

USDA Foreign Agricultural Service

GAIN Report

Global Agricultural Information Network

THIS REPORT CONTAINS ASSESSMENTS OF COMMODITY AND TRADE ISSUES MADE BY
USDA STAFF AND NOT NECESSARILY STATEMENTS OF OFFICIAL U.S. GOVERNMENT
POLICY

Voluntary Public

Date: 6/29/2014

GAIN Report Number: GT-1404

Guatemala

Post: Guatemala

Cardamom - The 3Gs -- Green Gold of Guatemala

Report Categories:

Agriculture in the Economy

Climate Change/Global Warming/Food Security

National Plan

Approved By:

Lashonda V. McLeod

Prepared By:

Spencer L. Milian

Report Highlights:

Cardamom is the "Green Gold of Guatemala" but the strong spice has several problems limiting further growth (and the taste of success). Guatemala is the largest exporter and producer, but sloppy growing practices, wildly fluctuating international prices, and pest infestations are draining the "joy" out of the sector.

Executive Summary:

Guatemala is the world's leading exporter of cardamom; producing approximately 35,000 metric tons (MT) annually (taking into account that world exports are around 45,000 MT).

Cardamom is the fourth largest agricultural export product of Guatemala by value. The majority of which is exported to the Middle East, with trace amounts to the European Union. In 2010, Guatemalan cardamom exports reached a historic high export value of US\$308.1 million. A historic high by volume 38,453 MT in 2013 was exported valued at US\$217.5 million.



The cardamom cultivated in Guatemala is *Elettaria cardamomum*, a native of India's Malabar Coast. It is typically grown at an altitude of 250 to 1,500 meters with an annual rainfall of 1,000 millimeters (mm) to 3,500 mm and temperature of 50 to 86 degrees Fahrenheit. Regionally, the Department of Alta Verapaz accounts for approximately 70 percent of production.

Although its consumption is low among the Guatemalan diet, cardamom is an important crop in the economy of the region. Its importance lies in the generation of foreign exchange, and as crop suitable for many smallholder (and women-led) households. For many of those smallholders, cardamom is the only cash crop.

Poor investment in research, technology transfer, and monitoring at the production level, has made evident the precarious condition of Guatemala's cardamom sector, posing tremendous challenges for sustainability. In order to seek the development of the product, the Cardamom Producers Association of Guatemala (CARDEGUA) was formed in the 1998. CARDEGUA is not a trading or profit organization, is not engaged in any activity of cardamom sales. The principal function of CARDEGUA is: Strengthen the productive chain of cardamom through the implementation of technical assistance and research.

General Information:

Production

Guatemala is the world's largest producer of cardamom (recently exceeding India's production level). Marketing Year (MY) 2012-2013 harvest reached a historic 38,453 MT. The national production is distributed as follows: Alta Verapaz 68 percent, Quiche 14 percent, Huehuetenango 8 percent, Izabal 4 percent, Baja Verapaz 2 percent and other departments of the republic adding the remaining 4 percent.

Cardamom must be harvested by hand, when ready, it can be easily detached from the stem and the color is bright green. The quality and price of the product depends on a timely harvest and a proper drying. Harvesting begins five months after blooming, the first cut is done in September and October, the second cut is done in December and January, and the last in March and April and can extend into May. Prior to shipping to the buyer countries, the cardamom is classified by qualities, such as first, second, and third, as well as yellow, open, and gold. It is also classified by sizes and colors, as the market requires.

The following definitions refer to common Guatemalan cardamom grades:

- Jumbo Green - extra-large green small cardamom pods
- Imperial Best Green - large green pods
- Fancy Green Extra - extra green pods
- Fancy Green - medium sized green pods
- Imperial Mixed Green - large pale green pods
- Mixed Green - pods of assorted colors
- Mixed Green Split - medium sized open green pods
- Yellow Mixed - medium/large closed yellow pods
- Mixed Yellow Quality (MYQ) -medium sized light-brown cardamom for grinding
- Seeds - cardamom with the husks removed



The output of cardamom is greatly influenced by climatic conditions. The cardamom plant requires a continuous rain interspersed with periods of good sunshine. Over the past two decades, the cardamom growing tracts in Guatemala have faced severe ecological degradation due to diminishing forest cover. For instance, the weather disturbance caused by El Niño and La Niña climate phenomenon adversely affected Guatemala's 2010 production, causing the quality of cardamom to deteriorate. The plant is now abnormally susceptible to attacks by pests and diseases. According to monitoring conducted by the Cardamom Producers Association of Guatemala (CARDEGUA) in 2012, the cardamom communities, it was established that a large part of the productive sector suffers from cardamom thrips, *Sciothrips cardamomi*, which is an exotic pest for Guatemala. Statistics have not been conducted to recognize the impact of this bug in Guatemala, it is estimated that 30 percent of the harvest is directly affected by this situation. Good agricultural practices (mainly cultural – maintaining clean soil surfaces to avoid weeds), combined with proper pruning and old plantation renewals, are required to get an effective control of the thrips.

