

**THE CARICOM REGIONAL TRANSFORMATION
PROGRAMME FOR AGRICULTURE**

MARKET INTELLIGENCE REPORT

Executive Summary

DRAFT

Hot Peppers

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Our discussion with officials in the Ministries of Agriculture in the Region proved helpful in reconciling some of the deficiencies we encountered in the review. Technical support was provided through the assistance of Brent Theophhile, Rebecca Gookool, Jai Rampersad and David Hanson, to which the Core Team also expresses support. To Ms. Martha Jiminez-Spence and Ms. Indira Buchoon-Ousman, we express our sincere thanks for their logistical organizational and communication support.

Although we tried to ensure accuracy of the database used for the review, nonetheless we accept responsibility for any errors that may be discovered. This may be the result of the multiple databases from which we had to access the data. The small ruminants sector in the Caribbean is just emerging unlike countries such as Australia and systems of data recording for this commodity have not yet entered the mainstream databases. This gap we recommend should be addressed with urgency.

Dedication

We dedicate this work to the Memory of our Colleague and member of the study team, Dr Lloyd B. Rankine. Dr Rankine passed away on October 25, 2006. He was a colleague with whom we shared many long hours in dialogue, in the field and in the class room. His life long endeavours and dedication reflect his passion for agriculture in the Caribbean.

Dr. Rankine was an integral part of the University of the West Indies having served the University (both Mona and St. Augustine campuses) from 2nd December 1968 to June 3, 2006 when he suffered a debilitating stroke. He served as Head of the Department of Agricultural Economics and Extension from 1977 to 1990 and taught in the capacity of Senior Lecturer up until 2003, when he retired. From 2003 to June 3, 2006, he lectured part-time in the Department

Dr. Rankine also served as Director and Chairman on many Boards in Trinidad and Tobago. .



EXECUTIVE SUMMARY

1. OVERVIEW OF THE HOT PEPPER MARKETS

1.1 Introduction to the Study: The CARICOM Regional Transformation Studies on Competitiveness

This Report constitutes the results of a review of the Markets for Hot Peppers from the perspective of the CARICOM industry. It is part of a larger study commissioned by the CARICOM Regional Transformation Project for Agriculture. The study evaluates the international competitiveness of five commodities: Hot Pepper, papaya, sweet potato, coconuts and small ruminants.

This market intelligence Report was preceded by a review of the general agricultural sector policies as well as those specific to the selected commodities in the seven CARICOM countries selected for the overall study, namely: Jamaica, Belize, Barbados, Guyana, St Vincent, St Lucia and Trinidad and Tobago.

The market intelligence study covers a review of the global situation – production and trade flows. It focuses on the sources of competition, opportunities and challenges for the respective CARICOM industries. The market intelligence report is followed by the final component of the overall study which evaluates the competitiveness of the Industry in each of the country studied as well as identifying strategies for development.

1.2 Hot Pepper Markets

This report examined the three major markets for Caribbean Hot Peppers. Each market has its own characteristics, pre-entry conditions that must be satisfied and competitive forces. The discussions have highlighted the demand side factors but clearly the greatest challenge of Caribbean peppers producers/exporters lies in the ability to consistently supply large volumes of peppers in these three markets. This is particularly true in the case of the Scotch Bonnet variety, which seems to have a competitive edge in terms of preference.

The USA, Canada and the EU represent three major markets and importers of hot chilies worldwide. Additionally, India also constitutes a major market but is a negligible importer, consuming a major share of its domestic production.

Our examination of the features of the USA, Canada and EU markets show segmentation in terms of 'fresh' as well as 'value added' chilies. In the case of fresh chilies, the market was further differentiated on the basis of degree of hotness measured by Heat Scoville Unit where possible. Examination of database showed increasing trends in the levels of imports of this spice. The literature identifies a shift in consumption patterns to higher levels of spicy foods, thus we expect the increasing trends in imports to continue.

We have also observed that in the period under review, although there has been a general increasing trend in the export of fresh chilies from the Region, the supply response has been mixed. Increases were evident in the case of Trinidad, decreases in Jamaica (partly accounted for by larger volumes being absorbed by processors) while supplies from others were not sustained.

