

Industry voices

State of the Industry:
2006 and Beyond

Forecasting opportunities and threats on the road to recovery

By Rick Brownell, Virginia Dare Extracts Inc.

Despite what was attributed to Cyclone Hudah, which raked across Madagascar in the spring of 2000, and political instability in that island nation, the real cause of this decade's vanilla crisis can be blamed on simple economics.

Anatomy of a crisis: Throughout the 1990s, worldwide consumption of vanilla beans exceeded production. The short-fall continually reduced the surplus that remained from earlier years. In the year 2000, the surplus was exhausted and there no longer were enough beans available to satisfy worldwide demand. Recognizing the shortfall, extractors began buying heavily in late 1999, and producers responded predictably to this increased demand by raising prices. World vanilla bean production (2002-2005) is presented in T-1.

The ill-timed Cyclone Hudah arrived shortly after. Although its impact on the vanilla bean crop was, in actuality, relatively modest, initial reports circulated that 80 percent of the crop had been destroyed. Buyers moved quickly to protect themselves against a perceived shortage, and prices literally doubled overnight. This might have been the worst of it, if not for two underlying factors.

As expected, higher prices encouraged growers to plant more vanilla vines. Manufacturers of food and beverages also reacted predictably by looking for alternatives to natural vanilla. However, both of these initiatives took time to implement. For the manufacturers, the process required new product development, consumer testing, and packaging and label changes, all of which easily can take 18-24 months. For the growers, the time frame was even longer. Vines require three

to four years of development before they become productive. So, for the next three years, vanilla prices spiraled upward. By the end of 2003, worldwide consumption of approximately 1,100 metric tons was roughly half of what it had been in 1999. At the same time, prices exceeded \$500 per kilogram — some 15 times higher than they had been just four years earlier.

The Current Situation: Recovery

Today, the vanilla industry already is experiencing a remarkable resurgence in growth and popularity. Admittedly, it probably will be a decade before worldwide consumption reaches the level that existed prior to the crisis. And, certainly, residual problems and questions remain unresolved. But, like all who experience and survive a severe crisis, the industry is likely to emerge stronger and healthier. Production almost

World vanilla bean production
2002-2005 (metric tons)

T-1

Origin	2002	2003	2004	2005
Madagascar	1,100	500	1,400	700
Indonesia	300	225	200	150
Papua New Guinea	25	175	175	200
Uganda	45	50	75	100
India	25	35	50	50
Others	105	115	75	75
Total	1,600	1,100	1,975	1,275

certainly will exceed demand, keeping prices low and relatively stable — at least throughout the balance of the decade.

Looking ahead, what are the major issues and opportunities facing the vanilla industry in 2006 and beyond? Let's start first from the consumer's point of view.

Consumer Outlook

Worldwide consumption of vanilla beans already has bounced back roughly 30 percent from its low point at the end of 2003. This rebound has occurred primarily in the retail (home) and food service (restaurant) segments. Consumers and chefs alike appear to have a strong preference for natural vanilla because they wasted little time in abandoning artificial substitutes when prices returned to affordable levels. To date, the large food and beverage manufacturers have not done the same, and most are adamant that they do not intend to reformulate — again. Ultimately, consumers will decide, and food and beverage manufacturers will be tracking sales data closely, recognizing that the food service segment often is on the leading edge of food and flavor trends.

Production Outlook: Emerging Sources

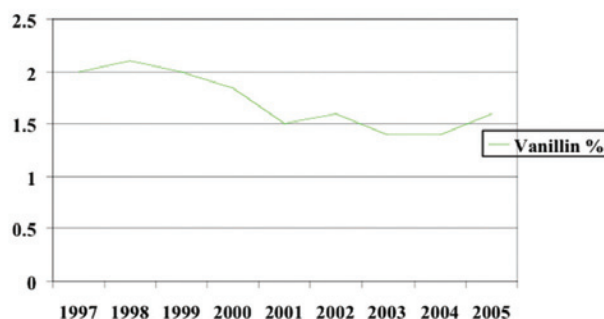
Vanilla consumption also will benefit from the geographic expansion of vanilla production that has occurred. A side effect of the vanilla crisis is a much wider range of vanilla profiles than was previously available in commercially significant quantities. Before, there were two primary vanilla types: Bourbon and Indonesian. Through variations in cultivation and curing, the flavor profiles were extremely different, and each was used extensively in the food and beverage industry. Bourbon vanilla typically is characterized as sweet and creamy with dried fruit, tobacco and balsamic notes. Indonesian vanilla is quite smoky, with woody and tea notes also predominant. Today, vanilla is produced in large quantities in Uganda, India and Papua New Guinea (PNG), and is expanding in other areas, such as Central America. Not surprisingly, differences in cultivation, curing, climate and even species result in entirely different flavor profiles from each origin.

Uganda: Although similar to Bourbon (Madagascar) vanilla, Ugandan vanilla has a more intense chocolate note. It also can be intensely creamy, with fewer tobacco, balsamic and hay notes than Bourbon vanilla. Approximately 100 metric tons of vanilla beans currently are produced in Uganda each year, and the price typically is slightly lower than Bourbon vanilla.

India: India now produces roughly 50 metric tons of cured vanilla beans per year. Indian producers have come a long way in terms of both quality and pricing. Indian vanilla still does not have the depth of Bourbon vanilla, but it is cured to a very high vanillin content — typically in excess of 2 percent. The flavor profile is somewhat thin and woody, but the creamy vanillin

Historical vanillin content
Bourbon vanilla beans

F-1



note is appealing.