Guatemala - Cardamom Crop and Harvested Area, 2008 - 2013

Year	Harvested Area (Hectares (ha))	Production (MT)	Crop yield (MT/ha)
2008	62,300.00	21,414.23	0.343728
2009	62,300.00	22,912.95	0.367784
2010	62,300.00	22,764.18	0.365396
2011	63,910.00	26,360.72	0.412466
2012	69,370.00	36,241.40	0.522436
2013	69,510.00	38,453.42	0.553207

Note: Cardamom dried pods.

Source: -DIPLAN-MAGA /BANGUAT.

The Cardamom Exporters Association (ADECAR) with the representation of the Guatemalan Association of Exporters (AGEXPORT) launched a campaign in alliance with CARDEGUA. The campaign, "Rubel Cardamom Chabil Tzi Mu" (Cardamom is better produced under the shade), seeks to improve the quality of cardamom and the economic conditions of the farmers involved in the production. The campaign consisted of providing direct technical assistance to more than 2,000 producers of cardamom in the department of Alta Verapaz. These actions were implemented in demonstration

plots, training producers on how to implement good agricultural practices and integrated crop management with special emphasis on the chemical control of the thrips pest. The national cardamom industry among its members it is promoting the planting of different crops to prevent further losses due to thrips plague in cardamom and to meet the demand for these products in the international market.

Postharvest handling...

Postharvest operations consist of washing, curing (drying), cleaning, polishing, sorting, grading, and packing. There are several ways of drying the fruit (capsules recently harvested) to reduce moisture content. In Guatemala the most common methods include sun-drying, solar drying, and wood-fired drying. Wood-fired drying is the traditional method used and typically requires a large amount of firewood to dry the pods. The smoke from the fire can give the pods an unpleasant smoky flavor and may burn some of the cardamom. Consequently, cardamom pods dried by this method are not of the highest quality. Approximately of 0.23MT of green cardamom fruit 0.05MT of dried cardamom pods are obtained.

...Wood-fired drying an energetic problem

The Guatemalan cardamom industry primarily uses wood as raw material in the industrialization process (drying), the use of this resource, regardless of the impact, may cause deterioration of the forests. The department of Alta Verapaz in 2006 had 372.588 hectares of forest and by 2010, 375.345 hectares of forest cover was reported. It is estimated that during 2006-2010, there was a loss of 61,455 hectares of forest, however, during the same period 64.211 hectares were recovered; having a net gain of 2,756 hectares of forest.

A normal wood-fired dryer can hold 1.8 MT of cardamom fruit and it will produce 0.37 MT of dried cardamom pods. These types of dryers use 5 cubic meters (m³) of wood in each process. Thus, for each metric ton of dried cardamom pods 13.514 m³ of wood is used. Taking into account that Guatemala produces an average of 30,000 MT annually of dried cardamom pods, multiplying this amount by 13.514 m³, a product of 404,420 m³ of wood is used per harvest. Assuming that 75 percent of the drying process it's done by wood-fired dryers, this equals 303,315 m³ yearly. According to the (National Counsel of Protected Areas (CONAP), wood usable volume estimation in forests in the cardamom area is 95m³ per hectare. The impact to the forest coverage is: 303,315 m³/95m³/ha = 3,192.79 hectares of lost due to deforestation on a yearly basis.

The producers

Cardamom has been the economic base that has allowed little producers to earn income to support their families, giving them stability when the product does not suffer from any plagues and revenue maintained over 6 to 7 months. This to date, no longer occurs, because of low prices and crop damage, resulting in reduced economic benefits. For a small cardamom producer an average annual income oscillates around US\$ 1,933 (15,000 Quetzals (Q)).

The economy of Alta Verapaz depends heavily on cardamom. According to CARDEGUA approximately 350,000 smallholders and dozens of farms are involved in the production, which together, accounts for 70 percent of Guatemala's production.

Although cardamom is a product that has generated large revenues for the country, this is not reflected in the development of communities. The lack of basic services and poverty is latent in the areas of

greatest production. In addition it was found that the prevalence of chronic malnutrition in the country is also higher in rural areas and in indigenous households, which are majority cardamom producers' households. The Guatemalan Ministry of Health conducted in 2008 and 2009 the National Maternal and Infant Health Survey concluding that Alta Verapaz' s percentage of children aged 3 months to 5 years old with chronic malnutrition was of 64 percent. Alta Verapaz presented one of the highest levels in the category of extreme poverty having a high percentage of 82 percent among the rural areas. Most producers are indigenous who own mini-crops whose land extension doesn't surpass 1.4 hectares. Producers work at the family level and cardamom is sold to an intermediary who carries out the drying process and then resells it to an exporter.

