

Options for a Food Replacement Strategy
in the context of Rising Food Prices and Food Security : A working Paper

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Introduction

There has been much discussion about the rising food prices and its global impact. In the Caribbean the debate about food prices and the so called food crisis has seen almost all countries in CARICOM seriously considering an approach to deal with the issue of food security as a matter of priority.¹ Food Security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life². Food Sovereignty can be defined as food security based on the deployment of domestic resources (national and regional) with a focus on domestic and regional production and processing.³ There have been calls in some quarters for Cassava flour and other substitutes using locally grown produce such as Breadfruit. The Barbados Agricultural Society (BAS) made an announcement, recently that they were looking into the possibility of using sweet potato and cassava as ingredients for production of Animal Food.⁴

The rising food prices situation is also exacerbated by fuel prices which have also been driven by the price of oil, which increased to as much as USD \$150/barrel. There is now a third and perhaps equally devastating ingredient which is the current global financial crisis with its predicted debilitating effects expected in the Caribbean.

The debates are often fueled by anecdotal evidence, and sometimes by advocates of one position or other in the bio-fuel controversy. What are the facts? Is there really a food crisis in the region? There is indeed an increase in oil prices and an increase in ethanol production from food sources primarily corn. Food prices are also increasing and are cause for concern. What are the policy options for Caribbean governments to mitigate the rise in food prices and ensure food security in the region? What is the long term outlook?

¹ Brian Francis, (2008) "Food Security in the Caribbean", Barbados Business Authority, Monday July 14, 2008

² FAO (2003) Trade Reforms and Food Security: Conceptualizing the linkages, Commodities and Trade Division, Rome

³ Barton Clarke and Whyte, K, (2008) National Forum on World Food Security and the Challenges of Climate Change and Bio-energy, Ministry of Agriculture, Barbados,

⁴ Caribbean Broadcasting Corporation, (July 2008) News Cast

According to FAO (2008) the nature and extent of the global crisis involves soaring food prices influenced in part by soaring input prices which in turn create rising inflationary pressures on countries. The consequences of the above are manifested in social unrest riots and protests against wider economic and political problems.⁵ Other associated costs of the ‘crisis’ identified in the discourse include soaring food import bills, rising poverty and inequality and rising hunger. The Food and Agriculture Organization which monitors the effects of food price situation on vulnerable groups estimates that children seem to be the most affected particularly those living in environments of instability, conflict or with HIV/Aids. Work by FAO and others including the World Bank and UNICEF confirm that the numbers of hungry people have risen to 50 million (2007 estimate) and that the nutrition crisis is mostly attributed to drought and prolonged conflict especially in some Eastern and southern African countries such as Somalia.

A few years ago the situation was different with commodity prices declining. In fact FAO (2005) recently noted that commodity prices had been on the decline for the past forty years.⁶ According to the FAO in its report, *The State of Agricultural Commodity Markets* (2005), “...in the second half of the 1990s prices of several commodities exported by developing countries fell to their lowest levels since the Great Depression”. Lower food prices have the effect of lowering income and employment of the rural poor and hungry that depend on agriculture. On the other hand, consumers in developed countries or consumers living in urban areas of developing countries benefit from lower prices. Today the situation has changed with commodity prices rising along with fuel prices.

The World Bank (2008) reports that in two years (March 2006 - March 2008), the international food price index has risen 82% which is nearly double in nominal terms⁷. However, as pointed out by the same report, food prices remain relatively low, in real terms. The World Bank asserts that “...wheat in 2007 was 10 percent lower than its average during the 1960s and 1970s”. However, that notwithstanding, there is growing concern that the nutrition and health of the poor in several Central American and Caribbean countries that are net importers of food and fuel, will

⁵ FAO (2003) Trade Reforms and Food Security: Conceptualizing the linkages, Commodities and Trade Division, Rome

⁶ Overall, real prices for all agricultural commodities have declined over the past 40 years, but the rate of decline has varied from commodity to commodity. FAO (2005) Commodity Markets: Global Trends, FOA Newsroom, Rome

⁷ World Bank (2008) Rising Food Prices: The World Bank’s Latin America and Caribbean Region Position Paper, The World bank, Washington D.C.

be compromised unless there is a sustainable strategic intervention to arrest and turn back the trend.

