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NAFTA OR NOT: IMPLICATIONS FOR CARICOM AGRICULTURAL COMPETITIVENESS

By

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ABBREVIATIONS AND ACRONYMS

CARICOM	Caribbean Common Market
CBERA	Caribbean Basin Economic Recovery Act
CBI	Caribbean Basin Initiative
FCGJ	Frozen Concentrated Grapefruit Juice
FCOJ	Frozen Concentrated Orange Juice
FOB	Freight on Board
FTA	Free Trade Agreement
GATT	General Agreement on Tariffs and Trade
GSP	Generalized System of Preferences
HFCS	High Fructose Corn Syrup
ITC	International Trade Centre
NAFTA	North American Free Trade Agreement
OECS	Organisation of Eastern Caribbean States
RTA	Revealed Trade Advantage
SSE	Singular Strength Equivalent
TRQ	Tariff rate quota
USDA	United States Department of Agriculture
USITC	United States International Trade Centre
USVI	United States Virgin Islands

NAFTA OR NOT: IMPLICATIONS FOR CARICOM AGRICULTURAL COMPETITIVENESS

INTRODUCTION

The 1980's have come to be considered by some as "the lost decade" for Caribbean economies. After experiencing fairly steady growth in the 1970's, CARICOM economies began manifesting symptoms of the "Dutch Disease."[1] This was compounded by a tendency towards declining exports and increasing production of non-tradeable and home goods. In the more developed CARICOM countries, monetary and fiscal measures were introduced to control inflation, escalating national debt and capital flight. The intensity of intra-regional trade also declined as CARICOM countries broke ranks and resorted to unilateral policies aimed at "safe-guarding" their national economies. International competitiveness also emerged as a major concern among countries in the 1980's, due to shrinking export demand and increased pressure to liberalize trade manifested by inter-alia, reductions in the levels of government support to agriculture.

In addition to the well-documented worldwide political changes that have occurred in the 1990's, this decade has been characterized by a renewed commitment to regional integration. Not only have old trading arrangements been revisited and new regional groupings formed, but existing arrangements have been widened to include new members.

Kelly et al (1992) suggests that this renewed interest in regionalism is not unrelated to frustrations arising from the inability to reach settlement in the Uruguay Round of GATT. This, in concert with other factors, may well result in a gradual movement towards regional trading blocs aligned around Asia, Europe and North America.

The increased attention accorded agriculture and concerns about competitiveness are evident in the numerous international negotiations and debates now occurring globally. Agriculture and agribusiness issues continue to constitute major constraints to on-going GATT negotiations, NAFTA and European agricultural policy reform. At the core of these debates are concerns over individual country capability to compete in agricultural trade.

Achieving and maintaining competitiveness in CARICOM agriculture constitutes perhaps the single most important challenge facing the region. The manner in which this issue is addressed will dictate economic development in many CARICOM countries for years to come. The manner in which this challenge is met will also have a major impact on initiatives directed towards attainment of environmentally sound and sustainable agricultural development.

AN OVERVIEW OF NAFTA

Tentative agreement on NAFTA was reached on August 12, 1992 between the Governments of Canada, the United States and Mexico. In the preamble to the NAFTA, the governments of the United States, Canada and Mexico affirmed their commitment "to promoting employment, and economic growth in each country through the expansion of trade and investment opportunities, and by enhancing the competitiveness of Canadian, Mexican and United States firms in global markets, in a manner that protects the environment." The preamble also endorses the common pursuits of the three countries to promote sustainable

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[1] Dutch Disease is a cliche given to the phenomenon when a windfall associated with one booming sector results in price increases (particularly in factor markets) and to subsequent declines in other sectors.

development, the protection of human rights and improvement of working conditions.

In more specific terms NAFTA seeks to:

(i) eliminate most trade barriers between the three countries; tariffs will be gradually phased out, with a maximum of 15 years for sensitive products;

(ii) eliminate all investment barriers among partners and the creation of an open environment for investments;

(iii) protect intellectual property rights;

(iv) open the transportation sector to competition; and

(v) strengthen regulations on the protection of the environment.

In relation to agriculture, while according protection to the signatories, the Agreement provides for phasing out periods of up to 15 years for sensitive products, protection against import surges through quantity based safeguards, and stringent rules of origin to ensure maximum benefits to products produced by signatories. Under NAFTA, trade will be liberalized for all commodities from Mexico with the exception of commodities now protected under Section 22 quotas (peanuts, cotton, most dairy products, sugar and some sugar-containing products). Mexican exports of meat will also be allowed to enter the U.S. unimpeded under the new arrangement. All told, the U.S. will have special safeguards on seven items imported from Mexico valued at approximately US$340 million, while Mexico will have safeguards against seventeen commodities imported from the U.S. valued at US$100 million.

The 'rules of origin' provisions ensure that only goods which have a substantial amount of Mexican/U.S. value added qualify for entry into second markets under the terms of the Agreement. The duty drawback facility which allowed importers to forego payment of duty on imported intermediate materials used in the production of final products is also curtailed under NAFTA. The Agreement has reduced the amounts of such drawbacks (this is more applicable to manufacturing and textiles than to agriculture).

While promoting free trade between signatories, NAFTA has maintained stringent health and safety standards for imported products. Individual countries are allowed to maintain their food safety regulations as long as they are scientifically based, in addition to continuing the inspection and monitoring of pesticide and chemical residues by the United States Department of Agriculture, Food and Safety and Inspection Service. Under NAFTA, the U.S. is allowed to prohibit all imports that do not meet U.S. standards. In addition to assisting Mexico in strengthening its food safety regulations, the Agreement will assist in the development of common grades and standards between the two countries.

The Agreement includes phased reductions in the duty on wood and wood product exports and liberalization of the transport market. U.S. trucking companies will be able to engage in business in Mexico and to compete for international cargo as Mexican registered companies. It is speculated that trade in perishable high valued products will be enhanced as a result of this. This will be supported by liberalization in the financial sector, which will provide new sources of capital for modernization of Mexican motor carriers to ensure compliance with U.S. safety standards. Liberalization in the transport sector will be phased in to allow the three signatories time to develop rules and regulations for implementation.

The Agreement will also facilitate increased investments by U.S. firms in Mexican agriculture through the elimination of government regulations on investments. It is reported that the investment provisions in

[redacted]

NAFTA are more far reaching than those in the U.S. Canadian Free Trade Agreement, since its coverage includes intangible property, bonds, stocks and real estate.

IMPLICATIONS OF NAFTA FOR CARICOM AGRICULTURE

To adequately assess the impact of NAFTA on CARICOM agriculture three levels of analysis must be undertaken. The first-level analysis will seek to assess the pattern of agricultural trade between the United States and Mexico as well as between CARICOM countries and the U.S., allowing for critical insight into the "nature" of the issues surrounding agricultural competitiveness between the countries. The second level of analysis entails a brief examination of the general economic factors affecting Mexico's ability to increase exports of agricultural commodities to the U.S. as a consequence of the Agreement. The final level of analysis will assess the impacts NAFTA is likely to have on the creation or maintenance of competitiveness for specific agricultural commodities of major importance to the CARICOM.

Competitiveness and Patterns of Trade

Several definitions of competitiveness can be found in economic literature.[2] In fact, the multiplicity of definitions on international competitiveness often result in valueless debate. To undertake any meaningful discussions on international
competitiveness therefore, it is imperative for the concept to be clearly defined.

A concise definition of competitiveness is given by Antoine (1992) who defines it as the ability of an industry/firm to realize and sustain higher rates of profits in the production and trade of commodities relative to other firms/industries. This definition is consistent with those of Balassa (1962) and Islam (1983), which assert relative as opposed to absolute competitiveness.[3] While other definitions abound in the literature, various shortcomings mitigate against their use in empirical work.[4]

Determinants of International Competitiveness

Several authors have identified factors which appear to influence international competitiveness. A comprehensive discussion of such factors can be found in Porter (1990). His list of determinants must however be extended to include a number of other factors of a less quantifiable though equally important nature. While not all such factors can be adequately discussed in a presentation of this nature, the following are likely to be most important in the context of this discussion. These factors are as follows:

- Technology
- Investment

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2 See Barkema, Drabenstott and Tweeten (1990), Sharples and Milham (1990), Vollrath (1992) and Porter (1990).

3 A country's absolute competitiveness measures how efficiently it produces relative to other countries. Relative competitiveness on the other hand, indicates which country will be a net importer of some commodities and a net exporter of others.

4 For a review see Antoine (1992).

- Factor Endowments
- Human Capital and Managerial Expertise
- Product Characteristics
- Factor Supplies
- Firm Strategy and Industry Structure
- Trade and Regulatory Environment

International competitiveness in the agricultural sector will be determined by the extent to which firms and industries can manage these factors collectively and more efficiently than firms and industries elsewhere. This is the yardstick by which Caribbean agriculture must be judged as the international economy enters into a new era of liberalized trade.

Caribbean agriculture, however, suffers from a number of shortcomings which may impair its ability to share in the benefits of trade liberalization. Among the more important are an inefficient capital stock, inappropriate trade and domestic policies, constraints to market access, low levels of domestic savings for private domestic investment, the small size of domestic markets, low levels of productivity, low rates of technology adoption and insufficient investment in research development and extension (RD&E) activities. Attention to these factors will lie at the core of the Caribbean's quest to compete successfully with foreign producers.

