The Root Market Problems With Vanilla

Vanilla bean quality is going down and prices are going up at an alarming rate. If vanilla is to remain the most popular and widely used flavor, this situation will have to change.

by Daphna Havkin-Frenkel

Vanilla production is vulnerable to many risks. The list includes diseases, weather conditions, lack of genetic variability, political instability, theft, early picking, packing in vacuumed packages, lack of sustainability, control by regulations, a need for intensive cultivation and farmer organizations in cooperatives. This complexity results in low prices for producers, high prices for consumers and a rollercoaster for the flavor business, in what has turned into a casino-like market. As a result, bean quality is going down and prices are going up at an alarming rate. If vanilla is to remain the most popular and widely used flavor, this situation will have to change. These are the reasons why the industry is looking for alternatives to natural vanilla, predominantly vanillin from natural sources and natural flavor from other natural sources which taste similar to vanilla. Madagascar is the main producer of vanilla beans and the discussion in this article refers mainly to Madagascar. This article reflects the opinion of many operators in the vanilla supply chain.

1. Unionized Farming

In the seventies and eighties, vanilla production in Madagascar was controlled by the government, which averted market volatility. When the country leaned toward democracy and after the vanilla cartel termination in 1995, vanilla cultivation was driven by the free market, resulting in market volatility (price and quality).

Contract farming, that is, agricultural production being carried out on the basis of an agreement between the buyer and farm producers, can be managed by a union (cooperative) or with private farmers. Madagascar has close to 80,000 vanilla farmers and unionization might be to their benefit and the benefit of the industry. Some villages are being organized with pre-financing to ensure quality of beans; however, this is maybe 5-10% of the whole operation.

The Netherlands and Israel are open societies with good and stable agricultural production. Hans van der Mheen, an agronomist from The Netherlands, explains the country's approach: "A Dutch approach to regulate production of agricultural commodities like potatoes, carrots and onions is to have a contract with a buyer before the growing season for a certain amount of product at a fixed price."

In such a contract, the producer promises to deliver 70-80% of a crop yield which normally can be expected. The buyer can rely on this production coming and will pay him a given and reasonable price for this quota.

The producer knows for sure that his production costs will be paid for. His production surplus can be sold according to current market prices, which can be both higher or below the contract price.

In this surplus volume, there are some speculation risks involved for both the producer and buyer. But because it is only a small part of total production, it will hardly influence average end user prices.

Therefore, huge year-on-year price differences for end users (the industry and the consumer market) can be minimized.

Applying the System to Vanilla

In the case of vanilla, a similar system can be useful. It is likely to be more difficult for producers to estimate green bean production before the beginning of the season, as vanilla has a long production cycle.

The buyer has the opportunity to mention all kinds of technical requirements (pollination rate, time of harvesting, condition of the green beans to be delivered, etc.) into the contract. The price level has to be fair, with possibilities to be partly paid up front, in order for the smallholder farmer to partly finance initial production costs and costs of living. The contract creates an incentive to aim for surplus production for the grower which, if it is to be sold for profitable spot market prices, can provide them with a bonus.

Dr. Nativ Dudai, a scientist in ARO, Israel states the following: "In Israel, in the past, the agricultural marketing was very organized. Farmers had unions and a cooperative that was the only marketing body. For export, there was only one main company owned by the government and farmers unions. Through this method, farmers are obligated to market through the export company and are charged with tax to cover marketing cost labeling, shipping and storage, QC and other expenses."

"Farmers receive instruction and benefits of research and development," Dudai continues. "The company agrees to buy from farmers a fixed amount of product. It guarantees a part of the payment before the growing season, followed by full payment at the end. Farmers are penalized for failure to produce an agreed quota. This system assures security for farmers. This method may be a better fit for Madagascar's farmers today."

"In Israel today, the export method is by government licensed private companies. The arrangement is usually a 'reward agreement': the marketing company, although demanding an agreed quota, will market what it can.

It will market at the highest possible cost and will reward farmers accordingly, but if it cannot market the product, there will not be a fiscal reward."

Dudai notes that there is a concern that this method causes competition between the various exporting companies and reduces the prices. "However, the freedom of the farmers to choose the exporter creates competition and motivation for the exporter to give better prices and service to the farmers."

2. Accountability

By accountability, we mean the acknowledgment and assumption of responsibility for action.

This relates to how the requirements for production and curing of good quality vanilla beans are being abused for short term gains:

a. Over Pollination: Excessive number of flowers are pollinated, to maximize yield, but that results in small poor quality beans, which cannot reach full maturity.

b. Early Picking: Beans reaching full size after 4 months need an additional few months to form the complex vanilla flavors on the vine. Early picking results in poor quality beans.

c. Spread of Disease: Cuttings used for propagation are often from plants that carry disease, like Fusarium. Cuttings need to be certified disease-free by appropriate agencies.

d. Vacuum Packing: Vacuum packing is used to maintain moisture and to deplete oxygen to avert chemical changes in food products, coffee or crackers, among other things. Cured vanilla beans harbor large populations of microorganisms, carried over from the farm (similar to any other agricultural commodity), and under low oxygen (anaerobic conditions) give rise to anaerobic fermentation. These conditions alter the flavor composition of cured beans, such as conversion of vanillin to guaiacol with phenolic-like off-flavor, which results in undesirable vanilla beans.

