THE CURRENT STATE AND FUTURE OF CARIBBEAN AGRICULTURE

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INTRODUCTION

Production in the regional economy is in a state of crisis with the gradual diminution of preferences for major export commodities (sugar, rice, bananas) and their eventual elimination in the not too distant future. Together with additional efforts towards trade liberalisation arising from other quarters such as the World Trade Organisation and the imminent establishment of the Free Trade Association of the Americas and that of the Caribbean Single Market and Economy, it is clear that regional economies have a very narrow window of opportunity to respond to these challenges. The contribution to real income growth of agriculture, still an important sector for a large segment of Caribbean economies, has been declining in some cases dramatically despite heroic efforts with donor support to stem the decline.

Agriculture output for decades has been geared towards external preferential markets from which the Region has benefitted in terms of real income growth, employment and foreign exchange earnings. However, the existence of preferences also shielded the Region's export agriculture from international competition, leaving it unprepared for the new international trading regime based on international competitiveness. In a number of cases, the Region's export agriculture will not be able to survive in a fully liberalised market and hence the need to identify new areas of comparative advantage within and outside of the agriculture sector. Furthermore, the events of September 11 and the ongoing war against terrorism has raised new concerns about regional food dependence and security. Also, incidence of bovine spongiform encephalopathy (BSE) and the growing controversy over genetically modified foods are all forcing the Region to rethink its agriculture strategy and particularly its substantial dependence on food imports while it simultaneously struggles to maintain and expand markets in an increasingly uncertain environment.

The paper reviews the performance of the agriculture sector over the period 1970 to 1999 with specific focus on export agriculture, food imports, food dependence and security. The data was obtained from the FAO online database. The study covers CDB's Borrowing Member Countries (BMCs) excluding the dependent territories, but also includes Suriname and Haiti which are prospective CDB members.[1] The first section of the paper reviews the performance of export agriculture while the second explores the issue of food dependence and security. The third section of the paper explores the policy options available, given the experience of the last three decades while the fourth compares the proposed with previous strategies.

A. Evaluation of performance of export strategy

As regards the performance of export agriculture, it is clear by use of any indicator that export agriculture, even with preferential market access, has been at best a sputtering engine of economic growth.

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[1] The study includes Antigua, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago.

Its contribution to GDP in most Caribbean economies has been declining steadily. For example, in the case of Barbados, the ratio of export agriculture earnings to GDP fell from approximately 60% in 1971 to less than 10% in 1998. In Belize, the ratio fell from approximately 70% of GDP in 1971 to less than 25% in 1999. The comparable figures for Dominica are 85% and less than 20% respectively. In Jamaica, the comparable figures are approximately 32% and 18%. A significant exception to this characterisation with respect to CDB's BMCs has been Guyana where export agriculture after a period of decline during the late seventies and early eighties and the implementation of a structural adjustment programme, was able to return agricultural export earnings to the levels of the early seventies of approximately 50.0% of GDP. Haiti seems to have followed a similar pattern with the ratio of agricultural export earnings returning to 20% of GDP by the end of the nineties after a substantial decline in the mid-seventies to 1991. In the case of Suriname, agricultural export earnings as a percentage of GDP zoomed from less than 10% in 1988 to approximately 40% thereafter (see Appendix 1).

The widespread decline in the role of agricultural exports in the Region is also reflected in the ratio of foreign exchange earnings relative to the export sector as a whole (goods and non-factor services). The ratio generally declined within the Region as shown by the graphs at Appendix 2. In the case of Barbados, revenues from agricultural commodity exports fell from approximately 23% of foreign exchange earnings in 1970 to approximately 6% in 1998. In Dominica, the fall has been from 70% (1976) to approximately 10% (1999). In Jamaica, the fall has been from approximately 14.5% (1976) to 8.5% in 1999. An exception to the foregoing trend is Belize where after a drop in the late eighties to mid-nineties, the contribution of food exports is on the rise again with shrimps and bananas playing an increasingly important role. However, it should be pointed out that Belize, like Guyana, has stimulated significantly the expansion in agricultural exports. In the case of Guyana which has followed a similar strategy, the outcome has not been as successful with the contribution of export agriculture to foreign exchange earnings falling from approximately 40% in 1970 to about 30% in 1999. In Haiti, there was a dramatic decline despite an increasing direct contribution to GDP. In the case of Suriname, while the late eighties saw a substantial increase in the ratio of agricultural export earnings to GDP, the contribution to foreign exchange earnings was substantially less, reaching 12% in 1995 and declining thereafter (see Appendix 2).

The foregoing indicators point to the conclusion that export agriculture even with preferences has not been an unqualified success and certainly has not been a consistent engine of growth whatever the contributions might have been in terms of real income, foreign exchange earnings and employment. On a more optimistic note, the data point to the conclusion that non-agriculture exports have turned in an increasingly better performance and have become the mainstay of most economies of the Region. Hence, an important transformation of the export sector has taken place over the three decades.

