THE STRUCTURAL ADJUSTMENT PROCESS
ON JAMAICA'S AGRICULTURAL SECTOR

INTER AMERICAN INSTITUTE FOR COOPERATION ON AGRICULTURE

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March, 1993

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PREFACE

The economies in today's world are acknowledged as an engagement towards free market ideas, privatization, contraction of the state, disciplined fiscal and monetary policies, and free movement of capital. Preceding strategies of economic development regarded as "Protectionism and Import Substitution" are being dismantled. On the contrary today's strategy of economic growth is foreseen to the "Outside World". Indeed, the abatement of import tariffs encourages exports, welcomes foreign investment, incites free trade agreements, and fosters market forces to determine resource allocation.

Notwithstanding, economic openness is not a modest scheme to reduce tariffs and quotas. It incorporates manifold actions, for countries to compete efficiently; at the domestic and international market, as well as to strengthen their competitive edge.

> ... Today's economic world could be acknowledged as an engagement towards free market ideas ... This strategy of economic growth is foreseen to the "Outside World" ... Economic openness is not a simple scheme of reducing tariffs and quotas. It incorporates manifold actions ... This strategy has implications for the equilibrium of national economic and social structures ... The economic opening of Latin America and the Caribbean ... implies that stabilization policies and structural adjustment programmes incorporate social cost in terms of equity. Likewise these processes of economic openness and free market oriented principles are simultaneously occurring within profound economic and political **changes** ...

The implementation of this strategy influences the national economic and social structures. It implies an intricate process towards new balances; at the commercial and financial interchanges, rearrangement of production factors, and overall economic performance. Needless to mentioned the social costs derived from economic structural adjustment processes.

The economic opening of Latin America and the Caribbean -LAC-; encompassed with high external debt, inability to access new financial resources, and after the last decade portrayed for its recurrent economic crisis, implies that stabilization policies and structural adjustment programmes incorporate social cost in terms of equity.

Simultaneously to these processes of free market oriented principles. There are the profound economic and political changes i.e. the globalization of the economies; the democratization and economic changes in Eastern Europe; the configuration of large, economic blocks; i.e., the European Economic Community - EEC- in

1992, and the North American Free Trade Agreement among Canada, the United States and Mexico - NAFTA-; the end of the cold war; the democratic rehabilitation through LAC, and greater liberalization of markets within the multilateral negotiations of GATT.

For LAC countries opening their economies towards a better insertion in the international markets, it implies greater options and possibilities, but also challenges. For instance, it requires strategic investments; to reconvert the industrial apparatus, and improve the communication and transportation infrastructure. Also, additional efforts needed in science, technology and human resource development to seize entrepreneurship, productivity, and competitive challenges.

Needless to cite the exigency for central governments to balance their budgets, restrain monetary growth, maintain realistic exchange rates, restructure the foreign debt and tighten fiscal policies. All geared to improve and gain competitive advantages to capitalize on wider and freer markets.

For LAC countries which are opening their economies; towards a better insertion in the international markets, it implies greater options and possibilities, but also challenges. ... Given the importance of Agriculture to the economies of LAC, it is important to determine and understand the implications of this process vis-a-vis the sector. ... The policies of economic stabilization, structural adjustment, and liberalization; ... are gradually modifying agriculture and the rural sector.

Bestowed the importance of agriculture to the LAC economies, it is important to determine and understand this process implications vis-a-vis the sector, considering agriculture as an expanded sector. Indeed, forward and backward linkages to the primary sector are to be established; with high level of transformation and value added. This indicates how this development strategy to the "Outside" markets it affects the entire agro-food system in LAC.

IICA through Program I, has elaborated a first approximation for the analysis of this process within a regional perspective. Now it is to focus at the national level by specific analytical studies to identify the economic-political path and/or strategies followed, and the consequences on the agro-food sector. Jamaica is one case study in this effort.

The policies of economic stabilization, structural adjustment, and liberalization; that an increasing number of countries are adopting since the past decade, and Jamaica is not an exception, are gradually modifying agriculture and the rural sector. To analyze their impact upon growth rates, markets, credit, land use, competitiveness and natural resources utilization among other indicators, merits beforehand to overview and delineate said

process ex-ante indepth analysis.

This document is an incipient contribution to highlight Jamaica's apparent changes due to the structural adjustment process, and its inter-relationship with the agricultural sector. It is an informative document. It might be basal for understanding the complex issues, for conceptualizing a policy agenda for the agricultural sector vis-a-vis the economic changes and structural process being undertaken.

> **The present document ... highlight Jamaica's evident substantive changes under the structural adjustment process, and their inter-relationship with the agricultural sector ... attempts to determine the effects and possible implications upon the agro-food sector ... by the process of liberalizing and opening its economy through its structural adjustment process.**

The document attempts to determine the effects and possible implications upon the agro-food sector of Jamaica by the process of liberalizing and opening its economy through its structural adjustment process. The evidence presented is subject to scrutiny. Further enhanced analysis would lead to a more conclusive assessment of this process and its impact on Jamaica's agricultural sector.

THEORETICAL FRAMEWORK OF THE STUDY

The research scope of this study is first to delineate the socio-economic scenario and/or a number of indicators that had impelled the country to affirm an economic liberalization process. Second, to ascertain the prevailing attributes of the overall Jamaican economy and the agro-food sector in particular, prior to the structural and economic liberalization process. And third, it intends to characterize said process.

The objective is to propose a referential framework concerning the socio-economic ambiance that preceded and justified the changes in the economic and political environment. This could derive in delineating a baseline to demarcate policies and objectives pursued, strategies, implementation time frames, principal components, instruments, velocity of the process itself, targets and coverage, and new roles assigned to the public sector; and to evaluate results of new policies.

This study is ... to delineate the socio-economic scenario ... that impelled the country to affirm an economic liberalization process. ... to ascertain ... the overall Jamaican economy and agro-food sector ... to characterize said process

Specific reference is sought to detect the effects of the structural adjustment process and the impact of liberalization policies upon economic performance, attested by macro economic variables and the agricultural sector, in particular.

The performance pertaining to general economic activity: productive sectors, price level and salaries, employment, public finances, exchange rates, balance of payments, interest rates, credit, trade balances, would be examined. Inferences regarding production, consumption and commerce indicators are pursued; as well as their inter-relationship with the productive structures and land tenure systems.

From the diagnosis of the last decade -the 80's- and the adjustment process that has been more emphatically pursued in the 1990's, is observable that the public sector has been debilitated. This would redefine the public sector's institutional role in the economy and social services. Granted, an open economy demands a public institutional framework strengthened and more efficient; maybe with new roles and functions likely different than before and perhaps with a smaller institutional apparatus, but in any case it would need to be strengthened. Thus, there are institutional implications on the agricultural sector, and its human resource development in light of liberalization.

From the diagnosis ... an institutional public sector has been debilitated. ... an open economy demands a public institutional framework strengthened ... maybe ... a smaller institutional apparatus, but in any case, it would need to be strengthened. ... It is expected this ... initial sketch would enhance the understanding of the **structural adjustment process ... and impact on the agricultural sector.**

It is expected that this document's initial sketch would enhanced the understanding of the structural adjustment process and its consequences and impact on the agricultural sector in Jamaica.

EXECUTIVE SUMMARY

1. Until recently, agricultural activity, and in particular, the export of sugar and bananas was the mainstay of the Jamaican economy. The economic diversification which has resulted in mineral exports and tourism as the major export earners, began in the 1950s. Manufactures were developed alongside these activities but had predominantly emphasized on supplying the domestic market.

2. The traditional bi-modal pattern of agriculture was characterized by a relatively small number of estates with large tracts of lands on the plains, generally devoted to the production of one export crop. On the other hand, over 80% of farm units were small (of five acres or less), occupied about 15% of the agricultural land and cultivated mostly domestic crops. Patterns of income distribution, population and culture developed along these lines. The agricultural sector, therefore, became an important measure for the effectiveness of the social and economic reforms attempted in the 1970s and 1980s.

3. The 1970s reforms led and supported by public sector intervention encompassed a political philosophy which emphasized equity, self reliance and community development. In agriculture, these themes denoted a land redistribution programme (Project Land Lease); support programmes for small farmers through subsidized inputs and wholesale purchasing; protection from competing imports; and, control earnings of major export crops through state marketing organizations. The maintenance of an overvalued exchange rate also meant a policy of import substitution across all sectors. Consequently, by 1980 acreage devoted to export crops declined by 27%, while land employed in domestic crop production increased by 54%. Thus, supply of local produced food and livestock increased significantly. The historical pattern of farm sizes and land ownership, though, had hardly changed, and total acreage under cultivation in 1978 was 10.9% below 1968 as reported in the agricultural census.

4. By the end of the 1970s, it became evident that the costs pursuing an "inward looking" development strategy were unsustainable. The growing imbalance in external payments led to a request for support from the International Monetary Fund - IMF. This implied a corrective alteration of policy direction. With the additional support from the International Bank for Reconstruction and Development - IBRD, a programme was initiated with the objective to achieve "export-led" growth. The reforms at the macro-economic level, in the trade regime, exchange rate, taxes and financial policies, would set the framework for a more free-market driven economy. Programmes to reform the main productive sectors were drawn and supported by external financing.

5. Under various adjustment programmes the agricultural sector reform measures pursued can be grouped as follows:

(i) Land Use Policy - zoning and privatization of land
(ii) Restructuring of Major Export Crops - modernization of large estates through capitalization and rationalization of acreage.
(iii) Export Marketing Organizations - EMO - introduction of greater transparency and flexibility in pricing and marketing policies of EMOs. Farm-gate prices to exporters would follow thus more closely international price trends.
(iv) Trade Restrictions and Distortions - liberalization of trade, removing biases towards inefficient import substitution, removal of generalized subsidies on imported food to improve competitiveness of the agricultural sector.
(v) Agricultural Credit - Establishment of the Agricultural Credit Bank - ACB - to co-ordinate an expansion of access to credit.
(vi) Institutional Support - Institutional strengthening of Ministry of Agriculture, Agro 21, National Investment Bank of Jamaica, National Irrigation Commission, Jamaica Promotions Company Limited and National Resource Conservation Authority - NRCA.
(vii) Privatization - Privatization thrust of land and public entities.

6. Broad macro-economic redirection policies accompanied the agricultural sector programme. The exchange rate control system was gradually relaxed until finally lifted in 1991. The import licensing system was dismantled, its quantitative restrictions removed, and the monopoly of imports by the Jamaica Commodity Trading Corporation - JCTC became restricted to those commodities subject to bilateral agreements. The tariff structure reform reduced the level and dispersion rates to CARICOM's Common External Tariff to a 45% maximum.

7. A full tax reform programme was introduced. Properties were revalued and rates revised. The personal income tax threshold was raised, and the progressive structure, as high as 57 1/2%, was replaced by a simple proportional tax of 33 1/3%. Finally, a general consumption tax was introduced in 1991 to replace a variety of indirect taxes. These fiscal reforms also contributed to reduced deficits and a separation of monetary from fiscal policy.

8. The macro-economic response was uneven and inconsistent at best. In 1982/83 the country experienced real growth which was reversed the following year when the bauxite/alumina market softened. Deep adjustment measures were implemented over the 1983-1985 period, resulting in a sharp real depreciation of the Jamaican dollar, a tightening of fiscal policy and higher interest rates.

In 1986, the fall in international oil prices and the rise in alumina prices, allowed a substantial improvement in Jamaica's term of trade. Indeed, pressure on the balance of payments was alleviated, the exchange rate was stabilized, inflation moderated and real growth in output resumed over the 1986-1988 period. In 1988 Hurricane Gilbert interrupted this momentum and although the real sector has recovered, the financial and exchange markets have not been stable.

9. The response of the agricultural sector has been slow but positive. Overall, in 1990 value added in the sector was about 10% above that of early 1980s. The export volume of traditional commodities, which had fallen during the previous decade, remained fairly even during the 1980s. These were always dominated by sugar, under which less acreage was progressively devoted. Earnings, however, increased as the prices for banana and sugar improved. Other traditional crops such as coffee and cocoa also experienced increased earnings as international prices rose. Most of this was reflected in higher farm-gate prices, encouraging expansion.

10. The expected diversification into non-traditional exports was not sustained. The value of non-traditional exports tripled between 1982 and 1987 (US$5.9 to US$18.9 million) and fell subsequently to average US$16.0 million in the following three years. Although the range of exports has widened, the volume and earnings have been up until now, disappointing relative to the financial, physical and human resources invested in non-traditional agriculture.

11. Evaluating the present performance of the agricultural sector vis-a-vis the macro-economic policy environment of the past ten years, it is clear that price and market incentives; derived from real devaluation of the foreign exchange rate, its deregulation and privatization, were sufficient to engender a positive response from traditional exports. Improvement in international prices have also helped. Investment has been well established in areas such as bananas, coffee and citrus where producers have acquired more authority for determining farm-gate prices and marketing.

12. Beyond weather vicissitudes, the non-performance of non-traditional exports with its perceived potential, can be attributed to several causes. Institutional support was inadequate to the extension services, praedial larceny and marketing services. The country's largest single joint venture failure might have deterred other potential investors. Thus, when nominally attractive returns from non-traditional export crops are appraised with uncertainties such as praedial larceny, weather, and low production, and marketing support, the financial returns from other activities, were more attractive to investors.

