

**FOOD SECURITY AND THE POVERTY PARADOX  
AT THE LOCAL LEVEL: THE CASE OF  
NORTH/SOUTH BELIZE**

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**Presented at:**  
**International Food and Nutrition Conference**  
**Tuskegee University**  
**Tuskegee, Alabama**

**October 8 – 10, 2000**

# TABLE OF CONTENTS

	<b>Page</b>
<b>Introduction</b>	
The Country	1
The Local Level—The household	2
<b>Food Security—Social, Political and Economic Framework</b>	
Policies	5
Food Availability and Food Consumption Practices	6
Value System—Beliefs and Social Relations	7
<b>Food Security Safety Nets</b>	
Initiatives at the Formal Level	9
Initiatives at the Local Level	9
<b>Conclusion</b>	10
<b>References Cited</b>	12
<b>Appendices</b>	
Appendix i	14
Mid-year Estimates by Age Group and Sex	
ii	15
Major Foreign Aggregates 1990 – 1998	
iii	15
Iron Deficiency Anaemia	
iv	16
Poverty Estimates For Belize	
v	17
Food Consumption in a Northern Community	
vi	18
Food Consumption in a Southern Community	

## LIST OF FIGURES AND TABLES

Table 1	Poverty Profile of Belize by Researcher	4
Table 2	Minimum Cost Daily food Basket	7

## **INTRODUCTION**

### **Definitions**

For the purpose of this paper, food security is nutrition security. Food security reflects availability, quality and safety. The two northern and two southern districts emphasized are Corozal, Orange and Toledo and Stann Creek, respectively.

### **The Country**

Belize lies on the northeast coast of Central America, bordering on the southwest with Guatemala, on the north with the Mexican State of Quintana Roo, and on the east by the Caribbean Sea (Fig. 1). Its total land space of 22,960 square kilometers (8,867 square miles) is approximately one-half the size of Massachusetts. Geographically, the country is divided into six districts, each with a district town, and with the City of Belmopan as its capital. The former capital, Belize City is the locale for the largest port, and remains the main economic and political hub. Belize's four ecological zones also serve as socio-economic units, as each zone influences patterns of livelihood. These are (Furley, 1974):

- coastal plains—localities along the coast which serve as market centers and seaports
- southern lowlands—rain forest areas which have suffered from erosion due to slash-and-burn farming system, and forest depletion
- northern lowlands—fertile limestone land in the northern districts use for intensive sugar cane farming
- cayes—consists of several small islands, the barrier reef and the atolls

The barrier reef extends 640 kilometers from the Yucatan Peninsula (north) to the Bay of Honduras (south), and 75 kilometers from the mainland (Palacio, 1996).

Belize is a country of migrants, and its demographic alterations over time are primarily a consequence of migration—movements within, into and out of the country. The most recent was during the period (1980 - 1990) of unrest in Central America, when some 30,000 displaced persons settled primarily in rural Belize, causing the population to increase by 30% (1991 Census). The 1998 mid-year population estimate of 238,500 comprises several ethnic groups. Its largest ethnic group is the Mestizo (43.7%), who predominate in the north; Creoles (29.8%) mainly in Belize City; the indigenous peoples (17.6%)—the Garifuna (6.5%), and Maya (11.1%) in the south. An influx of Asians and North Americans has added to the Mennonites, East Indians and Europeans. Since arriving in 1959, the Mennonites created farming communities in the west and north, and have contributed immensely to food production. The rural areas, which are more populated (53%), also have larger families than the urban areas. Some 61.1% of Belize's population is under the age of 25 years, with 67% of this group under the age of 15 years (Appendix i).

The country's economy is dependent on the export of basic agricultural and fisheries commodities, through special arrangements with Europe and the United States of America (USA). Due to trade liberalization, the preferential status will end in 2002. Since 1989 there has been great emphasis on tourism, which is now the second major foreign exchange earner. However, the extreme dependence on foreign markets, international credit, and foreign labour creates a fragile, economy. The 1998 statistics

show that most exports are to UK (42.1%) and USA (33.8%), while 54% of all imports are from USA (53.7%). The statistics on imports from Mexico (11.7%) are grossly undervalued, as purchases at the border town of Chetumal, Mexico invariably goes undocumented. With total retained imports (\$542,541M) exceeding exports (\$306,061M), the balance of trade stands at \$236,480M, the largest since 1993 (Appendix ii). GDP per capita has decreased slightly from \$4,556 in 1995 to \$4,468 in 1998. At 61.4%, the share in GDP is overwhelmingly dominated by the service sector (Abstract of Statistics, 1999). Furthermore, according to the Prime Minister's state of the nation's address on September 15, 2000, the present growth in GDP is 6.4%.