The Scotch Bonnet and Habanero varieties have been experiencing growing acceptance in the markets examined. Our research also identified three key competitors on the USA market – Mexico, the Dominican Republic and the USA's own production from New Jersey during the summer months. In the case of the European Union - Ghana, Israel, Brazil, Uganda and the USA are major competitors.

With respect to prices, preliminary research has shown a high to low price spread of approximately USD 0.57 / kg for Scotch Bonnet and USD 0.33 / kg for Habaneros where sufficiently detailed data were available. In the case of the value-added commodities, the data show two trends: (i) increasing volumes; and (ii) decreasing price levels.

Fresh chilies enter the markets through two major channels: (i) the terminal markets; and (ii) direct to warehouses, combines, and multiples. Further, in the case of all three markets, a host of regulatory measures and concerns with respect to pesticides, heavy metals, packaging materials, migration of molecules and changes to organoleptic properties were observed.

One problem in the Region is production and productivity, while another is the variability of the product in terms of its product attributes – hotness as well as shape and flavour. The use of

genetic modification can be a rapid and efficient method that can be employed to deal with these issues. However, consumers are still speculating about the human health aspects of GMO. Investment in production for the expansion in exports of peppers into the EU market must therefore consider these concerns not only in terms of the human health but also in terms of changes/reduction in market share.

2. THE USA MARKET

In our review of the USA market for Capsicum, we first attempted to estimate the current size of the market for hot peppers and its various products in the USA. We found the USA to be a major producer, importer and exporter in the global market. Our attempt to differentiate total size of the market in terms of the various segments and their trends was constrained by the ambiguity and ways in which the product was reported in both supply and trade. Our analysis of the USA market also focused on the range of pepper-based value-added products exported to that market over the period. These included dried and marinated capsicum as well as other peppers – “Piper” and “Pimenta.” Import levels also showed increasing trends over the period.

The USA is ranked as a leading importer of fresh **Chilies (both hot peppers and Bell Peppers - HS 07096020)** in the world. Imports grew by 265 % (value basis) over the six year period 1996-2002 from USD 46 mn (106,000 tonnes) to USD 168 mn (159,000 tonnes). The major sources of imports were from Mexico followed by the Netherlands. In the case of the Caribbean, although providing a relatively small share to the USA market, data also showed increasing trends. The major exporters of hot pepper from the Caribbean are Trinidad and Tobago, Jamaica, Belize and the Dominican Republic. Other smaller exporters are St Lucia, Barbados and St Vincent & the Grenadines. Exports from the latter sources tend to be small, sporadic and not sustained. Mexico dominates the USA Chili market supplying more than 99% of total imports. However, much of this comprises the milder chilies. Supply from Mexico generally tends to fall off during the months of October to February/March thus offering windows of opportunity in these markets.

With respect to the specific varieties supplied in this market, Mexico, the Netherlands and India exported a mix of varieties of capsicum, the database not allowing for segmentation. In the case of Caribbean supplies, the Region exported mainly Scotch Bonnet types and habaneros.

A review of the average annual prices (2001 to 2005) for various chilies at the Miami Terminal show that Scotch Bonnet attracted the highest price of USD 4.62 / kg, followed by Anaheim and Habanero. Also at the New York Terminal, Scotch Bonnet received the highest price of USD 4.34 / kg followed by Habanero at USD 4.10 / kg.

Although fresh hot pepper can enter all parts of the USA, the major markets examined were Miami and New York. These terminal markets represent the entry points of Caribbean capsicum as well as major consuming centres. Products from these centres move to other distribution points of the USA through a system of produce brokers, wholesalers, distributors and retailers. The Miami market is considered a more attractive market for Caribbean export of hot peppers, both with respect to price levels as well as price volatility. Significant advances have taken place in packaging and have contributed to increased differentiation in the marketplace. Our visits to the market have found that Caribbean suppliers to the market have not fully kept pace with these developments. For the most part the quality of packaging used by exporters do not minimize post harvest losses. The structural integrity of the packaging and the attractiveness do not auger well for the competitive edge that may have been obtained in these market niches.