FOOD SECURITY

Food Import Bills

Caribbean countries, since the 1980s, adopted the paradigm of buying then cheap food from the world market and in effect “put the sword” to the domestic agricultural sector which could not compete favourably. The result of that strategy is unsustainable food import bills. These countries have also been locked in export-led commodity production such as bananas, Sugar, rice, cocoa and coffee. The problem with that approach is that the Caribbean countries continue to be trapped in the import – export paradigm of the 1970s and 1980s and are still revisiting the productivity issues and the policies of export-led agricultural development to deal with food security.⁸

As a result of the high food prices and the high fuel costs, it may well be that producing food for the domestic market is now a viable consideration and may even be economically feasible⁹. However, there are concerns that as a result of the neglect of the domestic agricultural sector, many of the valuable indigenous institutions such as the marketing boards and farmers’ cooperatives have already been relegated to the past. In fact, there are also concerns that production skills are also on the decline as many farmers left the agricultural sector to work in other sectors such as the tourism sector, with the neglect of the domestic agricultural sector in many Caribbean countries.

The South Centre (2008) insists that this is why the causes of the current crisis must be properly analyzed and understood. This opportunity to rethink concepts such as self-reliance, self-sufficiency and food sovereignty must be put to good use. It is important to consider these

⁸ Ballayram et al, (2002) Food Security and Health in the Caribbean: Imperatives for a New Policy, UWI, SALISES and Mona School of Business, Jamaica

⁹ Domestic in this case refers to a regional approach to food security and

concepts in any strategy being developed ensure the security and sovereignty of food resources in this part of the global landscape, particularly as it relates to the current food crisis. Another important consideration, also highlighted by the South Centre, is that...

*“developing countries must also use the opportunity to consider features of the global landscape which have caused countries to place greater importance on the production of food over export crops, and imports over local production, and which have affected national ownership and control over main resources for food production”*¹⁰

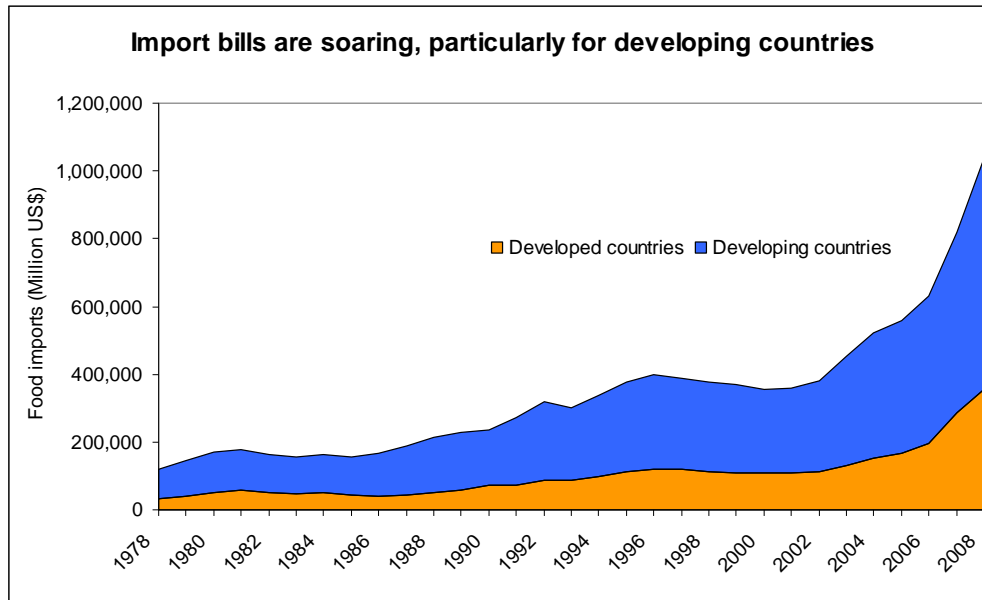
In this regard economic theory such as economies of scale and comparative advantage have been used by the north and those institutions charged with the responsibility for “development” to encourage the importation of then cheap food on the world market. The late Lloyd Best, noted Caribbean Economist, although not referring directly to the current food crisis, made the observation, that it was not in the Caribbean interest to necessarily adopt the economic theories of developed countries without question.

