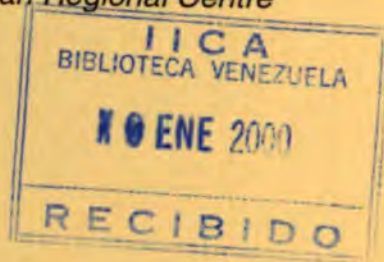


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Agriculture in Grenada



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Preface

Mindful of its technical cooperation responsibilities, IICA identified the critical need for improved information on the agricultural sector of member countries to assist them to more rapidly integrate with the global marketplace. The identification of the challenges and opportunities for the agri-food sector of constituent member countries, along with the development of a compendium of the best available comparative statistics for agriculture, was identified as a starting point.

Carlos E. Aquino G.
Director General, IICA

The data collection and analysis systems for the agricultural sector in most Caribbean countries are relatively weak. While some information, albeit imprecise, does exist, it is often spread over a range of national, regional and international publications and databases, which, in many instances, are of limited circulation and accessibility. In 1995, Grenada took definite steps in strengthening the agricultural sector information base through the publication of an Economic and Social Review of Grenada and National Accounts Statistics.

This working document represents one in a series of 13 working documents prepared for the IICA Caribbean member states, compiled for the specific purpose of preparing the document titled "Performance and Prospects for Caribbean Agriculture". The preparation of this working document constitutes another step towards the goal of improving access to information on the agricultural sector.

This working document was the result of a collaborative effort of Diana Francis of the Socioeconomic Policy, Trade and Investment Programme of the IICA Caribbean Regional Centre (CaRC), Mr. Cosmos Joseph, Coordinator of the IICA Technical Cooperation Agency (TCA) in Grenada, with support of the staff of the Ministry of Agriculture and Mr. John Auguiste of the Ministry of Trade, Grenada. The information and analysis are based on statistical and descriptive information extracted from various national sources, as well as from reports generated by counterpart institutions. It is

anticipated that the information will be useful, not only to individuals and institutions working in agricultural development in Grenada, but also to other parties interested in information on the agricultural sector in general.

The guidance of Dr. Patrick Antoine Head, Socioeconomic Policy, Trade and Investment Programme in the preparation of this working document is acknowledged. This report would not have been possible without the full commitment of the IICA Director General, Carlos E. Aquino G. and the Caribbean Regional Centre (CaRC) Director, H. Arlington D. Chesney.

This exercise will be undertaken every two years. We welcome comments aimed at improving subsequent reports. All errors and omissions are the responsibility of the authors.

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Country Profile

The tri-island state of Grenada, Carriacou and Petite Martinique lies 90 miles to the north of Trinidad and is the most southerly of the Windward islands chain. The climate is tropical maritime with temperatures averaging 24°C. During the wet season (June to December), rainfall ranges from 60 inches in the coastal region to 200 inches in the mountainous interior. Grenada is relatively less vulnerable to hurricane disasters due to its southern location in the Eastern Caribbean chain. The last recorded hurricane disaster in Grenada was in 1955.

Agriculture and forest lands, comprising 40% and 30%, respectively, of total land area (1995 Census) are important natural resources. White sand beaches and vibrant marine resources have facilitated the development of the tourism and fisheries sectors.

Grenada's population is primarily of African descent, with a lesser number of East Indian and European descent. The 1996 population of 98,600 represented a 0.6% increase over 1995. Approximately two-thirds of the population are scattered in small rural communities, including the dependencies of Carriacou and Petite Martinique. A population density of 283 persons per sq. km, ranks Grenada as the most densely populated of the Windward Islands.

The economy grew very slowly between 1991-1995 averaging a mere 1.9% per annum. This performance compares unfavourably to the high growth of the 1980s. Declining productivity and competitiveness in the agriculture sector, slow growth in the other tradable sectors and structurally weak fiscal balances played a key role in the economic slowdown of the 1990s. Grenada continued to experience large and increasing deficits on visible trade and unfavourable balance of payments. Declines in external concessionary aid in response to the country's fiscal instability and failure to meet external debt

obligations also impacted negatively on the public sector investment programme.

Between 1992-1994, the Government of Grenada (GOG) implemented a voluntary structural adjustment programme aimed at macro-economic stabilisation and restoring the country's creditworthiness. As a result the economy reported an increase in overall activity in the 1994-1996 period. Growth was led by transport and communications and construction, the latter partly due to the implementation of three major infrastructural projects (Fish Processing Plant, Road Improvement and Maintenance and Coastal Sea Defense and Road Rehabilitation). The relatively less vibrant performance in the agriculture and manufacturing sectors continued to negatively affect the trade sector, resulting in a widening in the visible trade balance in 1996.

As the decade progresses, economic development in Grenada will rely more on the continued vitality of the tourism sector, expansion in growth areas such as telecommunications and financial services and sustained recovery in the manufacturing and agriculture sectors. Sustained economic growth into the 21st Century will also be facilitated by the emphasis on education and skills training and expanded economic incentives to private (both local and foreign) sector investment.

Table 1 - Grenada

Key Economic Indicators EC\$M	1991	1992	1993	1994	1995
EC\$=US Exchange	2.7	2.7	2.7	2.7	2.7
GDP (1990)	495.1	500.5	494.4	507.3	521.5
Agriculture	62.5	60.8	58.3	54.7	58.5
Manufacturing	33.2	36.9	32.3	34.7	37.5
Tourism	30.3	35.5	36.3	45.3	43.1
Fiscal Balance	-35.2	-0.9	-1.3	-17.4	9.5
Visible Trade Bal	-239.2	-220.6	-260.8	-289.7	264.6
B.O.P US\$M	1.2	-7.7	-1.7	-9.4	-5.9
Ext. Debt, US\$M	94.6	87.5	90.1	92.4	97.3

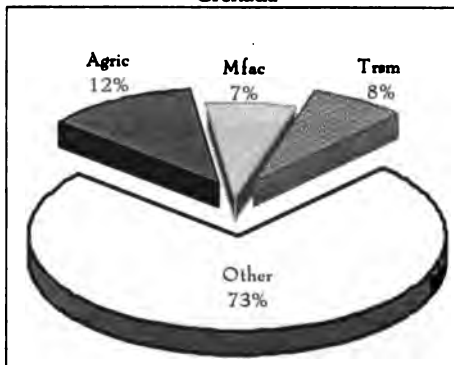
Source: CSO, Ministry of Finance

Agriculture in Grenada - Sector Profile

Socio-Economic Role

Agriculture continues to be important to the Grenadian economy, in terms of its contribution to employment generation, national income, foreign exchange earnings and to Grenada's overall economic recovery. Between 1991-1995, the agriculture sector maintained its position as the single largest contributor to real GDP. Agriculture's share in real GDP averaged roughly 12% per annum between 1991-1995. This share may be considered low in comparison to Dominica, where the comparative share in GDP for the corresponding period was 23%. This is in no way minimises the sector's economic significance, but is reflective of the relative diversity of Grenada's economic base. The comparative annual shares of the manufacturing and tourism sector averaged 7% and 8%, respectively for the same period (Fig.1). It should be noted that although agriculture's share in overall economic activity declined from an average of just over 20% between 1977-1985 to 12% between 1991-1995, the shares of manufacturing and tourism in GDP represented an increase from an average of 4% each between 1977-1985.

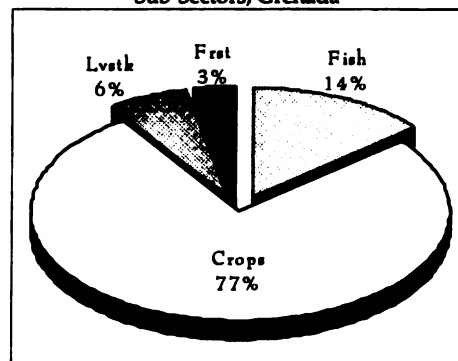
Fig. 1: 1991-95 Average Sectoral Shares in GDP, Grenada



Activity in the agricultural sector is dominated by crop production, primarily traditional crops of cocoa, nutmeg and mace and to a lesser extent, bananas. Crop production accounted for 77% of total agricultural output between 1991-1995 (Fig.2). In spite of its dominance, the difficulties experienced in the traditional crop industries led to a decline in the share of the crop sub-

sector, from 80% of total agricultural output in 1990, to 76% in 1995. This decline was matched by a relative increase in the share of the second largest sub-sector, fisheries. The share of fisheries in agricultural GDP moved from 12% in 1990, to 15% of total agricultural output in 1994 before declining slightly to 14% in 1995. In terms of contribution to gross agricultural output, the livestock and forestry sub-sectors continued to be relatively insignificant.

Fig.2 1991-95 Average Composition of Agricultural Sub-Sectors, Grenada



Agriculture has traditionally been the largest employer in Grenada. However, the farming community and agricultural labour force have also gradually declined since the 1980s. It was estimated that the number of farmers fell from 12,600 in 1970, to 11,442 in 1981. By 1990, only an estimated 6,000 farmers were engaged in agricultural production. This decline continued, with the 1991 Census reporting an active farming population (including fisheries and forestry) of 4,223. Thus between 1971 and 1990, the contribution of agriculture to employment fell from 33% to 17% respectively, declining further to 12% of the total labour force in 1995 (Agricultural Census).

The gradual decline in the agricultural labour force is partly associated with the relatively low wage levels offered for agricultural labour. In fact, agricultural labour was reported to be the lowest paid occupation in Grenada, lower even than temporary, government-employed road workers. In 1995, the daily wage for an agricultural worker

ranged from \$15.00 on government-operated farms to \$25.00 on private holdings. This did not compare favourably to wages of road workers (\$30.00 per day). In addition, most agricultural workers were not beneficiaries of the various employment benefit schemes, such as, national insurance, which covered sickness and retirement, maternity leave and holiday pay. Agricultural workers who are members of trade unions and commodity associations, however, benefit from additional provisions negotiated with the individual employers.

Organizational Characteristics

Direct agricultural production activities are undertaken by the private sector, comprised of small to medium sized farmers, a few cottage and medium sized processors, a multitude of small inter-island traders of fresh produce and a few large exporters. Private sector participation has usually been stronger in agricultural input and equipment retailing. The development of a strong private sector, comprising farmer organisations, agro-industry and non-governmental organisations, is yet to emerge in Grenada.