13. By the end of 1991, the economic incentives derived from the foreign exchange rate has sharpened. Simultaneously, strengthening of the institutional extension support network has been attempted with the formation of RADA.

14. The consolidation of the EEC and the North American Free Trade economic blocs will introduce some new economic challenges. Nonetheless, the essential challenge still resides in Jamaica, and remains that of increasing production and productivity. In short, that of producing sufficient output of consistently acceptable quality for export, efficiently and competitively.

15. Summary recommendations arising from the analysis are as listed below:

(i) Efforts to preserve preferential export market access should be supported by efforts to enhance productive efficiency.

(ii) Privatization should be accelerated but on a more transparent basis.

(iii) The government must still play a substantial role in infrastructural, institutional and policy support.

(iv) Relatively small scale domestic agriculture is in need of special support, for example, through RADA.

(v) More organizational human and financial resources are needed in natural resource conservation and the discouragement of praedial larceny.

(vi) The time frame to remove subsidies and protection especially for small farmers, ought to be re-examined.

(vii) The co-operative and associative productive organizations as a means of allowing small farmers access to economies of scale is to be re-explored.

(viii) The adequacy of crop insurance coverage needs to be re-evaluated.

(ix) Specialized export-market niches for "boutique and/or gourmet" agricultural produce is to be explored.

16. Certainly the reduction of the fiscal deficit forces the redefinition of the government's role and its finances. The agricultural sector specific external financing may possible be derived in preference to balance of payments support. Granted a rationalization of its role, scope and functioning must be emphasized.

BACKGROUND

The Jamaican economy, to the end of the 1940s, was largely dependent on the agricultural sector and agricultural exports. Its resource base, production and exports, were predominated by bananas and sugar. Agricultural production for the domestic market, had always been relegated to relatively small, under-capitalized and technologically backward hillside farming. This relatively inefficient domestic agriculture, induced taste patterns depended on imported food staples (rice, flour and processed meat and fish).

Despite the high proportion of economic resources devoted to agriculture, but geared to export agriculture, most other economic activity revolved around imports, distribution, government and other non-traded services. Historically lead Jamaica, from the early 1950s, encouraged economic diversification due to import shortages during the second World War, and its declining terms of trade for primary exports. One element of this strategy, was to promote import substitution in manufacturing, through fiscal incentives to attract foreign investment.

Economic diversification in the 1950s also benefitted from initial large scale exploitation of Jamaica's bauxite resources, and the associated processing of alumina. During this period the emergence of modern large scale tourism was also significant. Expansion in tourism and especially mining, was dependent on foreign, mostly North American investment.

An Exchange Control Act had existed in Jamaica since the 1940s due to the emergency wartime requirements. Its operation has recently been suspended with a view to its early abolition. The significant flows of foreign investment in the 1950s and 1960s ensured the accumulation of foreign reserves, despite current account deficits. The conservatism of the colonial currency board arrangements in the 1950s, was replicated by the new Central Bank in the 1960s in conservative monetary management. The issue of new money was avoided and thus, fuelling excess demand for foreign exchange. Despite the existence of an Exchange Control Act, therefore, foreign investment inflows and conservative monetary management allowed for relatively free convertibility of the Jamaica pound, at a fixed exchange rate.

The strategy of economic development during the 1950s and 1960s, led the government to assume an increasingly important role in mobilization and allocation of resources. In said period, the strategy was centred on attracting foreign investment in manufacturing, tourism and mining on the basis of liberal fiscal incentives. Investors in manufacturing, in particular, benefitted from income tax exceptions for a specified number of years (tax

holidays), allowance for accelerated depreci-ation and duty free imports of raw materials and machinery. Investors in tourism benefitted from similar fiscal incentives, as did mining companies which paid relatively low flat rate royalties.

From the mid 1960s, however, the emphasis shifted towards the protection of domestic production by trade policies; primarily quantitative restrictions and tariffs. This protectionism to support an "import substitution" strategy was further encouraged by the thrust to the Caribbean regional economic integration (from the 1960s to the 1970s). It was this emphasis; intensified by the foreign exchange crisis of the late 1970s, which justified the mid 1980s development policy.

The Jamaican economy grew on a sustained basis during the 1950s and 1960s due to significant direct investment flows, which lead to diversification and growth of merchandise, and service export earnings. The economic growth rate over the period averaged about 4% and over 5% from 1965 to 1970. In keeping with economic growth and diversification, there was an expansion of employment in tourism, manufacturing and, to a lesser extent, mining.

By late 1960s signs of socio-economic strain had emerged. The emphasis on incentives for sectoral diversification encouraged a more rapid rate of growth in manufacturing and tourism relative to the agricultural sector. The urban employment in manufacturing and tourism stimulated a rural-urban population migration bidding up the wages of agricultural labour. The unemployment increased in the 1960s. Also the unplanned urbanization put pressure on already inadequate urban infrastructure and housing. Simultaneously, the juxtaposition of an increasingly affluent urban upper middle class with urban and rural poverty dramatized the growing inequality of income distribution.

Within a growing social dissatisfaction, a new government was elected in early 1972. Keeping with its perceived mandate, the new government instituted using public finances and institutions as a means to ameliorate socio-economic conditions. These efforts were intensified between 1974 and 1976, after the adoption, by the governing party, of the mantle of "Democratic Socialism".

The government's "mandate" in the 1970s sought to increase employment and real wages, improve income distribution and expand social welfare. These goals were pursued through increased state intervention in economic resource distribution. In pursuit of state to "the commanding heights" of the economy, there was increased public sector ownership of productive enterprises for both domestic and export markets. In the agricultural sector, public sector involvement entailed not only ownership of prime lands but also production units, as well as strengthening the role of quasi-government export marketing organizations.

To facilitate governmental objectives regarding public sector investment and redistribution of income, corporate tax rates were increased, and revenue from the mining sector was multiplied by the imposition of a bauxite production levy in May, 1974. Income taxes were increased and made more progressive including a marginal tax rate of 57.5% on incomes over J$30,000 (US$25.000) by 1977. A variety of consumption taxes (for example, on gasoline, beer, cigarettes) were either introduced or increased.

In reference to the redistribution and welfare objectives, a minimum wage (at about J$20.00 per week) was introduced in late 1970s. At the same time, the Prices Commission was given enhanced powers to fix prices of over one hundred basic commodities (including basic foods) and to monitor wholesale and retail marketing margins.

Until 1977, the issue of foreign exchange rate adjustments was resisted and delayed. Despite the depletion of foreign reserves, there was an economic thinking within the government towards opting for an "alternative path" (to the IMF), with an emergency production plan around a stable foreign exchange rate. Under the option of an IMF Stand-by agreement, a dual exchange rate system was initially instituted. Agriculture was thus "taxed" through keeping the "basic" (non-depreciated) exchange rate for both traditional exports (including sugar and bananas) and staple food imports. The implicit tax on domestic agriculture was, however, to some extent offset by quantitative import restrictions and explicit resource subsidies from public finances.

The dual exchange rate system was operative from 1977-1978. It was followed thereafter by reunification of the rate, unitary devaluation, and crawling peg adjustment on a pre-announced schedule to the middle of 1979. From the end of the crawling peg in May 1979, the "official" exchange rate remained at J$1.78 per US$1.00 till the re-introduction of a unified flexible rate system by late 1983.

Jamaica's foreign reserves were initially threatened by the international oil price shock in late 1973. Despite the bauxite levy imposed in 1974 to counter-balance said shock, Jamaica, given its income redistribution efforts, had exhausted its liquid reserves by the end of 1976. Thus, the government increased foreign borrowing (towards negative net international reserves by the end of 1976) and increasingly used controls to manage its balance of payments. From 1973 onward, all imports were subject to licensing and quotas to monitor their growth rate. In 1976, there was further tightening of import controls, including prohibition of some imports. By the end of the 1970s, even with stabilization agreements with the IMF, the import management and foreign exchange control was done through a Trade Board and a department at the Central Bank; a highly bureaucratic system.

In the 1970s the production policy focus was towards "self-reliance". It implied "inward looking" growth. With policies avoiding exchange rate adjustment (dual exchange rates) and substituting it by outright non-price means to control imports, the incentive structure was biased in favour of non-tradeables, and against production for exports. This "self-reliance" policy was supported by a "land-lease" programme, youth and co-operative farms, subsidized agricultural implements, and free inputs. In addition, democratization of resource ownership and management was also attempted through the formation of sugar co-operatives.

Domestic agriculture as well as export agriculture, manufacturing, and tourism, were also benefitted from subsidized credit channelled through the Jamaica Development Bank. The interest rates being largely managed and non-market set, led that real interest rates were substantially negative; in the context of the late 1970s inflation.

Given the public sector centred approach to economic growth and socio-economic amelioration, government spending increased dramatically in the 1970s. Despite higher rates for corporate and personal income tax and despite the bauxite levy, the overall fiscal deficit had increased from about 5% in 1972 to 26% in 1976. And still in 1980 it was as high as 20%. Public sector investment increased from 2.7% to 4.3% of GDP by 1976, and the rate for the private sector was halved. This contraction in private sector investment was reflected by the Gross Domestic Capital Formation which fell from 25% to 13% from 1973 to 1979.

From the bauxite/alumina investments at the end of the 1960s and the increased taxation, intensified import and foreign exchange controls, and declining real interest rates, net capital inflows declined in the 1970s. Also, the expansionary public sector role to face receding tourism earnings to counteract perceptions of social unrest, led to an external current account deficit. With these current and capital account trends, net foreign reserves declined from a positive US$95.0 million to negative US$460.0 million from 1972 to 1980.

Due to import controls, artificial relative prices (through import licensing) and foreign exchange shortages, an illegal parallel foreign exchange market, smuggling and "informal commercial importing" including basic foods, emerged from the late 1970s. Reflecting decreasing capital inflows and private sector investment, the economy contracted sharply in the 1970s. From 1973 to 1980 there was negative growth in five of the seven years and a cumulative decline in real GDP of 18%. Jointly with the real economic contraction, the rate of unemployment increased from 21% to 28% in the course of the decade.

The decline in real GDP was conditioned by contractions in tourism, manufacturing and export agriculture (while domestic agriculture actually increased). From 1975 to 1980, while the annual average growth rate of visitor arrivals to the Caribbean region was about 6%, for Jamaica it was minus 0.03%. Real value added in manufacturing fell by 26% between 1973 and 1980. The share of agriculture to GDP actually declined from about 17% in the early 1960s to 8.3% by 1980. The decline in agricultural production during the 1970s, was due to a contraction in production for export at a rate of 4.0% yearly. However, domestic agriculture grew by 4% per annum. This trend reflected the anti-export relative price bias arising from protectionist import substitution and the interposition of quasi-government export marketing organizations. Indeed, acreage devoted to domestic agriculture increased by 54%, while for export agriculture declined by 27%. Thus, over the decade, the volume of sugar exports declined at an annual average of 8%, and for banana exports and citrus by 12% and 2% respectively.

The scenario was one of a contracting agricultural sector, under which export agriculture; with essential foreign exchange earning potential, was stagnating. This due to the anti-export exchange rate policy and the suppression of farm gate prices through public export marketing organizations. On the contrary, domestic agriculture, expanded on the basis of import controls and state subsidies. While domestic agriculture depended on state subsidies and investment, insulation from external competition, this meant a real cost to consumer welfare. Simultaneously, domestic agriculture did not compensate for the net loss of foreign exchange earnings from export agriculture. The anti-export bias of protectionism discouraged private sector investment, and led to increasing technological obsolescence and loss of external competitiveness in the sector.

A picture emerges, therefore, of inappropriate state intervention and protectionism which contributed to structural maladjustment and economic stagnation. Within the agricultural sector this was most keenly felt in terms of a strong anti-export bias.

AGRICULTURAL BASELINE

By several measures, the agricultural sector in Jamaica is significant in the economic life of the country. Since the colonization in 1655, a pattern of land distribution, cultivation and related activities developed and has persisted into modern times. Although modern industrial and service sectors have surpassed the growth and contribution of agriculture to national income, the following indicators attest to its continuing importance to Jamaica's economic and social life.

HISTORICAL AGRO-ECONOMIC INDICATORS

	1961	1970	1980
Agr-pop as % of total population	44	36	34
Agr-exp as % of total exports	42	23	14
Agr-imp as % of total imports	19	16	19
Agr-exp as % of total imports	36	15	11
Agr-emp as % of total labour force	41	33	31

Throughout Jamaica's history, its agricultural activity has been characterized by a bimodal system of farming, with large export oriented single commodity estates operating on the plains, and domestic food crops on the hillsides. Despite programmes to transfer agricultural land to small farmers since independence, land distribution has remained skewed in favour of large farms. The 1968 agricultural census revealed that 82% of farm units were five acres or less, and yet occupied 15% of total agricultural land. Added to this the Town Planning Department categorized about 225,000 acres completely idle, equivalent to 18.8% of the 1.2 million acres of arable land existing in 1970. Nonetheless, agriculture employed a third of the work force in the 1970s, it accounted for 8 to 9% of GDP and about 21% of export earnings.

During those years, the Government had embarked on a major land reform programme aimed at land redistribution and full utilization of idle land. The Project Land Lease was one attempt, and made visible headway in land redistribution. However, the five-year leases and thus lack of tenure security, inhibited farmers to seek credit to invest in agriculture. Other attempts included farming co-operatives and a rural development programme which sought to combine small farmer settlements with housing, credit and soil conservation assistance.

