

HAP PUBLICATION

HAITI EXPORT PRODUCT BULLETINS

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Abstract: The following nine export product bulletins were produced by the Haiti Hillside Agricultural Program (HAP) as a reference guide for exporters and farmer associations. The bulletins characterize the U.S. import markets, seasonal price fluctuations, and consumer preferences for identified products on the Haitian export market.

Table of Contents:

1.	Mango Product Bulletin.....	1
2.	Specialty Coffee Product Bulletin.....	3
3.	Avocado Product Bulletin.....	7
4.	Yam Product Bulletin.....	9
5.	Cassava Product Bulletin.....	11
6.	Malanga Product Bulletin.....	13
7.	Calabaza Product Bulletin.....	15
8.	Scotch Bonnet Peppers Product Bulletin.....	17
9.	Genip Product Bulletin.....	19

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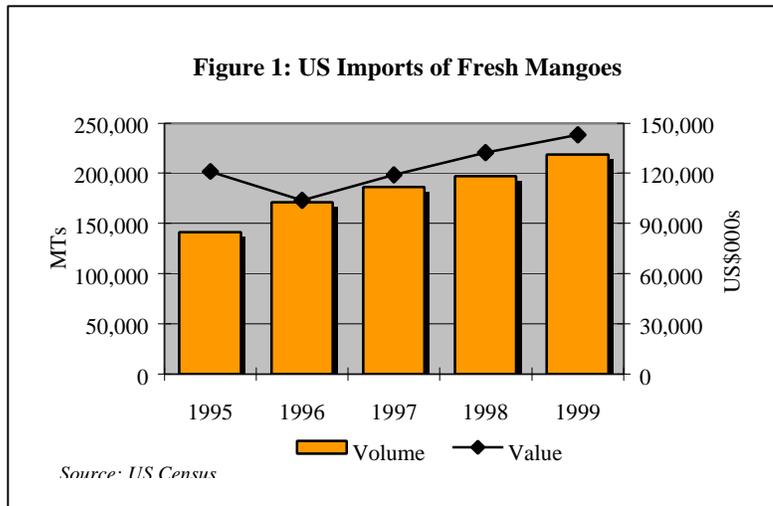
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MANGO

HAP Product Bulletin #1

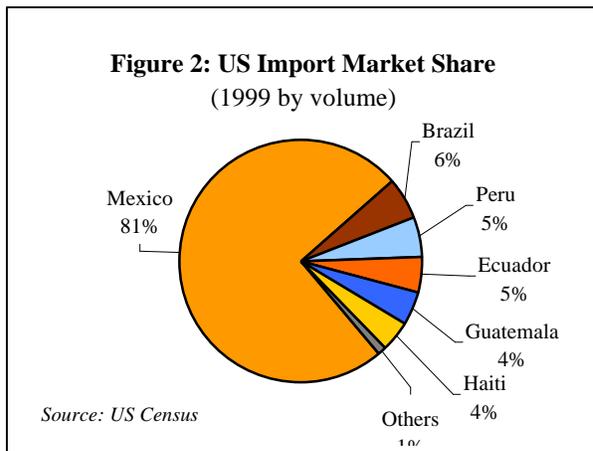
2000-2001

Imports: The US market for fresh mangoes continues to expand as more consumers become familiar with the fruit and the fact of its year-round availability. Imports account for about 99 percent of total sales, with Florida providing minimal (and declining) domestic production. In 1999, the US imported 219,000 MTs of mangoes (value estimated at \$142 million), an increase of 11 percent over 1998 volumes. One Los Angeles-based importer predicts steady growth of 7 to 10 percent annually over the next few years, with higher demand during the winter months.



Market Share: Mexico remains the dominant supplier with an 81 percent market share in 1999. It's relative share has decreased marginally over the

last few years (from 88 percent in 1994), primarily due to increased shipments from Brazil, Ecuador, and Peru during the Mexican counter season. Mexico's main advantage over these other suppliers is its proximity to the US, which it shares with rival suppliers Haiti and Guatemala. Like Mexico, Haiti is also a significant supplier during the summer months. Despite intense competition from Mexico, Haiti is able to compete by shipping mangoes directly to Miami. Brazil is the main supplier during the period mid-September through February. Other suppliers include Ecuador and Peru, both of which gained significant market share in 1999, and Nicaragua and Costa Rica. Shipments from Venezuela have declined since 1995-96.



Seasonality: Nearly 80 percent of all mango imports arrived during the period April-August in 1999, a time when Mexico supplies the market with large volumes at low prices. Mexico's main competitors during the spring are Guatemala and Haiti. Reliable supplies from Brazil, Peru, and Ecuador from September to March have made mangoes available on a year-round basis (see Figure 3 on back).

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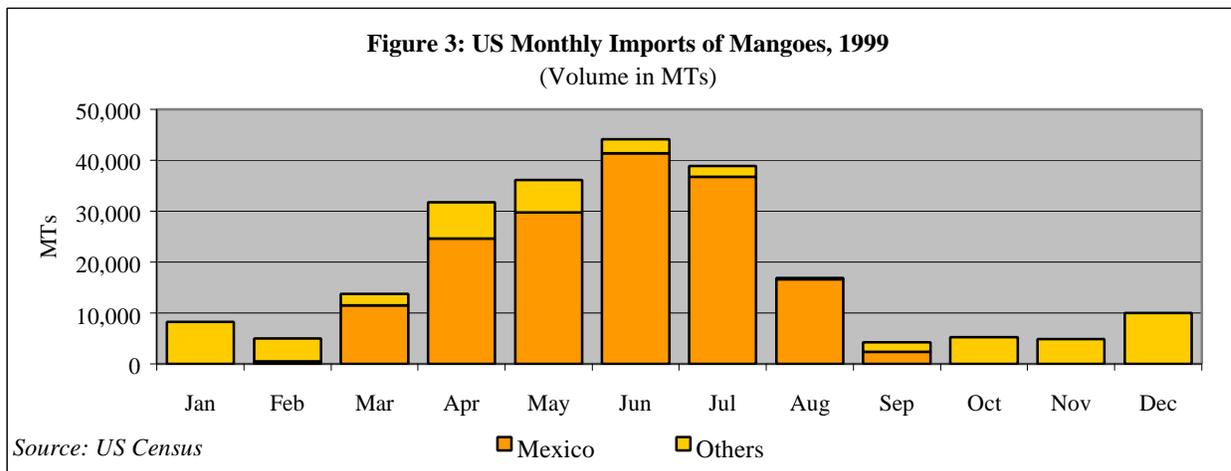
Exporters can obtain additional information by contacting:

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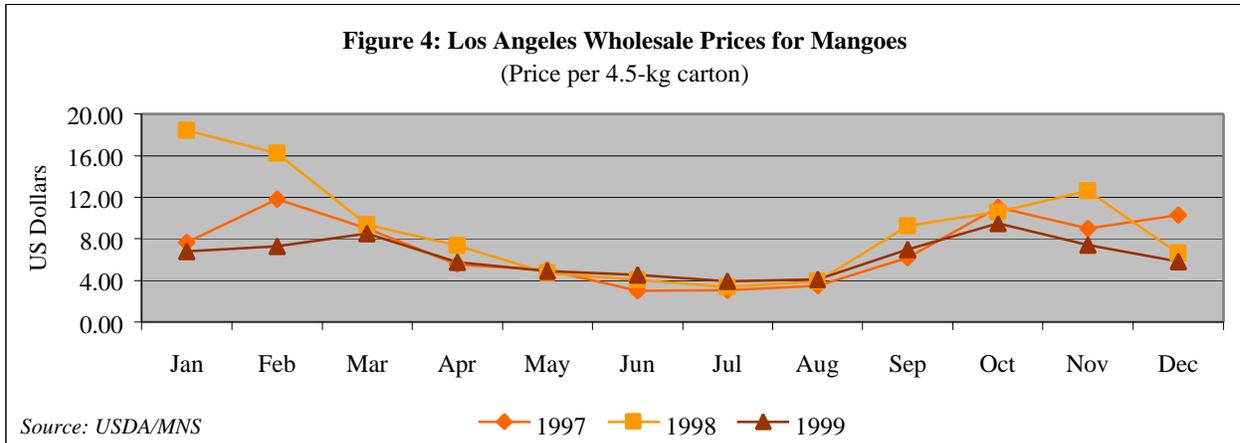
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Prices: Mango prices tend to be volatile due to the seasonal change in suppliers. During the summer months, when the Mexican season is in full swing, prices average as low as US\$4.00 per carton (4.5 kg net). Figure 4 provides a sampling of fresh mango wholesale prices in the Los Angeles terminal market from key supplying countries. Because of lower transport costs vis-à-vis competitors, Mexico is able to sustain these lower prices and effectively dominate the market. As the Mexican season ends, prices increase. In 1999, prices averaged \$7-\$10 per carton from September to December. Importers note that prices fluctuate greatly from year to year based on supply and weather conditions. Because of sporadic changes in the market, it is difficult to predict a trend in the prices of fresh mangoes. In general, however, prices have shown an overall decline over the last few years, attributable to increased volumes sourced from Brazil and other South American suppliers.



