SOME FACTORS AFFECTING

FRESH FRUIT and VEGETABLE EXPORTS

from

CENTRAL AMERICA and the WESTERN CARIBBEAN.

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ABSTRACT

Countries in Central America and the Western Caribbean have increased their interest in the development, expansion, and promotion of agricultural exports, especially non-traditional commodities. Western Caribbean countries include the Bahamas, Jamaica, Haiti, and the Dominican Republic. The establishment of fresh fruit and vegetable export operations often exposes local farmers to state-of-the-art agricultural technologies, export operations provide an inexpensive, abundant, and nutritional food for the domestic market, and export operations are labor intensive. The objective of this paper is to discuss some aspects of fresh fruit and vegetable exports from Central America and Western Caribbean countries and to examine specific conditions or factors which affect the comparative advantage of one country or region over another. Once these factors are understood, the potential of a certain country or region to be able to successfully export produce can be better assessed and sound management decisions can be made which will allow for realistic project design, implementation, supervision, and/or management.

In the US, the per capita and total consumption of fresh produce is increasing and the US is the market of choice for Central American and Caribbean fresh produce exporters. Total US fresh produce imports have been increasing since 1980 and 98 per cent of these imports originate from ten countries. Over fifty-one kinds of fresh produce are imported into the US, Mexico is the largest supplier, and the principal commodities imported are bananas, followed by tomato, cucumbers, grapes, onions, and watermelon. Greater variety and volumes of fresh produce, excluding banana and pineapple, are exported from the Western Caribbean region to the US than from Central America. In 1983, large quantities of tomato, cucumber, cantaloupe, dry onions, and bell pepper were imported from Mexico and about 78% of Mexico's imports were made during the US winter vegetable market season which is from December through May.

Lists of allowable US fresh fruit and vegetable imports, prepared by USDA/APHIS/PPQ, indicate that allowable imports vary by country and region, and more imports are allowed from Western Caribbean countries than from Central American countries. Production areas for some imported fresh commodities in 1983 were estimated using average US yield data and reported import volumes; production areas ranged from 22 to 14,101 hectares for fresh broccoli and tomato, respectively. The average weekly New York wholesale prices were calculated for imported produce for 1982 and 1983 and the average price per pound was $0.55 and $0.62, respectively. Using average New York wholesale prices, the total value of imports in 1982 and 1983 was $3.1 and $3.6 billion, respectively.

Ocean freight costs for different commodities and from different countries, obtained January, 1985, were compared. Ocean freight costs

for cucumbers were slightly greater than for melons and costs were less from the Western Caribbean region than from Central America; also, service is available from the Western Caribbean to Miami and to New Jersey. Additional transportation costs are incurred when exporting fresh produce, as produce must be transported from packing or assembly areas to the port of embarkation and moved from the port of entry to a receiving point. The costs for this transportation will depend upon distances to and from the ports, local prices for fuel, and the competitive situation.

During the US winter vegetable market, a large proportion of fresh vegetables are imported from Mexico and most of this produce enters the US at Nogales, Arizona. If the cost of producing, packing, and delivering produce from Central America or the Western Caribbean regions to Florida, is equal to, or less than, the cost of Mexican produce at Nogales, then Central American and Caribbean produce can compete in markets in the eastern US where over half of the population, with more than half of purchasing power in the US, resides. Assuming equal quality and costs at the different ports of entry, Florida and Arizona, the delivered price to the wholesalers will be determined by the cost of freight from the port of entry or receiving point to the wholesale facility. In December, 1984, refrigerated truck rates were more favorable for produce shipped from Florida to Chicago than from Nogales to Chicago.

Total cost of shipping would include charges for ocean freight, foreign and domestic inland freight, US trucking to wholesaler's facility, and the necessary handling. In some Western Caribbean countries, refrigerated container service is available to Miami and New Jersey, while in Central America only service to Miami is available. Produce entering the US at Miami must be re-shipped to reach markets in the Northeastern US. A comparison of shipping costs for shipping cucumbers and melons from Honduras and the Dominican Republic to Miami, then New York, and from the Dominican Republic to New York were made. The estimated cost of shipping fresh produce directly from the Western Caribbean to New York, rather than shipping to Miami and then New York, is clearly financially advantageous. Also, we must consider the additional damage that will result from the extra handling. Fresh produce is perishable and extremely delicate; excessive and improper handling will dramatically increase postharvest losses and will negatively affect value.

Projected profit and loss statements for melons and cucumber production in Honduras and the Dominican Republic indicate that melon is more profitable than cucumber, and fresh produce exports from the Dominican Republic are more profitable than from Honduras due to greater distribution costs.

Introduction

Countries in the Caribbean and in Central America have increased their interest in the development, expansion, and promotion of agricultural exports. This increased interest has been stimulated by many factors and it would be less than correct to assume that all regions or countries were stimulated by the same reasons. Nevertheless, it seems some of the present day interest in exports, especially non-traditional exports, has been stimulated by the following factors or conditions:

1. The Caribbean Basin Initative (CBI).

2. Lesser developed country (LDC) government export promotion, more often than not, stimulated by balance of payment problems.

3. LDC private sector's need for US dollars, rather than local currency, to run unrelated businesses.

4. The development of an international entrepreneural spirit.

5. The leadership and initiative of certain individuals who have demonstrated that fresh produce can be successfully produced, packed, exported, shipped, and sold in demanding foreign markets at a profit.

6. The decline in the monetary value of traditional exports, such as sugar, bananas, coffee, and others.

7. Previous and existing USAID financed projects to promote agricultural exports.

The business of successfully exporting fresh fruits and vegetables is a complex operation and requires knowledge, hard work, and attention to detail. A little luck in the start-up phase of the operation would always be appreciated; lacking luck, one must depend upon skill. Although the basic motives for developing exports would probably be the generation of profits and foreign exchange, there are numerous additional benefits that can be derived from export operations. Often, export efforts must utilize state-of-the-art technologies, and some of this technology is applicable to domestic crops and production systems. Export farming operations often provide the first visible demonstration of the full production potential of land to local

farmers. Rarely can all of the production be exported; non-exportable produce is mostly rejected for cosmetic reasons and usually enters the domestic market system as inexpensive, abundant, and nutritional food. Cucumber exports were initiated in 1978 in the Comayagua Valley of Honduras; today, Honduran field-workers carry a small bag of salt, mixed with pepper, to condiment fresh, peeled cucumbers. When in production, cucumbers are a new food to the peasant's usual diet of beans and tortillas.

Generally, fresh produce export operations are very labor intensive. In Haiti, the labor required to harvest and process their fresh mango exports has been reported to envolve over 40,000 peasants. In Central America the labor requirement for export cucumber production is sixty man-days per hectare (ha) per twelve-week crop cycle, or 260 man-days/ha/year, while field corn production requires only eleven man-days per ha per six-month cycle, or 22 man-days/ha/year. Most of the labor utilized on the farm or in the packing house does not require intensive training nor specialization, and there is work for women, men, and youth.

Objective

The objective of this paper is to discuss some aspects of fresh fruit and vegetable exportations from Central American and Western Caribbean countries and to examine specific conditions or factors which affect the comparative advantage of one country, or region, over another. Once these factors are understood the potential of a certain country or region to be able to successfully export fresh produce can be better assessed and sound management decisions can be made which will allow for realistic project design, implementation, supervision, and/or management.

Limitations

The scope of this paper is such that topics are only superficially discussed, as an in-depth study of any of these areas would require a serious, sophisticated effort involving considerable time, effort, and expertise. The data presented herein are from readily available sources. They should not be considered as absolutes but are corsidered adequate for our purpose to represent trends, illustrate situations, and support opinions. Our discussions will not consider traditional or ethnic fresh produce exports in depth. Western Caribbean countries include the Bahamas, Haiti, the Dominican Republic, and Jamaica. Also, some data on fresh produce shipments originating in Puerto Rico are presented. Data are summarized in the text while complete tables of data are presented in the Appendix.

Market of Choice

Historically, the market of choice for most fresh agricultural exports from almost all Central American and Western Caribbean countries has been the United States (US). Although other markets have developed, the US continues as the market of choice due to its proximity, existing shipping and transportation patterns, and the immensity and diversity of the marketplace.

US Fresh Fruit and Vegetable Consumption

It is generally assumed that in the US, the consumption of fresh fruit and vegetables has increased in recent years. It would be beneficial to know the past and present patterns of fresh produce consumption to attempt to predict future demand. As the list of fresh fruits and vegetables consumed in the US is so extensive, a careful study of their consumption would envolve from fifty to one hundred items and it is doubtful whether satisfactory or sufficient information on many items could be obtained. Some information on per capita consumption for twenty-five vegetables is presented for 1978 in Knott's Vegetable Grower's Handbook. These data represent only the consumption of commercially produced vegetables for fresh, canned, and frozen markets and are presented in Table 1. (See Appendix for complete tables.) Apparently this information was prepared by the Economic Research Service (ERS) of the US Department of Agriculture (USDA). It is not clear how these types of data are generated but it is presumed that they originate from household and industry interviews.

Other per capita consumption data were reported by the Statistical Reporting Service of the USDA (USDA/SRS). Data for only a limited number of commodities were available and these data are presented in Table 2. This information differs slightly from the data presented in Table 1. Some of the data presented were as follows:

US per Capita Consumption of Fresh Vegetables (Pounds)

	USDA/ERS	USDA/SRS		
Vegetable	1978	1975	1980	% Change
Cabbage	8.90	9.20	9.00	-2.2
Cantaloupe	9.10	6.90	7.20	4.3
Lettuce	26.60	24.50	27.40	11.8
Onion	10.60	9.50	9.90	4.2
Pepper, Bell	-	3.10	3.60	16.1
Tomato	13.40	12.10	13.40	10.7

The total consumption and the average percent change in total consumption were calculated from US population and per capita consumption data for fifteen fresh fruits and vegetables provided by the USDA/SRS for 1965, 1970, 1975, and 1980 (Table 2.). These data indicate that in the US, the per capita consumption patterns for fresh fruits and vegetables are changing and the important trends that have occurred since 1965 are as follows:

Fresh Fruit and Vegetable Consumption in the US.

1. Total consumption is increasing.
2. Per capita consumption is increasing.
3. Consumption patterns have changed.

Total US Fresh Fruit and Vegetable Imports

Reports of US fresh fruit and vegetable imports by the Fruit and Vegetable Division of the Agricultural Marketing Service of the USDA (USDA/AMS/F&V) are a readily available source of information. These reports do not include fresh fruit and vegetable exports from Central American and the Western Caribbean to countries other than the US. Also, the data presented for US imports are imprecise. Nevertheless, these data are considered sufficiently accurate for indicating trends and estimate volumes. Data for 1980 through 1983 are presented in Table 3. and indicate that US fresh produce imports were as follows:

US Fresh Fruit and Vegetable Imports

Year	1,000 CWT	% Increase
1980	83,183	-
1981	83,339	0.2
1982	92,138	10.6
1983	92,268	0.1

Fresh produce US imports are increasing and the erratic nature of this increase, in recent years, is largely due to unfavorable weather conditions in Sinaloa, Mexico in 1981 which negatively affected vegetable production.

US Fresh Produce and Banana Imports by Country in 1983

In 1983, US fresh fruit and vegetable imports were reported from twenty-five different countries, from as close as Mexico and Canada, and as far away as India and Australia; and, the number of different commodities imported per country varied from one to fifty-one. Imports were greatest from the following countries:

US Fresh Fruit & Vegetable Imports- 1983

Country	Total Imports 1,000 CWT	Bananas 1,000 CWT	Bananas % of Total	% of Total US Imports
Mexico	25,448	828	3.2%	27.6%
Costa Rica	12,901	12,806	99.3%	14.0%
Honduras	11,750	11,008	93.7%	12.7%
Ecuador	9,851	9,838	99.9%	10.7%
Colombia	8,282	8,280	99.9%	9.0%
Canada	7,291	0	0.0%	7.9%
Panama	4,877	4,873	99.9%	5.3%
Guatemala	4,835	4,689	97.0%	5.2%
Chile	3,388	0	0.0%	3.7%
Nicaragua	1,366	1,365	99.9%	1.5%
All Others	2,279	0	0.0%	2.4%
Total	92,268	53,687	58.2%	100.0%

The fresh produce imports from ten countries represent approximately 98 percent, by weight, of the total fresh produce imported into the US in 1983. However, these countries, except for Mexico, Chile, and Canada, are principally exporters of bananas. Banana imports represent approximately 58 percent, by weight, of the total fresh produce imports in 1983. Banana imports will not be included in succeeding discussions and data as the volumes imported are so great that other trends are not apparent.

