

Bananas Handbook

Commodities and Export Projections Division
Economic Analysis and Projections Department

TABLE OF CONTENTS

<u>Chapter</u>	<u>Page No.</u>
I. Product Characteristics of Bananas.....	I - 1
A. Physical Characteristics.....	I - 1
B. Economic Characteristics.....	I - 3
II. Production, Consumption and Trade.....	II - i
A. Production.....	II - 1
B. Consumption.....	II - 1
C. Trade.....	II - 2
III. The Structure of the Banana Industry.....	III - 1
A. Barriers to Trade.....	III - 1
B. The Role of the Transnational Companies.....	III - 2
IV. Economic Parameters Used in the Market Analysis of the Banana Industry.....	IV - 1
A. Demand Response.....	IV - 1
B. Supply Response.....	IV - 2
V. Market Prices.....	V - 1
A. Price Determining Mechanisms.....	V - 1
B. Movements in Banana Prices.....	V - 1
VI. Special Issues.....	VI - 1
A. The Creation of UPEB.....	VI - 1
B. Towards an International Banana Agreement.....	VI - 1
C. Possible Effects of Export Price Adjustments on Export Earnings.....	VI - 2

<u>List</u>	<u>Tables</u>	<u>Page No.</u>
II-1	Bananas - World Production by Main Countries and Economic Regions.....	II - 4
II-2	Bananas: Ratio of Exports to Production in Selected Countries, 1961-1979.....	II - 5
II-3	Bananas - World Consumption by Main Countries and Economic Regions.....	II - 6
II-4	Banana Consumption Per Head in Selected Countries, 1950-79.....	II - 7
II-5	Bananas - World Exports by Main Countries and Economic Regions.....	II - 8
II-6	Bananas - World Imports by Main Countries and Economic Region.....	II - 9
II-7	Banana Trade in 1978.....	II - 10
III-1	Post Tokyo Round Tariff and Non-Tariff Measure Situation.....	III - 4
III-2	World Banana Market Shares.....	III - 5
III-3	Market Share of Transnational Companies in Major Exporting Countries, 1978.....	III - 6
III-4	Market Share of Transnational Companies in Major Importing Countries, 1978.....	III - 7
III-5	Transnational Companies' Supply Sources of Bananas, 1977/78.....	III - 8
IV-1	FAO Estimates of Demand Elasticities for Bananas.....	IV - 4
IV-2	USDA Estimates of Elasticities of Demand for Bananas.....	IV - 5
V-1	Bananas: Estimates of Distribution Costs and Margins, Selected Countries.....	V - 4
V-2	Bananas: Formation of Retail Price, Selected Countries...	V - 6
V-3	Import Prices of Bananas.....	V - 8
V-4	Retail Prices of Bananas.....	V - 9
VI-1	Bananas: Export Projections under Alternative Price and Elasticity Assumptions.....	VI - 4

List of Figures

Page No.

IV-1	Per Capita Banana Consumption in Relation to Per Capital Income.....	IV - 3
V-1	Banana Prices, 1950-1980.....	V - 3

I. PRODUCT CHARACTERISTICS

A. Physical Characteristics

Bananas do not reproduce through seeds but from older plants. They are propagated vegetatively by means of transplanting rhizomes (underground stems), or seed-pieces or "sword suckers" 50 to 60 cm tall which bear only long narrow leaves. When the plant is about ten months old, a large bud at the end of a thick underground stem grows from the bundle of leaves. After the stem grows through the top of the plant, the bracts roll back, revealing clusters of small flowers. These flowers develop into tiny green bananas. Each cluster is called a "hand" and consists of 18 to 22 bananas, which are known as "fingers". There are on an average about nine to twelve hands in a good stem also known as a "bunch". The fruit is harvested four or five months later. Bananas are cut while they are green so they will be ripe when they reach the consumer at distant markets. Also, the fruit loses its flavor if allowed to ripen on the plant. The banana tree is cut down after bearing one growth of bananas, and a new stem grows in its place from the same rootstock. Replanting is desirable after the third crop.

Some climatic and soil conditions have to be met in banana growing. The average optimal daily temperature for the growth of bananas is about 27°C, the average minimum, 21°C, and the average maximum, 29.5°C. The absolute minimum and maximum temperatures are 15.6°C and 37.8°C, respectively. Exposure to temperatures below and above these absolute temperatures slows down growth and damages the fruit.

The optimal amount of moisture required for uniform growth is about 1,320 mm of rain per year, or still better, a uniform distribution of 25 mm per week. However, seldom, if ever, does such uniform precipitation occur in any tropical region. In some regions, most of the precipitation will occur between the months of May to November, with December and April receiving the minimum requirements of approximately 13 mm per week. The months of January, February and March may be dry, and the banana plants would not receive enough moisture. For uniform growth, and hence, a good yield, banana plantations should be irrigated during these months. If, however, irrigation requirements approach five months out of the year, the cost of maintaining uniform growth becomes excessive, and indicates the need of either a change in variety or a change in crop.

Banana leaves are large, soft, and easily torn by strong winds which seriously reduce productivity. The majority of banana varieties can tolerate winds of up to 40 kilometers per hour. Winds between 40 to 55 kilometers per hour cause a moderate amount of damage, but winds above 55 kilometers per hour are disastrous and cause "blow-downs", in which a large portion of plantation can be ruined. Therefore, if natural wind-protected areas do not exist, it is highly important to provide windbreaks for the plantings.

Bananas require exacting soil texture, moisture, aeration and fertility. Since bananas are extremely shallow rooted, a deep alluvial soil is necessary. The type of soil best suited for banana cultivation consists of a sandy to silty-clay loam texture. Good drainage is as necessary as a uniform supply of moisture.

Bananas need fertile conditions and abundance of soil moisture for best growth and production. The type of development the plant makes in the first 3 or 4 months determines the weight of the bunch and number of hands. The N-P-K formulation of fertilizer to be used depends on the type of soil. Since commercial plantations are usually located on excellent alluvial soils, usually very little P or K are required. The main nutrient requirement is nitrogen, which is generally applied in the form of urea. The amount of fertilizer used depends on the number of mats (root systems) 1/ per hectare; about 600 kilograms of nitrogen per hectare per year is an appropriate estimate for a deep alluvial soil.

There are two important diseases attacking the banana plant - Sigatoka disease (leaf spot) and Panama disease (fusarium wilt). The former is peculiar to bananas and affects the plant through restriction of the ripening process, shrinking in size, and deformation of the fruit. The latter is a fungus that spreads through the soil, attacking the root system of the plant and eventually destroys it.

In order to control Panama disease a new disease-resistant variety, Cavendish, was introduced to replace the Gros Michel variety in the early 1960s. The Gros Michel is a taller plant producing large fingers with

1/ A well-balanced mat contains three generations of plants from the same root system. There should be one mature plant with fruit, at least one younger plant which will flower shortly after the mature fruit is harvested, and one small sucker to take the place of the second.

attractive appearance and good handling qualities. The Cavendish is a lower-growing plant. It is not only resistant to fusarium wilt but also produces a higher yield. However its fruit is less attractive and susceptible to bruising in transit. Currently, most of the producing countries have completed the shift to the Cavendish variety which resulted in substantial increases in banana production. One consequence of the change in variety has been the change in transport method - from shipping in stems to shipping in boxes.

The edible portion of the banana is about 75% water, 23% carbohydrate, 1.2% protein, 0.2% fat, and 0.8% ash. It also contains calcium, phosphorus and iron, and vitamins A and C.

B. Economic Characteristics

Bananas are highly perishable and cannot be stored. The maximum time that may elapse between cutting and consumption is about five weeks. Within this short period of time, bananas must be selected, packaged, shipped to the very distant consumer markets, distributed to wholesalers for ripening and then to retailers before they reach the final consumers. This distribution system requires an efficient coordination of the various phases of banana production, packaging, shipping and marketing. This special characteristic of banana distribution and marketing has promoted a vertically integrated industry which is largely controlled by the transnational enterprises.

Bananas are a permanent crop; moreover, there is no seasonality in production, except for brief periods in certain countries. Due to the need to cut the full-grown banana tree each year after it has produced and perhaps to replant the seed-piece from its rhizome, the possibilities for adjusting production are greater than is usually the case with tree crops. But replanting is also a permanent, non-seasonal operation and investment decisions have to take into account the need to maintain a "reserve" of output in view of natural hazards such as hurricane and disease, and the impossibility of stocking bananas. In the face of unfavorable market conditions caused by production levels being simultaneously "normal" in all or most exporting countries, growers have little alternative but to accept a higher ratio of production losses.

There is a saturation level in banana consumption, after which demand grows in line with population growth. It appears to be in the neighborhood of 22 pounds per capita in industrialized countries. The

March 1962

I - 4

situation is different in developing countries where bananas are a staple part of the diet rather than a fruit as is the case in the industrialized countries. Demand for bananas tends to grow more slowly as consumption approaches the saturation level. Consumption in many industrialized countries has already reached the saturation level.

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II. PRODUCTION, CONSUMPTION AND TRADE

A. Production

Bananas are produced exclusively in the tropics. The optimal areas for banana cultivation are located between 15 degrees north and south of the equator. From 15 to 23 degrees north or south, bananas occasionally may suffer chills which not only damage the hanging fruit, but also slow down the uniform growth of the plants, which causes an increase in the interval between harvests. Between 23 and 30 degrees north or south, bananas become a seasonal crop, with three to five harvests during the warm months and none during the cold months.

It is difficult to quantify banana production in areas where export-oriented cultivation is not predominant in the structure of production and where most of the production is consumed locally. Data on domestic consumption are not available. According to FAO estimates, total world production amounted to over 39 million metric tons in 1979 (Table II-1). Approximately 40 countries produce bananas for local consumption, but only about 16 countries export significant quantities. Among the largest producers - Brazil, India, Indonesia, Ecuador, the Philippines and Thailand - only Ecuador and the Philippines are substantial exporters. Latin America is the major banana producing region, accounting for 49% of the total world production in 1979, whereas Asia and Africa accounted for 35% and 11%, respectively. However, Latin American production is more export-oriented. The ratio of exports to production was 29% in Latin America in 1979, whereas it was about 7% in Asia and Africa (Table II-2). Total world exports of bananas are about 18% of total world production. The share of production exported differs significantly among the various countries, ranging from a high of 94% in Costa Rica to less than 1% in some Asian countries (Table II-2).

