

FAIRTRADE LIVING INCOME REFERENCE PRICES FOR VANILLA



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INTRODUCTION

Smallholder vanilla farmers face a highly challenging environment with extreme price fluctuations, as a consequence of vicious boom-and-bust cycles on the natural vanilla market. Periods of oversupply and low prices are alternated by periods of tight supply when prices skyrocket.

But even when prices peak, vanilla farmers do not necessarily reap the all the benefits. At 50 to 70 cents per bean, theft of pods from the vines is a common threat. To avoid theft, many farmers feel pressure to harvest their vanilla prematurely, flooding the market with low quality beans that lack the desired vanillin which only emerges just before they ripen. As quality goes down, the demand eventually falls and the price plummets, only to rise again when farmers have torn out their vines to seek alternative livelihoods.

Price volatility is putting vanilla's future at risk and industry stakeholders, such as those under the umbrella of the Sustainable Vanilla Initiative, are therefore working to improve the structural incentives for the production of high quality and sustainably produced vanilla beans.

The establishment of a "living income reference price" for vanilla builds understanding around the minimum market conditions for vanilla farmers to earn a decent return and to escape poverty. A credible third-party reference serves as a tool to help stakeholders work towards a more stable vanilla market, supporting both the supply of high-quality vanilla and livelihoods of vanilla farmers' on the long term.

On the other hand, by setting a Living Income Reference Price for vanilla, farmer organizations are incentivized to establish their own productivity and quality targets and are empowered to negotiate adequate prices to sustain their vanilla business throughout market fluctuations.

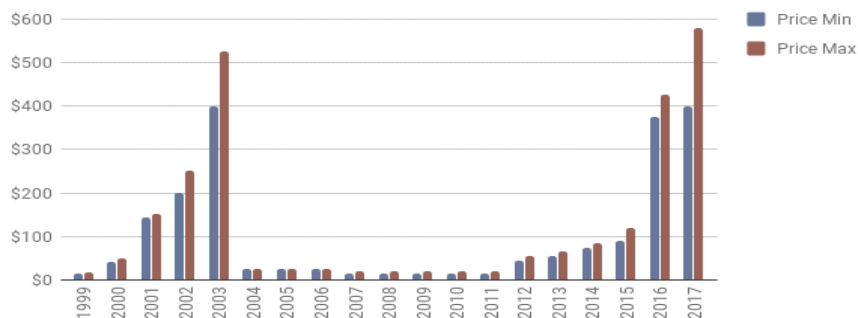


figure 1: Historical vanilla prices per kg, Source Cook's Vanilla

GEOGRAPHICAL SCOPE

Living Income Reference Prices were established for vanilla from Madagascar and Uganda.

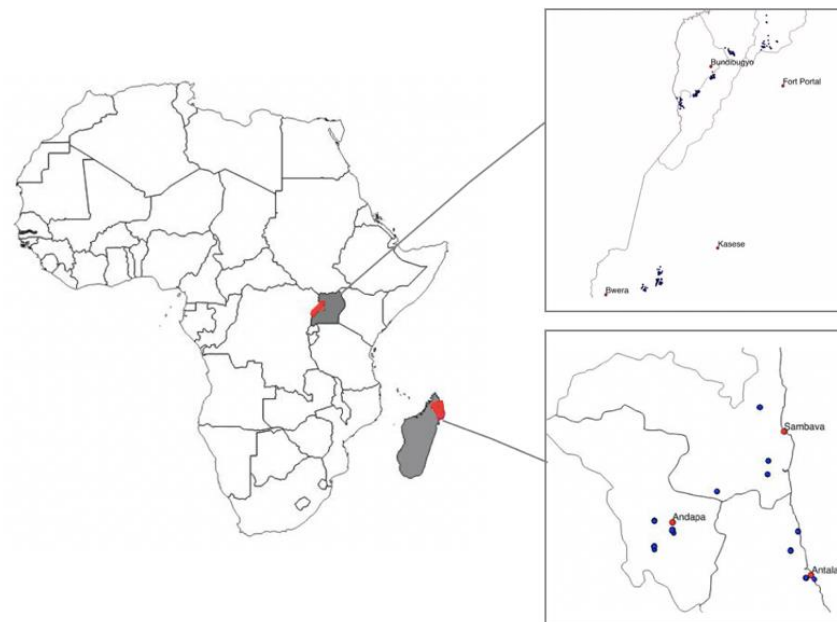


figure 1: Map of the study regions in Madagascar and Uganda

Madagascar is by far the largest vanilla origin and it is one of the ten poorest countries globally. The island is prone to cyclones, which can substantially impact global vanilla prices. Approximately 70,000 to 80,000 vanilla farmers produce around 60% of the world's vanilla (1500-1800 metric tonnes).