US Fresh Produce Imports from Central America, the Western Caribbean, Mexico, and All Other Countries

The volumes of US fresh fruit and vegetable imports for 1980 through 1983 from the Bahamas, Central America, Mexico, the West Indies, Puerto Rico, and all other countries are presented in Table 4. through Table 7. Data are presented for thirty-eight different fruits and vegetables and four general classifications as follows:

Imported Fresh Fruits and Vegetables

Asparagus	Grapes, Table	Pepper, Other
Avocado	Honeydew	Pineapple
Banana	Lettuce/Endive	Radish
Bean	Lime	Spinach
Broccoli	Mango	Squash
Brussels Sprouts	Melon, Mixed	Strawberry
Cabbage	Okra	Tangerine
Cantaloupe	Onion, Dry	Tomato
Carrot	Onion, Green	Tomato, Cherry
Cauliflower	Orange	Watermelon
Cucumber	Papaya	Vegs Others
Eggplant	Peas, Green	Misc Herbs
Garlic	Peas, Other	Misc Trop F&V
Grapefruit	Peppers, Bell	All Others

US Fresh Produce Imports from Different Regions

The amounts of fresh produce exported to the US from Central America, the Western Caribbean, Mexico, Puerto Rico, and all other countries for 1980 through 1983 were as follows:

US Fresh Produce Imports from Different Regions (1,000 CWT)

Region	1980	1981	1982	1983
Bahamas	135	192	170	187
Central America	743	849	918	1,024
Mexico	22,716	18,596	22,304	24,620
West Indies	228	269	383	553
Puerto Rico	43	65	195	139
All Others	7,537	9,395	11,479	11,999
Total	31,402	29,366	35,449	38,522

These data would indicate that US fresh fruit and vegetable imports are increasing, the greatest volume of imports are from Mexico, and imports from the other regions are increasing. The average yearly percent and volume increases of US fresh produce imports for the different regions for the period 1980 to 1983 were as follows:

US Fresh Produce Imports

Region	Average Yearly Increase: Volume (1,000 CWT)	Average Yearly Increase: Percent
Bahamas	17.3	12.8
Central America	93.7	12.6
Mexico	634.7	2.8
West Indies	108.3	47.5
Puerto Rico	32.0	74.4
All Others	1,487.3	19.7
Total	2,373.3	7.6

Although there are more than thirty-eight different fresh fruits and vegetables imported into the US, the commodities with the largest volumes for the period from 1980 through 1983 were as follows:

US Fresh Fruit and Vegetable Import Volumes

Commodity	Imports (1,000 CWT) 1980	1981	1982	1983
Cantaloupe	1,801	1,493	1,966	1,682
Cucumber	3,245	3,085	2,837	3,445
Grapes	971	1,270	2,096	2,869
Onion, all	1,290	1,315	1,683	2,052
Pepper, all	1,893	1,319	1,850	1,268
Pineapple	1,515	1,394	1,325	1,516
Squash	1,002	789	1,165	1,263
Tomato, all	6,889	5,602	6,419	7,799
Watermelon	2,168	1,328	2,372	2,056
Total	20,774	17,595	21,713	23,950

Prior to 1983, fresh produce imports from different countries in Central America and the Western Caribbean were reported regionally and it was not possible to identify exports of individual countries. In 1983, the US fresh fruit and vegetable imports from Central America and Caribbean countries were reported individually by the USDA/AMS/F&V. US fresh produce imports were, and are, reported as follows:

Regions and Countries

	Region	
Prior to 1983	Central America	West Indies
1983 and After	Belize Costa Rica El Salvador Guatemala Honduras Nicaragua Panama	Dominican Republic Haiti Jamaica

US Fresh Fruit and Vegetable Imports from Central America and the West Indies in 1983

The fresh produce imports from the different countries in Central America and the West Indies are presented in Table 8. The number of commodities exported to the US in 1983 from those countries were as follows:

Number of Different US Imported Commodities- 1983

Central America		West Indies	
Belize	1	Dominican Republic	15
El Salvador	1	Jamaica	5
Costa Rica	3	Haiti	3
Guatemala	7		
Honduras	6		
Nicaragua	2		
Panama	3		

The numbers of different commodities imported by the US from Central American and West Indian countries are twelve and seventeen, respectively. The diversity of exports from the West Indies is greater than those of Central America at present; however, the total volume of fresh produce imported by the the US from Central American countries is greater. If we examine the list and volumes of imported commodities from both regions and exclude bananas and pineapples, the volume of fresh produce imported from Central American countries is about half of that imported from the West Indies countries; also, the data indicates that imports from the West Indies have been rapidly increasing since 1980.

US Fresh Fruit and Vegetable Imports from Mexico

In 1983, US fresh produce imports from Mexico ranged from asparagus to watermelon and were valued in billions of dollars. The 1983 US imports from Mexico by month are presented in Table 9. Annual totals of major imported commodities were as follows:

US Fresh Fruit and Vegetable Imports from Mexico- 1983

Commodity	Volume (1,000 CWT)	% of Total
Tomato	6,933	27.2%
Cucumber	3,235	12.7%
Cantaloupe	1,557	6.1%
Onion, Dry	1,144	4.5%
Pepper, Bell	1,059	4.2%
Total	13,928	54.7%

Mexico's major area of fresh vegetable production for export to the US is concentrated around Culican, Sinaloa; the development of Sinaloa as the center for export vegetable production started about thirty-five years ago. A major stimulus in the development of Sinaloa for export vegetable production occurred in the early sixties when winter vegetable production in Cuba was discontinued. Today, we find large, sophisticated farming operations in Sinaloa; however, as in all agricultural endeavors, vegetable production in Mexico is not without its social, economic, climatological, and other problems. For example, in Sinaloa, it will take 12-13 weeks to get field grown slicing cucumbers to harvest; while in Comayagua, Honduras, the same cucumber will require six weeks to first harvest. Also, be assured

that costs for transporting fresh produce from Sinaloa, Mexico to the nearest US port of entry, crossing fees, tariff, and other charges will be so high that any labor or production cost reduction benefit derived from producing vegetables in Mexico will be insignificant. Examples of these costs for imported Mexican produce were studied by G.A. Zepp and R.L. Simmons in 1979 and 1980. The total of these costs per pound of tomato and cucumber in 1979 were $0.045 and $0.054, respectively. (Please see Table 10.)

US Winter Market for Fresh Produce

Due to the reduced capability of producing many vegetables during the winter months in the US, there exist lucrative markets in the US for many fresh fruits and vegetables from December through May. In 1983, fresh produce imports from Mexico during these months were as follows:

US Fresh Produce Imports from Mexico by Month in 1983

Month	Volume (1,000 CWT)	% of Total
January	2,683	10.5%
February	2,757	10.8%
March	4,441	17.5%
April	3,996	15.7%
May	3,654	14.4%
December	2,178	8.6%
Total	19,709	77.5%

Allowable US Fresh Fruit and Vegetable Imports

To be able to import fresh fruit and vegetables into the US, an import permit from the Plant Pest Quarantine Division, Animal/Plant Health Inspection Service, of the USDA (USDA/APHIS/PPQ) is required. A US importer can readily obtain an import permit, if the commodity to be imported has had prior approval by APHIS/PPQ. If a permit is requested for a commodity which has not had prior approval then a rather complicated procedure must be followed by APHIS/PPQ to determine whether the commodity can be imported and whether an approved quarantine treatment would be required. APHIS/PPQ also determines allowable ports of entry for each commodity. The APHIS/PPQ list of allowable imports from all countries is under constant scrutiny and is subject to periodic revision. A selected list of allowable US imports, by country, is presented in Table 11. and indicates the following:

1. Allowable imports vary by country.

2. Allowable imports vary by geographical region.

3. More imports are allowable from Caribbean countries than from Central American countries, except for Belize.

Estimated Production Areas for US Imported Fresh Produce

Expected good yields in the US for selected vegetables for the fresh market were obtained from Knott's Handbook for Vegetable Growers. These data were expressed as hundred-weight (CWT) per hectare (ha) were used to estimate the production areas required to produce the reported imported volumes of selected produce in 1983. Only the production areas of a few commodities were calculated due to the lack of yield data. The results of these calculations are presented in Table 12. Those fresh vegetables with the largest estimated production acreages were as follows:

Estimated Production Areas for Selected Fresh Vegetables Imported by the US in 1983

Commodity	Good US Yield (CWT/ha)	Production Area (ha)
Cantaloupe	494	3,401
Cucumber	618	5,534
Pepper, Bell	494	2,283
Tomato	494	14,101
Watermelon	494	4,162

Estimated Wholesale Dollar Value for US Imported Fresh Produce

The average weekly New York wholesale prices for imported fresh produce for 1982 and 1983 were obtained from the Market News Branch of the USDA/AMS/F&V; the data included weekly price, origin of the produce, and type of package. The average weekly wholesale price was calculated for the weeks that the produce was available in the wholesale market. The average price per pound was calculated by dividing the average weekly price per package by the average weight of each package. The average weekly wholesale price per package and the average weekly price per pound for selected fresh produce in New York

for 1982 and 1983 are presented in Table 13. and Table 14., respectively. The calculated average weekly New York wholesale price per pound for 1982 and 1983 and the average of these two years are presented in Table 15. and are summarized as follows:

Average New York Wholesale Prices

Commodity	Origin	Per Pound (US Dollars) 1982	1983	Average
Cantaloupe	Mexico	0.38	0.56	0.47
Cucumber	Mexico	0.34	0.34	0.34
Snow Peas	Guatemala	-	2.10	2.10
Tomato	Mexico	0.53	0.53	0.53
Watermelon	Mexico	0.24	0.31	0.28
Average		0.55	0.62	0.61

Estimated Value of US Imported Fresh Produce Using Average New York Wholesale Prices

The reported US fresh produce import volumes and the calculated New York average weekly wholesale price per pound were employed to estimate the total value of these imports for 1982 and 1983. The results of these calculations are presented in Table 16; the total value, using average New York wholesale prices, for US imported produce in 1982 and 1983 was $3.1 and $3.6 billion, respectively.

At times, the US fresh produce import volumes might be considered small but the total dollar value of fresh produce imports is considerable. Care must be taken and expertise is required to properly analyze data related to this agroindustry.

Ocean Freight Costs for Cucumbers and Melons from Certain Countries

In existing vegetable export operations in the Caribbean and Central American regions, transportation is the major concern and cost. Reliable, efficient, economic, and timely refrigerated container service is the key to success for most fresh fruit and vegetable export operations. It is not unusual to find that freight and distribution costs will be two too three times greater than farm gate cost.

At present, the principal method of transporting fresh produce from Central America and the Western Caribbean to the continental US is with refrigerated container service. Although some commodities exported from these regions require air transportation due to an extremely short shelf-life, most exports are transported in refrigerated trailers. Refrigerated trailers are utilized because of the large volumes involved or because economics preclude the use of air transportation. Air freight costs can vary from $0.12 to $0.25 per pound; thus, air transport is limited to a specific selection of commodities of high value, low weight, and limited volumes. Usually, refrigerated trailers are thirty-five or forty feet long and will hold 40,000 pounds. This weight limit has been established due to US highway maximum load restrictions (weight of cargo plus weight of truck and trailer).

The ocean freight costs for some commodities and certain countries were obtained from Sea-Land Service, Inc. in January, 1985. The costs presented in Table 17. and Table 18. should be representative of transportation costs from that specific country as ocean freight rates are usually established, maintained, and controlled by conference. A conference is composed of representatives of the different marine shipping companies serving a country, or countries; the conference establishes and constantly monitors freight rates for specific commodities, countries, and destinations. Ocean freight costs from some Central American and Western Caribbean countries and two commodities are summarized as follows:

Estimated Ocean Freight Costs

			US Dollars	
Commodity	Origin	Destination	Carton	Pound
Cucumber	Honduras	Florida	3.80	0.069
	Guatemala	Florida	3.72	0.068
	Dom. Rep.	Florida	3.29	0.060
	Dom. Rep.	New Jersey	3.96	0.072
	Haiti	Florida	2.95	0.054
	Haiti	New Jersey	3.60	0.066
Melon	Honduras	Florida	2.04	0.054
	Guatemala	Florida	1.85	0.049
	El Salvador	Florida	2.29	0.061
	Dom. Rep.	Florida	2.21	0.059
	Dom. Rep.	New Jersey	2.64	0.070
	Haiti	Florida	1.97	0.052
	Haiti	New Jersey	2.40	0.064

In general, ocean freight rates (expressed as cost per pound) for cucumbers are slightly higher than for melons. As the value of melons (cantaloupe, honeydew, and mixed-melons) can be expected to be greater than the value of cucumber (see Table 15.), there is no logical reason why ocean freight rates for cucumber are greater than for melon. One should also note that there is ocean freight service from some ports of origin directly to Port Elizabeth, New Jersey. As a large market for imported fresh fruit and vegetables exists in the Northeastern US, the availability of a delivery point in this geographical area could provide considerable advantage.