B. Consumption

More than 80% of world production of bananas is consumed or wasted in developing producing countries where bananas are a staple of the diet. Accurate data on consumption per capita are not available but estimates range as high as 50 to 100 pounds per year. Industrialized countries consume about 15% of world production, nearly all of which is imported from developing countries. Bananas are consumed primarily as a fruit in industrialized countries and therefore per capita consumption is much lower than in producing

countries. Banana consumption in centrally planned economies is very low, accounting for about 3% of world bananas (Table II-3).

The consumption of bananas in importing countries is influenced by many factors: income, prices, consumer tastes, competition with other fruits, and trade policies. The level of income is perhaps the most important factor affecting consumption of bananas in countries with per capita GNP of less than US\$1,500 per year. In these countries, banana consumption per capita tends to increase rapidly with increases in per capita income. On the other hand, per capita consumption of bananas tends to increase more slowly in those countries where per capita GNP is greater than US\$1,500 per year. Above some higher income per capita, say around US\$2,000, banana consumption per capita tends to level off at a saturation level of about 22 pounds per capita. Most of the major importing countries have reached the saturation levels (Table II-4).

The downward trend in retail prices in real terms has been a contributing factor to the rising per capita consumption. As can be seen, Italy, which has a very high retail price also has a very low per capita banana consumption while the opposite is true for West Germany and the United States. In addition, countries such as Italy, West Germany, and the Netherlands, which have had rapid declines in retail prices, have also had the fastest rates of increase in per capita consumption.

Banana consumption in an importing country can be altered substantially by governmental trade policies. For instance, the trade liberalization by Japan in 1963 led to a threefold increase in banana imports in one year; the easing of import restrictions in Italy in 1965 resulted in a doubling of per capita banana consumption.

According to a FAO study, the substitution between bananas and other fruits such as apples and oranges is limited. Although difficult to quantify, it is believed that consumer taste is an important factor affecting banana consumption.

C. Trade

Bananas are almost exclusively exported by developing countries to industrialized countries. About 77% of world banana exports in 1979 came from Latin America and the Caribbean, with 12% from the Philippines. The exports of Ecuador, the largest exporter, have been stagnating. Therefore, its share

in world exports has decreased from 25% in 1961 to 19% in 1979. The rapidly expanding Japanese import market was taken over by exports from the Philippines (Table II-5).

The major markets for the exports of bananas are the industrialized countries, accounting for 83% of world imports in 1979. The United States is the largest single market, accounting for 34%, followed by the EEC, accounting for 29% of world imports in 1979. Japan has been the most rapidly growing market and ranked third with 11% of world imports in 1979 (Table II-6).

World banana trade appears to follow a traditional pattern due to institutional factors, perishability of the fruit and high transportation costs. Institutional factor limits market access to a few exporters. The Commonwealth producers, Jamaica and the Windward Islands, export almost exclusively to the United Kingdom; the French Caribbean producers, Martinique and Guadeloupe mainly export to France; the Canary Islands export principally to Spain; some EEC associated countries such as Ivory Coast and Cameroon export to France and Somalia exports to Italy. Perishability and high transportation costs limit access to distant markets. Therefore, the Japanese market is mainly supplied by the Philippines and Taiwan, while Ecuador becomes a residual supplier for those markets. The Central and South American countries export mainly to the United States, Canada and the Western European countries which do not have special trade arrangements with other countries (Table II-7).

Table II-1: BANANAS - WORLD PRODUCTION BY MAIN COUNTRIES AND ECONOMIC REGIONS

	Actual						Shares of World Total						Growth Rate
	1961	1965	1970	1975	1978	1979	1961	1965	1970	1975	1978	1979	1961-79
	-----('000 mt)-----						-----(%)-----						(% p.a.)
INDUSTRIALIZED COUNTRIES	<u>129</u>	<u>124</u>	<u>135</u>	<u>108</u>	<u>117</u>	<u>146</u>	<u>0.6</u>	<u>0.4</u>	<u>0.4</u>	<u>0.3</u>	<u>0.3</u>	<u>0.4</u>	<u>-0.6</u>
DEVELOPING COUNTRIES	<u>22,593</u>	<u>27,947</u>	<u>29,832</u>	<u>31,598</u>	<u>36,730</u>	<u>38,042</u>	<u>96.6</u>	<u>97.0</u>	<u>97.0</u>	<u>96.9</u>	<u>97.1</u>	<u>97.2</u>	<u>2.6</u>
Brazil	3,529	4,531	4,806	5,455	6,176	6,424	15.1	15.7	15.6	16.7	16.3	16.4	3.2
Colombia	572	653	780	1,050	1,250	1,300	2.4	2.3	2.5	3.2	3.3	3.3	4.9
Costa Rica	398	516	1,146	1,221	1,149	1,078	1.7	1.8	3.7	3.7	3.0	2.8	7.0
Ecuador	2,597	3,067	2,911	2,544	2,152	2,391	11.1	10.6	9.5	7.8	5.7	6.1	-0.5
French Antilles /a	311	382	286	365	475	487	1.3	1.3	0.9	1.1	1.3	1.2	2.5
Guatemala	369	286	487	520	550	560	1.6	1.0	1.6	1.6	1.5	1.4	3.5
Honduras	739	725	1,348	783	1,300	1,300	3.2	2.5	4.4	2.4	3.4	3.3	2.9
Jamaica	176	239	195	127	150	152	0.8	0.8	0.6	0.4	0.4	0.4	-2.4
Panama	544	579	989	989	1,056	1,000	2.3	2.0	3.2	3.0	2.8	2.6	4.4
Windward Islands /b	131	222	152	112	159	162	0.6	0.8	0.5	0.3	0.4	0.4	1.2
Other America	2,596	3,075	3,102	3,548	3,828	4,325	11.1	10.7	10.1	10.9	10.1	11.1	2.9
Cameroon	225	190	94	95	110	110	1.0	0.7	0.3	0.3	0.3	0.3	-4.0
Ivory Coast	98	138	185	192	197	200	0.4	0.5	0.6	0.6	0.5	0.5	2.8
Somalia	98	157	140	106	150	150	0.4	0.5	0.5	0.3	0.4	0.4	0.2
Other Africa	2,613	3,250	3,437	3,595	3,877	3,954	11.2	11.3	11.2	11.0	10.3	10.1	2.3
Philippines	1,041	960	896	1,423	2,390	2,430	4.4	3.3	2.9	4.4	6.3	6.2	5.3
Taiwan	130	460	462	197	182	227	0.6	1.6	1.5	0.6	0.5	0.6	0.3
Other Asia & Oceania	6,012	8,035	7,820	8,717	10,971	11,182	25.7	27.9	25.4	26.7	29.0	28.6	3.5
South Africa and Southern Europe	414	482	596	559	608	610	1.8	1.7	1.9	1.7	1.6	1.6	2.2
CENTRALLY PLANNED ECONOMIES	<u>675</u>	<u>747</u>	<u>791</u>	<u>900</u>	<u>977</u>	<u>942</u>	<u>2.9</u>	<u>2.6</u>	<u>2.6</u>	<u>2.7</u>	<u>2.6</u>	<u>2.4</u>	<u>1.9</u>
WORLD TOTAL	<u>23,397</u>	<u>28,818</u>	<u>30,758</u>	<u>32,607</u>	<u>37,824</u>	<u>39,129</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>2.6</u>

/a Includes Guadeloupe and Martinique.

/b Includes Dominica, Grenada, St. Lucia and St. Vincent.

Source: FAO.

Table II-2: BANANAS: RATIO OF EXPORTS TO PRODUCTION
IN SELECTED COUNTRIES, 1961-1979

	1961	1965	1970	1975	1978	1979
<u>Latin America</u>	27.0	25.7	29.3	28.6	30.8	28.7
Brazil	7.0	4.8	4.2	2.7	2.1	2.0
Colombia	36.0	38.7	33.6	35.4	47.4	48.7
Costa Rica	58.0	61.6	75.7	91.4	87.6	93.9
Ecuador	37.9	39.1	42.8	54.4	66.2	58.0
French Antilles	83.6	67.0	74.1	75.9	72.8	50.7
Guatemala	44.4	17.8	45.2	49.4	57.5	47.7
Honduras	58.2	78.9	60.2	46.5	58.5	68.2
Jamaica	71.0	76.6	70.8	53.5	50.0	45.4
Panama	50.0	58.0	60.8	50.2	59.5	60.0
Windward Islands	77.1	81.5	80.9	75.9	84.3	60.5
Other America	8.1	3.3	2.1	6.0	5.2	4.3
<u>Africa</u>	14.6	11.8	10.2	8.9	8.0	7.3
Cameroon	62.2	62.6	53.2	77.9	75.5	72.7
Ivory Coast	93.9	92.8	75.7	70.8	73.1	58.0
Somalia	85.7	63.1	71.4	77.4	38.7	43.3
Other Africa	4.8	2.9	3.1	1.7	1.6	1.5
<u>Asia and Oceania</u>	2.2	4.2	4.1	9.6	6.8	7.5
Philippines	-	-	11.9	57.8	32.5	35.4
Taiwan	58.5	69.1	45.9	53.8	44.5	44.9
Other Asia & Oceania	1.3	1.0	0.8	0.7	0.5	0.7
WORLD TOTAL	17.1	16.5	18.9	19.5	18.9	18.2

Source: Tables II-1 and II-5.