Although, by the end of the 1970s the land distribution structure remained basically unchanged with 93% of farm units occupying 26% of cultivated land. Moreover, there was a decline in the acreage under cultivation which, according to the agricultural census of 1978 was 10.9% below acreages used in 1968. This was primarily evident in coconut and banana production in eastern parishes and declining sugar production in the West. Thus said acreage devoted to export agriculture was associated with shrinking in output and earnings. Sugar has been historically a major contributor to the Jamaican economy for income generation, employment and foreign exchange. From production of about 506,000 tons, sugar production declined to 199,000 from 1965 to 1982. Falling world prices, deteriorating quality and yields, labour unrest, inefficiencies related to government take-over of the main plantations (which were then operated along with workers co-operatives) and declining factory efficiency were some elements behind the decline. The industry had become increasingly non-viable and was progressively nationalized during the 1970s, as the major private sugar companies withdrew from production.

... **The agricultural sector in Jamaica is significant in the economic life of the country. ... Although modern industrial and service sectors have surpassed the growth and contribution of agriculture to national income ... agricultural activity has been ... a bimodal system of farming with large export oriented single commodity estates on the plains and domestic food crops on the hillsides ... 82% of farm units were five acres or less, and yet occupied 15% of total agricultural land. ... agriculture employed a third of the work force in the 1970s, it accounted for 8 to 9% of GDP and about 21% of export earnings ... the government had embarked on a major land reform programme ... by the end of the 1970s the land distribution structure remained basically unchanged ... there was a decline in the acreage under cultivation**

The banana industry was completely destroyed by Hurricane Allen in 1980. Prior to this, the industry had been in a state of decline with production and exports declining from 126,000 tons in 1970 to 65,500 tons in 1979. Among the factors accounting for the decline was the lack of new production and handling technology. Others were the inhibiting effects of government policy with respect to prices, particularly from an overvalued currency and also from

deficient operations of the former Banana Board and Banana Company. Towards the latter years during this period, banana production was largely from small scattered rain-fed holdings, yielding less than 1.5 tons per acre on average of export fruit.

A similar pattern was evident in other export crop performance. Even though coffee and cocoa maintained a premium quality over the years and demanded premium prices, export volumes were low. The expansion of these crops was limited by insufficient foreign exchange. Similarly, citrus exports were weak and pimento exports declined.

> **... acreage devoted to export** agriculture was associated with shrinking in output and earnings ... From production of about 506,000 tons, sugar production declined to 199,000 from 1965 to 1982. ... The Banana industry was completely destroyed by Hurricane Allen in 1980. Prior to this, the industry had been in a state of decline with production and exports declining from 126,000 tons in 1970 to 65,500 tons in 1979.... a change in the structure of agriculture domestic production vis-a-vis export agriculture was encouraged by government policy.... acreages devoted to export crops declined by 27% over the period, while land employed to domestic crop production increased by 54% ... Pricing and institutional arrangements further supported the government's strategy ... On the other hand, macro-economic and sectoral policies militated against large scale export agriculture ... Farmgate prices were regulated and suppressed by marketing boards; an overvalued exchange rate implied a cost for exporters and a subsidy to domestic suppliers. ... Over the decade of the 70s, sugar exports (by volume) declined by an annual average of 8%, banana exports by 12% annually, and citrus exports by 2%.

As mentioned before, a change in the structure of agriculture favouring domestic production vis-a-vis export agriculture was encouraged by government policy. Indeed, land tenure policy in the 1970s favoured the division of large holdings; some of them underutilized, others devoted to export crops, into smaller plots to cultivate domestic crops. Consequently, acreages devoted to export crops declined by 27% over the period, while land employed to domestic crop production increased by 54%. Pricing and institutional arrangements further supported the government's strategy. Inputs such as fertilizers, tools, and other inputs were subsidized; import restrictions in the form of high tariffs, quotas and outright bans afforded explicit protection for farmers producing for the local market. A central marketing corporation was established to facilitate wholesale of crops by the small farmer; and access to credit by small farmers was promoted and improved.

On the other hand, macro-economic and sectoral policies militated against large scale export agriculture. Farm gate prices were regulated and suppressed by marketing boards; an overvalued exchange rate implied a cost for exporters and a subsidy to

domestic suppliers. These led to declining profitability in the export sectors and thus attracted little investment in agriculture further reducing productivity and competitiveness. Over the decade of the 70s, sugar exports (by volume) declined by an annual average of 8%, banana exports by 12% annually, and citrus exports by 2%. So, at the end of the decade, the agricultural sector reflected the macro-economic trends of the wider economy: a falling export production, uncompetitive and inefficient plantation agriculture, and an incentive structure which protected small production units and discouraged investment for exports.

STRUCTURAL ADJUSTMENT POLICY IN THE 1980s

The attempts to stabilize the macro-accounts and to adjust the Jamaican economy towards a sustainable growth path had been an ongoing process since 1981 to the present. The economic adjustment effort has received significant external support, including one External Fund Facility -EEF- and five Stand-by Programmes with the International Monetary Fund - IMF-, and as well ongoing bilateral balance of payments support from multilateral agencies and the international community. In addition, the reform programme has been supported by three Structural Adjustment Loans - SALs- (approved March 1982, June 1983 and November 1984) four Sector Adjustment Loans -SECALs- (Trade & Finance I approved June 1987, Public Enterprise June 1987, Agricultural Sector loan approve January 1990 and Trade and Finance II approved March 1991). Finally in the context of the Enterprise for the Americas Initiative - EAI-, an Investment Sector loan agreement with the Inter-American Development Bank - IDB- is now pending as of December 1991, and negotiations for a new EFF Agreement with the IMF are scheduled for early 1992.

The broad thrust of this economic adjustment effort has been to rationalize the economy-wide incentive system; reduce the extent of regulation and the size of the public sector in the economy; increase domestic savings and restore medium-term viability to the balance of payments. The pursuit of the adjustment goals has encompassed a variety of macro-economic policy reforms and the primary themes of which have been as follows:

1. Monetary Foreign Exchange and Trade Policies

(a) The Foreign Exchange and Trade Regime

The foreign exchange allocation mechanism has evolved from the fixed exchange regime supported by a comprehensive Exchange Control Act with restrictions on both current and capital account transactions, existing at the start of the 1980s. The evolution has been through a dual exchange regime (1983), managed float (1983-1984), foreign exchange auction (1984-1989), fixed rate (1989-1990) and inter-bank market determined (1990-present). Accompanying these changes has been a depreciation of the Jamaican currency from a value of US$0.56 to US$0.05 over the 1981-1991 period (see Statistical Appendix: Table 5).

The trade regime regarding the import licensing system covering all imports at the beginning of the reform period has also been dismantled. Quantitative import restrictions have been removed and as at September 30, 1991 the import monopoly of the Jamaica Commodity Trading Company on all goods excepting milk solids and goods imported under certain bilateral agreements has been removed.

Further, a comprehensive tariff reform programme initiated in 1987 has reduced the average level in tariff rates as well as the dispersion between rates.
This programme is to be concluded with these rates being coincident with the CARICOM common external tariff at around 30.0 percent.

(b) Monetary Policy

Throughout most of the 1970s and early 1980s monetary policy was subordinated to the need to finance large public sector deficits. This entanglement adversely affected the private financial and banking sector's ability to efficiently intermediate. Initiated in 1985, was a programme to reform this relationship. The objectives were to disentangle monetary from fiscal policy, to improve mechanism for monetary control and to enhance the regulatory and supervisory framework for financial institutions.

With this thrust, the non-cash portion of the liquid assets ratio for the banking system was progressively reduced from 28.0 percent to 0.0 percent over the period March 1986 to March 1988. The Bank of Jamaica initiated as a complement, open market operations to offset the expected injections of liquidity in November 1985. In managing liquidity at the margin, a Liquidity Support Facility was introduced in May 1986 and more recently repurchase agreements with respect to government securities was also introduced. The Bank of Jamaica Act, Financial Institutions Act and Securities Act have been redrafted and are scheduled to become law by the end of 1991.

2. Fiscal Policies

(a) Fiscal Initiatives

A major aim of the adjustment programme has been to improve the financial performance of the public sector and to increase public savings. The overall public sector deficit was as high as 19.6 percent of GDP in 1983/84 thereby effectively crowding-out private sector activity. This deficit was adjusted downwards to 5.4 percent of GDP in 1987/88 before increasing to 13.4 percent in the hurricane affect fiscal year of 1989/1990. By fiscal year 1990/1991, however, this deficit had again fallen to 3.8 percent of GDP (See Table #1 "Evolution of Public Sector Balances" for more details).

(b) Tax Reforms

A full tax reform programme was initiated in 1983. In January 1986, a revised personal income tax system was introduced together with a revised property tax system in July 1986 and subsequently a revised corporate tax system in 1987. The personal income tax initiatives have raised the tax threshold with incomes above this taxed at a flat rate of 33 1/3 percent. The corporate tax revisions were such as to simplify the system and rates were

reduced from 45.0 percent to 33 1/3 percent. Finally, a General Consumption value added tax of 10.0 percent was introduced on October 22, 1991, replacing a variety of existing indirect taxes.

The programme results of said adjustment have been significant. Public dissaving has declined from its 1983 peak of 19.6 percent to current levels of 2.0 percent of GDP in 1991/92. In effecting this, it has been previously noted that a tax reform programme was initiated in 1983. Further, however, expenditure containment measures inclusive of labour force reductions in 1984/85 and the phased introduction of performance budgeting has improved the management systems in the public sector. Of note as well has been the developments in the public enterprises. From deficit positions of, as high as, 3.6 percent of GDP in 1988/89 enterprises now yield surpluses of 2.8 percent of GDP. This has been consequent on a programme of public divestment as well as a restructuring of pricing policies. To date some 41 public enterprises have been divested of which 26 or 63.4% of the divested enterprises have been specific to agriculture. A pricing policy now exists whereby for all major public enterprises there is automatic mechanism allowing for a full pass-through of both domestic and foreign costs.

3. Phases in the Adjustment Process

EVOLUTION OF PUBLIC SECTOR BALANCES

	1983/84	1985/86	1986/87	1987/88	1988/89	1990/91	REV. PROGRAM 1991/92
Central Government	-1196.3	-659.6	-203.5	2.7	-574.5	417.4	1354.7
Selected Enterprises	-93.4	167.2	243.8	310.2	-663.6	247.5	1137.7
Bank of Jamaica	-142.1	-857.9	-822.0	-875.4	-1090.1	-1414.8	-2432.9
Other	-53.3	31.2	-28.1	-320.9	-144.9	-310.3	-840.0
Overall Balance	-1485.1	-1653.5	-809.8	-883.4	-2473.1	-1060.2	-780.6
GDP in J$ million	7,576	12,496	14,459	16,307	18,273	28,141	40,000

Percentage of GDP

	1983/84	1985/86	1986/87	1987/88	1988/89	1990/91	1991/92
Central Government	-15.8	-5.3	-1.4	-	-3.1	1.4	3.3
Selected Entities	-1.2	-1.1	1.7	1.9	-3.6	0.8	2.8
Bank of Jamaica	-1.9	-6.9	-5.7	-5.4	-5.9	-5.0	-6.1
Other	-0.7	0.1	-0.2	-2.0	-0.8	-1.1	-2.1
Total	-19.6	-13.2	-5.6	-5.4	-13.4	-3.8	-2.0

The implementation of these macro-economic reforms has not always been a smooth process over the review period, and their pace and scope have been interrupted by various domestic and external developments. There are analytically, discrete periods in the adjustment process worth of mention.

(i) The programme initiated in 1981, was framed on the expectation of a modest improvement in world economic activity and some recovery in international trade. After a relatively successful first year of this programme with the domestic economy growing in real terms by 2.0 percent in 1982/83, with single-digit inflation of 7.0 percent, the programme was effectively derailed. This was partially consequent on a fall-out in Jamaica's bauxite/alumina markets as well as the experience of increased oil prices in that period. In these initial years very little was achieved by way of adjustment. The current account deficit widened to 14.0 percent of GDP over the two year period and the public sector deficit rose to 19.6 percent of GDP from its previous high of 17.8 percent in 1981.

(ii) Adjustment in the period 1983 to 1985 was therefore intense as efforts were geared toward correcting the external and fiscal accounts. There were the noted modifications liberalizing the exchange system and the process to relax import licensing, quota allocations and quantitative restrictions was also started. In the fiscal area there were initiatives to improve the operations of the public enterprises and the reform of taxation was initiated in this period. in the monetary area a 12.0 percent credit ceiling was imposed and interest rates rose, as the liquid assets ratio was increased.

(iii) Partly as a consequence of these adjustments, but more so because of a substantial improvement in the terms of trade towards the end of 1985, resulting from a sharp fall in oil prices and a rise in alumina prices, 1986 marked a new phase in the adjustment process. Positive real growth averaging 3.0 percent per annum, relatively low annual inflation averaging 8.0 to 9.0 percent and a stable exchange rate US$1.00 = J$5.50 (US$0.18) characterized the period 1986-1988. In a sense the adjustment efforts in this period, tended to be facilitatory of this fragile buoyancy. Reforms to the financial sector effected over this period tended to result in lower interest rates and enhanced market efficiency including narrower spreads. The liquid assets ratio was progressively reduced and interest rates fell by about 6.0 percentage points on average. Further, in the fiscal area the tax reform process was in full gear as was the case with the elimination of quantitative restrictions. This phase was sustained through 1988, when the Hurricane Gilbert imposed new parameters on the adjustment process.