Primary school is accessible even in the rural communities, and secondary and tertiary schools are available in each district town. Health care is provided through 35 health posts, 9 hospitals and 26 health clinics, which are evenly distributed by population countrywide (Abstract of Statistics, 1999). Monthly mobile clinics are also available to some communities. With the exception of two private hospitals, the government funds all the abovementioned health facilities. Therefore, service charge to patients is on a sliding scale. The demographic indicators such as, crude birth and fertility rates, as well as infant mortality rate, although still the highest in the region, have shown a steady decline since 1995. For example, 1998 data demonstrate that crude birth rate decreased from 30.6 to 25.1, fertility rate from 3.6 to 3.2; while infant mortality went from 26 to 21.5 (Abstract of Statistics, 1998). However, the nutritional situation is just the opposite, and the 1992 food and nutrition assessment outlined the following concerns:

- under and over-nutrition—49.5% of population studied were undernourished, and 30.3% obese
- low birth weight prevalent in the south of the country, particularly with Mayan children
- micro-nutrient deficiencies—Vitamin A, zinc, and iron deficiency anaemia prevalent in school-aged children and pregnant women, in the southern districts

Iron deficiency has increased by 11.5% since 1989, and is prevalent in the Stann Creek and Toledo Districts. In the Stann Creek District, 61% of all pregnant women attending prenatal clinic for the first time, were detected with having iron deficiency anaemia (Palacio, 1997). This is an increase of 37.6% in six years (Appendix iii).

### **The Local Level—The Household**

The local level is the smaller village community, and for the purpose of this paper the communities of the two northern and two southern districts (Fig. 1). Most village communities are rural communities each with population of less than 500 persons. The northern communities have larger populations, and have grown over the last ten years due to in-migration; while the southern communities have been plagued with out-migration (Abstract of Statistics, 1999). At the local level, the household is the locus for food security and resource management strategies. It is at this level that food availability whether quality or quantity as well as safety is achieved. The success in achievement is contingent on socio-economic, socio-political factors that affect the community within which the household exists. Structurally most households center on the woman, and maternal obligations are broadly defined. Therefore, the woman, even when there is a male household head, is responsible to manage household resources, and to devise strategies to provide food. The 1991 census used the household as a sampling unit; and

the Census Report defined it as “persons living under the same roof for most nights of the week and sharing at least one daily meal together”.

The average household size is 5.3 persons, and has two bedrooms (1991 Census). Household size in rural Toledo is much larger, with 63% of homes as single-room, thatched, and without toilet facilities. Some 32% of all households are headed by women, and one in every five live births (20%) are to young women under twenty years old, who are households heads. This type of household is prevalent in the south, and particularly among the Garifuna. While this is not a phenomenon for Belize, invariably, these young mothers have not yet developed the cognitive, linguistic and other educational and job related skills necessary for the world of work in the mainstream economy (Palacio, 1997). So they are at a disadvantage relative to other households and are far more vulnerable to poverty. Unstable marital unions through visiting unions are also more prevalent in the south than in the north, again particularly among the Garifuna. The effect of this is barely surfacing, in the increase in students who come to school hungry.

The local economy increasingly relies on the cash economy, and in some communities, this is exclusively so. (Palacio, 1996) Cash comes into the economy *via* remittances, petty trading, sale of subsistence food products, and wages. Remittances come from relatives who, for economic reasons, have migrated to other parts of the country. Wages are earned primarily from the sugarcane industry in the north, and in the south from virgin industries in tourism and aquaculture. Approximately 237 full-time jobs are available with hotels, whose occupancy rate of 22% has not changed in the past three years. The aquaculture industry attracted five farms to the south and employs 240 persons full-time, and an additional 300 during harvesting and processing. In 1999 aquaculture contributed to over \$5M Belize in foreign exchange. Another source of cash is through the subterranean economy, *via* sale of illegal drugs and contraband goods including food items at border communities in the north. The market at the local level is limited, but buyers and sellers use social relations and kinship, to safeguard success in economic activities (Palacio, 1997).

