

**POLICIES TO PROMOTE
SUSTAINABLE AGRICULTURAL DEVELOPMENT:
THE CASE OF BELIZE**

*Presented by:
M. Laetitia Solis
Central Bank of Belize*

*at the
24th Conference of the
Regional Program of Monetary Studies
Nassau, Bahamas
October 1992*

This working paper discusses the Government of Belize's agricultural policies over the 1980-1991 period. It analyses the extent to which these policies have assisted in the development of sustainable agriculture in Belize and looks at issues that must be addressed in order to achieve the policies' objectives.

The paper first introduces Belize's agricultural sector, highlighting the export and domestic sub-sectors. Section II focuses on the major Government policies designed to promote the development of agriculture, and analyses each policy ~~is analyzed~~ to determine the extent to which the objectives were achieved during the review period. Section III looks at two major issues that need to be addressed if agricultural development policies are to succeed. The conclusion recaps the issues raised in the paper and highlights concerns regarding future prospects for Belizean agriculture with respect to the changing global economic conditions.

Belize's Agricultural Sector

Belize's economy traditionally has been based on agriculture.¹ Mahogany formed the mainstay of the economy up until the 1960's when sugar took over prominence in agricultural production and export earnings. By 1980, sugar accounted for almost 30.0 percent of Gross Domestic Product (GDP) and over 58.3 percent of domestic export earnings.

1 Agriculture is defined to include fishing and forestry as well.

CENTRAL BANK LIBRARY

DATE: 1/12/93

MFN: 1365

PUBLISHER: J.S.E.R.

CALL NO.: 820 V/F 1365

In 1991, the agricultural sector accounted for 20.2 percent of GDP² and employed approximately 17.9 percent of the total labor force. The major exports of sugar and molasses, bananas, citrus and marine products accounted for 74.0 percent of total exports, valued at \$147.3 mn. Even though production and exports of citrus products, marine products and bananas grew significantly over the 1980-1991 period, sugar has remained the most dominant export commodity accounting for almost half of total export earnings in 1991.

In addition to export products, the agricultural sector is also the source of a large portion of our basic foodstuffs including rice, beans, corn, livestock and poultry products for local consumption.

Export Production

Like other Caribbean countries, approximately 80 percent of Belize's major exports are sold under preferential arrangements - either guaranteed quota prices or duty free entry into international markets. The bulk of citrus products are exported to the United States (US) under duty free access provisions of the Caribbean Basin Initiative (CBI), while most of our sugar (72.3 percent in 1991) is exported either to the US under the US sugar quota arrangement or to the United Kingdom (UK) under the Sugar Protocol of the Lome Convention. The residual is sold on the world market. Bananas are exported under the Banana Protocol to a single importer, Fyffes, in the UK.

2 Agriculture's contribution to GDP has fallen from 28.0 percent in 1981 to 20.2 percent in 1991.

Sugar

Sugar cane cultivation is found mainly in the northern lowland districts of Orange Walk and Corozal, with average annual output of 91,000 long tons of raw sugar over the 1981-1991 period and average earnings of \$69.7 mn per year. Over the same period, the production of molasses averaged 5.0 mn gallons at an average value of \$2.5 mn per year. In 1986, Petrojam purchased the Libertad Sugar Mill and is presently engaged in the production of wet molasses, which is exported to Jamaica, where it is further processed into ethanol.

During the 1980's, the sugar industry fell into a slump mainly as a result of the decline in international prices which had a negative impact on the incentive to produce. However, the industry has recovered and in 1991 output matched its early 1980's position. Sugar has remained Belize's dominant foreign exchange earner, bringing in \$83.3 mn in 1991.

Citrus

Citrus production is concentrated in the Stann Creek district in the south of Belize, but more recently production has expanded to the western district of Cayo as well. The industry experienced significant growth during the second half of the 1980's with the implementation of the CBI which facilitated access for Belize's citrus exports to the US market.³ Exports now consist of orange and grapefruit concentrate, squash and citrus oil which are exported primarily to the United States, while smaller amounts are

3 Prior to 1983, most of Belize's citrus was exported to CARICOM and EC markets.

sold on European and Caribbean markets. Citrus is Belize's second largest export earner and brought in a record \$43.2 mn in 1990.

Bananas

Bananas for export are grown in the south of the country in the Stann Creek and Toledo districts. The industry has expanded to become Belize's third largest export earner. Banana production grew considerably during the second half of the 1980's as acreage under cultivation more than tripled, while earnings increased by 115.0 percent to \$19.7 mn in 1990.