Uganda is the fourth largest producer with around five percent of global vanilla production. Growing an alternative origin for vanilla such as Uganda to help stabilize the market requires keeping vanilla attractive to farmers even during market lows. For this reason, the geographical scope for the reference prices covers sustainably produced vanilla in both Madagascar and Uganda.

The context for vanilla farming differs substantially between the two origins: household sizes and costs of living, levels of livelihood diversification and food self-sufficiency, as well as the conditions for vanilla production and marketing vary from one country to the other. Hence, Living Income Reference Prices were calculated for each country, based on its specific characteristics.

FAIRTRADE LIVING INCOME REFERENCE PRICES FOR VANILLA

THE CONCEPT

A Living Income Reference Price indicates the price needed for an average farmer household with a viable farm size and an adequate productivity level to afford a decent standard of living (a living income) from the sales of their crop.

Living Income Reference Prices play a critical role within Fairtrade's holistic living income strategy. They are instrumental for raising awareness around the fundamental need for sustainable pricing to enable living incomes on one hand, and on the other hand they inform price setting for Fairtrade and other actors committed to sustainability.

The Living Income Reference Price concept is derived from the universal human right of everyone who works to "a just and favourable remuneration, ensuring an existence worthy of human dignity", or a living wage. Following this logic, a full-time farmer should be able to afford a decent standard of living from the farm sales revenues.

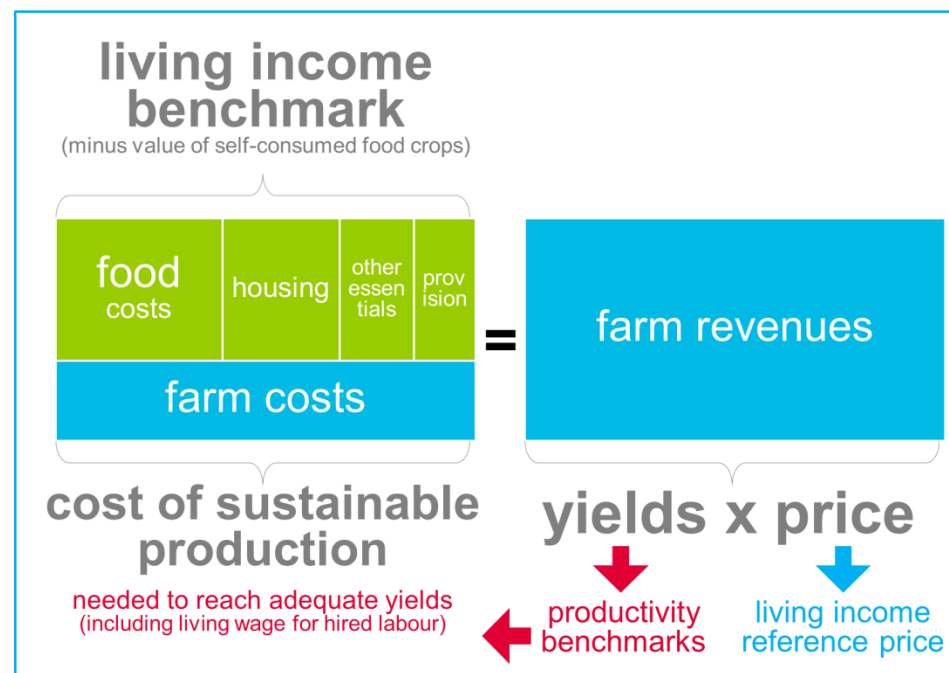
A Living Income Reference Price is based on the following key parameters:

1. Cost of a decent standard of living (living income benchmark)
2. Sustainable yields (productivity benchmark)
3. Viable farm size (to fully employ the available household labour)
4. Cost of sustainable production (in order to achieve above mentioned yields)

A price that allows an average farmer household with a viable farm size and a sustainable productivity level to earn a living income is calculated with the formula: price x volumes produced = cost of decent living + cost of production, or:

$$\text{Living Income Reference Price} = \frac{\text{cost of decent living} + \text{cost of sustainable production}}{\text{viable land area} \times \text{sustainable yields}}$$

In this model, the value of food produced on the farm for home consumption is considered an important source of in-kind income, that reduces the cost of decent living.