Patterns of Trade

The agricultural sectors of CARICOM countries are highly dependent on trade. Table 1 presents agricultural trade dependency indexes for CARICOM countries as well as for Mexico, Canada and the United States. The relative contribution of the export sector is shown by the trade dependency index (TDI). The results indicate that in the cases of Grenada, Dominica, Jamaica, Canada, Mexico, and the United States for every $100 worth of agricultural goods traded, over $40 comes from exports. For Barbados and Guyana between $30-$40 of every $100 worth of trade is derived from agricultural exports, while St. Kitts/Nevis, St. Vincent and St. Lucia earned between $15-$20 of every $100 from agricultural exports.[5]

[5]Estimates are for 1988, the last consistent set of estimates available for all the countries of interest.

Table 1. TRADE DEPENDENCY TABLES, SELECTED CARICOM MEMBER STATES, CANADA AND UNITED STATES, 1988

Total Agricultural Trade

	TDI*	EXPORT INDEX	IMPORT INDEX
ANTIGUA AND BARBUDA	73.6	1.1	72.6
BARBADOS	64.6	19.9	44.7
DOMINICA	49.5	22.3	27.2
GRENADA	83.7	41.4	42.3
GUYANA	39.7	14.1	25.6
JAMAICA	100.0	43.3	56.7
ST. KITTS/NEVIS	80.3	17.4	62.9
ST. LUCIA	100.0	22.3	77.7
ST. VINCENT	64.2	15.6	48.6
TRINIDAD AND TOBAGO	58.0	7.1	50.9
CANADA	79.6	35.5	44.2
MEXICO	27.2	12.5	14.7
UNITED STATES	71.7	45.9	25.8

Source: Johnston, (1992).

The data for CARICOM member countries displayed in Table 1 suggest the competitiveness debate should focus on two critical though not distinct issues: (a) the maintenance of competitiveness for commodities which CARICOM countries now produce and compete in favorably on intra- and extra-regional markets (rum, special liquors etc); and (b) creating the conditions amenable to CARICOM countries for developing their potential in specific commodities in which they may have an advantage.

The comparative export competitiveness index (Table 2), was calculated for select CARICOM member countries vis-a-vis Mexico, based on exports to the U.S. market. The comparative export capacity index between country a and b, as given by:

$$CEC_{ab} = \sum [\min(X_{ia} / X_{a}T ; X_{ib} / X_{aT}) * 100]$$

where X_{ia} and X_{ib} are the values of commodity i exported from country a and b, respectively and X_{iT}, i=a,b represents the total exports of country a and b, respectively.

As the CEC_{ab} approaches 100, it implies that an increasing number of Mexico's export sectors are at least as large as CARICOM's. While a CEC_{ab} which approaches zero, indicates that Mexico has few sectors which are at least as large as those in CARICOM countries.

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[6] The TDI satisfies the theoretical properties of uniqueness and unambiguous upper and lower limits, it is also size-neutral.

Table 2. Comparative Export Competitiveness, Select CARICOM countries and Mexico.[7]

Country	All Commodities	Agriculture
Jamaica	91	93
OECS	100	99
Belize	97	96
Trinidad and Tobago	96	98
Barbados	98	99

The results of the measure confirm Mexico's export capacity relative to that of CARICOM countries for broad sectors as well as for agricultural exports. Application of the measure by Martin et. al. (1993), also indicated the overwhelming size of Mexico's sectoral exports relative to exports from Central American countries.

Additional inferences in regard to the structure of production and pattern of bilateral competitiveness between the U.S, Canada, Mexico and CARICOM countries may be based on the overall "complementarity" and the "relative trade advantage" indices.[8] The overall complementarity index relates trade advantages and disadvantages between countries for a given group of commodities. The index indicates that bilateral agricultural trade between the U.S. and Mexico, as well as the U.S. and selected CARICOM countries is complementary, while trade between the U.S. and Canada is competitive.

The nature of bilateral competitiveness may also be examined using the relative trade advantage (RTA) index. The RTA index suggests that Mexico has a relative advantage over the U.S. and Canada in fruits, vegetables, coffee, tea and spices, while the U.S. and Canada have a relative trade advantage over Mexico in dairy products, coarse grains, wheat and oilseed.

While the fruit and vegetable subsector was not disaggregated sufficiently to identify the commodities in which CARICOM countries are likely to have a competitive advantage, it is possible to draw inferences about the commodities in which CARICOM countries are likely to find it difficult to compete. These include citrus and temperate vegetables (tomatoes, asparagus, broccoli and cauliflower etc.), all commodities for which Mexico has a decisive competitive advantage. In the short-run, certeris paribus, it is anticipated that Mexico's market share of these commodities will increase. CARICOM countries are not major producers or exporters of these commodities, which with the exception of citrus do not constitute target commodities in on-going diversification programs.

GENERAL ECONOMIC CONSIDERATIONS

There are numerous general economic factors that must be addressed in order to provide a complete assessment of NAFTA on CARICOM competitiveness. However, for purposes of exposition, these factors will be conveniently aggregated in four categories: investment, productivity, demand and cost.

Investment

[7] Calculated from data for the 1988-1990 period, drawn from the United Nations Trade database for Mexico and from national statistical offices and the CARICOM Secretariat for Caricom countries.

[8] See Vollrath et al (1992) for a detailed exposition.

Thompson and Hillman (1989) contend that Mexico's foreign debt constitutes a major constraint to U.S. Mexican trade relations.[9] This is so not only because of the magnitude of the debt itself which stood at US$93 billion in 1988 but also because of the proportion of the debt owed to foreign banks, of which $62 billion is payable to U.S. banks. The magnitude of this foreign debt servicing will continue to constrain production and trade in the agricultural sector as with other sectors of the Mexican economy.

The American Farm Bureau (1991), has identified access to investment as one of the key constraints to increased fruit and vegetable production in Mexico. By creating an environment conducive to investment and by facilitating the exploitation of economies of scale and scope, NAFTA could perceivably increase foreign investment opportunities. Kelly (1992, p. 6) suggests that, "the process of corporate restructuring, modernization, and technological change spurred by competition would further raise the level of efficiency of investment." The Mexican government has moved to create an environment conducive to attracting foreign investment in agriculture and in the rest of the economy, by legalizing the rental of "ejiditario" land and by passing legislation enabling stock companies to invest in the agricultural sector. Some speculate that moderate increases in foreign investment will occur.[10]

U.S. investment in Mexican agriculture declined by 17% between 1983-1988 but increased by 81% to approximately US$560 million in 1991. Whether NAFTA will cause a diversion of foreign investment away from CARICOM to Mexican agriculture remains an open question. Moreover to argue as some have that such U.S. foreign investment would be diverted in the future as a consequence of the NAFTA, presupposes that such investments would not be forthcoming in the absence of the Agreement.

Productivity

The level of productivity growth in Mexican agriculture is considered to be low. This is a result of the many years of protection and anti-producer policies pursued by the government. Cook et al. (1991) for instance have argued that the apparent Mexican competitive advantage relative to the U.S. in fruit and vegetable production due to low wage rates is undermined by its lower productivity.

Segarra, (1992) points out that subsistence or traditional agriculture characterized by small-scale producers with little modern technology is prevalent. The Mexican government has opted to liberalize trade and open up foreign competition as a means of stimulating productivity growth and increasing competitiveness. To this end they have undertaken unilateral policy changes, including reductions in the level of agricultural subsidies, removal of price controls on some commodities, as well as the reduction of government's role in agricultural marketing, trade and land reform. The absence of estimates on total factor productivity growth for CARICOM and Mexican agriculture precludes direct comparisons of productivity.

Preliminary data based on partial productivity measures suggest that productivity among CARICOM producers is below that achieved by their counterparts in Mexico.[11] Assuming this to be the case, the result would seem to suggest that in the markets, and for the commodities, in which Mexican and CARICOM

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9 Mexico has one of the largest foreign debt borders of all Latin American countries.

10 On the other hand, several others argue that this would not necessarily generate the major increases in investment required as many U.S. investors have already found ways of working around these restrictions (personal conversations with Gary Fairchild, University of Florida, Gainesville). See also American Farm Bureau (1991).

11 Partial productivity resources can be misleading, since increases in output to input ratio may be accomplished with substantial increase in other inputs not accounted for in the ratio.

producers compete, NAFTA by facilitating further growth in Mexican productivity could however, lead to a widening of the competitiveness gap.

This result however, presupposes that NAFTA would induce specialization in the production of agricultural commodities in which Mexican producers are efficient. In this regard the commodities of greatest concern to CARICOM producers include guava, mango, avocado and cut flowers.

Demand

Thompson and Hillman (1989) argue that while the foreign debt crisis will continue to be a prime consideration in U.S.-Mexico trade relation in the near future, in the context of liberalized trade between the two countries demand considerations are also likely to be important.

Economic theory holds that the demand patterns for food respond to changes in per capita incomes, prices and household characteristics (See Deaton and Muellbauer, 1986).[12] The structural adjustment process now underway in Mexico is fostering rapid economic growth and attendant increases in real income. In the short term, the income growth is likely to be disproportionate across income groups, with higher income groups receiving the greatest benefits. As such domestic demand growth may be insufficient to bring about substantial trade diversion. However, over the longer term, as income growth is realized by all segments of consumers, domestic demand may increase substantially. Commensurate with this, an increasing proportion of commodities now produced for export to the U.S will be consumed in Mexico.

Cost

Structural adjustment has resulted in a systematic reduction in the subsidies on electricity for ground water pumping and fertilizer. It is anticipated that this will lead to cost increases for the production of such commodities as corn, beans, sugar and oilseed grown on irrigated land and may induce a shift from these low-valued/high-volume commodities to high valued commodities such as fruits and vegetables.