(iv) The slippage in the macro-accounts associated with the post-hurricane re-building was aggravated by uncertainty on policy

directions approaching national elections in 1989. Since 1989, this phase of reform has been decidedly towards deregulation and liberalization, the high point being the complete removal of exchange restrictions in September 1991. In the course of this, however, earlier directions in monetary reforms have been reversed with the re-introduction of the liquid assets ration in April 1990 (then its removal in April 1991 and reintroduction in January 1992) and the move away from market based control methods in the temporary reintroduction of credit ceilings. Notwithstanding these, however, the direction has been supportive of the thrust to liberalize the economy.

4. General Evaluation and Future Trends

On the basis of sharp exchange rate adjustment, Jamaica reaped substantial gains in external competitiveness (as measured by cost adjusted exchange rate appreciation of about 14.0 percent by 1983, relative to a 1980 base, exchange rate flexibility ensured a gain of over 40.0 percent by the end of 1985. These gains were substantially sustained to the middle of 1988. After a moderate slippage in the aftermath of the hurricane in the late 1988, the resumption of nominal depreciation from September 1990, again ensured further substantial gains in external competitiveness. By the end of 1991, Jamaica had gained a substantial margin in external competitiveness relative to the middle of 1988.

The capacity of the system to preserve and enhance margins of external competitiveness has been supported by efforts towards transparent exchange rate flexibility through an inter-bank system in September 1990, and the effective elimination of exchange control in September 1991. Any domestic inflationary impulses from permissive demand management are automatically corrected through exchange rate adjustment. This should ensure the preservation of appropriate price signals for the production of tradeables and exports, and hopefully for the attraction of foreign investment.

The broad thrust of the structural adjustment programme also appears to have been successful in reversing the crowding out of the private sector by the public sector. The ratio of the overall public sector deficit to GDP which had peaked at 19.6 percent in fiscal year 1983/84 was reduced to 5.4 percent of GDP in fiscal year 1987/89 (as largely influenced by the emergency requirements from the hurricane). This ratio was subsequently rèduced to 3.8 percent in fiscal year 1990/91 and is programmed to be 2.0 percent in fiscal year 1991/92.

Monetary policy has been relatively tight throughout the 1980s. In the context of a benevolent external environment from 1986-1989 and with careful public sector management, nominal interest rates, substantially market determined, fell sharply below mid-1980s levels but have never gone down to levels of the 1970s. In that low inflation 1986-1988 period, real interest rates became

positive. More recently with foreign exchange system liberalization, there has been accelerating inflation with interest rates, though also increasing sharply, becoming negative in real terms.

The economy has been reducing its reliance on the use of foreign saving. The external current account deficit/GDP ratio (including official transfers in the current account) fell from 14.3 percent in fiscal year 1981/82 to 4.8 percent in 1987/88. having fallen to 1.1 percent in 1988/89 (with the influx of reinsurance flows), it increased to 8.5 percent in 1989/90 before falling again to 5.3 percent in 1990/91. This ratio was programmed at 2.6 percent for 1991/92.

The major resource constraint on Jamaica's potential for sustained economic recovery remains as the nature of its external indebtedness. This grew from under US$2.0 billion at the beginning of the 1980s to over US$4.0 billion by the end of 1986. The ratio of external debt to GDP increased from 50.0 percent to 140.0 percent and the actual external debt service/GDP ratio increased from 17.0 percent to 48.0 percent over the same period. Debt service also uses above 40.0 percent of fiscal expenditure, a ratio which increases with exchange rate depreciation. More recently, there have been signs of softening of these rations. The external debt/GDP ratio fell to under 120.0 percent over the years 1989 to 1991 but may again increase in 1990. Similarly, the actual debt service ration fell to below 30.0 percent for 1989 and 1990 and is also expected to be below that level in 1991.

A picture emerges of an economy which has extensively adopted policies for the structural adjustment of its economy. Public sector and domestic savings have increased, controls and restrictions have been dismantled and there has been greater allowance of the free play of market forces in pricing and allocating resources. The Subsequent sections well examine the extent to which structural rigidities in agriculture have been eliminated and the extent to which desired sectoral responses may be seen to be emerging.

To day, therefore, the macro-economic reforms have been substantial and there has been a marked improvement in the macro-accounts. (Statistical Appendix: Table 1 - Selected Indicators) Whilst being directionally positive in terms of relative price signals, the current phase of full liberalization has been accompanied by high inflation (over 80.0 percent) in 1991, sharp currency depreciation (from US$0.10 to US$0.05 in three months), and increasing domestic cost pressures. Stabilization in this transitory period appears crucial if the reform process is to continue.

In this regard, the macro-economic directions for the economy into the medium-term are likely to be discussed in the context of an EFF agreement with the IMF. At the micro-sectoral level commitments

for future reforms have already been given under the Trade and Finance Loan II and the Trade Finance and Investment sector with the World Bank and IDB respectively.

AGRICULTURAL POLICY REFORM IN THE 1980s

The recurring theme of economic management in the 1980s was "export-led, private sector driven growth." It repre-sents a reversal of the more inward looking strategy of the previous decade. The approach is to create an envir-onment in which private investment would flourish centred on macro-economic policy reform in the areas of trade, fiscal management and financial policy. The gradual relaxation of government control extended to the removal of price and exchange controls and divestment of publicly held assets. These reforms encompassed the agricultural sector but, in addition, several important sectoral pol-icy measures were formulated to alter the incentive structure in the sector. This to catalyze production through the considerable influence that the government had by its ownership of land, financial institutions, marketing enterprises and institutions.

The objectives of the reforms were plural. Firstly agriculture employs the largest bloc of the labour force. Any economic measures which could raise production and rural incomes would thus directly address a large and visible social problem, - rural poverty - and with it, arrest the drift to urban areas. Secondly, export agriculture would also be a net earner of foreign exchange and thus contribute to the achievement of stability in the foreign exchange market. Also in the long run viability in the balance of payments. To increase production, especially for export, required new investment, higher productivity and greater efficiency in the use of resources. Agricultural policy therefore encompassed changes in the following areas:

(i) Land Use Policy

Of the island's 2.7 million acres, some 800,000 acres or 20.9% of total acreage are Government owned. Some of these lands were devoted to agriculture through various state run enterprises and/or long term leases to private farmers. Larger acreages were maintained in natural forests, and reserved for bauxite mining or lay fallow. The policy adopted in respect of government owned land was to first, complete an appraisal of the extent of Crown lands, assess their agricultural capability by soil type, contour, elevation, irrigation and micro-climate. Thereafter, Agro 21, a Government entity, was established to administer the lease of land suitable for large scale development of non-traditional crops. Smaller lots which had been occupied by small farmers were to be sold to these tenants, to access loan financing secured by titles, and to invest in expanded production. By 1988, about 30,000 acres had been leased to large scale operators and 41,000 acres sold to smaller cultivators.

The above mentioned land use policy during the 1980s also included

monitoring of leased government-owned land to ensure compliance with agreed usages and production targets, upgraded the irrigation systems and supervision of a soil conservation and re-forestation programme.

(ii) Restructuring of Major Export Crops

Sugar production has been in temporal decline since a peak output of 506,000 tons in 1965 and fallen below 200,000 tons by 1982. The rationale for the decline were falling world prices, deteriorating quality and yields, inefficient operations of the main plantations by worker co-operatives, and declining factory efficiency. The industry had become increasingly non-viable and progressively nationalized in the 1970s, as the major private sugar companies withdrew from estate production. The policy pursued during the 1980s was to target output at 240,000 tons - a level deemed sufficient to meet export quotas and domestic demand; to abolish the sugar co-operatives and to close non-viable government factories. Processing was centralized in upgraded factories and management improved.

Banana exports, also in long term decline, were especially hard hit by Hurricane Allen in 1980. The replanting/recovery programme emphasized the use of modern technology in planting material and handling on large-scale plantations.

Other components of the approach to increase exports included market related pricing formulae for sugar and bananas, and the partial marketing deregulation of export crops. The establishment of a competitive exchange rate was expected to propel the export drive. Also the privatization endeavours would provide the capital, management and the drive to take advantage of new profitable opportunities.

(iii) Export Marketing Organizations

The transmission of relative price signals to farmers, in the 1970s, had been inhibited by the establishment of quasi government export marketing organizations -EMOs. These had monopoly powers over the export marketing of specific agricultural commodities. Coupled with the resistance to exchange rate adjustment at the macro-economic level, these organizations effectively inhibited growth by inducing price signals to the farm-gate with consequential effects on coffee, cocoa, citrus and pimento. Throughout the 1980s, therefore, the thrust of structural adjustment in agriculture had embraced efforts to reduce or eliminate the market intermediary and other functions of these organizations.

By early 1982, the government had removed the export monopoly powers of the citrus, cocoa and coffee marketing boards. Competition was allowed from growers, with the requirement of

minimum scale and output volume. In many cases, these minimum requirements appeared to be prohibitive and were subsequently reduced in May of 1985.

Under the first structural adjustment loan with the IBRD -SAL I-, signed in March 1982, studies auditing the management of the Export Division of the Ministry of Agriculture (exporting pimento) and of EMOs for citrus, coffee and cocoa were undertaken. From these studies, it was agreed under the second structural adjustment loan -SAL II- with the IBRD, that there should be satisfactory progress towards rationalizing the marketing and other activities of the EMOs for those commodities, including the Ministry of Agriculture's Export Marketing Division. Accordingly, the Government decided to divest the non-marketing functions of the EMOs, and thus research and extension services were integrated with those of the Ministry of Agriculture. Responsibility for the supply of inputs was to be transferred to the private sector (including farmer's organizations like the Jamaica Agricultural Society), and units in production were to be transferred to the National Investment Bank of Jamaica -NIBJ- for their eventual divestment. This divestment of non-marketing activities was eventually completed as a precondition for second tranche release under SAL III.

It was also agreed under SAL II that the efficient transfer prices to the farm-gate, should be facilitated by the use of pre-determined price formulae. Implementation did not occur under SAL II due to the non-availability of the study necessary to establish the relevant formulae. The issue re-emerged in SAL III for which February 28, 1985 was specified as a deadline for the adoption of efficient pricing formulae. Again, because of delays in organizing the study, the dated condition had to be waived. It was subsequently met, having re-appeared as a pre-condition for the sugar rehabilitation loan.

Following reforms under SAL's I to III, export marketing for coffee and pimento (as well as for sugar and bananas) may be considered satisfactory. In 1989, however, the cocoa industry board continued to control 100% of cocoa exports, despite formal allowance for competition. This was due to the minimum requirement for an export license, of 200 tons of dry cocoa, where there were 25,000 farmers producing just over 2,500 dry tons per annum. As a consequence of the inability to meet the minimum requirement for competing export licenses, farmers were receiving only about 50% of export prices in direct cash payments.

By 1989, there had been some progress in the deregulation of citrus with farmers being free to sell to the unregulated local market: two export processing plants (one owned by the citrus growers association - a private grower association) and to one of three approved private exporters. Only growers with 50 acres in production or producing at least 15,000 boxes of export fruit could qualify for export licenses. The Citrus Growers Association -CGA-

had the power to approve exporters. While this power was not being applied in restraint of competition, the IBRD expressed concern at its potential. They were also concerned about proposals from the citrus growers association to increase the minimum size requirements for export licensing.

Accordingly, the IBRD in 1989 sought to address these concerns, with respect to cocoa and citrus among the conditionalities for disbursement under an Agricultural Sector Adjustment Loan. In this regard, the government was expected to eliminate minimum production requirements for cocoa exporting and open marketing to general (non-cocoa) private enterprise. While the Cocoa Industry Board -COIB- would retain responsibility for quality control, membership by growers would no longer be compulsory. For citrus, the IBRD wanted Government to specify conditions for export licensing, eliminate minimum requirements, open marketing to non-citrus private sector interests, and downgrade the status of a grower cess to the CGA from compulsory to voluntary. Legislation to simplify and make flexible the administration of export marketing requirements, was also recommended.

(iv) Import Restrictions and Domestic Price Distortions

Substantial progress was made in the 1980s on the general thrust of structural adjustment in liberalizing the foreign trade and balance of payments mechanisms. Towards the liberalization of the foreign exchange system, the rigid import licensing system of the late 1970s had been substantially dismantled by 1989. The main exceptions in this regard were commodities monopolized by the state owned Jamaica Commodity Trading Corporation -JCTC. Those were agricultural products restricted to protect small farmers (see Appendix 2) and restrictions for security or public health. Agricultural inputs are, however, imported on relatively very concessionary terms. Restrictions on import competition imply a high nominal and effective protection rate for small farmers and perhaps a loss of consumer welfare.

General progress in lifting import restrictions has been supported by the reduction of price controls and less public sector intervention in domestic marketing. By 1989, the majority of price controls had been eliminated, but there continued to be controls for basic foods and animal feeds; especially for commodities imported through the JCTC. Under the aegis of the Agricultural Sector Adjustment Loan and of the second Trade and Finance Sector Adjustment Loan -TFSECAL II- the import monopoly status of the JCTC has basically been eliminated. Within the context of liberalizing the foreign exchange market and system, there is now a commitment that market prices should incorporate the effects of import price and exchange rate changes to final demand. This commitment now extends to basic foods imported through the JCTC. In this environment, the role of the Prices Commission has been severely curtailed.