Marine Products

Marine exports of lobster tails, conch, shrimp, fin fish and fish fillet's annual earnings averaged \$14.4 mn between 1981 and 1990, and peaked at \$20.2 mn in 1991. Exports of lobster tails account for approximately two-thirds of marine products' export earnings. The industry is controlled by fishermen's cooperatives, while foreign firms have invested in aquaculture, specifically shrimp farms.

Forestry

The forestry industry is mainly involved in the production of sawn wood for export. Output fluctuated during the 1980's with exports at their lowest in 1985 and 1986. The industry has improved since then, with earnings averaging \$4.8 mn between 1988 and 1991. Even though substantial reserves of hardwood presently exist, because of increasing global concern over unsustainable logging, inefficient milling facilities and a shortage of

kiln drying facilities development of the forestry industry, in the short run, has been constrained.

Production for the Local Market

Output for domestic consumption mainly involves the production of corn, rice, red kidney beans, livestock and poultry products. Corn is produced for human consumption as well as for the livestock industry. The two major purchasers of this commodity are the Mennonite farmers and the Belize Marketing Board. It has been noticed that corn production is very responsive to price changes and during the 1987 to 1989 period, production increased by an average of 25.1 percent boosted by the Marketing Board's purchasing of this commodity at prices above those prevailing on the world market.

Rice production is found mainly in the Toledo district where most of the output is grown by farmers on farms of less than 50 acres. Output is supplemented by imports carried out by the Marketing Board. Production peaked at 24 mn pounds in 1981, but since 1983, output has fluctuated between 10 mn and 12 mn pounds. Production increased between 1987 and 1989 reflecting the Government's policy, through the Marketing Board, to purchase rice since the prices offered were high and thus conducive to production. Fluctuations in output over the period can also be attributed to both weather conditions and management problems at the largest producer, Big Falls Ranch, which was until recently Government owned.

The production of red kidney beans is carried out by Mennonite farmers using mechanized farming methods as well as by small farmers using milpa farming techniques.

Production peaked in the 1987 to 1989 period again an indication of the Government's policy to purchase these commodities from farmers at attractive prices. At times, the Mennonites have been able to export red kidney beans surpluses to Jamaica at attractive prices. In 1989, red kidney beans exports were valued at \$3.9 mn.

Livestock production includes beef, pork, dairy and poultry products. Beef production rose slowly during the first part of the 1980's and has since peaked at 3.2 mn pounds in 1990 and 1991. Milk production rose consistently during the 1980's from 616,000 pounds in 1980 to 2.9 mn pounds in 1991.

The poultry sub-sector has been relatively successful. Mennonite farmers, the major producers of poultry products, have been able to achieve output levels sufficient to satisfy (and at times even saturate) the domestic market. Poultry production rose from 4.3 mn pounds in 1980 to 13.5 mn pounds in 1990 making chicken the most important meat of the Belizean diet. The production of eggs has also grown significantly over the last ten years. In 1980, 1.7 mn dozens of eggs were produced and this amount increased to 3.4 mn dozens by 1991.

Pork production has lagged behind the successes of the cattle and poultry sub-sectors. Output rose from 0.5 mn pounds in 1989 to 1.4 mn pounds in 1991. It must be noted however, that the official statistics for this activity may be understated since a large portion of total pig rearing is carried out by subsistence producers for own consumption. A considerable quantity of pork products is imported annually for the domestic market.

Policies for Sustainable Agriculture

"Sustainable agriculture involves the judicious use of natural resources...to produce food and other requirements in adequate quantity and quality for the sustenance of a population while replenishing the natural resource base overtime". (Daisley, 1992). "It is a process which will provide for the needs of the present without jeopardizing the ability of future generations to fulfill their needs." (Ford, 1992). Over the years, the Government of Belize's Development Plans (1980-1983, 1984-1989 and 1990-1994) have emphasized four major areas of activity which should assist in the development of a sustainable agriculture sector. The Plans focus on the diversification of agricultural output, the development of agro-industries, food security and conservation of the environment.

Agricultural Diversification

Diversification of export agricultural production (in the case of Belize) is aimed at broadening the agricultural base by reducing dependence on sugar exports and spreading the risks associated with a monocrop economy among various commodities. The Development Plans' strategies for diversifying agricultural output during the 1980's hinged on the identification of new products and markets, while seeking new non-traditional and non-preferential markets for the traditional exports of citrus, bananas and marine products.

