

INVESTMENT OPPORTUNITIES IN THE CARIFORUM AGRIBUSINESS SECTOR

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What is High Tech Agriculture

- High technology involves intensive and extensive use of **science, technology** and **training** to improve efficiency and certainty, thus reducing cost and risk in operations along the agribusiness value chain.
- It implies using **digital applications such as** artificial intelligence, block chain, robotics, drones, sensors, mobile APPS and mechanical systems such as high-pressure processing (HPP).

The Threat /The Opportunity

By 2050, demand for food is projected to exceed supply in many parts of the world as agricultural production is negatively affected by: dramatic climate change (droughts/ floods, extreme temperatures), decreasing supply of water and arable lands, and high use of inorganic chemicals.

Some signs

- South Korea, China, Saudia Arabia buying up African lands to secure future food supplies.
- The CIA has commissioned a report on the potential global conflicts that could arise from global warming's negative impact upon agricultural production and food supply.
- Water levels in US Mississippi and the Great Lakes have fallen dramatically, ice caps melting at rapid rate

But....

The planet will need to produce more food in the next four decades than all farmers in history have harvested over the past 8,000 years.

WHY HIGH TECH AGRICULTURE- ISRAEL

- **Agriculture in Israel** is a highly developed industry. Israel is a major exporter of fresh produce and a world-leader in [agricultural technologies](#) despite the fact that the geography of the country is not naturally conducive to [agriculture](#). More than half of the land area is [desert](#), and the [climate](#) and lack of [water](#) resources do not favor farming.
- Israeli cows produce the highest amounts of milk per animal in the world, average of 10,208 Kgs.
- Major exporter of fruits and flowers and leading exporter of technology.
- Israel produces 95% of its food needs.

WHY HIGH TECH-HOLLAND

With a land mass of only 41,543 km², Dutch population of just over 17 million people and yet, this country is the world's second largest exporter of food, top exporter of potatoes and onions and second largest exporter of vegetables overall more than a third of all global trade in vegetable seeds. Exported almost \$92 billion worth of agricultural produce, second only to the USA and can feed itself.

- While the global average yield of potatoes per acre is approx. 9 tons, many farms in the Netherlands produce more than 20 tons.
- Water usage for many crops is 90% lower., Usage of chemical pesticides in their large greenhouses has been almost eliminated.
- Poultry and livestock producers cut their use of antibiotics by as much as 60 percent.
- Between 2003 – 2014, new production technologies have resulted in:
 - 28% increase in vegetable yields, 6% reduction in energy used
 - 29% reduction in fertilizer usage.

CARIFORUM vs ISREAL AND HOLLAND

CARICOM COMPARED WITH LEADING TECHNOLOGY DRIVEN COUNTRIES				
Countries	Popn. ('000)	%POPn	Area (km2)	% Area
LARGER ISLANDS STATE	15832		57,610	13%
Smaller island States	915		3,220	1%
Mainland States	1764		375,660	86%
TOTAL CARICOM	18511		436,490	100%
Dominican Republic	10,738		48,442	
TOTAL CARIFORUM	29,249		484,932	
		% Caricom Popn.		% of Caricom Land
HOLLAND	17280	93.3%	41,543	9.5%
ISREAL	8884	48.0%	22,145	5.1%

AGRIBUSINESS STRATEGY

**Priority
commodity
value chain
development.**

Targeted at
specific regional
and export
markets segments

- **Regional and International Non-communicable Disease (NCDs) market** (with value-added medicinal foods, particularly herbal beverages (e.g. Moringa, turmeric, ginger) soursop, avocado, and gluten free high fibre complex carbs.)
- **The Regional import staple displacement market** (wheat, white potato, corn) with regional staples (cassava, sweet potato, eddoes, plantains).
- **The International specialty food export market** (e.g. bakery products, sauce, finger foods, herbal non-alcoholic and alcoholic beverages, Caribbean restaurants).

