



**USAID**  
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**John Ogonowski**  
**Latin America**  
**Farmer-to-Farmer Program**

## Executive Summary

This research project was prepared by marketing students attending Florida International University during the Summer Term of 2008. It aims to “determine the United States market potential of Vanilla and the Hibiscus Flower, evaluate its current level of market penetration (or lack thereof) and provide its findings to the farming cooperatives interested as part of the John Ogonowski Latin America Farmer-to-Farmer Program.” The entire research was done through the use of accessing secondary data and interpreting this data to form this paper.

From the data that was collected, it is clear that there has been a steady increase in the US importations as well as foreign importations of plants used in herbal teas; hibiscus being among them. The hibiscus flower is very popular in teas, and to a lesser extent, jellies. Hibiscus grown in Sudan is considered to be the best hibiscus in the world because of the land’s soil fertility, however due to the US trade embargo with Sudan; the US does not import the hibiscus from there.

As for vanilla, a steady decrease can be seen in the exportations of the vanilla bean from the high producing countries, such as Madagascar, Indonesia and Comoros to the US, while also showing an increase in exportations from the smaller producing countries because the price of the vanilla bean has been increasing, and as a result many companies switched their usage of the pure vanilla to synthetic vanilla in their confectionary products.

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## Introduction

## Program Rationale

The John Ogonowski Farmer-to-Farmer Program, funded by the United States Agency for International Development, provides voluntary technical assistance to farmers, farm groups, and agribusinesses in developing and transitional countries to promote sustainable improvements in food processing, production, and marketing. The program relies on the expertise of volunteers from U.S. farms, land grant universities, cooperatives, private agribusinesses, and nonprofit farm organizations to respond to the local needs of host-country farmers and organizations.

To date, approximately one million farmer families (representing about five million people) have been direct beneficiaries of the FTF Program. Volunteers have provided direct hands-on training to over 80,000 people.

Winrock International and Florida International University's College of Business Administration have combined their resources and knowledge to implement the John Ogonowski Farmer-to-Farmer Program in Latin America, from 2003-2008.

The MAR 4613 course was created to add value to the Farmer-to-Farmer Program and prevent scarce volunteer resources from being diverted to requests for assistance, which are best, completed in the United States. The resulting freed up resources allow the program to fulfill requests with volunteers where an in country expert is a necessity. Of added value, hosts receive this additional US-based volunteer service at no cost to the FTF program.

## Introduction

### Research Objectives

The objective of this research is to analyze the US market potential of a variety of commodities. Our goal is to provide information on a variety of commodities, which can then be applied by our in-country partners to their business strategies. The primary beneficiaries of these reports are small and medium-sized farming cooperative groups which do not have the capability or the resources to conduct these studies on their own.

It is of critical importance that while drawing conclusions to satisfy the research objective, a thorough analysis is carried out. In order to do so, some of the questions which must be analyzed are:

1. What is the demand of the product in question?
2. Who are the buyers and consumers of the product?
3. What are the quality standards and packaging requirements?
4. What is the distribution system for the product?
5. Who are the competitors?
6. What government regulations apply to the import of this product?

If it is a new product for the market, additional questions must be asked:

1. Who are the potential buyers of this product?
2. What are the potential distribution channels?
3. What are the additional important issues which must be investigated before attempting to export the product?
4. Are there any regulations which might inhibit this product from being sold in the US market?

### Research Method

Given that the research objectives include getting background information of the potential market of the commodities included in the report, the research was conducted using an explorative design. Two main methods were employed: secondary data research and personal interviews. In some instances focus groups with consumers were conducted.

The secondary research was conducted by searching and interpreting existing information relevant from governmental and private electronic sources. When specific information about a commodity was not found secondary research was guided by similar commodities relevant to the information needed.

In order to complement the secondary research, personal interviews with experts were conducted. The interviewees were either academic or commercial experts in the production and commercialization of the commodities in question. In some cases, the researchers felt the need to complement this information direct input from the consumers; in those cases focus groups session were conducted.

The sources of the information are cited through out the content of the report. Contact information of the experts is provided. At the end of the report conclusions and recommendations for future action are suggested.



# Jamaica Hibiscus Flower

## Product Description

There are more than three hundred species of the hibiscus flower growing in the world in tropical climates<sup>1</sup>. Hibiscus sabdariffa is the species used for food purposes. It is used as an herb for making teas and other beverages in its dry form and in its fresh form; it is used for making marmalades. Hibiscus sabdariffa is a member of the Malvaceae family. It is an annual flower that grows to 8 feet or more. It is known as Roselle (English), L'oiselle (French), Jamaica (Spanish) and Karkade (Arabic) among other names. The calyces are used to make cold and hot beverages. In China the seeds are used for their oil and the plant is used for medicinal properties, and in West Africa the leaves and powdered seeds are eaten<sup>2</sup>.

## Hibiscus Flower

# Statistical Data

Country	1994	1995	1996	1997	1998
China	1,062	1,341	1,692	1,639	1,760
Mexico	103	116	354	629	669
Chile	271	378	395	333	629
Germany	267	330	433	396	326
India	173	137	203	173	200
Thailand	138	200	223	163	154
Peru	26	255	86	26	148
Spain	93	88	53	93	99
Canada	13	10	3	3	98
South Korea	52	53	24	28	88
Egypt	24	56	79	106	54
Sudan	37	-	-	-	-
Other	659	988	860	1,488	958
TOTAL	2,918	3,952	4,405	5,077	5,183

## U.S. Production Data

Hibiscus is mainly grown in areas such as China, Thailand, Sudan, and Mexico therefore information regarding the production of Hibiscus in the US could not be accessed.