The need to diversify became increasingly more important in the mid 1980's when sugar earnings plunged to an all-time low of \$45.9 mn as the industry was negatively affected by prevailing domestic and international conditions. Smut disease, high domestic

interest rates (which impacted on the cost of production), depressed world sugar prices and reductions in the United States sugar quota, all contributed to the industry's decline. The citrus and banana industries responded to the need for agricultural diversification. Since 1985, their contribution to total export earnings increased from 23.9 percent to 29.0 percent in 1990.

The citrus industry grew moderately during the first half of the 1980's, but since 1986, growth has accelerated both in terms of acreage under cultivation and earnings, to become Belize's second largest export earner. Earnings were \$12.7 mn in 1980, but by 1990 citrus exports were valued at \$43.2 mn. The amount of acreage under cultivation expanded from 8,693 acres in 1982 to 39,973 acres in 1990. Cultivation has also expanded to the Western area of the country to the Cayo district. The major impetus for the growth of the citrus industry came from the arrangements under the CBI which facilitated duty free access to the US market for Belizean citrus products.

Banana production fell constantly during the first half of the 1980's. The first stage of the industry's privatization began in 1985 when the Government of Belize sold its banana plantations to banana farmers. Total acreage under cultivation rose steadily from 1,647 acres in 1985 to 6,192 acres by 1990 and exports increased by 64 percent from 671,000 boxes valued at \$9.2 mn in 1986 to 1.1 mn boxes by 1990, with earnings of \$14.7 mn. Investments from both growers and Fyffes which were put into the

development of drainage, the improvement of cultivation practices and combatting the sigatoka disease⁴ have contributed to an expansion in banana production.

Diversification of agricultural production has also emphasized assisting small farmers in the northern districts of Orange Walk and Corozal to become more actively involved in the commercial production of alternative crops, along with sugar for export, as well as livestock rearing. Presently, with assistance from the Belize Agri-Business Company, small farmers in the northern districts are engaged in the commercial production of papayas for export. Production rose from 1.2 mn pounds in 1990 to 2.7 mn pounds in 1991.

In addition, plans are currently in place to promote the production of soybeans for animal feed in the poultry and shrimp farm industries as well as for the production of cooking oil. Other crops being considered as having possible export potential include pineapples and cashew nuts. Research is being conducted to find a specie of ginger suitable for production primarily in the citrus producing areas, while the production of onions and potatoes for the domestic market is being investigated.

(Some policies for agricultural diversification have specifically targeted farmers in the South of the country in the Toledo district especially, this area being less developed than in the North where, over the years sugarcane farming has brought relative prosperity.) These farmers are encouraged to produce new crops such as cocoa and

4 The sigatoka disease causes bananas to ripen prematurely. This reduces the quality of the fruit by the time it reaches its destination and affects the premium payment which it can receive.

pineapples, as well as to enter into livestock rearing. At the same time, more modern and efficient farming techniques are being introduced in an effort to discourage these farmers' traditional mode of slash and burn and hillside farming, especially in the Toledo District, since these practices are potential hazards to the natural environment.

The fishing industry is also targeted by efforts to diversify Belize's agricultural base. (Currently, there are efforts to promote deep-sea fishing, targeting open sea species such as tuna and mackerel, as well as "deep fore reef-fishing" for catches including lobsters and blue crabs.) The aquaculture sub-sector is itself considering diversification to include, along with shrimp, fresh water lobster, catfish and other fresh water species.

(Diversification of the forestry sector, which is addressed in the 1990-1994 Plan period involves the promotion of lesser known hardwoods for use in the domestic market, while exporting the traditional mahogany and cedar woods in more processed forms, thus increasing their value-added.)

An analysis of the policy's achievements indicate that diversification of agricultural exports over the period 1980-1991 has been slow. For the most part, significant diversification of export crops only began in 1985 with the expansion of the citrus and banana industries. The fishing industry's output rose slowly during the review period, but earnings more than doubled implying an increase in prices received for these exports. In 1991 the industry was able to capture new markets for its exports as evidenced by the sale of whole cooked lobsters in France. However, this was short-lived as competition

from larger producers pushed prices downward and negated the efforts and expenditure incurred in the export of whole cooked lobsters.

Generally, therefore, the addition of other non-traditional crops to the export basket has been relatively small and finding new markets has also been slow. As mentioned before, most of Belize's agricultural exports continue to be sold on preferential markets in the US and the UK.

Development of Agro-industries

Belize's agricultural policies stress the development of agro-industries. This involves the commercial processing and distribution of agricultural output which increases the local value added and also creates forward linkages thereby increasing domestic income and employment. However, the Development Plans reviewed were not very specific as to the means by which this industry would be developed.