Table 11-3: BANANAS - WORLD CONSUMPTION BY MAIN COUNTRIES AND ECONOMIC REGIONS

March 1982

	Actual						Shares of World Total						Growth Rate
	1961	1965	1970	1975	1978	1979	1961	1965	1970	1975	1978	1979	1961-79
	('000 mt)						(%)						(% p.a.)
INDUSTRIALIZED COUNTRIES	<u>3,602</u>	<u>4,316</u>	<u>4,879</u>	<u>5,208</u>	<u>5,634</u>	<u>5,694</u>	<u>15.5</u>	<u>15.0</u>	<u>16.0</u>	<u>16.0</u>	<u>15.0</u>	<u>14.6</u>	<u>2.7</u>
USA	1,569	1,569	1,658	1,782	2,108	2,214	6.7	5.5	5.4	5.5	5.6	5.7	2.4
Canada	164	167	199	212	236	249	0.7	0.6	0.7	0.7	0.6	0.6	2.8
Germany, FR	470	582	512	543	609	599	2.0	2.0	1.7	1.7	1.6	1.5	1.2
France	363	394	435	478	497	440	1.6	1.4	1.4	1.5	1.3	1.1	1.6
Italy	105	317	288	304	317	348	0.5	1.1	0.9	0.9	0.8	0.9	4.5
UK	371	376	335	308	315	305	1.6	1.3	1.1	0.9	0.8	0.8	-1.3
Other EC	173	200	213	252	276	263	0.7	0.7	0.7	0.8	0.7	0.7	2.4
Other Western Europe	158	206	238	287	319	307	0.7	0.7	0.8	0.9	0.8	0.8	3.8
Japan	75	360	846	896	807	793	0.3	1.3	2.8	2.8	2.1	2.0	11.8
Other Developed	154	145	155	146	150	176	0.7	0.5	0.5	0.4	0.4	0.5	0.7
DEVELOPING COUNTRIES	<u>18,981</u>	<u>23,670</u>	<u>24,840</u>	<u>26,183</u>	<u>30,701</u>	<u>32,083</u>	<u>81.5</u>	<u>82.4</u>	<u>81.2</u>	<u>80.4</u>	<u>81.7</u>	<u>82.3</u>	<u>2.5</u>
Argentina	224	228	388	508	241	342	1.0	0.8	1.3	1.6	0.6	0.9	3.7
Brazil	3,283	4,315	4,602	5,308	6,044	6,296	14.1	15.0	15.1	16.3	16.1	16.1	3.5
Colombia	366	400	518	678	658	667	1.6	1.4	1.7	2.1	1.8	1.7	4.2
Ecuador	1,612	1,867	1,665	1,160	727	1,005	6.9	6.5	5.4	3.6	1.9	2.6	-1.8
Mexico	624	1,021	964	1,191	1,484	1,909	2.7	3.6	3.2	3.7	3.9	4.9	4.0
Venezuela	749	812	945	849	953	956	3.2	2.8	3.1	2.6	2.5	2.5	1.4
Other America	2,076	2,219	2,692	2,474	2,809	2,803	8.9	7.7	8.8	7.6	7.5	7.2	1.7
Bangladesh	446	620	593	578	596	600	1.9	2.2	1.9	1.8	1.6	1.5	0.5
India	2,246	3,263	2,890	3,408	3,900	4,000	9.6	11.4	9.5	10.5	10.4	10.3	2.5
Indonesia	1,280	1,480	1,780	1,897	2,904	2,905	5.5	5.1	5.8	5.8	7.7	7.5	4.1
Papua New Guinea	620	700	758	840	885	900	2.7	2.4	2.5	2.6	2.4	2.3	2.0
Philippines	1,041	960	789	600	1,613	1,570	4.5	3.3	2.6	1.8	4.3	4.0	1.1
Thailand	645	1,165	1,198	1,281	1,981	2,062	2.8	4.1	3.9	3.9	5.3	5.3	5.2
Other Asia	682	880	911	1,051	1,125	1,161	2.9	3.1	3.0	3.2	3.0	3.0	3.0
Africa	2,759	3,340	3,499	3,676	4,021	4,140	11.8	11.6	11.4	11.3	10.7	10.6	2.3
South Africa and Southern Europe	328	400	648	684	761	767	1.4	1.4	2.1	2.1	2.0	2.0	4.8
CENTRALLY PLANNED ECONOMIES	<u>712</u>	<u>754</u>	<u>857</u>	<u>1,156</u>	<u>1,250</u>	<u>1,216</u>	<u>3.1</u>	<u>2.6</u>	<u>2.8</u>	<u>3.6</u>	<u>3.3</u>	<u>3.1</u>	<u>3.3</u>
WORLD TOTAL	<u>23,295</u>	<u>28,740</u>	<u>30,576</u>	<u>32,547</u>	<u>37,585</u>	<u>38,993</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>2.6</u>

Source: FAO

11 - 6

Table II-4: BANANA CONSUMPTION PER HEAD IN SELECTED COUNTRIES, 1950-79
(in pounds)

	U.S.	Canada	Japan	W. Germany	France	U.K.	Italy	Netherlands	Belgium- Luxemburg
1950	24.4	12.8	0.3	4.1	10.6	6.2	0.5	4.7	9.6
1951	23.7	19.1	0.7	3.5	12.6	7.3	1.4	4.7	10.2
1952	23.7	19.4	1.1	4.9	13.2	7.4	1.5	4.4	10.0
1953	22.4	20.3	0.6	5.3	12.9	11.5	1.6	5.1	10.7
1954	21.8	19.3	0.8	7.9	14.2	12.8	1.7	5.8	11.3
1955	20.6	18.8	0.6	9.3	13.7	13.4	2.1	6.9	11.8
1956	20.9	19.1	0.5	12.7	13.3	13.7	2.1	8.3	12.5
1957	20.9	19.0	0.7	14.5	15.3	13.6	2.0	9.4	13.4
1958	20.0	18.9	0.9	17.9	17.2	13.3	2.8	10.2	14.3
1959	21.1	19.4	0.9	17.9	16.5	14.4	2.7	11.1	14.4
1960	23.8	21.1	1.0	18.6	16.8	14.7	3.9	11.4	14.6
1961	18.9	19.8	1.7	18.5	17.3	15.4	4.6	12.9	15.1
1962	15.6	18.2	1.9	18.0	18.5	15.4	5.8	13.1	15.2
1963	16.1	17.6	5.8	18.1	16.7	15.0	6.8	13.2	14.6
1964	16.7	17.9	8.0	18.3	16.2	14.4	7.0	12.4	15.3
1965	17.8	18.7	8.0	21.7	17.8	15.3	13.4	14.6	15.5
1966	17.5	19.3	9.2	22.4	20.6	14.8	13.6	17.7	17.2
1967	17.5	19.7	10.5	22.2	19.7	14.2	13.3	17.5	17.1
1968	17.5	20.7	13.8	20.6	19.0	13.7	13.6	16.8	17.3
1969	16.8	20.2	15.8	19.8	19.7	14.2	13.2	15.1	16.4
1970	17.8	20.6	17.9	18.6	18.9	13.3	11.8	13.6	16.2
1971	18.6	21.1	20.7	22.7	19.5	12.7	10.6	17.0	18.4
1972	18.6	20.8	21.9	23.9	21.6	12.3	14.2	19.4	20.6
1973	18.6	21.3	18.9	24.0	20.3	12.1	14.0	19.9	20.5
1974	19.3	21.6	17.2	20.9	20.0	12.0	12.6	18.4	19.2
1975	18.4	20.6	17.7	19.3	19.9	12.1	12.0	17.5	19.0
1976	20.2	22.8	16.4	19.6	18.7	12.3	10.5	17.7	18.5
1977	20.2	21.8	16.1	20.8	20.7	12.0	12.1	18.0	19.6
1978	21.3	22.1	15.5	21.9	20.6	12.4	12.3	19.4	20.0
1979	22.2	23.2	15.1	21.6	18.1	12.0	13.5	18.6	18.4

Sources: FAO and Jean-Paul Valles (8).

Table II-5: BANANAS - WORLD EXPORTS BY MAIN COUNTRIES AND ECONOMIC REGIONS /a

	Actual						Shares of World Total						Growth Rate
	1961	1965	1970	1975	1978	1979	1961	1965	1970	1975	1978	1979	1961-79
	('000 mt)						%						(% p.a.)
INDUSTRIALIZED COUNTRIES	53	78	198	218	239	240	1.3	1.6	3.4	3.4	3.3	3.4	24.0
DEVELOPING COUNTRIES	3,940	4,626	5,575	6,131	6,883	6,874	98.3	97.3	96.0	96.2	96.3	96.3	3.4
Brazil	246	216	204	147	133	128	6.1	4.5	3.5	2.3	1.9	1.8	-4.1
Colombia	206	253	262	372	592	633	5.1	5.3	4.5	5.8	8.3	8.9	5.8
Costa Rica	231	318	867	1,116	1,007	1,012	5.8	6.7	14.9	17.5	14.1	14.2	10.3
Ecuador	985	1,200	1,246	1,384	1,425	1,386	24.6	25.3	21.5	21.7	19.9	19.4	0.8
French Antilles /b	260	257	212	277	346	247	6.5	5.4	3.7	4.3	4.8	3.5	1.6
Guatemala	164	51	220	257	316	267	4.1	1.1	3.8	4.0	4.4	3.7	8.6
Honduras	430	572	812	364	760	887	10.7	12.0	14.0	5.7	10.6	12.4	3.5
Jamaica	125	183	138	68	75	69	3.1	3.9	2.4	1.1	1.0	1.0	-5.0
Panama	272	336	601	496	628	600	6.8	7.1	10.4	7.8	8.8	8.4	4.7
Windward Islands /c	101	181	123	85	134	98	2.5	3.8	2.1	1.3	1.9	1.4	-1.4
Other America	211	100	65	213	198	185	5.3	2.1	1.1	3.3	2.8	2.6	-0.7
Cameroon	140	119	50	74	83	80	3.5	2.5	0.9	1.2	1.2	1.1	-2.0
Ivory Coast	92	128	140	136	144	116	2.3	2.7	2.4	2.1	2.0	1.6	0.3
Somalia	84	99	100	82	58	65	2.1	2.1	1.7	1.3	0.8	0.9	-1.6
Other Africa	126	94	105	62	63	61	3.1	2.0	1.8	1.0	0.9	0.9	-3.9
Philippines	-	-	107	823	777	860	-	-	1.8	12.9	10.9	12.0	110.3
Taiwan	76	318	212	106	81	102	1.9	6.7	3.7	1.7	1.1	1.4	-0.6
Other Asia and Oceania	80	82	59	63	60	77	2.0	1.7	1.0	1.0	0.8	1.1	-0.2
South Africa and Southern Europe	110	121	53	6	3	1	2.7	2.5	0.9	0.1	-	-	-23.0
CENTRALLY PLANNED ECONOMIES	17	48	32	21	27	26	0.4	1.0	0.6	0.3	0.4	0.4	-1.0
WORLD TOTAL	4,010	4,752	5,805	6,370	7,149	7,140	100.0	100.0	100.0	100.0	100.0	100.0	3.4

/a Including re-exports.

/b Includes Guadeloupe and Martinique.