The USA market for hot peppers has a very strict regulatory framework. Non compliance with this associated protocol can serve to preclude market entry into all parts of the USA. Peppers are also screened for the presence of invasive alien species at source, and again at the point of entry in order to protect the USA's agricultural fruit and vegetable sectors including capsicum. In order to facilitate the export of fresh agricultural produce including hot peppers to the USA, the USDA has developed and published protocols for pesticides and SPS procedures. Exporters to the USA are well advised to observe those in their supply chain management and logistical procedures if they want to maintain their competitive edge that they are now enjoying.

Under CBI/CBPTA pepper benefits from special duty free on entry into the US market. Although there are other pepper producing countries that are excluded from this concession, increasingly they are negotiating preferential agreements with the USA. The CARICOM countries are increasingly facing reduction in the margin of preferences and the market share is thus being increasingly challenged.

The general recognition in the market place that Caribbean hot peppers are among the hottest as well as the most flavourful provides a basis for product differentiation and price discrimination,

specifically seeking premium prices. Thai chili hot, the next hottest after the Scotch Bonnet and Habaneros varieties, can be considered a competing substitute based on the degree of hotness (rated at 60,000 SHU) traded at an average price of USD 2.46 / kg at the Miami Terminal – approximately one half of the price of Scotch Bonnet. However, product differentiation in the market place calls for the adoption of a range of marketing and promotional strategies.

3. THE CANADIAN MARKET

The Canadian market for Hot Peppers is relatively small in comparison to the US market. However, consumption continues to grow in that market on account of the migrant population, which to a large measure retained some of its taste and preference for spicy foods. Further, the strong cultural linkage with the Caribbean cuisine has been exposing the indigenous Canadians to these new tastes and spiced-based value-added products.

The major Canadian markets for hot chilies is located in the cities of Toronto, Montreal, Winnipeg and Vancouver, largely because of the Caribbean and Asian migrant population. Hot pepper reaches the consumer through two marketing intermediaries: (1) The Ontario Food Terminal, and (2) Private Warehouses / Direct consignment System. Although it is not documented, we suspect that the larger volumes pass through the private warehouse / direct consignment channel. However we believe that this is only temporary and may change as volumes of value added commodities and competition increases. The supply situation at the Terminal market does not adequately reflect the national import situation since as noted above most of the imports enter directly through the private warehouses and distribution channels. Over the 12 month period December 2004 to November 2005, market data indicate that while the Toronto Terminal market was supplied throughout with hot peppers, supplies came mainly from Trinidad and Tobago. Similarly, over the same period the Montreal Terminal market was supplied with hot peppers primarily from California.

Habaneros traded at an average price of USD 5.42 / kg at the Montreal Terminal Market with prices ranging from a low of USD 4.37 to a high of USD 6.49. The average monthly prices at the Montreal Terminal were found to be highly correlated to Scotch Bonnet prices at the Miami Terminal Market ($R^2 = 75\%$).

The other major sources of imports of fresh capsicum into Canada are the USA, Mexico, Netherlands, Spain and Israel. In the Caribbean region, Dominican Republic, Trinidad and Tobago, Belize, Costa Rica and Jamaica represent important sources of supplies. Although the

database did not specify or distinguish by Scoville index, we deem imports from the Caribbean region to be within the hot pepper category. We have also observed that there has been an increasing trend in imports of fresh hot peppers. The Canadian market also shows imports of high volumes of value-added products, which also reflect an increasing trend. The major sources of imports were the USA¹ and Spain followed by India, China and Chile. In the Caribbean Region: Jamaica², Trinidad and Tobago and the Dominican Republic also exported large quantities of processed pepper – (dried, crushed or ground) into the Canadian Market.

Marketing of hot peppers in the Canadian market is subject to a number of protocols. These include construction materials for food contact, water for processing, pesticide residue levels as well as specifications with respect to fresh and processed foods.

Tariff regulation for the entry of peppers into Canada includes waivers under the CARIBCAN arrangement. Although the Region currently benefits from duty free entry, this benefit may disappear through increased competition brought about by preference erosion as new countries are afforded preferential status. Thus, continuous increases in the international competitiveness from the CARICOM producers are imperative for retention of market share.

