Get to Know the Market with Tridge

Analysis on the Vanilla Industry in Madagascar

June 2020
Written and Created by Tridge
Acknowledgments

In the creation of this report, we have collaborated with Tridge's network of local suppliers, who have provided us with valuable insights on the state of the vanilla industry in Madagascar.

**Main Contributor**

APLV

APLV is a producer and exporter of spices based in Madagascar, with its headquarters located in the main port of Tamatave. APLV is committed to leading the market for producing sustainable, traceable spices including vanilla, and considers it their social mission to work with farmers and cooperatives to lift the standards of living as well as the quality of Madagascar vanilla. All of the vanilla grown is organic, and several of its spices certified by Ecocert. Due to the company’s heavy involvement in the production, APLV is one of the few companies to implement a direct-trade model, or ‘bean to bottle’ supply chain, taking full control of the process from start to finish.

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Vanilla is by far the most expensive spice in the world. The Sava Region in north-eastern Madagascar delivers a large share (80%) of all global bourbon vanilla supply. Today, the Sava Region is the largest vanilla producing area worldwide, with an estimated 70,000 smallholder farmers producing 80-90% of the Malagasy Bourbon vanilla on around 25,000 hectares of land. Approximately 10% of Madagascar's GDP is said to come from the vanilla industry.

The harvest lasts from May in Northern Madagascar to August in the middle of the country, after the rainy season. Cultivated by smallholder farmers, vanilla farming is labor-intensive as it is produced using traditional farming methods.

Without mechanization or agricultural inputs, farmers manually clear plots, plant tutor trees, and vanilla vines, weed and hand-pollinate each vanilla flower. Madagascar vanilla has been able to stay on the top for its distinctive flavor profile, as well as its extremely low cost of labor.

Quality Standards of Vanilla

Grades of Vanilla

Vanilla produced in Madagascar is called Bourbon vanilla. Bourbon vanilla beans have high vanillin content and a very strong, clear, and creamy vanilla flavor that is instantly recognizable. Vanilla lacks a standardized grading system, but certain terminology is used in order to distinguish vanilla types, according to appearance and size.

However, the quality of the vanilla beans is mostly dependent on the moisture content, which ranges from very dry levels of 15-20% to moist levels at 35-38%. These types are established after the curing process, in which the ripe green vanilla pods are turned into the commonly known black color.
The Gourmet type commands a high price due to its ability to be used multiple times, with an average of 3-4 usages, compared to others which are unusable after two applications. Moist vanilla such as the Gourmet type can be used in various ways, with milk, sugar, or alcohol, and then ground into powder. Due to its brittleness, dry vanilla will break easily, and may not be suitable for cooking purposes. However, dry vanilla is the most prevalent type for industrial usages, as vanilla only needs to be processed once, and more water content will drop its concentration level.

The most common types of vanilla used in the industry are Red, Cut, and Split vanilla. Cut and Split vanilla are cheaper solely based on their appearance. Cut vanilla has inconsistent sizes, or is unnaturally small or bent, and split vanilla has a similar appearance, being split from sun curing or from handling. Vanilla sold on the markets, called “Grade A”, is ideally free of splits and between 14-19 cm, with 30% moisture content.

**Grading for Green Vanilla**

Table 2. Green Vanilla Grades

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
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<tr>
<td>Whole vanilla</td>
<td>Fully mature beans, well developed and with no mechanical or insect damages nor illness.</td>
</tr>
<tr>
<td>Spotted and cracked vanilla</td>
<td>Beans with considerable damages by Anthracnose, which produce a spotted appearance, mature fruits with natural longitudinal cracks.</td>
</tr>
<tr>
<td>“Zocatillo” vanilla</td>
<td>Small, immature malformed fruits, with severe mechanical and insect damages.</td>
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Green vanilla is graded depending on its maturity and appearance.

Key Traits of Madagascar Vanilla

Out of the various kinds of vanilla beans, Madagascar (Bourbon) vanilla is the most popular and known to have the most quintessential vanilla flavor. It is also the flavor most associated with classic vanilla ice cream. Tahitian vanilla beans, on the other hand, have a more fruity and delicate flavor and are used in drinks. They are also more expensive in the market than Madagascar vanilla. Mexican vanilla beans hold a bit of spice similar to that of clove or cinnamon.

Production Trends in the Global Vanilla Industry

Graph 1. Vanilla Bean Production in Decline (tonnes)

Global vanilla production saw a gradual decline from 2010 among top world producers. In 2016, the production volume dropped to 6,530 tonnes, falling with a CAGR of -4.2% from 2007 to 2016. The reduction in vanilla production volume was caused by a decrease in yields in Madagascar and Indonesia due to crop losses against the backdrop of poor weather conditions, drought, and harvesting vanilla beans at an immature stage by small producers.