Much of the directly productive activities continue to depend on public-sector support, through the Ministry of Agriculture (MoA). The MoA has the lead role in influencing and overseeing the general direction of the agricultural sector. The MoA is also primarily responsible for providing basic support services, including subsidised inputs (planting material, machinery and equipment) and credit, technical advice to the general farming community. The services and functions of the MoA are supported by a number of statutory bodies (such as Grenada Model Farms Corporation (GMFC) and the Marketing and National Importing Board (GMNIB)), major commodity associations (for bananas, cocoa and spices) regional and international organisations involved in agricultural development in Grenada.

The government of Grenada recognises the importance of a viable private-public sector partnership in enhancing the sector's capacity

to respond to the changing global environment. Consequently, private sector involvement in specific activities, including nursery facilities, veterinary and animal health services, was encouraged, with equal emphasis placed on strengthening of partnerships in areas, such as, processing. This was consistent with the overall economic and sectoral policy of strengthening the productive base by increasing output and productivity in agriculture and developing the potential for expansion and linkages with other productive sectors, mainly manufacturing, tourism and other services.

The specific areas of priority for agricultural development between 1991-1995 included:

- land assessment and reform to facilitate more efficient land distribution and use;
- the revitalisation of the traditional export crop industries;
- the acceleration of agricultural diversification;
- rationalisation and consolidation of the extension and technical advisory services to agriculture and the efficient co-ordination and use of resources;
- the attainment of self-sufficiency in basic food items.

As in other Caribbean countries, there has been a history of non-governmental organisations (NGOs) activity in the agricultural sector, providing financial, technical and other developmental support. In Grenada, their numbers, as well as level of involvement, particularly regarding financial assistance, have been greatly reduced. Credit and capital for agri-enterprise development was usually obtained from the limited and short-term support of Government (through MoA subsidies on inputs), concessionary lines of credit administered by the Grenada Development Bank (GDB), and input credit schemes operated by the commodity associations. The commercial banking sector continues to be a relatively small and expensive source of credit for agricultural development purposes.

Agriculture in Grenada - Performance Indicators, 1991-1995

Socio-Economic Performance

In real terms, gross agricultural output declined by 3.8% per annum between 1990-1994. This performance resulted from a steady decline in crop production over the same period. The decline was led by declines in the traditional crop industries of cocoa, nutmeg, mace and banana over the same period. The moderate growth in the livestock and fisheries sub-sectors between 1991-1993, was insufficient to offset the decline in crop production (Table 1).

Table 1

Grenada, Sub-Sectoral Growth (%) in Agriculture @ 1990 prices					
	1991	1992	1993	1994	1995 ^r
GDP	3.62	1.1	-1.2	2.6	2.8
Agriculture	-2.3	-2.7	-4.1	-6.2	6.9
Crops	-4.0	-4.3	-5.8	-8.5	8.8
Livestock	3.5	3.1	0.6	0.8	1.9
Fishing	4.9	3.1	1.4	1.7	0.9
Forestry	5.0	3.2	4.1	0.0	1.0

Source: CSO, Ministry of Finance.

1995 represented a year of recovery in the agricultural sector, with a reported 7% expansion in activity over 1994. This recovery was attributed almost exclusively to an 8.8% growth in crop production, led by improved performance in the cocoa and spice production, as well as expansion in non-traditional crop production. In the post-1995 period, the performance of the sector was adversely affected by the Pink Mealy Bug (PMB) infestation, continued low prices for cocoa and bananas, suspension of banana exports and general inadequacy of agricultural input supplies, which adversely affected productivity levels and output.

The deteriorating performance of the agricultural sector was in marked contrast with the trend in the overall economy, which reported positive, albeit low annual growth rates over the 1991-1995 period. The sector's difficulties in terms of adapting and transforming along with the rest of the economy may be partially associated with structural weaknesses. In the first half of the 1990s, strategies were designed to increase food production and stimulate employment and diversification of the agricultural sector.

However, there has been very little structural change in the agri-food production and distribution system. With the exception of a decline in the estate production system, the structure and organisation of agricultural production and distribution has remained the same.

Consequently, the sector's impact on improving net farmer incomes and rural welfare, forging inter-sectoral linkages and generating foreign exchange earnings has declined. The decline in the number of farmers engaged in agricultural activity and in the agricultural labour force are reflective of the adverse impacts of stagnation in the agricultural sector. In addition, the lack of dynamism in agricultural production has adversely affected the pace at which linkages between agriculture and the tourism and manufacturing sectors are developed and maintained.

The structure of agro-industry in Grenada has remained relatively unchanged since the early 1980's. Food processing continues to concentrate on small-to-medium sized canning and bottling facilities, producing syrup and rum from sugarcane, tomato ketchup, sauces, jams/jellies and juices, and beer. The most noticeable changes have been the establishment of two medium sized agro-processing firms in 1992. Constraints to agro-industrial development in Grenada are similar to those affecting the other Eastern Caribbean member states. These include low supply capabilities of the domestic agricultural sector and technological limitations. One side-effect of the limited development of agro-industrial activity has been the growing reliance on imports to satisfy the demand for a wide range of processed food products. This trend has exacted high costs as evidenced by a deterioration in Grenada's agricultural trade balances and balance of payments position.

In order to stem the growth in the food import bill, the need to increase agricultural output assumed greater importance, particularly in relation to reducing expenditures on food

imports. The increased demand for a wider variety of fresh fruit and vegetables and processed foods, coupled with the weakness of the country's agro-industrial sub-sector, processed food imports have become an important source of food requirements. This increase demand is partially driven by the need to feed a growing tourist population. This situation is clearly evident in the trend in food and live animal imports over the 1991-1995 period (Table 2).

Table 2

Grenada, Agricultural Trade					
EC\$M	1991	1992	1993	1994	1995
Agri-Trade Balance	-36.4	-47.4	-48.7	-42.5	-45.0
Agri-Imports :of which	82.1	86.8	87.1	85.7	85.8
Food & live animals	75.4	76.6	77.5	77.9	82.8
Beverages & Tobacco	5.6	8.9	8.3	6.5	1.2
Oils & fats	1.1	1.2	1.3	1.2	1.8
Agri-Exports :of which	45.6	39.4	38.4	43.3	40.8
traditional crops	30.8	20.4	18.0	27.6	24.9
Agri/Total imports	26.5	29.2	25.7	26.5	24.5
% growth Agri- imports	5.3	5.6	0.4	-1.6	0.1

Source: Grenada CSO.

Agricultural commodity imports averaged a relatively constant 26% share of total merchandise imports, with food imports (comprised of fresh and processed livestock, fruit and vegetables), accounting for the largest share of total agri-commodity imports (average of 91%). In contrast, expenditure on beverages was low, declining by 15% per annum, due to a steady decline in imports of same, in the post-1992 period. On average, the value of total agri-commodity imports increased by 2% per annum, primarily led by an annual 10% growth in fruits and vegetables, 6% growth in meats, 4% growth in cereals and a 3% growth in dairy products. In value terms, cereals, meat and dairy constituted the major imported food commodities over the 1991-1995 period, with average respective shares of 22%, 22, and 17%. The share of fruits and vegetables averaged a mere 8% of the total agricultural import value, implying that domestic production satisfies a significant portion of the fresh fruit and vegetable requirements.

While the above trade data imply that Grenada is a net food importer, this derives more from the country's narrow range of agricultural

exports. A large portion of the fresh food is locally grown and Grenada experiences a relatively high self-sufficiency in basic food items. The traditional exports of nutmeg and mace, cocoa and bananas accounted for approximately 50% of total agricultural exports between 1991-1995. However, this situation compares favourably with the situation in Dominica and St.Lucia, for example, where over the same period, banana exports alone, accounted for over 70% of total agricultural exports. In Grenada, as was the case with most other countries, although the trade share of the major export crops has declined, the volume of non-traditional exports did not increase significantly to compensate for the loss in export earnings.

In spite of the relatively high self-sufficiency levels in fresh fruit and vegetables, Grenada will continue to rely on imports to satisfy a growing demand for new food products. While there may be some negative effects of agricultural liberalisation on domestic production, the increase in market access will ensure that food imports become more easily accessible on the domestic market. Given the current uncertainty in the major export crop industries, the worsening agricultural trade deficit seems set to continue, particularly if agricultural food imports become more attractive and accessible. Restricting imports to protect domestic industry is no longer an acceptable option for reducing the agricultural trade deficit. Emphasis should be placed on expanding the volume and range of agricultural production, in all its dimensions, for facilitate increased exports and domestic consumption of local material, both in terms of final products and intermediate raw materials for agro-industry.

Sustained development of the agricultural sector thus requires significant levels of investment in all aspects of production, post-harvest and distribution. Typically, investment in agricultural development has been public-sector driven, with considerable assistance provided by the international financial community. In fact, the constrained performance of the sector in the 1990s may

have also been reflective of the general decline in the level of concessionary financing from the international financial institutions. Between 1991-1995, the annual current budgetary allocations to the Ministry of Agriculture averaged 3.4% of total current expenditure, representing about EC\$6 million per annum. Of the total, roughly 83% covered personnel costs between 1991-1993, with this share falling to 68% between 1994-1995. While total national expenditure has been increasing at approximately 5% per annum, the rate of increase in annual expenditure in the MoA has been slow, at 2% between 1991-1995 (Table 3).

Table 3
Grenada, Annual Expenditure in the MoA.

EC\$M	1991-93 Total	1994	1995 ^{est}
Total Current Exp.	507.67	181.80	199.08
MoA Total Budget	24.54	8.22	7.92
Agricultural Services:	18.17	6.12	5.72
of which Extension	4.55	1.04	1.33
Total Capital Exp.		19.91	12.94
MoA Capital Allocations	28.17	15.61	11.25
of which traditional	13.55	7.16	4.98
crops			
Farm Roads	3.10	4.63	2.64
Diversification	3.70	0	0

Source: Gov't Annual Estimates of Revenue & Expenditure

Public sector resources in agriculture have been supplemented by external support for the implementation of development projects. A portion of STABEX funds was also allocated to the commodity associations for commodity-specific development activities. As indicated, capital expenditure on traditional crops (bananas, cocoa and nutmeg) accounted for largest share of total capital expenditure in agriculture. Since the late-1980s, however, coupled with the limited revenues, the Government experienced difficulties in attracting concessionary financing in support of agricultural development initiatives. This situation has resulted in a slowdown of public investment in the sector, particularly in the provision of infrastructure, post-harvest and marketing facilities.