Our research identified a new pest of hot peppers, possibly of notifiable importance – the Asian Chili Thrips. While we are unable to determine its status at the Canadian border entry points, it can pose a significant risk should it enter the Caribbean and thus threaten the Caribbean's market share in Canada. It is therefore not too early to add this pest to the list of phytosanitary early warning systems in the Region. Based on our analysis, the Canadian Market represents one of significant potential for the Region given its geographic location and cultural link, as well as the “willingness” of the country to accept Caribbean products. The frequency and availability of transport freight space would need to be further addressed as the current interest in cultural cuisine and the current consumption patterns are expected to lead to preservation and expansion of demand for this spice.

4. THE EUROPEAN UNION MARKET

Our investigation of the EU market was restricted to the United Kingdom based on transportation logistics and costs. Within the UK the following markets were examined: Birmingham, Western International and New Covent Garden.

¹ Import data from the USA may include significant volumes of bell as well as the milder chilies

² Import data from Jamaica may include pimenta

Analysis of trade data shows a large number of countries supplying chili peppers to the UK market, most focusing on the milder chilies. Amongst the three markets, the Birmingham market offered the most attractive price. The least attractive on the basis of price was the New Covent Market. The average annual prices for chilies in these markets for the years 2001 to 2005 were as follows:

- Birmingham: average annual price = USD 6.61/kg
- Western International Market: average annual price = USD 5.19/kg
- New Covent Garden: average annual price = USD 4.89/kg

Not only was the Birmingham Market attractive in terms of price levels, but also prices were least volatile in this market. The volatility of prices in this market as reflected by the Standard Deviation in price movements was USD 0.85 /kg. Alternatively, prices were most volatile at the Western International Market where the Standard Deviation was USD 1.61 / kg.

Prices in the UK market showed definite seasonal trends with the period December – May being the period of higher prices. For the rest of the year, June to November, prices generally remained below USD 6.00 / kg.

Market entry conditions into the EU are considered more stringent than the USA because of the continuous introduction of new regulations. While the legislators may be attempting to protect EU consumers, their action may be viewed in other quarters as non-tariff barriers.

In an effort to protect its consumers, the EU has identified a list of pesticides and other chemical substances that are harmful to human health and the environment. These are excluded from pre and post harvest systems and non-compliance will preclude market entry. In the same manner, the stipulations with respect to packaging materials also apply. Labels providing information on package construction as well as contents must carry information about the presence or absence of possible contaminants including shelf life dates. These are critical factors and are increasing in complexity as the third generation of regulations evolves.

With respect to tariffs and taxes, commodities entering the EU market face two levels of taxes. While ACP countries receive normal duty free entry into this market, they still face the Value Added Tax. While free entry may seem attractive, CARICOM countries may lose their advantage

afforded through the duty free status due to the application of VAT on the higher transportation/freight and other charges. Producers and exporters of Capsicum into the EU must take into consideration the cluster of tariffs and non-tariff measures that impact on the success of the trade.

The emergence of ‘multiples’ throughout the supply chain has revolutionized the way in which products are made available to consumers, especially in the retail markets for chilies. This system has evolved as businesses find new ways for increasing efficiencies in the marketing system. This seems to have provided a competitive edge to firms wishing to gain and sustain market share through the adoption of this market model.

5. THE CARICOM MARKET

Production: Hot chilies are produced in commercial quantities in many CARICOM countries. Visits to the various countries found the industry at various stages of development. In Belize, St Vincent and St Lucia, commercial farm operations aimed at export have only started recently. In Trinidad and Tobago farmers possess a wealth of experience; Jamaica’s production is characterized by small-scale production units and Guyanese farmers are experienced in growing the smaller cherry varieties and are trying the Habaneros for the first time. Growers in Barbados have been moving out of hot pepper production due to limited market opportunities.