PNG: Probably the second-biggest surprise in the vanilla market in the past five years has been the emergence of PNG as a major producer of vanilla beans. Prior to the crisis, PNG was an unknown in vanilla circles. Today, this Oceania-based country is one of the top three producers in the world, generating roughly 175-200 metric tons per year. Even more surprising, the vast majority of the PNG crop is the species *V. tahitiensis* Moore., previously grown primarily on or near the island of Tahiti. This species (also known as Tahitian) was

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available only in very limited quantities, with production of 3-4 metric tons annually. Tahitian vanilla, including that grown in PNG, is highly desired for its floral, anisic profile. PNG vanilla largely has replaced Bourbon vanilla in the European gourmet market and has been blended into food service vanillas in the United States.

Yet, production greatly exceeds demand, and prices for PNG vanilla beans are roughly half those of Bourbon vanilla.

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Improved Supply Chain

On the supply side, the vanilla industry continues to face many challenges, but the future appears to be bright. The geographic expansion of production provides more insurance that a single event, such as a cyclone, will not cause a significant disruption in bean supply and price escalation. However, the supply chain itself is vastly different than it was just five years ago. Zink & Triest was the most dominant bean broker, following the deregulation of

vanilla in Madagascar in the early 1990s. Its stunning announcement in November 2005 that it was exiting the vanilla business after seven decades was simply a barometer of the changes the company already had observed.

The multilevel vanilla supply chain has begun to flatten out. Vanilla extractors travel regularly to producing countries to source vanilla directly from growers and curers. At the same time, vanilla growers and collectors increasingly cure their own vanilla, rather than sell green vanilla beans.

Simultaneously, improvements in communication and transportation in the countries of origin have accelerated this recent flattening of the supply chain. Farmers and collectors, traditionally isolated in remote regions, now have cell phones and easily can share information about who is buying and at what price. Better communication can provide advance warning of impending cyclones, giving exporters time to secure their stock or move it to other locations. Transportation also has been upgraded, making it easier for growers and curers to get their products to port, rather than selling to intermediaries. In addition to benefiting producers, better communication and transportation also ensure better information for buyers in assessing crop size or the impact of natural disasters.

Although there are obvious advantages to the shortening of the supply chain, product quality has not

been one of them. Inexperienced growers and curers often have produced beans with inferior flavor and aroma. The vanillin content of extraction-grade Bourbon vanilla beans averaged more than 2.0 percent in the late 1990s. By 2003, this figure had dropped by one-third to 1.3 percent. (For historical vanillin content of Bourbon variety beans, see F-1.) In recent years, many of these lower-quality beans were sold to buyers who were either desperate or inexperienced. Even beans aborted prematurely during Hudah were gathered, cured and subsequently sold as “cyclone” beans. Looking ahead, the surplus will enable knowledgeable buyers to demand and purchase better-quality beans. Inexperienced curers and growers will find themselves unable to sell their products and ultimately either will improve their quality or find themselves out of the vanilla business.

Shrinking Supply Side

Consolidation on the supply side of the industry will continue.

Worldwide consumption of natural vanilla is still only about two-thirds the level seen in 1999. The ongoing real growth of the vanilla market is anticipated to be about 5 percent per year. Much of this growth will follow increases in the standard of living in emerging economies, such as China and India. Still, there is a great deal of excess capacity among both bean extractors and curers alike. There will be fierce competition for new and existing business. New alliances will be formed, and other traditional players may decide to invest their resources elsewhere. This is not likely to be a good market for those who are uncomfortable with change!

The Technology Angle

Finally, new technologies are evolving that promise exciting opportunities for vanilla producers and consumers alike. Past attempts at intensive cultivation of vanilla virtually all failed for a variety of reasons. However, producers are learning from their mistakes and adapting new methods to overcome problems of plant disease, planting density and limited plant diversity. At the recent World Vanilla Congress in Veracruz, Mexico, researchers reported gains in understanding the biochemical pathways for flavor development in vanilla beans. Others are looking to utilize this information to improve curing methods to produce larger amounts of desirable flavor components in beans and, ultimately, extracts and flavors. The use of vanilla and vanilla derivatives in nontraditional applications, such as moisturizing creams and antibacterial agents, was another area discussed at the conference. These products would provide not only the organoleptic attributes of vanilla, but utilize its potential functional properties as well.

Seeking "Natural"

There is one other major factor impacting vanilla consumption, post-crisis: the demand for healthier natural products. The organic segment probably is the fastest-growing one in the U.S. food industry — no longer too small to be considered insignificant. Vanilla is one of only a handful of flavors that have achieved organic certification. Most natural vanillas are also genetically modified organism (GMO)-free, which continues to be a major issue, particularly in Europe. The anticipated introduction of Fair Trade vanilla will be another opportunity for food and beverage manufacturers to position their products for today's socially conscious consumers.

Parting Note

Despite the recent crisis, vanilla remains the most popular flavor in the world. The events of the past few years have taken a toll, no doubt. However, the future for natural vanilla appears bright once again for one simple reason: People like the way it tastes and smells. These consumers are familiar with vanilla and view it as natural and healthy. And so, in the foreseeable future, the vanilla market will reward this devotion with stable pricing and supply, while offering new profiles and additional applications.

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