Foreign and Domestic Inland Freight Rates

Fresh fruit and vegetable production areas in Central America and the Western Caribbean countries can be located considerable distances from the port(s) where refrigerated trailers are loaded on ocean vessels. Transportation charges for moving refrigerated trailers from the production area to the port of embarkation and from the port of entry to the receiving point are usually made by or through the marine shipping company. These transportation charges are determined by domestic and foreign prices for fuel, labor, repair and maintenance costs, and the availability of equipment. These charges will vary by country and will largely depend upon the distances from the production area to the port and from the port to the receiving point. Inland transportation charges in several countries and in the US for cucumbers and melons, are presented in Table 19. Average inland freight costs, domestic and foreign, were as follows:

Average Domestic and Foreign Inland Freight Charges

		US Dollars Cost		
Commodity	Location	Trailer	Carton	Pound
Cucumber	Central America	200	0.294	0.005
	Dominican Rep.	65	0.096	0.002
	Florida	175	0.257	0.005
	New Jersey	100	0.139	0.003
Melon	Central America	338	0.331	0.009
	Dominican Rep.	65	0.064	0.002
	Florida	200	0.196	0.005
	New Jersey	100	0.098	0.003

Truck Rates for Specific Markets and Commodities in the US

If fresh produce from Central American or Caribbean production areas can not be delivered directly to Northeastern ports, then this imported produce will be ocean freighted to Florida, refrigerated trailers will be off-loaded, the cargo is subject to inspection by USDA/APHIS/PPQ, customs, and the Food and Drug Administration (FDA), and the trailer is then delivered to a receiving point where the cargo of fresh produce can be unloaded. Often, the produce is placed in cold rooms for a short period or immediately reloaded onto other refrigerated trucks for delivery to wholesalers. If the wholesalers are located in the Northeastern US, produce has to be trucked North and unloaded.

During the US winter vegetable market season, a large proportion of fresh produce is imported from Mexico, most through Nogales, Arizona. Once fresh produce from Culican, Sinaloa is packed, shipped, and crossed, further distribution costs have to be considered. If the cost of produce from Central America and the Caribbean, delivered to Miami, Florida, is equal to, or less than, the cost of Mexican produce at Nogales, then Central American and Caribbean produce can compete in markets in the Eastern US where over half of the US population, with more than half of the purchasing power in the US, resides. Assuming equal quality and price at the different ports of entry, Nogales and Miami, the delivered cost to the wholesaler will be determined by the cost of freight from the port or receiving point to the wholesale facility. Refrigerated truck rates in the US in December, 1984, as reported by the Federal-State Market News, are presented in Table 20. and are summarized as follows:

US Refrigerated Truck Rates (December, 1984)

			Average Cost US $	
Commodity	Origin	Destination	Trailer	Pound
Vegetables	Arizona	Chicago	2,000	0.051
		New York	2,450	0.061
Tomato	Florida	Chicago	1,720	0.043
		New York	1,760	0.044

These data indicate that refrigerated truck rates would be more favorable for produce shipped from Florida to New York, and as far West as Chicago, than for produce shipped from Nogales, Arizona to

Chicago (and probably any location East of St. Louis, Missouri). Produce that could be directly delivered to a Northeastern US port for distribution would have considerable advantage.

Comparative Freight Costs for Fresh Produce from Central America and the Western Caribbean

At present, reliable refrigerated container service is available from most Western Caribbean countries to Miami; in some countries there is also direct service available to New Jersey. In Central America, however, only service to Miami is available. (Apparently, there may be refrigerated container service from Panama direct to New York but details about this service are not fully known at this time.) As previously stated, there is a large market for fresh produce in the Northeastern US. If Honduras and the Dominican Republic were able to produce fresh vegetables of equal quality and at similar cost and obtain the same selling price, then the cost of transporting their exported produce to market would determine the expected profit margin. A comparison of the estimated freight costs for cucumbers and melons from Honduras and the Dominican Republic is presented in Table 21. We assume that fresh produce from Honduras would be shipped to Florida, unloaded, sold to a wholesaler, reloaded, trucked to New York, and unloaded. Costs for transporting and handling produce from other Central American countries would be similar to those of Honduras except for slightly different ocean freight rates. Two cases are considered for the fresh produce originating in the Dominican Republic. In the first case fruit is shipped from the Dominican Republic to Florida and handled in a manner similar to the produce from Central America. In the second case, the fruit is shipped directly to the Northeastern US, sold to a wholesaler, and unloaded. Freight costs for commodities from Central America (Honduras) and the Western Caribbean (Dominican Republic) using these different options are estimated as follows:

Freight Costs for Fresh Produce

				Cost US Dollars	
Commodity	Origin	Port	Destination	Carton	Pound
Cucumber	Honduras	Miami	New York	7.29	0.133
	Dom. Rep.	Miami	New York	6.80	0.124
	Dom. Rep.	N.J.	New York	4.70	0.085
Melon	Honduras	Miami	New York	4.85	0.121
	Dom. Rep.	Miami	New York	4.69	0.117
	Dom. Rep.	N.J.	New York	2.87	0.072

The estimated cost of shipping produce directly from the Western Caribbean to the New York area, rather than having to ship to Florida and truck produce overland to New York, is financially advantageous. Also, one must consider other factors, such as the additional damage which will result from extra handling. One must always remember that fresh produce is perishable and extremely delicate, excessive handling will increase postharvest losses and will reduce value and returns.

Projected Profit and Loss Statements for Cucumber and Melon Production in Honduras and the Dominican Republic

Export cucumbers and melons, primarily cantaloupe, have been produced on a small, commercial scale in Honduras since 1977. In the Dominican Republic, the production of melons, primarily cantaloupe, for export started in 1980 and the volume exported in 1983 exceeded the volume exported from Honduras. Also, minor quantities of cucumbers have been exported from the Dominican Republic. In both countries, the costs of production, harvesting, and packing would be expected to be similar; also, we would expect to obtain similar export sales revenues because produce would be sold in the same markets. In this case 1983 New York average wholesale prices have been used. The basic difference between the two operations is found in the distribution costs, mainly the cost of freight. The results of these calculations are presented in Table 22. and are summarized as follows:

Profit and Loss Statement- Fresh Produce Exports

	Cucumbers		Melons	
	Dom. Rep.	Honduras	Dom. Rep.	Honduras
Revenue	$18.70	$18.70	$18.80	$18.80
Costs				
Production	$ 1.20	$ 1.20	$ 1.90	$ 1.90
Harvesting	.10	.10	.15	.15
Packing	1.75	1.75	1.50	1.50
Distribution	9.86	10.35	7.73	7.89
Administration	.75	.75	1.00	1.00
Total	$13.66	$14.15	$12.28	$12.44
Various (10%)	1.36	1.41	1.23	1.24
Total	$15.02	$15.56	$13.51	$13.68
Return to Cap. & Mgmt.	$ 3.86	$ 3.14	$ 5.29	$ 5.12

These calculations indicate that melons are more profitable than cucumbers and fresh produce exports are more profitable in the Dominican Republic than in Honduras due to greater distribution costs.

Conclusions and Indications

Countries in Central America and the Western Caribbean have increased their interest in the development, expansion, and promotion of agricultural exports, especially non-traditional commodities.

Western Caribbean countries include the Bahamas, Jamaica, Haiti, and the Dominican Rebublic. Some fresh produce shipment data for Puerto Rico are presented.

The market of choice for Central American and Caribbean countries is the US.

US fresh fruit and vegetable consumption, total and per capita, has increased since 1965.

Total US fresh fruit and vegetable imports have increased. The largest single fresh produce import is banana which represented 58 percent, by weight, of total US fresh imports in 1983. The primary producers of banana are the Central American countries, Ecuador, and Colombia.

In 1983, fresh produce from ten countries represented approximately 98 percent, by weight, of the total amount of fresh produce imported into the US. Mexico supplied the largest volume and fifty-one kinds and classifications of fruits and vegetables were imported.

US fresh produce imports are obtained from different regions- the Bahamas, Central America, the West Indies, Puerto Rico, and all other countries. Volumes of US fresh produce imports from these regions are increasing at different rates and the fresh produce imports of greatest volume are:

1.	Banana	6.	Watermelon
2.	Tomato, all	7.	Cantaloupe
3.	Cucumber	8.	Pepper, all
4.	Grapes	9.	Pineapple
5.	Onion, all	10.	Squash

The USDA/AMS/F&V Division reporting system was changed in 1983 and now information on imports from individual countries in Central America and the West Indies is available. The number of different kinds of commodities exported from the West Indies countries is greater than from Central American countries.

US fresh produce from Mexico in 1983 was valued in billions of US dollars and the items of greatest volume were:

1. Tomato
2. Cucumber
3. Cantaloupe
4. Onion, Dry
5. Pepper, Bell

Mexico, the largest exporter of fresh produce to the US in 1983, exported 77.5 per cent of the total import volume in the months from December through May; this period is referred to as the US winter vegetable market season.

The USDA/APHIS/PPQ issues import permits and determines plant pest quarantine and treatment requirements for specific crops from individual countries. The lists of allowable US fresh fruit and vegetable imports are greater for Western Caribbean countries than for Central American countries, except Belize. USDA/APHIS/PPQ requlations are subject to constant revision and possible change.

Using US good yields and import data, the area required to produce the US fresh fruit and vegetable imports for 1983 was calculated. Production areas were estimated to range from 22 to 14,101 ha for fresh broccoli and tomato, respectively.

New York wholesale prices were obtained for 1982 and 1983, and the average weekly price was calculated. Prices for imported produce were used when available. The average weekly price per pound was calculated.

Using New York average wholesale prices for 1982 and 1983, the total dollar value of US imported fresh produce was calculated and was approximately $ 3.1 and $ 3.6 billion, respectively.

In early 1984, ocean freight costs for cucumbers and melons were obtained from a company supplying refrigerated container service for most Caribbean and Central American countries. Ocean freight for cucumbers was slightly higher than for melons and ocean freight rates to the US are less from the Caribbean than from the Central American countries.

Other freight costs are incurred and involve the costs of transporting the refrigerated trailers from the production or packing area to the port of embarkation and the transport of the trailer from the port of entry to the receiving point in the US. These costs depend upon local prices, location, and competition.

Preliminary data indicate that US refrigerated truck rates would be more favorable for produce shipped from Florida to the Northeast and to Chicago, than produce trucked from Nogales, Arizona to Chicago.

Comparison of freight costs for fresh produce from Central America (Honduras) and the Western Caribbean (Dominican Republic) indicate that produce can be delivered cheaper to the Northeast from the Caribbean than from Central America.

Projected profit and loss statements for cucumber and melon produced and exported from Honduras and the Dominican Republic indicate that cucumbers are less profitable than melons and both commodities are more profitable from the Dominican Republic than from Honduras.