The processing of agricultural produce continues to be dominated by the sugar and citrus industries. The sugar industry is engaged in the production of raw sugar and molasses for export. In the case of Petrojam, high test molasses is exported to Jamaica where it is further processed into ethanol. The citrus industry is engaged in the production of orange and grapefruit concentrate, squash and citrus oil which are exported to the US, Europe and the Caribbean.

Manufacturing on a much smaller scale is carried out in the production of pepper sauces, peanut butter, jams and jellies. These are mostly sold on the local market while

a small quantity (of pepper sauces) is exported to the US. Mangoes are exported in puree form to the US since the United States Department of Agriculture regulations prohibit the importation of the fruit in its natural form due to an incidence of the Mediterranean fruit fly Belize.)

The commercialization of processed wood began in 1990 with the exportation of veneer to the US, with earnings of \$1.0 in 1990 and \$1.3 in 1991. Prospects for other processed wood exports include finished furniture, wood carvings and parquet floors.

The agro-industry in Belize has wide scope for development, however several facilities would first have to be put in place to ensure its development. These would include the development of technical skills needed for agro-processing. In addition, the need for specialized equipment to carry out such processing is important, while market research must be carried out to identify suitable markets for these products. (To date, the commercial banks' and the Development Finance Corporation's allocations continue to be skewed towards the traditional processing sectors.)

Food Security

(Development Plans over the 1980's and into the 1990's have emphasized the need to promote production for domestic consumption in order to reduce dependency on imports to fulfill basic needs and to save foreign exchange.) (In order to achieve food security, the goal is to attain some level of production of self sufficiency in our basic food items of rice, beans, corn, meats, poultry products, fruits and vegetables.)

Domestic production of our basic food items during the 1980's could best be described as mixed. The production of corn and beans increased during the earlier part of the 1980's and peaked in 1987 and 1989 respectively, reflecting the Government's agricultural policy by purchasing these commodities, through the Marketing Board, at attractive prices to encourage production. On the other hand, livestock and poultry products grew considerably throughout the decade. The Mennonite farming communities, located mainly in the northern and western districts, produce most of the country's corn, and red kidney beans, and are the dominant producers of milk and poultry products. They also make a sizable contribution to the domestic beef supply.

Local production of some basic food items and the residual of the major export commodities of sugar, citrus and bananas are usually sufficient to satisfy domestic demand, while continued efforts are being made to achieve self sufficiency in rice production. At times, red kidney beans are exported to Jamaica due to lack of storage facilities in Belize, while live cattle have also been exported to Mexico.

Due to the lucrative prices received for marine products in external markets, there is an incentive to export a major portion of the catch. Therefore, the availability of marine products on the domestic market, except for fin fish, is usually insufficient to satisfy the demand. Now, with the expansion of the tourist industry, where hoteliers are willing to pay as much as what the cooperatives can receive on the export market, the supply to domestic consumers may become even smaller.

Overall, there is still wide scope for the production of crops for import substitution. Meat processing is carried out on a small scale, but a large quantity is also imported, while continued research is being conducted into the production of vegetables such as onions and potatoes. However, there is an on-going debate as to whether the domestic market is large enough for the economic production of these commodities, since it is possible to produce a large amount of these commodities from a small land area. In addition, major investment will have to be put into the provision of storage facilities, especially for grains (rice and corn) and vegetables, while the unavailability and high cost of these equipment may make it more economical to import.

Conservation

Conservation of the natural environment involves planned utilization of the environment to ensure that it maintains its productive capacity for future generations. The issue of conservation of marine resources has been a major part of the fishing industry's development policy throughout the review period. Legislation for the regulation of fishing seasons for shrimp, lobsters, conch and turtles have been in existence for some time, while monitoring is carried out to prevent over-fishing. Nevertheless, it is presently felt that conch and lobsters may be experiencing difficulties, while it is expected that the turtle season may be reduced since it has been found that the turtle population is being rapidly depleted.

More recently, emphasis has been put into public education to bring about an awareness of the importance of the preservation of marine life and the essential elements of the marine food and reproductive systems. The Coastal Zone and Marine Reserves

Management Project has been set up to protect both Belize's coastal area and the barrier reef. The program looks at the effects that the expanding tourist industry and its related activities can have on these areas. It will also propose a network of areas which should be allowed to remain in their natural form, while identifying necessary institutional arrangements and recommending new legislation to assist in the achievement of these objectives. The Government has already created protected areas of mangroves and has increased penalties for the illegal destruction of these areas.