Even in the years cardamom exporters have registered the biggest gains in history, small producers still have a long way to go. In order to make a huge profit, a large inventory is needed. When cardamom is sold in small sizes most of the payment is used to cover the cost of production only. This means that for small and medium producers who are at the bottom of the value chain and who receive the least of the profits; almost all of it is used to pay costs acquired during the production process such as: land rental, credits, and transportation. The low wages that families linked to cardamom cultivation receive result in an inability to invest and raise productivity, which in turn leads to social and economic issues among the farmers.

The employers' informality also affects the farmers according to a monitoring conducted in 2011. Around 21,713 permanent jobs were created by direct employment in the cardamom sector (*Source: - DIPLAN-MAGA /BANGUAT*).

Trade



In 2012 and 2013, an overproduction of cardamom was recorded and depressed international prices. In 2014, however, the price of cardamom in the Guatemalan domestic market has risen on the expectation of a smaller crop.

Guatemala's cardamom marketing chain has up to seven different levels of intermediaries, which are: local gatherer, community buyer, community markets, municipal retail buyer, benefactor, municipal wholesale buyer, and a wholesale marketer of Cobán, Alta Verapaz.

Cardamom (Harmonized Commodity Description and Coding System (HS): 0908.30.20 and 0908.31.20 of the Central American Tariff System (SAC)) has a 15 percent import tariff on the cost, insurance, and freight (CIF) value rights.

Guatemala Cardamom Trade, 2008 - 2013

Year	IMPORT		EXPORT		Average Export price US\$
	MT	US\$	MT	US\$	
2008	120.05	122,080.00	27,948.35	206,201,021.00	9,477.75
2009	3.21	6,380.00	23,694.22	304,025,768.00	12,631.22
2010	35.43	20,638.00	22,167.17	308,093,125.00	13,698.62
2011	24.00	34,160.00	24,150.00	296,881,847.00	12,289.17
2012	128.91	173,612.00	35,989.88	250,327,130.00	6,955.49
2013	74.54*	47,052.00*	37,996.87	217,605,350.00	6,958.22
TOTALS	386.14	403,922.00	151,304.52	1,471,134,241.00	

* Up to April 2013

Source: DIPLAN-MAGA /BANGUAT

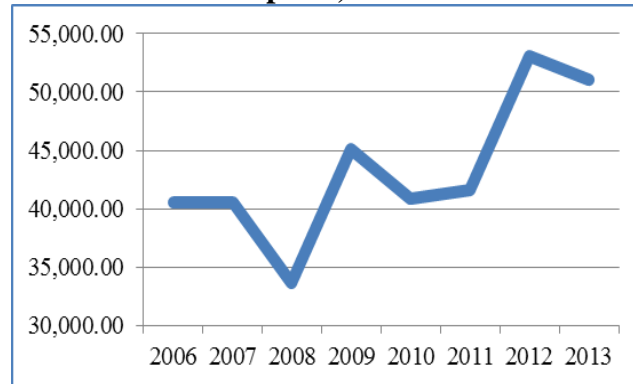
Guatemala Cardamom Exports by Destination, 2006 - 2012

Destination	METRIC TONS							Annual Average	% by Country
	2006	2007	2008	2009	2010	2011	2012		
Saudi Arabia	10,145.75	8,986.98	8,911.14	7,678.78	7,541.04	9,082.74	9,488.12	8,547.79	31.99
United Arab Emirates	2,291.80	4,103.49	2,836.41	4,291.74	3,730.84	3,280.41	6,372.02	3,858.10	14.44
Syria	3,545.50	2,148.29	1,133.92	1,398.79	1,394.18	2,273.81	2,670.82	2,080.33	7.79
Pakistan	1,607.34	1,246.29	630.34	1,729.20	1,186.22	1,440.36	2,843.75	1,527.07	5.72
Jordan	1,530.02	1,468.81	1,317.89	974.46	490.52	1,047.96	1,780.33	1,230.00	4.60
Singapore	1,512.96	1,923.22	781.74	1,227.80	1,318.86	454.63	1,011.98	1,175.88	4.40
Bangladesh	1,120.77	759.58	736.31	804.40	559.38	1,076.95	1,910.36	994.54	3.72
India	838.91	1,089.35	714.29	775.23	352.02	578.04	2,332.74	954.37	3.57
USA	512.92	657.44	754.37	550.80	987.66	980.12	681.98	732.18	2.74
Kuwait	686.04	656.64	914.95	349.86	578.19	807.39	862.64	693.67	2.59
Other - NESI	7,274.94	4,908.03	3,220.01	3,913.18	4,034.27	5,135.59	6,029.15	4,930.74	18.43
TOTAL	31,166.95	27,948.11	21,948.36	23,694.22	22,167.17	24,158.00	35,989.88	26,724.67	100