Preferences: The majority of US consumers are largely unfamiliar with mangoes. Tommy Atkins remains a popular variety because of its red blush, despite it being fibrous and less sweet than others. Retailers attribute this to the tendency of consumers to select fruit based on appearance rather than taste; hence produce managers are reluctant to stock supermarket shelves with better-tasting but less attractive varieties. Of the major imported varieties, buyers note that Haden possesses superior taste but a limited shelf life relative to the Tommy Atkins and Kent varieties. Some buyers believe that sweet, yellow-skinned varieties such as Mexico's Ataulfo mango may soon develop a following in the US. In addition to the large presence of poor quality varieties, the appearance, texture, and taste of mangoes found in the US are inferior to what consumers in other countries enjoy, since most imported mangoes are treated with hot water in order to meet phytosanitary requirements.

SPECIALTY COFFEE

HAP Product Bulletin #2

2000-2001

Introduction: The US coffee market is comprised of multiple segments and product formulations. The majority of sales consist of ground regular and instant/soluble coffee products, which are primarily sold under brand names such as Maxwell House, Folgers, and Nescafé. Whole bean and specialty coffee sales comprise a small but increasing share of the retail market. Each of these markets can be further subdivided into additional product formulations – e.g. caffeinated/decaffeinated, flavored/unflavored, Arabica/Robusta, dark roast/light roast, etc.

Contrary to common perceptions, US per capita consumption of coffee has declined over the last 30 years. In 2000, per capita consumption is projected at 1.66 cups per day. This compares to 2.77 cups/day in 1960 and 2.02 cups/day in 1980. While per capita consumption is decreasing, demand is increasing for specialty/gourmet coffees that often pay premium prices to producers.

The specialty coffee market is highly differentiated, with no universally accepted definition as to what constitutes “specialty coffee.” For the purposes of this survey, “specialty coffee” is defined as coffee that is marketed in one of the following four categories: gourmet/rare origin/estate; organic; shade-grown (also called “bird friendly”); and “fair trade.”

Table 1: Specialty Coffee Categories

Gourmet/Rare Origin/Estate	Coffee selling at premium prices because of the production location (country, region, or estate) and perception of high quality. Examples include Jamaican Blue Mountain, Hawaiian Kona Fancy, Haitian Bleu, Papua New Guinea Sigri A, Ethiopia Yirgacheffe, and Kenya AA.
Organic	Coffee grown and processed without using chemicals (including chemical pesticides, herbicides, and fertilizers).
Shade-Grown	Coffee grown under a natural forest canopy, providing a habitat for birds (hence also referred to as “bird friendly”), insects, other animals, and plants.
Fair Trade	Coffee purchased from fair trade certified cooperatives’ members at generally higher prices than those offered by traditional marketing channels (i.e. middlemen).

Production: World coffee production in the 2000/2001 crop year is expected to hit a record of 6.5 million MTs, up 2 percent from the previous year. The majority of coffee is produced organically, but only a small portion is actually certified organic by independent organizations. Approximately 85 percent of Ethiopia’s production is thought to be organic, yet very little of that is actually certified. Although Mexico is the largest producer of organic coffee, only 2 percent of its production is currently certified. In Guatemala, registered organic coffee production accounted for about 5 percent of total production in 1999. This level is expected to start increasing in a few years as transitional farms become fully certified.

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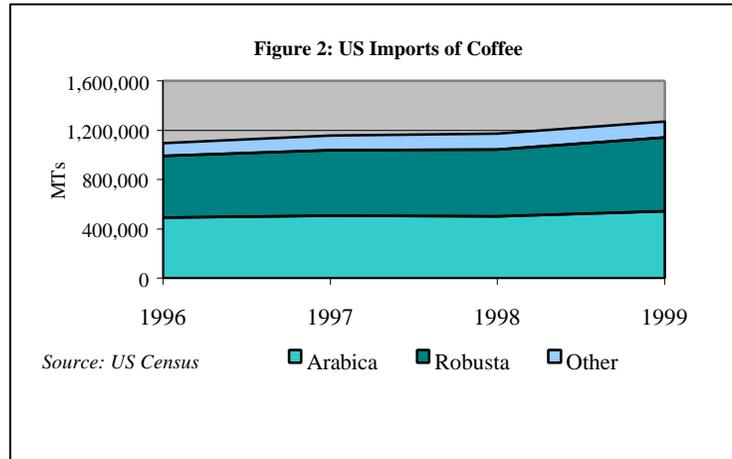
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Fair trade coffee constitutes a small percentage of total world production. Of the 240,000 MTs of green coffee produced by Uganda in 1999, only 307 MTs were produced by fair trade certified producers. However, this is an increase from 170 MTs in 1997. Tanzania produced 833 MTs of fair trade coffee in 1999, down from 888 MTs in 1997 and representing only a small portion of its 46,000 MT harvest.

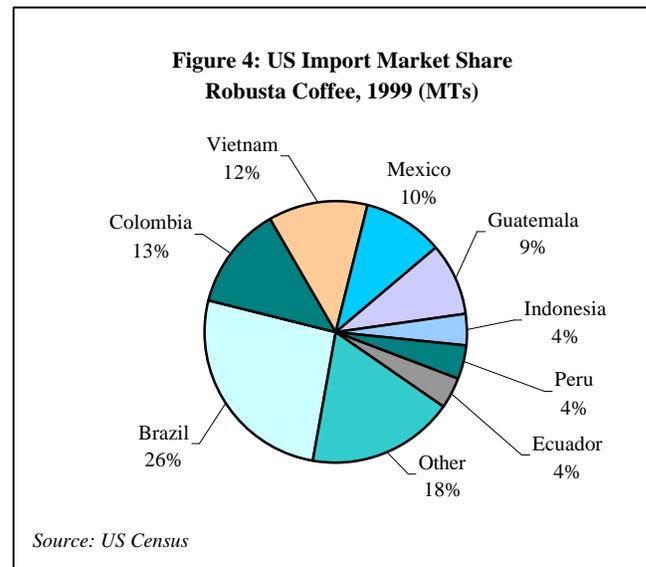
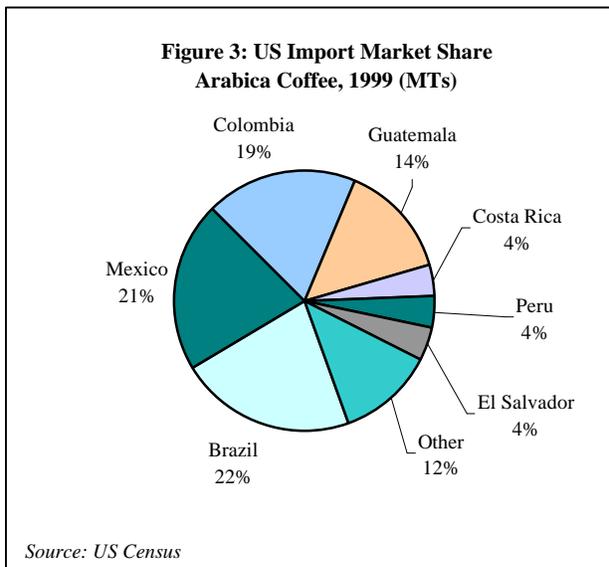
Prices: Prices for standard varieties of coffee fluctuate widely from year to year, mainly due to supply factors. Current high production and stock levels have continued to place downward pressure on prices. Over the short-term, prices are expected to remain at or under \$0.90/lb.

Imports: US coffee imports increased over the period 1996-1999 in terms of volume, but declined in value. In 1999, the US imported 1.3 million MTs of coffee worth \$2.7 billion. Green, unroasted, and caffeinated coffee accounts for the majority of US imports: 1.1 million MTs (\$2.3 billion).