Unfortunately, the shortfall in public sector resources was not covered by private sector investment in agriculture. As was the case in

almost all Caribbean countries, the credit infrastructure serving agriculture is woefully inadequate. The share of credit channeled into agricultural enterprises from the commercial financial sector averaged less than 3% per annum over the 1991-1995 period (Table 4). The commercial banks have traditionally adopted a preference for lending to full-time farmers, for periods not exceeding three years, and between five to seven in the case of lending for land purchase. The reluctance towards lending to small farmers derives mainly from the high cost and limited specialist managerial skills for processing and supervision of small loans, as well as the high element of risk associated with agricultural activity, particularly non-traditional export crops (fruits, vegetables and roots).

Table 4
Grenada, Agricultural Commercial Bank Credit

EC\$M	1991	1992	1993	1994	1995
Total Credit	328.9	348.2	455.3	454.6	488.3
Agriculture	8.52	11.9	13.4	7.5	10.7
Share %	2.6	3.4	2.9	1.6	2.2

Source: Grenada CSO.

Reluctance by commercial banks to operate special credit schemes for agricultural enterprises forced the government to establish the Grenada Development Bank (GDB), whose primary function was to provide credit at favourable terms to foster development activities. Consequently, agricultural sector loans constitute a relatively higher share in the total credit portfolio of the GDB, than that of the commercial banks. In 1994 and 1995, agriculture's share in GDB loans averaged 24% and 11%, respectively. The decline in the share in 1995 was attributed to a decline in both the number and value of GDB loan approvals to agricultural sector applicants.

GDB, (formerly the Grenada Agricultural Industrial Development Corporation), has emerged as the primary lender of agricultural credit. The GDB's portfolio covers activities in agriculture, fishing, industry, housing, tourism and higher education. The GDB received most of its funding from the Caribbean Development Bank (CDB), charging interest rates of 9½% or 10% per annum, with loan

values to agriculture ranging from \$1,000-\$5,999. Local resources are also used to provide loans of below \$5,999, while loans from \$6,000-\$800,000 are facilitated by funds provided by the CDB. The National Development Foundation of Grenada (NDFG) which provides loans to viable agricultural enterprises also constitutes another important financial agency in the development of small agri-enterprises.

Limited financial resources for working capital and on-farm investment are also provided by NGOs, such as the Association for Rural Transformation (ART), community Credit Unions and money lenders. Credit provided by the commodity associations is usually in the form of inputs and other services to their respective members. Poor crop performance and hence eroded profit margins, have, constrained the capacity of these associations to provide traditional assistance to members. Generally, credit to the agricultural sector is biased towards the traditional crop industries. Although access to credit for diversification efforts has greatly improved, these facilities have not been widely and consistently utilised.

Agricultural Diversification

Given the difficulties experienced in the traditional crop industries (particularly cocoa and banana), increasing the productivity levels was an important objective of the general agricultural development programme. Productivity growth was to be achieved through an intensification of rehabilitation efforts and improvements in extension and marketing services, among others. Strengthening the production system for traditional crop industries was seen as an important complement to the diversification effort.

As was the case with other Caribbean countries, the main objectives of agricultural diversification in Grenada were to reduce the dependence on the traditional crop sub-sector, reduce the food import bill and increase foreign exchange earnings and strengthen inter-sectoral linkages with the tourism and

manufacturing sectors. It was anticipated that success at agricultural diversification would be realised through the promotion of crops suitable for small (peasant) type production systems. Consequently, an important aspects of this objective was land reform, to facilitate increased ownership of agricultural lands by small farmers.

Grenada was in the unique position of being declared fruit-fly free. This advantage offers many opportunities for expanding fruit tree production under the agricultural diversification programme. Consequently, in 1986, Grenada implemented an orchard development programme to expand mango, paw paw, sour sop and avocado production, in particular, and to improve harvesting of fruit from the scattered plantings of golden apple and breadfruit. These commodities were identified as having good export potential.

Pilot pineapple and papaya projects were implemented in 1986 and 1988, respectively, with external assistance. These projects achieved limited success. Out the 10 ¼ acre papaya plots established in 1991, only one farm remained. In 1991, this farm alone produced an estimated 14,750 kgs of papaya, a substantial increase over the estimated domestic supply of papaya in 1986 of 1,350 kgs. The overall failure of the project was a result of disease, (bunchy top, Erwinia and fungal spotting), low productivity and consequently, abandonment by farmers. The pineapple project experienced a similar fate due to low productivity levels and grower abandonment.

While some new acreage was established for mango, sweet potato and citrus, the production capacity remained insufficient to increase agricultural exports by any significant level. The production base remained disorganised and generally inefficient, with the bulk of production undertaken by small part-time farmers. In the absence of data, it was observed that Grenada established a limited acreage in these crops on small, individual areas and mostly on marginal lands on which traditional crop production had ceased. The

large number of scattered, small individual suppliers was identified as a primary constraint to efficient production and fruit quality control and standardisation.

In addition to strengthening the production base, the diversification programme accorded some attention to institutional strengthening, infrastructural improvements and the establishment and strengthening of producer organisations. This aspect of the programme, initiated in the late 1980s, was assisted with financial assistance from the World Bank. Grenada's diversification efforts have also benefited from assistance provided through the regional USAID-financed Tropical Produce Support project (TROPRO) implemented by the OECS Agricultural Diversification Coordinating Unit (ADCU).

A review of the ADCU's activities undertaken in 1996 concluded that the project achieved limited impact among the OECS countries. This was due to a number of domestic factors, including low productivity and high production cost structures, weak institutional framework and inadequate support services, the absence of adequate and appropriate information to support planning and policy decisions, reduced incentives and the general weak linkages with the other sectors of the economy and constraints imposed as a result of small size of domestic and regional markets.

In addition to the above constraints, another limiting factor to Grenada's efforts at diversification was the fact that typically, non-traditional crop production was not strongly export-market oriented. Under-developed marketing systems and infrastructure were frequently identified as a leading constraint to agricultural development in general and non-traditional crops in particular.

This limitation is also true for most Caribbean countries. While the marketing system and infrastructure for traditional commodities are well established, through commodity associations (the GBCS, the GCGA and the CGA), the absence of similar systems for non-traditional commodities (including processed

products) is very glaring. This deficiency will become even more critical to the success of agricultural development initiatives as global agricultural trade is rapidly transformed as a consequence of liberalisation. Trade liberalisation and the adverse impact on the viability of traditional crops (through declining prices and erosion of preferences) has placed the marketing advantage enjoyed by the traditional crop sub-sector under tremendous pressure.

The importance of providing adequate market facilities at the domestic level and promoting the regional and extra-regional marketing of a more diverse range of agricultural products and commodities is well recognised by the Government of Grenada. In this regard, measures were taken to strengthen existing facilities and to establish new institutions for the purpose of undertaking and providing market intelligence to facilitate trade, particularly in non-traditional agricultural commodities.

Over the 1991-1995 period, the Grenada Marketing National Importing Board (GMNIB) continued to function as the leading exporter of fresh fruits, vegetables and cut flowers to the regional, US, UK, and Canadian markets. Efforts were also initiated to strengthen the capacity of the GNMIB. The apparent high demand in European and U.S markets and the fact that the country is fruit-fly free has improved the marketability of non-traditional fruits in these destinations. The introduction of direct weekly flights to the UK and daily flights to the US was also an important catalyst to the opening of new markets. Similarly, the expansion in Grenada's tourism sector offers significant opportunities for non-traditional crops in the domestic market.

The Trade, Industry and Energy Division of the Ministry of Finance continues to assist Grenadian exporters to increase their international competitiveness and export earnings. The main objective of the Export Development Unit of the Trade Industry and Energy Division, Ministry of Finance, is that of *"supporting industrial and export development*

activities by advising on appropriate policy measures and by providing facilitatory services such as marketing and trade information and sourcing of technical assistance". Notwithstanding its institutional and human constraints, this unit continues to facilitate the participation of local manufacturers/exporters at trade fairs and on trade missions to potential markets.

Market demand analyses in the target markets, will assume an even greater role in the continued efforts to analyse the export potential for non-traditional crops in non-traditional markets. In this regard, national capabilities to undertake such work are noticeably lacking. Given the institutional weaknesses, it may be that such an objective will be better served at the regional level. Sub-regional and regional agencies currently active in marketing support include the Eastern Caribbean Export Development Agency (ESCEDA), OECS/ADCU TROPRO, and the Caribbean Export Development Agency (CEDA).

These efforts, notwithstanding, success in obtaining and maintaining a foothold in non-traditional markets over the 1991-1995 period was limited. In many instances, Grenadian producers are challenged to consistently meet stringent market requirements. A factor which reduced the competitiveness of most of the commodities exported from Grenada was the high costs of transportation. It was recommended, that in consideration of this factor, as well as the low export volumes, emphasis should be placed on the promotion of high-value crops for these target markets. Specifically, crops such as ginger, mango, avocado, breadfruit and plantain.

The inability of Caribbean countries to satisfy the volume and quality requirements of even the smallest firms specialising in non-traditional products in the export market remains critical constraint to agricultural development.

Commodity and Sub-Sector Performance

□ Cocoa

Cocoa has been an economic mainstay in Grenada since 1714. The cocoa produced in Grenada is of the fine flavour variety which attracts a premium price in the world market. While much of the cocoa is still produced on estates, very few large plantations remain, with most of the active farmers operating small family farms. Since 1714, cocoa acreage and number of cocoa growers have declined significantly. Between 1991-1995, an estimated average of 8,000 acres were cultivated, providing direct and indirect employment for over 6,000 workers and farmers, and contributing on average, \$9m to the economy.¹

In terms of output volumes, cocoa falls far behind banana production, accounting for, on average a 16% share, compared to a 62% share of banana in total traditional crop output. Of significance, however, is the fact that the share of cocoa in total traditional crop output increased from 12% in 1991 to 20% in 1995. This increase was the result of both an actual decline in the share of banana and an actual increase in cocoa production.