APPENDIX

TABLE 1. 1978- US PER CAPITA CONSUMPTION OF COMMERCIALLY PRODUCED VEGETABLES.*

COMMODITY	AMOUNT(LB) FRESH	CANNED	FROZEN	TOTAL
ARTICHOKES	0.20	0.00	0.00	0.20
ASPARAGUS	0.30	0.40	0.09	0.79
LIMA BEANS	0.00	0.30	0.50	0.80
SNAP BEANS	1.40	5.70	1.03	8.13
BEETS	0.00	1.40	0.00	1.40
BROCCOLI	1.30	0.00	1.40	2.70
BRUS. SPROUTS	0.00	0.00	0.28	0.28
CABBAGE	8.90	1.30	0.00	10.20
CANTALOUPE	9.10	0.00	0.00	9.10
CARROTS	5.70	0.50	1.00	7.20
CAULIFLOWER	1.00	0.00	0.48	1.48
CELERY	7.00	0.00	0.00	7.00
SWEET CORN	7.50	6.00	1.86	15.36
CUCUMBERS	4.30	8.40	0.00	12.70
EGGPLANT	0.50	0.00	0.00	0.50
GARLIC	0.80	0.00	0.00	0.80
LETTUCE and ESCAROLE	26.60	0.00	0.00	26.60
ONIONS	10.60	2.60	0.72	13.92
GREEN PEAS	0.00	3.60	1.55	5.15
PUMPKIN and SQUASH	0.00	0.40	0.00	0.40
SPINACH	0.50	0.70	0.75	1.95
TOMATOES	13.40	21.90	0.00	35.30
WATERMELON	13.20	0.00	0.00	13.20
MINOR VEGS	6.90	3.50	1.21	11.61

*FROM: KNOTT'S HANDBOOK FOR VEGETABLE GROWERS. (USDA/ERS-TVS 213).

DAB:04/29/85 (FILE: T01CP1)

TABLE 2. US PER CAPITA CONSUMPTION OF COMMERCIALLY PRODUCED FRESH FRUIT AND VEGETABLES AND CALCULATED TOTAL CONNSUMPTION AND PER CENT CHANGE.*

	1965		1970			1975			1980			
	US POPULATION 190.5 MILLIONS		US POPULATION 200.5 MILLIONS			US POPULATION 212.7 MILLIONS			US POPULATION 224.4 MILLIONS			AVERAGE %
COMMODITY	PER CAPITA (LBS)	TOTAL AMOUNT ('000 CWT)	PER CAPITA (LBS)	TOTAL AMOUNT ('000 CWT)	AVERAGE % CHANGE	PER CAPITA (LBS)	TOTAL AMOUNT ('000 CWT)	AVERAGE % CHANGE	PER CAPITA (LBS)	TOTAL AMOUNT ('000 CWT)	AVERAGE % CHANGE	CHANGE SINCE 1965
ASPARAGUS	0.6	1,143	0.5	1,003	-12.3%	0.4	851	-15.1%	0.3	673	-20.9%	-41.1%
BROCCOLI	0.3	572	0.5	1,003	75.4%	1.0	2,127	112.2%	1.8	4,039	89.9%	606.8%
CABBAGE	8.9	16,955	8.8	17,644	4.1%	9.2	19,568	10.9%	9.0	20,196	3.2%	19.1%
CANTALOUPE	7.9	15,050	8.9	17,845	18.6%	6.9	14,676	-17.8%	7.2	16,157	10.1%	7.4%
CARROT	7.0	13,335	5.9	11,830	-11.3%	6.5	13,826	16.9%	6.3	14,137	2.3%	6.0%
CAULIFLOWER	1.0	1,905	0.7	1,404	-26.3%	0.9	1,914	36.4%	1.4	3,142	64.1%	64.9%
CUCUMBER	3.1	5,906	3.2	6,416	8.6%	3.2	6,806	6.1%	4.3	9,649	41.8%	63.4%
EGGPLANT	0.4	762	0.4	802	5.2%	0.5	1,064	32.6%	0.6	1,346	26.6%	76.7%
GARLIC	0.4	762	0.5	1,003	31.6%	0.5	1,064	6.1%	1.0	2,244	111.0%	194.5%
LETTUCE/ENDIVE	21.7	41,339	23.1	46,316	12.0%	24.5	52,112	12.5%	27.4	61,486	18.0%	48.7%
ONION	11.4	21,717	11.9	23,860	9.9%	9.5	20,207	-15.3%	9.9	22,216	9.9%	2.3%
PEPPER, BELL	2.3	4,382	2.4	4,812	9.8%	3.1	6,594	37.0%	3.6	8,078	22.5%	84.4%
SPINACH	0.6	1,143	0.5	1,003	-12.3%	0.5	1,064	6.1%	0.8	1,795	68.8%	57.1%
TOMATO	12.0	22,860	12.3	24,662	7.9%	12.1	25,737	4.4%	13.4	30,070	16.8%	31.5%
WATERMELON	15.7	29,909	14.4	28,872	-3.5%	12.2	25,949	-10.1%	11.4	25,582	-1.4%	-14.5%
TOTAL	93.3	177,737	94.0	188,470		91.0	193,557		98.4	220,810		
AVERAGE	6.2	11,849	6.3	12,565	7.8%	6.1	12,904	14.9%	6.6	14,721	30.8%	80.5%

* From: "Agricultural Statistics 1982." USDA/SRS.
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TABLE 3. US FRESH FRUIT AND VEGETABLE IMPORTS BY COUNTRY AND YEAR.*

COUNTRY	1980	1981	1982	1983	AVE	% OF TOTAL
	1,000 CWT					
ARGENTINA	2	12	11	77	26	0.03%
AUSTRALIA	99	139	48	98	96	0.11%
BAHAMAS	135	192	170	187	171	0.19%
BELGIUM	15	14	22	33	21	0.02%
BRAZIL	0	2	55	139	49	0.06%
CANADA	5,408	6,901	7,931	7,291	6,883	7.85%
CENTRAL AMERICA	35,750	35,939	35,504	35,765	35,740	40.74%
CHILE	1,252	1,596	2,299	3,388	2,134	2.43%
COLOMBIA	4,652	6,774	8,604	8,282	7,078	8.07%
ECUADOR	11,564	11,677	13,250	9,851	11,586	13.21%
FRANCE	66	81	86	191	106	0.12%
GREECE	0	0	1	2	1	.00%
ISRAEL	6	14	40	49	27	0.03%
INDIA	0	0	0	2	1	.00%
ITALY	5	3	13	20	10	0.01%
IVORY COAST	0	3	0	0	1	.00%
JAPAN	25	21	26	39	28	0.03%
MEXICO	23,134	18,795	22,583	25,448	22,490	25.63%
MOROCCO	1	4	4	15	6	0.01%
NETHERLANDS	84	3	84	35	52	0.06%
NEW ZEALAND	299	332	279	398	327	0.37%
PERU	11	4	3	1	5	0.01%
SOUTH AFRICA	210	189	318	269	247	0.28%
SPAIN	21	26	217	60	81	0.09%
TAIWAN	0	12	24	0	9	0.01%
VENEZUELA	8	4	18	32	16	0.02%
WEST INDIES	436	602	548	596	546	0.62%
TOTAL	83,183	83,339	92,138	92,268	87,732	100.00%

*FROM: USDA/AMS/F&V
DAB:04/22/85 (FILE: CP85)

TABLE 4. US FRESH FRUIT & VEGETABLE IMPORTS FROM DIFFERENT REGIONS- 1980.*

1980	1,000 CWT							
COMMODITY	BAHAMAS	CENTRAL AMERICA	MEXICO	WEST INDIES	PUERTO RICO	ALL OTHERS	TOTAL	PER CENT OF TOTAL
ASPARAGUS	0	0	81	0	0	0	81	0.10%
AVOCADO	0	0	0	47	0	0	47	0.06%
BANANA	0	35,007	418	208	0	16,191	51,824	62.27%
BEAN	0	0	262	3	0	11	276	0.33%
BROCCOLI	0	0	25	0	0	0	25	0.03%
BRUS. SPROUTS	0	0	61	0	0	0	61	0.07%
CABBAGE	0	0	19	0	0	256	275	0.33%
CANTALOUPE	0	36	1,764	0	1	0	1,801	2.16%
CARROT	0	0	48	0	0	1,041	1,089	1.31%
CAULIFLOWER	0	0	47	0	0	42	89	0.11%
CUCUMBER	135	11	3,072	1	7	19	3,245	3.90%
EGGPLANT	0	0	407	5	0	0	412	0.50%
GARLIC	0	0	212	0	0	32	244	0.29%
GRAPEFRUIT	0	0	96	0	0	0	96	0.12%
GRAPES, TABLE	0	0	163	0	0	808	971	1.17%
HONEYDEW	0	0	261	0	13	0	274	0.33%
LETTUCE/ENDIVE	0	0	85	0	0	66	151	0.18%
LIME	0	1	377	1	0	4	383	0.46%
MANGO	0	19	354	84	0	0	457	0.55%
MELON, MIXED	0	70	33	0	0	79	182	0.22%
OKRA	0	17	200	1	0	0	218	0.26%
ONION, DRY	0	1	829	0	0	32	862	1.04%
ONION, GREEN	0	0	428	0	0	0	428	0.51%
ORANGE	0	0	207	1	0	10	218	0.26%
PAPAYA	0	0	18	0	0	0	18	0.02%
PEAS, GREEN	0	0	79	0	0	0	79	0.09%
PEAS, OTHER	0	0	27	0	0	0	27	0.03%
PEPPER, BELL	0	0	1,501	67	2	4	1,574	1.89%
PEPPER, OTHER	0	0	319	0	0	0	319	0.38%
PINEAPPLE	0	587	928	0	0	0	1,515	1.82%
RADISH	0	0	94	6	2	52	154	0.19%
SPINACH	0	0	15	0	0	0	15	0.02%
SQUASH	0	0	997	0	0	5	1,002	1.20%
STRAWBERRY	0	0	114	0	0	15	129	0.15%
TANGERINE	0	0	328	0	0	0	328	0.39%
TOMATO	0	0	5,953	12	18	8	5,991	7.20%
TOMATO, CHERRY	0	0	898	0	0	0	898	1.08%
WATERMELON	0	1	2,167	0	0	0	2,168	2.60%
VEGS. OTHERS	0	0	141	0	0	0	141	0.17%
MISC HERBS	0	0	37	0	0	0	37	0.04%
MISC TROP F&V	0	0	41	0	0	0	41	0.05%
ALL OTHERS	0	0	28	0	0	5,053	5,081	6.11%
TOTAL	135	35,750	23,134	436	43	23,728	83,226	100.00%
PER CENT	0.2%	43.0%	27.8%	0.5%	0.1%	28.5%	100.0%	

* From: USDA/AMS/F&VEG DIV
DAB:04/10/85 (FILE: FFIMP80)

TABLE 5. US FRESH FRUIT & VEGETABLE IMPORTS FROM DIFFERENT REGIONS- 1981.*

1981	1,000 CWT							
COMMODITY	BAHAMAS	CENTRAL AMERICA	MEXICO	WEST INDIES	PUERTO RICO	ALL OTHERS	TOTAL	PER CENT OF TOTAL
ASPARAGUS	0	0	92	0	0	1	93	0.11%
AVOCADO	0	0	0	17	0	0	17	0.02%
BANANA	0	35,090	199	333	0	18,416	54,038	64.79%
BEAN	0	0	188	11	1	2	202	0.24%
BROCCOLI	0	0	9	0	0	0	9	0.01%
BRUS. SPROUTS	0	0	92	0	0	0	92	0.11%
CABBAGE	0	0	15	0	0	43	58	0.07%
CANTALOUPE	0	23	1,468	0	2	0	1,493	1.79%
CARROT	0	0	24	0	0	855	879	1.05%
CAULIFLOWER	0	0	58	0	0	67	125	0.15%
CUCUMBER	187	11	2,855	0	5	27	3,085	3.70%
EGGPLANT	0	0	337	4	0	0	341	0.41%
GARLIC	0	3	156	0	0	34	193	0.23%
GRAPEFRUIT	0	0	49	0	0	0	49	0.06%
GRAPES, TABLE	0	0	164	0	0	1,106	1,270	1.52%
HONEYDEW	0	0	288	0	46	0	334	0.40%
LETTUCE/ENDIVE	0	0	45	0	0	76	121	0.15%
LIME	0	0	460	8	0	5	473	0.57%
MANGO	0	0	346	97	0	1	444	0.53%
MELON, MIXED	0	120	29	0	2	80	231	0.28%
OKRA	0	24	223	0	0	0	247	0.30%
ONION, DRY	0	2	710	0	0	205	917	1.10%
ONION, GREEN	0	0	398	0	0	0	398	0.48%
ORANGE	0	0	126	2	0	27	155	0.19%
PAPAYA	0	0	15	0	0	1	16	0.02%
PEAS, GREEN	0	0	54	0	0	0	54	0.06%
PEAS, OTHER	0	0	26	0	0	0	26	0.03%
PEPPER, BELL	0	0	905	50	0	6	961	1.15%
PEPPER, OTHER	0	0	358	0	0	0	358	0.43%
PINEAPPLE	0	663	675	53	0	3	1,394	1.67%
RADISH	0	0	51	3	0	7	61	0.07%
SPINACH	0	0	13	0	0	0	13	0.02%
SQUASH	0	2	784	1	0	2	789	0.95%
STRAWBERRY	0	0	50	0	0	21	71	0.09%
TANGERINE	0	0	385	0	0	0	385	0.46%
TOMATO	5	0	4,761	23	7	10	4,806	5.76%
TOMATO, CHERRY	0	0	796	0	0	0	796	0.95%
WATERMELON	0	1	1,326	0	1	0	1,328	1.59%
VEGS. OTHERS	0	0	179	0	0	0	179	0.21%
MISC HERBS	0	0	0	0	0	0	0	0.00%
MISC TROP F&V	0	0	81	0	1	0	82	0.10%
ALL OTHERS	0	0	5	0	0	6,816	6,821	8.18%
TOTAL	192	35,939	18,795	602	65	27,811	83,404	100.00%
PER CENT	0.2%	43.1%	22.5%	0.7%	0.1%	33.3%	100.0%	