The table gives information on the amount of plants and plant parts that the United States imported from 1994-1997. The charts are not specific to the Hibiscus flower, however, you can conclude that the United States imports large amounts of plants, including hibiscus, from countries all over the world. (Please note: the charts are outdated and should only be used to gain an idea of the US imports)

US Imports of Plants and Plant Parts for Use in Herbal Teas (tons)<sup>3</sup>

## Main Origin of Importations

China and Thailand are the largest producers of hibiscus and control most of the world's supply. According to the FAO, the best Roselle (hibiscus) comes from Sudan but the quantity supplied there is very low and it is shipped primarily to Germany<sup>4</sup>. Hibiscus is available from mainly Thailand, Sudan, China, and Mexico<sup>5</sup>. China is said to be the biggest importer to the United States<sup>6</sup>. However, China is gaining a reputation for having poor quality of Hibiscus. Importers say that the Chinese Hibiscus has a dark purple color and a tart taste. They prefer for the liquid to be an orange-red color and less

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tart tasting<sup>7</sup>. Hibiscus is mainly only grown in the Northern Hemisphere, with the exception of South Africa. South Africa is able to capitalize on the production of hibiscus during the off-season months for the Northern Hemisphere. This is also appealing to importers, because it gives them a year round supply of hibiscus<sup>8</sup>. From 1995 - 1997 the USAID worked with Herb Research Foundation (HRF) in Africa to help farmers in Mali West Africa, as well as South Africa to develop a test crop of hibiscus and to teach them about the international standards of the flower<sup>9</sup>. The amount of hibiscus grown in Europe, even at a large scale, is not enough for entrepreneurs to bother with. Most of the Hibiscus grown in Mali is sent to the United States<sup>10</sup>. Mali could potentially become a large importer of dry hibiscus to the United States if they are able to honor their export contracts and organize proper delivery<sup>11</sup>.

India and parts of the Caribbean are increasing their production of hibiscus<sup>13</sup>.

## Demand Tendencies

Demand has steadily increased for the hibiscus in the past decades. Approximately 15,000 metric tons are traded internationally each year. The main supply of hibiscus comes from Thailand, China, Sudan and Mexico<sup>12</sup>.

Germany and the United States are the main importers of hibiscus. Due to the US trade embargo on agricultural goods from Sudan, Germany now sells the hibiscus flower at a considerable price mark-up. The industry for hibiscus is growing. African countries such as Gambia, Mali, Namibia, Nigeria, Senegal, Tanzania and Uganda, as well as South

## Hibiscus Flower

## Market Characteristics



## Market Segments

The hibiscus is divided into two segments: dried hibiscus for herbal uses in teas and other beverages, and for jellies.

## Consumer Preferences

Hibiscus is mainly used in teas, beverages and jellies<sup>14</sup>. Recently a trend was started with putting the whole flower into a glass of champagne. The teas and beverage segment represents largest segment for consumption of hibiscus.

## Apparent Consumption

Roselle (Hibiscus) is used in many products including: herbal teas, herbal medicines, syrups and food coloring<sup>15</sup>. It is difficult to tell exactly how much hibiscus is brought into the United States and consumed because production of Roselle is not tracked like conventional agricultural commodities and there are few, if any published reports<sup>16</sup>.

If kept in tact, there are many ways that the hibiscus calyces' are prepared and eaten. The taste of hibiscus resembles a cranberry. The calyces of the hibiscus can be chopped and added to salads, or stewed and used as a filling for pies or tarts. The hibiscus can also be dried and made into a concentrate. The dried hibiscus can be used in adding flavor

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to alcoholic beverages, however, in the United States; the FDA has regulations about the extract being used for this reason<sup>17</sup>. Also, the hibiscus can be made into a firm jelly. The calyces contain 3.19% pectin; therefore it is not necessary to add any additional pectin to form a jelly<sup>18</sup>.

## Competition

The largest producers of Hibiscus are China, Sudan and Thailand. Production of Hibiscus seems to be non-existent in the US which is why the US relies on these large producing countries to supply. As mentioned before, Sudan exports most of its Hibiscus to Germany, so the US depends mainly on China and Thailand for this commodity.

## Market Access

The U.S. government places light guidelines on the trade of hibiscus. Typically, the quality of the flower is observed by the importer. They tend to look at the color and taste to determine quality. Hibiscus is brought into the United States in the following ways: fresh, canned, processed and frozen.

### Acceptance Conditions

The Hibiscus Flower requires no permit for purposes of importing into any part of the US including ports. However, federal regulations require that imported plants clear certain inspections by the U.S. Department of Agriculture<sup>22</sup>. The Animal and Plant Health Inspection Service (APHIS) requires that importers must have certificates to verify that officials of exporting countries have examined the commodity before their departure from the country<sup>23</sup>.

### Quality Standards

The importers themselves generally do the quality inspection of the hibiscus.

The standards they use the color, taste, impurity count, moisture content, etc of the hibiscus<sup>25</sup>. There are no official codes written down to analyze the raw material used.

The following chart shows some general guidelines used by the importers to determine the quality of the hibiscus<sup>26</sup>.

## Hibiscus Flower

### Tariff Measurements

The hibiscus flower falls under the “Plants and parts of plants (including seeds and fruits), of a kind used primarily in perfumery, in pharmacy or for insecticidal, fungicidal or similar purposes, fresh or dried, whether or not cut, crushed or powdered” section in Chapter 12 of the Harmonized Tariff Schedule of the United States and has no tariffs on the imports of it<sup>27</sup>.

### Restrictions and Regulations

The hibiscus is regulated by the FDA in the Code of Federal regulations, Title 21, Volume 3. The FDA classifies the hibiscus as safe<sup>28</sup>.

### Technical Procedures

The following information shows the cultivation techniques for harvesting the hibiscus crop<sup>29</sup>.

#### Soil and Propagation

The hibiscus crop grows ideally in well drained soil with a lot of organic matter. Before sowing the soil, the land has to be thoroughly prepared and brought to a fine tilth. The soil is then fertilized and incorporated with manure. It is propagated by sowing the seeds in the field. These seeds are pre-soaked for

12 hours in water and treated with the chemicals captan (0.2%) and calyxin (0.1%) for 30 minutes.

The following chart shows the amount of materials needed for the crop based on the size of the land.