ESTABLISHING LIVING INCOME REFERENCE PRICES

In order to establish Living Income Reference Prices for vanilla, values for each of the parameters were determined based on field research into the farm economics and context of vanilla farmers in Madagascar and Uganda. In each country 250 individual household interviews were conducted, which were supplemented with focus group discussions, market surveys and stakeholder consultation.

Based on the findings, benchmarks for a realistic, sustainable vanilla productivity level and a "full employment" farm size were defined in consultation with vanilla farmers, cooperatives, local and international buyers. Throughout the project, stakeholder feedback was systematically taken into account and integrated into the research process.

FAIRTRADE LIVING INCOME REFERENCE PRICES FOR VANILLA

PARAMETER 1: LIVING INCOME BENCHMARKS

Living income is defined as **sufficient income generated by a household to afford a decent standard of living for the household members**. Elements of a decent standard of living include: a nutritious diet, water, decent housing, education, healthcare, transport, clothing and other essential needs, including a provision for unexpected events.

The cost of decent living has been calculated according to the guidelines of the Anker & Anker methodology¹, using primary data collected through household questionnaires, market surveys and focus group discussions, as well as secondary data sources.

Malagasy vanilla production is concentrated in the isolated SAVA region, elevating the cost of living due to expensive transportation costs. The average Malagasy vanilla household has 4.2 members. The cost of decent living for an average household is **€ 5,750 per year** (or € 3.75 per person per day), of which € 2,597 (45%) represent food costs.

A living income for an average Malagasy vanilla household with 4.2 members is estimated at*:

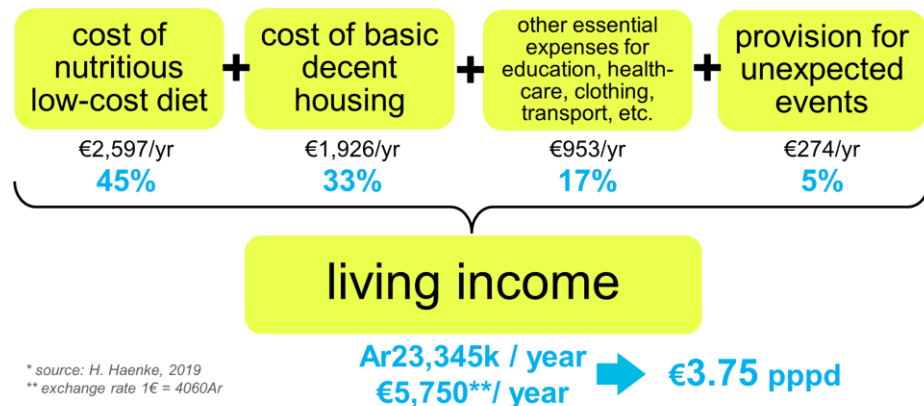


figure 3: Costs of a decent standard of living for an average Malagasy household

¹ Anker, R. and M. Anker. 2017. *Living wages around the world: Manual for measurement*.

Similarly, an average household of 6.6 members in Uganda would need **€ 7,297 per year** to cover its cost of a decent living, of which € 3,110 (43%) are food costs.