The US imported 543,000 MTs (\$1.2 billion) of unroasted Arabica coffee in 1999. Seventy different countries have exported unground Arabica coffee to the US market over the last four years. Brazil is the largest supplier, with an import market share of 22 percent by volume in 1999. Other major suppliers include Mexico (21%), Colombia (19%), and Guatemala (14%).

Imports of unground Robusta coffee reached 601,000 MTs (\$1.1 billion) in 1999. The US imported unground Robusta coffee from 84 different countries during the last four years. Brazil is also the largest supplier, with an import volume share of 26 percent in 1999. Other major suppliers include Colombia (13%), Vietnam (12%), Mexico (10%), and Guatemala (9%).

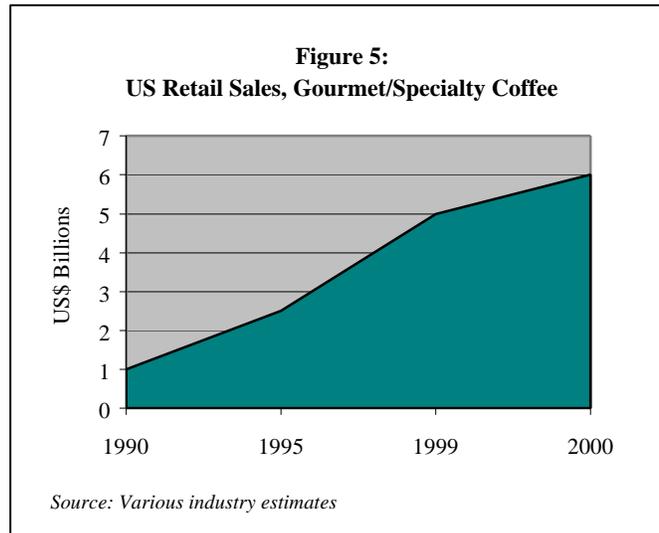


The Specialty Coffee Market

Because the definition of specialty coffee is vague, it is difficult to estimate the exact size of the US market. The Specialty Coffee Association of America (SCAA) defines specialty coffee simply as “quality coffee.” Specialty coffee may be marketed by country of origin, by method of production (organic, shade grown, etc.), by region, estate, roast color, and/or flavor. In reality, there are many niche varieties that would fall under the specialty category – the primary characteristics shared by specialty coffee are: (1) particularly high quality; (2) differentiated in some way from other coffees; and (3) command higher prices than the more common commercial blends. Specialty coffee is also usually of the Arabica variety, known for its better flavor, overall quality, and lower caffeine content.

According to the SCAA, gourmet/specialty coffee sales exceeded \$5 billion in 1999. This figure is up from other estimates of gourmet coffee sales at \$1 billion in 1990 and \$2.5 billion in 1995. While gourmet coffee will only account for an estimated 8 percent of the volume of beans roasted in 2000, it will comprise one-third of the \$18 billion in total retail coffee sales.

Despite the lack of detailed sales figures, what is clear is that the specialty/gourmet/quality coffee market is growing rapidly. Furthermore, its share of the market will continue to increase with the expansion of the retail coffee house sector.



Gourmet / Rare Origin / Estate Coffees: Imports of rare origin coffee remain low. This is mainly due to the fact that available volumes are so small. In 1999, the US imported only 16 MTs of coffee from Jamaica (the majority of Blue Mountain coffee is sold to Japan) and only 36 MTs from Haiti. Estate volumes vary depending on the size of the estates, although the number of estate brands marketed continues to increase. Gourmet, rare origin, and estate coffees generally retail at prices above \$9.00 per pound. For the rarest coffees such as Jamaican Blue Mountain, prices can reach \$40 per pound or more.

Organic Coffee: Organic coffee is thought to comprise only 1 percent of all US coffee sales and only 5 percent of the gourmet market, although some estimates are much higher. According to a survey conducted by the Specialty Coffee Association of America and *Gourmet Retailer* magazine, specialty coffee shop owners report that 10 percent of sales are organic. Some of the higher estimates of 7-10 percent of the market may be justified considering that much of the organically grown coffee is not sold as such since it has not been certified (also called “passive organic”).

What is clear is that organic coffee is one of the fastest growing niches in the overall specialty coffee market, with growth estimated at roughly 20 percent per year according to industry sources. Indicative of this was the announcement in April 2000 by Seattle’s Best Coffee, one of the largest specialty coffee companies in the US, that it was expanding its organic line from 4 to 6 blends because its organic sales had increased from 55,687 lbs in 1998 to 74,881 lbs in 1999.

Certified organic coffee fetches a premium of 10-15 percent above standard gourmet coffee. The main constraint to smallholders entering the organic market is obtaining, paying for, and maintaining organic certification. Producers need to obtain certification from independent third-party organizations, have a three-year history of not using chemicals, write a five-year farm plan, keep written records for an audit trail, and agree to annual inspections. Furthermore, the product must be maintained organic throughout the marketing chain. As of 1999, only 10 percent of US roasters were certified organic according to *Tea and Coffee Trade Journal*.

Shade-Grown Coffee: The shade-grown coffee “movement” is a result of the increased production of technified (sun-grown) coffee in Mexico and Latin America. Through the early 1990s, an estimated 40-50 percent of coffee production in the region was transformed from shade-grown to sun-grown. Increased sun-grown production has resulted in the clear-cutting of natural forests, increased use of agrochemicals, and a decrease in bird habitat. Latin American production regions are habitats for a large number of wintering US bird species, and advocates point to coffee technification as the main reason for a sharp drop in the number of US songbirds. For this reason, shade-grown coffee is also referred to as “bird friendly.”

No reliable market information is available on the current US sales volumes of shade-grown coffee. However, based on the increased number of offerings by coffee roasters and retailers, sales are certainly expanding.

Fair Trade Coffee: The “fair trade “coffee market has evolved as part of a worldwide movement to better the terms of trade for producers in developing countries. For coffee, this typically means removing the middleman from the transaction by having certified cooperatives sell directly to importers/roasters at or above a “fair” minimum price. Some advocates point to the common example of producers receiving just \$0.30-\$0.50/lb for coffee that retails for \$8/lb or more.

An estimated 85 percent of fair trade certified coffee is shade grown and either passive or certified organic. Currently, over half of all organic coffee is produced by fair trade certified cooperatives. While US-based organizations such as Equal Exchange (sales of \$5.5 million in 1998) followed fair trade standards as far back as 1986, there was no national fair trade organization until 1996 when TransFair USA was founded. TransFair USA estimates that, while US fair trade coffee sales totaled only 1.5 million lbs in 1999, this figure should reach 12 million lbs per year by 2002.

Fair Trade Criteria	
<i>In order for an importer to become certified as “fair trade,” it must meet the following requirements:</i>	
<input checked="" type="checkbox"/>	Pay a minimum price to small farmers included in the International Fair Trade Coffee Register. (\$1.26/lb fob for washed Arabica coffee, or \$0.05/lb above the world price if it exceeds \$1.26/lb);
<input checked="" type="checkbox"/>	Pay an additional \$0.15/lb fob premium to farmers for certified organic coffee;
<input checked="" type="checkbox"/>	Purchase beans from democratically organized small growers;
<input checked="" type="checkbox"/>	Provide pre-harvest credit to growers;
<input checked="" type="checkbox"/>	Agree to purchase on long-term and not one-time basis.

The fair trade coffee movement in the US got a big boost in 2000 when Starbucks Coffee began offering the product in its 2,300 company-owned retail stores (under pressure of protests organized by Global Exchange). It is being offered alongside Starbuck’s Shade Grown Mexico (sold in partnership with Conservation International) and Organic Costa Rica coffees (certified by the Costa Rica agency, Eco-LOGICA). Other large roasters/retailers are also entering into licensing agreements with TransFair USA, such as Peete’s Coffee (57 stores), Green Mountain Coffee, and Dean’s Beans.

Research by TransFair USA shows that about 50 percent of US consumers are willing to pay \$1.00-\$2.00 more per pound for fair trade coffee. It estimates that fair trade coffee should be feasible if retailing in the range of \$8.00-\$10.00/lb, although most of the larger roasters/retailers are in fact pricing their fair trade coffee higher than this in anticipation of increased demand.

