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Market Innovation for Agricultural Diversification

INTRODUCTION

In keeping with the thrust of this conference, implementing agriculturing diversification policies and strategies, this paper seeks to address the issue of market availability as a basis for product diversification with special reference to the choices that some Caribbean countries face.

The paper begins by assuming that success in improving their economic status demands of Caribbean economics, a level of adjustment of these economies, such as diversification of agricultural production. This diversification has as its genesis a desire to secure greater output and increased revenues. Fundamental to this assumption, however, is the further assumption that there are markets to be tapped which will result in increased returns.

A programme of diversification is useful in providing the basis for countries such as our host country, St. Kitts, to seek out alternative strategies for solving the perpetual dilemma of securing production response by farmers, while at the same time identifying and consolidating opportunities for expansion of the economy.

The Caribbean region is diverse when one observes the variation in social structures, cultural heritage, linguistic patterns and emphases in political and economic arrangements. This diversity is linked to the role which metropoles have played in the region. Consequently, while the CARICOM member countries are physically similar to other regional countries (e.g. Cuba, Dominican Republic, Haiti, Guadeloupe, Martinique, Suriname, etc.) they do maintain their independent qualities, hence ideas or strategies offered for adoption must be geared to the specific country.

The prevailing economic alignment of countries in the region is one of openness, primarily with export-oriented economic structures and expanding consumptive patterns aligned to important metropoles.

In the English-speaking Caribbean, agriculture has been developed through the classical plantation system. Originally owned by foreign interests, this system concentrated mainly on the large scale production of crops for export (particularly sugar) and relied primarily on indentured or slave labour. The system proved to be untenable for a variety of political, social, and economic reasons and has largely disappeared. It has, nevertheless, had a profound effect on the tenurial patterns of the agricultural sector, on land use, and on social attitudes to agriculture. It is also a truism that a great many of today's structural problems in terms of production can be directly or indirectly linked to the rise and fall of the plantation system.

PROGRAMMES OF PRODUCT DIVERSIFICATION

The pursuit of a programme of diversification of traditional agriculture by CARICOM member countries offers a strategy for dealing with such difficulties. It is the absence of a common objective on the part of these countries which makes it necessary to provide such a strategy. Those who promote the concentration hypothesis argue that it is the lack of diversification, or rather, the concentration on either a single commodity, or no more than a few commodities that makes the LDCs highly vulnerable to export instability. This hypothesis is also applicable to the marketing arrangements which exist for the country's exports. Dependence on a single geographical market makes that country particularly vulnerable to the fluctuations originating in one or more importing country. While, the full implication of such vulnerability is still to be explored, the process of adjusting is a continuing one.

Caribbean countries might well have to re-appraise their continued production of traditional crops geared towards securing foreign exchange under conditions where they lack the ability to control prices of their products. Rather, they might seek to gear

production towards meeting the growing needs faced by their own domestic sectors for basic foods for their growing population.

In an effort to improve the relative position of their respective countries, it now seems reasonable to assume that these countries, faced with the requirement of the new arrangements which they must adjust to, should now develop machinery to deal with this situation if they are going to maintain the stability and economic viability they seek.

A rationalization of existing patterns of production and marketing must be pursued. Such a reassessment should provide a review of the existing mix of commodities and, also, provide for development of alternative policy and logistical services (marketing, transportation, information, intelligence, etc.) which will provide agricultural producers with a higher standard of living.

Such a policy of change necessitates the introduction of innovativeness on a national and regional scale. A programme of innovation resulting in the diversification of existing patterns of production might be: (a) cost saving, (b) result in the introduction of new products, or (c) result in the creation of new institutions or new organizational approaches. In the first instance, the same final products are offered, but an improved technique or method results in cost per unit of output being decreased. In the second, the introduction and/or simultaneous promotion of newly designed products is possible, e.g. processed fruits, cassava flour, plantain chips, banana wines – catering to the demands of consumers. In the last case, legislative action for putting new institutions into place will contribute to a new approach.

INNOVATION AND PRODUCT DIVERSIFICATION

Theories of innovation and marketing rationalization are based on the presumption of the existence of a market economy. Pronouncements on the need for expanded trade and production patterns are viewed as calls for diversification of the existing patterns and are applicable to the concerns of the Caribbean countries.