A living income for an average Ugandan vanilla household with 6.6 members is estimated at*:

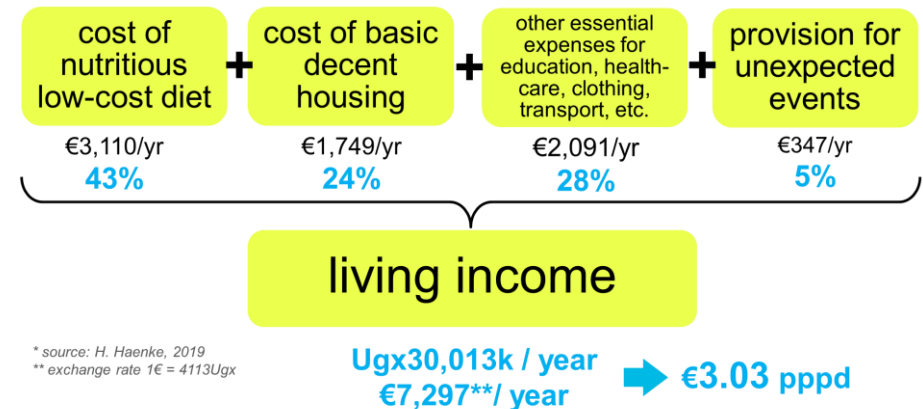


figure 4: Costs of a decent standard of living for an average Ugandan household

The cost of a nutritious diet makes up for approximately 45% of the total living costs. Food produced on the farm for home consumption is considered as in-kind income and can be deducted from the financial cost of living, as it reduces the food expenditure of the household.

Whereas Malagasy vanilla farmers limit their food production to rice in most cases, Ugandan farmers typically have more diversified farms and produce plantain, beans, cassava and corn, amongst other subsistence crops, for home consumption. The food crops are generally grown at low cost, without agricultural inputs, using locally or self-produced seeds and employing mainly family labour.

The total value of home-grown food (subsistence crops + livestock) was € 413 in Madagascar and € 736 in Uganda. Hence, the financial cost of decent living is brought down to **€ 5,337** and **€ 6,561** for Madagascar and Uganda respectively.

FAIRTRADE LIVING INCOME REFERENCE PRICES FOR VANILLA

PARAMETER 2: SUSTAINABLE YIELDS

Adequate productivity levels are determined based on feasible yields, obtained when implementing sustainable agricultural practices. These are called productivity benchmarks.

In focus groups, farmers discussed the average yield of vanilla they could achieve by implementing recommended good agricultural practices and density of vines. A time frame of five years was considered, in order to account for losses caused by cyclones in Madagascar or droughts in Uganda which occur occasionally in these countries.

Agronomic and empirical research shows that a vanilla vine can produce around half a kilo of green vanilla per year. At the recommended spacing of three by three meter (1100 vines per hectare), a productivity of over 500 kilos per hectare per year could be achieved. However, only about one percent of the surveyed vanilla farmers currently meet this target yield level². The risks of price instability and theft withhold farmers from investing more labour in their farms to replant vanilla vines, establish tutor trees and for shade management. Also, the high vanilla prices have attracted many inexperienced new vanilla farmers who lack the know-how for implementing good vanilla growing practices.

In Madagascar, vanilla is traditionally grown extensively in agroforestry systems and has one harvest per year. Malagasy farmers estimated a feasible yield to be 350 kg of green vanilla per hectare. It was acknowledged that in good years higher yields might be possible, but the likelihood of a cyclone hitting the region every 4-5 years and destroying part of the harvest would decrease the average and a 350 kg target yield was considered appropriate. This was confirmed as a realistic productivity benchmark by different stakeholders. Nonetheless, the average reported production in Madagascar was only 49.2 kg of green vanilla on an average farm size of 0.9 ha and significant effort and technical assistance will have to be put in to reach the target yield.

In Uganda, farmers tend to plant vanilla more intensively along with plantain, banana and fruit trees, and harvest vanilla twice a year. Vanilla farmers estimated a yield of 500 kg/ha to be a viable target, which was confirmed by cooperative leaders and vanilla companies. Yet, the average reported harvest in 2018 was only 65.3 kg on an average vanilla plot of 0.4 ha.

² These harvest volumes were self- and potentially underreported, to hide the common practice of side-selling of premature vanilla on the spot market.

PARAMETER 3: VIABLE FARM SIZE

The Universal Declaration of Human Rights establishes: “Everyone who works has the right to just and favourable remuneration ensuring for himself and his family an existence worthy of human dignity.” Hence, hired workers have the right to a living wage and self-employed farmers should be able to make a living income from their farm proceedings, provided there is a market for the goods produced. **Following this guiding principle, a farm that is big enough to fully absorb the available household labour should generate a living income.** This would be considered a viable farm size or a ‘full-employment farm size’.