Since the early '70's both northern districts were singled out by the state and multilateral agencies for agricultural expansion in sugarcane production for export. The larger landowners immediately replaced subsistence food production for sugarcane production. They received high foreign dollar prices, negotiated by the state, as sugar became one of the largest foreign exchange earners. Over-night they acquired wealth, and there was considerable cash flow, when the market price was favourable. The smaller farmers also abandoned their lifestyle of subsistence farming, in search of wage labour in the sugar cane industry. Therefore food production declined when farmers of the north embarked into the sugarcane industry. This change from a subsistence economy (food production) to a marginal capitalism brought about a dependence on imported foods, and drastically altered social relations and diet at the household level (Stravrakis, 1979). It also created illusions of prosperity, as imported food prices have little to do with wage rates at the local. The illusion of prosperity is augmented by the fact that the price for sugar has become unstable, and sugar cane production is seasonal. Therefore, those households who did not control their own subsistence ended up eating irregularly, and at risk for food security in both quality and quantity.

The milpa production system is used by Mayan farmers in Toledo to produce staples, as rice, corn and beans for domestic consumption. Some 1,300 such small farmers each produce approximately 3,000 pounds of rice annually. Their numbers dwindled by 20% in one year, and so has production. In 1995, Toledo provided nearly half (48.6%) of total rice produced for the Belizean table; by 1998 this had declined to 30.2%. The reasons for the decline in productivity as provided by the ESTAP Report (1999) are as follows:

- lack of appropriate storage facilities
- lack of credit facilities
- large distances between farms and service, supplies, marketing and processing centers
- weed infestation
- lack of appropriate and sustainable technology transfer

The southern Mayan farmer is forced to operate in a constricted economic atmosphere where markets are inaccessible, limited and the price controlled. This is augmented by the absence of processing capabilities and value-added opportunities.

Suffice to say the Mayan farmers provide food for all of Belize at their (the farmers') expense. Compared with the situation in the north, Toledo's local prices are miniscule, subject to limited domestic market, and controlled by the state. This is compounded by a poor market distribution system due to poor roads and the distance of the products from the markets. Identifying different areas of the country for development, the North producing for export and the south producing for domestic consumption, are systems of national economic significance. I will suggest three outcomes of this north/south dichotomy. One is purely economic--local price versus foreign export price. The other two are social—technology transfer went to the north; and perception--the heightened perception that the north gets more attention due to their economic contribution via foreign exchange earnings; the perception of having less relative to others, creates listless communities. As a result, it led to the development of one group and the underdevelopment of another, further institutionalizing poverty.

Two poverty assessments conducted in Belize in 1994 and 1995, measured poverty primarily on the basis of expenditure on food, to arrive at poverty estimates. Blane D. Lewis, whose research was funded by the United States Agency for International Development (USAID) in November 1994, utilized data from the 1990 Household Expenditure Survey, and the 1990 Consumer Price Index. The second study conducted in 1995 was commissioned by the Government Of Belize (GOB), and funded in part by the Caribbean Development Bank (CDB). This study utilized 1995 statistics from secondary sources, as well as primary research in areas identified as poor. Both studies relied heavily on the minimum food basket approach to arrive at the poverty line for Belize. A comparison of some of the findings is demonstrated below, in Table 1. These figures indicate that 25.3% of all households and 33% of individuals live in poverty, while 9.6% of households and 13.4% of individuals live in extreme poverty, or are indigent. Also, poverty is more severe in the rural areas, where 42.5% are poor, than urban areas where 20.6% of the population is poor. Nearly one-third (30.5%) of female-headed households are also targeted as poor. The "Variance" column indicates that poverty increased tremendously, and that the indigent population more than doubled, between 1990 and 1995.

**TABLE 1**  
**Poverty Profile of Belize By Researcher**

<b>Profile</b>	<b>Lewis</b>	<b>CDB/GOB</b>	<b>Variance</b>
Highest incidence is Toledo	41%	57.6%	16.6%
Belize's poor households	--	25.3%	--
Belize's indigent households	--	9.6%	--
Male household head	--	23.6%	--
Female household head	--	30.5%	--
Belize's poor population	23%	33.0%	10.0%
Rural households	--	35.2%	--
Belize's indigent population	6.4%	13.4%	7.0%
Belize's rural poor	24%	42.5%	18.5%
Belize's urban poor	21%	20.6%	-0.4%
Poorest sector	Agriculture and Construction	Agriculture and Fishing	
Poorest ethnic group	Garifuna and Maya		

Source: Compiled from The Poverty Assessment Report, 1996

Other characteristics offered by both authors are:

- High percentage of land/home ownership
- Women-headed households are poorest
- High dependency and taste for the more expensive imported food items

Poverty is far more pronounced for all variables in Toledo (Appendix iv). But the poverty paradox is more symbolic, and trying to understand it only in terms of a simple figure on absolute income/expenditure levels is not enough. As the perceptions abovementioned for the north/south dichotomy, many of the more direct consequences of poverty cannot be translated into figures.