Economists seem to agree that innovation is important to both supply and demand. They stress the fact that innovation in business plays a key role in the level of expectation – hence capital moves to the innovator who helps to generate new enthusiasm for further investments. This theme is expressed in Schumpeter's work as he glorifies innovations as the precursor of economic growth. "Innovation," he suggests, "is the setting up of a new production function. . . it combines factors in a new way or consists in carrying out new combinations." He sees the country, benefitting from a series of activities which establishes the psychological climate for other economic activity in the various sectors.

Yes, the innovator reaps the initial profits, but according to Schumpeter, cost-reducing innovations benefit not only the individual entrepreneur, but also the consumers and the society as a whole. He also suggests that innovation manifests itself in the form of new markets, new products, new techniques of production, new uses for factor inputs and the reorganization of an industry (country) or part of an industry.

John Bates Clark, on the other hand, sees competition as the driving force of innovation. Competition forces producers to adopt innovation and the resulting superior methods of productions diffused throughout the economy. Ronald Dove (page 569) in looking at the motives of the Japanese innovator during the Meiji period lists four factors which were crucial: novelty, patriotism, submissiveness and economic interest. The opportunity for innovation is viewed as synonymous with that of product diversification. In essence it involves the spreading out of risks so that if some, investments or industries perform poorly others will perform well.

It is not a secret that some of these Caribbean countries have not been able to maximise the use of their resources, for the benefit of all their people. Innovations (diversification) can play an important role in the economic future of the region. The impact of any such effort of diversification would influence production and the arrangements by which products are used to satisfy the needs of the society. As diversification occurs, new linkages are developed which require further adjustments.

Innovations to the existing approaches which may provide major dividends among the many possible areas of innovation are:

1. In the production of food crops for local and inter-regional needs, e.g. yam, sweet potatoes and peas.

2. In the development of fishing and fish related industries.

3. In the introduction of greater use of multiple cropping techniques.

4. In the increased emphasis on the marketing of sugar by-products rather than raw sugar.

5. In the reassessment of land use and land tenure arrangements.

6. In raising the level of technology and constant ongoing research and development.

7. In the expansion of research geared towards finding new or additional products and markets from existing primary agricultural commodities, e.g. winter vegetables, cut flowers.

8. In embarking on studies for the developing of taxation techniques to use as a stimulant to agricultural output.

9. In the granting of incentives to the agricultural sector for capital investment and increased labour usage.

10. In the freeing of traditional agricultural workers for non-agricultural production, e.g. textiles and light manufacturing which has as its base agricultural production.

Each of the above suggestions represents an area of substantive possibilities for a programme of diversification and could be adapted based on some macro policy directions of the country.

INNOVATION AND DIVERSIFICATION IN THE SUGAR INDUSTRY – CARIBBEAN SUGAR AND UNITED STATES POLICY

There is no question that in terms of earned revenue and job creation sugar has been the mainstay of some Caribbean economies. There are estimates that between 50 and 60 percent of the total cost of growing and manufacturing a ton of sugar is accounted for by wages and salaries with wage rates in the industry being generally higher than in other areas of agriculture.

Recently, Ives and Hurley (page 62) reporting with respect to Jamaica, Belize, Barbados, Trinidad and Tobago, and St. Kitts and Nevis, state:

> They all have one thing in common, they are all signatories to the Lome Conventions Sugar Protocol which allow them to export sugar to the EEC under quota and for a preferential price. While the sugar protocol has protected these countries, to a certain extent, from the full brunt of the U.S. quota cuts, they nonetheless have been hurt due to the integral role of U.S. sugar imports in their sugar industries and the importance of their sugar industries to their economies.