As fruits and vegetables are supplied on a seasonal basis with production areas determined in large part by climatic factors, expanded exports of these commodities will require the development of infrastructure in alternative geographic locations. Given Mexico's current debt position and competition for limited government funds from other segments of the economy, it is not clear that such infrastructure, in the absent of private investment, will be developed. Thus, such cost will have to be born by domestic producers.

COMMODITY ANALYSES

It is generally accepted that the size of the Mexican domestic market, its close proximity to the U.S., lower production costs and abundant natural resources result in an inherent competitive advantage over CARICOM countries. Coupled with the elimination of tariffs and quotas on Mexican products sold in the U.S.,

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[12] Household characteristics refers to the number, types, age of household members and demographic features which may impact demand pattern.

this creates the possibility of a general reorientation of trade away from the Caribbean. However, the effects of NAFTA will differ both by sectors and by commodities within given sectors. As such analysis must be conducted on a commodity by commodity basis. To this end, this section provides an analysis of major agricultural commodities including fresh vegetables, citrus, sugar, fish and fish products and rum.

Fresh Vegetables

Mexico is a significant producer, and exporter of both fresh and processed vegetable products. However, the relative paucity of vegetable processing in the Commonwealth Caribbean, suggests the impact of the proposed NAFTA on this sector will be minor. As such the present analysis will focus on the likely impacts of NAFTA on CARICOM competitiveness in fresh vegetable markets.

The fresh vegetable sector in Mexico is best characterized as dualistic, being composed of an export oriented sector and a sector which supplies the domestic market. Although there is burgeoning export vegetable production in Baja California, the center of export production is located in the State of Sinaloa in west central Mexico. Exports of fresh vegetables are dominated in terms of both volume and value by tomatoes. However, significant volumes of green beans, cucumbers, eggplant, (sweet) peppers, and squash are also exported.

Export production in Mexico generally occurs on large commercial farms using modern cultivation practices usually adopted from the U.S. The industry in Sinaloa is supported by a major highway providing good access to Nogales, Arizona, the primary entry point into the U.S., and by a well organized distribution system. While Mexican export producers enjoy a considerable labor cost advantage relative to the U.S., low productivity results in roughly equal per unit total costs between the two countries.

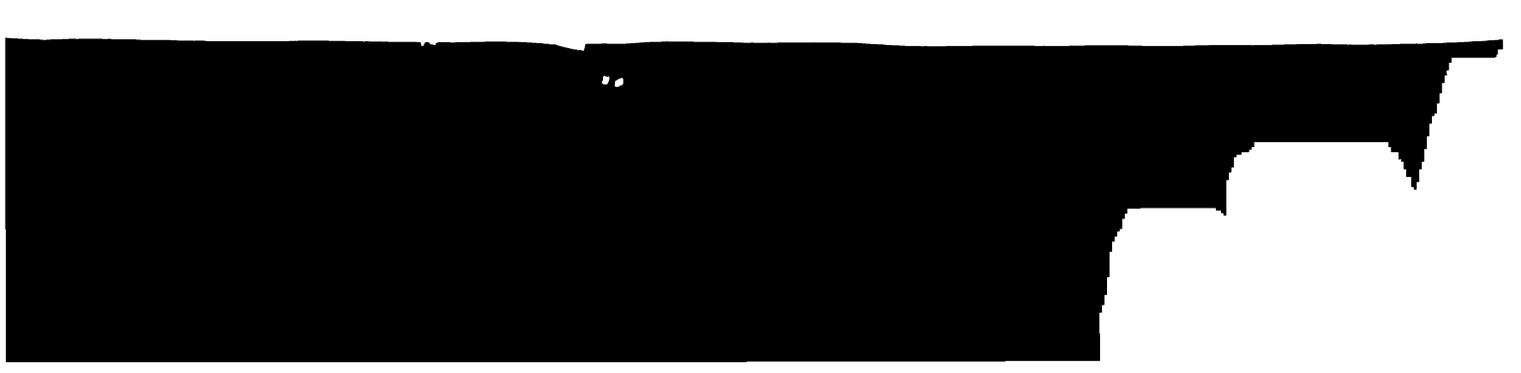
In contrast to the export vegetable sector, the production of vegetables for the Mexican domestic market is widely disbursed and occurs primarily on small farms using technologies fairly typical of small scale agriculture. This is evidenced by the fact that much production for the domestic market originates on 'ejido' land.

Historically, the Mexican domestic market has been informal, lacking well defined quality standards, and sub-standard marketing and distribution systems. This has resulted in poor quality and high post-harvest losses. However, as the economic policies of President Salinas have taken hold and economic growth has accelerated, the Mexican domestic market, especially in Mexico City, has become more sophisticated with consumers demanding higher and more consistent quality. This has served to suppress the demand for fresh vegetables traditionally supplied and served to divert an increasing amount of product from the U.S. export market to the Mexican domestic market.

Mexican Export Vegetable Competitiveness

If ratified, the NAFTA will have both direct and indirect effects on the Mexican vegetable industry, and as a consequence the competitiveness of CARICOM countries in markets for these commodities. Direct effects are those related to the likely supply response of Mexico producers, while indirect effects refer to the attendant consequences of such supply responses. Given that CARICOM countries, with the exception of Jamaica, have a minimal presence in the U.S. market for fresh vegetables, it is the indirect effects of NAFTA that are most germane to a discussion of competitiveness.

The potential impact NAFTA is likely to have on Mexican exports of fresh vegetables to the U.S. has been widely studied. While the conclusions of these studies vary, the majority generally agree that ratification of the NAFTA will result in a significant increase in Mexican exports of fresh vegetables to the U.S.



However, most of these studies are cursory analyses that fail to consider the structural and operational dimensions of export vegetable production in Mexico. One notable exception, however, is the comprehensive study conducted for the American Farm Bureau Federation by Cook, Taylor et al. in 1991. This study, which considered both economic and operational characteristics, concluded that the likely response of Mexican fresh vegetable exports to the U.S. as a result of NAFTA would be minimal.

The conclusions of this study are supported on several fronts. First, the tariffs on fresh vegetables, which are specific duties, are small in magnitude, generally accounting for less than 7% of delivered cost to Nogales, Arizona. Additionally, the level of these duties has remained constant since the inception of the Mexican export industry in the mid-1960's. Hence their importance in real terms as a significant trade barrier has been largely eroded. The provisions of the proposed Agreement further phase out the existing duties over 10 or 15 years, depending on the commodity, and also allow for tariff rate quotas.

Taken as a whole, these facts show that the current tariffs on fresh vegetables do not serve as effective trade barriers now, and the 10 to 15 year phase out periods do little more than the rate of inflation would be likely to do in the absence of NAFTA. As such, the economic significance of tariff removal appears minimal, and should not generate any significant direct supply response.

Further supporting this conclusion is the fact that the U.S. winter market for fresh (winter) vegetables is already adequately supplied by Sinaloa and Florida, which history has shown are likely to remain competitive. Hence, if increased exports from Mexico are to be forthcoming, geographic regions that will enable export production at other times of the year must be developed. This, however, will require substantial investments in roads and other infrastructure such as irrigation systems. It is not clear that such investments can be justified on economic grounds to a sufficient degree to lure private or public investment capital.

In the extreme, it can be argued that NAFTA may actually have a somewhat adverse effect on fresh vegetable exports from Mexico. First, domestic demand for high quality produce, though still small, is increasingly rapidly. Continued economic growth and the attendant rise in real income may serve to divert Mexican production away from the export market. There is already some evidence of such trade diversion. Secondly, it must be remembered that Mexican agriculture competes for labor with other sectors of the economy, most notably textiles and the assembly of manufactured goods. To the extent that the NAFTA stimulates growth in employment within these sectors, there may be upward pressure on agricultural wage rates. This would, of course, erode the primary advantage Mexican export producers are argued to enjoy--low cost labor.

Implications for CARICOM Countries

Given that the direct impact of NAFTA on Mexican exports of fresh vegetables is expected to be small, the attendant adverse consequences on the competitiveness of CARICOM fresh vegetables are expected to be minimal. In fact, if the NAFTA results in demand growth in the domestic Mexican market, to the extent that significant trade diversion occurs, or if competition for labor from the manufacturing sector bids up wages, the competitive position of CARICOM countries relative to Mexico may actually be enhanced.

If, however, the NAFTA results in increased exports to the U.S., the competitiveness of CARICOM producers may be adversely be affected in two ways. First, to the extent that increased exports of vegetables will likely occur during times other than the winter months, they are likely to put downward pressure on prices in all international markets (it should be noted the U.S. is a major exported of vegetables during the summer months). Such downward prices will further complicate the attainment of the import substitution goals pursued by many CARICOM countries.

Secondly, it is possible that increased exports of vegetables from Mexico will be among the class

of products defined as specialties. Within this category of commodities, tropical fruits and vegetables are of the most relevance. Specialty commodities represent the fastest growing segment of the U.S. market for fresh products. Given that certain areas of Mexico have a well defined export production and marketing system in place, and given its close proximity to California which is the primary domestic producer of specialties, NAFTA may encourage private investment capital and technology directed to specialty crop production to move into Mexico.

This is potentially of extreme significance to the CARICOM countries. A recent study of competitiveness (Antoine and Taylor, 1993), has concluded that OECS countries have considerable potential to export tropical fruits and vegetables to the U.S. To the extent that NAFTA fosters the development of tropical fruit and vegetable production in Mexico, competition in the U.S. market for these commodities will intensify, and the task of successfully entering and sustaining presence in these markets faced by CARICOM countries will be made more difficult.