Conservation of the overall environment is now receiving much more attention, given the global emphasis that is being put on environmental protection. The Tropical Forestry Action Plan is being set up to strengthen national capacities in terms of forestry management and conservation. The Plan has been charged with responsibility for recommending the passage of legislation and regulations for the conservation and development of wildlife and the environment. "The Plan emphasizes the revitalization of old plantations, replenishing of depleted forest areas and a more intense programme of reforestation that will also involve farmers". (Belize Today, October 1992.)

One major challenge to the conservation issue is the slash and burn mode of farming especially practiced by farmers in the Toledo district. This practice involves the burning of vegetation before planting. After the crop has been sowed, the land is left fallow for a number of years before it is used again. However, the problem of soil depletion arises when the land is not allowed to lay fallow for long enough to regain valuable nutrients because of land pressure. Hillside farming -above a 20 feet slope - and farming nearer than 30 feet from a river are discouraged since these contribute to

top soil erosion. It is hoped that these problems will be overcome by introducing new and more applicable farming practices, as well as alternative crops, to the farmers of this area.

Other Important Policy Issues

Credit to the Agriculture Sector

Throughout the 1980's and into the 1990's, credit to the agricultural sector was forthcoming mainly from the commercial banks and the Development Finance Corporation. These two institutions traditionally have been the primary sources of agricultural credit.

Credit to the agricultural sector from the commercial banks on average ranked third in importance next to credit for distribution and building/construction during the 1980-1991 period. Outstanding loans were targeted towards the production of export crops and, during the review period, the sugar industry accounted for an average of approximately 40.0 percent of total agricultural loans outstanding.

During the period, citrus received the second largest share of total credit to the sector. Outstanding loans to citrus consistently rose from \$2.1 mn at December 1981 to \$21.5 mn by the end of 1991, reflecting the expansion of the industry, especially since 1985. During 1985-1987, credit to the citrus industry was actually greater than credit to sugar at an average of 37.0 percent of total outstanding loans to agriculture.

Credit to the banana industry averaged only 10.5 percent of total outstanding loans to agriculture up to the end of 1987. However, with the expansion of banana production, credit rose significantly to average 30.2 percent of total agricultural loans between the end of 1988 and 1991.

The residual of commercial bank credit to the agricultural sector, an average of 20.4 percent per year between 1980 and 1991 was channelled towards domestic production. This included rice, cattle, dairy, poultry and eggs production, land clearing and preparation and other miscellaneous farming activities. The most significant among this group was cattle and dairy farming which accounted for an average of 4.0 percent of total loans outstanding at December during the period. Only a very small percentage of total loans outstanding were to the marine and forestry industries.

In summary, commercial bank credit was mainly targeted towards the export agriculture sector and the amount of loans outstanding was directly related to the performance of these industries.

Agricultural credit formed the major component of outstanding loans from the Development Finance Corporation, averaging 50.0 percent of total loans outstanding over the 1980-1991 period, although the absolute value was only about 25.0 percent of commercial bank credit. However, like the commercial banks, the larger portion of outstanding agricultural loans were generally for export agriculture - sugar, citrus and banana production in particular. In addition, the cattle and dairy industry was second

only to sugar, while outstanding loans for the production of citrus and bananas were also significant averaging 23.9 percent at the end of December over the review period.

It appears then, that credit from the commercial banks and the Development Finance Corporation assisted in the broadening of the agricultural base only in so far as the expansion of traditional exports, namely citrus and bananas, were concerned. Credit for production for the domestic market was channelled to the cattle and dairy industries from the commercial banks as well as the Development Finance Corporation. Therefore, the extent to which the financial sector has assisted in agricultural diversification and production for domestic consumption has been somewhat limited.

Land Reform

The issue of land reform with respect to agriculture has risen from time to time over the years, but the plans for agriculture development during the 1980's did not emphasize any strategies to overcome this concern. However, the Development Plan for the 1990-1994 period has been very specific in its strategies for a revision of existing land policies to "emphasize the right of ownership and the equitable distribution of land, as well as the creation of mechanisms that will encourage land to be developed according to its best use".(Development Plan 1990-1994 p.30). Two major objectives of the Plan which will directly impact on agricultural development will focus on "enabling lessees to obtain titles to land."(IBID p.31), thereby increasing the capacity of farmers to raise collateral for credit. The Plan also hopes "to encourage conservation through proper land utilization and legislation."(IBID p.31). The Government is instituting a Lands

Information System which will "function as a tool for legal, administrative and economic decision-making and as an aid for planning."(IBID p.31).