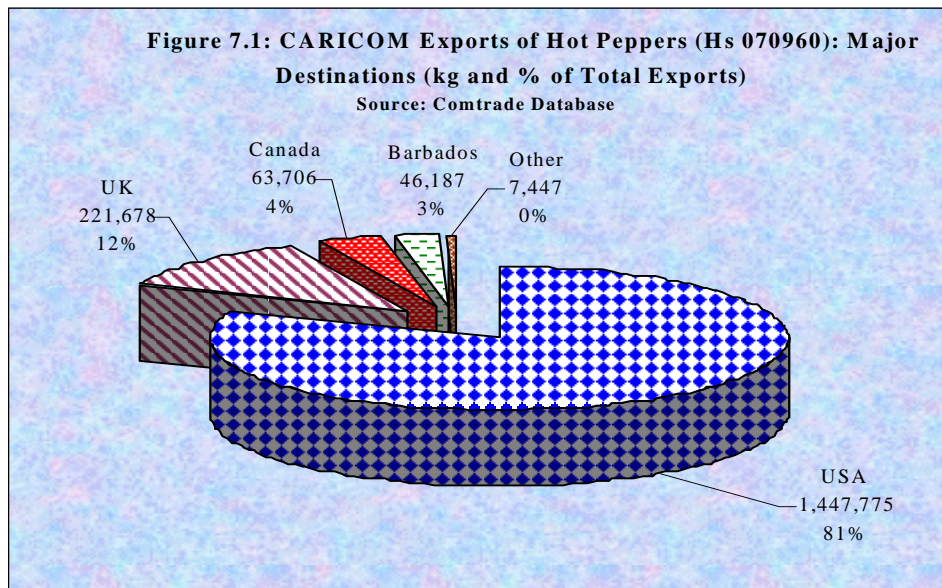
Utilization – Consumption & Processing: Trinidad and Tobago, Jamaica and Guyana represent substantial domestic market opportunities through their high per capita consumption as well as significant utilization in the processing and food service industries. The other countries are limited in this regard and depend principally on export marketing opportunities to drive production. Jamaica and Trinidad and Tobago each has about seven large-scale commercial hot pepper processors, while Barbados has one and Belize has one based in Stann Creek in the south.

Data for Jamaica show a processing demand for 1.2 mn kg (1998 data) which must have almost doubled with the expansion of Walkerswood Caribbean Ltd, while in Belize, Marie Sharp processing demand is estimated at about 110,000 kg/ annum (2005). These processors all have substantial export capacity and in addition to the traditional USA, Canada and UK markets, have been entering a number of new markets in the EU-25, as well as the emerging markets in the former Soviet Union and Asia. In spite of the prominence of these large processors, it is estimated

that their utilization of peppers is far exceeded by the numerous small-scale cottage processors and by the food service industry, particularly the informal sector throughout the countryside.

Examination of the databases shows Jamaica’s production at 4.6 mn kg of which just about 5% is exported fresh and about 95% utilized domestically by processors, the Food Service Industry and household consumption (Table 7.1). Guyana recorded the second highest production at 3.5 mn kg, most of which is utilized by small-scale processors, the food service industry and households. Less than 1% is being exported. Trinidad and Tobago’s production was estimated at 3.2 mn kg (Agricultural census 2003). From this production, an estimated 50% is exported; the rest being utilized locally as was reported for Jamaica. Barbados, the fourth highest producer in the Region, produced 1.2 mn kg of which 98% was used for domestic consumption including processing, with just about 2% being exported. Additionally, Barbados imports fresh hot chillies to satisfy domestic demand.

Exports & Imports: An estimated 2.0 mn kg of fresh hot peppers are exported annually from CARICOM countries with over 95 % destined for extra-Regional markets. The USA represents the major market, absorbing an estimated 81% of total Regional exports, the UK (12%), Canada (4%) and Barbados (3%); Barbados being the main CARICOM importer of Hot Pepper (Figure 7.1).



Trinidad and Tobago recorded the highest volume of exports at 1.5 mn kg (2003) or 83% of the estimated CARICOM export. The major market destinations were the USA, absorbing about

approximately 85% of Trinidad and Tobago's exports. About 14% of the country's exports went to the UK and less than 1% to Barbados. Jamaica recorded the next highest volume of fresh Hot Pepper exports from CARICOM, accounting for 0.2 mn kg or 12%. Of this amount, 72 % went to the USA and 27% to Canada. Exports from Belize were just about 22,511 kg in 2003, all destined to the USA. The export volumes from the other countries were quite low.

The Region periodically imports shortfalls in supplies to satisfy processors' demand; some of which originate within the region. Trade data for 2001 show Jamaica imported 99,215 kg of Dried, Crushed/Ground peppers for processing; Barbados 43,574; Trinidad and Tobago 40,478 kg and Guyana 12,170 kg. It should be noted that these statistics include the wider classification of all chilies and other peppers.

