Jerry's, the ice cream multinational, which has even offered to finance a training and meeting centre in the area, as well as coffee and cocoa storage facilities. And there's more hope in store around Mount Ndali: coffee and cocoa are about to be certified and the commercial contacts with America's Great Lakes Coffee and Britain's Divine Chocolate are promisina.

Trade for Development Centre, september 2014



The drying process of vanilla is also a delicate work. © Ndali Estate Uganda



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