Conclusion

Since the start of the 1980's, policies to promote the development of Belize's agricultural sector have focused on the four major areas of export diversification, the development of agro-industries, food security and conservation of the environment.

The citrus, banana and marine industries showed significant growth during the second half of the 1980's into the 1990's, somewhat broadening the economy's agricultural base. Their share of total exports increased while sugar's share became less dominant. The development of agro-industries took off in the later part of the review period, mainly producing for the local market. Although a few other non-traditional crops such as cocoa, papayas and mangos have been exported, their contribution to foreign exchange earnings so far has been limited.

Most of our major exports continue to be sold on preferential markets in the US and the UK. Considering the evolving international trade conditions (the formation of the Single European Economic Community Market at the end of this year and the North American Free Trade Area) it is very evident that now more than ever, more emphasis must be placed on the production and commercialization of non-traditional crops, such as exotic fruits, and the processing of agricultural produce which could be exported to non-traditional and non-preferential markets. This will expand the markets in which

Belizean products are sold while reducing over-dependence on a few products and preferential markets.

It is arguable whether the agricultural sector has in fact become more diversified and more viable. However, while export earnings have increased over the last decade we now have another challenge to face - that of producing for markets outside of the preferential ones on which most of our exports are presently sold. The extent to which our exports can compete on open markets is directly related to the production costs incurred by the local agricultural producers relative to the costs of their competitors. Presently, it is felt that agricultural production is heavily subsidized by Central Government in the form of import duty exemptions, especially. (Ministry of Economic Development).

In order to make the sector more competitive internationally, either on protected or open markets, the government will have to keep on subsidizing the industry or will more than likely be called upon to increase these subsidies in the case of exporting to open markets. The extent to which this will be possible is questionable as this kind of protection will be expensive, putting a strain on the Government's coffers.

Recognizing the international developments and the possible constraints that may be put on our traditional exports, the Government's strategy for economic growth presently places emphasis on the simultaneous development of the tourist and light manufacturing industries, to complement agriculture's contribution to the economy as it

is felt that in the future, countries like ours will have even less control over the markets on which traditional agricultural exports are sold.

The production of basic food items for domestic consumption to a large extent has been able to satisfy the demand, even though output fluctuated during the review period. However, imports of rice, processed meats and some vegetables are usually necessary to fill the gap between local output and demand. Agro-processing continues to be concentrated in the sugar and citrus industries while the production of jams, jellies and pepper sauces is mainly for the local market.

Conservation has become a critical concern given the global attention being focused on environmental preservation. The marine industry has expanded its conservation activities while institutions like the Tropical Action Plan have been set up to promote an awareness and protection of the overall natural environment.

Table 1: Exports

Exports	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Sugar												
Volume (mn. long tons)	97.2	90.4	98.2	109.1	93.9	89.1	98.5	79.0	79.7	79.2	92.5	91.9
Value (\$mn)	95.4	85.3	66.7	70.9	65.1	45.9	62.9	62.6	70.0	68.1	85.5	83.3
Molasses												
Volume (mn. long tons)	4.7	4.4	5.4	5.5	4.4	3.8	3.4	3.7	3.3	5.1	7.1	9.8
Value (\$mn)	4.4	2.4	1.8	1.2	2.3	1.7	1.0	1.1	1.0	1.3	6.5	7.5
Citrus Products												
Volume (mn. gallons)	0.9	1.2	1.4	0.9	1.1	1.3	1.6	1.9	0.5	1.9	2.0	1.2
Value (\$mn)	12.7	13.0	14.0	12.6	19.5	24.2	22.2	32.0	34.6	38.9	43.2	21.6
Bananas												
Volume (mn boxes)	0.8	0.6	0.5	0.5	0.6	0.5	0.7	1.2	1.5	1.5	1.4	1.1
Value (\$mn)	7.0	4.3	4.3	4.8	6.3	6.6	9.2	14.3	17.2	18.1	19.7	14.7
Marine Products												
Volume (pounds)	1.2	1.5	1.4	1.7	1.5	1.4	1.4	1.6	1.7	1.7	1.7	1.8
Value (\$mn)	8.4	14.4	13.3	15.0	13.4	15.0	14.8	16.9	16.1	17.6	18.2	20.2
Other Exports												
Value (\$mn)	12.7	13.0	14.0	12.6	19.5	24.2	22.2	47.0	51.4	45.0	43.8	51.9