Ives and Hurley go on to point out that:

> Among the oldest of industries in Jamaica, sugar is the third most important export earner. Cane cultivation occupies one-quarter of the arable land. In Belize, the sugar industry has been the mainstay, of the economy since the 1950s, accounting for 20% of GDP and 50-60% of all exports. Cane cultivation currently accounts for about 50% of the total area under cultivation in the country. In Barbados, sugar remains the most important commodity despite a gradual decline in production over the past few years. It has been surpassed in recent years by tourism as the largest source of foreign exchange and contributor to the country's GDP. Trinidad and Tobago's second largest industry is sugar (after petroleum) providing about 2% of the country's foreign exchange earnings and occupying a third of cultivated land. The St. Kitts and Nevis sugar sector provides over 10% of GDP and about 60% of merchandise export earnings.

Further indications of the importance of sugar to the economies of selected Caribbean countries is seen in Table 1, which indicates the importance of sugar as an export commodity. For example, in St. Kitts and Nevis the sugar share of total merchandize export earnings is 46.5% and 25.5% in Belize.

TABLE 1: *Export Reliance Indicators for Selected Caribbean Countries (1985)*

Country	Share of Sugar Output Consumed Domestically	Sugar Share of Total Merchandise Export Earnings
Barbados	13.4	7.1
Belize	5.8	25.5
Haiti	N*	1.2
Jamaica	47.6	9.1
St. Kitts and Nevis	7.9	46.5
Trinidad and Tobago	81.3	1

*Net Importer

Source: United States Policy: An Analysis, p. 23.

What is portrayed here is an industry which is critical to the economic well-being of these countries. In recent years, however, its importance has been declining. A major contributor to the declining nature of the industry centers on the policies of the United States regarding the importation of sugar as well as the falling production within each country. To understand the production failures one can look at the pricing pattern for sugar and the impact of U.S. policies regarding the importing of sugar during the past several years.

A major aspect of this U.S. policy has been the Food Security Act of 1985 which amends Section 201 of the Agricultural Act of 1949 and mandates a price-support programme for domestically produced sugar cane and sugar beets for the 1986-1990 crop years.

Table 2 Raw Sugar Prices (U.S. and World) depicts the deepening burden on these producers. World prices moved from 29.02 cents in 1980 to 6.71 cents in 1987. The United States support price of 18 cents per pound for raw sugar has generated increased domestic production in the U.S. Current dialogue in the U.S. Congress suggests on the one hand that a reduction of this support would lessen the production in the United States. Conversely, to the extent that domestic production declines, imports will increase and all quota holders including CBI members would benefit in proportion to their share of the U.S. quota. The question then is, will total revenue increase for these countries?

A corollary of this situation is that these countries are traditional beneficiaries of U.S. economic assistance. Over the years. their leaders and economic commentators have argued for trade rather than aid.

In recognition of the region's preference for trade rather than aid, the U.S. has enunciated a variety of support mechanisms. The Caribbean Basin Initiative was designed to assist these countries, yet they are among the hardest hit by changes in the U.S. production and resulting quota patterns for sugar. In the 12 years between 1975 and 1987, annual sugar consumption in the United States fell by 1.7 million tons, while total sweeteners consumption, including corn sweeteners, rose by over 3.4 million tons. The substitution of high fructose corn syrup (HFCS) for sugar and shifts in sweetener demand have changed the quantity and relative importance of sugar in different uses.

In 1988, the United States will import from the CBI countries about one-fifth of the total amount of sugar it purchased in the year before the quota programmes began.

As a result of smaller exports to the U.S., a greater amount of their exports have been dumped on the free market which has contributed to the depression of the world price and lower export earnings. On the other hand, the recent Legislative actions which are still pending before the U.S. Congress propose certain preferential trade and tax measures for the CBI countries. In fact, it expresses the sense of Congress that the