In the process of removing price distortions, food subsidies have also been substantially eliminated in the 1980s. Through its monopoly of basic food imports, the JCTC administered a Generalized Food Subsidy scheme - GFS- with non-transparent cross-subsidization from another public enterprise: the Power Generating Company. While the government operated limited populaion targeted food subsidy programmes (e.g. food stamps for the very poor and a school feeding programme), the proportion of Jamaicans requiring nutritional assistance has been so substantial, that the government considered generalized food subsidies to be more appropriate.

Under the Public Enterprise Sector Adjustment Loan of the mid-1980s, the government committed itself to study the operations of the JCTC, its role in generalized subsidies and possible alternatives in making targeted subsidies more efficient. While the resulting study was considered inadequate, the issue endured to subsequent discussions on trade and agricultural reform. The government announced its intention to phase out these generalized food subsidies over the fiscal years 1990/91 and 1991/92. Also, to limit its cost and increase fiscal transparency by passing any cross-subsidy explicitly through the budget.

Under the foreign exchange system liberalization framework, the generalized subsidy has been almost completely eliminated, and with pronounced currency depreciation, there have been sharp increases in basic food prices. While the government has stated its commitment to and sought international support for extending target population food subsidies, there has been a sharp movement of relative price signals for import substitution or replacement in food production.

(v) Agricultural Credit

The "government-led" approach to economic development in the 1970s had embraced the direct allocation of subsidized sector-specific financial resources. The primary institutional vehicle for the delivery of this credit, was the Jamaica Development Bank - JDB-. This institution loaned directly to manufacturers, tourism interests and relatively large farmers, and indirectly to small farmers through the intermediation of farmer owned peoples co-operative banks. Interest rates in the late 1970s had been "subsidized" (below market) and substantially negative in real terms. Operations appear to have been relatively inefficient as indicated through an increasing incidence of non-performing loans and the threat of financial insolvency.

The operations of the Jamaica Development Bank (lending to agriculture, industry and tourism) were analyzed by Professor Compton Bourne in an article "The Case of the Jamaica Development Bank: in Social and Economic Studies, Vol. 30, No. i, March 1981. He concluded that: "The financial performance of the JDB has not been good." Net operating income as a ratio to gross assets was

mostly below 1% with "significant losses being recorded in 1976 and 1977. In 1978, arrears as a percentage of agricultural loans outstanding were 19%. The outstanding debt as a percentage of payments due was 82% for the large farmer and 32% for the small farmer portfolio. At the end of 1978, 85% of all loans (including tourism and industry) were more than three months overdue.

From 1982, direct lending by government development finance institutions was discontinued. The operations of the JDB were limited largely to improving the administration of its then existing loan portfolio while two new institutions, the Agricultural Credit Bank - ACB- and National Development Bank -NDB= were established, as wholesale intermediaries for development finance. In this vein, the ACB and NDB, funded mainly by external agencies and rediscount loans, provided through commercial banks and people's co-operative banks. In the case of the people's co-operative banks, credit was geared mainly to small farmers, and the ACB provides technical support for their management.

The Bank of Jamaica also provided, in the 1980s, selective rediscounting for commercial bank loans for agriculture, construction and manufacturing. Reflecting a consideration that it may be inappropriate for the Central Bank to be involved in selective credit allocation, these facilities were discontinued under the first phase of the Financial Sector Reform Programme which ended in March 1988.

At the end of 1988, the ACB channelled funds to commercial banks at 11%, which, in turn loaned them to relatively large farmers at 14%. For small farmers, the ACB funded the PCBs at 7% which then charged small farmers 11%. The retail lending rates while being positive in real terms (in the context of low inflation from 1986-1988) were nonetheless between seven and ten percentage points below open market lending rates. Subsequently, with the acceleration of the inflation rate in 1989 and 1990, the subsidized real lending rates became more significantly negative.

The outstanding debt as a percentage of PCB loan portfolios was 16% at the end of March 1988, which is an improvement over the 40% as it was in March 1984. However, in March 1988, PCB arrears to the ACB were 70% of the amounts due. With improved collection, this had been reduced to 31.5% by September 1988.

In addition to subsidized interest rates and arrears, the IBRD in its sector analysis, prior to its Agriculture SECAL, expressed concern about the limited range and flexibility of financial intermediaries in on-lending ACB sourced funds. The concerns were the limiting of commercial banks to relatively large farmers, and the constraints to other institutions, notably credit unions, to participate.

With the government approval, the IBRD proposed that by the release

of the second tranche of the Agriculture SECAL (before April 1, 1990) the ACB would rediscount loans for relatively large farmers, at the weighted average yield of Government Treasury Bills over the previous twelve months. The Government agreed that for the small farmers the rediscount rate would be based on the large farmer rediscount rate less the differential of seven percentage points as existed from October 1988 to September 1989. These rates were to be revised at the end of each quarter. Furthermore, it was agreed to reduce the maximum percentage of total cost financed for large farms by the ACB to 60%, while keeping this for smaller farms at 80%.
With respect to arrears the ACB, prior to board presentation, introduced a system for suspension of disbursement to PCBs. This when backpayments of more than 120 days represent more that 20% of amounts due at the end of any quarter. This contributed to the substantial reduction of PCB arrears to the ACB by September 1988.

In terms of widening distribution channels, there was substantial disagreement between the government and the IBRD. It was not clear that the IBRD fully understood the co-operative's nature of credit unions in underpinning their interest rate ceiling and borrowing, and repayment conditions. Neither was it clear that the co-operative movement was prepared to accept flexible market linked rates in accommodating ACB rediscounting. And thus, it appears that not much progress has been made in modifying the modus operandi of the credit unions.

Since 1989, market interest rates have moved for them most part upwards (with Certificate of Deposit and Treasury Bill rates now approximating 50%). At the same time, inflation has accelerated in 1990 and especially in 1991; with the twelve month rate of inflation exceeding 80% at the end of 1991. Despite the role of inflation in depressing real interest rates (towards current negativity), there are indications that ACB rediscount rate linkage to increasing nominal rates has suppressed demand for agricultural credit in 1991. This followed a surge in 1990, based on a desire to increase borrowing before the market rate linkage became fully effective.

The flow of credit to the agricultural sector in the 1980s has been substantial. Commercial bank lending partly financed by wholesale funds from the Agricultural Credit Bank, showed a net increase in exposure to the sector of 650 million between 1982 and 1990. The ACB itself, since its formation in 1983, had disbursed a total of 799 million; out of which 67.7% equivalent to 541 million was outstanding at the end of 1990. These loans were channelled through associated Peoples Co-operative Banks and Commercial banks for land acquisition, production and marketing financing. The other significant creditor to the sector - the Jamaica Agricultural Development Foundation disbursed 99 million over the 1980s.

Equally significant were the resources channelled into the sector

through Agro 21 and other publicly controlled institutions in the form of equity participation, technical support and marketing. These efforts were supported by external financing including the Export Crops Project and Sector Adjustment Loans from the IBRD. The financial resources devoted to agricultural restructuring are difficult to quantify precisely. The sector however seems to continue to receive substantial attention, even in the face of a general contraction in government services.

vi) Support Services and Institutional Reform

The Ministry of Agriculture -MOA- had traditionally been the central organization charged with fostering growthand development of agriculture. The MOA functions have included agricultural planning and formulation of public sector agricultural investment programmes, research and extension services, provision of agricultural statistics, natural resource conservation and export marketing of pimento. Through its Lands Department, the Ministry of Agriculture has also been the primary holder and administrator of crown (government) lands.

Over time, the historical domain of the Ministry of Agriculture in has changed, as some of its functions have been diluted and assigned to a numbern of more recently established statutory organizational structures. The Planning Institute of Jamaica - PIOJ- is also a primary source of publication and analysis of agricultural statistics. In 1983, Agro 21 Corporation was established as a public corporation, under the control of the Office of the Prime Minister. Its central purpose was to facilitate investments and enterprises in non-traditional agricultural exports. In pursuit of this objective, Agro 21 sponsored feasibility studies and provided technical assistance for investors. It also acted as the agent for the long term leasing of government land, for these ventures. Agro 21 also provided equity capital for 'pioneer' projects and joint ventures in order to set the lead for domestic private investors.

The National Investment Bank of Jamaica was established in 1984 as a holding company for government owned, including agricultural and agro-industrial, enterprise. As such, it provided management and accounting support. It later became the primary vehicle for the divestment of government owned enterprises. In 1989, both Agro 21 and agricultural enterprises previously held by the NIBJ, were transferred to the Agricultural Development Corporation - ADC.

In 1986, a National Irrigation Commission was established to manage all public irrigation systems and to improve cost recovery. A new tariff schedule was prepared in 1989 designed to increase cost recovery from 10% to 50% by 1992.

Jamaica Promotions, -JAMPRO-, formed as a merger of three agencies

in 1988, continued to have responsibility for investment promotion and export facilitation.
In general up to now, government efforts to promote soil conservation and inhibit watershed degradation appear to have had limited success. To co-ordinate new initiatives, the government in 1989 established a new statutory body, the National Resources Conservation Authority.

From the early 1980s, it was clear that praedial larceny was emerging as significant potential constraint, which would inhibit agricultural enterprise development. In reaction, the government had introduced legislation to increase penalties in an effort to discourage this phenomenon. The policy conditions for SAL I also led to the establishment of a system of agricultural wardens to police specific areas. There had been some controversy surrounding the establishment and operation of the agricultural warden system. It is not at all clear that the legislative and policing initiatives have effectively suppressed praedial larceny, and the agricultural warden system appears to have been practically abandoned. Whereas large farmers may be able to afford their own security, small and medium farmers continue to be at risk.

The proliferation of institutions infringing on various aspects of agricultural planning and administration, seems to have diluted the role and functioning of the Ministry of Agriculture. Also, in terms of overlapping roles and responsibilities across institutions, the cohesiveness of national economic management may well have been weakened.

The status and effectiveness of the Ministry of Agriculture was further threatened by the effects of sharp fiscal and macro-economic adjustment of the mid 1980s. Within the context of fiscal expenditure constraint, an accelerated inflation rate reduced real wages and increased the difficulty of attracting qualified staff. At the same time, the staff complement was cut by 35% in 1985. Retrenchment did not spare essential support services as there was a severe curtailment, with associated loss of effectiveness for research and extension services provided by the Ministry.

It is expected that the second phase of the Administrative Reform Programme - ARP- will facilitate the recruitment, retainment and motivation of qualified personnel in the Ministry of Agriculture. Care has to be taken, however, that the ARP is used for facilitating recruitment and change.

Overall, the structure of agricultural administration has to be made more cohesive and effective. If within the public sector reform, the role of the Ministry of Agriculture is to be re-established, then roles and functions of other public sector agencies will have to be re-evaluated.

(vii) Enterprise Divestment

Efforts of the government to divest itself of land holdings and to enhance security of freehold tenure, have already been discussed under "Land Reform" above. Government in the 1970s had also acquired sole or part ownership in a wide range of agricultural and agro-industrial enterprises, and there is a commitment that these holdings are to be privatized.

The issue of enterprise divestment arose in negotiating the Agriculture Sector Adjustment Loan in 1989 and the IBRD suggested divestment of some holdings. Some of those scheduled for privatization in the fiscal year 1989/90, notably Cornwall Dairy Development Limited and National Cassava Products Limited, had not yet been divested in 1991. Some of the delays have been due, however, to an absence of what would have been considered to be suitable offers. With the enhancement of relative price signals, however, it may be anticipated that there could be a substantial strengthening of domestic and foreign investor interest.

The government in pursuit of its objectives has enterprises in varied states of readiness for divestment. While some have been advertised and/or are in negotiations, others have been approved and are in background preparation. A representative list is reflected in the following table.