/c Includes Dominica, Grenada, St. Lucia and St. Vincent

Source: FAO

Table II-6: BANANAS - WORLD IMPORTS BY MAIN COUNTRIES AND ECONOMIC REGIONS

	Actual						Shares of World Total						Growth Rate
	1961	1965	1970	1975	1978	1979	1961	1965	1970	1975	1978	1979	1961-79
	-----('000 mt)-----						-----(%)-----						(% p.a.)
INDUSTRIALIZED COUNTRIES	<u>3,483</u>	<u>4,211</u>	<u>4,941</u>	<u>5,318</u>	<u>5,757</u>	<u>5,788</u>	<u>88.6</u>	<u>89.9</u>	<u>87.9</u>	<u>84.3</u>	<u>83.3</u>	<u>82.6</u>	<u>3.1</u>
USA	1,565	1,565	1,846	1,967	2,306	2,410	39.8	33.4	32.8	31.2	33.4	34.4	3.0
Canada	164	167	199	212	236	249	4.2	3.6	3.5	3.4	3.4	3.6	2.8
Germany, FR	473	585	517	548	617	603	12.0	12.5	9.2	8.7	8.9	8.6	1.2
France	367	399	435	478	498	440	9.3	8.5	7.7	7.6	7.2	6.3	1.5
Italy	105	317	288	304	317	348	2.7	6.8	5.1	4.8	4.6	5.0	4.5
UK	371	376	335	308	315	305	9.4	8.0	6.0	4.9	4.6	4.4	-1.3
Other EC	176	211	214	277	304	300	4.5	4.5	3.8	4.4	4.4	4.3	3.0
Other Western Europe	158	208	239	287	322	308	4.0	4.4	4.3	4.5	4.7	4.4	3.8
Japan	74	358	844	894	804	790	1.9	7.6	15.0	14.2	11.6	11.3	11.8
Other Developed	30	25	24	43	38	35	0.8	0.5	0.4	0.7	0.5	0.5	0.9
DEVELOPING COUNTRIES	<u>395</u>	<u>416</u>	<u>582</u>	<u>715</u>	<u>854</u>	<u>916</u>	<u>10.0</u>	<u>8.9</u>	<u>10.4</u>	<u>11.3</u>	<u>12.4</u>	<u>13.1</u>	<u>5.1</u>
Argentina	212	191	164	134	112	142	5.4	4.1	2.9	2.1	1.6	2.0	-3.1
Chile	17	28	76	39	68	52	0.4	0.6	1.4	0.6	1.0	0.7	3.7
Other America	42	33	82	61	104	117	1.1	0.7	1.5	1.0	1.5	1.7	5.9
Africa	24	39	35	39	25	36	0.6	0.8	0.6	0.6	0.4	0.5	2.3
Asia	76	86	121	311	388	411	1.9	1.8	2.2	4.9	5.6	5.9	9.8
South Africa and Southern Europe	24	39	104	131	157	158	0.6	0.8	1.8	2.1	2.3	2.3	11.0
CENTRALLY PLANNED ECONOMIES	<u>54</u>	<u>56</u>	<u>99</u>	<u>277</u>	<u>299</u>	<u>300</u>	<u>1.4</u>	<u>1.2</u>	<u>1.8</u>	<u>4.4</u>	<u>4.3</u>	<u>4.3</u>	<u>13.1</u>
WORLD TOTAL	<u>3,932</u>	<u>4,683</u>	<u>5,622</u>	<u>6,310</u>	<u>6,910</u>	<u>7,004</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>3.6</u>

Source: FAO

March 1982

II - 9

Table 11-2. BAVARIA TRADE IN 1978
('000 WT)

FROM/TO	US	Canada	Germany	France	Italy	IV	Netherlands	Belgium-Luxemburg	Denmark	Ireland	Sweden	Switzerland	Norway	Austria	Japan	Argentina	Chile	World
Brazil	0.5	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	109.7	-	112.5
Colombia	201.7	16.0	118.8	4.0	11.4	11.3	38.4	13.3	3.3	0.4	7.1	1.6	7.5	23.2	-	-	-	622.3
Costa Rica	493.0	66.9	161.5	2.5	64.2	0.7	24.0	12.7	13.8	0.2	23.2	16.9	15.6	76.4	-	1.4	-	1008.7
Ecuador	547.8	49.4	105.6	3.7	70.6	8.6	22.5	21.6	2.2	32.8	7.1	0.1	0.3	3.7	21.5	0.9	67.4	1223.9
French Antilles	-	-	-	327.6	41.8	1.8	-	-	-	-	-	-	-	-	-	-	-	345.8
Guatemala	173.3	7.8	2.0	0.4	24.2	-	0.1	0.1	1.5	-	0.1	8.4	2.3	-	-	-	-	326.0
Honduras	542.6	57.9	74.3	0.1	12.9	0.8	15.2	12.5	6.1	0.1	12.7	11.4	4.2	11.6	-	-	-	740.3
Jamaica	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75.2
Panama	188.7	27.4	154.7	1.8	41.7	1.4	27.7	26.2	11.3	0.8	29.1	24.9	12.2	26.9	-	-	-	627.8
Windward Islands	-	-	-	-	-	130.9	-	-	-	-	-	-	-	-	-	-	-	134.3
Nicaragua	126.8	8.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	123.5
Cameroon	-	-	-	57.9	1.2	18.4	-	-	-	-	-	-	-	-	-	-	-	82.6
Ivory Coast	-	-	-	96.6	7.1	0.9	-	-	-	-	-	-	-	-	-	-	-	144.0
Somalia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	57.1
Philippines	-	-	-	-	3.3	-	-	-	-	-	-	-	-	-	-	-	-	772.1
Taiwan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	702.5	-	-	81.1
World	2304.5	236.2	612.4	499.8	317.0	316.3	131.8	93.6	38.2	19.9	79.3	63.8	37.2	91.9	804.7	112.3	67.6	4979.9

Sources: GATT and FAO Trade Tables.

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III. THE STRUCTURE OF THE BANANA INDUSTRY

A. Barriers to Trade

There are two different international markets for bananas. One is the free market, accounting for 84% of world trade in 1979, and which comprises all the countries granting access to banana imports without any quantitative restrictions based on origin. The other is the protected markets, accounting for 16% of world trade in 1979; these include countries which reserve a proportion of their total imports to specific exporting countries. The latter consists of France, Italy and the United Kingdom; each imposes quantitative restrictions on banana imports. France has always maintained a managed market such that two-thirds of her market are reserved for imports from the French Overseas Departments (Martinique and Guadeloupe) and one-third for African franc zone countries such as Cameroon, Ivory Coast, and Malagasy Republic. Imports from other origins are subject to licensing which is only granted when import prices exceed a certain level. Italy grants free access to imports from EEC members and associated countries, but imports from third countries are allowed only within the limits of a global quota. Somalia is a traditional supplier to Italy with a preferential status. However, currently Somalia supplies only 15% of the Italian market requirements, the rest are supplied by the Latin American countries. The United Kingdom has traditionally granted duty-free access to Commonwealth producers such as Jamaica and the Windward Islands. Imports from dollar area countries are limited to an annual quota of 4,000 tons but additional licenses may be granted if supplies from Commonwealth countries fall short of market requirements. In 1978, the Windward Islands supplied 41% of the UK market and Jamaica 24%; the remainder came from other ACP countries including 19% from Latin American countries. Under the Lomé Convention Caribbean bananas have first preference in the UK market; other ACP producers such as Ivory Coast and Surinam have second preference; and any remainder is made up by Latin American producers. Finland applies a global quota for imports between June 1 and December 31 of each year.

As for tariffs, the EEC applies a 20% ad valorem common tariff on all supplies not originating in associated countries. However, under a special protocol of the treaty of Rome, Germany may import a varying volume of bananas without duties. Japan levies an average import tariff of 40% ad valorem. Effective April 1980 it granted duty-free imports from least-

developed countries under the GSP. However, the duty-free imports do not apply to the three current suppliers - the Philippines, Taiwan and Ecuador. Finland imposes 40% ad valorem on banana imports during the period of June 1 and December 31 of each year. The Swiss tariff is SwF 0.20/kg MFN (Table III-1).

The discriminatory import restrictions in the three protected markets have led to their traditional suppliers receiving higher prices than they otherwise would. The protection also hinders technical advancement and quality improvement in the countries enjoying preferential treatment. As a result, the preferential countries cannot compete with other exporting countries in the free markets and they cannot find a new export outlet. Among the countries enjoying preferences, only Somalia has so far developed exports outside its traditional market, Italy. This is due to its locational advantage of being close to the rapidly growing Middle Eastern markets.

The high perishability of bananas and the relatively high transportation costs also limit the trade flow of bananas. These two factors limit the distance that bananas can be shipped, and call for the availability of appropriate shipping facilities. The high proportion of transportation costs in the c.i.f. price of bananas makes geographical location a very important determinant of an exporter's competitiveness. The competitiveness in the faraway markets will be weakened because longer transportation time is required, thereby leaving less time for distribution and retailing in the consumer markets.

B. The Role of the Transnational Companies

One of the well-known aspects of the world banana economy is the large role played by transnational companies in production and marketing. The three major transnational companies are United Brands, Standard Fruit and Del Monte. They controlled 60% of the world banana market in 1977/78 (Table III-2). They dominate the markets in both major exporting and importing countries (Tables III-3 and III-4). More than 70% of banana exports from Costa Rica, Guatemala, Honduras, Nicaragua, Panama, and the Philippines were controlled by these three companies in 1978. They are the traditional suppliers to the US market, accounted for 93% of the total US imports in 1978. In addition, these companies controlled a major share of world production, either through direct ownership of plantations or through production contracts with associate producers. They own large plantations in Central America, which supplied 52%

of Del Monte's exports, 45% of United Brands' exports and 29% of Standard Fruit's exports in 1977/78 (Table III-5).

In addition to their own output, the transnational companies obtain a substantial proportion of their banana exports from independent and associate producers. Associate producers receive financial and technical assistance from these companies. In return they deliver all their output to the companies under long-term contracts.

The three companies are also engaged in packaging and shipping. These vertically integrated operations ensure the efficient handling of bananas from producing countries to consumer markets within the limited time constraint.

Although the three transnational companies control over 90% of the US banana market the competitive conditions are intense. Three factors contribute to stimulating competition in the banana market. (a) Lack of brand preference by consumers. Bananas are purchased by consumers depending on price and quality. Brand names are hardly paid special attention by consumers. (b) Restriction on vertical integration limits opportunities for exerting control over the market. (c) Constraint in marketing time. Bananas are highly perishable. Once bananas are mature, they must be cut and marketed within four to five weeks. The short marketing time allows little room for manipulating the market.