However, as was the trend with other traditional export crops in the region, the cocoa industry in Grenada experienced mixed fortunes since the late 1980s. The industry's decline was precipitated by a secular decrease in the average size of farms, due to the increased fragmentation of land holdings and a lack of investment in production units. This structural change presented problems associated with the provision of services and monitoring of production of a multitude of scattered small farm holding. In spite of governments efforts in the late-1980's at revitalising the industry through the implementation of a STABEX-based price support programme, the industry continued to experience difficulties over the 1991-1995 period. Annual growth in cocoa production averaged 9.3% per annum, with the volume of

¹ Grenada-Draft Medium Term Economic Strategy Paper; Ministry of Finance, March, 1996.

cocoa exports declining by 1.4% per annum between 1991-1995 (Table 5).

Table 5

Grenada, Cocoa Production and Exports			
Year	Production	Exports f.o.b	
	mt	mt	EC\$'000
1991	1,432.6	1,588	8,267
1992	1,677.1	1,316	4,792
1993	1,626.6	1,588	8,404
1994	1,164.7	1,270	7,947
1995	1,763.6	1,407	8,953

Source: Central Statistical Office

While production and exports were highly variable over the period, the sharp decline in production and exports in 1994 occurred in spite of a 16.5% increase in export prices over the 1992-1993 levels. This favourable market situation resulted from a more rapid rate of growth in world chocolate consumption compared to cocoa production. By 1995, however, both production and exports increased in response to the continued favourable conditions on the world market.

As a means of consolidating the gains derived from price increases, the Cocoa Growers Association (GCA) attempted to stabilise production at around 1,500 tons (3.2 million pounds). The loss of one of its major purchasers, which absorbed approximately 30% of the cocoa crop over the 1991-1995 period, at contractual price approximately 90% above prevailing market prices, contributed to severe financial difficulties at the end of 1995. This situation led to a discontinuation of the high price levels paid to GCA farmers/members.

The inability of the CGA to pay maintain high prices to farmers will result in a continued decline in cocoa production since cocoa farmers currently experience difficulties in realising profits from their cocoa enterprise. Current yield levels (1995/96) were estimated at 400 - 500 lbs per acre, with only a small proportion of cocoa farmers realising yields above this national average. It was also estimated that 67% of cocoa fields were old, neglected and ravaged by pests and diseases. This situation contributed to high production costs, which, in spite of the fact that the variety is of the high-valued flavoured cocoa,

constrains the product's competitiveness in the international market.

□ *Nutmeg & Mace*

Nutmeg and mace have been an important part of Grenada's agricultural sector since the 1880s. Grenada is the second largest producer of nutmeg/mace in the world. Together with Indonesia, these countries jointly accounted for a 95% share of the world nutmeg/mace production (Indonesia 70% and Grenada 25%). During the 1987-1990 period, the level of nutmeg/mace production and export in Grenada was greatly influenced by the cartel arrangement between the Grenada Co-operative Nutmeg Association (GCNA) and its Indonesian counterpart (ASPIN). This agreement, initiated in 1987, regulated the world nutmeg & mace market through a fixed the price of nutmeg and mace, and the control of supply, an arrangement which led to a tripling of prices in the 1987-1988 season.

Market instability, due to a decline in world demand induced by significant expansions in production, contributed to a reduction in purchases by the sole purchasing company. The GCNA, abiding by the cartel decision, accumulated large stocks and drew on its financial reserves to maintain producer prices. Towards the end of 1988, the agreement was discontinued due to the non-compliance of Indonesia, which sold the commodity at lower prices.

The breakdown of the Grenada/Indonesia producer cartel in 1990, led to a sharp plunge in the world price of the commodity. Due to Grenada's relatively higher production cost structure, the subsequent collapse of world prices have since adversely affected its nutmeg and mace industry. There was an immediate 14% decline in nutmeg production that year, with a significant increase in the level of GCNA stock. The increased costs associated with maintaining large stocks forced the GCNA to cut the price advances to farmers. By 1992, further reductions in prices, by about 1/3 of the price level in 1990, were responsible for the steady decline in production in the post-1992 period.

Production data indicate a 5% decline per annum in nutmeg production and a corresponding 16% per annum decline in mace between 1991-1995 (Table 6). By 1995, the industry showed signs of recovery, with nutmeg and mace production increasing by 16% and 7%, respectively over 1994 output levels. This recovery was partly facilitated by Government intervention in the form of financial support as well as the conclusion of a new marketing agreement with Indonesia, which made provision for an increased market share of Grenada's nutmeg.

Table 6

Grenada, Major Spice Production and Exports

	Production, mt.		Exports mt		Exports, EC\$'000	
	Nutmeg	Mace	Nutmeg	Mace	Nutmeg	Mace
1991	2,632.7	245.5	1,452	227	9,482	2,277
1992	2,336.8	136.7	1,815	182	6,202	1,623
1993	2,186.9	87.6	2,178	272	3,107	1,638
1994	1,794.9	92.6	2,949	272	12,124	1,803
1995	2,098.0	99.4	1,770	91	9,435	1,640
1996	1,741.9	na	na	na	na	na

Source: Central Statistics Office

The US, Germany and Holland represent the major destinations for nutmeg and mace exports, which account for approximately 17% of total value of agri-commodity exports. This share moved from 26% in 1991 to a low of 13% in 1993. In contrast to the steady improvement in production and export volumes of nutmeg in particular, export earnings exhibited high annual fluctuation, declining rapidly by 43% between 1991-1993. This declining trend in export earnings, in spite of the 14% increased export volumes from 1992, was precipitated by the fall in the prices of nutmeg and mace.

The depressed price situation persisted until 1994 when price increases resulted in a 290% increase in the export earnings of nutmeg and a 10% increase in export earnings of mace. This contributed to an increase in the share of nutmeg and mace export earnings to 32% of the total value of agri-commodity exports that year. In spite of increased 1995 output level, export volumes declined by 40% for nutmeg and 57% of mace. In fact, 1995 was the only year when declines in the export volumes were reported for the entire 1991-1995 period.

According to the IMF² the concentration on the cartel and the hope of sustained high prices delayed decisions of the GCNA with respect to investing in processing facilities to obtain higher value added from its product. The emphasis on renewing the cartel agreement with Indonesian Association, even with its reduced control over Indonesian's producers, prevented the GCNA from adopting immediate measures to alleviate the situation. In the 1993-94 marketing period, a 20% increase in the price of nutmeg allowed the GCNA to reduce its stocks and recapture lost markets; however it is unlikely that Grenada would be able to regain its cartel-era position in the nutmeg market. With the establishment of processing units to produce higher value-added derivatives from nutmeg and mace, albeit on a small scale, the industry is expected to consolidate the losses in the period immediately following the collapse of the cartel and remain viable.

□ Banana

The Grenada banana industry has been constrained by factors not experienced by the other Windward Islands producers. An important factor is that banana was not regarded as the most important crop. The initial role of banana cultivation in Grenada was as a protection for the young cocoa and nutmeg plants. While commercial banana production began since 1953, the hurricane-induced devastation (Janet 1955), the subsequent pre-occupation with the rehabilitation of cocoa and nutmeg orchards and the unfavourable political developments between the late 1960s to early 1980s combined to constrain the recovery and development of the banana industry. Of even greater importance, is the fact that banana production continues to be severely affected by diseases, particularly moko and leaf spot, and low productivity associated with poor soil suitability.

Within the context of these challenges, banana production in Grenada has been significantly lower and somewhat less efficient than in the

² Document of the IMF "Grenada- Recent Economic Developments", May 5, 1995.

other Windward islands. In addition, in the post-1993 period, additional external challenges, specifically, the uncertainties regarding the continuation of preferential market access with the coming into effect of the Single European Market (SEM) in January 1, 1993 and the introduction of the New Banana Regime (NBR) in 6 months later (July, 1993) adversely affected the ability of the Grenada Banana Growers Society (GBCS) to adequately provide services to its members. This resulted in a general loss of confidence in the industry.

Between 1991-1995, the volume of fruit accepted for exports by the Grenada Banana Cooperative Society (GBCS) declined by an average rate of 11% per annum. This was reflective of the persistent downward trend in banana production (Table 7). In the 1990s, this trend was accelerated by uncertainty resulting from the deregulation of the European banana market and the consequent elimination of market protection and falling prices.

Table 7
Grenada, Banana Production and Exports

	Production mt	Exports	
		mt	EC\$'000
1991	8,143.5	6,941.9	10,837.3
1992	7,335.7	6,306.7	7,748.4
1993	5,730.9	4,900.2	4,879.5
1994	5,237.3	4,419.8	5,694.4
1995	5,001.4	4,310.3	4,925.7
1996	1,742.4	1,850.0	2,153.3

Source: CSO; GBCS

In spite of its tertiary role to cocoa and nutmeg, banana export volumes accounted for, on average 16% of the total value of agricultural exports. This share fell from 23% of total agricultural exports in 1991 to 11% in 1995. Similarly, banana export earnings fell from \$10.8 million in 1991 to \$5 million in 1995. This decline in export earnings was a direct result of both the decline in absolute export volumes and price on the UK market.

By the end of 1995, the future of the Grenada Banana industry within the Windward island grouping was questionable. Among the strategies for the reorganisation of banana production in Grenada included, proposals to

expand banana production on the Belvedere and La Sagesse estates. It was anticipated that the Belvedere estate would add 350 new acres to total banana acreage. By 1994, approximately 50 acres were brought under cultivation with output from Belvedere estate accounting for 17% of total banana production. Proposals were also tabled to develop the Douglaston estate which, upon completion, would add another 200 acres. The initial objective of the acreage expansion schemes was to enable Grenada to fulfill its quota of 15,000 tons by 1996. As evidenced by a continued decline in output, the expansion of cultivated acreage has not reversed the downward trend in banana output, but has only succeeded in slowing down in the rate of decline in banana production.