However, analysis of export agriculture performance should not end with just the foregoing conclusion. It would be instructive from a policy perspective to determine whether continued pursuit of an agricultural export strategy is worthwhile. As indicated earlier, many countries are attempting to increase their competitiveness in traditional agricultural exports via various productivity enhancing measures. However, while this strategy is being pursued, it is useful to have some perspective on the long-term trend in the terms of trade of these commodities so as to determine the likelihood of increased productivity changes redounding to economic expansion in the exporters rather than merely to the benefit of importers. Using the Laspeyres index and 1970 as the base year, estimates of the terms of trade of the Region's agricultural exports vis-a-vis food imports for the period 1970 to 1999 show that generally there has been an improvement for most countries for the period as a whole. This finding is consistent with access to preferential price. However, in the early nineties as the process of trade liberalisation unfolded, the terms of trade for the Region's agricultural exports declined and as preferences are eliminated, indications are that there will be further deterioration implying reduced impact on real income growth and foreign exchange earnings per unit of exports (see Appendix 3).

Separation of the terms of trade performance into traditional (sugar, bananas) and non-traditional agricultural exports is also informative. The data show that the terms of trade have performed better in the case of non-traditional rather than traditional exports for most countries almost throughout the period (Antigua, Barbados, Belize, Grenada, Haiti, Jamaica, St. Vincent and the Grenadines and Trinidad and Tobago). For the other countries, either the reverse has been true for most of the period (Bahamas, Dominica) or there has been a mixed performance (Guyana, St. Kitts and Nevis). (see Figure 4). Generally, the terms of trade analysis seems to suggest the expansion of non-traditional agricultural exports rather than of traditional agricultural exports.

B. Import Strategy and Food Dependence

While not explicitly stated as part of the Region's agriculture strategy, it is clear that if large segments of the Region's agricultural resources are used to generate exports, food import dependence is a logical corollary. Hence the alarm at the level of food imports and the automatic calls for import replacement are surprising.[2/] However, before reaching the latter policy conclusion, it is important to evaluate more thoroughly the level or intensity of the Region's dependence on food imports. While regional commentators often refer to the large import bill in terms of the foreign exchange requirement, it is important to note that such an indicator of food dependence is flawed for several reasons. The first is that there has been no determination in real terms of the growth in food imports over the period. The second is that no attention has been paid to the impact of population growth and of expanded tourism activity which has a high food import content. Also, no attention has been paid to the impact of the increase in real income on food imports. The latter three variables are all pushing upwards the demand for food imports.

Another indicator of food dependence that is commonly used is net food exports, that is the difference in nominal value terms between food exports and imports which generally has been declining, given the performance of export agriculture over the period and the constant growth in food imports. The picture does not change radically when net food exports are taken as a percentage of GDP. With the exception of Guyana, Trinidad, Jamaica and Belize, net food exports have been declining, indicating

[2] Smith (1991), p.111 and RFNS (1980), Vol.1, p.57.

increased dependence on food imports. However, it needs to be emphasised that a major contributor to this trend has been the performance of agricultural exports which as a percentage of GDP have declined much more rapidly than imports (see Appendix 1). Hence one can justifiably argue that the increasing dependence at least as measured by the net imports criterion is the result more of the crisis in export agriculture than import demand pressures. A problem with net exports as an indicator of food dependence, however, is that it completely ignores the contribution to consumption of domestically produced food. Ideally, any indicator of food dependence should include both domestically produced food and imports since these are the two sources of domestic consumption.

An attempt has been made through the use of two alternatives to address the deficiencies in the foregoing indicators. The first indicator used is the ratio of the value of food imports to GDP at market prices without any reference to export performance. This indicator captures the effects of the population growth rate, the growth in real income, including to some extent the impact of tourism growth. As indicated by the graphs in Appendix 1, while in nominal terms the value of food imports has increased steadily over the period for all countries, as a percentage of GDP, food import values have generally stabilised (Guyana, Jamaica) or declined (Antigua, Bahamas, Barbados, Belize, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, St. Vincent, Trinidad and Tobago). The exceptions have been Suriname and Haiti where the ratios have risen.

Use of the weighted import dependency ratio or WIDR, which is the ratio of imports to consumption in volume terms, addresses the weakness in the net exports criterion and the ratio of food imports to GDP stemming from exclusion of the consumption of domestically produced goods. The use of the WIDR criterion modifies the conclusions drawn using the earlier criteria, and gives new insights into the issue of food dependence in the Region. Arguably, the WIDR shows more realistically the varying levels of food dependence in the Region. Using this ratio, countries in the Region can be classified into three groups. In the first group are those which have had a relatively stable WIDR over the period. In this category are Antigua, Dominica and Jamaica. However, it should be pointed out that the WIDR is significantly lower in Dominica and Jamaica than in Antigua. Hence, food dependence is substantially less for the former two countries.

Belize and Suriname can be classified as countries in which the WIDR has fallen for a significant portion of the period. This is more pronounced in the case of Suriname than Belize. In the case of Belize, the WIDR reached below 10% in 1999, making Belize one of the most self-sufficient countries in the Region. The remaining countries are those which have witnessed a rise in the WIDR during the period. These include the Bahamas, Barbados, Grenada, Guyana, Haiti, St. Kitts and Nevis, St. Lucia and St. Vincent. In the case of some of these countries the level of import dependence is remarkably high (Bahamas, Barbados, St. Vincent, St. Kitts and Nevis, Trinidad and Tobago) reaching close to or surpassing 80% by the end of the period. The importance of the WIDR is that it depicts a situation that is somewhat more complex and varied than other simpler indicators such as the nominal value of food imports or the net export value criterion, and allows the formulation of a regional policy on a more informed basis.