Citrus

The major producers of citrus in the CARICOM are Belize (58,500 a.), Trinidad and Tobago (15,000 a.) Dominica (4,450 a.), and Guyana (3,900 a.). While citrus is grown in other CARICOM member countries, the acreage is small and non-commercial.

Among CARICOM producers only Belize, Jamaica, and Dominica are exporters to the U.S. and Canada. Belize's exports are concentrated on two commodities, frozen concentrated orange juice (FCOJ) and frozen concentrated grapefruit juice (FCGJ). These two commodities constitute between 95% and 99% of total citrus exports. Citrus oils account for the remainder of Belize's exports.

Jamaica also exports a small amount of FCOJ (exports to the U.S. declined from $2.5 million in 1990 to $ 0.6 million in 1992). Compared to Belize, Jamaican exports have become more diversified in terms of market. While FCOJ exports to the U.S. and Canada accounted for 90% of market share in 1990, by 1992 exports to the U.S. and Canada comprised less than 20% of export market share. The export of fresh citrus to the U.S. and Canada from Jamaica amounted to $2.7 million in 1990, but declined to less than $1.7 million by 1992. Jamaican exports of fresh grapefruit and other specialty citrus products (ortaniques, tangerines, mandarins) are also small (less than $1 million annually). Export of citrus products from Dominica are mainly to the U.S. Virgin Islands and amount to less than $0.5 U.S. annually.

CBI Provisions

Citrus exports from CARICOM countries are accorded duty free access to the U.S. market under the Caribbean Basin Economic Recovery Act (CBERA). Exports from non-beneficiary CBERA countries are subject to a $0.35 per SSE gallon or approximately $0.20 per SSE for unreconstituted citrus juice.

The available data suggests that the citrus products which NAFTA could potentially impact are sweet oranges and specialty fruits from Jamaica, and FCOJ from Belize. The U.S. is the largest producer/exporter of grapefruit; comparatively production and exports from CARICOM countries and Mexico are small. Currently import duties on Mexican grapefruit range from 1.8 cents/kg (Oct.) to 2.8 cents/kg (Nov. 1 - July 31). Considering the small production and export volumes from both Mexico and CARICOM, it is unlikely that the NAFTA proposal to phase out duties on Mexican exports between August and September with immediate effect and exports in October and between November and July over 10 years, will result in significant increases in exports to the U.S.. Non-tariff barriers including the existence of the Mexican fruit fly which affect the exports of fresh fruit from Mexico, as well as growth in demand among CARICOM countries, further support this conclusion.

The export of fresh citrus from Jamaica to the U.S. will in all probability also remain unaffected as a consequence of NAFTA. Exports of these products, as indicated earlier, remain quite small and are marketed in the U.S. largely during off-season periods.

In addition, the two products of greatest importance to Jamaica's fresh citrus exports, ortaniques and sweet oranges, are sold in "niche markets" in the U.S. where the products are distinguished by country of origin and quality. It is therefore not likely that duty-phase outs by themselves could result in declining market shares for these products. In all likelihood, it would appear that once the products continue to receive preferential access to the U.S. market, Jamaica's ability to export will remain largely unaffected.[13]

FCOJ exports from Belize and Jamaica appear to be the citrus products which are most vulnerable to negative impacts as a consequence of NAFTA. In this regard, Rosenberg and Hiskey (1993) contend that countries which export commodities such as citrus which receive preferential treatment under CBERA not enjoyed by other countries are most likely to be immediately impacted by NAFTA.

While exports of citrus from Belize have increased as a consequence of duty-free provisions, exports from Jamaica and Dominica have been slow in responding to preferential access. The reasons for this are numerous, but generally are associated with structural and institutional weakness at the national level. Perceivably for producers of citrus products now covered under CBERA, the small volumes of exports may be indicative of an inability to compete internationally.

The analysis of the impact of NAFTA on the Caribbean Citrus Industry in essence amounts to an analysis of its impact on FCOJ exports to the U.S. if the preferential access is maintained then the NAFTA proposal to introduce a tariff rate quota (TRQ) of 44 million gallons and to phase out the duty on FCOJ and frozen orange juice (not constituted) over 15 years, could result in marginal displacement of FCOJ exports from Belize. An ITC study (1993) of the impacts of NAFTA on U.S. agriculture argues that the TRQ will cover most of the 46 million SSE gallons imported from Mexico in 1991, leaving open the possibility of increased exports from Mexico in the medium to long term.

However, Spreen et. al. (1991) argued that the duty phase-out would lead to approximately equal increases in the price received by Mexican processors. Assuming a yield of 5.34 gallons per box, tariff elimination would lead to increases in the price which Mexican processors receive by approximately $1.87 per box. Such price increases will lead to shifts between fresh fruit and fruit for processing and increased plantings of oranges. The modified world orange juice market model (McClain, 1989) suggests that the supply response from Mexico would be small due to the modest impact on Florida's FOB prices (ranging from U.S. $0.08 to U.S $0.13 per SSE gallon), attributable to tariff elimination.

Belize's export price follows FOB Florida FCOJ prices for bulk tanker and bulk drum quite closely. (Varying between $.15-$.30 per lb. solid over the 1985-1991 period). Belizian citrus farmers received a lower delivered-in price per acre than producers in both Florida and Mexico and the industry has higher processing costs due largely to excess capacity (30-40%). Tariff eliminations could result in small reductions in FOB prices will undoubtably have an adverse impact on the industry in Belize. Both Belize and Jamaica have projects under way which aim to expand the acreage of citrus including oranges. Lower prices, even moderately so, could impact upon the viability of these production expansion programs. Based on 1990 data for Belize assuming a yield of 275 boxes per acre, if the on-tree price declines to $4.00 per box per acre returns would decline to $850.00.

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[13] Potentially, Cuba constitutes a far greater threat to Jamaica's small but growing exports to niche markets in the U.S. than does Mexico.

If the present market situation is contexted appropriately however, NAFTA dwindles in importance for CARICOM producers of FCOJ. Of greater significance is the sharp declines in both FCOJ prices since July 1993, the lack of growth in U.S. consumer demand and recent indications that consumer demand may even have declined slightly. If the record crops in Florida and Brazil continue, and all indications are that they will, prices will continue to be low for the remainder of the decade and U.S. processors are expected to import less of their processing requirements. Despite preferential access under CBERA, FCOJ exports from CARICOM countries are likely to find it increasingly difficult to be price competitive in the U.S. market if the present trend in crop production and consumer demand persists.

Sugar

Mexico is one of the largest sugar producing and consuming nations in the world. In recent years however, consumption surpassed production transforming Mexico into a net-importer of sugar mainly from the United States. The impact of NAFTA on Caribbean sugar production will depend to a large extent on whether Mexico is able to change its status from a net importer to a net-exporter of sugar.

Production Considerations

Sugarcane is one of the most widely grown crops in Mexico, with production being concentrated in 15 of 23 states, (Buzzanell, 1991). Mexican yields have been increasing over the year and now rank above current levels in Brazil and Cuba. The yield advantage is however undermined by a relatively low recovery rate. USDA economists have indicated that inefficient processing facilities and the low sugar content of Mexican sugarcane may also be contributing factors to this low recovery rate.

Over the last five years a combination of freezes and droughts has led to declines in Mexican sugar acreage. This decline is also attributable to reductions in the level of government subsidies to the industry.[14] While Mexico is clearly well placed to increase acreage in sugar, recent trends indicate that several other factors will influence its ability to do so.

Domestic Factors

Recent initiatives by the Mexican Government to rationalize policies in the sugar industry will act both as a stimulus and a hindrance to production. In the past, the land tenure system which prevented the amalgamation of 'ejidos' has forced producers to utilize inputs beyond economically feasible limits. Policy reformation which facilitates more flexible use of land resources is therefore expected to reduce production cost and expand production.

Similar reform in the milling operation to allow for private ownership and foreign capital participation augurs well for increased industry production in Mexico. Production will however be constrained by the reduction in government subsidies alluded to earlier as well as by the rising costs of credit. These factors could lead to a switch from sugar to other more high-valued products such as tomatoes, peppers,

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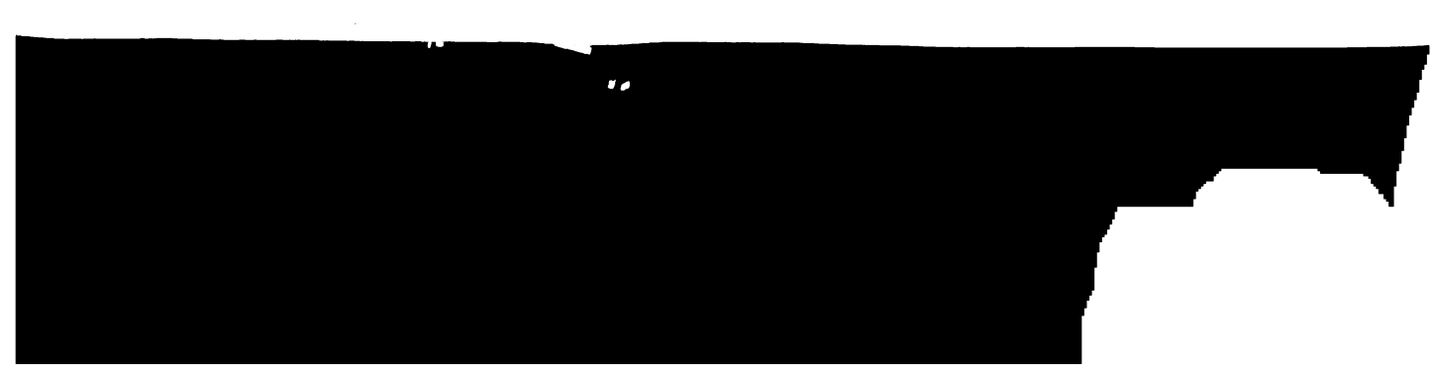
[14] Prior to 1986, Government involvement in the Mexican sugar industry was substantial. Measures affecting output such as guaranteed minimum producer prices, trade volume controls and exchange rate manipulation were employed. In addition, subsidies on imports and irrigation were granted. To further protect the industry a complex system of import licenses, import duties and export duties was also used.



vegetables and citrus in some traditional sugar producing regions.[15]

Since these factors are likely to result in production contraction, both the magnitude and direction of the ultimate cumulative impact remains an empirical question. Data limitations preclude us from making any prediction of this ultimate impact at this time.