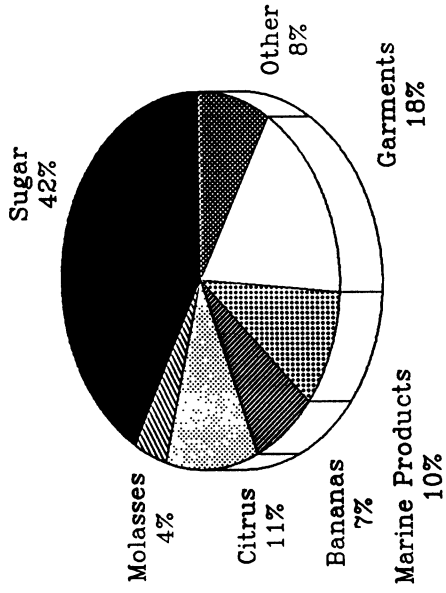
Source: Central Statistical Office

Table 2: Production for Domestic Market

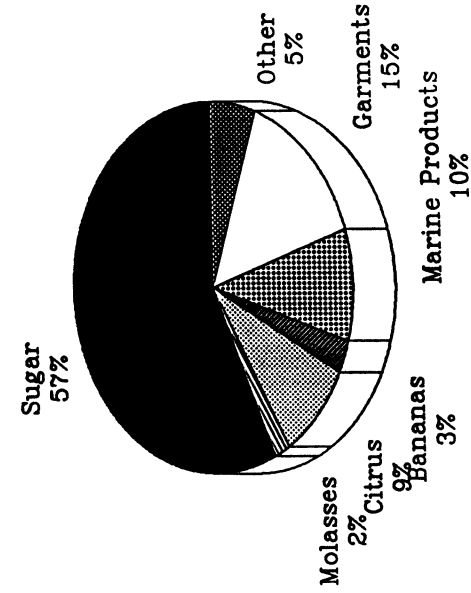
Production for the Domestic Market	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Corn (mn lbs.)	41.5	46.6	46.7	38.8	35.6	43.3	40.7	51.2	51.0	51.1	41.2	
Rice Paddy (mn lbs.)	19.0	24.0	17.8	9.2	12.5	12.3	9.7	10.1	12.2	11.1	10.2	10.6
RK Beans (mn lbs.)	3.1	3.8	3.9	3.4	2.8	2.3	4.0	5.3	5.0	9.3	5.7	7.8
Cattle												
No. slaughtered	6,600	6,400	6,042	5,820	6,198	7,552	7,091	8,317	7,459	6,423	7,870	7,157
Dressed Weight (mn lbs.)	2.3	2.2	1.9	2.1	2.2	2.7	2.4	2.9	2.0	2.1	3.2	3.1
Pigs												
No. Slaughtered		6,490	5,773	5,658	6,251	6,353	6,411	8,030	8,160	6,951	1,553	8,627
Dressed Weight (mn lbs.)	0.5	0.4	0.3	0.5	0.6	0.7	0.7	0.8	0.9	0.8	1.4	
Poultry												
No. Slaughtered	1,405	1,534	1,789	1,929	1,968	2,002	2,250	3,030	2,831	2,486	3,882	2,739
Dressed Weight	0.5	4.3	5.2	6.1	6.5	6.7	6.8	6.9	8.9	11.1	7.5	13.5
Milk (mn lbs.)	0.6	0.6	0.7	1.0	1.2	1.2	2.3	2.2	2.6	2.4	2.7	
Eggs (mn doz.)	1.7	1.8	1.8	1.9	2.0	2.0	2.0	2.1	2.2	2.2	1.4	3.4