## **FOOD SECURITY—SOCIAL, POLITICAL AND ECONOMIC FRAMEWORK**

### **Policies**

Three policies directly affect food security at the national level. These are (Hood, 1994):

- an export oriented development policy
- price controls on locally produced foods
- importation of selected food items

The climate for import and export is influenced by conditions for lending *via* institutions such as International Monetary Fund (IMF), The World Bank, and CDB, whose financing is traditionally for investment in export production (Medina, 1997: 150). Consequently Belize's export policy objectives are twofold—to decrease the trade deficit by boosting exports, and to earn foreign exchange to pay creditors. To attract investors, GOB offers generous development incentives, such as tax and tariff concessions to investors, free trade zones, and as recent as 1998, offshore banking. The success of the export-oriented development policy is demonstrated in growth of real GDP for the past ten years, and in the decrease in the balance of trade between 1994 and 1997 (Abstract of Statistics, 1999).

However, the activities involved in exporting citrus and banana are very labour intensive. Additionally, local workers had long refused to work for the low wages offered by owners of the industry. Therefore, cheap labour was imported from neighbouring Central America to satisfy the need for workers, but to the exclusion of local labour. This has proven to be disruptive socially, particularly in the weakening of unions, and divisiveness among ethnic groups (Medina, 1997). It is also a foundation for furthering the institutionalization of poverty through unemployment.

The price control on local produce was initiated in 1974 as a measure to keep food prices low. Marketing Boards were introduced to regulate the marketing of some staples. While this was of great benefit to consumers, the small farmers in Toledo, who provide staples for home consumption, were adversely affected. The GOB's imposed price controls "prejudiced opportunities for the farmer to earn a just price for his product" (Palacio, 1996: 13). They received low prices for their crops while paying high prices for purchases. At the same time, the marketing and distribution strategy of Toledo's small farmer is not as efficient to move produce, particularly the perishable goods, to main market centers. Similarly, import licensing on food products was instituted, with the primary objective of maintaining a balance in supply and demand. This was particular to food items that were in high demand during festive seasons. The licenses do not always control imports, and invariably the market was flooded with food items that can be produced locally. Furthermore, both strategies by GOB created unfair competition between imported and locally produced goods.

### **Food availability and Food Consumption Practices**

National food available (1990 statistics) was valued at \$231M while foods consumed nationally amounted to \$226M, resulting in a surplus of food available countrywide (Palacio, 1997). It consisted of net imports (27.4%), net farm production (21.2%) and home production (51.4%). Some 90% of home production consists of food from animals and 10% consists of staples and vegetables. Total food imports in 1995 amounted to \$514,431M, which had increased by 15.5% to \$594,086M in 1998 (Abstract of Statistics, 1999). The largest imported food items are fruits, vegetables, dairy products, oils and cereals.

The household is the locus for food security at the local level. Food availability at the national level invariably does not trickle down to the local level. Food supply consists of both local produce and imported goods, and is dependent on other factors, such as, geographic location and size of household. Imported goods first enter the country at Belize City (Fig 1), and moved to other parts of the country. Therefore the readily available imported food items are more expensive in Toledo, as it is the furthest point from the center. Decline in food production and increased dependence on imported foods, are prevalent in both the north and south. But imported foods are barely affordable and therefore, those households who could not adapt to new coping strategies often went short of food.

Appendices vi and vii demonstrate food consumption practices for a northern, Mestizo/Yucatecan Maya community (Stravakis, 1979) and southern, Garifuna community (Palacio, 1982). Both tables reveal the use of imported food items at the household level. In the Mestizo/Yucatecan Maya community, wheat bread was the most recurring food item for breakfast and supper in place of the traditional corn tortilla, while

tea or coffee is the most preferred beverage, none of which is produced in Belize. Protein intake was limited to cheese, eggs and beans, as fish and meat (poultry, beef, pork) were consumed infrequently. Similarly for the southern community, the beverages were mainly imported foods, such as, Milo. Partly due to the proximity to the sea, the consumption of fish is more frequent. For both communities, food is prepared with unnecessary large quantities of oil or lard.