The foregoing analysis indicates that the agriculture sector in the Region is in crisis with the sector contributing less as export performance wanes in the face of increasing international competition. Unfortunately, the demise of the sector is leading to increasing impoverishment of rural communities, a situation that is likely to worsen with the elimination of preferences for major commodities. The implications for social and political stability in some countries in the Region can be quite severe. At the same time, there are increasing concerns about food dependence and security. Additionally a new consciousness in the Region and elsewhere is arising about the issue of food quality and environmental sustainability of food production and consumption systems. Hovering above all this is the international paradigm shift that has placed substantial emphasis on open markets and international competitiveness. It is within this new context that the Region must fashion a new agricultural policy. However, the foregoing analysis suggests that there is considerable difference among countries and hence a need for different approaches to agricultural development. The following section details the strategies available to member countries.

C. Policy Options

(i) Expansion of Non-agricultural Exports

For some countries in the Region, focus on agriculture development may not be a desirable option, given their resource endowment and their new demonstrated areas of competitive advantage in non-agricultural exports. Among these are Barbados, Bahamas, Trinidad and Tobago (with St. Kitts and Nevis, Grenada, Antigua and St. Vincent tending in this direction). For these countries, the import dependence as measured by the WIDR is already very high. However, these are countries with strong export sectors outside of agriculture. In the case of both Barbados and the Bahamas, agriculture activity has to a large extent given way to export services (tourism, offshore finance). In Trinidad, the oil sector dominates. St. Kitts is currently winding down its operations in sugar and is expanding substantially tourist sector activity. St. Vincent in recent years has achieved a rapid expansion in service exports, particularly tourism, while agricultural exports, mainly bananas, struggled in the face of international competition. In all of these countries, the decision implicitly or explicitly is to de-emphasise agriculture production and exports and to reorient resources towards export services.

The logical consequence of this strategy is a rise in food imports. Increasing food dependence implies increased vulnerability to external food supply shocks. However, the food security strategy in the case of these countries may lie in the maintenance of appropriate levels of foreign reserves and development of food reserves rather than on the development of agriculture per se. Both foreign exchange and food reserves can be established on a national, subregional (involving basically those countries that have chosen this type of development strategy) or regional basis. Of course, the issue of efficient management of both sets of reserves then arises so as to minimise foreign exchange, administrative and other costs. The very important conclusion that is being made here, however, is that the issue of food dependence and vulnerability cannot be taken in isolation from overall macroeconomic strategy. In this wider context, it is then seen not necessarily as a cause for alarm, but rather as an accepted risk attendant upon the pursuit of a superior economic strategy. Hence, the question then arises as to the best and most efficient way to

mitigate that risk rather than pursuing a strategy of import replacement which may have substantial opportunity costs in terms of growth, employment and foreign exchange earnings foregone.

Such a strategy also has implications for those caught in a declining agricultural sector. It implies either the development of alternative non-agricultural activity in rural communities and/or programs for the acceleration of rural/urban drift as new income earning opportunities are developed elsewhere. For most of the Region's economies because of their resource endowments, the new economic activities will most likely be in the services sector rather than in manufacturing as was the case of the now developed countries. The identification of the targeted service industries and the provision of the appropriate training opportunities would be the relevant course of action under this strategy as opposed to the development of skills in the agricultural sector.

(ii) Export Diversification

For the remaining group of countries of the sample, given their resource endowments, stimulation of agriculture exports and competitive import replacement seem viable strategies for the foreseeable future.[3] Among these would be Guyana (WIDR around or below 30% for most of the period), Belize (WIDR declined from under 30% in 1970 to less than 10% in 1999) and Jamaica (WIDR less than 45% for most of the period), the three largest countries in CARICOM. Also included would be Dominica where the WIDR has remained at approximately 20% for most of the period and Suriname where the WIDR has been less than 50% since 1980 and declining. However, given the performance of agriculture exports so far and current prospects for those commodities receiving preferential treatment, a change in agricultural strategy is urgently required. The first requires rationalisation of traditional agricultural exports. This will require the closing down of some industries or of firms in certain industries as is the case with sugar in Jamaica or bananas in the Windwards. Substantial resources will also have to be used to enhance productivity in these traditional sectors. These efforts are already ongoing in some countries with donor support. The consensus is that these countries will likely witness more efficient though possibly reduced exports in these sectors.

It needs to be reiterated, however, that the recent terms of trade performance of these traditional industries have been declining as a result of diminishing prices. It is highly likely that prices and the terms of trade for these commodities will deteriorate further, impacting negatively on real income growth.[4] Hence, the opportunity should be taken to explore other export commodities which are not only competitive since they are exported outside of any preferential arrangement, but also as indicated earlier, enjoy better terms of trade than the traditional agricultural exports. Agro-processing based on raw material production in the traditional export sector may also be an option. Superior terms of trade for non-traditional agricultural exports are certainly an argument for export diversification in the agriculture sector. However, given the new competitive international trading regime, it is highly unlikely that agricultural exports will be very concentrated. It is likely that in the long run those countries in the Caribbean that so choose will be having a relatively more diversified agricultural sector based on a variety of fruits and vegetables targeted at various regional and extra-regional markets. Arguably, this strategy can lead to more stable and sustainable growth in agricultural exports through the diversification of risks across a wider range of commodities and markets. It should also be emphasised that the recent experience and difficulties within export markets should not blind the Region to the potential of export agriculture as an engine of growth in the case of countries that have the appropriate resource endowment and can attain the required levels of efficiency.