Source: Central Statistical Office

Exports



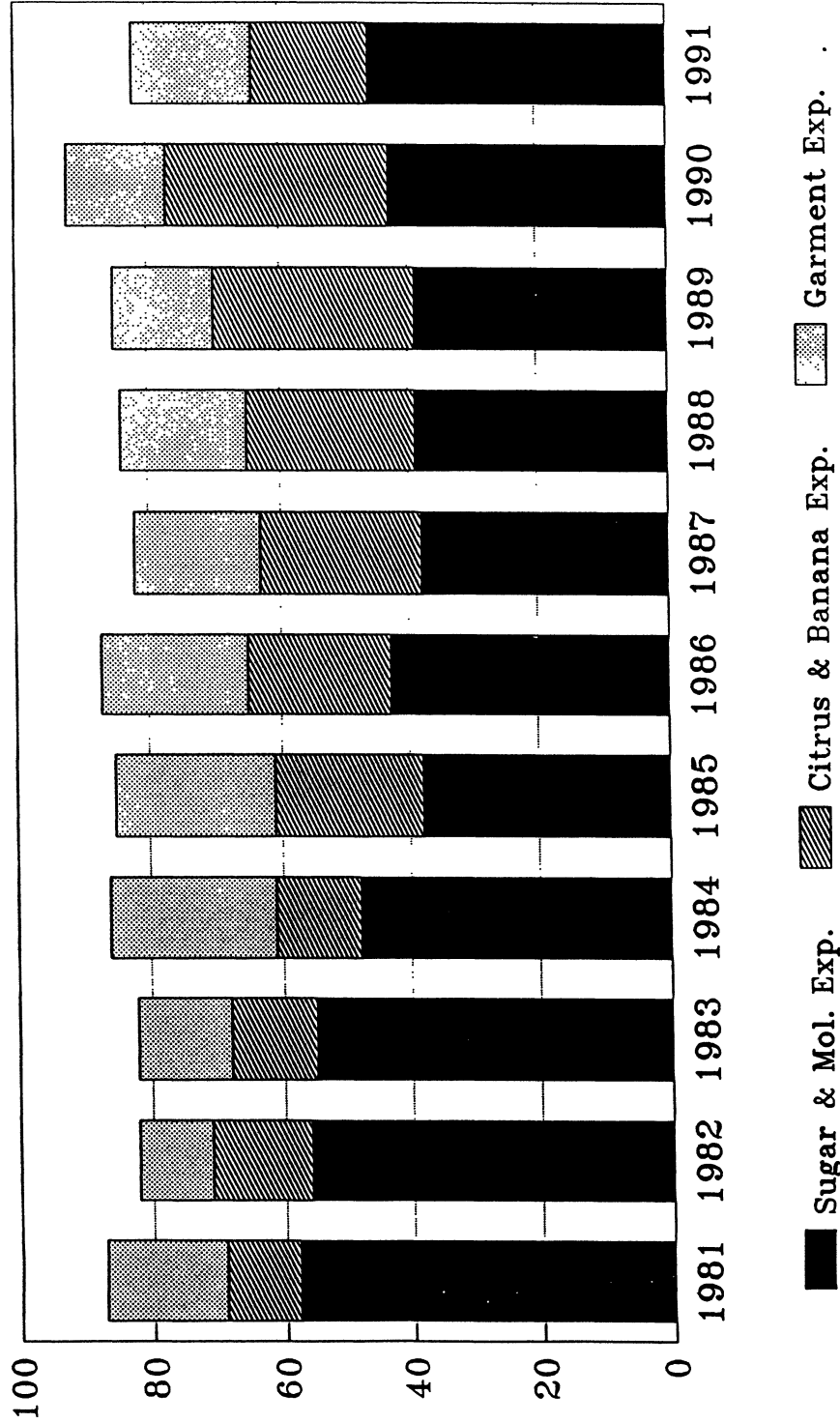
1991



1981

Source: Central Statistical Office

Export Diversification 1981 - 1991



Source: Central Statistical Office

BIBLIOGRAPHY

1. Barnett, Carla - "Aspects of State Policy on Land Distribution and Use in the Crown Colonial Period and After" in SPEAR Reports 7, Fourth Annual Studies on Belize Conference, 1991.
2. Belize Today - various issues.
3. Caribbean Development Bank, 1991 Annual Report on Belize.
4. Central Bank of Belize - 1991 Annual Report
- December 1991 Quarterly Digest
- Statistical Digest
5. Central Statistical Office, Belize.
6. Daisley 1992 " Agricultural Diversification: The Facilitating Factor for Self Reliant and Sustainable development in the Caribbean Area". Draft
7. Ford, J.R. Deep "Free Trade and Sustainable Agriculture in the Caribbean". Draft
8. Government of Belize - Development Plans 1980-1983, 1985-1989, 1990-1994.
9. Ministry of Agriculture - Food and Agriculture Policy, 1986.
10. Ministry of Agriculture - various literature.
11. Ministry of Agriculture Personnel - Mr. Eulalio Garcia, Chief Agricultural Officer
Mr. Joe Smith, Chief Project Officer.
Mr. Wendell Parham, Policy Analyst.
Mr. Vincent Gillett, Fisheries Administrator
12. National Fisheries Development Plan 1983 - 1988.
13. Perry, Joseph M., Woods, Louis A. - "Changing Agricultural Patterns in Belize Since 1958", in SPEAR Reports 7, Fourth Annual Studies on Belize Conference, 1991.
14. United States Agency for International Development, Belize - Semi-Annual Report April 1 - September 30, 1991.
15. World Bank Report, Belize, 1989.