The Region also exported peppers within this classification: Jamaica 679,211 kg and Trinidad and Tobago 117,649 kg. In addition to these exports, processors also export significant amounts of pepper based products such as hot sauces and other combinations thereof: seasonings; jerk sauces, chutneys and amchars. The database however, does not allow for full disaggregation.

6. MARKET ASSESSMENT: STRATEGIC FOCUS

The review conducted suggests that the Hot Pepper markets with the greatest potential are the CARICOM and USA markets. We are not suggesting the exclusion of opportunities that may exist in the Canadian and UK markets, but rather we are of the view that the Region's strategic focus should be on the CARICOM and USA markets for both fresh and value-added products.

Given the importance of spices and Hot Pepper in the cuisine of the Caribbean, the regional market for Hot Pepper is indeed a significant one. As indicated in our market review, the major consumers are Trinidad and Tobago, Guyana and Jamaica with other countries consuming lesser volumes. While traditionally the fresh market has dominated, recent trends suggest major growth in the utilization of Hot Peppers for value-added manufacturing, particularly in Jamaica and Trinidad and Tobago.

The US market is clearly the most attractive extra-regional market for both fresh Hot Pepper and pepper-based value added products from CARICOM. This attractiveness is based on the following factors:

premium over prices at the New York Terminal Market. In the case of Habaneros, prices at the Miami Terminal were just about 2% higher than the New York Terminal.

Additionally, prices in the New York market in comparison to the Miami market revealed greater volatility, with very low prices prevailing at some times. For example, over the period 2001/2005 average monthly prices for Scotch Bonnet in New York reached as low as USD 1.98/kg, down from a maximum of USD 6.26. Habanero reached a minimum price of USD 1.98/kg down from a maximum of USD 6.15. The Miami market on the other hand revealed less price fluctuations.

Price Seasonality: Our analysis of the average monthly prices for the five-year period 2001-2005 at both the Miami and New York Terminal Markets confirms the seasonal movements in prices both for Scotch Bonnet and Habanero. However, no seasonality was observed for other milder chilies. In general, Scotch Bonnet and Habanero attract higher average monthly prices during the months of October to March than during the remainder of the year, April to September. The relatively lower prices during the latter months are ascribed to supplies from New Jersey as well as increased exports by Mexico.

The estimated seasonal differences in prices were 18% for Scotch Bonnet and 10% for Habaneros. In comparison, Thai Hot Chili shows no pronounced seasonality and is typical of the milder chilies.

Seasonal upward movement in prices for Scotch Bonnet and Habaneros in the USA market during the period October – March needs further analysis in an attempt to develop a strategy for optimizing returns. In particular, the following three issues need to be explored:

- (i) firstly, the price elasticity of demand for these peppers must be determined so as to estimate the extent of downward pressure on demand from any increases in Caribbean exports
- (ii) secondly, the technical feasibility of ramping up production during the season of higher prices needs to be ascertained
- (iii) thirdly, the feasibility of differentiating the domestic processing market from the USA fresh market and supplying a relatively larger volume to the domestic processing market during the low season and the USA market in the high season.

Competitors in the USA Fresh Hot Pepper Market: The principal competitor for CARICOM exporters of hot pepper the USA market is of course Mexico on account of the country's capacity for volume production and low prices. Other competitors include the Dominican Republic and Costa Rica. Increasingly, Hot Peppers are being produced in the mainland USA, mainly Florida, New Jersey, California and Texas (Table 6.1).

**Table 6.1: Sources of Supply/Availability of Hot Pepper in the USA:
Habanero, Scotch Bonnet and Thai Chilies: 2004**

Data Source: Today's Market Prices & USDA.