Caribbean economies already produce and export generally outside of preferential arrangements various non-traditional commodity exports (fruits, vegetables, ground provisions) to regional and extra-regional markets. However, for various reasons (lack of extension services, training, effective marketing, transportation difficulties, skewed distribution of land resources, trade barriers etc.) these exports generally are only a small portion of the Region's agricultural exports. The challenge is to address the barriers to growth so that these non-traditional exports which have already demonstrated their competitiveness, and therefore have a relatively good chance of sustained expansion, can be allowed to do so. The success of this approach may, however, require cooperation at the regional level in order to reap the benefits of scale economies. An important additional consideration will be the need to look at the changing market tastes in extra-regional markets which is now emphasising organic products, a niche market that is showing considerable dynamism and by all accounts is set to do so for the foreseeable future.[5]

(iii) Competitive Import Replacement

[3] However, this does not preclude the development of competence in service exports as in the case of Guyana or of a mixed export sector that includes substantial development of services as in the case of Belize and Jamaica.

[4] For a discussion of the impact of terms of trade on real income growth, see Sachs and Larrain (1993), p. 167.

[5] Organic products can be defined simply as those commodities produced without the use of synthetic-based agrochemicals (pesticides, herbicides, fertilisers, fungicides, veterinary drugs etc.) [See INIBAP (1999), p.84.] However, more rigourous definitions include not only the absence of such inputs or limits on their use, but also precautionary measures as specified by a certification system. [See de Haen (1999), p.4.] . In fact, in the market place, it is the certification system that ultimately decides which products are "organic". For a very comprehensive discussion of organic agriculture, its contribution to sustainable production, enhanced productivity, increased rural incomes and hence increased food security, and its substantial development worldwide, see Scialabba (2000). For a comprehensive and very useful discussion on the contribution of organic products to food safety and quality, see the Twenty-Second FAO Regional Conference (2000).

The other component of an agricultural strategy for the Region must, in a way differ from those countries that have decided to focus on non-agricultural activity, address the issues of food dependence and security. Given current resource endowments, population size and growth, existing bottlenecks already in the agriculture sector, tastes that have been cultivated over centuries and competition for resources from other sectors, there are clearly limits to food independence particularly in the short run. Those countries therefore which want to pursue some measure of food independence must do so within the context of these constraints. Ideally, this strategy should contain two fundamental elements: (i) a strategy for constraining growth in import demand and; (ii) a strategy for expanding production for the domestic market.

In recent years, there has been much focus on the level of food imports into the Region with the automatic conclusion that the Region must consume more of what it produces or vice versa (RFNS (1980); Smith (1991)). However, the issue is much more complex than that and should be approached as such. First of all, while the Region's focus in this era of trade liberalisation has been on maximising productivity and efficiency in production, little attention has been paid to the issue of consumption efficiency in the debate over food imports. Using the neoclassical model, consumers determine their basket of goods on the basis of price and marginal utility and spend in such a way that the marginal utility of a dollar spent is equalised across a basket of goods. The price used, however, assumes that there are no positive or negative externalities. If the latter do in fact exist, then there are social inefficiencies in consumption. The challenge therefore is to move the consumer to the point where marginal utility is equated with marginal social cost and benefit so that consumption can be socially efficient.

The question, of course, that logically arises are what are these externalities and how can they be addressed. Negative externalities include, for example, the environmental impact of the food industry which ranges from production to those related to marketing and consumption. Common externalities mentioned are the excessive use of herbicides, pesticides and fertilisers (agrochemicals) which impact on the environment, on food safety and quality and hence on the public health. [6]Hence the rising chorus of calls for organically produced foods. In addition to concerns about food quality arising from the production process, the garbage related to the packaging, transport and marketing process has increasingly become a matter of concern in regional economies where locations for the construction of landfills are at a premium, and there is increasing opposition to the location of such sites within or near to neighbourhoods.[7]

Under the circumstances, the Caribbean has an opportunity to reformulate agricultural policy in a way that takes into consideration these broader concerns and moves food production and consumption towards a point of social efficiency, that is, where marginal private benefit equals price equals marginal social cost equals marginal social benefit/utility. To achieve this on the demand side, Governments can impose an environmental levy on food imports as has been done, for example, by Belize and which has, in fact been proposed by BVI also. This can be a flat tax on food imports or one that differentiates between the types of food packaging used, reflecting the cost of garbage disposal. Such policy is allowed under current WTO rules. The levy should move consumers somewhat away from imported foods towards local substitutes which, hopefully, will be packaged in a way that is more environmentally sensitive or not packaged at all, given the possibly increased use of fresh rather than semi-processed or processed food likely to emerge particularly as a result of a sustained programme of education. Where locally produced foods are superior in terms of safety/quality and environmental impact, all efforts should be made to make the public aware of this and in the long run shift consumer preferences in this direction.