□ Citrus

The transformation of the citrus industry in Grenada into an important income and foreign exchange earner has never been fully realised. This was partially attributable to the emphasis on the three main traditional crops, which limited the opportunities for the development of other tree crops. Another factor constraining citrus production was that citrus trees were established mainly to function as windbreaks and are therefore generally found scattered over the island. Although small areas of limes exist, all other citrus species tend to be inter-planted between cocoa, banana and nutmeg and total acreage is estimated between 150-200 acres.

For these reasons, the citrus industry in Grenada is characterised by a small production base low, high levels of negligence, highly seasonal production, low yields and high levels of losses. Production data in the pre-1980 period indicated that the total level of citrus output averaged approximately 1,200 tons, led by grapefruit, orange and to a lesser extent lemon and lime. Lime productions, mainly in Carriacou, declined due to lack of market outlets for processing. In spite of some growth in the post-1980-period, the structure of citrus production remained the same with grapefruit accounting for over 65% of total citrus production, orange 28% and lime

making up the balance. Between 1991-1995, growth in citrus production was negligible, averaging 0.48% per annum (Table 8).

Table 8,
Grenada, Citrus Production, mt

1991	3,364.3
1992	3,507.7
1993	3,397.3
1994	3,411.9
1995	3,382.5

Source: Central Statistical Office

□ *Non-Traditional Fruits*

Grenada's fruit crop diversity is not readily apparent due to the dominance of traditional crops in the production, distribution and marketing system. In spite of efforts to develop the non-traditional fruit sector, the production base continues to be very limited, characterised by small and widely scattered plots.

The performance of the non-traditional fruits was mixed over the 1991-1995 period. Production of breadfruit, golden apple and mango, although expanding slowly, recorded some growth between 1991-1995, compared to declines in soursop and avocado production. Avocado cultivation is also scattered throughout Grenada, on holdings which vary from a few trees to 1 acre in size. Total plantings are estimated at 50 acres. Acreage of soursop and mango are also low, and most trees are planted in backyards and in cocoa fields. In fact, GMNIB mango purchases in 1991 were obtained from over 500 growers, each of whom had only five trees.

Of the non-traditional fruits, mango, avocado and golden apple appear to contribute most to export earnings (Table 9). Production data for golden apple and breadfruit refer primarily to fruit harvested from existing scattered plantings established since the 1960s and 1970s. In 1994, there was approximately 200 acres in total, of soursop, cashew, West Indian cherry, golden apple and other minor fruits. 95% of these fruits were not grown in fruit orchards. Most of the fruit were harvested using basic techniques and collected for sale.

Table 9

Grenada, Non-Traditional Fruit Production & Exports

Production mt	1991	1992	1993	1994	1995
Avocado	1,759	1,584	1,504	1,549	1,583
Breadfruit	1,456	1,005	1,495	1,495	1,664
Mango	1,815	1,872	1,881	1,906	1,963
Soursop	1,225	1,226	1,239	1,248	1,111
Exports, EC\$'000	na	na	na		
Avocado				76	94
Mango				663	1,057
Soursop				104	122
June Plum				596	1,324

na - not available at time of completing report

Source: Grenada, Central Statistical Office

While the production data of non-traditional crops may at best, be regarded as estimates, the data appear to support the observation of limited progress achieved in agricultural diversification. This may be partially explained by the general movement of land and labour away from agriculture in favour of tourism and manufacturing enterprises. Constraints considered critical to tree crop production in particular included, the lack of planting material, improper husbandry techniques, the long maturation period, the small size of production units, scattered production and low level techniques.

□ *Food Crops and Vegetables*

The production of food crops and vegetables occurs under a very informal system, dominated by a multitude of small farmers.. Most production occurs during the wet season on holdings averaging $\frac{1}{4}$ - $\frac{1}{2}$ acres. About 90% of production of food crops is consumed locally with most of the products sold to the National Marketing Importing Board.

Although Grenada is the driest of the Windward islands, plantains, cinnamon, pumpkin and cucumber and other food crops are harvested year round. With the introduction of irrigation, string beans, egg plant, cabbage and eddo also possess the potential for year-round production. Vegetable production, which was previously grown in small kitchen gardens for home consumption, has been slowly developing into a commercial enterprise, albeit under very small scale operations. There has been a noticeable expansion in vegetable production as a result

of improved access to land, through the subdivision of government-owned estates to small farmers, the provision of necessary technical training and mechanised land preparation assistance, as well as the emergence of a few private nurseries providing high quality planting material. The production of tomato and hot pepper between 1991-1995, in particular, has made significant progress, both in terms of area cultivated and in improved production technologies utilised. Production of broccoli and cauliflower, introduced through the technical assistance of the Republic of China on Taiwan, has been a relatively recent addition in the vegetable cropping system.

Table 10
Grenada, Food Crop and Vegetable Production

metric tons	1991	1992	1993	1994	1995
Plantain	653	654	635	658	670
Dasheen/Eddo	454	385	372	383	387
Yam	309	312	313	313	342
Tannia	60	62	62	64	54
Sweet Potato	263	267	263	268	268
Corn	250	337	386	347	354
Peas & beans	648	649	658	662	671
Tomato	50	54	54	54	54
Carrot	86	82	79	82	78
Cabbage	227	255	250	254	255
Pumpkin	227	228	230	231	227

Source: Grenada, Central Statistical Office

In general, the level of food crop production has remained relatively constant in spite of attempts to expand the production base. Such attempts included research on root crops and development of technological packages by CARDI and the Ministry of Agriculture, credit facilitation and provision of improved marketing facilities in support of root crops production, particularly tannia, yam and ginger under the Agriculture Rehabilitation and Crop Diversification (ARCD) project.

As noted earlier, Grenada is relatively self sufficient in root crops, in particular, and export of surplus production formed an important aspect of intra-regional trade, Trinidad & Tobago being the main market. Since the early 1990s, this trade has declined due, in part, to the increased domestic production capacity of Trinidad (more so than Tobago). More recently, the reduced trade flows in food crops between these two

countries was discontinued in response to the pink mealy bug infestation in Grenada.

□ *Livestock Production*

The livestock sub-sector remains undeveloped, falling far behind crop production and fisheries. The relatively low importance of the livestock sub-sector is reflected in its share of agricultural GDP, which averaged approximately 6% per annum between 1991-1995, compared to a 14% average share of fisheries over the same period. Livestock activities continue to be largely subsistence with very few small commercial operations rearing cattle, sheep, goats, pigs and poultry.

Data on head of livestock and number slaughtered for domestic consumption are generally not available. It has been reported, however, that the observed decline in livestock numbers, except in poultry, was consistent with the decline in estate agriculture, loss of pasture land to housing, and low productivity of animals due to low levels of nutrition and the limited animal husbandry technologies utilised. While production data are not available, it was estimated that Grenada appears to be relatively self-sufficient in table egg production, and was capable of supplying approximately 50% of the country's fresh pork requirements, compared to a mere 3% domestic supply capability in poultry meat. In value terms, meat and dairy constituted the major import commodities over the 1991-1995 period, with an average share of 22, and 17% respectively.

□ *Fisheries*

Unlike the livestock sub-sector, fisheries features more prominently in the agricultural system of Grenada. Fishing is concentrated in the parish of St. Georges, St. Johns and St. Andrews, with some fisheries occurring in other parts of the country, including Carriacou and Petite Martinique. Fish landing data indicate an upward trend since 1981, increasing by over 50% to approximately 2,225 tons in 1987. In spite of the early efforts (since 1980s) of the Ministry of Agriculture to improve storage and landing facilities, the available data indicate a decline in production

to just under 2,000 tons per annum between 1987-1991. More recently (1990) the Governments of Grenada and Japan signed a "Coastal Fisheries Development Project" aimed at expanding the scope of fishing through the use of modernised fishing vessels and improvements in landing infrastructure in the major fishing areas. The decline in fish landings continued into the 1991-1995 period by of 4.8% per annum, averaging 1,700 tons per annum (Table 11).

Table 11

Grenada, Fish Landings Indicators

	Production		Exports	
	tons	EC\$'000	tons	EC\$'000
1991	na	na	410	4,987
1992	2,055	11,036	420	5,236
1993	2,107	11,515	520	6,492
1994	1,638	10,845	640	8,358
1995	1,492	11,618	750	9,793

Source: Grenada, Central Statistical Office

While the data indicate declines in fish landing, the trade data indicate that crustacean and molluscs were the only agricultural export commodities recording strong annual growth in both volume and value of exports. Between 1991-1995, the value of fish exports increased by approximately 19% per annum, with total volume averaging 548 ton per annum. The discrepancy in the production and export trends may be explained by the inadequacies of the fish production data collection system. Overall, constraints to the fisheries sector include the lack of a clear policy and strategy for its development, limited budgetary allocations to the existing Fisheries development units, lack of a national co-ordinating agency and a general lack of technological application.

□ Agro-Processed Products

The agro-processing sector in Grenada comprises mainly syrup and rum production from sugarcane, flour and wheat bran manufacture and canning and bottling facilities producing tomato ketchup, sauces, beer, juices and jams/jellies. Output data of the agro-processed sub-sector are not readily available. In the absence of such data, trade data on miscellaneous edible products and preparations provide some indication of the

size and performance of the agro-processing industries. The data presented, however, do not account for fruit and vegetable juices, jams and jellies reported in the other various categories of agri-commodity exports (Table 12). As indicated, growth in the value of beverage exports was strong, averaging 40% per annum between 1991-1995, in spite of a 20% decline in export earnings in 1993.

Table 12

Grenada, Agro-Processed Commodity Exports

EC\$'000	Flour	Wheat Bran	Beverages	Misc.
				Edibles
1991	3,569	220	965	250
1992	3,549	193	1,851	340
1993	3,120	111	1,481	235
1994	2,485	91	1,503	521
1995	na	na	2,810	350

Source: Grenada, Central Statistical Office

The export performance of the flour and wheat bran industries was poor, and may have been limited by the fact that the most significant portion of their raw material is imported. Thus, with rising costs of imported raw material and relatively cheaper imports of similar products, the local industries may have lost some of their market competitiveness over the period. In the absence of output data, however, it is difficult to determine whether the decline in exports was attributable to an actual decline in output or to an increase in domestic sales. The manufacture of most beverages and flour (from imported wheat), also do not contribute significantly to domestic value-added since the most significant proportion of the raw materials is imported.