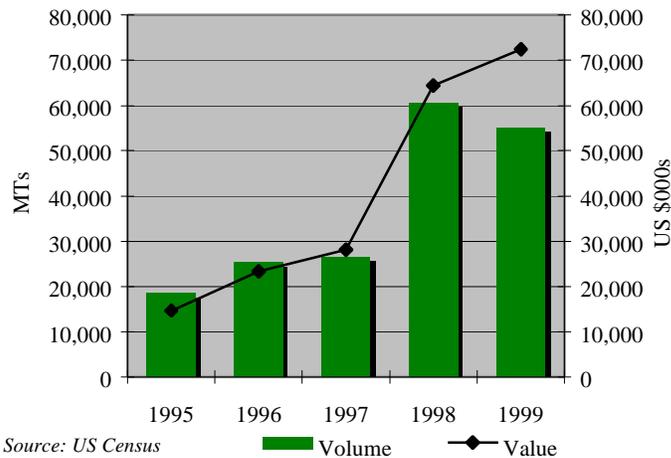
Roaster/Retailer	Retail Price (per lb)
Starbucks	\$11.45
Peete’s	\$10.95
Tully’s (certified organic)	\$13.95
Equal Exchange	\$8.95
<i>Source: Fintrac survey conducted in October 2000</i>	

AVOCADO

HAP Product Bulletin #3

2000-2001

Figure 1: US Imports of Fresh Avocadoes

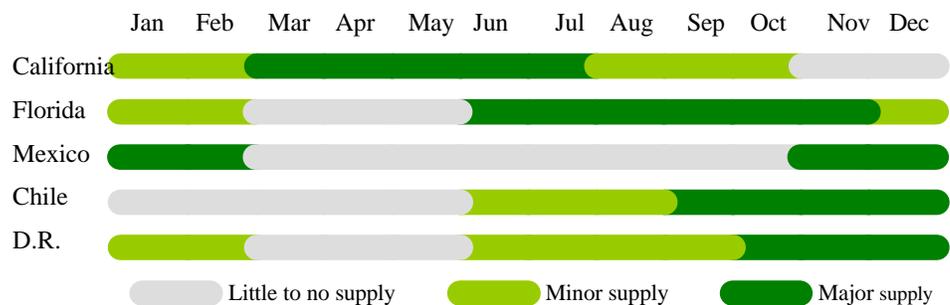


Imports: US import figures for avocado do not distinguish between the more popular Hass variety found in Mexico, Chile, and California, and the West Indian, or “Greenskin” variety grown in the Caribbean and in Florida. US imports of fresh avocado increased gradually between 1995 and 1997 and then leapt by over 100 percent during the following year, both in volume and in price, due to the first-time entry of imports from Mexico. 1999 imports fell slightly from the previous year but still finished at 55,185 MTs, well above prior levels. Import value has increased annually since 1995, reaching \$72 million in 1999.

Imports from the Caribbean: The bulk of US imports come from Chile and Mexico and are almost exclusively the Hass variety. When singled out separately, imports from the Caribbean show a slight decline in volume from 1996 to 1998, followed by a substantial increase in 1999 with 8,522 MT.

Seasonality: There are notable changes in product seasonality throughout the year. Chile’s main months of supply are September through December, while Mexican shipments are restricted to 19 northern US states from November 1 to February 28. The California season takes over from March through September. Total US production per annum is around 150,000 MTs, roughly three times the level of all imports.

Table 1: Avocado Seasonality Chart – Intensity of Supply to US Market



Source: US Census and Fintrac importer interviews

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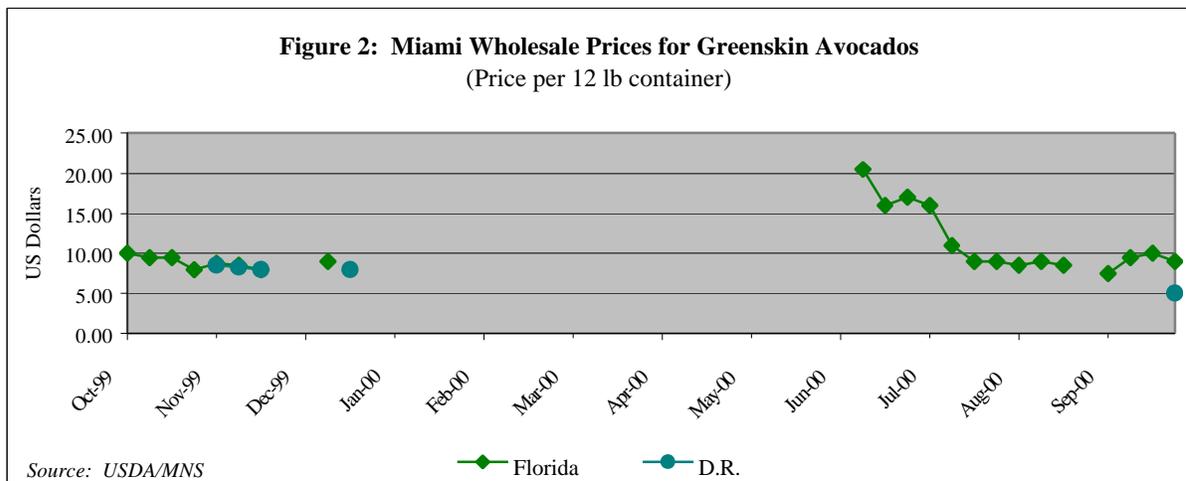
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Caribbean Market Share: The Dominican Republic holds 90 percent of import market share among Greenskin suppliers, the Bahamas being the only other significant competitor. Jamaica and Dominica have not exported avocado to the US in several years. Haiti did not export avocados until 1999, when it shipped 3 MT valued at \$7,200. While the volume of Caribbean imports has rarely fluctuated, its relative market share in the US has fallen sharply due to increased imports from Chile and Mexico.

Prices: There are notable differences in the wholesale price of Hass and Greenskin avocados, with Hass normally commanding higher figures. Double-layer packages (24-lb) of Hass range from \$40 during the height of the California season to \$63 at other times, while double-layer packages of either Florida or Dominican Greenskins rarely broke the \$20 mark during the last 12 months, often ranging \$13-\$15. Last year's prices for single-layer containers of the Greenskin variety are detailed in Figure 2.



Quality Standards: The Hass variety of avocado is smaller, more oily, and more flavorful than Greenskin varieties, examples of which include Lula, Monroe, Hall, and Nesbitt. Greenskins remain far more popular among Caribbean and Cuban consumers -- the Hass variety turns a deep purple or black when it is ripe, whereas the Greenskins do not, leading these consumers to assume that a black avocado is rotten. As the name implies, Greenskin avocados should be uniformly green and free of mechanical damage, insect damage, and fungal infection. Fruit maturity is indicated by a change from green to light green. Fruit should be pear-shaped and of a uniform size. Skin is leathery smooth and medium-thick (1.5 to 3 mm).

Postharvest: West Indian varieties are particularly susceptible to chilling damage and should not be stored or shipped at less than 12° C, with 95% relative humidity. Ripening rate after harvest is largely dependent on fruit age; early season mature fruits may take 10-12 days to ripen, while fruit picked late in the season ripen in half that time.



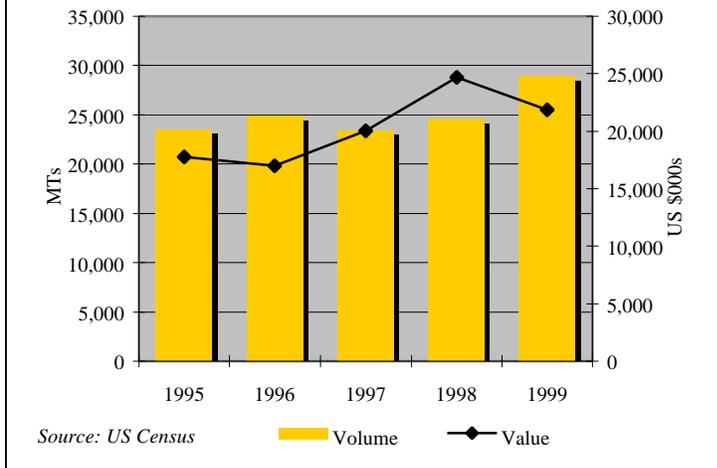
Packaging: Avocados are packed in single- or double-layer, telescopic fiberboard cartons, either two-piece combinations or one-piece, self-locking units. Standard single-layer carton dimensions are 40 cm. x 30 cm. x 11 cm. Because of wide variation in fruit size, avocado cartons come in different counts: single-layer cartons weigh 12 pounds and normally contain 8, 10, 12, 14, or 16 avocados; double-layer cartons weigh 24 pounds and contain 14, 16, 18, 20, 22, or 24 fruit. All avocados in a given container should be the same size.