A GLOBAL
LEADER IN
ORGANOLEPTIC
QUALITIES/
FLAVOUR OF
NATURAL FOODS

CARICOM is globally recognized as the leader in the following commodities in terms of *flavour, pungency and quality*:

1. **Cocoa:** Trinidad, & Tobago, Winward's, Jamaica, Belize, Dominican Republic
2. **Coffee:** Jamaica, Dominican Republic
3. **Coconut water:** Guyana
4. **Ginger:** Jamaica
5. **Hot pepper:** CARICOM
6. **Pimento:** Jamaica
7. **Nutmeg:** Grenada
8. **Vetiver:** Haiti
9. **Turmeric:** Belize
10. **Honey:** CARICOM
11. **Marijuana:** Jamaica, St. Vincent
12. **West Indian Cotton:** All Islands

LEADER or HIGH
PERFORMER
THROUGH
SPECIALIZATION &
R&D

SELECTED COMMODITIES AND PRODUCTION SYSTEMS

1. **Cassava:** Trinidad & Guyana
2. **Yams:** Jamaica
3. **Green house/undercover systems:** Dominica Republic
4. **Organic systems:** Dominican Republic, Guyana, Belize



Large Accessible Regional Market

Highest Incidence of NCD's
in Western Hemisphere
creates exceptional demand
for healthy foods

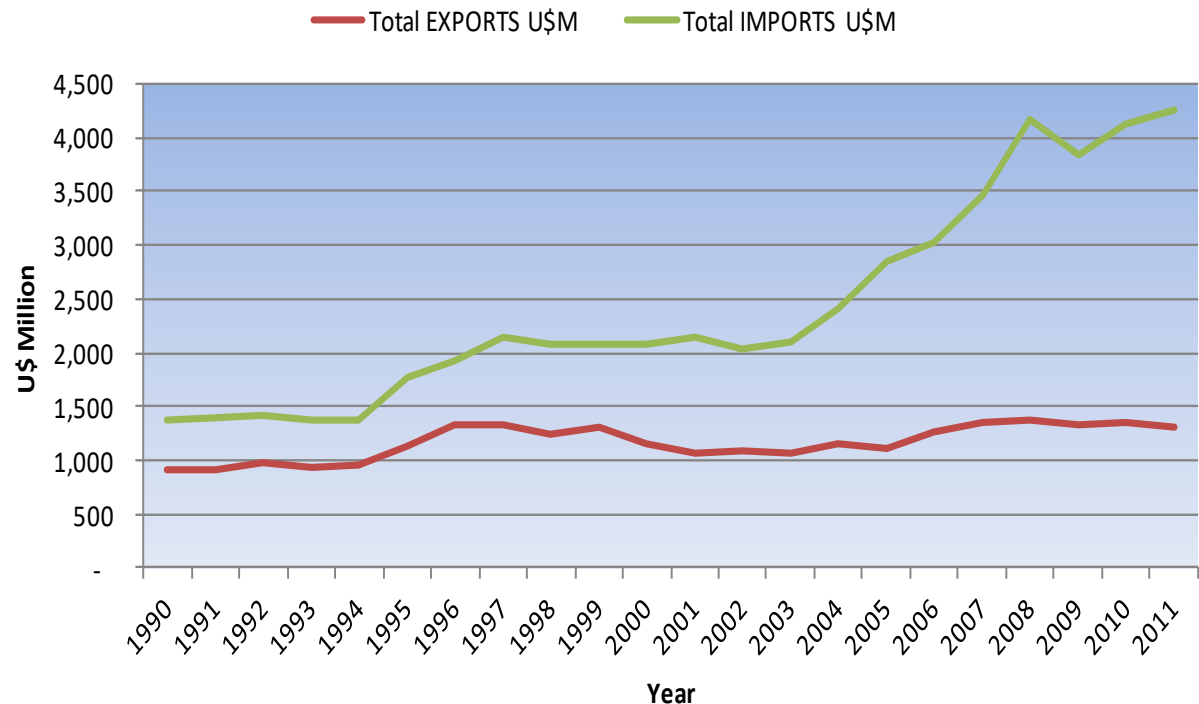
Among the most tourist
dependent Region globally

In 2017 the Caribbean had
30.6 million stayover visitors
with expenditure of US \$37
billion and 27.0 million
Cruise passenger arrivals.