One of the indicators of food insecurity is the food import bill of a country. (Diouf, 2008) reports that globally the food import bills are soaring particularly for developing countries.

Figure 1: Global Food Import Bills

¹⁰ South Centre (2008) Food and Energy Crisis: Time to rethink Development Policy, Reflections from the High Level North-South Dialogue on Food and Energy Security, Geneva, Switzerland

¹⁰ National Nutrition Centre (2003) The Barbados Food Consumption and Anthropometric Survey , Ministry of health, Government of Barbados



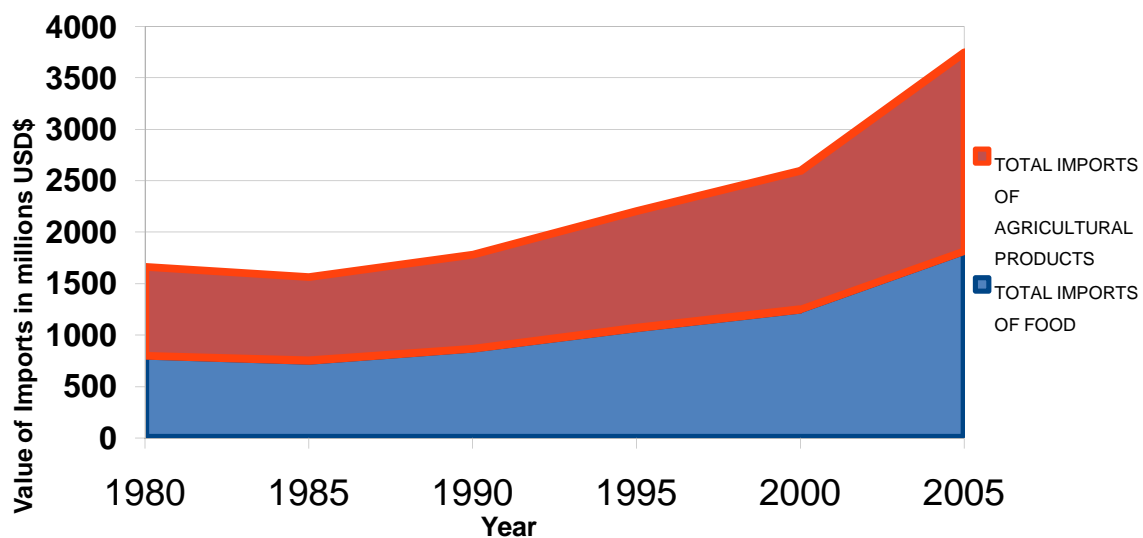
Source: FAO (2008)¹¹

In the Caribbean the situation very closely follows the global trend with unsustainable food import bills. The Figure below clearly shows that the trend is similar and is cause of great concern. The spiraling and unsustainable food import bills are only part of the problem.

Figure 2: Regional Food Import Bills

¹¹ Jacques Diouf (2008) High Food Prices: Causes and Possible Actions, Food and Agriculture Organization of the United Nations, Rome

Total Imports of Food and Agricultural Products



The burning question is how to reverse this trend. Whatever the strategy that is used, it must be compliant to the rules of the multilateral trading system. In other words, the strategy must not be trade restricting.

Nutritional problems

The National Nutrition Centre of Barbados conducted the *Barbados Food Consumption and Anthropometric Survey* in 2000 which is one of the few such surveys which were accessible.¹² The report analyzed the socio-economic, demographic, food acquisition and preparation practices, and assessed the health and nutritional status of the respondents. It found that there was a high prevalence of obesity in the population, particularly among the youth. As a result that group is a high risk one for developing any of the chronic non-communicable diseases (CNCDS). The study also found a high prevalence of nutrition-related CNCDS among older persons. According to the Report, Barbadians do not have enough understanding of the individual, family and community risks associated with obesity, the CNCDS and the poor quality of life that will result from these risks. The study revealed that obesity and overweight notwithstanding,

Barbadian diets lack diversity and tend to be inadequate in vitamins and minerals. Based on a non-scientific observation, it may well be that some of these findings are similar throughout the region.