Table III - MOST DEVELOPING COUNTRIES AND SOCIO-ECONOMIC SITUATION

PRODUCT	AUSTRALIA	AUSTRIA	CANADA	CHINA	JAPAN	NEW ZEALAND	FINLAND	NORWAY	SWEDEN	SWITZERLAND	UNITED STATES
CCCF ex 0801 Fresh bananas	0% + 2% temporary revenue duty, GSP-02	S 1.00/kg, B or 8% whichever is lower, GSP-02	0% B	0% B /a GSP-02 GSP-02 (FRA, ITA, GRC, SXT, CTA)	Apr.-Sept. Provisional duty: 50% OCT-02 OCT.-Mar. Provisional duty: 50% GSP-45% EUC-02	0% B Import monopoly	Jan.-May /b 24% P GSP-02 June-Dec. /b 40% B 1980/81: 48.2% OR	0% B	0% B	Sw F 0.20/kg. /c (21.6% - 1976)	0% B
CCCF ex 0802 Dried bananas	0% + 2% temporary revenue duty, GSP-02	S 1.26/kg, B or 8% whichever is lower, GSP-02	0% B	0% B /a GSP-02 GSP-02 EUC-02 GSP-02 (FRA, ITA, GRC) SXT (ITA)	6% B GSP-02	0% B	6% B GSP-02	0% B	0% B	Sw F 0.70/kg. (21.6% - 1976)	3.5% B GSP-02
CCCF ex 1104 Flour of bananas	S 0.06/kg.	10% or 11.5% /d GSP-52	0% GSP-02	12% B GSP-67 /e GSP-02 EUC-02 GSP-02 (FRA, ITA, GRC) SXT (ITA)	0% B (tariff ceiling purposes) 1980/81: 18.2% GSP-0.5% (1981) 2% (other) SXT (ITA)	0% B	1% B GSP-02	0% B GSP-02 (1.3% - 1976)	0% B	In packages of more than 5 kg. Sw F 0.045/kg. (1.2% - 1976) GSP-02 In other packages: Sw F 0.20/kg. B (4.5% - 1976) GSP-02	2% B GSP-02 /f

/a. Duty-free for imports into F.R.G. Germany within a tariff quota.

/b. Bananas in bunches are subject to the following duties: January-May MFN - 14% B, GSP-02; June-December MFN-20% (1980/81) - 26.1%, GSP - 0%.

/c. Bound rate = Sw F 0.25/kg.

/d. An m.f.n. rate of 11.5 percent is applicable to imports in packages of not more than 5 kg.

/e. A GSP rate of 0 percent is applicable to denatured banana flour.

/f. In 1976 this GSP rate did not apply to Philippines under the "competitive need" provisions.

Explanatory notes and symbols used:

Symbol "B" denotes bound tariff rates including Tokyo Round final rates.

In cases where current tariff rates are different from bound rates current rates have been indicated below bound rates.

Incidence of specific duties has been indicated in parenthesis to the extent available from the tariff study file.

Sources: GATT document, COM.TD/W/331, March 16, 1981.

OR = Quantitative import restriction
 CTF = Selective Internal tax
 LDC = Least-developed developing countries
 BCP = Bulgaria, ESP = Spain, GBR = United Kingdom, FRA = France
 ITA = Italy

Table III-2: WORLD BANANA MARKET SHARES

(in %)

	1973	1974	1975	1976	1977/78
United Brands Co.	28	29	28	29	29
Standard Fruit Co.	22	21	21	19	19
Del Monte	8	11	12	13	12
TOTAL	<u>58</u>	<u>61</u>	<u>61</u>	<u>61</u>	<u>60</u>

Source: FAO document CCP: BA 80/4, March 1980

Table III-3: MARKET SHARE OF TRANSNATIONAL COMPANIES IN MAJOR EXPORTING COUNTRIES, 1978

	United Brands Co.	Standard Fruit Co.	Del Monte	Others	Total
Costa Rica	33	37	30	--	100
Guatemala	--	--	100	--	100
Honduras	52	48	--	--	100
Nicaragua	--	100	--	--	100
Panama	80	--	--	20	100
Colombia	30	30	--	40	100
Ecuador	--	20	--	80	100
Philippines	22	26	28	24	100

Source: FAO document, CCP: BA 80/4, March 1980.

Table III-4: MARKET SHARE OF TRANSNATIONAL COMPANIES IN MAJOR IMPORTING COUNTRIES, 1978

(in %)

	United Brands Co.	Standard Fruit Co.	Del Monte	Others	Total
United States	35	40	18	7	100
Germany, Fed.	10	26	5	59	100
France	15	--	--	85	100
Italy	32	25	11	32	100
United Kingdom	39	--	--	61	100
Japan	19	27	30	24	100

Source: FAO document, CCP: BA 80/4, March 1980

Table III-5: TRANSNATIONAL COMPANIES' SUPPLY SOURCES OF BANANAS, 1977/78
(in %)

	<u>United Brands Co.</u>		<u>Standard Fruit Co.</u>		<u>Del Monte</u>	
<u>Central America</u>						
Costa Rica	17	(75)	27	(57)	34	(41)
Guatemala	-		-		32	(82)
Honduras	20	(70)	25	(59)	-	
Nicaragua	-		9	(-)	-	
Panama	27	(80)	-		-	
<u>South America</u>						
Colombia	12	(-)	6	(-)	-	
Ecuador	10	(-)	18	(-)	1	(-)
<u>All Others</u>						
Philippines	10	(-)	15	(-)	33	(-)
Others	4	(-)	-		-	
TOTAL	<u>100</u>	(45)	<u>100</u>	(29)	<u>100</u>	(52)

*Figures in parentheses are shares grown on own plantation.

Sources: FAO document, CCP: BA 80/4, March 1980.
OAS, Sectoral Study on the Banana Industry in the Latin American and Caribbean Countries and the Role Transnational Enterprises, October 1981.

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IV. ECONOMIC PARAMETERS USED IN THE MARKET ANALYSIS OF THE BANANA INDUSTRY

A. Demand Response

Factors which influence banana consumption per capita are income per capita, retail prices of bananas, substitution of other fruits, and tastes. Elasticities of income and price for economic regions were estimated by the UNCTAD as follows.

	Income Elasticities	Price Elasticities
Developed Countries	-	-0.37
Developing Countries	1.02	-0.41
Centrally Planned Economies	1.72	-0.35

Demand elasticities of income and price for selected countries have been estimated by FAO and USDA. They are shown in Tables IV-1 and IV-2.

Banana consumption is highly elastic when income increases from a low level, but the elasticities decline as income continues to rise. This hypothesis is confirmed by the UK data estimated by Jean-Paul Valles (9) as follows:

<u>Income</u>	<u>Income Elasticity</u>
\$ 500	5.0
1,000	1.4
2,000	0.6
2,500	0.2

The changing relationship between per capita banana consumption and income also can be seen from Figure IV-1. It clearly shows that income elasticity is highest when per capita income and consumption are low and declines as per capita income and consumption rise. For example, the income elasticity declines from 1.3 in the lower part of the curve (around \$500 income per capita) to 0.5 in the upper part where incomes are between \$1,500 and \$2,000 per capita. This characteristic of income elasticity implies that income elasticity for a specific country declines over time as a result of income growth.

According to FAO and USDA estimates, in most of the cases the price elasticities of demand for bananas are less than unity, i.e., banana

consumption is inelastic with respect to banana prices. This implies that higher prices at the retail level would lead to less than proportionate consumption decreases.

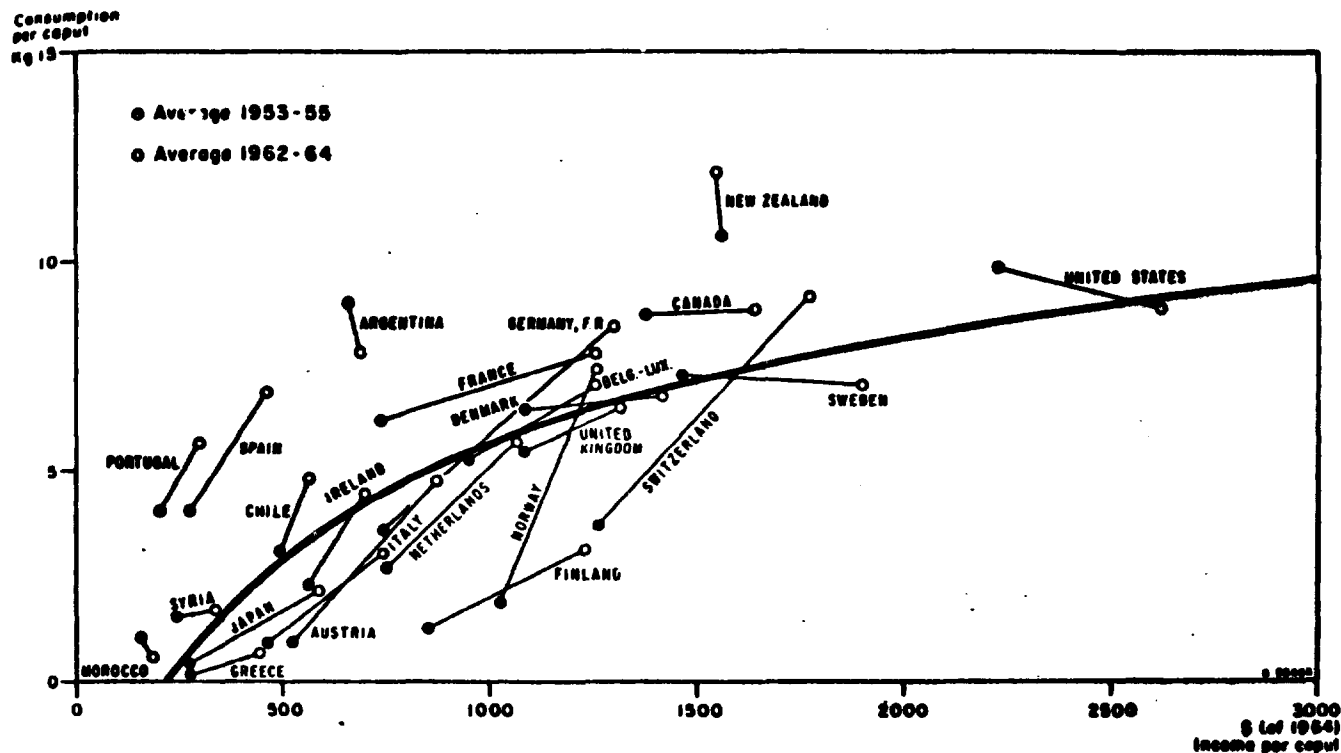
As for the relationships between bananas and other fruits, FAO made a study in 1969 for six major fruit consuming countries. The cross-price elasticities between bananas and apples show that there is a low degree of competition between these two fruits. The value of cross-price elasticities range from zero for Germany to 0.3 for France. The cross-price elasticity for bananas and oranges suggests a different type of relationship in the different countries. They show a limited price competition in the Netherlands, the Federal Republic of Germany and France, whereas in the United States, United Kingdom and Canada they point to the possibility of a limited price complementarity between these two fruits.