*but only between 15%
and 30% of the
expenditure remains in
CARICOM*

**Regional food import market- US\$ 5.5 Billion –
protected by 40% CET– one of the most food
Import dependent region (90%-30%)**

TRENDS IN CARICOM AGRICULTURAL TRADE IN CROPS AND LIVESTOCK PRODUCTS 1990-2011



OPPORTUNITIES TO DISPLACE IMPORTS

with Root crops for imported staples and Green house production for vegetables

PRODUCT	IMPORT TONNES	IMPORT VALUE US\$	% TONNES	% VALUE US\$
WHEAT	632,235	140	33%	13%
RICE	467,654	364	24%	34%
WHITE POTATO	399,422	113	21%	10%
CORN	410,000	145	21%	13%
VEGETBALES	22,000	320	1%	30%
TOTAL	1,931,311	1082	100%	100%



TRADE AGREEMENTS

- European Partner Agreement EPA; Generally base on reciprocity except for agricultural products/foods where **70% of all agricultural tariff lines were excluded** from CARIFORUM's market access commitments.
- CARIBCAN with Canada: non-reciprocal.
- Extended CBI with the USA non-reciprocal.
- Caribbean Trade Partnership/CBI-Non-reciprocal Bilateral Agreements with DR, Costa Rica, Venezuela. Columbia and Cuba

In all cases many agricultural products are exempted, or products only allowed on a seasonal basis.



Export Market Opportunities

The home meal replacement & Delivery market, e.g estimated that only 55% of American meals has a home-made component.

Tremendous growth in ethnic cuisine market and strong position of Caribbean cuisine especially in USA & Canada.

Growth in the nutraceuticals/ Functional foods (plants with distinctive disease preventative or health enhancement capacity) market segment in USA growing at 7% per annum.

The 15-20% annual growth in the organic and natural food industry and the absence of major preferred brands in this segment in all markets.

POLICY SUPPORT MEASURES

- FOOD & NUTRITION SECURITY POLICY AND ACTION PLAN- Strong link between agribusiness, health and tourism.
- IMPORT PROTECTION THROUGH HIGH WTO BOUND RATE OR 40% CET.
- DIFFERENTIAL TREATMENT/SPECIAL PRODUCTS—Recognizes the special status of Small & Vulnerable Economies.
- DOMESTIC SUPPORT MEASURES- e.g. income tax and import duty reduction/removal.
- EXPORT PROMOTION & FINANCING.
- ADDITIONAL POLICY MEASURES FOR THE PRIOTIY COMMODITIES –e.g. Cassava, coconuts, herbs & spices, cocoa, fisheries etc.
- PROMOTION OF SUSTAINABLE & CLIMATE SMART POLICIES e.g. water land, fisheries, pollution, pesticide management policies.

AGRIBUSINESS STRATEGY

Priority
commodity
value chain
development

To exploit both
regional and
export markets

- **“Contract Food Processing Service” Market.** *Allow agro-entrepreneurs easy entry in the food processing business by significantly lowering capital, operational cost level of technically competence.*
- **Agri-recreational services market.**
(agricultural, food service, educational, recreational and entertainment activities)