Materials		Per acre	Per hectare
1.	Seeds (g)	1.0	2.5
2.	Farm Yard Manure (t)	5	12
3.	Fertilizers (kg)	N	100
		P2O5	30
		K2O	30
		250	75
		75	75

#### Climate

The hibiscus crop grows very well in a warm, humid/ dry climate with rainfall of approximately 150-200 cm per year. It can not withstand heavy downpours of rain, water logging or winter cold frost.

#### Irrigation

After sowing, the field is immediately irrigated if there are no rain falls. Upon sowing, irrigation is given at a regular interval of 4 days until the seedlings sprout up and are well

## Hibiscus Flower

established. Upon them being well established, the irrigation is given weekly during the dry periods.

### Plant Protection

The major insect pests that affect this crop are the Capsule Borer and the Flea Beetle which causes stem rot and root rot of the plants. To ensure that the crop is well protected from insects, it is recommended to spray the crop with 0.2% quinolphos or nuvacron. The stem rot and root rot problem can be controlled by improving the soil drainage and frequent irrigations. They can also be improved by treating the seeds with 0.2% captan or 0.1% calyxin before sowing and then drenching the plants with 0.1% carbendazim or 0.3% mancozeb chemical.

### Harvesting

The hibiscus crop is a 150-180 days duration crop. After sowing, the plant begins flowering after about 45-60 days and extends over a 4 month period. After about 15-20 when the plant blooms, the calyces are ready and can then be picked. The calyx lobes are then separated and can be either used fresh or dried. For the drying process, the calyx is placed in shade for about 12-15 days until they have moisture of 12 percent.

## Distribution Channels

No information was available that spoke specifically about the hibiscus flower channels of distribution. The information provided is for general herb and spice distribution. There are three main methods of distribution for herbs and spices: producer to consumer, producer to store/restaurant, and producer to wholesale/distributor. In an attempt to have the freshest herbs available many companies are now opting to work directly with the growers<sup>19</sup>. For instance, Celestial Seasonings works directly with growers from all over the world to bring spices into the United States<sup>20</sup>.

There are some common guidelines regarding packing the hibiscus. The item must be packed in a 50 lb (or less) poly lined boxes or multi-walled sacks. In Mexico, the dried calyces of hibiscus are packed for sale in imprinted plastic bags. The United States regulations regard Roselle as being safe by virtue of being dried<sup>21</sup>. Producers do not need to be registered in order to import it into the United States.

**Hibiscus Flower**

**Prices**

The table below gives a good representation of pricing for the several different options of dry hibiscus flower available. There is a large mark-up for hibiscus depending on the quantity purchased: \$4.90 per lb., \$4.66 per lb. (20 lbs.), and \$4.05 per lb. (50 lbs.) was what was paid to an importer by one tea manufacturer. (Please note: this information is from 1997-1998)<sup>30</sup>.

Dry hibiscus flower in the United States can be purchased from retailers in three ways - 1 way is as a powder. Sells for \$5.50 for 2.1 oz – 2 is the dried flower itself, which sells for \$5.90 for 4.0 oz<sup>31</sup>- 3 in the form of a concentrate. This can be purchased from Naturesflavors.com for \$7.95 for 2 oz. And all the way up to a 5-gallon bucket for \$365.00<sup>32</sup>.

Price Ranges for Dried Hibiscus (CIF, US\$ per metric ton, 3/97-4/98)				
Supplier	Liquid Color	Liquid Taste	US	Germany
China	Dark Purple	Tart	\$800-1000	\$900-1000
Sudan	Orange red	Acidic	\$1500-1700	\$1200-1300
Thailand	Purplish red	Sweet	\$1000-1200	\$1000-1100
Mexico	Orange red	Salty	\$600-700	No quote
Egypt (Organic)	Burgundy red	Acidic	\$1200-1500	No quote

## Sales Promotion

Promotion within this certain commodity seems a lot less of a presence than your average product. The primary means of exchange on the internet is through trade websites like EBay and Amazon<sup>33</sup>.

The majority of this product is not produced or sold within the US which may explain the lack of its promotional essence in the market.

A small family owned business, The Wild Hibiscus Flower Company, has created an innovative new use of this product which may make it a stronger presence in the US. The flower has been cultivated and altered with a mix of spring water and pure sugar cane to help it stay fresh for much longer. These elegant flowers are dropped into your favorite champagne. With appearances coming in the New York Fancy Foods Event, It just may be the elegant and trendy element to bring the commodity into the mainstream market.

## Importers List and Distribution Networks

**Katekaew**

Contact Person: Mr. Natthiad

PH: 66-86-044-1406

FX: 66-36-512-455

Address: 49/9 m.6 Tonphao, Muang, Singburi, Thailand 16000

**Changsha Organic Herb Inc.**

Contact Person: Ms. Ling Ling Liu

PH: 86-0731-2967-873

FX: 86-0731-2967-861

Address: No.2405.Dushidongjia.Xiongju, Mawangdui North Road, Changsha City, Hunan, China, Changsha, Hunan, China 410016

**TOON CONSOLIDATED COMPANY LIMITED**

Contact Person: Mr. OLATUNJI LAWAL

PH: 234-1-790-3284

FX: 234-1-555-1166

Address: 18, TAIWO STREET, OJOTA, LAGOS. LAGOS, LAGOS, Nigeria 02341

**Huizhou International Trade CO., LTD**

Contact Person Mr. Marbury

PH: 86-592-598-8228

FX: 86-592-207-5450

Address: Changqing Road, Xiamen, Fujian, China 361012

Sdk Universal Concept Limited

Contact Person: Mr. Sadiq Awopeju

**Hibiscus Flower**

PH: 234-80-5173-0649

FX: 234-01-4527-500

Address: 14/16 Osolo Way, Olundegun's House, Ajao Estate,  
Lagos Lagos, Ikeja, Lagos, Nigeria 12210