According to The Poverty Assessment Report, 1995, the minimum daily cost of food that each individual needs to survive is \$3.32, and the average number and percent cost of food imports consumed on a daily basis is 42% and 59% respectively (Table 2).

**TABLE 2**  
**Minimum Cost Daily food Basket**  
**As at June 1996**

<b>District</b>	<b>Daily Cost</b>	<b>% No. of Imports</b>	<b>% Cost of Imports</b>
Country	\$3.32	42%	59%
Corozal	3.30	50	67
Orange Walk	2.87	41	57
Belize	2.81	41	56
Cayo	3.25	56	54
Stann Creek	3.06	41	47
Toledo	4.48	34	29

Source: Compiled from The Poverty Assessment Report, 1996

Corozal and Cayo, being border districts show the highest combination in number and percent cost of imported foods consumed on a daily basis. But Toledo, another border district, proves the opposite for the same variables. By consuming the least imported foods, Toledo demonstrates some self-sufficiency in food production over all other districts. However, Toledo's overall daily cost is the highest (\$4.48), but consume the least (29%) number of imported food items. When the earning power of these north and south communities is factored in, it shows that the basic food cost for survival is barely affordable. For example, the cost of feeding an average-sized household of 5.3 persons would be \$17.60, while the earnings for an agriculture labourer is approximately \$20.00 daily, and a subsistence rice farmer earns approximately \$100.00 to \$300.00 per acre, annually (Palacio, 1997). Notwithstanding all this, imported foods have become more socially acceptable, so much so that local foods, when available, are downgraded. This is supported by some observations listed below, of dietary and consumption practices from the minimum cost daily food basket compiled from The Poverty Assessment Report, 1996 for Belize (Palacio, 1997).

- most favoured staples are rice, cassava and irish potato
- all districts use canned fish
- no fresh fish as an item in Corozal and Cayo Districts
- no butter, milk or rice as an item in Toledo
- most recurring imports are oil, cheese, powdered milk, butter, mixed vegetables

### **Value System—Beliefs and Social Relations**

Food security at the household level is not only a factor of quantity, but also whether members of the household eat on time and/or have a greater selection of foods for meal preparation (Palacio, 1982). Cultural belief systems about food and health, rather than the nutritive value of food, contribute to dietary practices in Belize. Cultural practices place constraints on the type (quality) and the amount (quantity) of food items selected for consumption. It is the significance of lard or oil as mentioned above, to add “richness” to the diet. In some cases the timing of the arrival of foods, affects quantity and quality of foods consumed. In Barranco, the untimely arrival of the fisherman makes daily food supply uncertain at the household level. Similar examples are prevalent in both northern and southern communities, where production is limited despite proximity to the sea and available, arable land. I will outline three areas of cultural influences. One is the need to combine solids and liquids in the folk belief system (Palacio, 1982), the second is the deliberate refusal of certain foods to children and pregnant women (Brady, 1990); the third is the obligation to share foods in indigenous religious belief systems of the Garifuna people.

Folk belief is that the body building properties of foods rest on the right mixture between solids and liquids. The distinction between solids and liquids rests not only on physical characteristics, but also on taste and presumed effects on the body. Garifuna women prefer the homemade *darara* (starch), to formula as foods for young infant feeding. The main reason was that the formula is not “heavy” enough to “fill-up” the infant (Palacio, 1982: 69). The formula also did not contain the right balance of solid and liquid. Teas were believed to be especially effective on the working of the body. Where once plant leaves were used as a base for teas, Milo and other imports were becoming the more preferred drink. The advertisement of Milo as a “tonic food drink” was very effective (Palacio, 1982: 73).

Particular foods, and specifically large fish, even when these were the most available in the season were not fed to particular segments of the population such as, young children, pregnant women and nursing mothers (Brady, 1990). The fear was the ability of the food in deforming the unborn child and the very young infant through its mother. This is an example of quality foods that are available, but restricted from the diet, whose resultant effect may be nutritional. In addition, the traditional religion called *Dugu* is still a very popular method of healing for the Garifuna. Indigenous ceremonies such as this, involve food obligations toward dead ancestors, but also the need to feed the living. The living includes relatives and friends who are invited to participate and partake, and which often involves the feeding of an entire village community (Palacio, 1993). The family responsible, although frugal in personal use of foods within the household, is obligated to provide large quantities for public redistribution in these ceremonies. Although the constraint to the host family may be purely economic, due to cultural beliefs, this ensures the availability of food to some segments of the community (Palacio, 1982).