PRIVATISATION OF AGRICULTURAL ENTERPRISES			
Enterprises/Assets/Activities	Ownership	Subject Ministry/Agency	Comments Including Preliminary Proposed Modality for Privatisation
ADVERTISED AND CURRENTLY IN NEGOTIATIONS			
1. National Cassava Products Ltd	100%	Ministry of Public Utilities and Transport	Dilution of Interest from Injection of new capital. (Special Committee appointed by Government to privatize)
2. Cornwall Dairy Development Ltd	100%	Ministry of Industry, Production and Commerce JAMPRO/JIDC	Sale of Assets and lease of assets
BACKGROUND PREPARATION			
1. Shettlewood Property/Montpelier Property	100%	ADC Group Limited	Sale of Assets and lease of assets
2. Jamaica Soya Products Ltd.	60%	Ministry of Industry, Production and Commerce	Sale of Shares
3. Highgate Foods Ltd.	38%	Ministry of Industry, Production and Commerce	Sale of Shares
PRELIMINARY ASSESSMENT			
1. Innswood Vinegar Limited	51.21%	Ministry of Agriculture	Sale/Lease of Assets
2. Cocoa Industry Board (properties)	Cocoa farmers	Ministry of Agriculture	Sale of properties on open market by Cocoa Industry Board
3. Black River Upper Morass Development Co. -BRUMDEC	100%	NIBJ	Sale/Lease of Assets
4. Tropiculture Limited shares) Agriculture	45%	Jamaica Development Bank	Sale of shares
5. Minard Estate	100%	ADC Group Limited	
6. Grains Jamaica Limited	51%	NIBJ/JCTC	Sale of Shares
7. Victoria Banana Limited	100%	ADC Group Limited	Sale of Shares

AGRICULTURAL SECTOR RESPONSE

1. Summary Indicators

The summary indicators of change in the sector point to the following: Over the decade of the 1980s agricultural exports moved from US$82.4 million to US$146.0 million in 1980 to 1990. Of this US$63.0 million change, sugar accounted for US$31.0 million and bananas US$27.0 million, most of which occurred during 1990. By comparison, exports in 1988 were US$130.0 million and US$102.0 million in 1989. The importance of agriculture as a foreign exchange earner has fallen from 10% of total exports in 1977 to 7%

SELECTED AGRICULTURAL DATA

	1981	198 2	198 3	1984	1985	1986	1987	1988	1989	1990
Rate of Growth of Agricultural GDP (%)	2.3	-7.9	7.3	10.0	-3.5	-2.1	5.2	-5.4	-4.3	11.8
Contribution to GDP (%)	8.3	7.6	7.9	8.8	8.9	8.6	8.5	7.9	7.3	7.8
Agricultural Exports ($US million)	69.4	77.3	91.5	89.7	82.8	95.6	113.2	129.9	102.5	145.7
o.w. Sugar	46.5	49.0	57.3	66.0	49.8	62.2	75.8	91.9	64.8	85.8
Bananas	4.3	4.7	6.8	1.5	4.2	9.1	18.9	15.7	19.3	37.6
Non-Traditionals		5.9	9.3	10.0	14.9	16.1	18.9	16.5	15.7	15.6
Agricultural Employment ('000)	256.8	247.7	234.1	257.8	279.8	272.7	272.0	261.1	247.7	239.7
Agri-Employment/Total Emp. (%)	36.5	35.1	32.6	33.1	35.8	33.7	32.3	30.0	28.4	26.7
Value Added per worker (1974 $)	607.9	580.5	658.7	658.3	585.1	5Mw.5	604.0	610.9	616.5	712.1

Source: STATIN: PIOJ

(in 1989). Earnings remain concentrated in sugar and bananas as non-traditional exports have waxed and waned.

Over the decade of the 1980s, employment in agriculture has declined from 36.5% of the employed labour force in 1981 to less than 27% in 1990. With total value added having grown by some 10% over the same period. Value added per worker has risen, especially in 1990 when it jumped by 16%. This broad measure of productivity has been on an improving trend since 1985 and reflects the impact of the reorganization of production of the major export crops.

More recently, the terms of trade have shifted more strongly in favour of exports and the sector is attracting more investment in the form of expanded acreages, processing and marketing ventures. The most noticeable areas of expansion have been in orchard crops such as mangoes, papaya and citrus as well as bananas and coffee. The obstacles to expansion now appear to be in the area of technology, support services and marketing. Resolution of these problem areas will point the way of the sector in the 1990s.

2. Overall Sectoral Performance: GDP

Based on National Income and Product data, value added in agriculture rose through the 1980s when compared with 1980 as a base year. In 1987, Agriculture GDP was 9.5% higher in real terms than the out-turn in 1980 and 1983. Output fell in 1988 and 1989 mainly as a result of hurricane related dislocation, but rose sharply again in 1990. Value-added in agriculture in 1990 was 10.8% higher than in 1983, but in historical perspective, it was still 5% lower than the performance of 1978. In the sub-sector "Export Agriculture", GDP has never risen above 1974 levels. During the 1980s, value added in the traditional export sector remained on average some 33% below that of 1974 and was always lower than the lowest point in the 1970s (1979). This sub-sector covers only sugar, bananas, coffee, cocoa, citrus, pimento and coconuts and consequently would not have reflected any increases which resulted from a change in the composition of exports. The trend performance for this group is heavily weighted by sugar which has been in secular decline over the past fifteen years.

Domestic agriculture, which in the national accounts includes non-traditional export crops had, in 1987, expanded by 25% over 1982. The largest annual increase was in 1984 (15%) which was associated with new large scale winter vegetable projects. Output subsequently fell to 1983 levels. Average annual GDP in domestic sub-sector for 1984 - 1990 was 5.6% higher than the average of the seven year period 1974 - 1980.

The other major sub-sector in the standard classification of agricultural activity is livestock, which includes beef, dairy, pigs and poultry. This area has shown tremendous expansion. Value added in 1990 was 39% above that of 1980 and 63% above 1974. Output in the last two years, 1989 and 1990, has been higher than at any time since 1974.

3. Export Agriculture

The Structural Adjustment Policies applied to agriculture would be expected to generate a shift away from reliance on a narrow range of traditional export crops to a diverse mix of non-traditional products in varied markets. At the same time, farm operations would be made more efficient and marketing operations more flexible and market principle oriented.

INDEX OF VALUE ADDED IN AGRICULTURE 1974-1990

	Traditional Export Agriculture	Domestic Agriculture	Livestock	Total Agriculture
1974	100.0	100.0	100.0	100.0
1975	89.3	103.0	111.0	101.7
1976	99.2	96.9	115.2	102.4
1977	80.8	108.0	124.9	105.4
1978	91.2	128.3	121.3	115.5
1979	71.8	114.4	118.6	103.6
1980	67.4	108.1	117.0	99.2
1981	68.2	112.0	118.6	101.4
1982	66.8	98.7	111.1	93.4
1983	64.7	107.2	124.1	100.1
1984	67.1	124.1	127.4	110.2
1985	65.1	122.1	115.7	106.3
1986	63.2	117.2	114.5	104.1
1987	62.3	123.4	125.7	109.5
1988	67.6	111.5	122.7	103.6
1989	67.2	96.3	134.4	99.2
1990	67.6	107.2	163.0	110.8

Source: STATIN - National Income & Product: various issues

While the index of production of traditional exports shows negligible change over the past ten years, as Table 3 shows the value of traditional agricultural exports has gradually increased during the 1980s. Moving from around US$80 million in the base year, earnings grew thereafter to reach US$145.7 million in 1990.

The two main exports, sugar and bananas have benefitted from improved international prices as the relationship between value and volume exported attests. Earnings from sugar exports were 36% higher in 1987 than in 1980 although the volume exported had fallen by over 22%. Banana production was expanded rapidly in more recent

TRADITIONAL EXPORT CROP PRODUCTION AND EXPORTS

	PRODUCTION			VALUE (US$ million)		
	1980	1987	1990	1980	1987	1990
Sugar (l.t.)	242,000	188,000	204,000	54.4	73.8	85.8
Banana exp. (m.t.)	33,000	34,000	61,066	10.5	18.9	37.6
Coffee ('000 boxes)	250	371	261	4.5	8.4	3.3
Pimento (l.t.)	1,255	2,355	2,518	3.9	4.9	5.7
Citrus (m.t.)	4,996	9,567	11.918	1.8	4.8	4.7
Cocoa (l.t.)	1.369	2,600	2,068	4.5	4.6	3.3
				79.6	115.5	145.7

Source: PIOJ

years while the quality has improved by virtue of improved planting and handling techniques. Production for export has been concentrated on large modernized estates whose operations are geared towards high quality output, as small farmers, market their bananas locally. Consequently, the rate of rejection has fallen from 22% in 1980 to below 1% at present. Other traditional exports increased in output and value prior to setbacks occasioned by the 1988 "Hurricane Gilbert".

The increases in exports were positively influenced by conditions in world markets as well as by improved farm gate prices offered by marketing organizations. IMF data on international commodity prices show a trend of rising prices in sugar and bananas even in the absence of quality premia and special arrangements. The EEC price for imported sugar was 21% higher in 1990 than in 1980. An index of prices for bananas of Latin American origin delivered to United States ports showed prices in 1990 of the order of 44% above those of 1980. Similar data for EEC bananas under the LOME Agreement were not available, but export earnings by volume show a similar trend. Farm gate prices for bananas increased substantially over the period and especially in 1990.

For all but cocoa, farm gate prices for traditional agricultural exports increased faster than the general rate of inflation as represented by the Consumer Price Index. In Contrast, the farm gate prices for domestic crops kept pace with the CPI. As a consequence the intra-sectoral terms of trade shifted markedly in favour of export crops. The most outstanding case, that of bananas, has attracted heavy investment. Its attractiveness being

partly reflected in a surge in the market value of the shares in the privatized marketing company. A combination of rising international prices, credit availability and currency devaluation have thus contributed to the increased profitability of these crops.

The value of non-traditional exports tripled between 1982 and 1987 US$5.9 to US$18.9 million) and has subsequently fallen to 15.7 million in each of the last two years. Production peaked in 1986 led by large volume increases in vegetables (cucumbers, sweet peppers, etc.) and in fruits. The volume of exports in 1990 was about half of the 1986 out-turn concentrated in yams and other tubers.

4. Issues Related to Domestic Agriculture

As outlined before, economic policies of the 1970s, promoted protectionist inward looking growth. In that context, relatively small scale agriculture for domestic consumption flourished while relatively large scale export oriented agriculture stagnated. It is against said background that economic policy in the 1980s was re-oriented towards export led economic growth. For agriculture, this placed the emphasis largely on a resuscitation of traditional export agriculture and the encouragement of large scale non-traditional exports (for example through Agro 21).

While emphasizing the importance of agriculture as a potential earner of foreign exchange, its potential role in terms of alleviating rural poverty and increasing national food sufficiency through import replacement, ought not to be overlooked.

Whereas substantial elements of traditional export agriculture (especially in sugar and increasingly in bananas) is dominated by relatively large, highly capitalized and technologically advanced production units, there is more involvement of relatively small units in production of non-traditional exports. Of "traditional" exports, there is extensive small farmer involvement in pimento and cocoa while coffee has experienced increasing concentration on large scale production units. Food corps for domestic consumption which are also grown for (non-traditional) export, like yams, pumpkins and vegetables, are largely grown on relatively small production units.

The issue then arises as to the extent to which a policy focus dominated by the imperative to export, benefits the broader agricultural sector, including relatively small scale farming and food production. In the early 1980s, there was a vulgar perception that there would be a "trickle down" of technology, productive dynamism and income generating potential, form specially promoted large scale farms to a wider cross-section of the rural economy. The fallacy of this proposition is reflected in the effective withdrawal of small farmers from the banana export market, leaving

it to large technologically advanced units.

There is a sense in which the broad thrust of structural adjustment while benefiting large scale export agriculture, also ought to create a strong stimulus for increased dynamism and profitability of relatively small scale agriculture. This is obvious in relationship to small farmer involvement in producing especially roots, tubers, pulses and tree crops for export, benefiting from enhanced relative price signals and other aspects of monetary deregulation. It is less obvious, but no less important, that domestic food production by small farmers should be encouraged by those same relative price re-alignments. Increasing prices of food imports, consequent on exchange rate adjustment, should increase the demand for and increase the profitability of domestic food production.

Exchange rate adjustment, while being helpful, is not a sufficient condition for increased dynamism in agriculture. In the case of small farmers, there may be other interpositions which inhibit the transmission of exchange rate impulses to the farm-gate. Throughout the 1980s, for example, the state owned Jamaica Commodity Trading Company - JCTC- had a monopoly in the importing of specific commodities including a fairly extensive basket of basic foods. In the exercise of this monopoly, basic food prices were suppressed through effective cross subsidization from another public enterprise. The artificial suppression of the cost of imported food would have been a clear disincentive to increased domestic food production.

More recently (between 1990 and 1991) price controls on and subsidization of basic foods have mostly been phased out and the

Farm Gate Prices of Selected Traditional Exports
J$/Tonne

	1983	1990	% /\ 1984-90
Sugar	562	2,014	258
Bananas	330	3,748	1,036
BM Coffee	3,117	9,369	200
Cocoa	1,235	2,737	122
Pimento	2,420	9,590	296
Coconut	1,752	7,316	318
Consumer Prices	100	321.8	222

Source: PIOJ

JCTC monopoly largely dismantled. For the period under review (the 1980s), however, the disincentive effects would have been operative.

Parallel with subsidizing food imports, there was absolute protectionism where import of specific commodities which could be produced locally, was banned. This protectionism was derived from a perspective that it would allow expansion of domestic agriculture on the basis of market monopoly.

From the middle of the 1980s, however, the IBRD took the view that protectionism encouraged inefficiency in domestic agriculture. Accordingly, phasing out of protectionist policies has been an element of Trade and Finance, and Agriculture Sector Adjustment loans. The issue then arises as to whether, in light of the relative inefficiency of domestic agriculture, the removal of protection has been too precipitate. The capacity for domestic agriculture to compete will depend not only upon free market price signals, as inherent in the removal of import subsidies, but also on appropriate institutional support.

Monopolistic or oligopolistic export marketing organizations have been cited as important inhibitors to free market prices to farmers. Throughout much of the 1980s, efforts have been directed

Volume and Value of Non-Traditional Exports

	Volume million KG	Value US$ millions
1980	-	-
1981	-	-
1982	-	5.9
1983	12.3	9.3
1984	16.5	10.0
1985	23.1	13.5
1986	20.5	16.4
1987	20.5	18.9
1988	16.4	16.5
1989	11.9	15.7
1990	14.7	15.6

Source: PIOJ; ESSJ 1985, 1990

to improve competition and pricing efficiency for these organizations. As discussed some successes occurred and were attained in the second half of the decade. Granted, at the end of the 1980s there were still residual concerns on export marketing for citrus and especially cocoa.