Sources of Supply	Variety	Miami Terminal Market											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Jamaica	Scotch Bonnet	●	●	●	●	●	●	●	●	●			
Trinidad & Tobago	Scotch Bonnet	●	●	●	●	●	●	●	●	●	●	●	●
New Jersey	Scotch Bonnet			●	●								
Florida	Habanero		●	●	●								
Mexico	Habanero		●	●	●	●	●	●	●				
Belize	Habanero	●	●	●	●	●	●						
Dom. Rep.	Habanero	●	●	●	●	●	●	●					
Trinidad & Tobago	Habanero							●	●	●	●	●	●
Jamaica	Habanero	●	●	●	●	●							
Dom. Rep.	Thai Chili Hots	●	●	●	●	●	●	●	●	●	●	●	●
		New York Terminal Market											
Mexico	Scotch Bonnet	●											
Trinidad & Tobago	Scotch Bonnet	●	●	●	●	●	●	●	●				
Jamaica	Scotch Bonnet		●	●	●			●	●	●			
New Jersey	Scotch Bonnet								●	●	●	●	
Dom. Rep.	Scotch Bonnet			●									
Mexico	Habanero	●	●	●		●	●	●					
Florida	Habanero				●	●						●	
Dom. Rep.	Habanero			●	●	●						●	
New Jersey	Habanero									●			●
California	Habanero										●		
Netherlands	Habanero					●	●						
Texas	Habanero		●		●								

8. THE CHALLENGES: KEY COMPETITIVENESS FACTORS

8.1 The US Market

While the US market presents opportunities, the CARICOM Industry needs to meet the challenges and competition in this market in order to expand market share and to sustain this in

the long term. We highlight some of the key drivers of competitiveness in the US market for fresh Hot Pepper:

<p>1.Competitors: Increasing Supplies</p>	<p>The attractiveness of the US market for Hot Peppers in terms of prices, size and growth potential has attracted increasing competition from a number of countries. The dominant players here are Mexico and the Dominican Republic, both of whom have the advantage of low cost and the capacity to dominate the market with large volumes.</p> <p>Additionally, production in the US has also been expanding in recent years. These producers have the obvious advantage of proximity, transportation cost and market linkages.</p>
<p>2. Price</p>	<p>As a result of increasing supplies, prices in the US market have generally held steady in spite of increasing demand. Additionally, prices have shown pronounced seasonal decline when supplies from Mexico peaks. The outlook over the longer term is for continued competition and further softening of prices.</p>
<p>3.Quality Attributes</p>	<p>While the Caribbean has enjoyed the advantage of a superior product in terms of flavour and pungency of its Scotch Bonnet types, there is evidence of other countries attempting to grow these varieties in increasing quantities.</p> <p>There is need therefore for the industry in CARICOM to focus on maintaining and upgrading the quality of its genetic resource in Hot Pepper and to ensure that its farmers have access to quality certified Hot Pepper seeds.</p>
<p>4. SPS Market Entry Req'ments</p>	<p>Increasing concerns regarding Invasive alien species suggest that CARICOM producers need to adopt high standards to ensure SPS measures are satisfied.</p>
<p>5.Product Differentiation & Promotion</p>	<p>Given the recognized superior and preference for Caribbean Hot Pepper, an important strategy towards sustaining and expanding market share is transform Caribbean Hot Pepper from a commodity to a differentiated product. In this regard we suggest labeling and promotion.</p>
<p>6. Value-Added</p>	<p>While the market for fresh Hot Pepper is expanding, the potential in the value-added markets is even more substantial. We are of the view that over the longer term, this latter market with a focus on the development of pepper based products with unique Caribbean cuisine flavours, presents the greatest opportunities for industry development.</p>

8.1 The CARICOM Market

The development of the CARICOM market for Hot Pepper is essentially dependent on three key drivers of competitiveness. These are:

- (i) Cost competitiveness
- (ii) Maintaining quality genetic material
- (iii) Development of pepper-based value added products with unique Caribbean flavours

As discussed in the body of the Report, the most important source of growth for the Hot Pepper Industry in CARICOM over the longer term is through value-added manufacturing, both for the local and export markets. However, processors are finding it difficult to compete at prices being sought for the fresh peppers by the local industry. As a consequence, processors often turn to extra-regional sources of supply for their raw material. Obviously, this trend is likely to continue if the domestic industry fails to improve productivity and cost efficiency so as to become competitive with other producers of peppers.

The obvious strategy for industry to take advantage of the opportunities for growth and development is to adopt measures to address the three drivers of competitiveness listed above. With respect to reducing cost, we propose wider use of drainage & irrigation; mechanization to reduce the cost of various operations; R&D to increase yield and productivity and access to land suitable for production of Hot Peppers and achieving scale economies.