Perhaps, the most important conclusion of all of the foregoing is the fact that the Region needs to view international competitiveness in the agricultural sector in a new light, using the social rather than the private cost criterion. While it is true that in many cases regional economies because of diseconomies of scale will not be as cost competitive as foreign exporters, the Region's competitiveness may very well change when various externalities are taken into account. Hence, it behoves regional governments to try through various policies to address those externalities in a way that leads to internalisation of the social costs of those externalities, thus making domestic production relatively more competitive and permitting the expansion of **competitive import replacement** in the sector. It is important to emphasise the difference between what is being advocated here and traditional import substitution which was the earlier response and one which took place behind various types of trade barriers. In the new trade regime, import replacements must now be competitive but not solely on the basis of price but also other features such as environmental sustainability, taste, freshness, food quality/safety. When the debate about competitiveness in the agricultural sector includes these other considerations, Caribbean agriculture may yet be competitive and provide the basis for some return to increased self reliance.

The foregoing, however, implies a completely new approach to production and marketing in the Region. Current modes will have to be revised and significant retraining undertaken in order to ensure that production takes place with the objective of ensuring **a healthy, environmentally friendly and sustainable food supply at the cheapest possible social cost.** This may very well imply moving agriculture production towards a more organic approach. An important additional advantage of this approach is that world markets in various commodities, including a wide range of fruits and vegetables, are already moving in this direction and hence unless the Caribbean adapts, it will not be able to participate in those markets. Also, there is the advantage of price premia in these markets from which the region can benefit. Many less developed and also developed countries have already begun moving the agriculture sector in this direction. The Caribbean can be said to be lagging substantially behind in this regard. While there is some skepticism in the Region with respect to the pursuit of such a strategy because of various constraints (advanced age of farming population, in the case of the Windwards sloping terrain, inadequate knowledge of production methods etc), it is estimated that currently more than one hundred countries are engaged in the production and export of a wide range of organic food exports most often in small farming

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[6]For an interesting discussion of the negative externalities related to the pursuit of modern agriculture in the region with its substantial use of synthetic based agrochemicals, see Smith (1991).

[7] Water and earth Science Associates Ltd., Solid Waste Management Study for British Virgin Islands, October, 2001; Stanley Associates Engineering Ltd., Integrated Solid Waste Management Programme, Barbados, 1992.

communities that are quite prevalent in the Caribbean. Also, the FAO, the World Bank and the IDB have through various projects given support to this rapidly expanding initiative.

The two period model in Figure 1 details the approach suggested and the likely outcomes if the intended policies discussed above are successful. D_1 represents the initial demand in period 1 while S^d_1 represents the domestically produced component of domestic food consumption and S^{tot}_1 the total supply of food which is the sum of domestic production and imports. The level of imports in period 1 is the difference between S_1 and C_1 with the latter representing the equilibrium level of consumption and P_1^e the equilibrium price level. D_2 is the demand curve in period 2 after the successful implementation of various policies (education, advertisement, environment levy etc.) that will impact on food imports. At the same time, new policies (new technologies for the development of organic agriculture, environmentally friendly production and marketing processes, productivity enhancement policies through training etc.) would have been implemented to increase the proportion of domestically produced foods in local consumption. As can be seen, in the new equilibrium position, more food is produced and consumed with, however, a lower share of domestic consumption being imported. Imports have shrunk to the difference between S_2 and C_2 . The expectation is that the level of food consumption will increase because of population and real income growth but that food dependence as defined by the WIDR criterion would have decreased . Note also that P_2^e is lower than P_1^e .

D. Comparison with Previous Agricultural Strategies

The proposed strategies while similar in some ways with previous regional strategies, makes some important departures reflective of the evolution of regional economies themselves and of the changing international economic environment. While previous strategies such as Brewster and Thomas (1967) and more recently, the Regional Food and Nutrition Plan (1982) (RFNS) and Axline (1986) saw agriculture as continuing to play a significant if not dominant role in regional economies, the current study concedes that the role of agriculture, for the foreseeable future, in some economies will likely be miniaturised. Secondly, the substantial emphasis placed on import substitution both as an economic strategy and as a strategy towards the maximisation of self sufficiency in food, has been significantly diluted. For example, the RFNS saw as one of its major objectives " the greatest possible measure of food self-sufficiency in the region."[8] Thirdly, the emphasis initially placed on regional import substitution has given way to more nationally tailored strategies in recognition of the substantial differences in the agriculture sector and also in the availability of other developmental strategies. This more country-based approach does not reject completely regional collaboration but rather relegates it to a secondary position to areas such as collaboration in the development of strategic food reserves and the development of common infrastructure such as transportation and marketing of agricultural exports, minimising the contentiousness over the distribution of benefits that plagued past regional collaboration efforts in agriculture.[9] The increased emphasis on competitiveness is also an important departure from past strategies, reflective of a changed international economic environment. Competitiveness, very importantly, has also been more broadly defined, offering a somewhat more complicated but also more relevant paradigm for the Region within the context of trade liberalisation and evolving views internationally about the food industry as consumer education improves and consumer tastes change. The new strategy also inverts the approach of earlier strategies in that the competitive import replacement strategy ideally can be the basis for the regeneration of the agriculture sector in those regional economies that so choose. A substantial and growing domestic demand can be used as a launch pad into a dynamic niche of the international market rather than a purely defensive economic strategy. Also, a substantial and relatively dynamic domestic market provides a safeguard against the vagaries of the international market while also increasing food security, quality and environmental sustainability, making at the same time important contributions to political and social stability in rural communities currently trapped in poverty because of a declining agriculture sector.