Table 3. shows Mexico's sugar consumption in relation to consumption in other countries. Per capita sugar consumption in Mexico is high due primarily to real growth in per capita income since 1986, population growth and due to the Mexican Government's subsidies on the commodity. Available projections indicate that by 1996 Mexico would be consuming between 4.4-5.0 million tons of sugar per annum. Buzzanell (1991) estimated that Mexico's net-exporter/net-importer status by 1996 will depend on whether there is a tendency towards high production and low consumption, or historic rates of growth in production and consumption, respectively.

Trade

Mexico sugar exports to the U.S. are covered by a tariff rate quota (TRQ). The TRQ allows for allotted quota (first tier) imports at a rate of $0.625 per pound.[16]

NAFTA proposes the following with respect to sugar imports from Mexico:

(i) that over the first 6 years, Mexico's duty-free allocation will be limited to the greater of its current export allotment or to the quota allotted under the U.S. sugar program;

(ii) if Mexico reaches net-exporter status during the first six years, it may ship up to 25,000 tons of its surplus product at a rate of $0.625 per pound;

(iii) that over the first six years the U.S. will systematically reduce the tariff on Mexican exports in excess of the 25,000 ton allotment; and

(iv) that from years 7-15, both the U.S. and Mexico will move towards elimination of all remaining tariffs on sugar.

Table 3. Per capita consumption of sugar, developed and developing countries, 1978-88 (kg/person, raw value)

	1978	1983	1988
Developed countries	40.9	38.7	38.3
Developing countries	12.2	13.3	14.9
Brazil	46.8	45.7	43.2
China	3.8	5.4	7.3
Egypt	24.3	33.8	34.2

[15] An important and interesting area of research to the Caribbean, will be the impact of NAFTA on the citrus industry. While one cursory study has been done, to date no serious economic analysis of the FTA on the ability of producers to compete in this product has been undertaken.

[16] This is in contrast to duty-free quota imports for beneficiaries of the Generalized System of Preferences (GSP) and Caribbean Basin Initiative (CBI).

India	8.1	10.0	12.8
Indonesia	11.1	11.9	14.7
Iran	38.8	22.6	21.8
Mexico	44.7	43.2	49.2
Morocco	33.6	34.0	31.6
Philippines	23.7	23.2	20.9
Other Africa	9.8	10.3	9.4
Other Asia	10.8	11.9	14.0
Other Central America	50.2	51.6	50.7
Other South America	36.2	34.4	33.8
Other	19.3	15.5	18.6

Source: International Sugar Organization Yearbooks, various years and International Monetary Fund, International Statistics Yearbook, 1989.

While the long-run implications of the NAFTA for the Caribbean Sugar Industry are somewhat uncertain, it does not appear that the ability to export to the U.S. will be adversely affected in the short term. This observation is based both on expected trends in production and consumption in Mexico, as well as on the apparent inability of the Mexican industry to substitute out of sugar into High Fructose Corn Syrup (HFCS) in the short-run. Williams (1993) for instance, argues that substantial investments are required to retool Mexico's beverage manufacturing industry, which is set up to use crystalline sweeteners in beverage manufacturing. Mexico's ability to displace Caribbean sugar in the U.S. market will also depend on the extent to which the investment for required industry modernization is obtained.

Sugar is basically an undifferentiated commodity. Consequently industry competitiveness is determined primarily on the basis of costs. Table 4 shows sugar production costs among CARICOM sugar producing countries and Mexico as a ratio to U.S production costs. While the lack of comparable data precluded computation of the cost ratios beyond 1989. The declining level of sugar production and exports among CARICOM producers and the slow pace of technological change vis-a-vis the industry in the U.S, suggests that the cost competitiveness gap may have widened since 1989. Mexico's cost advantage relative to producers in CARICOM is also evident from the data. While the cost ratios are incapable of fully capturing the impact of domestic policies on the sugar industry in CARICOM member countries. In both the cases of Guyana and Jamaica, the cost ratios indicate a widening of the competitiveness gap with the U.S, despite these countries having had successive currency devaluations in the 1980s. This would seem to indicate that the competitiveness of the CARICOM sugar industry is constrained by factors more endemic than those implied by price adjustments induced by monetary policy.

The slow rate of technological progress in processing, deterioration in the capital stock and the acute shortage of investment to upgrade existing factories and equipment has undermined the overall productivity of the CARICOM sugar industry. In addition, declining labor productivity coupled with high wages rates has impaired both field and factory efficiency.

The increasing difficulty which CARICOM member countries have in filling their quota allotments under the U.S. Sugar Program is suggested by the data in Table 5. Preliminary data for 1991-92 (not included in the Table), indicate that Trinidad and Tobago as well as Guyana, have satisfied their quota allotments to the U.S. This notwithstanding, increased sugar availability in the U.S, coupled with the downward trend in the level of quota allocations to CARICOM countries, raises serious concerns about continued access for CARICOM sugar under the current U.S. sugar program, despite NAFTA.

Table 4. Comparative Sugar Statistics, United States, Mexico and CARICOM, 1984/85 and 1988/89

Country	Tons of Cane (TC)	Tons of Sugar (TS)	TC/TS (%)	Total Costs Index
Jamaica 1984/1985	2,350,000	188,000	8.00	1.102
1988/1989	2,590,000	223,000	8.61	1.156
Barbados 1984/1985	837,000	98,000	11.71	1.226
1988/1989	740,000	80,000	10.80	2.03
St. Kitts/ Nevis 1984/1985	308,000	31,210	10.13	.782
1988/1989	275,000	26,400	9.6	1.215
Trinidad 1984/1985	942,000	67,500	7.16	1.756
1988/1989	1,367,000	99,800	7.3	1.584
Guyana 1984/1985	N.A	N.A	N.A	.948
1988/1989	N.A	N.A	N.A	1.35
Mexico 1984/1985	15,926,000	1,764,000	9.0	.780
1988/1989	18,937,000	2,241,000	8.9	.874
U.S 1984/1985	15,926,000	1,765,000	11.08	1.0
1988/1989	18,937,000	2,241,000	11.83	1.0

source: USDA Situation and Outlook, Annual Reports.
Sugar Industry Reports

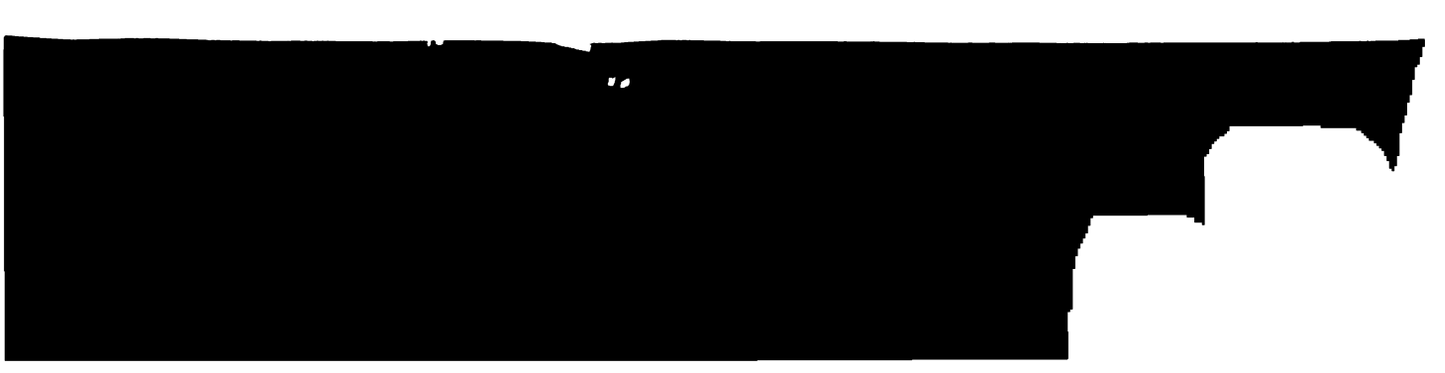


Table 5. U.S. sugar imports under tariff-rate quota, by country

Country	1987 1/		1988 2/		1989/90		1990/91	
	Quota allocation	Actual imports	Quota allocation	Actual imports	Quota allocation 3/	Actual imports 4/	Low-tariff allocation 5/	Actual imports 6/
Barbados	7,500	7,500	8,205	8,205	20,212	8,236	15,696	0
Guyana	10,920	10,920	374	374	34,648	7,912	26,907	0
Jamaica	10,010	10,010	16,692	16,426	31,761	31,761	24,665	349
St. Christopher-Nevis	7,500	7,500	8,000	8,086	19,075	8,040	8,851	0
Trinidad-Tobago	7,500	7,500	8,588	8,588	20,212	20,212	15,696	7,535

--- = Not applicable. NA = Not available.
1/ Quota period Jan. 1, 1987, to Dec. 31, 1987. 2/ Quota period Jan. 1, 1988 to Dec. 31, 1988. 3/ Quota period Jan. 1, 1989, to Sept. 30, 1990. Includes quota changes effective May 27, 1990. 4/ Imports as of October 19, 1990. 5/ Quota period Oct., 1, 1990, to Sept. 30, 1991. Includes quota changes effective November 30, 1990. 6/ Imports through March 10, 1991.
Note: Imports are reported on an actual weight basis adjusted by Customs upward by a factor of 1.035. When final polarization results are received or when adjustments are made to raw value on final vessels, cumulative import data are adjusted accordingly. A country's excess of cumulative entries and adjustments over its quota allocation is carried over to and against the country's allocation for the next quota period. To convert from short tons to metric tons, divide by 1.10231125.