YAM

HAP Product Bulletin #4

2000-2001

Figure 1: US Imports of Fresh Yams

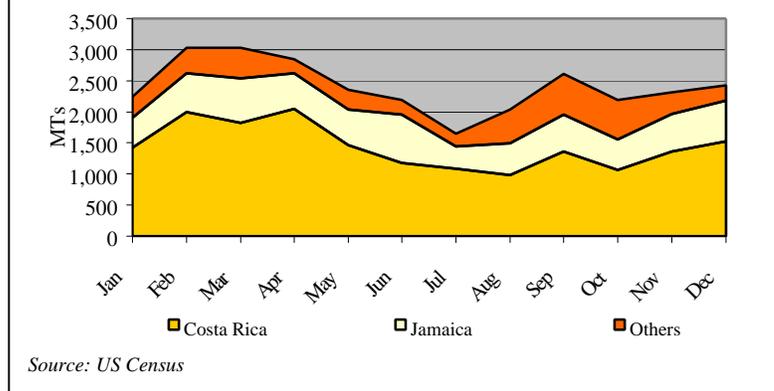


Imports: US imports of fresh yam have increased since 1995, gaining particularly strong growth in the last three years. After a slight drop in imports between 1996 and 1997, growth has been steady, increasing 18 percent between 1998 and 1999 to 28,910 MT. Despite the gains in volume, the corresponding value of fresh yam imports fell from \$24.68 million in 1998 to \$21.89 million in 1999 (but was still 23 percent higher than four years prior).

Seasonality: Yams are imported into the US on a year-round basis. Both production and demand fall during warmer weather, resulting in a decline in imports in the spring until an increase at summer's end.

Market Share: Costa Rica claims the majority of the US market, particularly during the first four months of the year, but Jamaica and Ghana have significant market share as well. Costa Rica's market share increased from 37 percent in 1994 to 60 percent in 1999. Over the same period, Ghana's share increased slightly from 4 percent to 7 percent, while both Jamaica and Colombia have lost market share. Other suppliers in 1999 included the Dominican Republic, Japan, and Panama.

Figure 2: US Monthly Imports of Fresh Yams, 1999



Prices: Yam prices vary sharply by variety. The Jamaican Yellow variety consistently sells 50-100 percent higher than the more plentiful Costa Rican Blanca. In the most recent season, the Jamaican Yellow yams commanded strong premiums over Blanca, peaking at \$80 per 50-lb carton. This was due to a shortage of supply brought about by both drought and a recent USDA ban on a chemical long used by Jamaican producers. The price of Yellow yam has since fallen and is currently trading in the mid-\$40s, while the Blanca yam is trading around \$20 (see Figure 3 on back).

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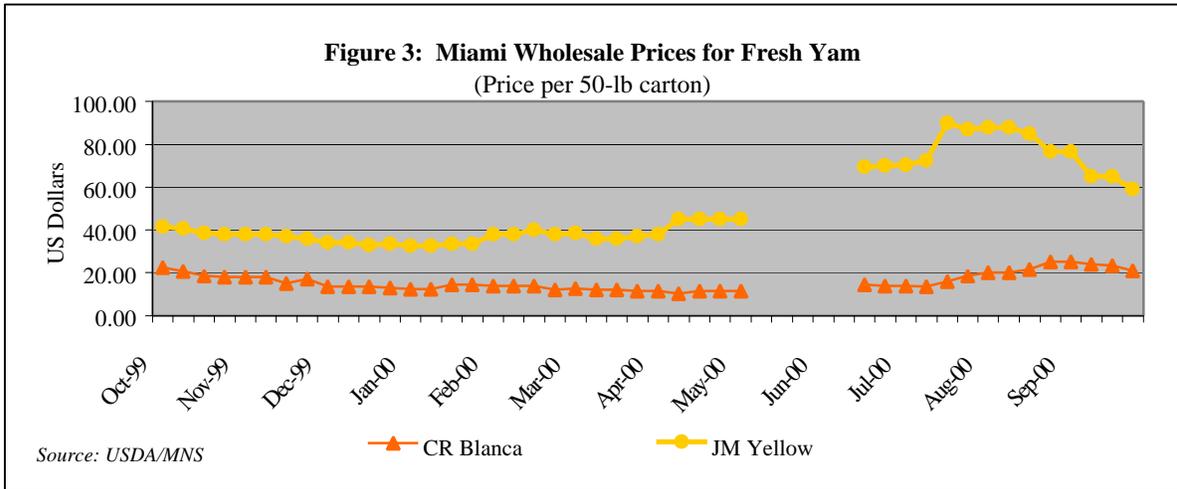
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A number of yam varieties can be purchased in the US. The two most common are the Negro Yam, also known as Blanca, African Yam, Ñame, and Yname and grown all over the world, from South America to Africa to the Caribbean; and the Yellow Yam, sometimes called Ñame or Ignose and grown almost exclusively in Jamaica.

Quality Standards: There are no established grades and standards for fresh yams imported into the US. Quality requirements are determined by producers based on the specifications articulated by importers. The following specifications have been established for Jamaican varieties of yam but can at least serve as indicators for other varieties as well. Quality yams should be brown, clean, and fresh and should have reached their full maturity in the field before harvest. Skin should be entirely intact, with no surface shrivelling, fungal infection, insect damage, or sprouting. If the yam has been cut as part of the harvesting process, the cut surface should be smooth, dried, and healed. Surface wounds of greater than 0.5 inches are unacceptable. Yams of even shape with regular "toes" are preferred, and should weigh between 1 and 6.5 pounds.

Storage: Yams are very susceptible to chill damage and should be stored at 12 - 13° C. Lower temperatures will expose them to excessive chill, and higher temperatures will result in sprouting.

Packaging: Yams are packed loose with no separation based on size grades. Product is often packed with no other packing material, though Jamaican exporters are known to use sawdust or coconut fiber to protect the yams and retain freshness during shipping. Cartons are corrugated cardboard weighing either 40 or 50 pounds

after being filled; banana-type boxes are often used. For sea shipment, an additional 5% of net weight

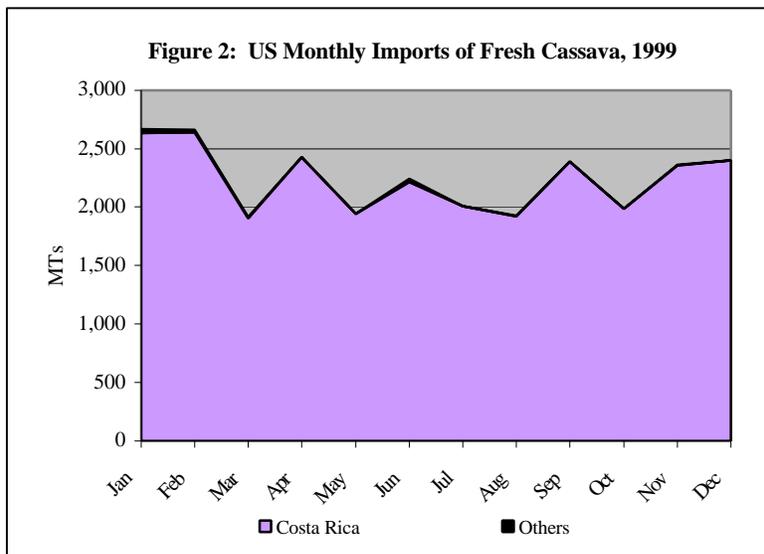
should be added to make up for weight losses during storage and transport. According to US Animal and Plant Inspection Service regulations, fresh yams must be fumigated prior to entry into the US. To ensure that damage does not occur during fumigation, the yam must be fully mature at harvest and dry when treated.