B. Supply Response

Although no precise estimates of the elasticity of banana production are available, a qualitative analysis of the factors influencing supply indicates that banana production, and consequently also the exportable supply, can be expanded fairly rapidly in response to favorable price or marketing conditions. Bananas are a permanent crop and there is no seasonality in production. It takes 11-14 months to produce a bunch of bananas. Bananas produce very high yields per unit of land. Since banana exporting countries have vast areas of marginal land suitable for banana production, the capacity of banana production can be adjusted easily to meet greater international demand without an increase in average farm-gate costs. Because a banana tree has to be cut after it has produced each year the possibilities for adjusting production are greater than is usually the case with tree crops.

A high short-term elasticity of supply could be the result of the low export-production ratio (less than 20% of world banana production being exported). The excess production not only allows for the application for strict quality standards to ensure export market competitiveness, but also allows for the possibility of increasing export supply by lowering the quality standard, as, for example, where natural hazards affect production in the main producing countries. A high percentage of banana production usually goes to waste due to quality and transportation problems. Therefore, prospects for an almost immediate increase in the exportable volume of bananas, without any increase in average costs, are quite feasible.

Figure IV-1: PER CAPUT BANANA CONSUMPTION
IN RELATION TO PER CAPUT INCOME /1



The equation for the regression line is: $X_1 = -20.381 + 8.645 \log X_2$, $\bar{S} = 1.41 R = 0.878$
(± 0.75)

Source: FAO, Monthly Bulletin of Agricultural Economics and Statistics, February 1967.

Table IV-1: FAO ESTIMATES OF DEMAND ELASTICITIES FOR BANANAS

	Income Elasticity		Price Elasticity		Cross Elasticities <u>/a</u>	
	I	II	I	II	I	II
Germany, F.R.	0.36	-0.27	-0.77	-0.58	0.38	0.11
France	0.49	0.06	-0.46	-0.50	0.21	
Netherlands	0.44	0.14	-0.45	-0.45	-	0.89
Switzerland	0.23	0.72	-0.70	-0.35	0.61	-
US	-	0.08	-	-0.11	-	-
UK	-	-0.93	-	-0.22	-	-
Japan	-	1.29	-	0.48	-	-

/a Cross elasticities with respect to apple prices.

I: Elasticities at 1972 actual values.

II: Elasticities at 1976 actual values (data covered 1959-76, in the case of Japan 1965-76).

Source: FAO documents, CCP: BA/CONS 74/3 Suppl. 1, May 1974 and CCP: BA/WP 77/2 Suppl. 2, May 1977.

Table IV-2: USDA ESTIMATES OF ELASTICITIES OF DEMAND FOR BANANAS

Country	Income Elasticity	Price Elasticity
North America	0.2	-0.4
Belgium-Luxemburg	.4	-.4
France	.4	-.4
Germany	.4	-.4
Italy	.7	-1.1
Netherlands	.5	-.5
New Zealand	.3	-.3
United Kingdom	.4	-.5
Austria	.7	-.5
Denmark	.4	-.6
Norway	.5	-.6
Sweden	.3	-.7
Switzerland	.3	-.4
Finland	.7	-2.0
Japan	1.1	-1.4

Source: USDA, BANANAS IN 1980, WASHINGTON, D.C., 1971, P. 69.

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V. MARKET PRICES

A. Price Determining Mechanisms

Banana prices are mainly determined by production and marketing costs, trade barriers, taxes, and the structure of the markets. The price levels and structures vary from one market to the other. Prices in the protected markets with import quotas and tariff such as France, the United Kingdom and Italy are usually higher than those in the free markets such as the United States and Germany (Table V-1).

F.O.B. export prices, which are returns to the exporting countries, include the price paid to the producer, the cost of packing and transporting the bananas, the cost of loading them on the ships, and export taxes. In total, these costs account for 12 to 35% of retail prices in 1978. The C.I.F. import prices accounted for 23 to 46% of the retail prices in 1978. The main causes of the variations in C.I.F. prices are the differences in freight and the prices paid to the producers. The marketing and handling costs (including unloading, import duties, consumption taxes, and wholesalers and retailers margins) in the importing countries accounted for 54 to 77% of the retail prices (Table V-2).

B. Movements in Banana Prices

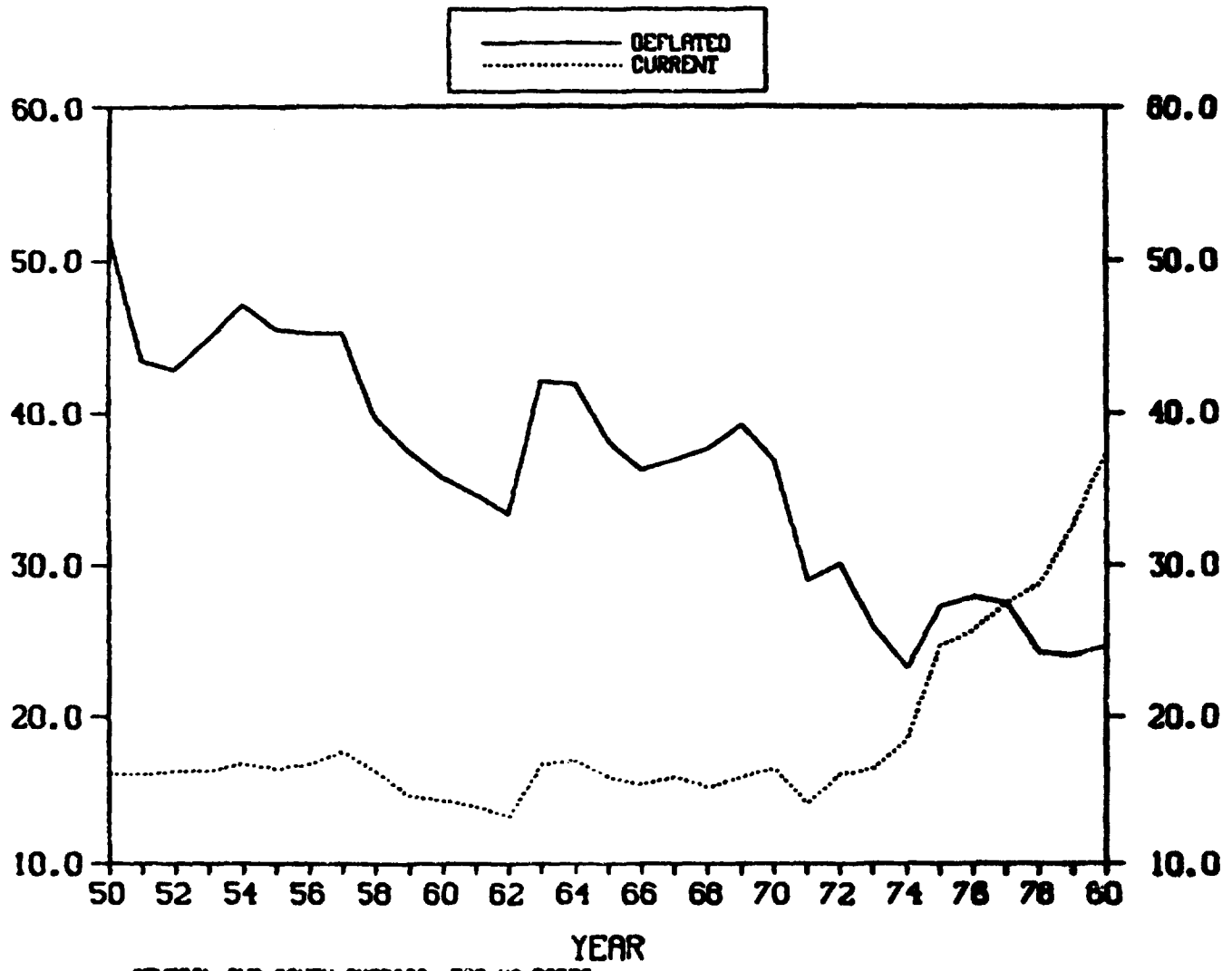
Reflecting the continuous pressure of increasing supply, banana prices changed little in current dollar terms between 1950 and 1973. Productivity increases which accompanied the introduction of Cavendish varieties and the opening up of large-scale plantations by transnational companies have contributed to rapid increase in supply. Current prices started to rise in 1974 and this rise continued to 1980. The US import price of bananas increased by 127% in 1980 as compared with 1973 levels. Import prices in Germany and France show more or less the same movements as US import prices. This increase in prices was mainly due to Hurricane "Fifi" in September 1974 which destroyed about 80% of Honduran production and about 25% of Guatemalan production, and Hurricanes "David" in 1979 and "Allen" in 1980 which together destroyed 800,000 tons of bananas in the Caribbean.

Meanwhile production and distribution costs continued to rise, and export taxes have been imposed by UPEB countries (Unión de Países Exportadores de Banano).

However, in the long-run, banana prices have not fully kept pace with world inflation. Banana prices in real terms show a long-term declining trend. US import prices in real terms decreased by 2.3% each year between 1950 and 1980 (Figure V-1). The other major markets also show a long-term decreasing trend in real prices (Table V-3).

Retail prices in the US market have shown the same movement as import prices. US retail prices in real terms decreased by 3% each year between 1955 and 1979. Retail prices in real terms in other markets also showed a declining trend during the same period (Table V-4).