The Report also discussed proposed policies, programmes and actions to address nutrition-related problems and recommended that strategic alliances should be formed, as required, between the public and private sectors, especially the food sector, to address specified nutrition problems.¹³

Another concern related to the prevalence of lifestyle diseases, primarily diabetes, hypertension and heart related diseases, and various types of Cancer is the type of foods being imported along with these nutrition-related chronic non-communicable diseases (CNCDS) referred to earlier, which have become the major causes of death in the Caribbean.¹⁴ Ballayram et al (2002) found that these CNCDS were not restricted to any one socio-economic or demographic line but was related to a sedentary life style and changes in diets which can linked to domestic and import food policies.

The following table indicates the main causes of death in the Caribbean for two periods 1980 and 2002. It should be noted that these conditions are also nutrition related and in fact are preventable or controllable through nutrition.

TABLE 1: Main Causes of Death in the Caribbean

¹³ National Nutrition Centre (2003) The Barbados Food Consumption and Anthropometric Survey , Ministry of health, Government of Barbados

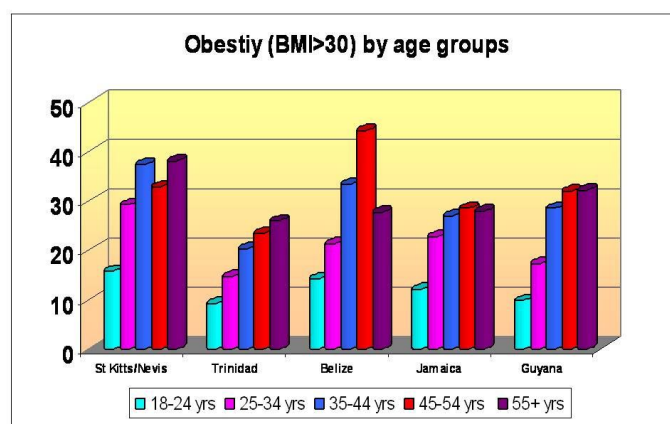
¹⁴ Ballayram et al, (2002) Food Security and Health in the Caribbean: Imperatives for a New Policy, UWI, SALISES and Mona School of Business, Jamaica

MAIN CAUSES OF DEATH IN THE CARIBBEAN			
1980 (%)		2002 (%)	
1.Heart Disease*	20	1.Heart Disease*	16
2.Cancer*	12	2.Cancer*	15
3.Stroke *	11	3.Stroke*	10
4.Injuries	8	4.Diabetes*	10
5.Hypertension*	6	5.Inj. &Violence	7
6.ARI	5	6.HIV/AIDS	6
7.Diabetes*	4	7.Hypertension*	7
*Nutrition Related = 53 %		*Nutrition Related = 57 %	

Source :CFNI¹⁵

Director of the Caribbean Food and Nutrition Institute (CFNI), Dr. Fitzroy Henry, also points out that these conditions referred to above are as a consequence of nutrition related causes. He points to the increased incidence of obesity in the region coupled with a reduced level of physical activity as also being associated with the increased incidence of the lifestyle diseases referred to earlier.¹⁶ The Chart below shows the relationship between obesity (Body mass Index) and age which suggests that obesity is highest among those older than 35 in St. Kitts and Nevis, Trinidad, Belize, Jamaica and Guyana.