CASSAVA

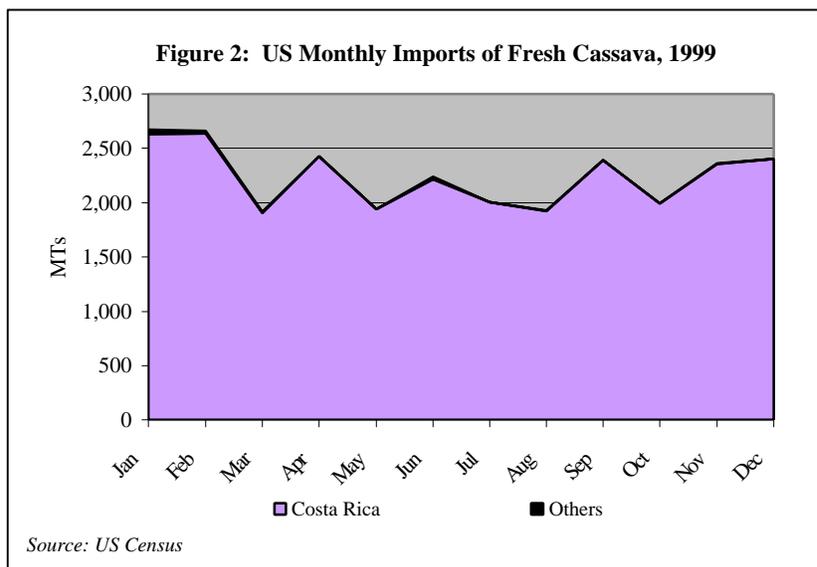
HAP Product Bulletin #5

2000-2001



Imports: US imports of fresh cassava have been steady for the past five years, averaging around 25,000 MT per annum. Import value has also been steady, with the exception of a 1999 drop from \$15.55 million to \$8.8 million in spite of the volume increase. Sources indicate that the decline in value is due to substantial oversupply by the main supplier of cassava, Costa Rica.

Seasonality: The US imports cassava year-round, with supply fluctuating between 1,900 MTs and 2,700 MTs per month in 1999.



Market Share: Costa Rica's domination of the cassava market represents a challenge for new suppliers, as it regularly maintains market share of over 96 percent, and last year supplied 99.6 percent of US imports. Five other countries shipped minimal volumes to the US, including the Dominican Republic, which exported 21 MTs; Nicaragua; Ghana; Panama; and Ecuador.

Prices: Prices have remained low throughout the last year, spurred by continuing Costa Rican oversupply. Miami wholesale market prices for 50-lb containers of cassava ranged

\$9-\$11 for most of the previous 12 months (see Figure 3 on back).

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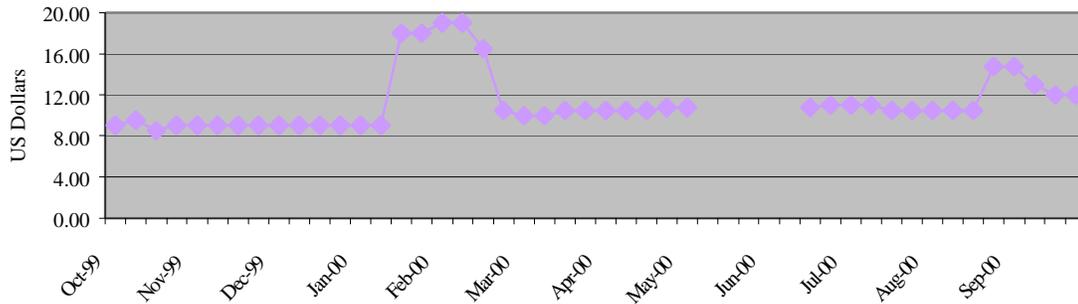
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**Figure 3: Miami Wholesale Prices for Costa Rican Cassava
(Price per 50-lb carton)**



Source: USDA/MNS

Cassava, also called yuca, manioc, mandioca, and aipim, is a tuberous root which forms the staple of many types of cuisine in Africa and Latin America.

Quality Standards: The outside skin of cassava is similar in appearance and texture to tree bark; the inside flesh is white as coconut flesh. Skin should be rough and dense and either pink or brown in color. Cassava flesh is a brilliant and consistent white and slightly fibrous. No sliminess, mold, or hairline cracks should be visible. Product should smell clean and fresh as well, with no traces of ammonia odor. Any yellowing of the skin is a sign of aging, and such products should be discarded. If product has been dipped in wax, the coating should not be cracked. Desired product ranges from 1.4 to 4 inches in diameter and up to 2 feet in length, and weighs from 1.5 to 3 pounds.



Storage: Fresh cassava deteriorates rapidly, often within 48 hours of harvest. Refrigeration is relatively ineffective, but freezing is a possibility. Cassava can be stored for up to 4 months at 0-2° C with at least 90% relative humidity. Care must be taken while handling cassava, as micro-wounds sustained during and after harvest lead to rot and mould formation in the flesh. Product is usually dipped in wax to stave off deterioration.



Packaging: As with most roots and tubers, cassava are packed loose with no additional packing materials into 40- or 50-lb. corrugated cardboard boxes. Cassava do not require any kind of fumigation or other pest prevention method prior to entry into the US. However, in regards to the layer of wax, all coatings used on fruits and vegetables imported into the US must meet FDA food additive specifications, and any foods treated with wax or paraffin must be labeled as such.

MALANGA

HAP Product Bulletin #6

2000-2001

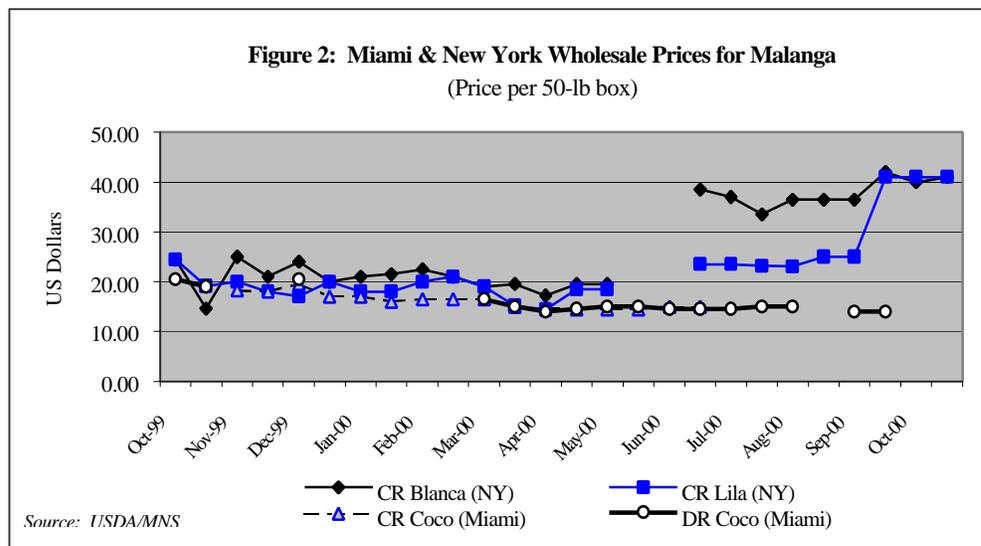
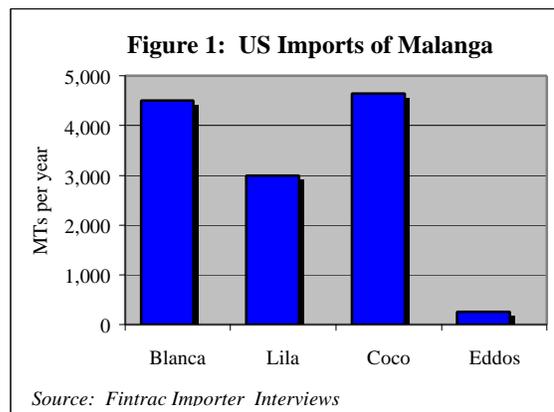
A root crop and staple of Hispanic and Cuban cuisine, malanga comes in four main varieties: Blanca (white or yellow flesh); Lila (pink flesh); Coco (rounder and fatter), and Eddos (a type of taro root commonly referred to as malanga).

Imports: Official import statistics do not exist for malanga; however, Figure 1 provides approximate US annual import levels based on interviews with Florida importers. Imports of the Blanca variety are estimated at 4,000-5,000 MTs per year; of the Lila variety, 2,500-3,500 MTs; of the Coco variety, 4,300-5,000 MTs, and of the Eddos variety, 225-300 MTs. Imports are thought to be growing steadily as ethnic populations within the US increase in size.

Market Share: Malanga is grown primarily in the Caribbean and Central America, including Venezuela.

Costa Rica is the largest supplier of malanga to the United States. It produces all four varieties and exported a total of \$8.85 million worldwide in 1999. The Dominican Republic exports primarily the Coco variety and ships on average one-third the volume of Costa Rica. Malanga is imported all year round and is also grown in small quantities in southern Florida, California, and Hawaii, though specific production volumes are not available.

Prices: Because of the critical lack of supply and poor quality of recent shipments from Costa Rica, prices for good Blanca and Lila product have surged to three times the normal rates. Coco and Eddos are not encountering such volatility. Importers note that prices are normally less volatile in times of consistent supply.