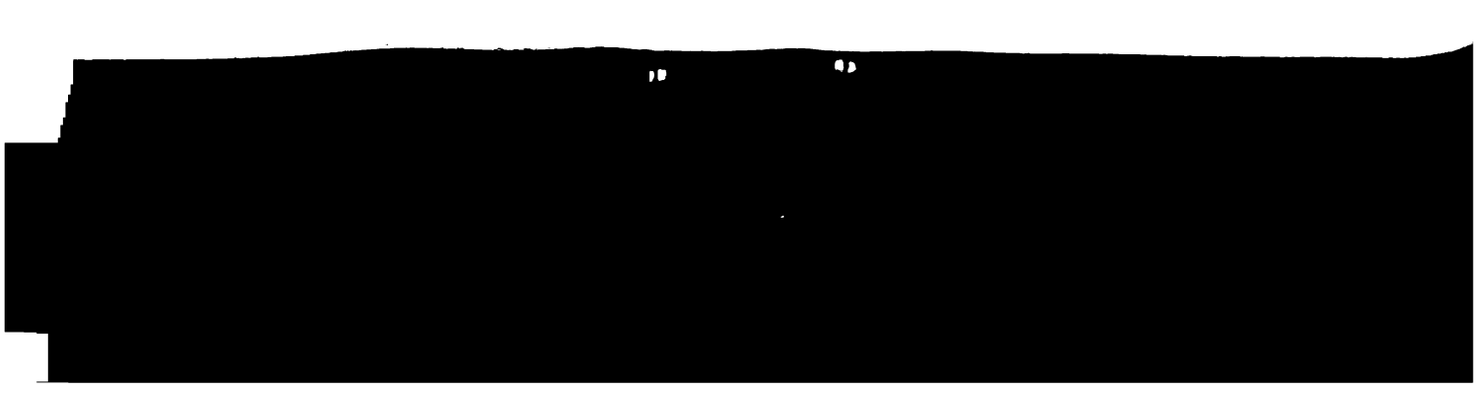
Source: Foreign Agricultural Service, USDA.

Fish and Fish Products

Exports of fish and fish products from Mexico and the CARICOM countries to the U.S are covered under GSP eligibility. Only a very small proportion of Mexican exports to the U.S are affected by tariffs. For the Caribbean, exports appear to be affected more by failure to meet enterability requirements (such as acceptable levels of mercury), than by the level of tariffs. For this reason it is not anticipated that the NAFTA proposal to phase out duties on imports from Mexico with immediate effect for products with rates of less than 5%, and over 10 years for imports of products with rates over 5%, will result in significant increases in the level of imports from Mexico.

That NAFTA calls for reciprocal reductions in duties on exports from the U.S to Mexico is particularly relevant in assessing the potential impact of the NAFTA on the fisheries sector in the Caribbean. Under NAFTA Mexican duties on U.S fish and fish product exports (which ranges between 10% and 20%) will be phased out over a period of 10 years. This is also expected to result in small increases in exports from the U.S to Mexico and then only for specific types of fish and other seafood.

A substantial amount of product differentiation exists for fish and other seafood. While U.S exports are concentrated in shrimp, sardine, cod and other mollusks, Mexican exports to the U.S. are concentrated in shrimp, tuna and other high valued seafood. Table 6 indicates that in relative terms fish and other seafood exports to the U.S. from CARICOM are quite small. While Jamaica and Belize are the largest CARICOM exporters to the U.S. mainland, small volumes of conch, lobsters, tuna and swordfish are also exported to the U.S. Virgin Islands (USVI) from Grenada, St. Lucia, St. Vincent, and Antigua. Because of this market



segmentation NAFTA is of greater importance to Jamaica, Belize and Guyana, the major exporters to the mainland U.S. market. However it appears that for Guyanese fish and shrimp exports into the U.S market, enterability requirements continues to be a more important factor than the level of U.S. import tariffs.

Table. 6 Imports of Fish and Fish Products into the United States, 1989-1991

(US $ million)			
	1989	1990	1991
Mexico	393	279	291
Canada	1,218	1,180	1,234
Caribbean	7.3	9.3	12.6
Other	3,826	3,738	4,100
Total	5,444	5,206	5,638
Import Market Share (%)			
Mexico	7.22	5.36	5.16
Canada	22.37	22.67	21.89
Caribbean	0.14	0.17	0.22
Other	70.28	71.80	72.72

Exports from most Caribbean countries with the possible exception of Belize and Jamaica continue to face several constraints. Basic infrastructure prerequisites such as equipment, landing sites etc., are in many instances lacking. The virtual absence of basic market information systems, and the lack of programs to develop these, also constitutes a significant limitation on the capability of many Caribbean countries to export to the U.S.

Comparatively, Mexico's extensive coastline and its production and processing potential affords it a substantial advantage vis-a-vis the industry in CARICOM. This notwithstanding, Jamaica which exports small quantities of high valued seafood is not likely to lose market share as a result of the NAFTA. This is due to the fact that exports to the U.S are directed to small highly specialized market niches and most of the exports from Jamaica and Mexico already enter the U.S at low rates of duty. The market for fish and other seafood from the smaller Caribbean islands to the USVI will in all probability be largely unaffected by the Agreement. The exception to this appears to be shrimp exports from Belize and Guyana, on which it appears NAFTA could have negative effects. The extent to which the industry in Belize and Guyana will be affected will depend in part, on the extent to which Mexican harvesting and processing increases in response to tariff reductions. The paucity of data on both industries precludes further investigation at this time.

In general, it appears that the impact of NAFTA on Caribbean fish and seafood exports will be negligible. While Jamaica, St. Vincent, Grenada, Antigua and St. Lucia are not likely to suffer major adverse impacts as a result of NAFTA. The fate of shrimp exports from Guyana and Belize remains uncertain. Attention to infrastructural prerequisites as well as investments in the development of marketing including marketing information systems will continue to be critical if the industry in Guyana and Belize aims at maintaining product visibility in the U.S. mainland market.

With increasing demand for fish and seafood by the tourist industry in the USVI as well as in other CARICOM member states, the industry in CARICOM may be partially compensated for foreign exchange losses which may be incurred as a result of reduced market share in the mainland U.S market.

Rum

Most of the alcohol exports from CARICOM were concentrated in rum which is targeted at the European Market. The U.S. and Canadian markets while being less important to most CARICOM rum producers than the European market is fairly important for Jamaica. By contrast U.S. alcoholic beverages imported from Mexico consist mainly of beer and tequila, while exports of beer and wine from the U.S. to Mexico predominated this area of trade. Canadian imports consist largely of rum from CARICOM and wine from the U.S., while U.S. imports from Canada consisted mainly of beer and whisky. While reliable data on the rum industries are difficult to obtain, available data for 1990 suggest that the U.S. and Canadian markets accounted for less than 2% of rum exports from Trinidad and Tobago, and between 30% and 40% of the export market share for Barbados and Jamaica.

The evidence suggests that while substantial cross-border trade occurs in alcoholic beverages, it is fairly well differentiated both by product and country of origin. Further product differentiation also exists for rum, which for present purposes may be classified into branded and bulk product forms. Branded Caribbean rums have strong consumer appeal based on vintage, blend, reputation, brand loyalty and labelling. Such differentiation is central to the analysis of the impact of NAFTA on CARICOM's ability to compete in alcoholic beverages.

For branded rums product differentiation gives Caribbean producers a decisive edge in the market and allows premium prices to be charged. While considerations of cost are important, the ability to pursue product differentiation strategies to a large degree mitigates against consumer purchasing patterns being based solely on costs. Premium or high-valued rum from the Caribbean compete more directly with product from Puerto Rico than with lower valued product from Mexico.[17] [18] The 10 year phase-in period for Mexican rums proposed under NAFTA and the continued access of CARICOM rums to the U.S under the CBI seem to reinforce the competitive advantage currently possessed by CARICOM producers in branded rums. In the longer run CARICOM's ability to remain competitive will depend on the extent to which it can improve and strengthen the distribution network for the product through marketing and distribution agreements, increased consumer loyalty through advertisement, branding and labelling and increased infrastructural investment within producer countries themselves to reduce costs and increase efficiency. To compete in this end of the market substantial investments will be required in Mexico both to modernize existing facilities and to develop brands and labels which is an extremely high cost venture. In addition, there is currently little integration between Mexican rum producers and U.S. distributors and the extent to which existing distribution linkages for tequila and beer can be exploited in marketing and distributing branded rums remains uncertain.