Risk factor - obesity



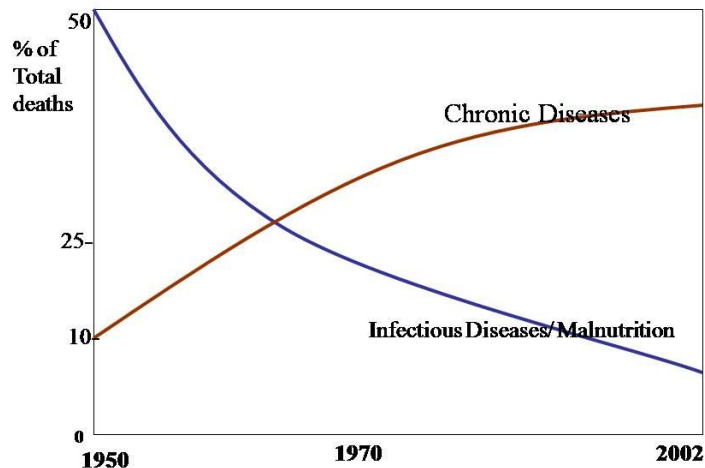
Source: CFNI¹⁷

¹⁵ Ballayram "Conceptual Framework for Food and Nutrition Security within Poverty Alleviation Strategies" in (CFNI, 2007) "Poverty Alleviation and Food Security Strategies in the Caribbean: A Policy Dialogue", pp 5-9.

¹⁶ Henry, Fitzroy, (undated) Nutrition Challenges in the Caribbean, Caribbean Food and Nutrition Institute, Kingston, Jamaica

¹⁷ Henry, Fitzroy, The Obesity Epidemic--A Major Threat to Caribbean Development: The Case for Public Policies. CAJANUS, Vol 37 No. 1, 2004, pp 3-21.

The following graph shows the long term trend with respect to the CNCDs which have been afflicting Caribbean people over the years. While infectious diseases exhibit a downward trend CNCDs display an upward trend. As pointed earlier CNCDs are the leading cause of death in the Caribbean.



Data on epidemiological transition in the Caribbean—diet-related diseases are the major health problems in the Caribbean

A review // analysis of the nutritional value of many of the indigenous foods such as breadfruit, cassava, sweet potato as well as the sources of animal protein produced locally (region) indicates that in many cases the values are superior in many respects.¹⁸ In the first place fresh foods are notably more nutritious than processed food. Then there is the concern related to genetically modified crops and animals which are now in the food chain.

Towards a Food Replacement Strategy

The need for a food replacement strategy has long been established particularly with the spiraling food import bills and the life style diseases which have been associated with imports over the

¹⁸ Food conversion Tables

past three decades or so.¹⁹ The proposed food replacement strategy which involves the systematic replacement of foods from the import basket with those from the indigenous food sector is by no means a simple construct. It will require a holistic approach involving all the relevant stakeholders and the political will of those charged with Governance.

Since this strategy will have to involve an array of national, regional, international as well as governmental and non-governmental organizations, it will be necessary for some consultation to ensure that all are on board in tackling this important and complex situation. It will be important also from the outset to recognize and understand the context of habits developed over a long period and entrenched in the economic structures and the incumbent private sector architecture will not be easy or willingly change over time. The strategy must also recognize that the process must be a long term strategy as much of the habits developed over the past decades will be difficult to change in the short run.

Any food replacement strategy must firstly be compliant with the WTO rules.²⁰ It must therefore be clear that any policy action in respect of the strategy must not violate the rules of the WTO and must not restrict trade in any way. Only those countries which had signaled in their schedules to the WTO can institute measures (which may be deemed to be trade restricting) to “protect their agriculture” and encourage domestic production.²¹ Of course, the rules of the WTO allow for some limited intervention in this regard, however, the measure(s) instituted must be temporary.

Notwithstanding the above restrictions there is still some policy space within the WTO which allow for some measures to be taken particularly as they relate to food security and protection of the environment. The preamble of the Agreement on agriculture notes “*..that reform of trade in agriculture should be made in an equitable way among all members having regard to non-trade concerns, including food security and the need to protect the environment.*”²²

¹⁹ Caroline Allen (1999) *Power, Identity and Eurocentrism in Health Promotion: the Case of Trinidad and Tobago*, PhD thesis, Centre for Research in Ethnic Relations, Faculty of Social Science, University of Warwick, UK.