Production levels recovered since then in 2018. The greater yield was mostly due to the maturing of green vanilla pods.
and improved curing rates. Additionally, after several consecutive harvests that yielded sub-standard quality vanilla beans, the 2018 Madagascar crop recovered to previous levels of quality. If the 2020 Madagascar crop reaches its full potential, it is expected that the harvest could reach 2,000 tonnes. However, the global production volume is still largely under the demand volume, keeping the market price at a high level.

What Caused the Global Supply-Demand Gap

The price of Madagascar vanilla was once set by the government, which formed a “vanilla cartel” with neighboring country Comoros and Réunion Island. But such prices led to the situation in the 1980s where global buyers turned their attention to cheaper, poorer-quality products available elsewhere, particularly in Indonesia.

The Malagasy government was eventually forced to end its price-fixing regime. Exacerbating the pressure, food giants such as Unilever, Mondelez International, and Nestlé also increased their use of synthetic vanillin, which can be produced from more reliable sources such as wood pulp and petroleum.

As a result, for approximately 20 years preceding 2011, Madagascar’s vanilla farmers had been leaving the business. But even with fewer producers, the price of natural vanilla stayed low, suppressed by the availability of synthetic vanillin. It was not until public tastes started shifting towards all things natural that farmers’ fortunes revived.

From around 2011, some manufacturers began focusing once more on natural vanilla, while also changing their recipes to achieve the synthetic tastes with which consumers had grown familiar. In 2015 Nestlé announced plans to use only natural ingredients in their products, and other companies like Hershey’s followed suit.

Demand for natural vanilla surged, and with it, prices also hiked as vanilla vines took years to mature, and natural supplies were insufficient. Extreme weather, weak crop security, and exporters who withheld inventory anticipating further price increases have also kept prices high.
02. The Supply Chain of Madagascar Vanilla

Vanilla Farming: Production Areas & Cost

The production of Madagascar vanilla beans mainly takes place in the Sava region, in which the major producing districts Antalaha, Sambava, Vohemar, and Andapa are located. It is estimated that there are approximately 70,000 vanilla farmers in Sava who produce 70-80% of all Bourbon-Madagascar vanilla.

While there are larger-sized producers who own more than a hectare of land, most of the farmers in the business are smallholders who possess less than one hectare of production area. Farmers also work together to form a collective group and share resources. For example, the farmers would form a community of 200 farmers managing 100 hectares of land.

Production-wise, the biggest cost factor is surprisingly the living cost for farmers. This is because production areas are usually in remote locations that are protected from vanilla thieves. Due to the high living costs, the money farmers make is often just enough for them to maintain their livelihoods.

Source: Ministry of Agriculture, Livestock and Fisheries 2018
Diagram 1. The Supply Value Chain of Madagascar Vanilla

The main actors in the distribution chain are the farmers, collectors, exporters, importers, and end buyers that usually consist of retailers and international food companies. Except for a few large companies that work directly with the farmers, the sector is not vertically integrated. There is no official number for each actor, but it is estimated that there are around 70,000-80,000 farmers, 6,000 collectors, and around 40 major exporters.

**Farmers**

A few international flavor houses have established sourcing centers in the Sava region, either competing or partnering with traditional collectors, importers, and exporters. Contracted vanilla farmers receive a varying combination of benefits. The benefits can include price premiums, access to loans, support for income diversification, technical assistance, and educational support.

**The Role of the Collector**

Collectors are local middlemen who liaise with and purchase the products from the farmers, working as an intermediary between the farmer and the exporter. Collectors can have different entities working for them and also put the margin on prices. For example, when they sell the product, they increase the price from USD 200 per kg to USD 600 per kg with 2 to 3 people involved in the transaction. While many large corporations work with an assigned collector to purchase the vanilla, the collectors can also work independently and sell it themselves at an equal or cheaper price.
Exporters

Quality control is mostly conducted by the exporters rather than collectors, who are especially careful about the product quality and credentials, especially when exporting to markets such as Europe. As of now, collectors are working as temporary processors for many exporters. It is unusual for exporters to process the vanilla themselves but even if they do, they do not process large quantities. Only major vanilla companies will do both as they process vanilla in-house and employ collectors to process the additional quotas.

Government Roles

Vanilla exports are monopolized by the government and associations of vanilla exporters. Likewise, the government sets the final prices, both for the green bean and the final product. Vanilla exports represent a large portion of government revenues, thus monitoring vanilla production and vanilla trade have become priorities of the government of Madagascar.