Source: DIPLAN-MAGA /BANGUAT

Cardamom World Exports, 2006 - 2013

Year	Quantity (MT)
2006	40,571.50
2007	40,514.80
2008	33,675.20
2009	45,067.30
2010	40,891.30
2011	41,582.90
2012	53,110.50
2013	51,062.70



Data Source: United Nations Commodity Trade Statistics

Market Influencing Factors

- Unawareness of international prices:
 - Cardamom has become a speculative business of large exporters (big companies concentrate 80 percent of exports).
 - The large distances in terms of price between the producer and the other marketing links.
 - The intervention of more than seven different levels of intermediaries in the market chain.
- Major characteristics that indicates quality of the cardamom
 - Lacks of research for develop of new varieties that are resistant to pests, diseases bugs.
 - Loss of genetic force causes phyto-zoo-pathological recurring problems causing losses in plantations productivity and quality of final product.
 - Bad post-harvest practices causing contamination with chlorine and other chemicals.
 - Over drying.
- Production status in competing countries like India
 - There is not a Guatemalan cardamom stock market.
 - Most of the data shown are estimates, since the data can only be gathered and traced when the product is exported and not since cardamom is planted.
 - Lack of Global GAP and GMP certificates.
 - FDA environmental and traceability requirements are not met.
 - Very few or non-existing factoring and processing services give added value to the product.
 - Lack of research, extension and technology transfer
- Annual production in the country
 - Year ending stocks and stocks-to-export ratio.
 - The time of arrival of the new crop in the market comes when remains from the previous crop haven't been sold, resulting in the delay of harvest and loose of production.
- Weather conditions in the country
 - Climate change phenomenon



- Other Factors:
 - Time (3-4 months) that it takes the product to arrive as far as to Arabia for example.
 - Three months or more to receive payment of return
 - Original price is reduced in the port of destination
 - Regional conflicts affecting business (Egypt and Syria)

Policy

Among the main political and strategic actions suggested at the National Cardamom Congress that took place in Santa Cruz, Alta Verapaz in August 2013, supported by USDA/FAS, were: 1) the need to create country brand; 2) achieve cardamom institutionalization, as it was with the Guatemalan coffee; 3) promote distinction of the product by territoriality; 4) promote the consumption of cardamom in the domestic and regional market, either as food or as medicine; 5) based on the incidence of plagues and diseases, plant protection cords will be created; 6) create information networks that work in real time ; 7) the creation of a Special Unit directed by the Ministry of Agriculture, Livestock, and Food of Guatemala (MAGA) to follow up the strategic actions concluded in the Congress.

Cardamom producers recognize that their role as a fundamental part to promote Integrated Rural Development promoted by the government, especially in regards to enhancing crop and strengthening partnerships between producing sectors. Representatives of the cardamom productive sector have established that it is urgent to declare cardamom crop of "national importance" (as it has been done with other products like coffee), define the crop area as the "cardamom corridor," boost grain production, and market more effectively. Cardamom has the potential to become a country product by creating a market strategy to make it a country brand.

Due to the generation of economic wealth produced by cardamom, the public sector organized to promote investment in the cardamom sector and to contribute with productive aspects, infrastructure, rural roads, added value and life quality for those who live in this corridor. The goal is to lay the foundation for developing a comprehensive policy support cardamom producing sector in which the involvement of government, producers, entrepreneurs and civil society can be achieved.

In late 2013, a bill was proposed to create the National Cardamom Law. This project seeks to create an institute with 1 percent of the national budget. This institute would control the production, marketing, and export of cardamom through pricing, license and permit authorization, registration, fines, and penalties. It also includes that the GOG would be empowered to make buying and selling decisions. Different sectors stated that this bill puts at risk thousands of small producers. The merchants requested that the initiative be socialized before it can be adopted. The bill still has to pass many reviews from various sectors before it can get to Congress.

Guatemala's interest to consolidate and improve the bilateral relationship with the Republic of India (formerly the largest cardamom exporter) has been materialized with the opening of the Embassy of Guatemala in New Delhi, officially established in April 2014. India established its resident Embassy in Guatemala in 2011. The primary objective is to build the country's presence in Asia to explore new business opportunities, investment, and cooperation.