Rum exports from the CARICOM to the U.S. have benefitted from the CBI. Commodities traded under special agreements such as CBI are likely to be impacted more severely from the lowering of duties under NAFTA than commodities not benefitting from such agreements. In this regard bulk rum exports from CARICOM to the U.S. appear particularly vulnerable as a consequence of the NAFTA. Bulk rums are sold primarily to U.S rectifiers and bottlers and compete primarily on the basis of costs. The volume of such exports may somewhat misrepresent the relative importance of this lower end of the market for CARICOM producers, since several OECS member states, Barbados and to a lesser extent Guyana have only recently began to achieve some degree of product visibility in the U.S. Low-valued rums from the Caribbean compete

[17] The Puerto Rican rum industry currently holds 72.6% of the U.S. Market.

[18] Mexico currently exports no rum to the United States.

with imports from the Virgin Island, Mexico and Puerto Rico. High U.S. tariffs on Mexican rum imports presently 13.7% ad-valorem or approximately US $1.37 per proof gallon relative to other alcoholic beverages has acted as a barrier to Mexican exports to the U.S.

The analysis for bulk rums bears a stark likeness to that of sugar which also competes on the basis of costs. The long phase-in period proposed by NAFTA will provide only short term protection for CARICOM producers, as Mexican producers face more favorable prices for molasses, labor, energy and transportation (these are the critical inputs in rum production). Unlike the situation for branded rums the infrastructure for the marketing and distribution of bulk rums will not be as difficult or as costly to establish. In fact the Barcardi Corporation headquartered in Puerto Rico has acquired a distillery and three sugar mills in Mexico (USITC, 1993). The possibility of Barcardi using its distribution and marketing network within the U.S. to promote Mexican bulk sales remains a definite possibility once tariff rates decline to a level sufficient to generate rents. Should this occur it appears that the rum market in the West Coast of the U.S. would be the first share of the market lost to Caribbean producers.

Analysis of the FTA often ignores the fact that it proposes reciprocal tariff reductions on the U.S as well as Mexico. In this regard NAFTA proposes to eliminate duties on alcoholic beverage imports from the U.S. to Mexico. Duties are expected to be eliminated immediately on whiskey, while duties on rum, beer and most wines currently 20% will have phased out over periods ranging from 5 to 10 years.[19] Accessing the Mexican market for rum will however prove difficult due to the complicated system of distribution and the interlocking nature of distributors and retails in that country, NAFTA notwithstanding.

The current trend towards declining alcohol consumption in the U.S. and the expected cost advantages of Mexican producers should they attract the requisite capital for modernization and investment in the rum industry, and could result in declining exports from the Caribbean. This extreme though unlikely scenario could result in near total displacement of Caribbean bulk rums by lower costs Mexican product.[20] Whether Mexico will begin rum exports in year 6 or year 7 of the Agreement is an empirical question. However what is evident is that the long-run prospects for bulk rum exports from the Caribbean are doubtful in the absence of any other intervention.

While NAFTA is expected to result in a modest increase in U.S. alcoholic beverage exports to Mexico, U.S. imports of beer and tequila from Mexico are not expected to increase substantially. Mexico's advantages which occur as a consequence of tariff reduction will be negated as a result of reciprocal tariff reductions for U.S. alcoholic beverage imports, including imports of rum with shorter phase-in periods.

Over the short term, industry restructuring will take place between the U.S. and Mexico particularly in the products for which the two countries have a competitive advantage. It is therefore anticipated that strategic business alliances will be formed for the wine, distilled spirits, and beer producing industries. Indications are that initial benefits will accrue from increased investment opportunities and from the reductions in distribution barriers. Most of this investment is however industry specific and has been targeted at the beer, wine and spirits producing industries.

While the potential impact of NAFTA on premium or high-valued rums appears minimal in the short-

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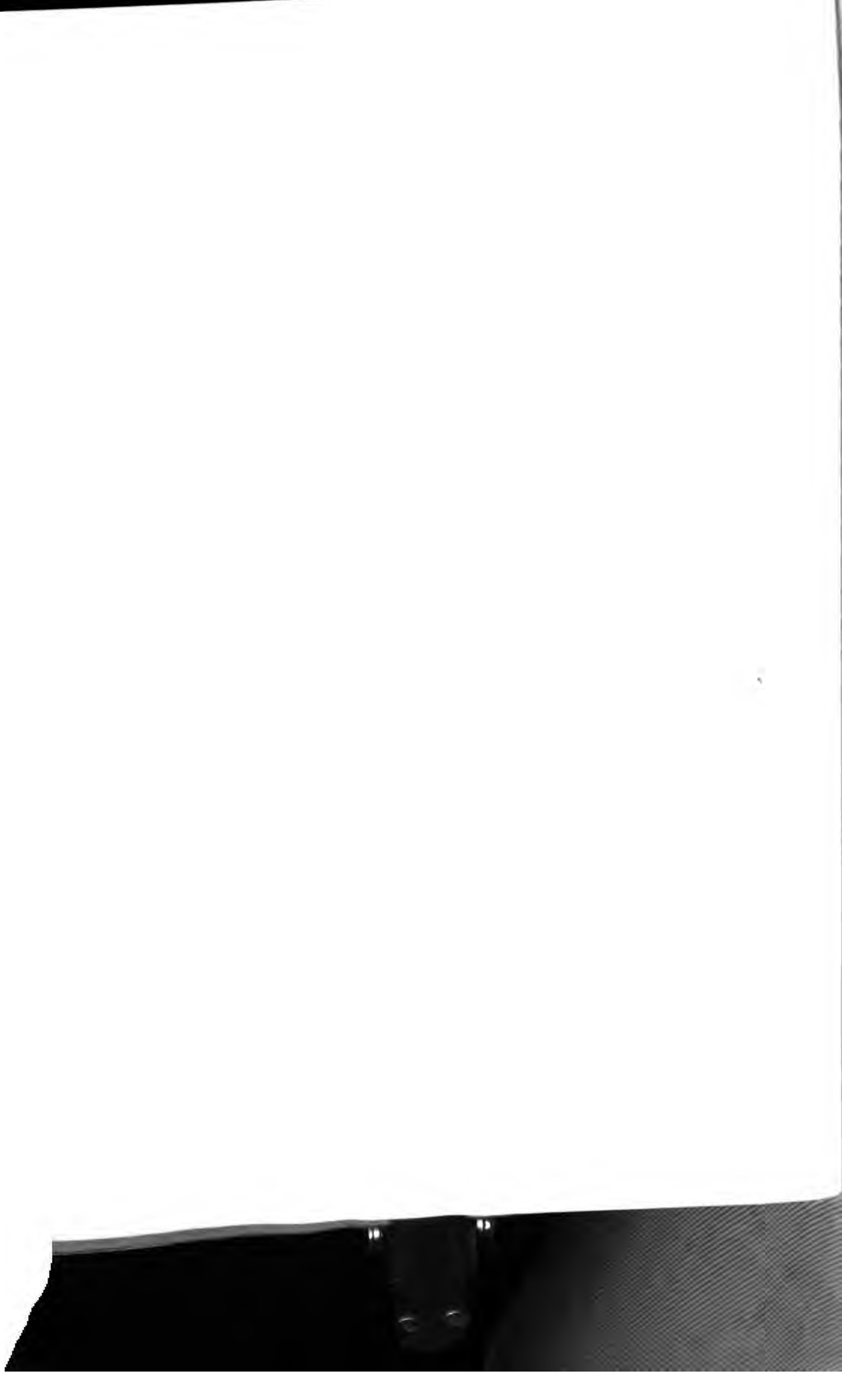
[19] NAFTA proposes an immediate reduction in the tariff on beer to 16% from 20%, while the tariff on rum currently 20% will be systematically phased out over a 5-year period.

[20] This constitutes the basis of the argument of the West Indies Rum and Spirits Producers Association (WIRSPA). In addition they argue that NAFTA by reducing the tariff on Mexican imports given their cost advantage, will erode the preferred status of Caribbean producers as guaranteed in the CBI due to "import surges" from Mexico which will lower bulk rum prices.



run, the impact on low-valued rums could be substantial. Low valued rums, are marketed mainly on the basis of costs. The ability to compete is based almost solely on the lower relative costs of production and marketing. The pattern of cost competitiveness therefore reflects the ability to source low cost molasses, transport and labor as well as on an efficient system of marketing and distribution.

If NAFTA results in increased production of sugar-cane in Mexico, then molasses as a source of raw material to rum production is likely to become relatively less costly. This could generate a cost advantage for Mexican production. By opening up the Mexican transportation sector to U.S. investment NAFTA will lead to a more cost effective system of product delivery for agricultural commodities between the U.S. and Mexico. Cost savings will accrue both from more direct and less costly trucking as well as from the greater efficiency brought about by allowing U.S/Mexican trucks to carry loads in both directions.

It is anticipated that the Virgin Islands as well as CARICOM rum producers in the absence of any other policy intervention stand to lose significant market share for low-valued rum exports to the U.S.

CONCLUSIONS

It is difficult to judge the effects that NAFTA will have on the competitiveness of CARICOM producers of nontraditional agricultural commodities with any degree of precision. While it is true that NAFTA represents a substantial international policy change, there are numerous additional economic factors that may also significantly impact the competitiveness of CARICOM producers. As it is impossible to foresee changes in this plethora of factors, conclusions can only be based on the implicit ceteris paribus assumption that the current economic policy environment will remain unchanged. Given this, the following conclusions may be rendered.