* From: USDA/AMS/F&VEG DIV
DAB:04/10/85 (FILE: FFIMP81)

TABLE 6. US FRESH FRUIT & VEGETABLE IMPORTS FROM DIFFERENT REGIONS- 1982.*

1982	1,000 CWT							
COMMODITY	BAHAMAS	CENTRAL AMERICA	MEXICO	WEST INDIES	PUERTO RICO	ALL OTHERS	TOTAL	PER CENT OF TOTAL
ASPARAGUS	0	0	162	0	0	3	165	0.18%
AVOCADO	2	0	0	12	0	0	14	0.02%
BANANA	0	34,586	279	165	1	21,854	56,885	61.61%
BEAN	0	0	156	12	0	2	170	0.18%
BROCCOLI	0	0	0	0	0	1	1	.00%
BRUS. SPROUTS	0	0	85	0	0	0	85	0.09%
CABBAGE	0	2	110	0	0	134	246	0.27%
CANTALOUPE	0	25	1,926	13	0	2	1,966	2.13%
CARROT	0	0	11	0	0	1,029	1,040	1.13%
CAULIFLOWER	0	0	26	0	0	90	116	0.13%
CUCUMBER	148	14	2,642	7	2	24	2,837	3.07%
EGGPLANT	0	0	354	4	0	0	358	0.39%
GARLIC	0	13	165	0	0	62	240	0.26%
GRAPEFRUIT	0	0	52	0	0	0	52	0.06%
GRAPES, TABLE	0	0	358	0	0	1,738	2,096	2.27%
HONEYDEW	0	0	291	0	144	0	435	0.47%
LETTUCE/ENDIVE	0	0	75	0	0	103	178	0.19%
LIME	13	4	199	7	0	4	227	0.25%
MANGO	0	0	595	109	0	0	704	0.76%
MELON, MIXED	0	113	40	11	7	101	272	0.29%
OKRA	0	30	351	5	0	0	386	0.42%
ONION, DRY	0	2	1,041	0	0	203	1,246	1.35%
ONION, GREEN	0	0	437	0	0	0	437	0.47%
ORANGE	0	5	252	0	0	53	310	0.34%
PAPAYA	0	0	27	0	0	2	29	0.03%
PEAS, GREEN	0	0	66	0	0	0	66	0.07%
PEAS, OTHER	0	0	38	0	0	0	38	0.04%
PEPPER, BELL	0	0	1,287	61	0	14	1,362	1.48%
PEPPER, OTHER	0	0	476	0	12	0	488	0.53%
PINEAPPLE	0	709	489	127	0	0	1,325	1.44%
RADISH	0	0	63	5	1	14	83	0.09%
SPINACH	0	0	1	0	0	0	1	.00%
SQUASH	0	0	1,164	1	0	0	1,165	1.26%
STRAWBERRY	0	0	23	0	0	26	49	0.05%
TANGERINE	0	0	283	0	0	56	339	0.37%
TOMATO	7	0	5,579	9	11	17	5,623	6.09%
TOMATO, CHERRY	0	0	796	0	0	0	796	0.86%
WATERMELON	0	1	2,353	0	18	0	2,372	2.57%
VEGS. OTHERS	0	0	214	0	0	0	214	0.23%
MISC HERBS	0	0	0	0	0	0	0	0.00%
MISC TROP F&V	0	0	86	0	0	0	86	0.09%
ALL OTHERS	0	0	31	0	0	7,801	7,832	8.48%
TOTAL	170	35,504	22,583	548	196	33,333	92,334	100.00%
PER CENT	0.2%	38.5%	24.5%	0.6%	0.2%	36.1%	100.0%	

* From: USDA/AMS/F&VEG DIV.
DAB:04/10/85 (FILE: FFIMP82)

TABLE 7. US FRESH FRUIT & VEGETABLE IMPORTS FROM DIFFERENT REGIONS- 1983.*

1,000 CWT

1983 COMMODITY	BAHAMAS	CENTRAL AMERICA	MEXICO	WEST INDIES	PUERTO RICO	ALL OTHERS	TOTAL	PER CENT OF TOTAL
ASPARAGUS	0	0	173	0	0	14	187	0.20%
AVOCADO	3	0	0	25	0	0	28	0.03%
BANANA	0	34,741	828	43	0	18,273	53,885	58.31%
BEAN	0	0	197	14	0	10	221	0.24%
BROCCOLI	0	0	6	0	0	1	7	0.01%
BRUS. SPROUTS	0	0	71	0	0	2	73	0.08%
CABBAGE	0	0	119	0	0	156	275	0.30%
CANTALOUPE	0	43	1,557	80	0	2	1,682	1.82%
CARROT	0	0	51	0	0	1,210	1,261	1.36%
CAULIFLOWER	0	2	24	0	0	103	129	0.14%
CUCUMBER	132	15	3,235	17	21	25	3,445	3.73%
EGGPLANT	0	0	406	10	0	1	417	0.45%
GARLIC	0	0	194	0	0	81	275	0.30%
GRAPEFRUIT	1	0	15	0	0	25	41	0.04%
GRAPES, TABLE	0	0	368	0	0	2,501	2,869	3.10%
HONEYDEW	0	0	234	0	90	0	324	0.35%
LETTUCE/ENDIVE	0	0	123	0	0	128	251	0.27%
LIME	48	6	322	4	0	1	381	0.41%
MANGO	0	15	793	140	0	1	949	1.03%
MELON, MIXED	0	141	32	6	0	144	323	0.35%
OKRA	0	11	408	0	0	0	419	0.45%
ONION, DRY	0	1	1,144	0	0	286	1,431	1.55%
ONION, GREEN	0	0	621	0	0	0	621	0.67%
ORANGE	0	0	90	11	0	38	139	0.15%
PAPAYA	1	0	52	0	0	0	53	0.06%
PEAS, GREEN	0	0	89	0	0	0	89	0.10%
PEAS, OTHER	0	35	63	20	0	0	118	0.13%
PEPPER, BELL	2	0	1,059	66	1	22	1,150	1.24%
PEPPER, OTHER	0	0	524	0	6	0	530	0.57%
PINEAPPLE	0	754	631	129	0	2	1,516	1.64%
RADISH	0	0	100	3	0	7	110	0.12%
SPINACH	0	0	12	0	0	0	12	0.01%
SQUASH	0	0	1,262	1	0	0	1,263	1.37%
STRAWBERRY	0	0	33	0	0	20	53	0.06%
TANGERINE	0	0	385	0	0	35	420	0.45%
TOMATO	0	0	6,933	25	8	4	6,970	7.54%
TOMATO, CHERRY	0	0	829	0	0	0	829	0.90%
WATERMELON	0	1	2,043	2	10	0	2,056	2.22%
VEGS. OTHERS	0	0	202	0	0	0	202	0.22%
MISC HERBS	0	0	0	0	0	0	0	0.00%
MISC TROP F&V	0	0	101	0	3	0	104	0.11%
ALL OTHERS	0	0	119	0	0	7,180	7,299	7.90%
TOTAL	187	35,765	25,448	596	139	30,272	92,407	100.00%
PER CENT	0.2%	38.7%	27.5%	0.6%	0.2%	32.8%	100.0%	

* From: USDA/AMS/F&VEG DIV
DAB:04/12/85 (FILE: FFIMP831)

TABLE 8. US FRESH FRUIT & VEGETABLE IMPORTS FROM DIFFERENT REGIONS- 1983.*

1983	1,000 CWT											
	CENTRAL AMERICA								WEST INDIES			
COMMODITY	BELIZE	EL SAL.	C.R.	GUAT.	HON.	NICAR.	PANAMA	TOTAL	D.R.	HAITI	JAMAICA	TOTAL
ASPARAGUS	0	0	0	0	0	0	0	0	0	0	0	0
AVOCADO	0	0	0	0	0	0	0	0	25	0	0	25
BANANA	0	0	12,806	4,689	11,008	1,365	4,873	34,741	42	0	1	43
BEAN	0	0	0	0	0	0	0	0	14	0	0	14
BROCCOLI	0	0	0	0	0	0	0	0	0	0	0	0
BRUS. SPROUTS	0	0	0	0	0	0	0	0	0	0	0	0
CABBAGE	0	0	0	0	0	0	0	0	0	0	0	0
CANTALOUPE	0	0	2	0	41	0	0	43	80	0	0	80
CARROT	0	0	0	0	0	0	0	0	0	0	0	0
CAULIFLOWER	0	0	0	2	0	0	0	2	0	0	0	0
CUCUMBER	0	0	0	0	15	0	0	15	12	0	5	17
EGGPLANT	0	0	0	0	0	0	0	0	10	0	0	10
GARLIC	0	0	0	0	0	0	0	0	0	0	0	0
GRAPEFRUIT	0	0	0	0	0	0	0	0	0	0	0	0
GRAPES, TABLE	0	0	0	0	0	0	0	0	0	0	0	0
HONEYDEW	0	0	0	0	0	0	0	0	0	0	0	0
LETTUCE/ENDIVE	0	0	0	0	0	0	0	0	0	0	0	0
LIME	0	0	0	0	6	0	0	6	0	4	0	4
MANGO	15	0	0	0	0	0	0	15	3	137	0	140
MELON, MIXED	0	21	9	94	14	0	3	141	6	0	0	6
OKRA	0	0	0	10	0	1	0	11	0	0	0	0
ONION, DRY	0	0	0	1	0	0	0	1	0	0	0	0
ONION, GREEN	0	0	0	0	0	0	0	0	0	0	0	0
ORANGE	0	0	0	0	0	0	0	0	11	0	0	11
PAPAYA	0	0	0	0	0	0	0	0	0	0	0	0
PEAS, GREEN	0	0	0	0	0	0	0	0	0	0	0	0
PEAS, OTHER	0	0	0	35	0	0	0	35	20	0	0	20
PEPPER, BELL	0	0	0	0	0	0	0	0	61	0	5	66
PEPPER, OTHER	0	0	0	0	0	0	0	0	0	0	0	0
PINEAPPLE	0	0	84	4	666	0	0	754	129	0	0	129
RADISH	0	0	0	0	0	0	0	0	2	1	0	3
SPINACH	0	0	0	0	0	0	0	0	0	0	0	0
SQUASH	0	0	0	0	0	0	0	0	1	0	0	1
STRAWBERRY	0	0	0	0	0	0	0	0	0	0	0	0
TANGERINE	0	0	0	0	0	0	0	0	0	0	0	0
TOMATO	0	0	0	0	0	0	0	0	16	0	9	25
TOMATO, CHERRY	0	0	0	0	0	0	0	0	0	0	0	0
WATERMELON	0	0	0	0	0	0	1	1	0	0	2	2
VEGS. OTHERS	0	0	0	0	0	0	0	0	0	0	0	0
MISC HERBS	0	0	0	0	0	0	0	0	0	0	0	0
MISC TROP F&V	0	0	0	0	0	0	0	0	0	0	0	0
ALL OTHERS	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	15	21	12,901	4,835	11,750	1,366	4,877	35,765	432	142	22	596

* From: USDA/AMS/F&VEG DIV

JAB;05/24/85 (FILE: FFIMP832)