**Greater Gifan Trading & Investment Co. Ltd.**

Contact Person: Ms. Aisha El Tayeb Abdalla

PH: 249-183-7799-20

FX: 249-183-777-212

Address: Babikir Badri, Khartoum,  
Khartoum, Sudan 183

**Divine Way Ltd**

Contact Person: Mrs. ADEJARE Margaret

PH: 234-80-2300-7097

FX: 234-1-804-5522

Address: P.O Box 3676, Festac town, Lagos State,  
Nigeria 102102

# Upcoming Trade Shows and Events<sup>35</sup>

## Western Hemisphere

### 2008

EXPHOTEL- June 11-13 Cancun, Mexico  
 Alimentee (Tentative)- June 11-14 Bogota, Columbia  
 SIAL Mercosur (Tentative) - September 16-18 Buenos Aires, Argentina  
 IFE Americas Food and Beverage- September 24-26 Miami, Florida  
 Abastur- October 1-3 Mexico City, Mexico

### 2009

The Canadian Restaurant & Food Service Association Show (CRFA) - March 1-3 Toronto, Ontario  
 ANTAD- March 10-13 Guadalajara, Mexico  
 SIAL Montreal- April 1-3 Montreal, Canada  
 Expo Alimentos (Tentative)- April 17-18 San Juan, Puerto Rico  
 Global Food and Style Expo (NEW)- April 5-7 Chicago, Illinois  
 American Food Fair (National Restaurant Association) - May 14-19 Chicago, Illinois  
 Alimentaria Mexico- June 2-4 Mexico City, Mexico  
 EXPHOTEL- June 10-12 Cancun, Mexico  
 SIAL Mercosur- September Buenos Aires, Argentina  
 Abastur- September 30; October 2 Mexico City, Mexico  
 IFE Americas Food & Beverage- November 11-13 Miami, Florida

## Hibiscus Flower

### Asia

#### 2008

Food Taipei- June 18-21 Taipei, Taiwan  
 AFEX Plus (New) - July 8-9 Manila, Philippines  
 Asia Fruit Logistica- September 10-12 Hong Kong  
 Food Ingredients Asia (Fi Asia) - September 24-26 Bangkok, Thailand  
 Health Ingredients Japan- October 15-17 Tokyo, Japan  
 Food & Hotel China, Shanghai- December 4-6 Shanghai, China

#### 2009

AAHAR (Tentative) - March New Delhi, India  
 FOODEX Japan- March 3-6 Tokyo, Japan  
 Food & Hotel Indonesia (American Café)- April 1-4 Jakarta, Indonesia  
 Int'l Food and Ingredients & Additives Exhibition (IFIA)- May Tokyo, Japan  
 HOFEX- May 6-9 Hong Kong  
 SIAL China- May 19-21 Shanghai, China  
 Seoul Food & Hotel Korea- May 26-29 Seoul, Korea  
 Food & Hotel China, Beijing- June 9-11 Beijing, China  
 Food Taipei- June 17-20 Taipei, Taiwan  
 AFEX Plus (Tentative)- July Manila, Philippines  
 Food Ingredients Asia (FI Asia)- September Bangkok, Thailand  
 Fruit Logistica- September Bangkok, Thailand  
 Food & Hotel Vietnam- October 28-30 Ho Chi Minh City, Vietnam

Health & Ingredients Japan (HI Japan) [Tentative] - October Tokyo, Japan  
 Food & Hotel China, Shanghai- November 17-19 Shanghai, China

### Australia

#### 2008

Fine Food Australia- September 22-25 Melbourne, Australia

#### 2009

Fine Food Australia- September 7-10 Sydney, Australia

### Europe/Russia

#### 2008

World Food Moscow- September 23-26 Moscow, Russia  
 SIAL Paris- October 19-23 Paris, France  
 Health Ingredients Europe (Hi Europe)- November 4-6 Paris, France

#### 2009

Sirha- January 23-27 Lyon, France  
 Fruit Logistica- February 5-7 Berlin, Germany  
 BioFach (organics) February 19-22 Nuremberg, Germany  
 Int'l Food & Drink Exhibition (IFE) London- March 15-18 London, UK

## Hibiscus Flower

European Seafood Exposition- April 28-30 Brussels, Belgium  
World Food Moscow- September Moscow, Russia  
ANUGA- October 10-14 Cologne, Germany  
Food Ingredients Europe (Fi Europe) - November 17-19  
Frankfurt, Germany

### **Africa/Middle East**

#### **2008**

Morocco (American Café)- June Casablanca, Morocco  
Libya (TBD- December Tripoli, Libya

#### **2009**

Gulfood- February 19-22 Dubai, United Arab, Emirates  
Alimenticia Angola- April Luanda, Angola  
Morocco (American Café)- June Casablanca, Morocco  
Libya (Tentative)- December Tripoli, Libya

**Vanilla**



**Vanilla**

## Product Description

Vanilla is an orchid which grows in tropical countries. It is said to have originated from the tropical forests of Mexico and other parts Central America<sup>36</sup>. For vanilla to grow, it requires high rainfall of more than 1,000 mm per year along with high humidity as well as about two months of a dry season for stimulation of flowering.<sup>37</sup>

Its pods are harvested when unripe and then they go through the process of fermentation followed by a drying process. The vanilla pods contain a black/brown fruit pulp with numerous small seeds.

Vanillin is the aroma substance of vanilla and is formed during the fermentation process. It is the most important part of the vanilla bean and is widely used today in the perfumery industry.

## Statistical Data

### U.S. Production Data

Vanilla is currently produced in the U.S. in Florida, Puerto Rico and Hawaii; however, since the U.S. mainly imports this commodity, information regarding the production of vanilla within the U.S. could not be accessed.

### Statistics of Foreign Trade:

#### Exportations

The table below shows the cured Vanilla Bean Exports from Producing Countries 1998-2002 (tons) Country. Madagascar is the main world exporter of Vanilla followed by Indonesia.<sup>38</sup>

#### Importations

According to the ITC/UN statistics the USA, France, UK and Germany account for approximately 60% of world imports.