Financiers in the Market

Many farmers still hold apprehension toward banks, which runs both ways. Transactions between collectors and buyers are still done by cash, and banks are reportedly unable to manage such a large amount of banknotes. Due to the prevalence of scams, banks have stopped providing advance payments, and loans for product purchases are not offered as well. Furthermore, many banks are not located close to villages to begin with, due to the volatility of the cash flow.

Trust Issues in Vanilla Trade

As vanilla is a high-value product for which the sector is only starting to be regulated, the Madagascar vanilla industry faces challenges including theft and lack of transparency. The supply chain is largely separate between exporters and farmers, with exporters receiving supplies from collectors who serve multiple clients, in which collectors have a history of gaining profits by paying low prices to producers while selling it at a much higher price to exporters. Scams have also become a serious problem.
and the government is making an effort to alleviate these problems in the industry by increasing regulation on entities, mainly collectors.

03. Price Settlement Factors in the Market

Graph 3. Global Prices of Vanilla (FOB USD/kg)

Recent Trends in Global Prices

Price trends of vanilla have fluctuated over the past 20 years, starting with the occurrence of a massive cyclone in 2000 wiping out the Northeastern production area. As it takes three, or sometimes four to five years for the trees to reach their full maturity level, prices rose uncontrollably before collapsing with the increased use of artificial flavoring.

For the past few years, however, prices have been on a rising streak again, hitting the USD 600 per kg mark in 2018 (matching the price of silver), before steadying at a mid-400 mark last fall, with prices not expected to fall below USD 400 per kg. The increase in prices is attributed to the rising demand for natural vanilla ingredients as opposed to chemical flavoring by consumers.
Farmgate and Wholesale Price

The farmgate prices of Madagascar vanilla are set differently for each campaign, which is conducted in different regions. In 2019, for example, Ambanja was the first region to start the campaign at USD 40-50 for their green vanilla, followed by Maroantsetra at USD 50-55, a higher amount as the region is harder to access.

Prices in the wholesale market are 7.5 to 8 times more expensive than prices of green vanilla beans found in the farmgate level (disregarding additional costs). For example, if the price for green vanilla beans ranges at USD 40 to 60 per kg at the farmgate level, it becomes around USD 320 per kg for black vanilla beans at the wholesale market as it goes through processing. After the collector purchases the processed beans, there are 2-3 other actors involved in the distribution channel that hikes the price up to USD 600 per kg.

Government Interventions on Export Price

As prices are extremely volatile, the government has recently introduced a set export price, a very new course of action for Madagascar. The measure came into effect as of February 26, at a minimum price of USD 350 per kg (FOB) in order to ensure profits for the actors involved in the supply chain. Prices are expected to differ according to each campaign. However, as this is still a relatively new policy, it has not yet reached the level of the farmers most of whom have already sold their products for the 2020 season.

Price Instability

While vanilla is an extremely lucrative industry in Madagascar, it is exactly for this reason that many farmers are secretive about their production sites and yields in fear of theft, an ongoing problem in the sector. In addition, once the products are stolen, it is very difficult to track where they have come from, and most buyers in the market do not care where they have originated as long as they are guaranteed a good price. Even though there are government regulations set for vanilla transportation, these regulations are relatively new and have only been implemented as of this year.
There is a decrease of theft risk if the farmers work with associations and cooperatives, as the organizations help the farmers monitor their sites, and in return, the cooperatives receive a better price or premium compared to other products in the market. However, not a lot of farmers are currently a part of any associations or cooperatives as they are incentivized to sell their products to the highest bidder.

*Margin Structure: Who Gains the Biggest Profit Margin?*

As previously mentioned, the government has made efforts to level the playing field for farmers who bear the brunt of the production, by establishing a minimum export price of USD 350 per kg, set to apply until the end of this campaign in mid-July. If the farmers sell vanilla for USD 40 per kg, the price in the wholesale market would be converted to USD 320 per kg, which then the collector and exporter would add USD 10-20 of their own margins to become at least USD 350, giving less flexibility for intermediaries when they are adding their own margins.

**04. Importers and End Consumption Channels**

Vanilla is a complex business where many layers of intermediaries are involved, and the connection between each actor is powerful. Trading companies and brokers play an important role in importing vanilla beans and distributing the products to packers and fragrances houses which process the vanilla into its final form and provide them to the end consumption channels. While there are a few companies that directly source the raw material without any brokers, due to trust issues within the industry, the role of the intermediary between exporters and producers are still very important.