E. Conclusion

A logical and important conclusion is that the pursuit of a regional agricultural strategy as advocated, for example, by the regional food plan is not as practical nor as easy as it may seem. Secondly, the issue of food dependence and vulnerability is not as worrisome as may at first seem and import replacement may not be the best solution nor the only solution in some cases. A third and important conclusion, and one unfortunately that has not been investigated by regional analysts, is that further growth and development of the Caribbean region may require a gradual movement of resources out of the agriculture sector with all of the differing implications for agriculture policy.

[8] Regional Food and Nutrition Strategy (1982), Vol. 1, p.3

[9] For a good historical review of efforts at regional cooperation in agriculture, the challenges and the politics that underlay and frustrated several important initiatives such as the Agriculture Marketing Protocol and the Generalised Market Scheme, see Axline (1986), Chapter 5, p.71-98.

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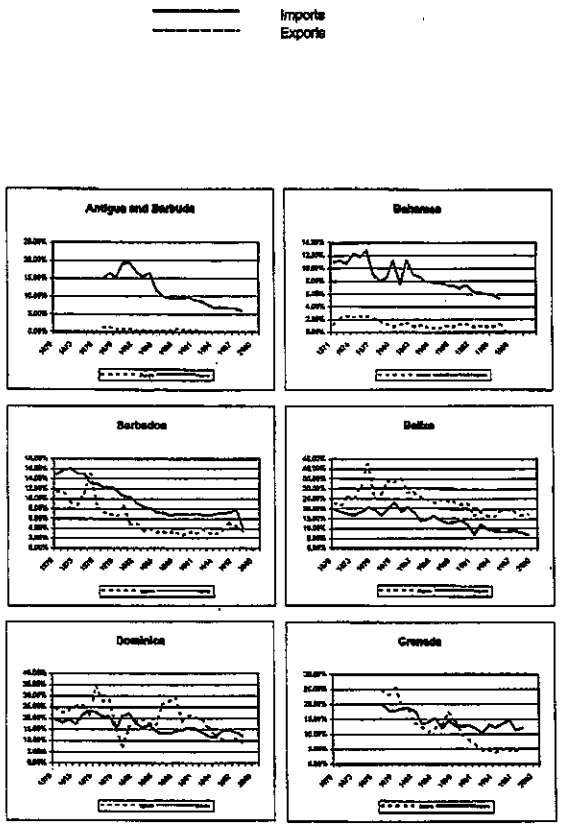
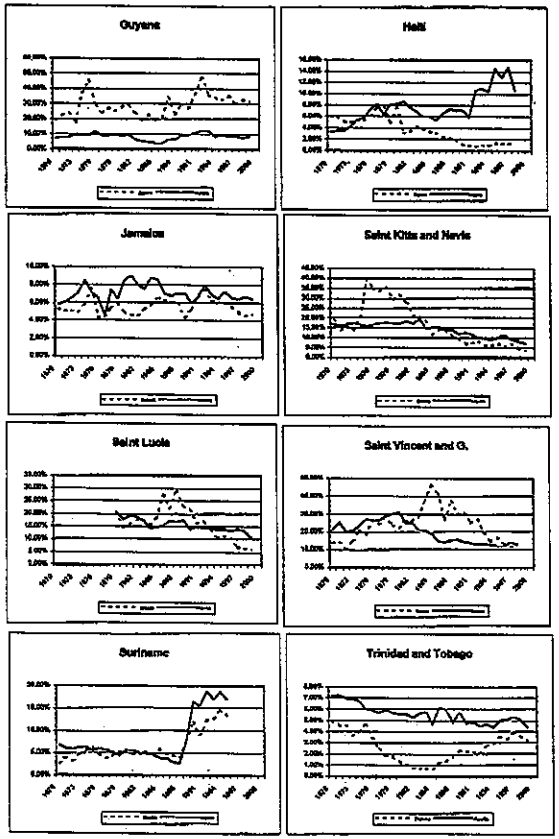
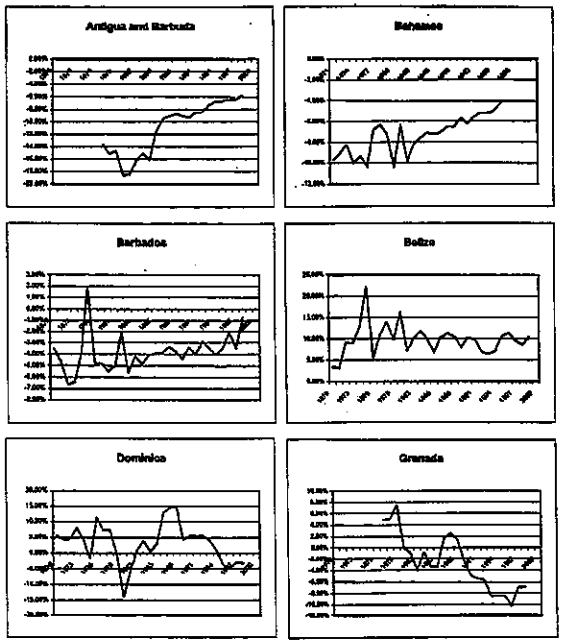
Appendix 1a: Imports and Exports of Agricultural and Food Goods as a % of GDP