## Vanilla

**World Exports of Vanilla**

Country	1998	1999	2000	2001	2002
Madagascar	1765	1743	1676	1412	1182
Indonesia	806	368	285	474	325
Comores	161	183	102	203	92
Uganda	63	41	48	75	70
India	1	11	44	27	33
Papau New Guinea	0	2	9	13	36
Mexico	3	6	2	9	19
Tonga, Figi	25	43	19	4	14
Others	82	18	63	22	30
Total	2906	2415	2248	2239	1799

**World Imports of Vanilla**

Year	USA	EU	OTHERS	TOTAL
1995	1480			
1996	1524			
1997	1530	702	60	2292
1998	1475	656	65	2196
1999	1240	923	65	2228
2000	1185	816	80	2081
2001	1470	625	85	2180
2002	1117	524	95	1754

## Main Origin of Importations

Looking at the above table, the main origin of these importations seems to come from Madagascar from the years 1998-2002 followed by Indonesia, Comoros, Uganda and India.

## Demand Tendencies

The vanilla market has been very unstable since 2000. Environmental disasters hit the world's top producers of vanilla, Madagascar and Indonesia. Vanilla supply was cut significantly. Demand for vanilla remained the same which caused prices to skyrocket. Vanilla prices peaked at \$500/kg in 2003 and demand significantly dropped and, as a result, many companies switched to synthetic flavoring of vanilla.<sup>40</sup>

## Market Characteristics

## Market Segments

Vanilla can be categorized into three segments: Natural Vanilla, Synthetic Vanilla and Organic Vanilla. The natural vanilla segment has shown a steady growth in the 1990's but has dropped in the 2000's as a result of increasing prices. As a result, the synthetic vanilla segment has grown as demand has been increasing because it is less costly than the pure vanilla. The organic vanilla represents about 5% of the market in the pure vanilla segment and is growing.<sup>41</sup>

## Consumer Preferences

Vanilla is widely used in the perfumery industry as well as for confectionary products. The dairy industry uses a large percentage of the world's vanilla in ice creams, yogurt (fresh and frozen), and other flavored dairy products. The perfumery industry uses vanilla in fragrances<sup>42</sup>. The main consumption of vanilla is with ice-cream. Consumers also enjoy vanilla in yogurts, cakes, cookies and other confectionary products.

## Vanilla

### Competition

Natural vanilla experiences competition from synthetic vanilla as well as other flavors. Synthetic Vanilla is a lot cheaper to manufacture and is used by many companies in the perfumery industry as well as the confectionary industry.

The vanilla flavor is also in competition with other flavors. Vanilla is currently of the world's most popular flavors. Vanilla is especially popular in ice creams, beverages, desserts, dairy products, chocolate, confectionery products and pastry. While vanilla flavor experiences strong and growing demand, within the larger category real vanilla is increasingly being substituted with synthetic vanillin.

Vanilla has experienced a rise in prices in recent years. These high prices have encouraged farmers in countries such as Uganda, Papua New Guinea, India, Costa Rica, China and Colombia to cultivate vanilla<sup>43</sup>. Although vanilla extract from beans is still used by the food industry, this accounts for less than 1 % of vanillin production. The remaining 99% is obtained synthetically.

## Market Access

## Acceptance Conditions

In order to enter in the U.S. market, importers need to follow some steps that are established by the Department of Health and Human Services. All importers that manufacture, process, pack, or store food or beverages are required to register the company with the FDA (Food and Drug Administration) before foods are accepted in the country. They also need to assign a U.S. agent who will be in charge of the communication with the FDA.

## Quality Standards

The United States prefers vanilla with low water content (20 - 25%) since it will be used further as the raw material for extraction industry. In order for vanilla to be imported into the United States it must be exactly 35% alcohol by volume<sup>46</sup>.

The European Union, on the other hand, requires whole vanilla which is good in performance, has high vanillin and tajam aroma, and contains 30 - 35 % water content. Internationally, the International Standard Organization (ISO) has determined specification for vanilla traded in the world; that is, ISO 5565-1982<sup>47</sup>.

The following chart shows the specifications for the standards of Vanilla quality according the International Standard Organization.

## Vanilla

### Tariff Measurements

According to the Harmonized Tariff Schedule of the United States (2008) (Rev.2) there are currently no tariffs on vanilla beans (classified under heading number 0905.00.00) but it has a 66 cents/kg duty on all imports<sup>48</sup>.

### Restrictions and Regulations

The production of Pure Vanilla Extract is governed in the United States by the Code of Federal Regulations (CFR - 169.175 and following sections). It is established that the content of the vanilla extract be no less than 35 percent by volume alcohol and the content of vanilla constituent, as defined in §169.3(c) is not less than one unit per gallon. When the CFR requirements are not met in either or both bean content or alcohol content, a new description is used: this product would be a "flavor". Pure Vanilla-Vanillin Extract follows similar CFR standards (169.180 and following sections) to Pure Vanilla Extract, except one ounce of vanillin is added per gallon. This qualifies for Category II Ice Cream in the U.S. Dairy Industry and could also be labeled as Natural & Artificial Vanilla Flavor<sup>49</sup>.

### Technical Procedures

The vanilla plant requires a very unique and labor intensive cultivation and harvesting process. The following information explains the procedures for preparing, planting and harvesting of the vanilla plant<sup>50</sup>.

#### Preparing the Land

The land used for vanilla needs to be prepared with considerable effort to prompt the roots to develop quickly. This includes processing the land and making the beds. Processing the land includes hoeing to make the soil loose and deep. The bed is made 1 or 2 meters wide and approximately 30 cm high. Drainage should be made along the side of the plantation of approximately 60 cm wide and 40 cm deep.

#### Planting

Prior to the vanilla being planted, the cutting is placed in a shade area for approximately 3 - 4 days in order to make the cut dry to prevent it from rotting. A 10 cm deep planting hole is made next to the base of the shading plants. Three or four of leaves are removed from stem base, since this part will be buried in the soil.