The end consumption channels of Madagascar vanilla are mainly international food conglomerates and cosmetics companies. Approximately 40% of the vanilla is sold for food purposes while the remaining are used for cosmetic and industrial purposes. While the widespread use of synthetic vanilla resulted in a huge price drop in 2004, there is a growing demand for customers to use all-natural vanilla products, which has led Nestlé S.A., one of the
largest food companies in the world, to announce that they
would use only natural vanilla in their products, for which
other companies followed suit.

The cosmetics & personal care industry is projected to
witness the highest consumption growth, attributable
to the increasing use of vanilla extracts in cosmetics
products. The use of vanilla beans in the food industry,
however, is still the predominant consumption channel of
the vanilla bean market.

The major contributing factor for this is the high usage
of vanilla in the confectionery and bakery industry,
subsequently expanding the use of vanilla in more food
products such as baby food, powder premixes, and others.
The use of vanilla bean products as an ingredient is also
expected to increase in numerous alcoholic beverage
products, owing to the rising consumption of flavored
alcoholic beverages across the world.

05. Export Landscape and
Outlook

Export Landscape and Recent Trends

Diagram 2. Largest Importing Countries in the World

The countries with the highest consumption rate are the
US (42%), France (18.8%), Germany (11.8%), and Canada
(4.3%). The countries which are listed above as the
largest consumers of vanilla showed per capita vanilla
consumption above the world average, such as France (5.6
gr/year), and the US (3.9 gr/year).

The high level of vanilla consumption in these countries is
due to its widespread use in the food and perfume
industries with the existence of major global manufacturers. In terms of exports from Madagascar, the US, France, Germany, Mauritius, and Canada were the top destinations, exhibiting a similar pattern.

Diagram 3. Export Destinations for Madagascar

North America dominates the vanilla market globally, owing to the increasing demand for dairy products, which is around half of the total vanilla imports. The US accounts for 18% of the total vanilla demand globally, the highest in the world. This high demand in the U.S. is mostly due to its large ice-cream consumption market with multinational food manufacturers. New product development techniques and technological advancements in the region are also aiding factors for the North American vanilla market.

The European vanilla market has shown significant growth in vanilla consumption in recent years. The regional growth rate is around 20% in volume annually in the form of grounded or crushed vanilla. This growth can be attributed to the region’s flourishing bakery and confectionery industries. The main players in the market in terms of consumption are France, the UK, and Germany.

Latin America is expected to show significant growth potential in the global vanilla market. Brazil is one of the largest markets in terms of vanilla consumption in Latin America, owing to its increasing population and growing use of vanilla in food and pharmaceutical industries.

In the Middle East and Africa, the UAE is showing significant growth in the vanilla market. The UAE exhibited a 65% growth rate for uncrushed vanilla and 35%
for crushed vanilla, respectively. The African market enjoys a fair consumption of vanilla due to Madagascar being a part of the region. However, rising vanilla prices are a source of concern for African consumers.

Countries that cure vanilla and re-export the finished product obtain significant profits without running the risks associated with primary production. The main re-exporting countries are Japan, Germany, France, the UK, and the US.

**Challenges & Market Outlook**

Farmers and exporters remain disconnected within the supply chain, creating more room for price volatility and decreasing the opportunity for higher margins for both ends. Trust and cooperation are key, but a long-run history of fraud and money-motivated behavior will make it difficult for co-ops and the government to rebuild the current system.

In efforts to regain the reputation of Madagascar vanilla, the government has increased monitoring the vanilla market, among them limiting the export season from October to May to maintain the product quality, requiring authorization for exports, and tracking the activities of the collectors. Madagascar already enjoys a huge global presence in the vanilla market, and despite its volatile tendencies, it is still a favorite among top companies in the world.

However, in order for the industry to function effectively and be able to provide more profit margins for farmers, the sector will need to work towards vertical integration. With more emphasis put on direct farmer-exporter relations rather than collectors, prices will become more stable, and consumers will be able to benefit from less expensive prices. Furthermore, farmers will also be able to improve their living even at a lower price, thus building a stronger value chain.

In 2020, suppliers in Madagascar anticipate that the crop will begin to offer an opportunity for a recovery. While the vanilla market is currently stable in terms of quantity, it remains fragile, according to market experts. Years of high prices have reduced demand for pure, natural vanilla to between 1,700 to 1,800 tons, down from 2,700 tons in
2014 and 2015, as manufacturers turned to less expensive alternatives, such as artificial vanilla and low-quality blends. While the market is recovering somewhat, if prices do not decrease significantly, it will leave manufacturers with no choice but to continue turning to cheaper vanilla substitutes.

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