TABLE 2: *Raw Sugar Prices: 1950 — 1987*

Year	Domestic	World	Difference	Difference
		(cents per pound)		(percent)
1950	5.93	4.98	0.95	16.02
1951	6.06	5.67	0.39	6.44
1952	6.26	4.17	2.09	33.39
1953	6.29	3.41	2.88	45.79
1954	6.09	3.26	2.83	46.47
1955	5.95	3.24	2.71	45.55
1956	6.09	3.48	2.61	42.86
1957	6.24	5.16	1.08	17.31
1958	6.27	3.50	2.77	44.18
1959	6.24	2.97	3.27	52.40
1960	6.30	3.14	3.16	50.16
1961	6.30	2.91	3.39	53.81
1962	6.45	2.98	3.47	53.80
1963	8.18	8.50	−0.32	−3.91
1964	6.90	5.87	1.03	14.93
1965	6.75	2.12	4.63	68.59
1966	6.99	1.86	5.13	73.39
1967	7.28	1.99	5.29	72.66
1968	7.52	1.98	5.54	73.67
1969	7.75	3.37	4.38	56.52
1970	8.07	3.75	4.32	53.53
1971	8.52	4.52	4.00	46.95
1972	9.09	7.43	1.66	18.26
1973	10.29	9.61	0.68	6.61
1974	29.50	29.99	−0.49	−1.66
1975	22.47	20.49	1.98	8.81
1976	13.31	11.98	1.33	9.99
1977	11.00	8.11	2.89	26.27
1978	13.93	7.81	6.12	43.93
1979	15.56	9.66	5.90	37.92
1980	30.11	29.02	1.09	3.62
1981	19.73	16.93	2.80	14.19
1982	19.92	8.42	11.50	57.73
1983	22.04	8.49	13.55	61.48
1984	21.81	5.18	16.63	76.25
1985	20.34	4.04	16.30	80.14
1986	21.00	5.39	15.61	74.33
1987	21.83	6.71	15.12	62.26

Source: International Sugar Organization, USDA.

trade portion of the CBI should be strengthened. Much pessimism abounds, however, as to the likely passage of the proposals.

This contradiction in policy support on the one hand with restrictions on the other, means that the countries of the region must find alternative approaches for stimulating their economies. The present structure and performance demand the introduction of a programme of diversification in the production mix.

MARKETING INNOVATION IN THE SUGAR ECONOMIES

The crux of this paper is to support the thesis that improved marketing and opportunities for marketing can serve as a basis for increased returns. In the case of Caribbean countries that have been dependent on sugar as an important income generator, it now appears that they are faced with finding new markets and new income generating products.

Diversification, while an alternative, does include a cost. While the case for diversification is to lessen the chance of injury from production failures (drought, diseases, market or price declines) the consequence of diversification is that a country becomes chronically poorer if it is not able to specialize in the production in which it has a comparative advantage. Hence, the recently announced 41% reduction in U.S. sugar imports has reduced the St. Kitts quota to 10,500 tons for 1987 and will result in an estimated $0.4 million less in earnings. This reality calls for greater acceptance of non-sugar and/or non-agricultural involvement by St. Kitts. For example, it might now seek expansions in its growing and marketing of yams, sweet potatoes, and peas grown in rotation with existing sugar cane production.

Simultaneously, St. Kitts and other Caribbean countries must explore alternate markets for their sugar and seek to take advantage of the growing opportunities for bagasse, molasses, animal feeds and other by-products of sugar. In the non-agricultural sector, the countries might seek expansions of exports to the United States under provisions of various trade bills which have been under consideration. For example, legislative proposals were introduced in the 100th Congress to liberalise the movement of textiles. Allocation of import levels would be left to the Executive Branch, but maintained at no more than the global quota. The Bill, S.73 would, in effect, specify that there are to be no quantitative limits on imported products that are assembled in the Caribbean from U.S. made components. This could be a major boom for Caribbean countries in search of alternative strategies for bringing into production currently under-utilized resources.

CONCLUSION

All the evidence might not be in, but it seems clear that the potential for improvement in the agricultural sector is present in the Caribbean. Whether progress can be made will depend on the development of successful strategies to meet the needs of the individual countries not only to introduce new products but also to engage in new marketing arrangements.

In facing these concerns, agricultural producers must recognize that their options for profitability rest with meeting the local demands as well as the supply of international and regional markets.

New approaches (innovations) must be made in finding expanding markets, and new products. Latin America, a region which has some natural advantages to the Caribbean based on its relative geographical position, must be courted. In addition to new products and new marketing arrangements, new marketing channels, transportation, storage, credit and financing arrangements, pricing and production incentives must be put into place to ensure that the rationalization of Caribbean agriculture will improve the quality of life of those who are dependent on its success.

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