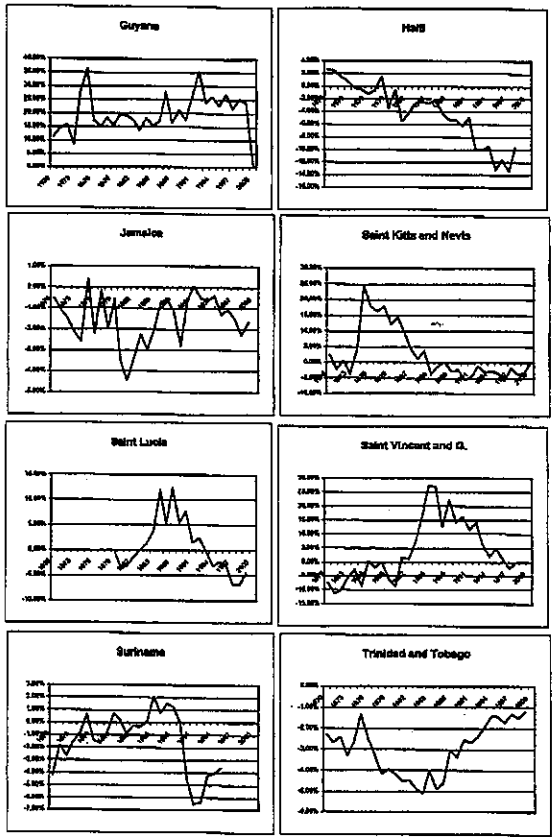
Appendix 1a: Imports and Exports of Agricultural and Food Goods as a % of GDP



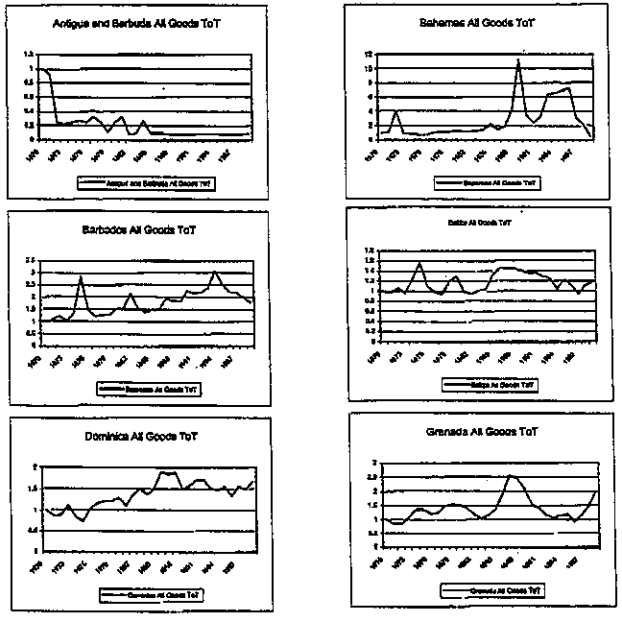
Appendix 1b: Net Exports of Agricultural and Food Goods as a % of GDP



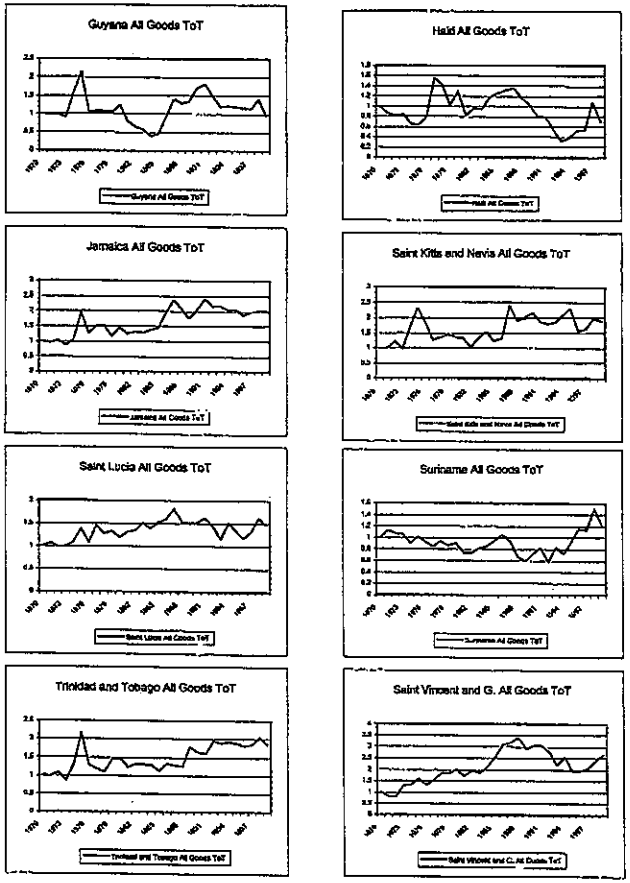
Appendix 1b: Net Exports of Agricultural and Food Goods as a % of GDP