The living income reference price for vanilla is based on the maximum vanilla area that can be managed primarily with family labour. This should not be mistaken as a recommendation to grow vanilla as a monoculture, but it is a critical assumption for establishing the reference price. In case farmers grow less vanilla, the reference price will contribute a proportionate share of a living income relative to the full-employment vanilla area.

After making individual estimations, farmers discussed in focus groups how much vanilla they could manage if they adopted all recommended agricultural practices and occupied all their available household labour. The outcomes were sense-checked with cooperative leaders, other industry stakeholders and experts.

Labour requirements in vanilla farming are not evenly distributed throughout the year. There is a steep labour peak during the short time-frame for pollinating vanilla flowers. This delicate task is performed by hand and requires specialized skills. Labour for hand-pollination is rarely outsourced, since the brief time interval in which the flowers are open largely coincides for all vanilla farmers and each household will be taking care of their own vines. Therefore, available household labour for pollination is among the main limiting factors for the maximum manageable vanilla area.

Given the current high prices of vanilla, securing the vanilla plots is another labour-intense activity, particularly before the harvest season starts and theft of premature beans is common. Some farmers sleep on their fields for several weeks, others arm themselves, hire security guards, build fences or install traps.

FAIRTRADE LIVING INCOME REFERENCE PRICES FOR VANILLA

In addition to labour occupation, the lack of land to expand vanilla production was commonly cited as a limiting factor. Potential substitution of other crops for vanilla to obtain a full employment vanilla area was assessed. Transforming plots with cocoa or coffee which also grow in agroforestry systems similar to vanilla was considered to be a viable option, whereas replacing subsistence crops seemed unrealistic because vanilla requires tutor and shadow trees.

The average Malagasy vanilla farmer household consists of 2.4 adults and 1.8 children. Two of the adult household members work full time on their farm, which has on average 0.9 hectares of vanilla with high labour intensity during October-November and March-July. Besides vanilla, most families grow rice, occupying household labour mainly from December to April. Some further diversification with coffee, cloves or other subsistence crops like banana and cassava occurs at a lesser scale. **A full employment vanilla area in Madagascar is estimated at 1.0 hectare.**

The average Ugandan vanilla farmer household consists of 3.2 adults and 3.4 children. In practice, the full-time equivalent labour force available for farm work is 3.15 family members. Farms are typically well diversified with other cash and subsistence crops. The actual average vanilla area is 0.4 ha, besides plots with cocoa and/or coffee in most cases, as well as food crops for home consumption. These other crops are also primarily taken care of by the household members outside the vanilla labour peaks. Many farmers are currently enlarging their vanilla area at the expense of coffee, because of the low coffee market prices. **The maximum manageable vanilla plot size in Uganda is estimated at 0.8 hectare,** which is slightly smaller than in Madagascar because of the two vanilla harvests in the year, requiring more labour input.

PARAMETER 4: COST OF PRODUCTION

Vanilla production is “organic by default” and mainly involves labour costs, vanilla vines and some materials and tools. All the crop maintenance is done manually, and no agricultural inputs like fertilizer or pesticides are applied.

The costs of production involved in achieving the target yields of 350-500 kg/ha are higher than the actual production costs, since the current low yields can be attributed to insufficient farm investment. However, some costs may also go down. For instance, a major cost item is related to securing the plots against theft, which would decrease when vanilla prices drop.

In order to project the farm business costs involved in producing the target yields, the following main cost items are considered:

- **Labour:** External labour is currently in the first place hired for guarding the vanilla plots prior to and during the harvest, whereas other activities on the vanilla fields are rarely outsourced, due to the risk of theft by workers. However, this situation would be different in a conjuncture of low vanilla prices and hence reduced theft pressure: More hired labour would be engaged for crop maintenance and harvesting. If vanilla prices were to drop to LIRP level, the security requirements would most likely reduce, and the savings would be compensated with intensified hired labour to carry out the good agricultural practices needed to meet the target productivity.
- Hired labour costs are factored in at living wages (see grey bars in figure 5). **This way, the reference price covers both a living income for the farmer household (provided the available household labour is effectively employed on their farm) from the farm profits and a living wage for hired workers.**
- Malagasy vanilla farmers hire around 135 labour days per hectare of vanilla per year at an average pay rate of € 2.3 per day. A living wage in Madagascar is estimated at € 4.4 (wageindicator.org, 2019). The cost of hired labour paid at a living wage would thus be € 594 per hectare of vanilla per year.