Communal solidarity, as in the case above, is an example of how consumption at the local level also focuses on social relations. Furthermore, the division of labour around food production is stratified in the Garifuna household. In the north, food consumed, exchanged, or stored is jointly produced by the husband and wife of the

household (Stravrakis, 1979). For both the Mestizo in the north and the Garifuna in the south, consumption patterns center around the male spouse. Although the woman has the ultimate power to decide what meals to serve or what the household will consume, she will tailor foods to men's (spouses') peculiarities rather than the children (Palacio, 1982). Oftentimes the male spouse is given first choice, and the best part of the meal. For example, the meat goes to the spouse and the women and children receive the gravy. This is to ensure that men who are believed to work the hardest, eat enough (quantity).

## **FOOD SECURITY SAFETY NETS**

### **Initiatives at the Formal Level**

Initiatives at the formal level are those of large organizations, such as, government, NGO's, and international agencies. These initiatives are usually initiated outside of the receiving communities. Public awareness, even at the technical level, on food and nutrition security is not as widespread as awareness on poverty. Therefore, wherever there are interventions, these are not directly aimed at food security, but designed to alleviate poverty. Activities are wide ranging, from those that offer direct sustenance, such as, clothing and food items by the Red Cross; cash donations by government; to indirect sustenance, such as training and research by multilateral agencies. There are four projects worthy of mentioning. The Environmental and Social Technical Assistance Project (ESTAP) is aimed at adopting a holistic approach to development in the southern region, the Social Investment Fund (SIF) targets poverty reduction, the Belize Agricultural Health Authority (BAHA) is a new statutory body within the Ministry of Agriculture, and the Small Farmers' Bank provides small farmers and micro-entrepreneurs with access to non-conventional loans. ESTAP is still in the planning stage. SIF started implementation about two years ago, mainly to rural communities and it is too early to measure the impact of change. BAHA and the Bank are also relatively new entrants to the initiatives.

In August 1997, GOB's Ministry of Economic Development (MED) established ESTAP. Funding was made available via a loan from the Inter-American Development Bank (IDB). At the time, work on realigning and paving the existing thoroughfare that links both southern districts to the rest of the country, had just began. Community leaders were very concerned about possible negative, social and economic impact this development may have on its members. ESTAP was partly a response to this outcry by NGO's and community leaders. The overall goal was to develop an all-encompassing development plan for the southern region, which addresses the potential social, economic, land tenure, land use, and environmental concerns brought on by the construction of the Southern Highway. A draft plan was completed in November 1999. Then there is the SIF, which was established in 1996, and aims to provide community based sustainable solutions to the social and economic needs of the poorest segment of the population. It is jointly funded by the GOB, World Bank, Government of the United Kingdom, and the United Nations Children's Fund (UNICEF). The project areas financed include, health, education, water and sanitation, micro-enterprise credit, and organizational strengthening. Thirdly, BAHA commenced operations in April, 2000. It is responsible for animal

health, plant health, and food safety. BAHA aims to maintain standards in export potential areas, including fisheries and aquaculture (State of the Nation Address, 2000). The mission of the Small Farmers' Bank is to "provide working capital to small farmers and businesses, and to assist women and youth access to much needed finances to invest in their business ventures" (Brochure). Unsecured loans of up to \$7,000 are available at 10% interest. Each applicant is assessed on credit reference, character, and financial means.

### **Initiatives at the Local level**

Intervention into food security needs at the local level is more direct. These are initiatives, by the household, kinfolks, and small community based organizations in response to dire need. At the household level, the woman as the manager is responsible for the proper administration of resources to provide food on a daily basis. When resources are scarce, she devises various strategies for survival. Some of these tactics as witnessed by Palacio (1982) are:

- constricting consumption—limiting quantity first to children
- increase income—children are sent out to sell
- intensifying links to broaden one's food resources

Oftentimes, relations with kinfolk and friends are bonded around food exchange in the form of communal redistribution or as a system of reciprocity. Where this is practiced, the relations are guarded with jealousy (Palacio, 1982). The selection of godparents is based not only on one's ability, but also on one's generosity in food sharing.