This product bulletin was produced by Fintrac, Inc. under the auspices of the USAID-funded Haiti Hillside Agricultural Program (Contract # 521-C-00-00-00035-00) SO1 – “Sustainable Increased Income for the Poor”

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Closely related both biologically and aesthetically to the taro root, malanga is also referred to as yautia, cocoyam, eddo, coco, tannia, sato-imo, and Japanese potato. It is one of the most easily digested of all complex carbohydrates and particularly popular among Caribbean consumers.

Quality Standards: Malanga have a rough, brown, hairy exterior. Flesh color can be cream, yellow, or pink. Samples should be free of mold and excess dirt. Flesh should be consistently firm, with no soft spots, cuts, or holes on the outside. A minimum length of six inches is desired, and importers indicate that consumers generally prefer bigger specimens over smaller ones.

Storage: After bruised or otherwise damaged products

have been sorted out, malanga are washed in water containing chlorine at 100 parts/million, then allowed to air-dry. Product deteriorates somewhat rapidly after harvest and should be stored at 7 - 10° C; however, exposure to temperatures below 7° can induce chill damage.

Packaging: Malanaga are packed loose into unwaxed corrugated cardboard boxes. Generally no additional packing materials are used, though some exporters add wood shavings to absorb moisture. Full boxes range in weight from 40 to 50 pounds, with the trend shifting away from the larger containers and towards the 40-pound boxes. Banana boxes (new or used) are often used for packing malanga. It is recommended that two extra pounds be added initially to make up for the weight lost



due to dehydration. A few buyers noted the more rare packaging of malanga in netted nylon or plastic sacks, though this seemed to happen after the product had been brought into the US.

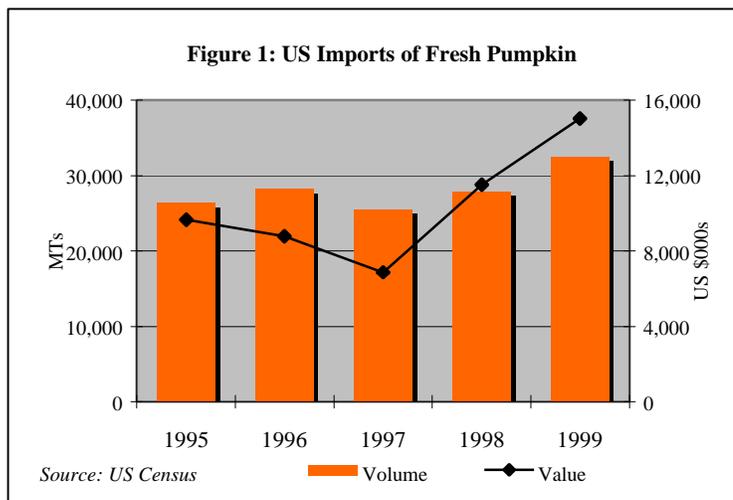


CALABAZA

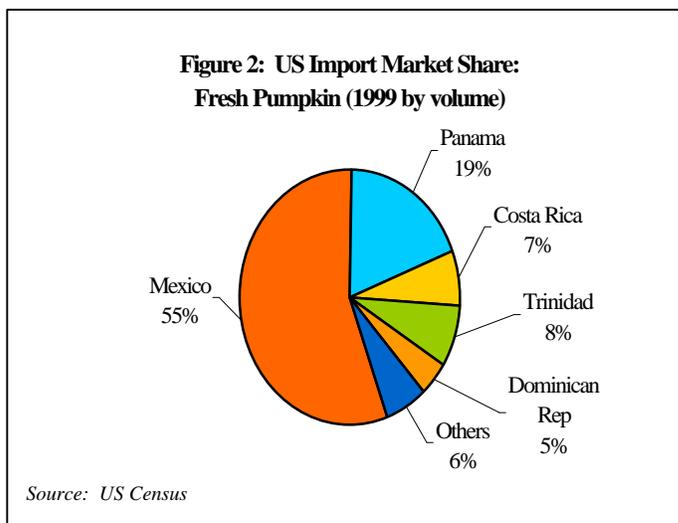
HAP Product Bulletin #7

2000-2001

Imports: Variously called Tropical Pumpkin, West Indian Pumpkin, Calabash, Auyama (Dominican Republic), and Joumou (Haiti), the calabaza is a pumpkin-like squash found in a variety of sizes. Official US Census import figures do not break imports down beyond the general “pumpkin” category, which also includes jicama and breadfruit. Imports in this larger category from Caribbean and Latin American sources have risen by 23 percent since 1995, from 26,400 MTs to 32,500 MTs in 1999. Import value dropped slightly between 1995 and 1997, but by 1999 had increased 118 percent to \$15 million.



Seasonality: Calabaza imports tend to be seasonal. From January to May 1999, US imports ranged 3,300 to 3,900 MTs; between June and November they dropped to 1,500 – 2,200 MTs per month; and in December they climbed back to earlier levels, almost reaching 2,900 MTs.



Market Share: Mexico controls a slim majority of the market, with 55 percent of total market share by volume. Other suppliers include Panama, Trinidad and Tobago, Costa Rica, Dominican Republic, Honduras, and Jamaica (these figures exclude Canadian pumpkins, which flood the US market for a two-month period in September and October).

Prices: Prices for 50-lb sacks of Jamaican calabaza have remained stable over the last 12 months, ranging \$13 to \$18. The exception was a surge in price at the New York wholesale market from November 1999 to February 2000 that led to prices as high as \$29 per 50-lb sack (see Figure 3 on back).

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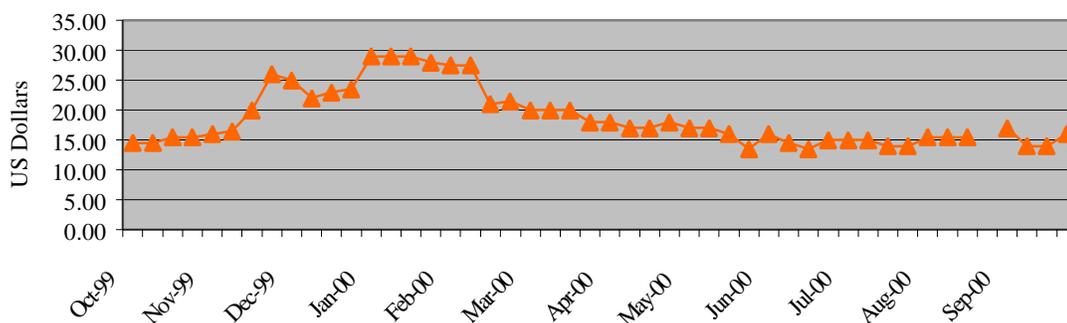
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Figure 3: New York Wholesale Prices for Jamaican Calabaza
(Price per 50-lb sack)



Source: USDA/MNS

Quality Standards: Because it is an open-pollinated fruit, tropical pumpkin displays great variation in both size and shape. Calabaza range from the size of a basketball to that of a large watermelon and are generally round- or oval-shaped, though they can also be found in the shape of a pear. Rind is speckled, with a green, tan, or orange color and a mottled surface. Internal flesh should be a brilliant orange. The rind should be firm to the touch. Stem should remain attached. Fruit maturity is indicated by a number of changes: stem texture changes from a fleshy when immature to well-corked when fully ripe; the last tendril near the fruit dies back; the rind loses much of its sheen; and a yellowing of the ground spot occurs where the pumpkin is growing.



Storage: Tropical pumpkin is susceptible to chill damage, but otherwise stores well in ventilated areas. Chilling injury occurs at temperatures of less than 12° C, and symptoms include sunken pits on the surface and high levels of decay once fruit are removed from storage. Store between 12.5 and 15° C with 85-95% relative

humidity. Calabaza are relatively resistant to bruising and mechanical damage, but care must be taken because bruises often do not appear until well after harvest, and secondary infection will occur. Rapid temperature change will also induce spoilage.

Packaging: Assuming the minimum and maximum size requirements are met, fruits of all size are packed loose together in a mesh polypropylene sack which weighs 50 pounds after filling. Trials with a cardboard pumpkin carton have indicated improved customer preference, but increased returns must be achieved to cover high carton costs. Calabaza are shipped by sea.