Constraints to Agriculture

Grenada's economy, once predominantly agricultural, is in transition with tourism emerging as a main growth sector. Within this transition, agriculture remains an integral economic activity, both at rural and national levels. At the level of production, the sector's ability to contribute to national economic development has declined. This declined derived from a host of constraining factors, some of which were outside the control of the government and farming community of Grenada.

The range of constraints and deficiencies to the development of the agri-food sector in the Caribbean, which are also applicable to Grenada, may be summarised as follows:

Low Productivity Levels

- physical (geological) limitations, including hilly terrain, which minimizes the adoption of cost-effective mechanisation, unsuitable soils, soil degradation and water availability and management problems, which adversely impact on yields and productivity;
- pests and diseases of economic significance, exacerbated by the inadequate quarantine capabilities;
- small domestic and regional markets;
- low levels of human capital and inadequate application of improved technologies;
- lack of a commercial orientation in farming and propensity to produce for "protected" markets, resulting in slow progress in agricultural diversification programmes;
- inadequate storage, marketing and transportation facilities and services to facilitate and stimulate trade in agricultural commodities.

Institutional & Structural Deficiencies

- weak macro-economic framework, which constrains the development of enabling economic environment for investment in agriculture and the creation of inter-sectoral linkages with tourism and agro-industry;
- weak institutional capacity of Ministries of Agriculture, resulting in inadequate policy analysis formulation and poor planning, evaluation and implementation of appropriate agriculture sector and rural development initiatives;
- the dependence on public-sector resources, which are inadequate to meet the demands of improved facilities, post-harvest and marketing infrastructure, training, research and other essential services;
- undeveloped domestic capital market and low propensity to invest in agriculture due to the sector's comparatively high risks and absence of risk-mitigating facilities

such as insurance, market guarantees and compensation;

- lack of labour for agriculture and poor skills of the agricultural labour force;
- undeveloped information systems which constrain the effectiveness of sector planning, produce marketing and trade.

While the above constraints are certainly not exhaustive, they capture the general constraints which are fairly common across all Caribbean countries. Grenada is more fortunate than most of its Caribbean counterparts, in that the agricultural sector is not vulnerable to the devastating and sometimes, long-term effects of periodic hurricanes. Pest and disease infestations have been contained mainly in the banana industry, (moko disease) and efforts at controlling the pink mealy bug have been met with extreme successful.

Low productivity and declining competitiveness is a general problem in the agriculture sector due, in large part, to lack of technological application to production. The low levels of technological application are closely linked to the inappropriateness of the contemporary systems for the agricultural system in Grenada as well as the low levels of domestic financial resources necessary to invest in appropriate research and development. Except for the introduction of clonal nutmegs after 1955 and the introduction of Malayan variety, there have been no new methods applied to nutmeg cultivation and harvesting. A similar situation exists in cocoa production and banana production.

Typically, options for increasing productivity have tended to focus on increased use of agro-chemicals. Between 1991-1995, an average expenditure of \$3.7 million per annum was spent on fertilisers, agricultural chemicals, equipment and machinery imports. The value of such imports increased by 47% per annum, with higher levels of expenditure in 1991 and 1995. In spite of the continued growth in agro-chemical imports, scientific advances have proven that improved yields, genetic stock and biological control of pests and diseases are

more cost-effective, sustainable and environmentally-friendly means of reducing losses, standardising output, improving productivity and enhancing farm incomes.

The low levels of human capital, particularly a production base which is dominated by small farmers, many of whom are forced to practice agriculture in marginal areas, has been a major factor constraining agriculture development in Grenada. The Grenadian small farmer displays the following characteristics:

- small and often a part time operator, operating an average of 2.5 acres if part-time, and above 5 acres if full time,
- cultivating several crops on single plots of land, including commercial export crops,
- responsive to technical help and price movements,
- has had some years of primary education,
- an average age of 51, with indications of a decline in this average age due to the entrance of younger persons into agriculture since the 1980s, through Government schemes and through private sale of lands.
- important, but understated role of women as farm managers, labourers, processors and marketers of produce.

While these characteristics have been viewed as responsible for the resilience of the small farm sector over the years, they do not, inherently suggest that there is a pool of entrepreneurs in the sector, or even, that they could be easily developed. In fact, it is now said that there are many "harvesters" but few real farmers left in Grenada.

Given such characteristics, it is a challenge to significantly increase the productivity levels in agricultural production and hence, the competitiveness of many agricultural enterprises in Grenada. The constraints and deficiencies at the domestic level have been brought into clear focus in the emerging trading environment of the 1990s. Global recession, which adversely affects the demand for imports and other external shocks which reduces foreign investment, also impact the national economy in general and the vulnerable sectors, in this case agriculture. While export agriculture has had to contend with periodic depreciation in the exchange rate between the Pound Sterling and the US dollar, the agricultural sector in general now has to contend with the changing rules of international agricultural trade. These international developments significantly influences agricultural sector performance.

Agriculture in Grenada - Prospects

International Environment

Towards the year 2000, world agriculture will be increasingly influenced by an acceleration in the pace of globalisation and trade liberalisation. Trade is identified as the driver of this emerging environment. The dynamics of the globalisation and liberalisation have also been extended to agricultural trade, which, prior to 1994, was very heavily regulated by regional, hemispheric and international agreements. The most significant of these was the 1986-1994 Uruguay Round of negotiations on trade liberalisation.

These negotiations included for the first time, reducing the distortions in trade in agricultural products. These distortions resulted from

government intervention and support for agriculture. The establishment of the World Trade Organisation in January 1995 thus marked the end of an era of protection the agricultural sector. The main WTO Agreements which impact the agricultural sector are summarized below. While developed countries were given a maximum period of six years for implementing commitments (i.e., 1995-2000), developing countries were allowed a period of ten years (i.e., from 1995 - 2004).³

³ "The Trading System After the Uruguay Round" John Whalley and Colleen Hamilton, Institute for International Economics, Washington DC, July 1996.

- Agreement on Agriculture: 3 Commitments
Market Access commitments require the conversion of all non-tariff border measures (import quotas), to tariffs which provide the same protection (process called tariffication). Tariffication is to be followed by a reduction in all tariffs by 24%. Provision is also made for the institution of a minimum-access tariff quota, initially set at 3% in 1995, to increase to 5% by 2004.

Countries are, however allowed to include special arrangements in their minimum access commitment and to allocate their minimum access to exporters with special arrangements, such as with the EU and sugar. Special safeguard provisions were also included for tariffied products that will allow additional duties to be applied in cases where shipments priced in domestic currencies fall below a certain trigger or in the case of import surges. This introduces, at least, the possibility of new protective measures being used in agriculture which may represent a weakness of the agreement.

Domestic Support commitments require reductions in the level of expenditures on domestic agricultural support measures which distort genuine trade (called amber box aggregate measures of support (AMS)), by 13.3% between 1995-2004. AMS include acreage payments, certain subsidised loan programmes, input subsidies and price supports.

Export Subsidies commitments require reductions in the value of direct export subsidies by 21% and in the volume of subsidised exports by 14% between 1995-2004. Developing countries are exempted from commitments on marketing of agricultural exports or internal transport subsidies.

- Sanitary & Phytosanitary (SPS) Agreement
This agreement covers food safety and animal, plant and health regulations. The agreement stipulates that the use of these measures should only be in instances where human, animal or plant life or health is threatened. Although negotiations towards

the development of a globally accepted code of standards are still ongoing, Caribbean countries are encouraged to base their national SPS measures on international standards, guidelines and recommendations; higher standards may only be imposed if there is scientific justification.

- Ministerial Decisions

The Decisions on Measures Concerning the possible Negative Effects of the Reform Programme on LDCs and NFIDC seek to ensure that these countries are not disadvantaged in terms of higher food prices. The provision of food aid and basic food stuffs provided in full grant form constitutes the key elements of these Decisions.

The basic objective of agricultural trade liberalisation is to reduce the level of protection which imposed constraints to other potential suppliers of the specific agricultural commodities. The agreements may negatively affect some participants in agricultural trade, particularly the least efficient producers. However, for most, tariff reductions and the elimination of quantitative restrictions may impact positively on their production costs, particularly as the cost of imported inputs are reduced. While lower costs of imported inputs is one element in enhancing commodity competitiveness, other factors, such as increased productivity, improved fruit quality and improved commodity marketing are equally important in producing a cost and quality competitive commodity.

International - Domestic Economy Link

Grenada is a signatory of the WTO and by virtue of its membership, committed to implementing these reforms within the 10-year period. The WTO also specifies that all commitments are to be included in the country's schedules of agricultural concessions and commitments. The pace of implementation of WTO commitments has progressed rather slowly in Grenada, as with the other Eastern Caribbean countries. This is partially due to the reluctance in fully adopting trade liberalisation as a macro-economic objective. Much of this reluctance is related to its

inability to compete against imports and the implications which this lack of competitiveness will have for employment, national income and economic growth.

In addition to the slow pace of implementation of the WTO 1994 Agreements, Grenada must now prepare for the next Mini-WTO Agriculture negotiations, which are due to begin in 1999. It is very likely that this Round will place additional pressure in the EU to further liberalise its internal agricultural policy. It is likely that on-going discussions between the EU and the ACP towards the development of a post-Lomé IV arrangement will also alter the current preferential trade regime which Caribbean countries now enjoy with the UK, including the special commodity protocols in particular (including banana). Preparations are also underway for the review of the EU's Common Agriculture Policy (CAP), which will also impact trading patterns between the EU and ACP countries.

Although Grenada is a relatively minor player in international trade generally, and in agricultural trade in particular, these global developments will have profound impacts on the country's agricultural sector and economy. Agricultural trade liberalisation will be accompanied by changing patterns of production, food sourcing, preparation, distribution and consumption.

Commodity Market Trends

Given the export-oriented role assigned to agricultural output, of priority concern is the dominant international trends for the major export commodities and the implications for the prospects for Grenadian exports. The export sub-sector, particularly bananas, has already begun to feel the effects of liberalisation in the global agri-food trade.