One deterrent of the economy at the local level is inaccessibility to financial institutions. From a total of \$600M in circulation as credit, only a small amount is available to the small person due to the rigid lending requirements. Although no formal studies are available, informed sources suggest that informal credit systems exist and actively support the economy. Three examples of this alternative loan system include, the "loan shark" who lends cash at a very high interest rate, a rotating credit system called "syndicate", and lastly, is credit for food items from the neighbourhood mini market. Additionally, school feeding programmes have proliferated, and continue through the coordinating efforts of community business houses, schools and churches.

## **CONCLUSION**

Belize is a land of migrants, whose population grew by nearly one-third in a ten-year span. It has a very large dependent, highly unemployed populace, with a poverty-ridden countryside. At the same time, the breadbasket area of the country is not only the poorest, but also the most vulnerable for food security. Belize's mono-economy is largely dependent on protected markets and foreign labour in an era of trade liberalization. Despite abundant, arable land and accessible fishing banks, local production growth failed to equal population demand. This has been due in part to inconsistencies in production, but also to the overnight switch from a subsistence production to a market driven economy for foreign exchange. The result of which is visible in two ways—prices for local food items have increased to unaffordable levels, and the increased taste and demand for imported foods. The real amount of family cash

available at the household level determines the quality and quantity of food on a day-to-day basis. Some 33% to 54% of Belizeans in the north and south are plagued by low or no purchasing power. Augmented by belief systems that affect food quality, and rapid demographic shifts, these factors impact negatively on food security.

Income poverty, which is widespread, and in some cases institutionalized, affects food availability and eventually nutrition. Therefore, other characteristics of poverty, the non-monetary aspects are also prevalent. It is the poor choice in quality foods consumed in the north that displays a poverty of values, and places the household at risk for poor nutrition. For the south it is the perception of having less than others, which continually redefines what are regarded as necessities. The communities at risk for income poverty are most pronounced in the south. It is visible in pregnant Mayan and Garifuna women, the retarded growth of Mayan children, and in households headed by women in Stann Creek. While there is awareness of poverty in Belize, awareness and research on food security is not so widespread. Needless to say, there is yet no comprehensive policy for food security. I am suggesting three topical research areas to further understand the seriousness of food security. These are:

1. the effect of tourism on food security—as in the case of the small cayes which were once sleeping fishing towns, and are now bustling tourist resorts
2. the hunger for foreign exchange as it affects the increase in the price of local produce—fish products have become prohibitive for most Belizeans
3. the effect of land tenure and use particularly in the south where land is leased and or are placed in reserves—leased and reserved land do not give one leverage for loans for expansion in food production

The position of food security in a dependent economy must take priority at the local level. The present coordination and collaboration are invariably disjointed and not people friendly. I have emphasized the influence of peoples' belief systems, which are oftentimes ignored. Some suggestions for food security reform at the local level are:

- To provide opportunity for real sustainability—direct interventions through people to people, institution to institution collaborative research and technical assistance
- Capacity building through hands-on efforts at the community level, such as processing and value-added opportunities, agro and biodiversity efforts

In the short run, the intent to strengthen communities is through participation as partners in their development. Among the many principles of community development is the belief that despite their poverty communities have the capacity to be fully responsible for their own self-sustained development. They have the will, knowledge and understanding of their own situation. Ideally, the best policy for the development of people at the local level is to circumvent bureaucratic systems, and disburse directly to organizations that they themselves create. They are no less visionary, and effective than public or private sector bureaucrats.

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## Appendix i

### 1998 Mid-year Estimates by Age Group and Sex

Age Group	Male	Female	Total
0 – 4	35,955	18,310	17,645
5 – 9	33,205	16,840	16,365
10 – 14	29,050	14,890	14,160
15 – 19	26,235	14,095	14,140
20 – 24	19,185	9,385	9,800
25 – 29	15,810	7,185	8,625
30 – 34	15,260	7,065	8,195
35 – 39	14,120	6,715	7,405
40- 44	10,500	5,205	5,295
45 – 49	8,350	4,275	4,075
50 – 54	6,940	3,575	3,365
55 – 59	5,725	2,950	2,775
60 – 64	4,975	2,475	2,500
65 – 69	3,985	1,910	2,075
70 – 74	2,900	1,695	1,206
75 – 79	1,805	825	980
80 – 84	1,255	600	655
85+	1,245	505	740