To make matters worse, there is the recent practice of short or quick curing, that is, dipping in hot water followed by vacuum packing of the beans, as a means of storage until the price is right. In addition, it is also used to protect against theft. This practice prevents curing but encourages growth of anaerobic microorganisms. Curing of these beans leads to an inferior and uneven quality, because enzymes that drive the development of the flavor complex are inactive.

Compromise of these principles result in lots with uneven quality making it difficult or impossible for user companies to present consumers with a satisfactory and consistent quality of vanilla bean extracts.

3. Market Forces

Market forces are those that decide price level in an economy or trading system whose activities are not influenced by government. Middle men and speculators in the vanilla supply chain lead to volatility in vanilla prices. Ironically, high prices result in low quality in vanilla beans because producers want to exploit the market by providing immature and poorly cured vanilla beans, as described above. Market volatility defies the objective of user companies for consistency in supply and quality of vanilla beans. It creates an incentive to look for substitutes for authentic vanilla products.

When simple supply and demand kicks in, companies stop buying vanilla and the price hits rock bottom. Farmers stop producing, resulting in price hikes and the onset of a new price cycle. This pattern has been repeated through the years, resulting in progressive reduction in the use of vanilla beans.

Vanilla Supplier Views

This is what user companies are looking for:

George Rosskam of David Michael & Co. (US), defines the situation as follows: "Consistent quality and adequate supply is needed for vanilla to maintain its position as the world's most popular flavor. This stability will only occur when all levels in the supply chain are getting paid fairly for the goods and services they provide. If this point can be reached, other countries will join Madagascar in the long term commitment to grow vanilla. These additional sources are essential to buffer the supply chain against shortages due to weather conditions that cannot be controlled and competition between origins for the sale of vanilla beans in order to control pricing."

Doug Daugherty of Vanilla Corporation of America, (US) is more concerned with the immediate crisis. He states: "I would say that both vacuum packaging of improperly cured and unstable vanilla beans which lead to poor quality and speculation, and lack of understanding on the part of food and flavor manufacturers, by disregarding the US standard of identity for vanilla are equally problematic."

A spokesperson for Virginia Dare, Inc. (US) describes the problem as follows: "The biggest problem is what I describe as the marginalization of the grower. In a historically complex supply chain, growers have no leverage or access to end users (extractors). This is changing now as extractors are more active at the source, working directly with growers and helping them to establish grower cooperatives. But there is still a long way to go as the vast majority of Madagascar's 80,000 growers continue to be isolated in remote communities and are extremely impoverished. In reality, this is one problem."

Alessandra Lerouvillois, Prova: "Real changes require a global effort by all companies involved in the vanilla market in order to improve the sector governance, by doing a number of things. This includes influencing local and national level policy to create an enabling environment for the vanilla value chain."

They also point to the increasing use of vacuum packaging of vanilla beans at origin. "This procedure allows farmers and collectors to hold beans for extended periods hoping that prices will rise. However, the flavor and aroma profile of beans stored in this manner deteriorate significantly. Off notes are formed which cannot be eliminated with further processing. Vacuum packaging is a primary cause of the high pricing and inferior quality of vanilla beans available in the current market."

David van der Walde of Aust & Hachmann Ltd. (Canada) notes: "The main problem is simple supply and demand. There has been an unexpected increase in the global consumption, fueled by the large food conglomerates all wanting to go natural with even their most basic products. The timing could not have been worse because vanilla production was actually falling when all of this came about. Madagascar is simply too dysfunctional to respond in the appropriate way. So we see other regions picking up production to take advantage of the higher prices, which is a good thing until prices crash, of course. The difference between the present situation and the 2001-2004 crisis is that end users have many options for natural vanilla flavors, some of which have nothing to do with vanilla beans. This of course is the great danger, long term, for all growing regions."

Naushad Lalani, Sentrex Ingredients, LLC (US) suggests changes that must be made: "With respect to natural vanilla, there is a glaring absence of an effectively developed institutional capacity that can manage this pronounced volatility. It sounds counterintuitive and irrational, but there are very few commodities where quality is inversely correlated to pricing. High prices are invariably a function of small crops, resulting in poor quality; alternatively, low prices equate to larger crops, promoting higher quality."

"For natural vanilla to evolve beyond a niche and marginal business, it critically needs to develop an effective institutional framework that can intelligently regulate, promote and manage its long term development. Absent that, the growth opportunities in natural vanilla will constantly be compromised by extravagant claims of 'reformulation.'"

Alessandra Lerouvillois of Prova France summarizes the situation, with hope for the future: "Real changes require a global effort by all companies involved in the vanilla market in order to improve the sector governance, by doing a number of things. The first is influencing local and national level policy to create an enabling environment for the vanilla value chain. The second is facilitating links with lending institutions for sustained trade and working capital relationship investing in sector wide work programs to improve quality, livelihoods, and traceability. Thirdly, we must develop relationships with research institutions and universities specializing in vanilla to apply existing research and enhance learning documentation of evidence-based results. Finally, we must scale company led supply chain programs."

"A good example of how vanilla stakeholders (Malagasy and international) can cooperate to have a positive influence on the vanilla market is the Sustainable Vanilla Initiative (SVI)."

Moving Forward

In summary, there is market opportunity, but there is also a need to create a fair supply culture that will address the existing opportunities. There is a scientific study which suggests a culture of saving will empower people who are under financial stress. In addition, if farmers are presented with a fair and consistent price that can support their livelihoods, they are less likely to resort to practices which undercut the quality of vanilla beans. ▼

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