TABLE 9. US FRESH FRUIT AND VEGETABLE IMPORTS FROM MEXICO BY MONTH IN 1983.*

1983	1,000 CWT													
COMMODITY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	%
ASPARAGUS	8	49	71	16	0	0	0	9	10	7	3	0	173	0.68%
BANANA	37	47	61	66	83	79	82	86	78	95	62	52	828	3.25%
BEAN	42	28	57	23	5	1	1	0	0	1	3	36	197	0.77%
BROCCOLI	1	0	0	0	0	0	0	0	1	2	0	2	6	0.02%
BRUS. SPROUTS	5	16	17	18	12	2	0	0	0	0	0	1	71	0.28%
CABBAGE	0	0	2	1	1	1	2	51	40	14	2	5	119	0.47%
CANTALOUPE	22	52	77	361	974	31	10	0	1	1	20	8	1,557	6.12%
CARROT	0	2	1	0	1	1	1	1	1	5	20	18	51	0.20%
CAULIFLOWER	7	11	1	0	0	0	0	0	0	1	2	2	24	0.09%
CUCUMBER	636	513	552	410	46	2	10	10	0	13	391	652	3,235	12.71%
EGGPLANT	60	67	81	67	28	3	0	0	0	4	31	65	406	1.60%
GARLIC	1	1	21	38	53	47	23	2	3	2	2	1	194	0.76%
GRAPEFRUIT	0	0	0	0	0	0	0	0	3	12	0	0	15	0.06%
GRAPES, TABLE	0	0	0	0	2	216	149	1	0	0	0	0	368	1.45%
HONEYDEW	60	27	11	38	86	0	0	0	0	0	0	12	234	0.92%
LETTUCE/ENDIVE	45	20	2	0	0	0	0	0	0	0	5	33	105	0.41%
LIME	8	32	33	33	21	33	17	18	28	25	31	43	322	1.27%
MANGO	0	13	22	42	113	175	231	156	40	1	0	0	793	3.12%
MELON, MIXED	2	1	2	6	21	0	0	0	0	0	0	0	32	0.13%
OKRA	4	9	18	13	37	141	134	22	1	5	10	14	408	1.60%
ONION, DRY	144	146	410	224	46	25	1	0	0	5	11	132	1,144	4.50%
ONION, GREEN	77	72	108	98	69	26	11	5	4	7	60	84	621	2.44%
ORANGE	11	8	7	2	2	0	0	0	5	34	11	10	90	0.35%
PAPAYA	2	5	6	9	10	6	3	4	2	1	2	2	52	0.20%
PEAS, GREEN	24	21	20	6	4	1	0	0	0	0	1	12	89	0.35%
PEAS, OTHER	0	0	2	1	4	1	0	0	0	38	17	0	63	0.25%
PEPPER, BELL	116	144	345	197	57	2	6	4	2	4	6	176	1,059	4.16%
PEPPER, OTHER	51	52	55	50	35	34	43	51	40	34	35	44	524	2.06%
PINEAPPLE	46	47	136	81	112	54	23	19	21	21	33	38	631	2.48%
RADISH	15	18	15	11	1	0	0	0	0	1	17	22	100	0.39%
SPINACH	1	3	3	0	0	0	0	0	0	0	0	5	12	0.05%
SQUASH	256	283	196	96	60	20	9	6	7	42	99	188	1,262	4.96%
STRAWBERRY	4	7	3	0	0	0	0	0	0	0	3	16	33	0.13%
TANGERINE	32	3	0	0	0	0	0	0	1	51	142	156	385	1.51%
TOMATO	728	806	1,644	1,442	807	226	87	119	256	342	303	173	6,933	27.24%
TOMATO, CHERRY	115	86	138	128	111	49	15	11	9	27	53	87	829	3.26%
WATERMELON	79	113	251	474	812	250	16	2	0	0	2	44	2,043	8.03%
VEGS. OTHERS	28	22	24	21	21	11	8	5	10	12	18	22	202	0.79%
MISC HERBS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
MISC TROP F&V	8	7	9	8	8	9	9	10	11	7	8	7	101	0.40%
ALL OTHERS	8	26	40	16	12	0	0	12	4	1	2	16	137	0.54%
TOTAL	2,683	2,757	4,441	3,996	3,654	1,446	891	604	578	815	1,405	2,178	25,448	100.00%
% of TOTAL	10.5%	10.8%	17.5%	15.7%	14.4%	5.7%	3.5%	2.4%	2.3%	3.2%	5.5%	8.6%	100.0%	

* From: USDA/AMS/F&VEG DIV

DAB:04/10/85 (FILE: FFMEX83)

TABLE 10. DISTRIBUTION COSTS FOR SOME FRESH PRODUCE IMPORTED FROM MEXICO.*

YEAR	COMMODITY	PACKAGE	EXPENSE	US DOLLARS PACKAGE	US DOLLARS POUND
1978-79	CUCUMBERS	47-LB BUSHEL	TRANSPORT TO NOGALES	$1.03	$0.022
			CROSSING CHARGES	$0.09	$0.002
			TARIFF	$1.35	$0.029
			FEES	$0.09	$0.002
			TOTAL	$2.56	$0.054
1978-79	PEPPERS	28-LB BUSHEL	TRANSPORT TO NOGALES	$0.85	$0.030
			CROSSING CHARGES	$0.09	$0.003
			TARIFF	$0.70	$0.025
			PRODUCTION TAXES	$0.03	$0.001
			TOTAL	$1.67	$0.060
1978-79	TOMATO	30-LB CARTON	TRANSPORT TO NOGALES	$0.60	$0.020
			CROSSING CHARGES	$0.07	$0.002
			TARIFF	$0.56	$0.019
			PRODUCTION TAXES	$0.13	$0.004
			TOTAL	$1.36	$0.045
1978-79	TOMATO	20-LB CARTON	TRANSPORT TO TIJUANA	$0.31	$0.016
			CROSSING CHARGES	$0.08	$0.004
			TARIFF	$0.42	$0.021
			TOTAL	$0.81	$0.041

* FROM: ZEPP, G.A. AND R.L. SIMMONS. 1979 AND 1980.
DAB;06/07/85 (FILE: FVMEX1)

TABLE 11. ALLOWABLE US IMPORTS (USDA/APHIS/PPQ)*

US PORT	PRODUCE	BAH.	BAR.	BEL.	C. RICA	DOM. REP.	EL SAL.	GUA.	HAI.	HON.	JAM.	PAN.
ALL	ALLIUM	+	+	+	+	+	+	+	+	+	+	+
	ASPARAGUS	+	+	+	+	+	+	+	+	+	+	+
	BEAN	+						+				
	BEET	+		+	+	+	+	+	+	+	+	+
	BRASSICA	+	+	+	+	+	+	+	+	+	+	+
	CARROT	+		+	+	+	+	+	+	+	+	+
	CELERY	+		+	+	+	+	+	+	+	+	+
	CUCURBIT	+		+	+	+	+	+	+	+	+	+
	EGGPLANT	+	+	+		+			+		+	
	LETTUCE	+	+	+	+	+	+	+	+	+	+	+
	MANGO								T			
	OKRA			+	+		+	+		+		+
	PAPAYA	+	+	+		+			+		+	
	PARSLEY	+	+	+		+		+	+		+	
	PEA			+	+		+	+		+		+
	PEPPER	+	+	+		+			+		+	
	RADISH	+		+	+	+		+	+		+	
	RUTABAGA	+		+	+	+	+	+	+	+	+	+
	SPINACH	+	+	+	+	+	+	+	+	+	+	+
	STRAWBERRY	+	+	+	+	+	+	+	+	+	+	+
	S. CHARD	+		+	+	+	+	+	+	+	+	+
	TOMATO	+	+	+	+	+			+		+	
NA	ARTICHOKE	+		+	+	+	+	+	+	+	+	+
	AVOCADO	+	+			+			+		+	
	BEAN		+	+	+				+			
	CARROT		+									
	CITRUS	+	+	T	T	+	T	T	+	T	+	T
	CUCURBIT		+		+		+	+		+		+
	MANGO	T	T	T	T	T	T	T		T	T	T
	OKRA		+			+			+		+	
	PAPAYA				T		T	T		T		T
	PEA	+				+			+		+	
	RADISH		+									
	TOMATO				+		+	+		+		+
SAG	ARTICHOKE	+		+	+	+	+	+	+	+	+	+
	AVOCADO	+				+			+		+	
	CHAYOTE				+		+	+		+		+
	CITRUS	+				+			+		+	
	CUCUMBER		+									
	MELON		+									
	OKRA	T	T			T			T		T	
	PEA	+				+			+		+	

*EFFECTIVE JAN. 1984; SUBJECT TO REVISION AND CHANGE. PORTS OF ENTRY: ALL, NA (ATLANTIC- NORTH OF BALTIMORE), AND SAG (SOUTH ATLANTIC & GULF). T = TREATMENT REQUIRED. DAB;06/03/85 (FILE: APHISL2)

TABLE 12. SELECTED US IMPORTS FROM DIFFERENT REGIONS AND THE CALCULATED PRODUCTION AREAS FOR EACH COMMODITY.

1983 COMMODITY	GOOD US YIELD** (CWT/HA)	BAHAMAS AMOUNT*	CENTRAL AMERICA AMOUNT*	MEXICO AMOUNT*	WEST INDIES AMOUNT*	PUERTO RICO AMOUNT*	TOTAL AMOUNT*	TOTAL HA
ASPARAGUS	99	0	0	173	0	0	173	1,747
BROCCOLI	272	0	0	6	0	0	6	22
BRUS. SPROUTS	346	0	0	71	0	0	71	205
CABBAGE	618	0	0	119	0	0	119	193
CANTALOUPE	494	0	43	1,557	80	0	1,680	3,401
CARROT	865	0	0	51	0	0	51	59
CAULIFLOWER	371	0	2	24	0	0	26	70
CUCUMBER	618	132	15	3,235	17	21	3,420	5,534
EGGPLANT	618	0	0	406	10	0	416	673
GARLIC	395	0	0	194	0	0	194	491
HONEYDEW	618	0	0	234	0	90	324	524
MELON, MIXED	371	0	141	32	6	0	179	482
OKRA	247	0	11	408	0	0	419	1,696
ONION, DRY	988	0	1	1,144	0	0	1,145	1,159
PEPPER, BELL	494	2	0	1,059	66	1	1,128	2,283
SPINACH	371	0	0	12	0	0	12	32
SQUASH	741	0	0	1,262	1	0	1,263	1,704
TOMATO	494	0	0	6,933	25	8	6,966	14,101
WATERMELON	494	0	1	2,043	2	10	2,056	4,162
TOTAL		134	214	18,963	207	130	19,648	38,541

* 1,000 CWT; From: USDA/AMS/F&V DIV.
** "GOOD YIELDS IN THE US"; From: KNOTT'S HANDBOOK FOR VEGETABLE GROWERS.
DAB;05/31/85 (FILE: FFIMP838)

TABLE 13. AVERAGE WEEKLY NEW YORK FRESH FRUIT & VEGETABLE WHOLESALE PRICES IN 1982.*

1982 COMMODITY	ORIGIN	PACKAGE TYPE	AVERAGE LBS	PRICE PRICE	AVERAGE PER LBS
ASPARAGUS	MEXICO	1/2 CARTON	14	$25.32	$1.81
BANANA	ECUADOR	CARTON	40	$10.00	$0.25
BROCCOLI	CALF	14-16 CARTONS	23	$10.84	$0.47
BRUS. SPROUTS	MEXICO	10 OZ CUPS	0.63	$0.72	$1.14
CABBAGE	NEW JER	CARTON	50	$4.33	$0.09
CANTALOUPE	MEXICO	1/2 CRATES	40	$15.36	$0.38
CARROT	TX & FLA	SACKS	50	$8.52	$0.17
CAULIFLOWER	FLA	CARTON- 12'S	22	$13.43	$0.61
CUCUMBER	MEXICO	1&1/9	55	$18.69	$0.34
EGGPLANT	MEXICO	1&1/9	33	$9.08	$0.28
HONEYDEW	PR & MEX	CARTON	30	$9.82	$0.33
LIME	MEXICO	36-72 CARTON	10	$7.89	$0.79
MANGO	MEXICO	CARTON 8-14	10	$6.89	$0.69
MELON, MIXED	MEXICO	CARTON	30	$21.63	$0.72
OKRA	MEXICO	1/2 BU CRATE	15	$11.04	$0.74
ONION, DRY	MEXICO	BOILER/RED	25	$12.88	$0.52
ONION, GREEN	MEXICO	CARTON- 48'S	13	$8.70	$0.67
PAPAYA	HAWAII	9-12 CARTONS	10	$10.55	$1.06
PEAS, GREEN	MEXICO	1&1/9 BU	30	$18.98	$0.63
PEPPER, BELL	MEXICO	1&1/9 BU	28	$15.23	$0.54
PINEAPPLE	HON	TWO-LAYER	40	$11.63	$0.29
RADISH	FLA	BUNCH- 24'S	15	$5.95	$0.40
SPINACH	TX & FLA	BUSHEL	25	$9.35	$0.37
SQUASH- ZUCC	MEXICO	LUGS	26	$8.87	$0.34
SQUASH- YSNECK	MEXICO	LUGS	26	$15.50	$0.60
TOMATO	MEXICO	2- LYR FLAT	20	$10.66	$0.53
TOMATO, CHERRY	MEXICO	12 PT TRAY	15	$10.93	$0.73
WATERMELON- CG	MEXICO	3-4 CARTONS	1	$0.24	$0.24
WATERMELON- JU	MEXICO	3-4 CARTONS	1	$0.23	$0.23
		TOTAL	697.6	$313.26	$0.55