It is suggested that the planting of the cutting be conducted in the beginning of rainy season. The cutting is planted in the hole prepared next to the base of shading trees. The soil

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surrounding this cutting must be kept wet. Watering is carried out when needed. The materials that can be used to tie vanilla to the supporting tree are plastic rope or the rope which is made from banana stem.

### The Creeping of Vanilla Plants

The creeping of vanilla plants can be conducted in three ways; the fence system, a single supporting system with twisting curves, and a hanging system.

#### a. The Fence System

If the branches of the host plant are not horizontal then the fence system is used. A piece of bamboo is tied to this plant in the height of 2 meters from this host plant to enable vanilla stem to creep horizontally in this piece of bamboo.

#### b. Single Supporting System with Twisting Curves

In this system, the vanilla is crept upward until it reaches approximately 2.5 m. After that, the end of the spiral stem is released from its main support and left hanging until it is about 50 cm above the land surface and its end is directed upwards again and then tied to its support.

#### c. Hanging System

Making the hanging system is the same as the twisting curves one. When the end is approaching approximately 30 cm above land surface, its bud is trimmed. When it grows again and reaches 1.5 - 2 meters of height, it is curved again, and when it is approaching the land surface, the bud is trimmed again. This process is continued.

### Pollination

Vanilla plants are initiated by humans because they not able to pollinate by themselves. The blossom of its flowers only last for 12 hours; mainly around 12 a.m. to 12 p.m. This pollination job will be easier when it is carried out around 08.00 a.m. - 12.00 a.m., when flowers are sufficiently dried from the dew.

The way to pollinate flowers is by lifting the rostellum which is adjacent to the anther and the stigma by using a palm leaf rib as long as approximately 10 cm. Then the pollen is placed on the stigma which is located below it. If the flower stays in its bunch, the pollination is successful. If it falls from the bunch, then the pollination was unsuccessful. If the number of fruit in one bunch ranges from about 9-12 fruit, it is considered plenty and the pollination job is ceased and all of the remaining flowers are thrown away. On average, one person is able to pollinate 1,000 flowers per day.

### Fertilization

The fertilization process is a crucial process. The types of

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fertilizers that can be used in this stage are manure, inorganic fertilizers which includes N, P, K, Ca, and Mg, Gandasil D, Gandasil B and Gier (the waste of cow which is diluted). It has been proven that the application of manure approximately 1.5 tin of kerosene per plant per year can improve the number of fruit. Manure is especially required in the areas lacking water, and this is applied in the beginning of dry season.

The following chart shows the recommended dosage of manure and artificial fertilizers for vanilla plants<sup>50</sup>

Plant Age (Year)	Fertilizers Dosage (gr/plant/year)			
	Manure	Urea	SP-36	KCL
Less than 1	800	20	40	60
1 - 2	800	40	80	120
2 - 3	960	80	160	240
3 - 5	1,280	160	320	480
More than 5	1,600	300	600	750

### Controlling Pests and Diseases

Pests that attack vanilla plants are very rare. The pest that usually attacks the plant is the white moth (Lawava Sp.). When plants are seen to be attacked by pests then it is recommended to spray the plant with insecticide Decis 0.5 –

1.0 ml/liter of water.

Additionally, the major disease of vanilla plants is rot stem. This result from fungi called *Fusarium oxysporum* f. sp. vanilla which is able to spread vastly. Once this disease enters the plantation, it will spread very quickly and will be difficult to handle.

The following table shows a guideline of applying fungicide to vanilla plants<sup>51</sup>

The Guidelines of Fungicide Application on Vanilla Plants

Plant Age (Year)	Fungicide (kg/ha)
Less than 1	-
1 - 2	12
2 - 3	14
3 - 4	15
More than 5	18

### Harvesting

Vanilla fruits will be adequately ripened in 9 months after the pollination. The length of the fruits will be approximately 15 - 25 cm, and the color of the fruit will be yellow at the end. When harvested at the right time, the vanillin content reaches 2.2%, has a black color, and is oily and shiny. When fruits are harvested earlier they are too rigid, have less in aroma, and

**Vanilla**

have low vanillin content. When they are harvested too late, the fruits are broken, causing the price to be low. Based on some researches, vanilla that is harvested approximately 240 days after the pollination bear the highest vanillin content (2.95%).

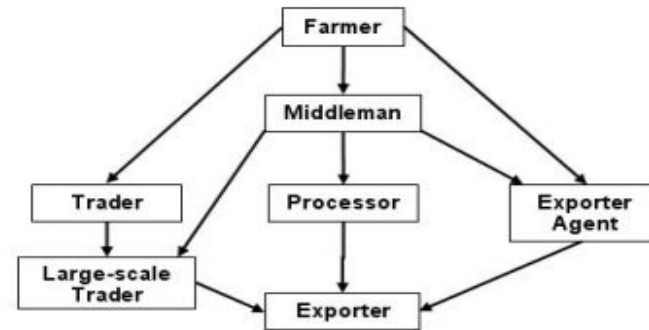
The following table shows the influences of age towards the vanillin, ash and water content<sup>52</sup>.

The Influence of The Age Harvested Vanilla Age towards The Contents of Its Vanillin, Ash, as well as Water

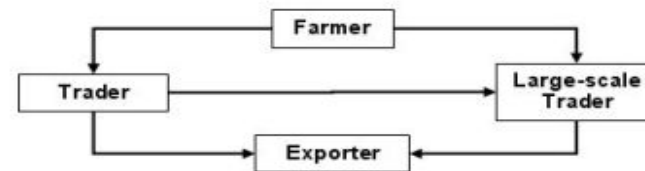
Harvest Age (days)	Vanillin Contents (%)	Ash Contents (%)	Water Contents (%)
150	0.85	6.75	17.54
180	1.90	5.68	18.26
210	2.65	4.91	18.49
240	2.95	3.59	17.52

# Distribution Channels

In its lane of marketing, the majority of vanilla from farmers is initially accommodated by middlemen. The marketing lane to foreign countries involves more number of parties; namely exporter agencies, processors, brokers/middlemen and traders. The following chart show s the typical distribution channel for Vanilla<sup>44</sup>.