Source: Central Statistical Office, Abstract of Statistics, 1999

## Appendix ii

### Major Foreign Aggregates (‘000 BZ\$) 1990 - 1998

Year	EXPORTS		IMPORTS		Trade	
	Domestic	Re-exports	Gross	Retained	Value of	Balance of
1990	216,911	49,011	422,586	388,007	653,929	-171,096
1991	197,076	49,360	512,485	441,483	687,919	-244,407
1992	238,418	49,929	548,497	492,900	781,247	-254,482
1993	237,876	35,091	561,923	524,996	797,963	-287,120
1994	254,895	47,075	519,860	465,371	767,341	-210,476
1995	285,732	37,520	514,431	492,804	816,056	-207,072
1996	307,101	28,174	510,962	469,016	804,291	-161,915
1997	317,875	34,824	572,424	205,973	858,672	-188,098
1998	306,061	30,654	594,086	542,541	879,256	-236,480

Source: Central Statistical Office, Abstract of Statistics, 1999

## Appendix iii

### Iron Deficiency Anaemia in Pregnant Women

District	1989--%	1995--%	Variance--%
Country	40.2	51.7	11.5
Belize	38.5	57.1	10.6
Cayo	47.1	63.1	16.0
Corozal	39.4	36.2	-3.2
Orange Walk	39.4	32.1	-7.3
Stann Creek	24.3	61.9	37.6
Toledo	47.3	58.9	11.6

Source: "From girls to Women—Growing Up Healthy in Belize". UNICEF, 1997

## Appendix iv

### Poverty Estimates For Belize

Items	Corozal	Orange Walk	Belize Dist.	Cayo	Stann Creek	Toledo	All Belize
Poor Households	20.3	21.0	18.6	33.5	16.1	47.6	25.3
Poor Population	26.7	24.9	24.5	41.0	26.5	57.6	33.0
Indigent Households	5.9	2.9	4.9	15.9	2.2	40.2	9.6
Indigent Population	8.7	5.0	6.5	19.7	5.1	47.2	13.4
Youth Population	25.6	27.5	21.1	41.1	19.7	50.0	31.6
Elderly Population	19.4	44.0	19.7	30.6	14.3	45.5	27.6
Female Population	27.3	25.6	25.4	39.8	28.9	56.3	33.1
Male Population	26.0	24.2	23.5	42.1	24.4	58.9	32.8
Male Heads	17.6	17.0	12.4	36.3	13.2	50.7	23.6
Female Heads	36.4	38.5	29.5	25.0	19.4	30.8	30.5
Urban Households	11.4	17.8	18.4	19.7	10.5	100.0	15.1
Female Heads	23.9	22.6	19.1	44.9	20.0	66.1	35.2
Urban Households	17.7	24.1	23.6	24.7	16.8	100.0	20.6
Rural Households	29.2	25.2	28.6	51.5	31.3	71.5	42.5

Source: The Poverty Assessment Report, 1996

**Appendix v**  
**Food Consumption in a Northern Community**

<b>Breakfast</b>	<b>Lunch</b>	<b>Supper</b>	<b>Snacks</b>
Wheat tortilla Wheat bread Maize tortilla	Rice in coconut milk Beans Maize tortilla	Wheat tortilla Wheat bread Garnaches	Fruits in season
Beans Eggs and cheese	Eggs Chicken Venison Spam Sardines	Beans Eggs Lard with tortilla	Coke
Milo Nespray/lactogen Breast milk	Avocado Squash Cabbage Tomato	Venison Chicharon	
Avocado Guava Mango	Lime juice Oranges Fruit in season Tea/Coffee Kool-aid Nespray	Milo Nespray Tea	
Tea/Coffee Milk in Beverage		Avocado Tomato	

Source: Olga Stavrakis, 1979

## Appendix vi

### Food Consumption in a Southern Community

Breakfast	Lunch	Supper
	Seed crops: Stewed red beans	
	Other vegetable crops: Cabbage and tomato	
Beverage: Coffee Milo Fever grass Ginger	Beverage: Cool-aid Fanta/coke	Beverage: Coffee/tea Milo Tea ginger
Breads: Fein (Wheat bread) Durudia (Wheat tortilla) Fry Jack (Wheat) Johnny cake (Wheat)	Breads: Fein Durudia	Breads: Fein Durudia Fry jack Johnny cake
Vegetable crop: Flita	Vegetable crops: Rice Tapou Hudut Cassava bread	Fish: Fried Stewed Boiled
Fish (fried)	Meat: Pigtail (pickled) Pork Chicken	Seed crops: Fried/stewed red beans
Dairy: Eggs cheese	Fish: Friend Stewed Boiled	

Source: J. O. Palacio, 1982