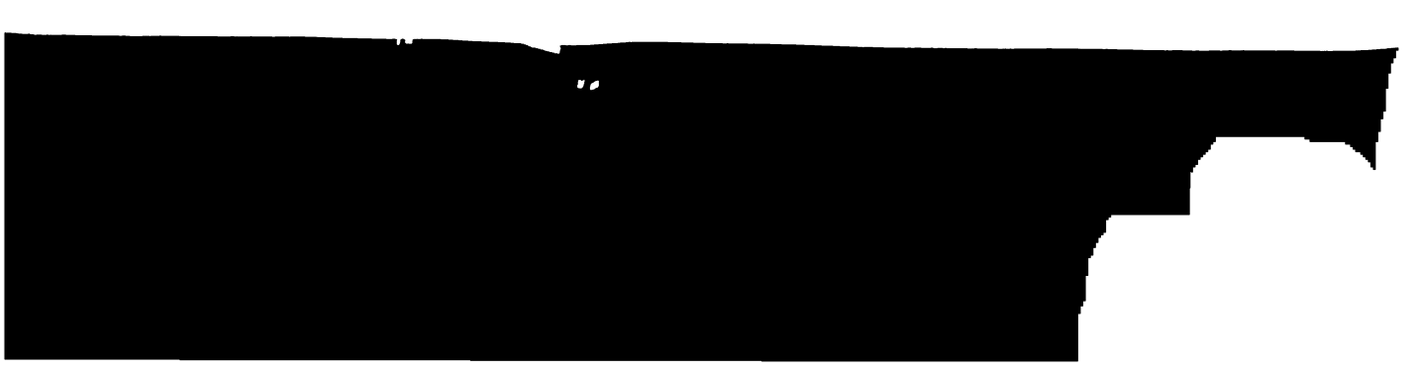
As regards fresh vegetables, the effects of NAFTA on competitiveness are likely to be small. With the exception of Jamaica, the CARICOM countries export only small volumes of nontraditional commodities to the U.S., and most of this goes to the U.S. Virgin Islands. As such, the CARICOM region does not actually compete with Mexico to any substantial degree at present and NAFTA will not alter this.

It should however be noted that recent research suggests that CARICOM countries have the potential to be competitive in U.S. markets for tropical fruits and vegetables. If NAFTA serves to stimulate the production of tropical fruits and vegetables in Mexico, CARICOM producers will be faced with a stiff competitive challenge for these markets.

As is the case for fresh vegetables, the effect that NAFTA will have on the competitiveness of CARICOM citrus is expected to be small. Indeed, the primary impact NAFTA is likely to have will be indirect. If, as expected, NAFTA stimulates increased world production of citrus, world prices for fresh and concentrated products are likely to decline. This will place many citrus producers in the region into a cost-price squeeze of sorts

The potential impact of NAFTA on CARICOM fish and seafood exports to the U.S. remains uncertain. While exports from Jamaica and the OECS member countries will be largely unaffected, shrimp exports from Belize and Guyana could face increased competition due to the NAFTA proposed tariff reductions. The response by the Mexican shrimp industry to duty phase-outs along with the ability of the industry in CARICOM to attract new investment to finance modernization, will also be important determinants of NAFTA's impact on fish and seafood export from CARICOM.

It does not appear that the tariff reductions proposed under NAFTA will impact high-valued CARICOM



rum exports substantially in the short-run. The cost advantages possessed by Mexico in the areas of transport, labor and raw materials (sourcing molasses) could however, lead to an erosion in the market share for CARICOM bulk rums in the U.S. Over the medium to long term, the impact on high valued rums will be determined in large measure by the ability of CARICOM rum producers to defend their market share through advertising as well as through the development of new brands and labels. The long term viability of bulk rum exports from CARICOM in the U.S. market, in the absence of any other policy intervention, appears doubtful.

The impact of NAFTA on CARICOM sugar producers continues to hinge on three factors: the availability of sugar in the U.S.; the pace of industry restructuring and modernization; and Mexico's net-export status.

If industry restructuring and modernization efforts by CARICOM producers are successful, the impact on Caribbean sugar producers will be determined by the extent to which NAFTA induces reductions in quota allocations to CARICOM Countries.[21] If CARICOM producers are able to fill their quota allocations under the U.S. sugar program, then, the extent to which their exports are impacted will depend on how future quota allocations contract in response to the NAFTA-induced sugar exports from Mexico. To separate reductions in quota allocations due to increased sugar availability in the U.S. vis-a-vis NAFTA induced reductions in quotas as a result of increased Mexican exports, will be difficult. Yet, given the present trend towards quota reductions, in the absence of the Agreement, it is a task which supersedes intellectual curiosity. There is a distinct possibility that U.S. sugar availability, may obviate the necessity for sugar quotas altogether.

The impact of NAFTA on the CARICOM sugar industry will depend on several factors. The lack of empirical evidence on the net effect of many of the factors which will determine the ultimate impact of the Agreement on CARICOM producers, as well as uncertainty regarding other potential important competitors, such as Cuba, results in a great deal of uncertainty about the possible impacts of the Agreement on CARICOM agriculture.

The proposed NAFTA and the effects it will have on the agricultural sectors of the signatory countries, as well as that of other regions such as Central America and the Commonwealth Caribbean has been widely studied and the conclusions rendered are highly varied. This is because analyses of this issue have necessarily been of a qualitative nature. The same is true of this study since the lack of hard data has severely limited the use of quantitative analysis.

While any general conclusion must be regarded as tentative at best and tenuous at worst, the weight of evidence suggests that the direct impact that NAFTA will have on the competitiveness of major nontraditional commodities produced in CARICOM will be minimal. Indeed the most important factor affecting the competitiveness of CARICOM producers is not NAFTA at all, but rather the rate at which regional programs of market oriented reforms are successfully implemented. To the extent that such reforms create an environment that provides the proper incentives for producers to respond to market signals and hence promote economic efficiency and technological innovations, CARICOM producers are likely to sustain their competitive position, NAFTA or not.

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[21] This will also depend on the availability of sugar for export to the U.S., albeit under quotas, after servicing the domestic, regional and EEC markets.

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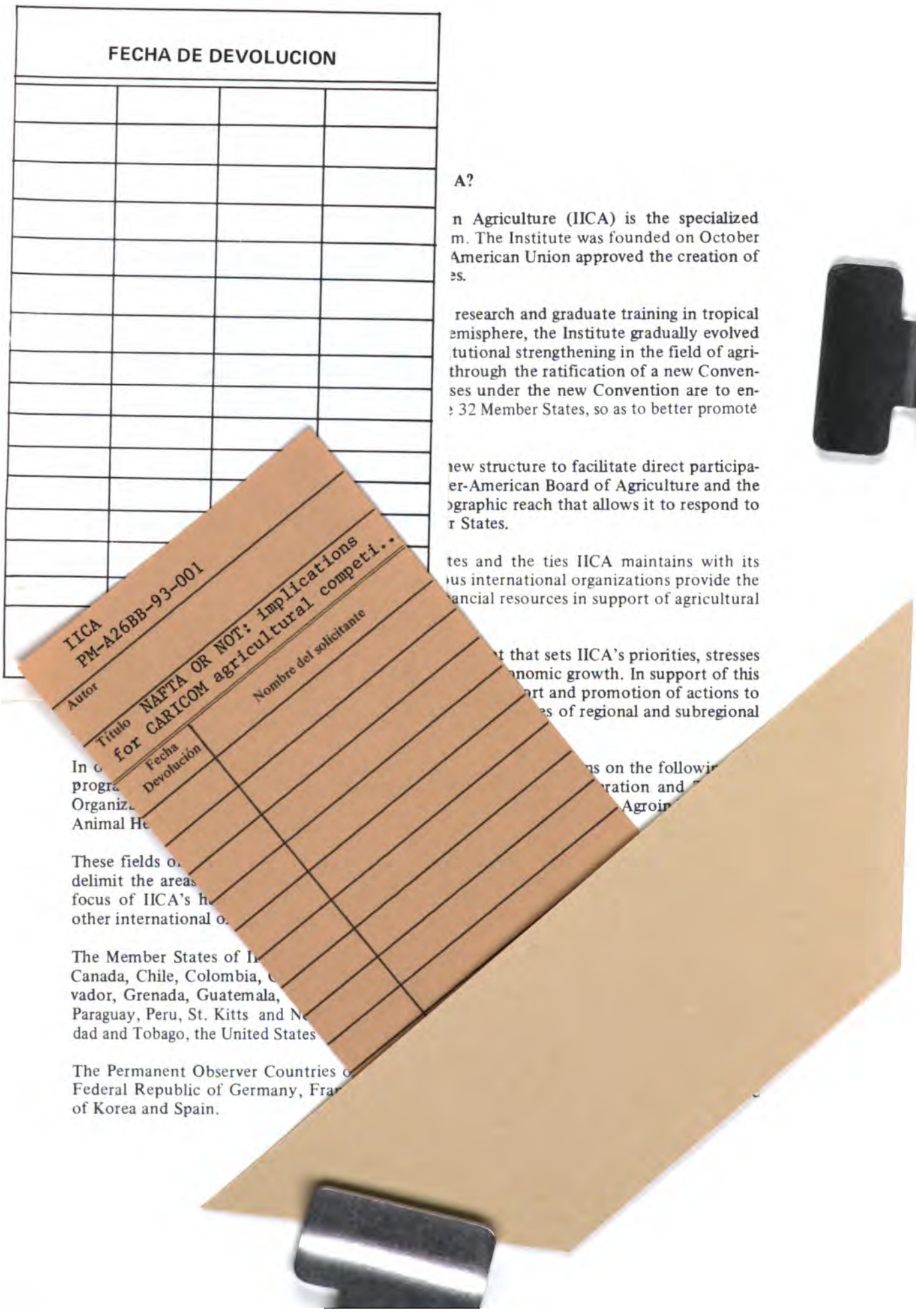

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