Source : BRI, 1986



Source : Primary Data, 2005

## Vanilla

### Procedures to Make Orders

The requirements to import any vanilla products through most companies are fairly similar. You must first send them your contact information to their headquarters including:

1. First, Last Name
2. Email
3. Company name and address
4. Telephone number

### Systems and Terms of Payment

The Vanilla Saffron Imports Organization pre arranges with the farmers or groups. It is usually 30 days net or L/C<sup>45</sup>.

### Transportation

For the vanilla to reach the US from countries such as Madagascar, Uganda, Comoros, etc, it has to be shipped via a ship in a container.

### Packing, Types Used: Crates and Labels

For the Vanilla Saffron Imports organization, the vanilla comes in packs of 5 kg and 25 kg to the box. They need the size of each bundle and there are different sizes of bundles in the box.

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## Prices

The wholesale prices of vanilla bean from an American company are as follows<sup>53</sup>:

“Wholesale prices”

Premium Extracts Quality  
Length: 14cm (5 1/2”) to 20cm (8”)  
Madagascar whole vanilla beans  
Color : Dark brown \$63.50 lb

Gourmet Vanilla Beans (Short)  
Length: 14cm (5 1/2”) to 16cm (6 1/4”)  
Madagascar whole vanilla beans  
Color: Black \$77.10

Gourmet Vanilla Beans (Long)  
Length: 17cm (6 3/4”) to 20cm (8”)  
Madagascar whole vanilla beans  
Color: Black \$90.70

There are many factors that go into the pricing of vanilla bean depending on length, type, and grade (A or B). The Organic Vanilla Bean Company breaks their pricing into 2 main categories: Tahitian and Bourbon beans. Within each category the pricing of the beans is broken down by 3 sizes: S, M, and L<sup>54</sup>.

At an average unit value of \$22.79 per pound, imports averaged \$61.6 million annually in 1990-94 for 2.7 million pounds<sup>55</sup>.

## Sales Promotion

The internet is a very strong force of sales promotion for many Companies involved with vanilla. Many companies such as Virginia Dare push their superior technological processes to win over buyers. They highlight their new cultivation techniques and improved production processes and controls. They also emphasize their effective analytical method development and sensory evaluation tools used<sup>56</sup>.

Other companies like VANILLA FROM TAHITI utilize more conventional methods of promotion like the offer they have on their Tahitian Vanilla Extract: "Allergies? No Additives, No Grains Buy One 8oz Get Free One 2oz Offer". Although the "buy one get one free" phrase is a common sales tactic seen by the consumer, it is nonetheless still an appealing strategy<sup>57</sup>.

Since vanilla is derived from mother earth, patrons often search for that "100% all natural" label on the products. This is very commonly emphasized within a lot of companies.

## Importers List and Distribution Networks

### Retail Distributors

#### North East/ Mid Atlantic

Associated buyers- Barrington, NH 603-664-2424  
Atlantic Importing- Southboro, MA 508-229-0014  
New Market Fine Foods- Millburn, NJ 973-921-1277  
United Natural Foods- Chesterfield, NH 800-451-2525/ New  
Oxford, PA 800-336-4557/ Dayville, CT 860-877-8898  
Millbrook Distribution- Leicester, MA 800-375-6455  
Neshaminy Valley Foods- Ivyland, PA 215-443-5545  
Provisions International- Whiter River Junction, VT 802-649-  
3211  
Cavallaro Specialty Foods- Syracuse, NY 315-437-4636  
Regional Access- Trumansburg, NY 607-387-6959  
DPI/ Mid Atlantic- Upper Marlboro, MD 301-430-2200  
Wythe Will Distributing- Toano, VA 757-566-5360

#### South East/ Central

European Imports- Atlanta, GA 404-767-7655  
United Natural Foods- Atlanta, GA 800-676-4667  
Martin Preferred Foods- Houston, TX 800-356-7390

#### Midwest

Euro USA- Cleveland, OH 800-999-5939  
Peters Imports Inc. - Grandville, MI 616-261-5405  
European Imports- Chicago, IL 773-227-0600  
R. Hirt Jr., Company- Detroit, MI 313-831-2020  
United Natural Foods- Greenwood, IN 800-814-0819/ Iowa  
City, IA 800-323-2131

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### Mountain/ West

European Imports- Glendale, AZ 623-937-4100  
 Gourmet Merchants International- Carson, CA 310-638-9828  
 Provvista Specialty Foods- Portland, OR 503-228-7676  
 Renaissance Specialty Foods- San Francisco, CA 415-671-4920

### Canada/ International

G. Costa & Co.- Kent, UK +44 (0) 1622 717777  
 Roel Delicatessen- Wijchen, Nederland +31 642 308 664  
 Food Ingredients Technology- Beds, UK +44 (0) 1767 677666  
 Community Foods- London, UK+44 (0) 20 8450 9419  
 Inka Foods Aps- Frederiksberg, Denmark +45 30228431  
 Truffle Food & Wine- Wellington, New Zealand +64 4 385 2802

Listed below is relevant Company Headquarters information:

#### Virginia Dare

882 Third Avenue  
 Brooklyn, NY 11232  
 PH: (718) 788-1776  
 FX: (718) 768-3978

#### Nielsen-Massey Vanillas International, LLC.

Uranusweg 10  
 8938 AJ Leeuwarden  
 The Netherlands

Plant Manager, Netherlands  
 Bouwe de Vries  
 PH: 31 58 28 82 880  
 FX: 31 58 28 00 288

#### Vanilla Saffron Imports

949 Valencia St.  
 San Francisco, CA 94110  
 PH: (415) 648-8990  
 FX: (415) 648-2240

#### Mooreganics

9047 Sutton Place  
 Hamilton, Ohio 45011  
 PH: 513.881.7144  
 FX: 513.881.7145

#### ForesTrade U.S./Europe

ForesTrade, Inc.  
 41 Spring Tree Rd.  
 Brattleboro, VT 05301  
 PH: +800-989-4399  
 FX: +802-257-7619