* From: USDA/AMS/F&VEG DIV/MARKET NEWS BRANCH.
DAB:04/15/85 (FILE: FFIMP835)

TABLE 14. AVERAGE WEEKLY NEW YORK FRESH FRUIT & VEGETABLE WHOLESALE PRICES IN 1983.*

1983 COMMODITY	ORIGIN	PACKAGE TYPE	PACKAGE LBS	PACKAGE AVERAGE PRICE	AVERAGE PRICE PER LB.
ASPARAGUS	MEXICO	1/2 CARTONS	14	$28.28	$2.02
BROCCOLI	CALIF	14-16 CARTONS	23	$11.74	$0.51
BRUS. SPROUTS	MEXICO	10 OZ. CUPS	0.63	$0.81	$1.29
CABBAGE	NEW JER.	CARTON	50	$6.18	$0.12
CANTALOUPE	MEXICO	1/2 CRATES	40	$22.34	$0.56
CARROT	TX & FLA	SACKS	50	$7.92	$0.16
CAULIFLOWER	FLA	CARTONS- 12'S	22	$11.82	$0.54
CUCUMBER	MEXICO	1&1/9	55	$18.60	$0.34
EGGPLANT	MEXICO	1&1/9	33	$10.10	$0.31
HONEYDEW	PR & MEX	CARTON	30	$14.22	$0.47
LIME	MEXICO	CARTON	10	$4.81	$0.48
MANGO	MEXICO	CARTON- 8-14'S	10	$6.58	$0.66
MELON, MIXED	MEXICO	CARTON	30	$19.64	$0.65
OKRA	MEXICO	1/2 BU. CRATE	15	$12.64	$0.84
ONION, DRY	MEXICO	BOILER SACK	25	$13.50	$0.54
ONION, GREEN	MEXICO	1&1/9 BU	13	$7.27	$0.56
PAPAYA	HAWAII	CARTON	10	$10.49	$1.05
PEAS, GREEN	MEXICO	1&1/9 BU	30	$18.14	$0.60
PEAS, OTHER	GUAT.	(CHINA TYPE)	1	$2.10	$2.10
PEPPER, BELL	MEXICO	1&1/9	28	$16.18	$0.58
PINEAPPLE	HON.	TWO-LAYER	40	$12.08	$0.30
RADISH	FLA	BUNCH- 24'S	15	$6.60	$0.44
SPINACH	TX & FLA	BU	25	$9.15	$0.37
SQUASH- ZUCC	MEXICO	LUG	26	$14.47	$0.56
SQUASH- YSNECK	MEXICO	LUG	26	$16.39	$0.63
TOMATO	MEXICO	2-LYR FLAT	20	$10.69	$0.53
TOMATO, CHERRY	MEXICO	12-PT FLAT	15	$8.36	$0.56
WATERMELON- CG	MEXICO	3-4 CARTONS	1	$0.31	$0.31
WATERMELON- JU	MEXICO	3-4 CARTONS	1	$0.31	$0.31
		TOTAL	658.6	$321.72	$0.63

* From: USDA/AMS/F&V/MARKET NEWS BRANCH.
DAB:04/10/85 (FILE: FFIMP834)

TABLE 15. AVERAGE NEW YORK WHOLESALE PRICES PER POUND FOR FRESH FRUIT AND VEGETABLES IN 1982 AND 1983.*

COMMODITY	ORIGIN	PACKAGE TYPE	PACKAGE LBS	AVERAGE PRICE PER POUND 1982	1983	AVERAGE
ASPARAGUS	MEXICO	1/2 CARTON	14	$1.81	$2.02	$1.92
BANANA	ECUADOR	CARTON	40	$0.25	$0.29	$0.27
BROCCOLI	CALF	14-16 CARTONS	23	$0.47	$0.51	$0.49
BRUS. SPROUTS	MEXICO	10 OZ CUPS	0.63	$1.14	$1.29	$1.22
CABBAGE	NEW JER	CARTON	50	$0.09	$0.12	$0.11
CANTALOUPE	MEXICO	1/2 CRATES	40	$0.38	$0.56	$0.47
CARROT	TX & FLA	SACKS	50	$0.17	$0.16	$0.17
CAULIFLOWER	FLA	CARTON- 12'S	22	$0.61	$0.54	$0.58
CUCUMBER	MEXICO	1&1/9	55	$0.34	$0.34	$0.34
EGGPLANT	MEXICO	1&1/9	33	$0.28	$0.31	$0.30
HONEYDEW	PR & MEX	CARTON	30	$0.33	$0.47	$0.40
LIME	MEXICO	36-72 CARTON	10	$0.79	$0.48	$0.64
MANGO	MEXICO	CARTON 8-14	10	$0.69	$0.66	$0.68
MELON, MIXED	MEXICO	CARTON	30	$0.72	$0.65	$0.69
OKRA	MEXICO	1/2 BU CRATE	15	$0.74	$0.84	$0.79
ONION, DRY	MEXICO	BOILER/RED	25	$0.52	$0.54	$0.53
ONION, GREEN	MEXICO	CARTON- 48'S	13	$0.67	$0.56	$0.62
PAPAYA	HAWAII	9-12 CARTONS	10	$1.06	$1.05	$1.06
PEAS, GREEN	MEXICO	1&1/9 BU	30	$0.63	$0.60	$0.62
PEAS, OTHER	GUAT.	(CHINA TYPE)	1	-	$2.10	$2.10
PEPPER, BELL	MEXICO	1&1/9 BU	28	$0.54	$0.58	$0.56
PINEAPPLE	HON	TWO-LAYER	40	$0.29	$0.30	$0.30
RADISH	FLA	BUNCH- 24'S	15	$0.40	$0.44	$0.42
SPINACH	TX & FLA	BUSHEL	25	$0.37	$0.37	$0.37
SQUASH- ZUCC	MEXICO	LUGS	26	$0.34	$0.56	$0.45
SQUASH- YSNECK	MEXICO	LUGS	26	$0.60	$0.63	$0.62
TOMATO	MEXICO	2- LYR FLAT	20	$0.53	$0.53	$0.53
TOMATO, CHERRY	MEXICO	12 PT TRAY	15	$0.73	$0.56	$0.65
WATERMELON- CG	MEXICO	3-4 CARTONS	1	$0.24	$0.31	$0.28
WATERMELON- JU	MEXICO	3-4 CARTONS	1	$0.23	$0.31	$0.27
	AVERAGE PRICE PER POUND			$0.55	$0.62	$0.61

* From: USDA/AMS/F&VEG DIV/MARKET NEWS BRANCH.
DAB:04/15/85 (FILE: FFIMP836)

TABLE 16. CALCULATED TOTAL DOLLAR VALUE OF US FRESH PRODUCE IMPORTS USING AVERAGE NEW YORK WHOLESALE PRICES.*

	1982			1983		
COMMODITY	AVE $/LBS	CWT (000'S)	VALUE (MM $)	AVE $/LBS	CWT (000'S)	VALUE (MM $)
ASPARAGUS	$1.81	165	$29.865	$2.02	187	$37.774
BANANA	$0.25	56,885	$1,422.125	$0.29	53,885	$1,562.665
BROCCOLI	$0.47	1	$0.047	$0.51	7	$0.357
BRUS. SPROUTS	$1.14	85	$9.690	$1.29	73	$9.417
CABBAGE	$0.09	246	$2.214	$0.12	275	$3.300
CANTALOUPE	$0.38	1,966	$74.708	$0.56	1,682	$94.192
CARROT	$0.17	1,029	$17.493	$0.16	1,261	$20.176
CAULIFLOWER	$0.61	116	$7.076	$0.54	129	$6.966
CUCUMBER	$0.34	2,837	$96.458	$0.34	3,445	$117.130
EGGPLANT	$0.28	358	$10.024	$0.31	417	$12.927
HONEYDEW	$0.33	435	$14.355	$0.47	324	$15.228
LIME	$0.79	4	$0.316	$0.48	381	$18.288
MANGO	$0.69	704	$48.576	$0.66	949	$62.634
MELON, MIXED	$0.72	272	$19.584	$0.65	323	$20.995
OKRA	$0.74	386	$28.564	$0.84	419	$35.196
ONION, DRY	$0.52	1,246	$64.792	$0.54	1,431	$77.274
ONION, GREEN	$0.67	437	$29.279	$0.56	621	$34.776
PAPAYA	$1.06	29	$3.074	$1.05	53	$5.565
PEAS, GREEN	$0.63	66	$4.158	$0.60	89	$5.340
PEAS, OTHER	$2.00	38	$7.600	$2.10	118	$24.780
PEPPER, BELL	$0.54	1,362	$73.548	$0.58	1,150	$66.700
PINEAPPLE	$0.29	1,325	$38.425	$0.30	1,516	$45.480
RADISH	$0.40	83	$3.320	$0.44	110	$4.840
SPINACH	$0.37	1	$0.037	$0.37	12	$0.444
SQUASH	$0.47	1,165	$54.755	$0.60	1,263	$75.780
TOMATO	$0.53	5,623	$298.019	$0.53	6,970	$369.410
TOMATO, CHERRY	$0.73	796	$58.108	$0.56	829	$46.424
WATERMELON	$0.24	2,372	$56.928	$0.31	2,056	$63.736
SUB-TOTAL		80,032	$2,473.138		79,975	$2,837.794
ALL OTHERS	$0.55	12,302	$676.610	$0.62	12,432	$770.784
TOTAL		92,334	$3,149.748		92,407	$3,608.578

* From: USDA/AMS/F&VEG DIV/MARKET NEWS BRANCH.
DAB:04/15/85 (FILE: FFIMP837)

TABLE 17. ESTIMATED OCEAN FREIGHT COSTS FOR FRESH CUCUMBER FROM DIFFERENT COUNTRIES AND REGIONS.*

	CENTRAL AMERICA		CARIBBEAN REGION			
COUNTRY	HONDURAS	GUATEMALA	DOM. REP.	DOM. REP.	HAITI	HAITI
CONFERENCE:	SA & GULF	SA & GULF	USA&G-JHIS	USA&G-JHIS	-	-
COMMODITY:	CUCUMBERS	CUCUMBERS	CUCUMBERS	CUCUMBERS	FRT&VEG	FRT&VEG
COMPANY:	SEA-LAND	SEA-LAND	SEA-LAND	SEA-LAND	SEA-LAND	SEA-LAND
CARTONS:	720	720	680	680	680	680
POUNDS:	40,000	40,000	36,000	36,000	36,000	36,000
SIZE:	40 FEET	40 FEET	35 FEET	35 FEET	35 FEET	35 FEET
DATE:	1JAN85	1JAN85	1JAN85	1JAN85	1JAN85	1JAN85
FROM:	P. CORTEZ	STO. TOMAS	STO. DGO.	STO. DGO.	P au P	P au P
TO:	FLORIDA	FLORIDA	FLORIDA	NEW JERSEY	FLORIDA	NEW JERSEY
COSTS						
OCEAN	$2,440.00	$2,440.00	$1,750.00	$2,175.00	$1,440.00	$1,840.00
WHARFAGE	$0.00	$85.00	$0.00	$0.00	$92.70	$92.70
HANDLING	$144.00	$144.00	$200.00	$200.00	$220.00	$250.00
TERMINAL	$136.00	$0.00	$0.00	$0.00	$0.00	$0.00
ARRIMO	$0.00	$0.00	$40.91	$40.91	$0.00	$0.00
DOCUMENTS	$12.50	$12.50	$12.50	$12.50	$12.50	$12.50
REEFER USE	$0.00	$0.00	$100.00	$100.00	$0.00	$0.00
ASSESSMENT	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
LANDING	$0.00	$0.00	$0.00	$0.00	$240.00	$255.00
SUB-TOTAL	$2,732.50	$2,681.50	$2,103.41	$2,528.41	$2,005.20	$2,450.20
SURCHARGE	$0.00	$0.00	$136.72	$164.35	$0.00	$0.00
TOTAL	$2,732.50	$2,681.50	$2,240.13	$2,692.76	$2,005.20	$2,450.20
PER POUND	$0.069	$0.068	$0.060	$0.072	$0.054	$0.066
PER CARTON	$3.80	$3.72	$3.29	$3.96	$2.95	$3.60