²⁰ World Trade Organization (1999), *The Legal Texts: The Results of the Uruguay Round of Multilateral Trade Negotiations*, Cambridge University Press

²¹ *Ibid*, pp 36 See articles 4, 5, 6 and 7

²² *Ibid* pp32

A food replacement strategy must sensitize the populations in the region to the health benefits of eating fresh fruit and vegetables as well as the economic benefits of reducing the food import bills and in fact creating employment in the agricultural sector. However, the agriculture which is sold to the populations must not and cannot be the same old approach of producing primary products. The value added approach to agriculture must be the way forward. The articulation of the strategy must be all inclusive and ensure that all stakeholders participate meaningfully in the development of the strategic approaches. Therefore such a strategy must in fact involve schools, restaurants, chefs, the hospitals, hospices and other institutions where food is prepared for a captive client group such as the schools feeding programmes, prisons and other similar entities. Farmers groups, community based organizations, Non-governmental organizations, the relevant ministries including, agriculture, health, local government, community and rural development to name a few.

A regional public Education and marketing strategy must be developed and implemented with the input of all relevant stakeholders from the grass roots to the policy levels. That campaign must employ all media of communications particularly the new media and media products which the youth and the not so young are employing. These products include “face book”, “my space”, MSN and a host of other channels and products. The notion of cell phone adverts and other innovative strategies must be employed to good effect. The campaign must be cognizant of the behavioural change which is being pursued and that indeed, it will be a strategy with short medium and long term approaches.

A critical aspect of the strategy must be the further development of the concept of agriculture in limited spaces, such as backyard gardening and other similar initiatives. The concept of urban gardening or as practiced in Havana, Cuba, ‘Agriculture in the City which involves the use of empty lots within the city limits for the production of food is noteworthy and should emulated.’²³ This approach is employed particularly in countries or areas of limited land space for agricultural production. The development of urban agriculture commenced in Havana around 1989, with the

²³ Maria Caridad Cruz and Medina, R.S., (2001) *Agriculture in the City: A Key to Sustainability in Havana Cuba*, International Development Research Centre, Ian Randle Publications.

all important authorization by the government which allowed for the use of state-owned empty lots for agricultural production.

The concept of backyard gardening or ‘box agriculture’ in other parts of the Caribbean where crops are grown in containers such as cut-out oil drums or in specially constructed wooden boxes is similar in that it encourages the production of agriculture in areas where there is limited land space, especially in urban areas.

Cruz & Medina (2001) report that urban agriculture made an important contribution in quality and quantity to food security for the population of Havana, Cuba. It also encouraged trade and developed opportunities which contributed to its further development. The authors insist that...

“Urban agriculture should be considered a permanent urban function and treated as such in the city’s land management system and city management in general. This implies the application of a more integrated theoretical-practical management approach, broader than the sectorial approach currently applied to urban agriculture”.

Some parts of the Caribbean are characterized as water deficit, however, the quantum of water which washes away to the seas with loads of topsoil after rainfall laments the lack of the development and implementation of a water harvesting strategy for agriculture as well as domestic purposes.

Some of the foods which could form part of the replacement strategy include: Starchy crops such as maize, *Dioscorea trifida* (cush cush yam), sweet potato, cassava, tannia, arrowroot, topi tambu; Legumes including beans (*Phaseolus vulgaris*, *P. lunatus*), ground nuts; Vegetables such as Spinach/Bhagi (*Amaranthus*) and pumpkin; Fruits counting avocado, pineapple, guava, papaya, West Indian cherry, guinep, soursop, sugar apple, sapodilla, caimite/star apple, mammey apple, plums (*Spondias*); and Industrial crops and beverages viz., cocoa and mauby to name a few and condiments which include hot pepper, roucou, pimento, vanilla, tonka bean.

The nutritional value of these and other food which can be produced locally, such as green and ripe bananas, breadfruit and the plethora of fruits and vegetables which are grown must be articulated and shared with the populations through schools, community organizations, hospitals, sports and social clubs,

The foregoing are some of the building blocks in the articulation of a food replacement strategy which must be developed as a matter of course to help to reduce the food import bills and of course equally important to reduce the incidence of CNCDS.