ForestTrade Europa B.V.  
 Wijnkoopsbaai 16  
 NL 2904 BP Capelle a/d Ussel  
 The Netherlands  
 PH: +31 10 451 83 34  
 FX: +31 20 203 10 15

# Upcoming Commercial Events

## Western Hemisphere

### 2008

EXPHOTEL- June 11-13 Cancun, Mexico  
 Alimentee (Tentative)- June 11-14 Bogota, Columbia  
 SIAL Mercosur (Tentative)- September 16-18 Buenos Aires, Argentina  
 IFE Americas Food and Beverage- September 24-26 Miami, Florida  
 Abastur- October 1-3 Mexico City, Mexico

### 2009

The Canadian Restaurant & Food Service Association Show (CRFA) - March 1-3 Toronto, Ontario  
 ANTAD- March 10-13 Guadalajara, Mexico  
 SIAL Montreal- April 1-3 Montreal, Canada  
 Expo Alimentos (Tentative)- April 17-18 San Juan, Puerto Rico  
 Global Food and Style Expo (NEW) - April 5-7 Chicago, Illinois  
 American Food Fair (National Restaurant Association) - May 14-19 Chicago, Illinois  
 Alimentaria Mexico- June 2-4 Mexico City, Mexico  
 EXPHOTEL- June 10-12 Cancun, Mexico  
 SIAL Mercosur- September Buenos Aires, Argentina  
 Abastur- September 30; October 2 Mexico City, Mexico  
 IFE Americas Food & Beverage- November 11-13 Miami, Florida

## Vanilla

### Asia

#### 2008

Food Taipei- June 18-21 Taipei, Taiwan  
 AFEX Plus (New) - July 8-9 Manila, Philippines  
 Asia Fruit Logistica- September 10-12 Hong Kong  
 Food Ingredients Asia (Fi Asia) - September 24-26 Bangkok, Thailand  
 Health Ingredients Japan- October 15-17 Tokyo, Japan  
 Food & Hotel China, Shanghai- December 4-6 Shanghai, China

#### 2009

AAHAR (Tentative) - March New Delhi, India  
 FOODEX Japan- March 3-6 Tokyo, Japan  
 Food & Hotel Indonesia (American Café) - April 1-4 Jakarta, Indonesia  
 Int'l Food and Ingredients & Additives Exhibition (IFIA) - May Tokyo, Japan  
 HOFEX- May 6-9 Hong Kong  
 SIAL China- May 19-21 Shanghai, China  
 Seoul Food & Hotel Korea- May 26-29 Seoul, Korea  
 Food & Hotel China, Beijing- June 9-11 Beijing, China  
 Food Taipei- June 17-20 Taipei, Taiwan  
 AFEX Plus (Tentative) - July Manila, Philippines  
 Food Ingredients Asia (FI Asia) - September Bangkok, Thailand  
 Fruit Logistica- September Bangkok, Thailand  
 Food & Hotel Vietnam- October 28-30 Ho Chi Minh City, Vietnam

Health & Ingredients Japan (HI Japan) [Tentative] - October Tokyo, Japan  
 Food & Hotel China, Shanghai- November 17-19 Shanghai, China

### Australia

#### 2008

Fine Food Australia- September 22-25 Melbourne, Australia

#### 2009

Fine Food Australia- September 7-10 Sydney, Australia

### Europe/Russia

#### 2008

World Food Moscow- September 23-26 Moscow, Russia  
 SIAL Paris- October 19-23 Paris, France  
 Health Ingredients Europe (Hi Europe) - November 4-6 Paris, France

#### 2009

Sirha- January 23-27 Lyon, France  
 Fruit Logistica- February 5-7 Berlin, Germany  
 BioFach (organics) February 19-22 Nuremberg, Germany  
 Int'l Food & Drink Exhibition (IFE) London- March 15-18 London, UK  
 European Seafood Exposition- April 28-30 Brussels, Belgium  
 World Food Moscow- September Moscow, Russia

## Vanilla

ANUGA- October 10-14 Cologne, Germany  
Food Ingredients Europe (Fi Europe - November 17-19  
Frankfurt, Germany

### **Africa/Middle East**

#### **2008**

Morocco (American Café) - June Casablanca, Morocco  
Libya (TBD- December Tripoli, Libya

#### **2009**

Gulfood- February 19-22 Dubai, United Arab, Emirates  
Alimenticia Angola- April Luanda, Angola  
Morocco (American Café)- June Casablanca, Morocco  
Libya (Tentative) - December Tripoli, Libya

## Conclusions and Recommendations

### Hibiscus

Whether it is fresh, canned, processed, or frozen, the 15,000 metric tons of Hibiscus that are exchanged every year definitely leaves room for potential entrants into the industry. Possibly the most important factor to realize here is that the market for hibiscus has had an increase in demand at a steady rate for the past couple decades. Being that there is practically no production of this commodity in the US, distributors rely on importing to satisfy consumers.

Globally, most of the supply is provided by the Northern Hemisphere. The ample amount of consumption for the product around the globe leaves distributors buying the commodity year round. This is where South Africa takes advantage of the regular off season by capitalizing on production. Any potential entrants who could maximize output in these months would benefit greatly by the lack of competition during this off season.

### Vanilla

For any potential vanilla producers or distributors, it is important to note the fact that the US is currently the world's largest vanilla importer. The fact that ice cream accounts for approximately half of the vanilla usage in the US should be a factor when thinking of promoting efforts. As the industry is one that has steady growth, there is room for potential entrants to steal consumers from existing competitors.

## Conclusions and Recommendations

Although natural vanilla is currently being overpowered in the market by the cheaper and more readily available synthetic vanilla, it cannot be dismissed as a valuable commodity. The United States is the largest importer of vanilla at approximately 2200 tons per year and with the frenzy for healthy and natural products growing, it's only a matter of the right kind of focused promotion to give natural vanilla the market power it once had.

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