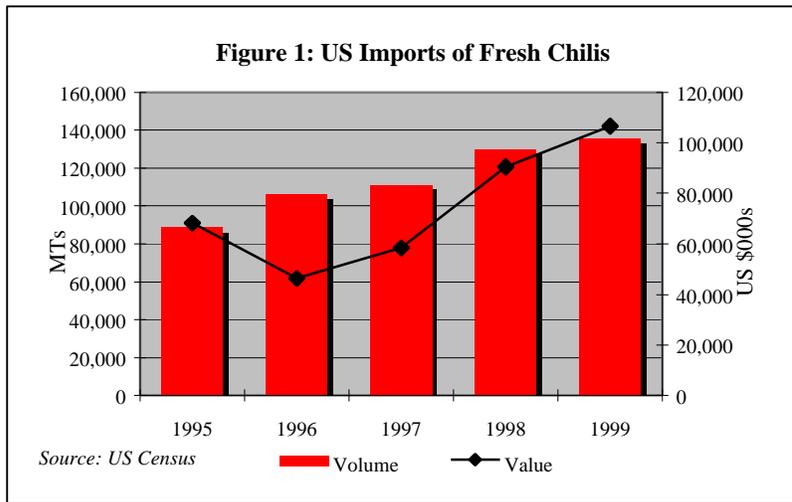


SCOTCH BONNET PEPPERS

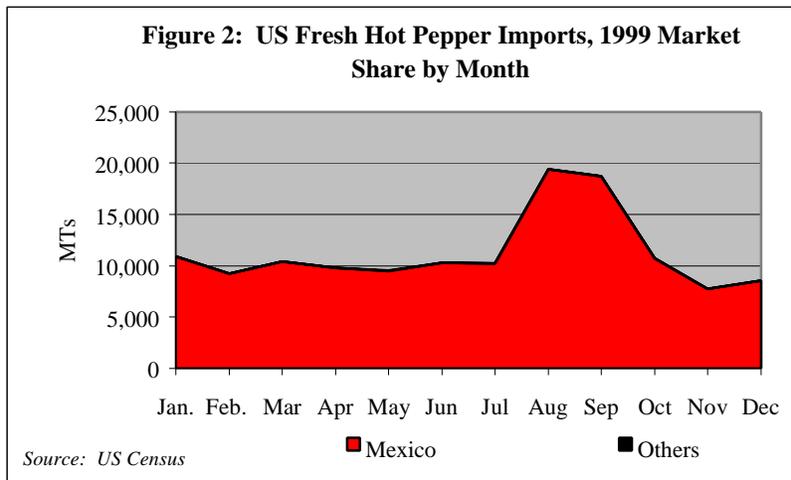
HAP Product Bulletin #8
2000-2001

Native to Jamaica, other Caribbean islands, and Belize, the Scotch Bonnet pepper is related to the Habanero and is the most popular of the Caribbean varieties. It is also referred to as Bahamian, Bahama Mama, Jamaican Hot, or Martinique Pepper.

Imports: Official census figures do not break down imports of chili peppers by variety. Total US imports of fresh hot peppers have shown consistent growth in recent years, increasing over 50 percent by volume and value since 1995. In 1999, imports totaled over 135,000 MT and were valued at \$106 million, though over 99 percent of these came from Mexico. Several other countries, including the Dominican Republic and Jamaica, vied for the remaining market share.



Seasonality and Market Share: Mexico exports fresh hot peppers year round, with the primary season stretching from August to November. Import volume hovered around 10,000 MTs in 1999,



jumping to a peak of 19,500 MTs in September. Imports from other suppliers reach their maximum of 30 MTs per month during May and June.

Prices: Wholesale prices for scotch bonnet peppers are consistent throughout the year, occasionally varying a few dollars per box. Prices during the last 12 months ranged \$14 to \$20 per 8-lb box (see Figure 3 on the back).

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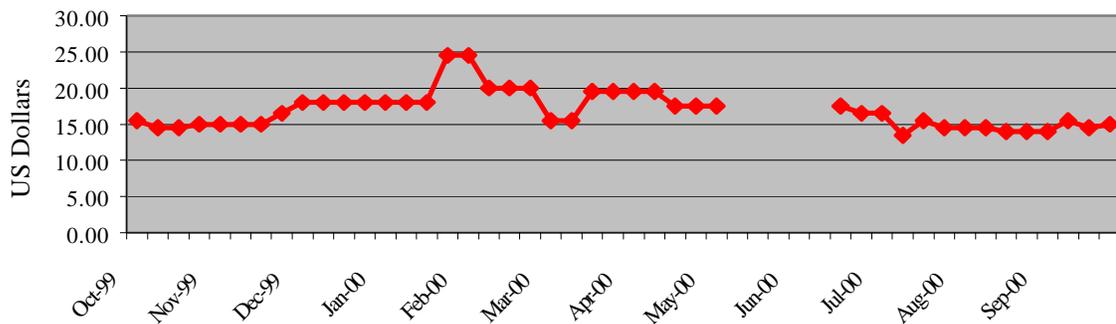
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Figure 3: Miami Wholesale Prices for Jamaican Scotch Bonnet Peppers
(Price per 8-lb. box)



Source: USDA/MNS



Quality Standards: Scotch bonnet peppers come in a variety of colors and sizes. All specimens should be clean, dry, and free of blemishes, cracks, and discolorations prior to packing. Uneven maturity, color, and sizes should also be removed. The stalk should be intact, fresh, and green with no blackening. Large peppers are preferred over small ones – individual specimens should measure a minimum of one inch in diameter and weigh no less than 5 grams. Grading should be carried out in field packing stations or in a packhouse in order to satisfy the minimum hygiene requirements.

Postharvest Handling and Storage:

the surface will accelerate deterioration; soil-splashed peppers are wiped with a clean cloth dipped in potable water containing a cleaning solution. The peppers must be allowed to dry before packing. Peppers break down soon after harvest, and shipment within 24 hours is preferred. Even with a cold storage of 8-12° C, the highest quality product should not sit for longer than 48 hours after harvest. For the same reason, hot peppers are always shipped by air.

Peppers should not be washed, as water on wipped with a clean cloth dipped in potable water containing a cleaning solution. The peppers must be allowed to dry before packing. Peppers break down soon after harvest, and shipment within 24 hours is preferred. Even with a cold storage of 8-12° C, the highest quality product should not sit for longer than 48 hours after harvest. For the same reason, hot peppers are always shipped by air.



Packaging: Peppers can be packed in either half- or full-telescopic fiberboard cartons. If full boxes are used, a central divider should be inserted. The net weight of hot pepper containers varies, but a standard size for the scotch bonnet is 8 pounds. Open or ventilated boxes are preferred to closed ones because the latter cause gas to build up, temperature to rise, and condensation to form, which hastens deterioration.





Variouly referred to as Guenepa, Mamoncillo, Spanish Lime, and Quenepe (in Haiti), genip is a sour tree fruit consumed almost exclusively by individuals from the Caribbean basin. The US imports incremental volumes of genip based on demand from Caribbean consumers. Small quantities are also produced in Florida. Although US Census import statistics do not exist for genip, less-reliable USDA/APHIS statistics show sporadic import levels, most arriving through Miami.

Imports and Market Share: The leading US suppliers are the Dominican Republic, Haiti, and Jamaica. US imports in 1999 reportedly totalled 242 MTs, representing a decrease from the 509 MTs in 1998 and the 580 MTs in 1997. The Dominican Republic's 211 MT represented 87 percent of the US import market in 1999. Haiti supplied the US with 27 MTs (or 11 percent of the import market), and Jamaica shipped 5 MTs (2 percent).

Seasonality and Prices: Genip is handled by a small number of importers who specialize in niche Caribbean and Latin American produce. The product is distributed almost exclusively to small ethnic retailers. Those who deal with genips report only occasional imports, usually focused during the late summer and early fall. The fruit is normally shipped loose in 15- or 25-lb boxes and sells for \$12 – 20 per box wholesale.

Quality Standards: Genips have greenish-brown, thin, leathery skin and salmon-colored, gelatinous pulp. Black skin indicates deterioration or premature harvest. The fruit



hangs in clusters and resembles large grapes, each fruit measuring 1 to 2 inches in diameter. Because of their leathery skin, genips remain fresh for long periods of time. Storage should be at 12° C. Import volumes are so low for genip that no recognized quality or packing standards exist. Consumers prefer a green skin and will stay away from genips that have turned brown. Buyers state that Haitian genips are larger and have a higher sugar content than those sourced from the Dominican Republic. Dominican genips tend to be sour by comparison, yet have a longer shelf live due to the decreased sugar content. Genips are also produced in Puerto

Rico, and these tend to yield higher prices.

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