* SA & GULF- SOUTH ATLANTIC AND GULF- EL SALVADOR/GUATEMALA/HONDURAS RATES.
USA&G-JHIS- US ATLANTIC & GULF-JAMAICA & HISPANOLA STEAMSHIP FREIGHT ASSOC.
DAB:04/17/85 (FILE: TRATE856)

TABLE 18. ESTIMATED OCEAN FREIGHT COSTS FOR MELON FROM DIFFERENT COUNTRIES AND REGIONS.*

	CENTRAL AMERICA			CARIBBEAN REGION			
COUNTRY	HONDURAS	GUATEMALA	EL SAL.	DOM. REP.	DOM. REP.	HAITI	HAITI
CONFERENCE:	SA & GULF	SA & GULF	SA & GULF	USA&G-JHIS	USA&G-JHIS	-	-
COMMODITY:	MELON	MELON	MELON	MELON	MELON	FRT&VEG	FRT&VEG
COMPANY:	SEA-LAND	SEA-LAND	SEA-LAND	SEA-LAND	SEA-LAND	SEA-LAND	SEA-LAN
CARTONS:	1,020	1,020	1,020	1,020	1,020	1,020	1,020
POUNDS:	38,250	38,250	38,250	38,250	38,250	38,250	38,250
SIZE:	35 FEET	35 FEET	35 FEET	35 FEET	35 FEET	35 FEET	35 FEET
DATE:	1JAN85	1JAN85	1JAN85	1JAN85	1JAN85	1JAN85	1JAN85
FROM:	P. CORTEZ	ST. TOMAS	G. PALMER	STO. DGO.	STO. DGO.	P au P	P au P
TO:	FLORIDA	FLORIDA	FLORIDA	FLORIDA	NEW JER.	FLORIDA	NEW JER
COSTS							
OCEAN	$1,727	$1,584	$1,914	$1,760	$2,175	$1,440	$1,840
WHARFAGE	0	85	85	0	0	93	93
HANDLING	204	204	204	200	200	220	250
TERMINAL	136	0	124	0	0	0	0
ARRIMO	0	0	0	41	41	0	0
DOCUMENTS	13	13	13	13	13	13	13
REEFER USE	0	0	0	100	100	0	0
ASSESSMENT	0	0	0	0	0	0	0
LANDING	0	0	0	0	0	240	255
SUB-TOTAL	$2,080	$1,886	$2,340	$2,113	$2,528	$2,005	$2,450
SURCHARGE	0	0	0	137	164	0	0
TOTAL	$2,080	$1,886	$2,340	$2,251	$2,693	$2,005	$2,450
PER POUND	$0.054	$0.049	$0.061	$0.059	$0.070	$0.052	$0.064
PER CARTON	$2.04	$1.85	$2.29	$2.21	$2.64	$1.97	$2.40

* SA & GULF- SOUTH ATLANTIC & GULF, EL SALVADOR/GUATEMALA/HONDURAS RATES.
USA&G-JHIS- US ATLANTIC & GULF-JAMAICA & HISPANOLA STEAMSHIP FREIGHT ASSOC.
DAB:04/18/85 (FILE: TRATE857)

TABLE 19. ESTIMATED CUCUMBER & MELON INLAND (DOMESTIC & FOREIGN) FREIGHT COSTS.*

	ORIGIN				COST (US $)		
COMMODITY	REGION	LOCATION	DESTINATION	CTNS	TRAILER	CTN	LB
CUCUMBER	CA	COMAYAGUA	P. CORTEZ	680	200	0.294	0.005
		ZACAPA	STO. TOMAS	680	94	0.138	0.003
			AVERAGE	680	147	0.216	0.004
CUCUMBER	CAR	AZUA	STO. DGO.	680	100	0.147	0.003
		AZUA	P. VIEJO	680	30	0.044	0.001
			AVERAGE	680	65	0.096	0.002
CUCUMBER	US	EVERGLADES	IMMOKOLEE	680	250	0.368	0.007
		EVERGLADES	MIAMI	680	100	0.147	0.003
			AVERAGE	680	175	0.257	0.005
CUCUMBER	US	NEW JERSEY	NEW YORK	720	100	0.139	0.003
MELON	CA	CHOLUTECA	P. CORTEZ	1020	405	0.397	0.011
		NACOME	P. CORTEZ	1020	380	0.373	0.010
		G. PALMER	STO. TOMAS	1020	210	0.206	0.005
		ESQUINTLA	STO. TOMAS	1020	290	0.284	0.008
		RESTALHULEU	STO. TOMAS	1020	530	0.520	0.014
		ZACAPA	STO. TOMAS	1020	210	0.206	0.005
			AVERAGE	1020	338	0.331	0.009
MELON	CAR	AZUA	STO. DGO.	1020	100	0.098	0.003
		AZUA	P. VIEJO	1020	30	0.029	0.001
			AVERAGE	1020	65	0.064	0.002
MELON	US	JACKSONVILLE	MIAMI	1020	300	0.294	0.008
		EVERGLADES	MIAMI	1020	100	0.098	0.003
			AVERAGE	1020	200	0.196	0.005
MELON	US	NEW JERSEY	NEW YORK	1020	100	0.098	0.003

*DATA FROM SEA-LAND AND "FRUIT & VEGETABLE TRUCK RATE REPORT." FEDERAL-STATE MARKET NEWS.
DAB:04/18/85 (FILE: TRATE855)

TABLE 20. TRUCK RATES, PER LOAD, TO SELECTED MARKETS IN THE US.*

			COST (US $)			
			RANGE			
COMMODITY	ORIGIN	DESTINATION	LOW	HIGH	AVE	LB
VEGETABLES AND CITRUS	S. CALIFORNIA	ATLANTA	$1,800	$2,200	$2,000	$0.050
		CHICAGO	$1,600	$1,900	$1,750	$0.044
		DALLAS	$1,300	$1,500	$1,400	$0.035
		DENVER	$1,100	$1,300	$1,200	$0.030
		NEW YORK	$2,300	$2,600	$2,450	$0.061
VEGETABLES	NOGALES, ARIZONA	CHICAGO	$2,000	$2,100	$2,050	$0.051
		DALLAS	$1,000	$1,200	$1,100	$0.028
		DENVER			$1,100	$0.028
		LOS ANGELES			$850	$0.021
		NEW YORK	$2,800	$2,900	$2,850	$0.071
SPINACH	RIO GRANDE, TEXAS	CHICAGO	$1,450	$1,700	$1,575	$0.039
		DALLAS	$700	$850	$775	$0.019
		LOS ANGELES	$1,500	$1,650	$1,575	$0.039
		NEW YORK	$2,100	$2,500	$2,300	$0.058
TOMATO	FLORIDA	ATLANTA	$750	$900	$825	$0.021
		CHICAGO	$1,600	$1,840	$1,720	$0.043
		NEW YORK	$1,600	$1,920	$1,760	$0.044
VEGETABLES	WEST & CENTRAL NEW YORK	NEW YORK	$520	$720	$620	$0.016

*"FRUIT AND VEGETABLE TRUCK RATE REPORT." FEDERAL-STATE MARKET NEWS. DECEMBER 27, 1984.
DAB:04/18/85 (FILE: TRATE858)

TABLE 21. ESTIMATED FREIGHT COSTS FOR CUCUMBER AND MELON FROM CENTRAL AMERICA AND THE CARIBBEAN.

	DOMINICAN REPUBLIC				HONDURAS	
CUCUMBER FREIGHT	FROM: AZUA TO: MIAMI TO: NEW YORK		FROM: AZUA TO: NEW JERSEY TO: NEW YORK		FROM: COMAYAGUA TO: MIAMI TO: NEW YORK	
COSTS	$/CTN	$/LB	$/CTN	$/LB	$/CTN	$/LB
INLAND- FOREIGN	0.10	0.002	0.10	0.002	0.29	0.005
OCEAN	3.50	0.064	4.21	0.077	3.80	0.069
INLAND- US	0.26	0.005	0.00	0.000	0.26	0.005
HANDLING	0.25	0.005	0.00	0.000	0.25	0.005
INLAND- NY	2.44	0.044	0.14	0.003	2.44	0.044
HANDLING	0.25	0.005	0.25	0.005	0.25	0.005
TOTAL	6.80	0.124	4.70	0.085	7.29	0.133

	DOMINICAN REPUBLIC				HONDURAS	
MELON FREIGHT	FROM: AZUA TO: MIAMI TO: NEW YORK		FROM: AZUA TO: NEW JERSEY TO: NEW YORK		FROM: CHOLUTECA TO: MIAMI TO: NEW YORK	
COSTS	$/CTN	$/LB	$/CTN	$/LB	$/CTN	$/LB
INLAND- FOREIGN	0.06	0.002	0.06	0.002	0.39	0.010
OCEAN	2.21	0.055	2.61	0.065	2.04	0.051
INLAND- US	0.26	0.007	0.00	0.000	0.26	0.007
HANDLING	0.20	0.005	0.00	0.000	0.20	0.005
INLAND- NY	1.76	0.044	0.00	0.000	1.76	0.044
HANDLING	0.20	0.005	0.20	0.005	0.20	0.005
TOTAL	4.69	0.117	2.87	0.072	4.85	0.121

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TABLE 22. PROFIT AND LOSS STATEMENTS FOR CUCUMBER AND MELON PRODUCED IN CENTRAL AMERICA AND THE CARIBBEAN.

	CUCUMBERS				MELON			
	DOM. REP.		HONDURAS		DOM. REP.		HONDURAS	
REVENUES	$/CTN	$/LB	$/CTN	$/LB	$/CTN	$/LB	$/CTN	$/LB
EXPORT SALES	18.70	0.340	18.70	0.340	18.80	0.470	18.80	0.470
COSTS								
PRODUCTION								
MECHANIZATION	0.09	0.002	0.09	0.002	0.10	0.003	0.10	0.003
CHEMICALS	0.88	0.016	0.88	0.016	1.25	0.031	1.25	0.031
SEED	0.03	0.001	0.03	0.001	0.25	0.006	0.25	0.006
LABOR	0.20	0.004	0.20	0.004	0.30	0.008	0.30	0.008
SUB-TOTAL	1.20	0.022	1.20	0.022	1.90	0.048	1.90	0.048
HARVESTING	0.10	0.002	0.10	0.002	0.15	0.004	0.15	0.004
PACKING	1.75	0.032	1.75	0.032	1.50	0.038	1.50	0.038
DISTRIBUTION								
COMMISSION	2.81	0.051	2.81	0.051	2.82	0.071	2.82	0.071
FREIGHT	6.80	0.124	7.29	0.133	4.69	0.117	4.85	0.121
INSPECTIONS	0.15	0.003	0.15	0.003	0.12	0.003	0.12	0.003
MISCELLANY	0.10	0.002	0.10	0.002	0.10	0.003	0.10	0.003
SUB-TOTAL	9.86	0.179	10.35	0.188	7.73	0.193	7.89	0.197
ADMINISTRATION	0.75	0.014	0.75	0.014	1.00	0.025	1.00	0.025
TOTAL	13.66	0.248	14.15	0.257	12.28	0.307	12.44	0.311
VARIOUS (10%)	1.37	0.025	1.41	0.026	1.23	0.031	1.24	0.031
TOTAL COSTS	15.02	0.273	15.56	0.283	13.51	0.338	13.68	0.342
RETURN TO CAP & MGMT	3.68	0.067	3.14	0.057	5.29	0.132	5.12	0.128

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