□ *Cocoa*

Grenada remains a high cost producer of fine flavoured cocoa compared to its main competitors, Cote'd Ivoire, Jamaica and Trinidad and Tobago. Furthermore, with the increasing concentration in the chocolate industry, manufacturers have been moving into the production of more standardised and

bulk products. For such types of chocolate, fine flavoured cocoa is an expensive input. In addition, there has been increasing pressure to harmonise the 5% allowance of the use of Cocoa Butter Equivalents (CBE) in the production of chocolate, a move which would result in a downward pressure on international prices. The performance of the industry in the post-1995 period will be determined by the trend towards the use of bulk as opposed to flavoured cocoa.

Added to this international market situation is the financial crisis currently affecting the CGA. The downward trend in international cocoa prices is expected to exacerbate the already precarious financial position of the association, which in turn, adversely affect grower returns and profit margins. Unless costs of production are drastically reduced, the ability of Grenadian cocoa exports to compete both with cheaper bulk cocoa and flavoured cocoa will be hampered.

□ *Nutmeg & Mace*

Spices, make up a small part of the overall agricultural trade, and nutmeg and mace exports from Grenada, occupies an even smaller share of the world spice trade. The global spice trade has undergone major changes in the past few years. The food industry and food service sectors now account for nearly 60% of the spice trade in developed countries and the household sector has been relegated to second place. With the exception of pepper, the largest component in the spice trade, prices for most spice have not risen in the last 15 years.

Grenada is, however, world renowned for nutmeg production. In spite of the instability of the world spice market in the recent past, there are indications towards recovery and strengthening of the spice market. This is particularly true of the US market, which is emerging as a major importer of spice. This trend is associated with growth in ethnic populations and the increased use of spices to compensate for less salt and lower fat levels in food among the general population. In spite of the apparent preference for the deep brown aromatic nutmeg and orange-red mace from Indonesia (which accounts for 2/3rd of the US

nutmeg market), there exists the potential for Grenada to increase its nutmeg and mace, as well as other minor spices, to the US market both as a fresh products and a range of processed by-products in order to take advantage of market segmentation and product differentiation.

In this regard, Grenada should attempt to fully exploit the reputation of the "Spice Isle" in marketing its spice products in the US and other developed countries. The challenges which confront Grenadian spice exports to the US market are linked to the rigid health and sanitation regulations of the FDA and the ability to consistently sell its spice products at prices and quality comparable with its competitors.

□ *Banana*

Banana continues to be a leading consumer fresh fruit choice as evidenced by an increase in per capita banana imports over the last 10 years. However, production capacity has increased, particularly in the Latin American countries. Barring the adverse impacts of unfavourable weather conditions on the major production zones, supply will continue to outpace demand. Prices in general, will fall. Another factor which will definitely lead to lower banana export prices is the ongoing processes of global agricultural trade liberalisation. The WTO 1997 ruling against the continuation of the EU's banana trade regime in its present form is one benchmark in the quest to liberalise agricultural trade. For the Windward islands, this decision means an acceleration of the UK banana market liberalisation in advance of the guaranteed market protection to the year 2000.

The outlook for export banana production in Grenada is far less favourable. In fact, by the end of 1996, the issue was one of a suspension of export banana production in Grenada. Among the several factors mitigating against competitive banana production in Grenada are the persistent moko disease, the marked decline in soil fertility associated with the intensive banana cultivation and subsequent low volume and poor quality fruit. Unless these physical constraints can be effectively

controlled, and the institutional and management framework improved and made more efficient, the short-term survival of the banana industry appears to be very doubtful. Added to this has been the acceleration of the UK banana market liberalisation in accordance with the WTO.

The banana restructuring programme stands to benefit from the adjustment and debt relief assistance from the EU and other international donors. In mid-1997, the EU allocated US\$165 million to assist banana-producing countries in the region. Important elements of this programme included the establishment of a core group of efficient banana growers, who would be able to compete in liberalised markets by the year 2000 and provisions to assist displaced farmers to find alternatives means of income. The acquisition and adaptation of technologies for the production of a wide range of by-products such as banana purees, juices, chips and fibre products, will also provide a much needed boost to the agro-industrial sector, economic diversification as well as enhance the welfare situation of the banana-dependent communities.

□ *Fresh Fruits*

The global fresh fruit market is considered to be well supplied by low-cost producers, particularly those in Latin America. While demand for less mainstream fruits, such as mango, golden apple, tamarind, paw paw and soursop etc, exists, penetrating the US market in particular, has been difficult due to rigid health and sanitation requirements as well as in the trend towards multiples and supermarkets which demand range, volume, regularity and product-related services.

In spite of the apparent high demand for non-traditional fruits in developed markets, the low production volumes (due to both to a low acreages and damage to fruit from pests and diseases), relatively high cost of fruit and inadequate marketing and air shipment facilities continue to be major limitations to the development of a vibrant trade in non-traditional fresh fruits. It is observed, however, that there exists a greater demand in developed countries for fruit products, such as pulps, juices and purees, than for fresh fruit. In

this regard, opportunities exist for agro-processed exports.

Domestic Food Production

Food production of crops, such as, roots and tubers, vegetables, legumes and grains, as well as meat, poultry and fish production, occurs primarily for domestic consumption. Grenada has generally developed the capacity to adequately meet domestic requirements of roots and tubers and to some extent, the most common vegetables of tomatoes, carrots and lettuce. There remains much scope in increasing domestic production of legumes, grains, mainly corn, livestock and fish. The reorganising of crop production patterns, such as the systematic use of rotation, the development of appropriate inter-cropping systems which maximises output of all crops within the mix, and the use of irrigation for out-of-season production, will go a long way in achieving expanded output and ensure year-round supplies of high quality produce at reasonable prices.

Similar developmental efforts in the livestock and fish industry, based on an assessment of the viability of domestic meat production, will also benefit the non-crop agricultural sector. Full self-sufficiency in meat and fish production may never be attained. However, the development of the livestock industry along commercial lines, utilising largely local feeds and material for animal housing will enhance the competitiveness of sustainability of livestock rearing.

Agro-Industry

Fruit processing as an alternative or complement to the fresh fruit market would ensure income to the farmer and increase value-added to agriculture. The expansion of the agro-industrial sub-sector has been relatively slow. Market trends indicate a rapidly growing processed food segment in all major markets due to an increasing demand for processed food products. Increased emphasis should therefore be placed on developing the fruit processing industry in order to increase the benefits derived from value-added products.

Adding value, through agro-processing has been hailed as a key vehicle to achieve growth and transformation in agriculture. The experiences of fruit processing enterprises have indicated that these enterprises also suffer from low productivity, associated with high cost of investment, inadequate management and technical capabilities, technology and lack of low cost, good quality and steady volumes of raw materials.

The level of success in increasing agricultural production (both fresh produce and processed commodities) will be conditioned on the existence of an effective agricultural marketing network. Maintaining supplies in traditional markets and introducing new products into traditional as well as new markets present a tough challenge for any country. Given the low export volumes, the magnitude of this challenge could be minimised through the adoption of the concept of partnerships with overseas retailers, mainly super market chains. The development of an integrated production and market intelligence system is a prerequisite to successful marketing.

Guidelines for Policy Formulation

The Government of Grenada has committed to the provisions of the WTO Agreement, including reducing public sector support to agriculture. Against this background, all actors in the sector are challenged to the develop WTO-consistent mechanisms to increase productivity and competitiveness in the sector.

Competitiveness in agriculture can be viewed as a dynamic economic concept inherent to globalisation, that takes into account the need to adjust to the macroeconomic environment, adapt to the astonishing pace of technological innovation and be flexible in terms of the requirements of sustainable and equitable development.

AGRIFORUM - Towards an Agenda for Agriculture in the Americas, DIREXCOM, IICA Headquarters, Costa Rica, August, 1997.

The challenge continues to be one of sustaining efficient traditional crop production while expanding into a more flexible, diverse agriculture. Policy makers are thus faced with the twin tasks of increasing productivity and competitiveness within a free trade

environment while simultaneously keeping the adjustment costs relatively small so as to minimise the negative impact on resource constrained groups. This can only be achieved through an appropriate mix of enabling policies, technological research and development, investment and continuous human resource development.

Policy decision making for Caribbean Agriculture should place priority on the following considerations in the design of an agricultural development strategy.

- **An Enabling Policy Environment** which combines new public policy for rural areas with current macro-economic policy to enhance competitiveness. This should include policies which ensure rational spending of public resources on direct works that support the market rather than replace it. This strongly suggests an increased role of the private sector in all dimensions of the agricultural sector.
- **Dynamic and Flexible Support Institutions** through the transformation of the institutional framework. Institutional evolution should be characterised by reform and development of specialist institutions and an integrated and dynamic public and private sector partnership with the capacity to capitalise on strategic and tactical alliances for developing the sector

This implies the extension of institutional capabilities which enables the

development of mechanisms to secure access for local output to mainstream food distribution centres, which consolidates linkages with the hospitality sector, which provides quality-enhancing marketing services (eg. grading and packaging) and adequate extension and research services for product development.

- **Technology Generation** based on innovations for improved efficiency. Given the human and financial resource constraints, it may be more feasible for Grenada actively support the establishment and effective operation of a regional or sub-regional research centre for technology generation and transfer. This will be a pre-requisite for achieving and maintaining competitiveness and sustainability of the agricultural sector.
- **Human Resource Development** and the continuous development of the knowledge base will become a fundamental factor of production. Attention must be placed on the provision of high quality and timely education, which takes into account production and social requirements of the sector. Training and investment in human resources, particularly in the rural areas are inextricably linked to the sector modernisation process, competitiveness and equity.



Additional Statistics

Table 1: Origin of Gross Domestic Product, Grenada

EC\$ Millions @ 1990 prices	1991	1992	1993	1994	1995 ^P
Agriculture	62.51	60.82	58.31	54.72	58.47
<i>Crops</i>	49.34	47.24	44.52	40.76	44.35
<i>Livestock</i>	3.52	3.63	3.65	3.68	3.75
<i>Forestry</i>	1.89	1.95	2.03	2.03	2.05
<i>Fishing</i>	7.76	8.00	8.11	8.25	8.32
Mining & Quarrying	2.42	2.47	2.52	2.49	2.51
Manufacturing:	33.51	36.93	32.33	34.78	37.46
Construction	37.01	34.75	36.31	36.71	37.63
Utilities - Electricity & Water	19.48	20.45	30.34	23.42	25.69
Transport & Communications	106.23	109.51	111.81	115.73	120.33
Wholesale & Retail Trade	56.99	58.23	59.26	60.64	62.46
Restaurants and Hotels	30.25	35.80	36.28	45.53	43.14
Financial Institutions	39.11	40.42	41.19	42.06	43.74
Real Estate & Housing	23.16	23.16	23.62	23.74	23.86
Government	100.19	94.92	89.32	84.86	83.78
Other	14.46	14.75	14.85	14.99	15.14
Less Imputed Service Charge	29.88	31.28	31.76	32.40	32.72
GDP at Factor Prices	495.08	500.51	494.38	507.27	521.49

Source: Grenada Statistical Office.