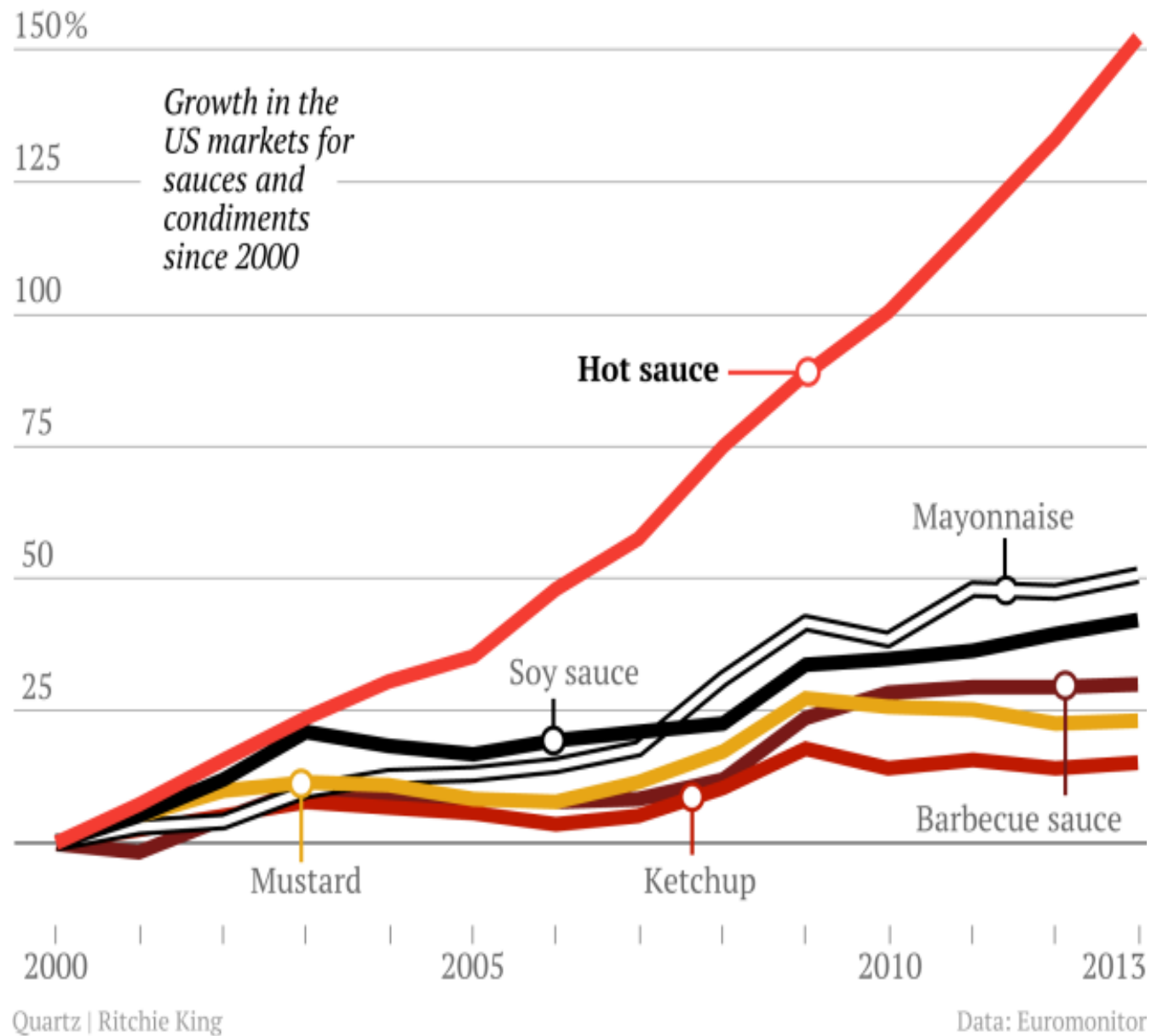
Supported by

- **Regional Co-ordinating Mechanism - The RFNS Cluster** (team of government, development agencies and private sector partners meets monthly to seek to remove obstacles and provide technical support to the priority industries)

SOME SPECIFIC BUSINESS OPPORTUNITIES

1. **Replace sugar** with natural sweeteners –**Honey and sugarcane juice** -----Guyana has the capacity ecosystem for large scale production of these.
2. **Replacement of soft drink** – **naturally, sweet fruit juices coconut water, melons/ pineapple/pawpaw juices & herbal teas** –The region has tremendous capacity for production of these.
3. **Red meat & chicken replacement-** **Farmed fish & seafood** to replace red meat and drugged poultry. Guyana with tremendous water resources ranks as **one of the top countries globally.**
4. **Regional replacement of imported staples**, particularly wheat--- with high fibre complex carb— **cassava, sweet potato and eddoes, for bakery & snacks products .**
5. **Replacement of large volume of imported fruits and vegetables--** **Green house production of mushrooms, tomatoes, leafy vegetables herbs, melons.**
6. **Increased exports -Organic & fair trade produced hot pepper based seasoning and sauces---**International markets for hot pepper products growing very rapidly e.g in the USA more than that of BBQ sauce, ketchup, mayonnaise and mustard—combined.
7. **Production of herbal medication & nutraceuticals** form Caribbean herbs e.g. **marijuana, guinea-hen weed, turmeric.**

Hot sauce
market-gone
crazy





WHAT ARE WE SEEKING FROM INVESTORS

- Partnerships with firms supplying **food service companies** (restaurants, bakeries, caterers, food manufacturers)
- Partnerships with firms with **on-line healthy food home delivery clubs.**
- Partnerships to **establish new and expand existing Caribbean restaurant franchises** based on Caribbean produced and GI protected foods.
- Partnerships for **investments in our agri-recreational business model CADCO-ART**, which integrates- the culture and practices associated with agriculture, food processing, cooking and consumption of the foods, sports, games, music, arts, religious practices etc.
- Partnerships for investment in **integrated primary production, processing and marketing of Nutraceutical/Functional Foods.**
- Partnerships for the establishment of **public-private contract food processing centers.**
- Partnership in establishing **in-market Caribbean food distribution Centres.**