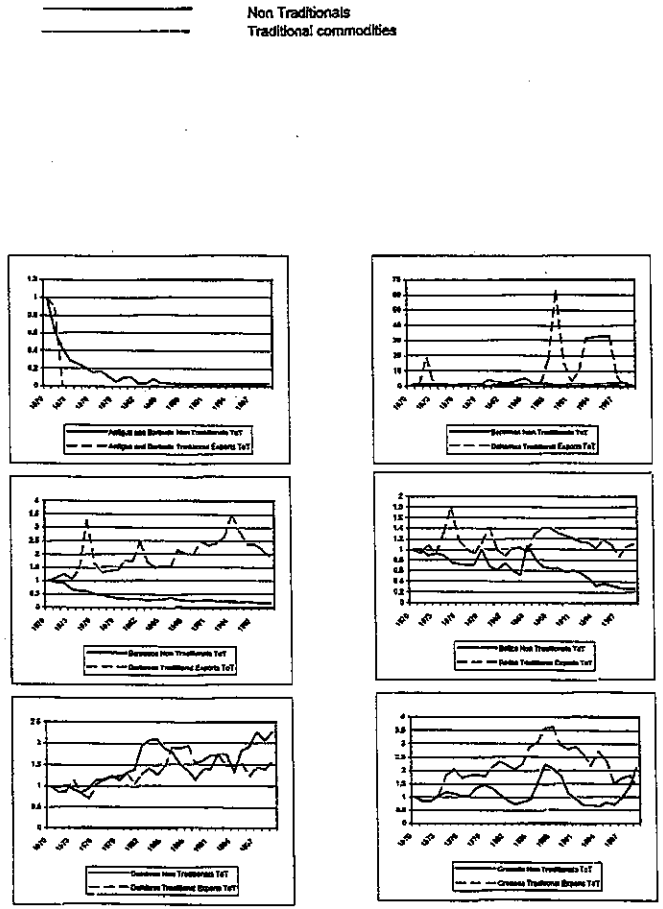
Appendix 3: Terms of Trade of Exports of All Agricultural and Food Goods against Imports of All Agricultural and Food Goods, Fixed 1970 base Laspeyres Price Index



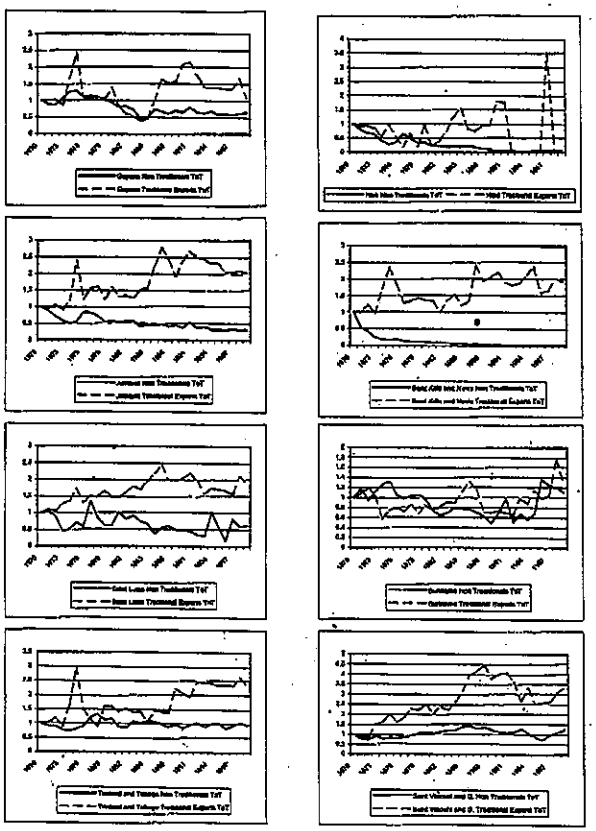
Appendix 3: Terms of Trade of Exports of All Agricultural and Food Goods against Imports of All Agricultural and Food Goods. Fixed 1970 base Laspeyres Price Index



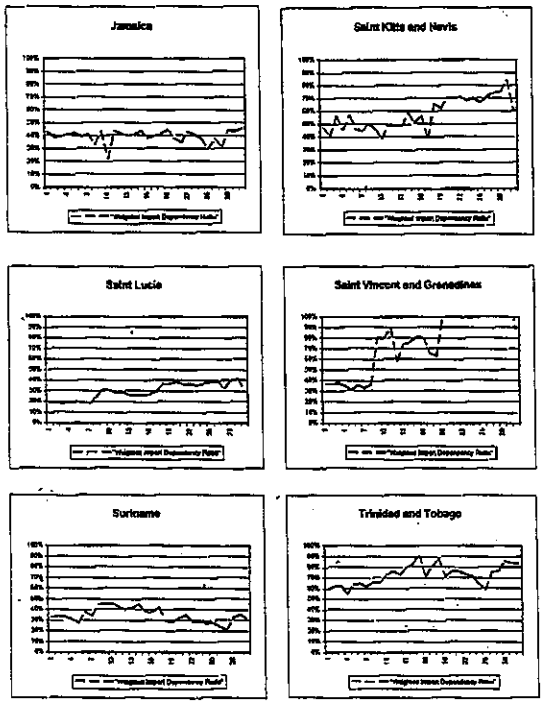
Appendix 4: Terms of Trade of Exports of Traditional Commodities and Non-traditionals against Imports of All Agricultural and Food Goods



Appendix 4: Terms of Trade of Exports of Traditional Commodities and Non-traditionals against Imports of All Agricultural and Food Goods



Appendix 5: Import Dependency Ratio - Weighted Average over all agricultural products by importance in Domestic Use



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