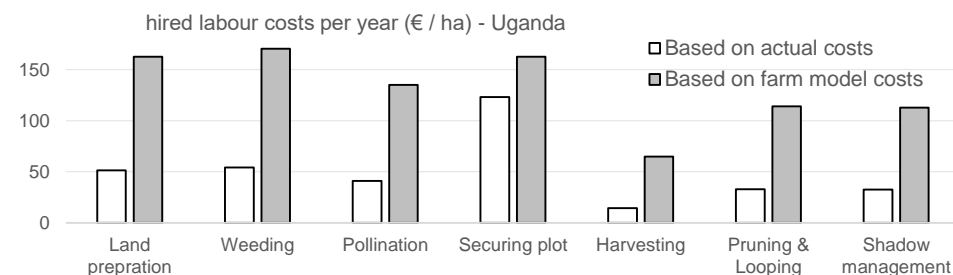


figure 5: Actual and projected distribution of hired labour costs per hectare of vanilla in Uganda

- More labour is hired in Uganda with two vanilla harvest seasons, compared to Madagascar that has only one harvest. The average vanilla plot size of 0.4 hectare in Uganda requires approximately 95 hired labour days throughout the year, which translates into 249 labour days per hectare. Workers are currently paid € 1.4 per day on average, whereas a living wage in Uganda is calculated at € 3.7 per day (Guzi and Kahanec, 2017). The yearly cost of hired labour paid at living wages would be € 922 per hectare.

FAIRTRADE LIVING INCOME REFERENCE PRICES FOR VANILLA

- **Agricultural inputs:** No fertilizer or other agricultural inputs are used for vanilla production in Madagascar and Uganda. Planting material (vanilla vines and lianas) cost € 15 per hectare in Madagascar. In Uganda the availability of planting material is scarcer and more expensive at a cost of € 91.
- **Tools and materials:** Equipment used include knives, security equipment such as torches and batteries, and bags for transportation. The costs for these tools and materials add up to €17.3 per hectare in Madagascar and are again more expensive in Uganda, totalling €84 per hectare.

The total cost of sustainable vanilla production per hectare sums up to €594.5 + €15 + €17.3 = € 626.8 in Madagascar and €922 + €91 + €84 = € 1097 in Uganda. **Thus, the production costs for a target productivity and a viable farm size is € 626.8 and € 877.7 for Madagascar and Uganda respectively.**

The cost of production is added to the living income benchmark, in order to calculate the total farm revenues needed to afford a decent living and make the necessary investments in the farm.

OTHER FARM INCOME

Like with any commodity with volatile markets, dependency on vanilla as a single cash crop should not be promoted. Crop diversification enhances farm and income resilience of smallholders. Moreover, a farm dedicated exclusively to vanilla will never fully absorb the available household labour outside the peak seasons, and other crops can well be taken care of. For this reason, the vanilla living income price model incorporates net income from other crops commonly grown alongside vanilla.

Malagasy vanilla farmers typically also produce rice, cloves and coffee and keep some livestock for sale. The average yearly **net income generated from the sales of other farm products sums up to € 150.**

Farms in Uganda are usually more diversified and often have cocoa and/or coffee as cash crops besides vanilla. In order to maximize the vanilla area, current coffee plots could be substituted due to the low coffee prices, leaving a **net income from cocoa and livestock adding up to € 1211.**

The above suggested farm models were considered viable and realistic by consulted stakeholders. The net income from other crops is deducted from the cost of decent living in the calculation of the respective Living Income Reference Prices.