Figure V-1: BANANA PRICE* - 1950-1980
(US CENTS/KG)



* CENTRAL AND SOUTH AMERICA, FOB US PORTS

Table V-1: BANANAS: ESTIMATE OF DISTRIBUTION COSTS AND MARGINS, SELECTED COUNTRIES

	FRANCE							UNITED KINGDOM						
			GUADELOUPE/MARTINIQUE							JAMAICA /a				
	1973	1975	1977	1978	1975	1977	1978	1973	1975	1977	1978	1975	1977	1978
	--(in current US\$ per ton)--				deflated /b (in 1973 US\$ per ton)			--(in current US\$ per ton)--				deflated /b (in 1973 US\$ per ton)		
F.o.b.	213	306	307	350	269	253	261	150	245	185	235	167	110	127
Freight and insurance	52	83	86	100	73	71	75	70	90	150	163	61	91	91
C.i.f.	265	389	393	450	342	324	336	220	335	335	398	228	201	218
Unloading and handling	45	48	53	58	42	44	43	18	20	21	25	15	12	12
Importers' gross margin or commission	9	39 /c	26 /c	30 /c	34	22	22	24	27	16	22	17	10	12
F.o.r. selling price	319	476	472	538	418	390	401	262	382	372	445	260	223	242
Ripeners' gross margin	99	138	128	153	121	106	114	116	138	159	165	96	96	91
Ripeners' selling price	418	614	600	691	529	496	515	378	520	531	610	356	319	333
Retail gross margin	125	254	269	311	223	220	232	166	196	202	273	135	120	150
Retail price	543	868	869	1,002	762	716	747	544	716	733	883	491	439	483

	FEDERAL REPUBLIC OF GERMANY							ECUADOR						
			CENTRAL AMERICA											
	1973	1975	1977	1978	1975	1977	1978	1973	1975	1977	1978	1975	1977	1978
	--(in current US\$ per ton)--				deflated /b (in 1973 US\$ per ton)			--(in current US\$ per ton)--				deflated /b (in 1973 US\$ per ton)		
F.o.b.	105	145	160	170	113	110	100	100	125	145	155	97	100	91
Freight and insurance	52	85	105	110	66	75	65	60	95	120	125	74	82	73
C.i.f.	157	230	265	280	179	185	165	160	220	265	280	171	182	164
Unloading and handling	18	21	26	30	16	18	18	18	21	26	30	16	18	18
Importers' gross margin or commission	19	46	23	4	36	12	2	-6	26	-2	-18	20	-1	-10
F.o.r. selling price	194	297	314	314	228	215	185	172	267	289	292	207	199	172
Ripeners' gross margin	77	94 /d	115 /d	127 /d	73	79	74	74	96	102	92	74	70	54
Ripeners' selling price	271	391	429	441	301	294	259	246	363	391	384	281	269	226
Retail gross margin	204	206	208	261	160	143	153	174	189	186	223	146	128	131
Retail price	475	597	637	702	461	437	412	420	552	577	607	427	397	357

/a Green-boat price.

/b Price in national currency deflated by national wholesale price index and converted at the 1973 dollar rate.

/c Including the difference between costs and prices "wagon depart" which is accrued to producers.

/d Inland transportation, ripening and distribution costs may account for about US\$80 for 1975 and US\$95 for 1977 and US\$115 for 1978.

Table V-1 (contd.)

March 1982

	CENTRAL AMERICA							ITALY							ECUADOR													
	1973	1975	1977	1978	1975	1977	1978	1973	1975	1977	1978	1975	1977	1978	1973	1975	1977	1978	1975	1977	1978							
	--(in current US\$ per ton)--							deflated /a (in 1973 US\$ per ton)	--(in current US\$ per ton)--							deflated /a (in 1973 US\$ per ton)												
F.o.b.	105	145	160	170	106	110	104	100	125	145	155	92	100	94	105	145	160	170	106	110	104	100	125	145	155	92	100	94
Freight and insurance	52	120	135	145	88	93	88	70	130	146	155	95	102	94	52	120	135	145	88	93	88	70	130	146	155	95	102	94
C.i.f.	167	265	295	315	194	203	192	170	255	291	310	187	202	188	167	265	295	315	194	203	192	170	255	291	310	187	202	188
Unloading and handling	25	35	40	42	26	27	26	25	35	40	42	26	27	26	25	35	40	42	26	27	26	25	35	40	42	26	27	26
Import duties	33	53	59	63	39	41	38	34	51	58	62	37	40	37	33	53	59	63	39	41	38	34	51	58	62	37	40	37
Consumption tax	189	168	125	295	123	86	180	189	168	125	295	123	86	180	189	168	125	295	123	86	180	189	168	125	295	123	86	180
Importers' gross margin or commission	30	66	31	5	48	21	3	6	50	14	-9	37	10	-5	30	66	31	5	48	21	3	6	50	14	-9	37	10	-5
F.o.r. selling price	444	587	550	720	430	378	439	424	559	528	700	410	365	426	444	587	550	720	430	378	439	424	559	528	700	410	365	426
Ripeners' gross margin	119	239	205	236	175	141	144	96	221	210	220	162	144	127	119	239	205	236	175	141	144	96	221	210	220	162	144	127
Ripeners' selling price	563	826	755	956	605	519	583	520	780	738	920	572	509	553	563	826	755	956	605	519	583	520	780	738	920	572	509	553
Retail gross margin	212	236	275	424	173	189	258	205	220	240	380	161	165	232	212	236	275	424	173	189	258	205	220	240	380	161	165	232
Retail price	775	1,062	1,030	1,380	778	708	841	725	1,000	978	1,300	733	674	785	775	1,062	1,030	1,380	778	708	841	725	1,000	978	1,300	733	674	785

	UNITED STATES CENTRAL AMERICA							JAPAN /c PHILIPPINES																				
	1973	1975	1977	1978	1975	1977	1978	1973	1975	1977	1978	1975	1977	1978														
	--(in current US\$ per ton)--							deflated (in 1973 US\$ per ton)	--(in current US\$ per ton)--							deflated /a (in 1973 US\$ per ton)												
F.o.b.	105	145	160	170	112	112	110	96	121	122	135	104	83	74	105	145	160	170	112	112	110	96	121	122	135	104	83	74
Freight and insurance	42	53	60	70	41	42	45	40	50	65	77	43	44	42	42	53	60	70	41	42	45	40	50	65	77	43	44	42
C.i.f.	147	198	220	240	153	154	155	130	171	187	212	147	127	116	147	198	220	240	153	154	155	130	171	187	212	147	127	116
Unloading and handling	18	23	27	30	18	19	19	17	22	27	30	19	18	17	18	23	27	30	18	19	19	17	22	27	30	19	18	17
Import duties	-	-	-	-	-	-	-	65	77	80	90	66	54	47	-	-	-	-	-	-	-	65	77	80	90	66	54	47
Importers' gross margin or commission	-	25	26	17	19	18	11	53 /b	82 /b	132 /b	152 /b	71	90	83	-	25	26	17	19	18	11	53 /b	82 /b	132 /b	152 /b	71	90	83
F.o.r. selling price	165	246	273	287	190	191	185	265	352	426	484	303	289	265	165	246	273	287	190	191	185	265	352	426	484	303	289	265
Ripeners' gross margin	85	95	92	104	74	64	67	69	83	58	77	71	40	42	85	95	92	104	74	64	67	69	83	58	77	71	40	42
Ripeners' selling price	250	341	365	391	264	255	252	334	435	484	561	374	329	307	250	341	365	391	264	255	252	334	435	484	561	374	329	307
Retail gross margin	114	170	197	229	132	137	148	139	168	250	304	144	170	166	114	170	197	229	132	137	148	139	168	250	304	144	170	166
Retail price	364	511	562	620	396	392	400	473	603	734	865	518	499	473	364	511	562	620	396	392	400	473	603	734	865	518	499	473

/a Prices in national currency deflated by national wholesale price index and converted at the 1973 dollar rate.

/b Partly includes ripener's gross margins.

/c Excluding cost of cartons.

Table V-2: BANANAS: FORMATION OF RETAIL PRICE, SELECTED COUNTRIES

	CENTRAL AMERICA				ITALY				UNITED STATES CENTRAL AMERICA			
	1973	1975	1977	1978	1973	1975	1977	1978	1973	1975	1977	1978
	Percent											
Delivered packing shed	6.6	5.7	6.5	5.4	5.9	5.3	7.0	5.4	14.0	11.9	11.9	11.9
Packing material	0.5	0.4	0.4	0.4	0.3	0.3	0.4	0.3	1.1	0.8	0.7	0.8
Cost of cartons	3.2	2.8	3.2	2.6	3.3	2.7	3.0	2.3	6.9	5.9	5.9	5.8
Transport	0.5	0.5	0.6	0.6	0.6	0.5	0.6	0.5	1.1	1.0	1.1	1.3
Loading	0.6	0.6	0.7	0.6	0.6	0.5	0.7	0.5	1.4	1.2	1.2	1.3
Export tax	-	1.9	2.3	1.8	1.0	0.3	-	-	-	3.9	4.3	4.0
Other charges	0.4	0.4	0.4	0.4	0.8	0.7	1.1	0.9	0.8	0.8	0.7	1.0
F.o.b. cost	<u>(11.8)</u>	<u>(12.3)</u>	<u>(14.1)</u>	<u>(11.8)</u>	<u>(12.5)</u>	<u>(10.3)</u>	<u>(12.8)</u>	<u>(10.0)</u>	<u>(25.3)</u>	<u>(25.5)</u>	<u>(25.8)</u>	<u>(26.1)</u>
F.o.b. return	<u>(13.5)</u>	<u>(13.7)</u>	<u>(15.5)</u>	<u>(12.3)</u>	<u>(13.8)</u>	<u>(12.5)</u>	<u>(14.8)</u>	<u>(11.9)</u>	<u>(28.8)</u>	<u>(28.4)</u>	<u>(28.5)</u>	<u>(27.4)</u>
Freight and insurance	8.0	11.3	13.1	10.5	9.7	13.0	14.9	11.9	11.5	10.4	10.7	11.3
C.i.f.	<u>(21.5)</u>	<u>(25.0)</u>	<u>(28.6)</u>	<u>(22.8)</u>	<u>(23.5)</u>	<u>(25.5)</u>	<u>(29.7)</u>	<u>(23.8)</u>	<u>(40.3)</u>	<u>(38.8)</u>	<u>(39.2)</u>	<u>(38.7)</u>
Unloading and handling	3.2	3.3	3.9	3.0	3.4	3.5	4.1	3.2	4.9	4.5	4.8	4.8
Import duties	4.3	5.0	5.8	4.6	4.7	5.1	5.9	4.7	-	-	-	-
Consumption tax	24.4	15.8	12.1	21.4	26.1	16.8	12.8	22.7	-	-	-	-
Importers' gross margin or commission	3.9	6.2	3.0	0.4	0.8	5.0	1.5	-0.5	-	4.9	4.6	2.7
F.o.r. selling price	<u>(57.3)</u>	<u>(55.3)</u>	<u>(53.4)</u>	<u>(58.2)</u>	<u>(58.5)</u>	<u>(55.9)</u>	<u>(54.0)</u>	<u>(53.9)</u>	<u>(45.2)</u>	<u>(48.2)</u>	<u>(48.6)</u>	<u>(46.3)</u>
Ripeners' gross margin	15.4	22.5	19.9	17.1	13.2	22.1	21.5	16.9	23.4	18.6	16.4	16.8
Ripener's selling price	<u>(72.7)</u>	<u>(77.8)</u>	<u>(73.3)</u>	<u>(69.3)</u>	<u>(71.7)</u>	<u>(78.0)</u>	<u>(75.5)</u>	<u>(70.8)</u>	<u>(68.6)</u>	<u>(66.8)</u>	<u>(65.0)</u>	<u>(63.1)</u>
Retail gross margin	27.3	22.2	26.7	30.7	28.3	22.0	24.5	29.2	31.4	33.2	35.0	36.9
Retail price	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

Source: FAO document, CCP: BA 80/4, March 1980.