It is not clear that the institutional support to enhance the supply responsiveness to relative price signals by traditional small scale agriculture, has been very strong throughout the 1980s. Indeed the institutional support through Agro 21, the National Investment Bank of Jamaica -NIBJ- and the Agricultural Development Corporation -ADC- has mostly focussed on relatively large scale export agriculture. The extension and research services which could have benefitted small farmers, were transferred and integrated from export marketing organizations to the programmes of the Ministry of Agriculture. In the mid-1980s, however, in light of severe fiscal adjustment, research and extension services of the Ministry specifically for domestic crops were effectively curtailed.

There has been limited attention to natural resource conservation, despite the establishment of the Natural Resource Conservation Authority in 1989, as there are continuing claims about watershed degradation. This counter-balances and undermines the efforts to improve irrigation.

Praedial larceny appears to have been and as yet an unresolved plague on domestic agriculture. National security agencies and their extension, agricultural wardens, for example, have been apparently unable to resolve said problem. The relative small scale farming makes it less viable to finance its own provision of crop security, as compared to relatively large scale farming.

There have been land reform and land titling projects which have benefitted small scale free-holding. Agricultural enterprise divestment has been mainly related to relatively large scale enterprises. Concerns have also been expressed about the transparency of the process of divesting large government holdings of agricultural enterprise or prime production acreages. At the same time, the demise of co-operative arrangements in agricultural production has undermined the capacity of small farmers to share in economies of scale in agricultural production.

While there has been a fairly substantial flow of credit to the agricultural sector, "domestic crops: have not been a primary beneficiary of the flow. The following tables relate to allocations from the Agricultural Credit Bank -ACB-, a principal source of credit for the sector, and especially for relatively small farmers.

For "Domestic Crops", the sub-sector within which small farmers figure most prominently, the annual credit flow did not show a

INDEX OF AGRICULTURAL CREDIT BANK LOAN ALLOCATION
1983 = 100

	Domestic Crops	Livestock	Export Crops	Infrastructure	Total
1983	100.0	100.0	100.0	100.0	100.0
1984	83.1	63.8	203.8	370.7	123.7
1985	123.7	108.0	225.2	277.9	154.8
1986	94.9	92.3	427.5	666.8	216.2
1987	105.5	175.3	588.8	589.6	294.5
1988	52.6	230.2	653.3	1,103.7	334.1
1989	63.3	358.0	561.1	1,831.2	382.1
1990	190.4	649.3	1,304.5	2,077.2	757.8*

Source: Economic and Social Survey of Jamaica, 1986 and 1990

* 1990 total is computed net of J$58,390,000.00 for "Agro-Processing" which was reported only for 1990.

sustained trend improvement. it was only two of the six years from 1983 to 1989 that the allocation from the ACB exceed that of 1983. In 1988, the allocation was slightly above 50%, of the flow in 1983. While the allocation grew strongly in 1990 relative to 1989, (in the context of a general rush to access credit before market rate linkage, it was only 90% above base year flows. This contrasts sharply with comparable increases for "Export Crops" of 1,200% and for the total of over 650%.

As a reflection of these comparative cumulative rates of growth, the share of ACB credit going to "Domestic Crops", declined over the period under review, as reflected in Table 8 above.

The share of "Domestic Crops" fell from 31.2% in 1983 to 4.9% in 1988. Despite having the strongest rate of growth in the rush of 1990, its share was still only 7.9%. In contrast, the share of "Export Crops" increased from 30.4% in 1983 to about 60% for each of the years 1986, 1987 and 1988. Following a flow and share contraction in 1989, "Export Agriculture" had recovered to 52.6% in 1990.

While data for 1991 is not yet available, post 1990 normalization and possible the impact of higher interest rates, it is likely that

in the context of sharp exchange rate adjustment, "export agriculture" will be better able to afford increasing interest rates than farmers producing for a domestic market which has suffered a sharp contraction in real income.

Granted a policy and institutional framework which was not strongly supportive of small farming, it would not be expected that there would be significant increases in productivity and production in crops with substantial small farm involvement. While the indicators would benefit from being more current, this proposition is not invalidated by the following table.

There are only three crops, cucumbers, cocoa and coffee where Jamaican yields increased between a base period of 1979-1981 and 1987, at a faster rate than a comparable agricultural economy (the Dominican Republic), the Unites States of America and the world average. In the case of pulses, Jamaican productivity increased faster than the Dominican Republic's and the USA's but much slower than the world average. For cassavas and yams in particular, traditional small farmer crops, productive dynamism was weak compared to both the Dominican Republic and the world average.

While coffee had started to benefit from large scale enterprise from domestic and foreign investors, attracted by premium prices for Jamaica coffee; comparative productive dynamism in sugar cane, on the other hand, appeared to have been, by 1987, very weak.

"SUB-SECTORAL ALLOCATION OF AGRICULTURAL CREDIT BANK LOANS (%)

	Domestic Crops	Livestock	Export	Infrastructure	Total
1983	31.2	34.7	30.4	3.7	100.0
1984	21.0	17.8	50.1	11.1	100.0
1985	25.0	24.2	44.2	6.6	100.0
1986	13.7	14.8	60.1	11.4	100.0
1987	11.2	20.6	60.8	7.4	100.0
1988	4.9	23.8	59.2	12.1	100.0
1989	5.2	32.5	44.6	17.7	100.0
1990*	7.9	29.7	52.3	10.1	100.0

Source: Economic and Social Survey of Jamaica, 1986 and 1990

* 1990 total is net of an amount reported for "Agro-Processing" which was reported only for that year

Indicators of agricultural output and especially that of small farmers, suggest rather indifferent performance throughout the 1980s. The following table relates to cereals, root crops and pulses which are likely to have substantial if not dominant small farmer involvement.

The table generates a consistent picture of output increasing to 1985, declining and failing to recover thereafter.

The same time path is replicated in the following table:

Total agricultural production and specifically food production, are seen to have increased by 1985 but subsequently declined almost to 1980 levels by 1990. When considered in per capita terms, the lack of dynamism is placed in sharper relief. By 1990, per capita food production was 12% below 1980 levels.

The decline in per capita food production, is not reflected, as might be expected, in an unambiguous increase in food imports. Consider the following table:

As dominated by heavily weighted "Cereals", the overall volume index for these selected food imports had declined to 68.2% of a

SELECTED CROP YIELDS
COMPARATIVE CUMULATIVE RATES OF GROWTH 1979-81 TO 1987

	Jamaica	Dominican Republic	USA	World
Potatoes	24.0	42.4	11.3	10.6
Sweet Potatoes	19.7	74.4	14.1	- 4.7
Cassava	- 3.6	16.9	-	4.1
Yams	0.1	18.5	-	6.5
Pulses	8.9	7.1	7.4	14.9
Tomatoes	- 7.3	5.4	25.4	9.3
Pumpkins	1.7	- 9.3	1.0	14.4
Cucumber	53.2	30.0	5.5	13.5
Cocoa	15.6	- 8.2	-	3.4
Coffee	33.9	26.5	-	- 1.6
Sugar Cane	-12.5	9.5	- 1.2	4.2

Source: FAO Yearbook 1987

SELECTED AGRICULTURAL PRODUCTION
JAMAICA

Metric Tonnes '000s

	1980	1985	1989	1990
Total Cereals	7	8	3	4
Root Crops	214	252	205	208
Total Pulses	7	8	6	6

Source: FAO 1990

1984 base by 1990. As a weak counteraction to volume decreases in "Cereals" and "Dairy Products", there were moderate increases for "Oil Seeds and Vegetables" (mainly soya products) and "Meat and Seafood".

Despite the overall volume decrease, price movements generated a 13% increase in United States dollar value between 1984 and 1990. From a comparison of volume and value movements, this resulted from price increases for all the selected categories but especially so for "Meat and Seafood" and "Dairy Products".

The changing pattern of food imports could be interpreted as reflecting a benevolent effect whereby consumers are substituting animal and marine protein for starches. But in light of stagnant real per capita incomes, and a worsening income distribution, however, hardly there has been a substitution of commodities with

INDICES OF AGRICULTURAL PRODUCTION
JAMAICA

1979-1981 = 100

	1980	1985	1989	1990
Food Production	99	109	104	100
Agricultural Production	99	109	104	100
Food Production per capita	99	101	91	87
Agricultural Food per capita	99	100	92	87

Source: FAO 1990

higher income elasticities of demand, for more basic "Cereals". Instead the increase in "Meat and Seafood" may be related to an increase in tourism needs in contrast to static domestic food production and concerns about the "quality" and regularity of domestic output.

To address the issue of declining small farmer's income and associated rural poverty, the government in 1989 announced its intention to establish "an organization to help improve the quality of life of rural Jamaicans." In pursuit of this objective, the Rural Agricultural Development Authority -RADA- was established in 1990. RADA's mandate is primarily to serve small and medium size farmers in the rural areas in an effort to enhance their productivity and income, while at the same time fostering the development of rural infrastructure and meeting farm family social needs.

It therefore functions to:

i) enhance the development of farms through an effective, efficient and sustainable extension service:

ii) supplement information to rural development agencies thereby assisting to advance improvements in rural infra-structure;

iii) assist social services, by providing information that will aid them in the development of programmes for farm families;

iv) provide technical advice to farmers of any size.

To accomplish its mandate, RADA will pursue the following objectives:

INDEX OF SELECTED IMPORT COMMODITIES
(1984 = 100)

	Cereals		Oil Seeds & Vegetables		Meat & Seafood		Dairy Products		Total	
Year	Vol.	Val.	Vol.	Val.	Vol.	Val.	Vol.	Val.	Vol.	Val.
1984	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1985	100.3	103.2	-	-	111.0	119.2	102.5	98.9	91.1	96.9
1986	85.7	74.6	94.7	86.7	140.0	164.4	107.2	107.0	90.8	98.4
1987	99.0	75.8	124.8	122.4	139.0	167.8	155.7	132.9	105.9	105.9
1988	97.0	96.3	72.3	96.5	152.2	224.2	88.7	126.5	103.0	126.6
1989	68.1	74.1	105.9	154.1	136.4	217.6	121.3	255.2	77.9	134.0
1990	56.9	62.4	116.1	138.9	130.8	207.4	77.3	170.6	68.2	113.3

Source: Computed from Economic and Social Survey Jamaica, 1987 and 1990

i) Provide a technical agricultural extension advisory service primarily to farmers in rural Jamaica in an effort to increase production and productivity;

ii) Train and develop extension personnel at all levels through in-service training programmes geared towards improving their efficiency;

iii) Administer farmer training programmes, thereby rendering farmers more knowledgeable and capable;

iv) Catalyze agricultural credit and inputs for small farmers;

v) Assist small farmers and intermediaries in organizing co-operative marketing ventures and disseminate timely marketing information to farmers;

vi) Co-operate with agencies involved in the development of rural infra-structure with a view to improving the quality of life in rural communities;

vii) Develop and operate rural agricultural service centres at strategic locations, thereby bringing service closer to farmers;

viii) To be the implementing agency for selected projects that impact on the rural farming and biological environment e.g. Watershed development projects, hillside agriculture, etc.

ix) To liaise with agricultural research organizations with a view to providing the technology delivery link to rural farmers;

x) Provide a channel for the free flow of policy inputs from farmers upwards, and for the implementation of policy decisions taken by the policy makers.

All to enhance productive efficiency and ultimately the quality of life for small farmers.

By early 1992, however, before RADA was able to begin effective delivery of its objectives, assistance for small farmers was once more threatened by fiscal resource constraints. At the end of February it was announced that the budgetary allocation available for RADA would be effectively halved.

On the contrary export agriculture appears to have been relatively dynamic as it is an intended effect of structural adjustment policies. Export agricultural oriented growth does not, however, have to be at the expense of relatively small scale domestic agriculture. However small scale agriculture, appears to have been affected by the liberalization and free market relative price signals as well as a weakening of institutional support which has not yet been effectively reversed.

SECTION VI: EVALUATION AND RECOMMENDATIONS

Expectations versus Developments to Date

The development strategy of the 1980s relied expressly on private investment in export manufacture, international services, tourism and export agriculture. These activities collectively had the potential to dramatically increase foreign exchange earnings and diminish reliance on bauxite/alumina exports as the mainstay of external trade.

Based on past performance, the existing infrastructure and long-lasting trading arrangements, remained causal elements for traditional export crops. i.e. the sugar industry was beset by inefficiency in every area. Re-organization and investment along commercial lines could raise yields in both production and processing sufficient to satisfy export quotas while freeing some prime arable land for other high yield crops. A zone of 250,000 tons per annum was seen as achieving this goal at the end of the resuscitation process.

Bananas too were felt to have significant under-used capacity which could be efficiently realized by replanting estates with improved varieties and the modernization of handling and packaging techniques. Exports had declined from 136,000 metric tons in 1970 to a low of 11,000 metric tons in 1984. The reorganization of the industry was expected to restore exports to 50,000 tons by 1988 and 120,000 tons by 1991.

Other traditional exports, particularly coffee and citrus, provided as well a wider scope for significant expansion. Direct investment by Japanese firms and Government investment in roads and other basic amenities would have made possible a tripling of acreage under coffee by 1990. Progressive deregulation of marketing arrangements for coffee, citrus and cocoa would add to the incentive to export already initiated by the new trend towards exchange rate liberalization.