Table 2: Savings and Investment, Grenada

EC\$ Millions	1991	1992	1993	1994	1995 _p
Gross Domestic Savings	158.2	156.9	152.9	173.6	187.2
Transfers from Broad	27.3	29.1	23.5	39.6	38.3
Net Factor Payments	-20.4	-18.4	-25.6	-23.8	-22.7
Gross National Savings	165.1	167.6	150.8	189.4	202.8
Private Sector	145.7	145.1	115.5	155.3	165.4
Consolidated Public Sector	19.4	22.5	35.3	34.1	37.4
Gross Domestic Investment	268.5	227.2	251.2	268.9	239.4
Private Investment	199.7	199.4	197.4	187.1	187.9
Public Investment	66.1	27.8	53.8	81.8	51.5
Foreign Savings	100.7	59.6	100.4	79.5	36.6

Source: Ministry of Finance and IMF Staff Estimates

Table 3: Selected Consumer Price Indicators, Grenada

Average, year-end, 1987=100	Wghts	1991	1992	1993	1994	1995
- All Items		115.8	120.2	123.6	126.7	129.6
<i>Food & Non-Alcoholic Beverages</i>	38.7	121.9	122.4	127.4	134.0	141.1
<i>Alcoholic Beverages & Tobacco</i>	2.0	121.4	125.5	127.8	124.7	129.2
Housing & Fuel Supplies	9.5	114.9	116.1	117.0	116.2	116.3
Fuel and Light	3.9	113.2	109.5	109.4	106.8	108.1
Household Expenses	17.3	105.3	121.5	123.0	123.5	124.1
Rent	11.9	102.0	125.4	127.5	127.5	127.5
Furniture & Household Equip.	2.7	109.7	113.1	117.8	120.1	115.3
Health Expenses	8.6	111.4	121.3	125.1	125.1	126.5
Clothing	5.2	107.5	111.0	111.6	114.9	112.4
Transport Equipment	9.1	124.8	125.6	130.3	133.7	133.4
Educational & recreational	4.6	128.0	128.1	129.9	129.6	132.5
Misc. Expenses	2.3	110.3	111.4	116.4	125.2	122.8

Source: Ministry of Finance and IMF Staff Estimates

Table 4: Summary Central Government Fiscal Operations and Composition, Grenada

EC \$ Millions	1991	1992	1993	1994	1995
Central Government Current Account:	na				
Current Revenue		158.9	171.2	171.0	183.1
Taxes		144.5	154.1	154.8	165.5
Non-Tax		14.4	17.1	16.2	16.6
Current Expenditure		166.0	162.4	163.0	168.7
Wages & Salaries		89.0	87.4	84.7	88.4
Interest Payments		17.3	17.5	16.6	18.6
Other		57.9	57.5	61.7	61.7
<u>Current Account Balance</u>		<u>-7.1</u>	<u>8.8</u>	<u>8.0</u>	<u>14.4</u>
Capital Revenue		11.3	0.1	17.9	16.6
Grants		17.4	18.3	32.0	21.1
Capital Expenditure		25.0	32.0	69.1	51.7
<u>Overall Balance</u>		<u>-3.5</u>	<u>-4.9</u>	<u>-11.2</u>	<u>-22.2</u>

Source: Ministry of Finance, na - not available at time of preparation

Table 5: Distribution of Commercial and Development Bank Credit, Grenada

EC \$ Millions, End of Period	1991	1992	1993	1994	1995
<u>Total Commercial Bank</u>	<u>326.9</u>	<u>348.2</u>	<u>455.3</u>	<u>454.6</u>	<u>488.3</u>
Agriculture	6.6	9.5	11.1	5.4	8.1
Fisheries	1.9	2.4	2.3	2.1	2.6
Manufacturing	25.4	36.9	29.2	26.1	26.7
Mining & Quarrying	1.2	1.0	0.7	0.1	0.7
Distributive Trades	70.9	68.5	79.4	73.6	85.6
Tourism & Entertainment	32.5	58.3	52.7	51.9	58.5
Transport	13.4	15.3	20.4	21.4	23.7
Public Utilities	13.1	14.4	29.7	22.5	16.9
Construction & Land Development	13.3	15.2	15.9	22.1	18.6
Government exc Statutory Boards	17.4	11.6	12.3	14.9	17.9
Financial Institutions	1.9	3.5	3.5	4.2	2.8
Personal	120.0	123.4	188.0	117.3	207.9
Other	9.3	14.5	10.9	13.1	18.1
<u>Total Grenada Development Bank</u>	<u>na</u>	<u>na</u>	<u>na</u>	<u>na</u>	<u>1.94</u>
<u>Loan Disbursements</u>					
Agriculture					0.13
Fisheries					0.08
Industry & Tourism					0.91
Education					0.38
Housing					0.44

Sources: Commercial Banks: Eastern Caribbean Central Bank.; GDB Reports
na: not available at time of completing report

Table 6: Balance of Payments, Grenada

US \$ Millions	1991	1992	1993	1994	1995p
Current Account Balance	-37.3	-22.1	37.2	-29.5	-13.6
Trade Balance	-88.6	-81.7	-96.6	-107.3	-98.0
Exports f.o.b	24.9	21.5	21.5	24.6	21.6
Imports c.i.f	113.5	103.2	118.1	131.9	119.6
Services (Net)	48.7	55.6	60.2	72.0	78.6
Income (Net)	-7.5	-6.8	-9.5	-8.8	-8.4
Net Private Transfers	10.1	10.8	8.7	14.7	14.2
Capital Account Balance	36.1	29.7	38.9	38.1	19.5
Net Direct Investment	15.3	26.7	17.2	19.3	12.7
Overall Balance	1.2	-7.7	-1.7	-9.4	-5.9

Sources: Grenada Statistical Office/ECCB

Table 7: Composition of Merchandise Exports and Imports (SITC), Grenada

EC \$ Millions	1991	1992	1993	1994	1995p
Domestic Exports:	57.19	48.86	47.40	54.18	57.40
0 Food & Live Animals	45.14	37.85	37.25	41.72	43.37
1 Beverages & Tobacco	0.97	1.85	1.48	1.50	2.81
2 Crude Material	0.07	0.08	0.05	0.02	0.02
3 Minerals Fuels	0.00	0.00	0.00	0.00	0.00
4 Animal, Vegetable Fats & Oils	0.00	0.00	0.00	0.00	0.00
5 Chemicals	2.52	2.48	1.89	2.59	1.52
6 Manufactured Goods	2.85	3.46	3.65	4.01	4.65
7 Machinery, Transport, etc	0.39	0.54	0.96	0.72	0.70
8 Misc, Manufactured Goods	5.26	2.60	2.12	3.63	4.33
9 Misc. Transactions	0.00	0.00	0.00	0.00	0.00
Re-Exports	5.43	9.30	10.75	12.10	6.18
Imports:	317.53	286.56	338.71	322.43	349.69
0 Food & Live Animals	75.54	73.93	77.53	77.98	87.96
1 Beverages & Tobacco	5.64	5.65	8.24	6.49	7.14
2 Crude Material	9.13	8.06	10.42	12.43	9.57
3 Minerals Fuels	23.34	23.12	42.01	24.88	27.16
4 Animal, Vegetable Fats & Oils	1.14	1.08	1.30	1.24	1.82
5 Chemicals	26.97	26.88	29.01	27.33	30.50
6 Manufactured Goods	63.97	54.84	64.56	63.85	66.98
7 Machinery, Transport, etc	76.62	65.05	66.33	70.71	76.08
8 Misc, Manufactured Goods	35.04	108.6	39.20	37.54	42.36
9 Misc. Transactions	0.10	-	0.07	-	0.12

Sources: Central Statistics Office

Table 8: Composition of Agri-Food Merchandise Exports (SITC), Grenada

EC \$ Millions	1991	1992	1993	1994	1995p
0 Food & Live Animal Exports					
00 Food & Live Animals	0.02	0.02	0.02	0.03	0.00
01 Meat & Preparations	0.00	0.00	0.00	0.00	0.00
02 Dairy Products & Eggs	0.00	0.00	0.00	0.00	0.00
03 Fish & Fish Preparation	4.99	5.24	6.49	8.36	9.79
04 Cereals & Preparations	3.57	3.46	3.12	2.49	3.67
05 Vegetables & Fruits	15.61	11.87	4.95	7.52	8.24
06 Sugar & Sugar Preparations	0.00	0.00	0.00	0.00	0.00
07 Coffee, Tea, Cocoa & Spices	20.48	16.73	18.28	21.87	20.30
08 Feeding Stuff for Animals	0.22	0.19	0.15	0.93	1.02
09 Misc. Edible Products	0.25	0.34	0.23	0.52	0.35

Source: Central Statistics Office

Table 9 Imports of Agricultural Inputs, Grenada

EC\$ Million	1991	1992	1993	1994	1995
Total Imports	4.27	2.24	3.79	3.00	5.06
Agro-Chemicals (fertilisers)	1.87	0.77	1.66	1.02	1.39
Inputs	1.91	1.12	1.64	0.85	3.23
Seeds	-	0.12	0.84	0.08	0.04
Insect/Herb/Fung/Rodent-icides	1.71	0.81	0.50	0.76	3.15
Anti-sprouting products & Other	0.20	0.19	0.30	0.01	0.03
Agro-Equipment (small implements)	0.30	0.32	0.37	0.48	0.36
Agro-Machinery	0.19	0.03	0.12	0.65	0.08

Sources: Central Statistics Office

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