LIVING INCOME REFERENCE PRICES FOR VANILLA

The parameter values described above lead to Fairtrade **Living Income Reference Prices of € 16.6 per kilo of green vanilla at farm gate for Madagascar and € 15.6 per kilo for Uganda**, as follows:

$$\text{Living Income Reference Price Madagascar} = \frac{(5750 - 413) - 150 + (1.0 \times 627)}{1.0 \times 350} = 16.6 \text{ €/kg}$$

$$\text{Living Income Reference Price Uganda} = \frac{(7297 - 736) - 1211 + (0.8 \times 1097)}{0.8 \times 500} = 15.6 \text{ €/kg}$$

IMPLEMENTING LIVING INCOME REFERENCE PRICES

The extreme fluctuations of vanilla prices, oscillating between short price peaks and longer periods of low prices, underlie the complex problems of the vanilla sector. The resulting unstable quality of supply depresses the potential growth of the natural vanilla market. At the same time, the price uncertainty and the risks of theft when prices are high have made vanilla farmers reluctant to invest in their farms, resulting in low productivity even when prices are high.

With current market prices well above the Living Income Reference Price, the main lever to improve the incomes of vanilla farmers is through increasing productivity, where there is still much to be gained. But the high prices won't last. The sudden steep price decline after the 2004 market high showed the dramatic effect of poor quality vanilla flooding the market. A major challenge for Madagascar is to secure a fair return from vanilla production during such periods of oversupply.

A more stable price that allows for a decent standard of living would reduce the uncertainty and encourage farmers to adopt the recommended agricultural practices, leading to increased and more sustainable vanilla production. The Living Income Reference Price for vanilla could be taken as a minimum price guarantee when market prices collapse to keep vanilla attractive for farmers.

FAIRTRADE LIVING INCOME REFERENCE PRICES FOR VANILLA

Growing production in alternative origins like Uganda can reduce the volatility from single origin dependency. In order to keep vanilla attractive for farmers in Uganda, a reference price for vanilla will also be crucial, as they tend to switch to other crops like cocoa and coffee when vanilla prices drop. A key finding from the focus group discussions in Uganda was that many farmers start moving away from vanilla when the price falls below 50,000 UGX (~ €12.5) per kilo of vanilla.

While vanilla off-takers, traders and farmers alike report that they would prefer a fair stable price over volatility, there is no easy way to realize such a transition as a sector. Individual companies can only support higher prices relative to their competitors if their customers support it.

Yet, it is this complexity of interrelated challenges that calls for innovation in agricultural supply chains. The Fairtrade Living Income Reference Price lays out a roadmap towards sustainable livelihoods of smallholder farmers by determining a set of key conditions of viable farm productivity and the price they would need to earn a living income, when those conditions are met. Now it is up to supply chain and other actors to coordinate efforts and bridge the gaps.

The vanilla market is undergoing a shift, with an increasing number of companies investing in supply chain relationships and projects that allow them to work more directly with farmers and farmer organizations. While the bulk of the vanilla is still traded through informal networks and sold on the spot market, approximately one fifth of all vanilla farmers in Madagascar is already integrated in supply chains through contracts and/or certifications. These more direct relationships create an opportunity for companies to work with their supply chain partners to invest in better services, such as technical assistance, and adequate trade structures, that contribute to closing the income gap for farmers.

“The Fairtrade vanilla living income reference price study has clearly shown us the livelihood risk our farmers face when prices collapse - as they did in 2005. Ben & Jerry’s is committed to linked prosperity in our supply chain – we want our farmers to do well when we do well. Purchasing through Fairtrade is part of that solution by providing a price floor. But the reference price study shows we as buyers need to do more to support farmers who strive to make vanilla their primary business - enabling them to invest in the productivity, value addition, and diversification needed to close the gap to a living income.”

- Cheryl Pinto, Global Values-Led Sourcing Manager,
Ben & Jerry’s Homemade Ice Cream



Natural vanilla as a no-input, agroforestry crop is already sustainable from an environmental point of view. A living income for vanilla farmers in a more stable market would enable long term growth of this iconic natural flavor with benefits to both farmers and the environment.

The current Fairtrade Minimum prices for conventional and organic green vanilla are US\$ 5.10 and US\$ 5.60 respectively in both Madagascar and Uganda. These minimum prices were last reviewed in 2009, and the estimated Living Income Reference Prices generated through this study will serve as a guide for the next Fairtrade vanilla price review, scheduled for 2020.

The Living Income Reference Price model makes up an integral part of Fairtrade’s Living Income Strategy. Fairtrade is constantly testing and improving its model in order to develop a standardized approach for establishing sustainable price levels for smallholder farmers, applicable to a wide range of commodities and regions. We welcome your feedback in this process. For more information or comments, please contact:

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