The outlook for traditional exports then was one of growth through more efficient organization and increased farm-gate prices to mae new investment in these areas attractive. The modernization in agriculture was expected to develop into a vibrant commercial farm sector devoted to the export of non-traditional crops - winter vegetables, fruits and ornamentals. A "new breed of entrepreneur" would emerge to lead this new thrust, blending overseas marketing expertise and technology with local land and equity. Exports would, therefore, become more resilient to fluctuations in commodity prices, being more diversified by type and by destination.

Up to 1987, the response of traditional exports to price signals, reorganization and investment had been disappointing. Growth in sugar and banana production had not yet materialized. Sugar production in 1987 was 188,000 tons compared with 242,000 in 1980. Bananas had increased marginally: 33,000 tons in 1980 to 34,000

tons in 1987. Other traditional exports, however, coffee, pimento, citrus and cocoa doubled in output. Earnings nevertheless increased for all crops with sugar and bananas enjoying favourable market prices. Production of most crops was badly affected by Hurricane Gilbert in 1988 but recovery since then has been spectacular.

Banana production has doubled; sugar output has begun to achieve some earlier expectations. Tree crops have been slower to expand but acreages and other inputs point to continuing expansion. Overall, the expectations of the early 1980s for a revival of strong traditional exports have been slow, but it is progressing.

Non-traditional export growth has not caught on to the dimension expected. Following major investments by Government in land preparation, planting material, irrigation, roads and packaging plants; the exports of winter vegetables, fruits and flowers increased rapidly, tripling between 1982 and 1986. Thereafter, with the dissolution of marketing partnerships, these exports have fallen.

Running parallel with the somewhat protracted implementation of structural reforms, domestic agricultural output rose through the first half of the 1980s. Thereafter, financial resources, institutional support and the thrust of government policy shifted further attention to the export sector. Indeed, local food expansion was infringed to the more general balance of payments problem Massive diversion of resources away from the production of domestic crops may yet prove to have been shortsighted. It certainly was not a condition for export expansion.

Elements of the Process

To evaluate the rather slow response of agriculture to exports in light of the resources and incentives committed to this process, it is useful to review a series of factors which has influenced this process. i.e. the stages of project planning and implementation; the degree and adequacy of financial and institutional support; the price and market incentives; and certainly the role of uncontrollable factors such as the weather and international market conditions.

The Uncontrollables

Agriculture is highly vulnerable to weather conditions. Indeed, production and productivity is invariable tied to favourable weather conditions. Over the review period, there were occurrences of drought, flood, hurricane winds as well as disease at various times. Unseasonal rains were a factor in the production/marketing cycle of the projects supporting the winter vegetable initiative. Irregular rainfall and long periods of drought affected all crops and regions at different times, but was particularly acute and generalized in 1986. The agricultural recovery of 1987 was

reversed in 1988 by Hurricane Gilbert with rippling effects which extended through 1989. Between 1981 and 1990, agricultural performance was significantly affected by weather conditions in at least four years: 1982, 1986, 1989 and 1990.

While weather changes were generally negative, developments in export markets were particularly positive. Opportunities were opened through trading arrangements. i.e. The Caribbean Basin Initiative (CBI) and CARICOM. Also through private marketing contracts such as the arrangements for coffee exports. prices of the major traditional exports rose secularly and sugar exporters in particular were able to shift from quota commitments to the world market to maximize returns. In general, Jamaica was able to sell whatever it could export at good prices subject to its quality.

The unification of the European market and the relaxation of preferential access will have implications for the marketing of bananas over the next few year.s Jamaican bananas will be in direct competition with lower cost Central American producers. To be competitive, the local industry is investing in expanding acreage and improved technological packages to increase production and productivity to lower unit costs. Investment is also flowing into handling arrangements locally, in transit and in England. Other initiatives such as joint marketing with other CARICOM countries and Latin America are being pursued. But despite the impending loss of special status of preferential market under the "Lome Convention" prospects in both the banana and sugar industries remain promising.

Government Direction and Control

Agriculture was,throughout the 1980s, an area of the economy over which Government exerted extensive control. One third of the total land area was publicly owned as well as some twenty agricultural and agro-industrial enterprises in sugar, bananas, rice, livestock, forestry, aqua culture, orchard crops, rum and other products. In addition, government controlled export marketing organizations, financial and promotional companies as well as a large administrative and institutional Support Services.

The success of the modernization process in agriculture, therefore, depended heavily on the efficacy of government planning, financial investment and institutional support. under the said premise on which success would be based, then the alternative would have to be a divestment of control over the use of resources, and reliance on the market and the private sector for decisions on prices, investment, output and trade.

In retrospect, the supply response of agriculture has tended to vary directly with the pace of divestment from government control. Those industries which enjoyed the most control by the private sector have seen the most encouraging results. The restructuring and partial deregulation of marketing arrangements for sugar, bananas, coffee and pimento have produced strong price incentives

for those producers. Further, the privatization of the sugar estates and the extensive purchases from private farmers, has been associated with the improved yields of both sugar cane and sugar. Bananas are an even more spectacular case. Coffee expansion was private sector led although it benefitted from improvements to access roads in mountainous areas. In general, privatization and free market prices have constituted causal elements toward improving efficiency in agriculture.

On the other hand, the modernization in non-traditional exports was conceived to have been spearheaded by a large project, which was a partnership between a public corporation and private managers and marketers. The project was an expensive government financial failure under which adverse weather conditions, inefficient planning, and operational management are claimed to be the primary reasons of said failure. The effects of this enterprise seems to have discouraged other would-be non-traditional exporters from investing in those new crops recommended by Agro 21 such as heart-of-palm. Contrary to general belief, with few exceptions, the agricultural exports of non-traditionals that have shown sustained growth have been those familiar to the traditional farmer - primarily tubers, vegetables such as pumpkins and cucumbers, fruits such as melons and condiments. In sum, there was and seems to be a potential conflict between private initiative by the farming community regarding crops for export on the one hand, and those promoted by Government through direct participation in production and marketing as well. In that environment, a divergence inevitable arose between the expectations formed by the planners and the extent of a response by the private producer.

Financial and Institutional Support

The creation of the Agricultural Credit Bank -ACB- in 1982 was a major reform of the credit delivery system for agriculture as this supplemented the private foreign investment, corporate diversification and normal commercial bank financing. The combined private and public investment in agriculture was considerable. Interest rates through the ACB were below market rates and before 1985 were negative in real terms. There was consequently some motivation for the diversion of funds obtained for farming into other areas of faster and more lucrative returns such as commerce, and into real estate, activities not directly related to farming.

The extent of this phenomena cannot be easily substantiated, but it is a factor to incorporate in the analysis when comparing financial resources allocated to agriculture with the agricultural supply response up to 1987.

Also, one is to recognize the limited support services by the Ministry of Agriculture and the issue of praedial larceny and how they adversely affected a substantial increase in non-traditional agricultural exports. Reduced real Government expenditure has meant a compression of real public sector wages and a loss of

skilled extension and research staff. A slower than expected agricultural supply response would be related to this failing and could account for the relative concentration of new methods in particular crops.

Incentive Structure and Opportunity Costs

The centre piece of the Structural Adjustment process was the realignment of relative prices between traded and non-traded goods on a broad economic front and between particular sectoral and sub-sectoral activity at a more disaggregated level. Much of this realignment took place between 1983 and 1985.

It has been argued that in the absence of strong institutional support - extension services, roads, marketing services, crop security, etc. - the price incentive provided through real devaluation was not sufficient to induce investors at the margin. Costly difficulties between production and export discounted the improved farm-gate prices. Even without subsidized credit, good foreign exchange earning opportunities existed in tourism and manufacturing for CARICOM, while investment in real estate absorbed a great deal of the marginal investment dollar. In short, a has been the experience of several countries, a shift in relative prices does not quickly lead to a change to the desired pattern of production. The response is influenced by the perception of economic policy that signals permanency, the extent of supply bottlenecks, opportunity costs and the degree of Government control. Markets do not work well where prices are distorted by government intervention.

To summarize, the growth in traditional agricultural exports has been slow to materialize but the performance of the sector in the last two year is encouraging. This is not true of non-traditional crops except for the more familiar areas such as yams and pumpkins and to some extent, flowers. Developments in non-traditionals therefore, have fallen short of expectations by varying degrees, granted there are some specific exceptions.

These expectations were not over-ambitious and in some cases represented no more that a recovery to previous levels of production, improved quality in others, and expanded acreages in yet other crops. Targets were, however, set at the level of government, while performance depended on private initiative. Where government control and ownership was divested and market forces freer to work, the response was most encouraging.

Other elements of the resuscitation and modernization of the agricultural sector process were inadequate. These include the limited support services available thereby increasing the risks involved in agricultural investment and reducing its attractiveness relative to other sectors. Some of the distortions caused by administered relative prices are only recently being removed and export agriculture should become more attractive in a freer market economy framework.

The experience of the attempt at structural adjustment of the economy involving multilateral donor agencies and high degree of Government participation and intervention in all aspects of the process, raises consideration of the proper role of the public sector in general, and specifically regarding use of it as and efficient resource allocation media earmarked for a particular purpose. The continuing divestment of public owned enterprises indicates a commitment to minimizing the role of government in the production and marketing of commercial crops.

The formation of the Rural Agricultural Development Agency -RADA- to be staffed by agriculturalists to spearhead technology transfer and applied research suggest a recognition of the areas on which public resources should be devoted. Previous country surveys suggest that, the growth induced by field demonstration, proper testing of better varieties of planting material, attention to training, quality standards, transportation and market information tends to have a higher pay-off in the long run than intervening on price related issues.

In this vein, it is arguable that overseas support through World Band Funding may have been more productively deployed on sector specific infrastuctural and technological development, with benchmarks to monitor progress, than to have been applied broadly to balance of payments support with policy conditionalities. In any event, as investment finance becomes scarcer and more expensive, the need for a better return has begun to focus more attention on issues of farm efficiency and productivity. As the sector becomes more commercialized, competition is bound to induce more investment into research and farming methods. In this regard, the public sector should lay the foundation for national competitiveness (through agencies such as RADA and the Bureau of Standards) and allow the market to reward pioneering progress in the agricultural sector.

SUMMARY

The analysis of the impact of structural adjustment process on Jamaica's agricultural sector highlights the following issues for consideration:

(i) Within the framework by which the consolidation of the European and North American trading blocs threatens the nations's existing preferential market access, efforts and lobbying for continued preferential markets ought to be accompanied by a national commitment and strive to enhance production and productive to become more efficient. These efforts should include technological development in those crops determined by rigorous technical evaluation of comparative advantage in traditional and non-traditional export agriculture and domestic food production.

(ii) In the context of enhanced relative free-market price signals, there could be an effective acceleration of privatization of agricultural enterprise and prime productive acreages. In keeping with the logic of liberalization, the transparency of the privatization process should be enhanced.

(iii) Despite privatization and notwithstanding the failure of Agro 21 and the "mother farm" concept, the government still has a substantial role to play regarding agricultural policy issues, environment, facilitating foreign market access, encouraging and promoting foreign and local investment as well as providing adequate infrastructure and institutional support for both export expansion and import substitution replacement.

(iv) Jointly to emergent success in large scale traditional export agriculture, the imperatives to diversify exports, increase food self-sufficiency and nutritional standards and ameliorate rural poverty require special attention to the plight of relatively small farmers. In this vein, the original objectives of RADA especially in terms of research, extension and marketing for the small farming community need to be pursued.

(v) The Government together with the farmers need to actively participate in inhibiting praedial larceny as well as encourage and support organized co-operative efforts in this direction. Similarly there needs to be more organized and extensive efforts (policy and public education) to halt deforestation and watershed degradation. The deeper solution to these problems may require broader social engineering embracing education and alternative socio-economic opportunity.

(vi) Whether or not the rate of removal of subsidies for agriculture in general and small farmers in particular is adequate and ought to be re-examined, with the international lending agencies is unclear. In other countries the pace has been slower. In a context where farmers in OECD countries are heavily state supported and where, internally, there are widely divergent rates of return between sectors, the issue is especially acute in the

case of lending rates for small farmers producing for the domestic market. While there may be positive relative price signals for import replacement, the reduction in real income from exchange rate adjustment seems to inhibit the capacity of small farmers to take credit with high nominal interest costs arising from balance of payments and exchange rate policy.

(vii) The issue of small farmer's economies of scale ought to be re-examined. Certainly co-operative enterprises in production as well as purchasing and marketing might be viable. Granted, resurgence of co-operatives will, however, require a major educational effort to overcome the unfortunate and irrelevant ideological trappings that the concept acquired in the 1970's in Jamaica. Co-operative production may also be inhibited by the small farmers' preference towards mixed production as against single cropping and pure stand cultivation.

(viii) The unavailability of adequate crop insurance when production has suffered from natural disasters for the small farmers seems to support their preference for inter-cropping. The possibility of more effective and extensive crop insurance needs to be explored.

It is clear from the issues presented that the government still needs to play an extensive support role to increasingly privatize and modernize agriculture. The issue that arises as to how this is to be financed within the context of a tightening public sector financial constraint. On one level, it is clear that balance of payments support measures intertwined with an agricultural policy matrix does not necessarily allow for targeted support to the agricultural sector. The issue of making financial resources target oriented and more sector specific ought to be explored. On another level, a specification of priorities within a more narrowly defined role and scope of government, could release more adequate resource for effectively supporting the agricultural sector modernization.

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