Table V-2 (contd.)

March 1982

	FRANCE				FEDERAL REPUBLIC OF GERMANY							
	GUADELOUPE-MARTINIQUE----				CENTRAL AMERICA				ECUADOR			
	1973	1975	1977	1974	1973	1975	1977	1978	1973	1975	1977	1978
	-----percent-----											
Delivered packing shed	20.0	18.0	17.9	18.0	10.7	10.2	10.5	10.5	10.2	9.6	11.8	11.5
Packing material	1.1	1.2	1.3	1.3	0.8	0.7	0.6	0.7	0.5	0.5	0.7	0.7
Cost of cartons	6.4	5.7	5.2	4.7	5.3	5.0	5.2	5.1	5.7	4.9	5.0	4.9
Transport	1.1	0.8	0.8	1.2	0.8	0.8	0.9	1.1	1.0	0.9	1.0	1.2
Loading	5.2	5.0	5.7	5.7	1.1	1.0	1.1	1.1	1.0	0.9	1.2	1.2
Export tax	-	-	-	-	-	3.4	3.8	3.6	1.7	0.5	-	-
Other charges	3.6	3.0	2.8	2.5	0.6	0.7	0.6	0.9	1.4	1.3	1.9	2.0
F.o.b. cost	(37.4)	(33.7)	(33.7)	(33.3)	(19.3)	(21.8)	(22.7)	(23.0)	(21.5)	(18.6)	(21.6)	(21.4)
F.o.b. return	(39.2)	(35.3)	(35.3)	(34.9)	(22.1)	(24.3)	(25.1)	(24.1)	(23.8)	(22.6)	(25.1)	(25.5)
Freight and insurance	9.6	9.6	9.9	10.0	10.9	14.2	17.3	15.7	14.2	17.2	20.8	20.6
C.i.f.	(48.8)	(44.9)	(45.2)	(44.9)	(33.0)	(38.5)	(42.4)	(39.8)	(38.0)	(39.8)	(45.9)	(46.1)
Unloading and handling	8.3	5.5	6.1	5.8	3.8	3.5	4.1	4.3	4.3	3.8	4.5	4.9
Importers' gross margin or commission	1.7	4.5	3.0	3.0	4.0	7.7	2.8	0.6	-1.4	4.7	-0.3	-2.9
F.o.r. selling price	(58.8)	(54.9)	(54.3)	(53.7)	(40.8)	(49.7)	(49.3)	(44.7)	(40.9)	(48.3)	(50.1)	(48.1)
Ripeners' gross margin	18.2	15.9	14.7	15.2	16.2	15.7	18.1	18.1	17.6	17.4	17.7	15.2
Ripeners' selling price	(77.0)	(70.8)	(69.0)	(69.0)	(57.0)	(65.4)	(67.4)	(62.8)	(58.5)	(65.7)	(67.8)	(63.3)
Retail gross margin	23.0	29.2	31.0	31.0	43.0	34.6	32.6	37.2	41.5	34.3	32.2	36.7
Retail price	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

	UNITED KINGDOM				JAPAN			
	JAMAICA				PHILIPPINES			
	1973	1975	1977	1978	1973	1975	1977	1978
	-----Percent-----							
F.o.b. return	(27.6)	(34.2)	(25.2)	(26.6)	(19.0)	(20.0)	(16.6)	(15.6)
Freight and insurance	12.9	12.5	20.4	18.5	8.5	8.3	8.9	8.9
C.i.f.	(40.5)	(46.7)	(45.6)	(45.1)	(27.5)	(28.3)	(25.5)	(24.5)
Unloading and handling	3.3	2.8	2.9	2.8	3.6	3.6	3.7	3.5
Import Duties	-	-	-	-	13.7	12.8	10.9	10.4
Importers' gross margin or commission	4.4	3.8	2.2	2.5	11.2	13.6	18.0	17.6
F.o.r. selling price	(48.2)	(53.3)	(50.7)	(50.4)	(56.0)	(58.3)	(58.1)	(56.0)
Ripeners' gross margin	21.3	19.3	21.7	18.7	14.6	13.8	7.9	8.9
Ripeners' selling price	(69.5)	(72.6)	(72.4)	(69.1)	(70.6)	(72.1)	(66.0)	(64.9)
Retail gross margin	30.5	27.4	27.6	30.9	29.4	27.9	34.0	35.1
Retail price	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

V-7

Table V-3: IMPORT PRICES OF BANANAS
(US Cents/Kg)

	Current \$			1977 Constant \$ /a		
	U.S. /b	Germany /c	France /d	U.S.	Germany	France
1950	16.1		n.a.	51.6		
1951	16.1		n.a.	43.4		
1952	16.3		n.a.	42.8		
1953	16.3		24.9	44.8		68.4
1954	16.8		24.7	47.1		69.2
1955	16.5		22.9	45.5		63.1
1956	16.8		29.8	45.2		80.1
1957	17.6		27.1	45.2		69.7
1958	16.3		23.6	39.7		57.4
1959	14.6		18.3	37.3		46.8
1960	14.3	13.4	20.1	35.8	33.5	50.3
1961	13.9	14.7	19.8	34.7	36.7	49.4
1962	13.2	14.1	19.6	33.3	35.6	49.5
1963	16.8	15.0	22.5	42.0	37.5	56.3
1964	17.0	13.8	23.6	41.9	34.0	58.1
1965	15.9	13.0	22.7	38.1	31.2	54.4
1966	15.4	12.7	23.8	36.2	29.9	56.0
1967	15.9	13.1	23.4	36.9	30.4	54.3
1968	15.3	12.3	22.7	37.9	30.4	56.2
1969	16.0	12.5	23.6	39.4	30.8	58.1
1970	16.6	14.6	22.0	37.0	32.5	49.0
1971	14.0	16.0	23.1	28.8	32.9	47.5
1972	16.2	17.2	26.4	30.3	32.1	49.3
1973	16.5	19.1	31.7	25.9	29.9	49.7
1974	18.4	24.3	34.3	23.3	30.7	43.4
1975	24.5	29.7	47.8	27.1	32.8	52.8
1976	25.9	27.3	44.8	28.1	29.6	48.6
1977	27.3	31.4	47.2	27.3	31.4	47.2
1978	28.7	31.4	53.6	24.3	26.5	45.3
1979	32.6	36.6	63.0	24.1	27.0	46.5
1980	37.5	49.1	69.0	24.8	32.4	45.6

/a Deflated by the IBRD "International Price Index".

/b FOB US ports, imports from Central and South America.

/c FOR Hamburg, up to 1971 imports from Colombia, 1972 o from Central America.

/d FOR French ports, up to 1971 imports from Guadeloups, 1972 on imports from Martinique.

Sources: US, BLS and FAO.

Table V-4: RETAIL PRICES OF BANANAS
(US Cents/Kg)

	Current \$			1977 Constant \$ /a		
	U.S.	Germany	France	U.S.	Germany	France
1955	37.4	36.2	42.9	103.0	99.7	118.1
1956	37.0	36.0	51.7	99.5	96.6	139.0
1957	38.1	36.0	50.9	97.9	92.4	130.8
1958	38.1	34.5	44.3	92.7	84.0	107.8
1959	37.5	32.1	37.1	95.9	82.2	94.8
1960	35.0	33.3	37.5	87.5	83.3	93.7
1961	35.0	36.2	38.3	87.3	90.3	95.5
1962	35.9	37.5	39.5	90.7	94.7	99.7
1963	36.0	38.0	42.1	90.0	95.0	105.3
1964	36.4	37.8	40.1	89.7	93.0	98.8
1965	35.3	37.5	40.1	84.7	89.9	96.2
1966	34.7	33.8	39.9	81.6	79.4	93.9
1967	34.8	33.3	39.9	80.7	77.1	92.6
1968	34.2	32.8	43.5	84.7	81.1	107.8
1969	35.1	34.0	42.5	86.5	83.7	104.8
1970	35.1	38.0	42.5	78.2	84.6	94.6
1971	32.8	37.0	42.2	67.5	76.0	86.9
1972	34.8	39.8	46.0	65.0	74.4	86.0
1973	36.4	47.5	54.3	57.1	74.5	85.2
1974	40.6	52.9	62.2	51.3	66.9	78.6
1975	51.2	64.2	86.8	56.6	71.0	95.9
1976	51.8	60.4	82.6	56.2	65.5	89.7
1977	56.2	69.8	86.9	56.2	69.8	86.9
1978	62.0	73.2	100.2	52.4	61.9	84.7
1979	71.5	84.0	117.8	52.8	62.0	86.9

/a Deflated by the IBRD "International Price Index".

Source: FAO, Demand Interrelationships Between Major Fruits, 19, Banana Statistics, (CCP: BA/ST 70/4) July 1970, and Current Situation (CCP: BA 80/2, Supp.1) March 1980.

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VI. SPECIAL ISSUES

There are two issues which are very topical in the world banana economy: (1) The long-term downward trend of banana prices in real terms; and (2) the domination of banana marketing by transnational companies. The following actions have been taken with respect to these perceived problems.

A. The Creation of UPEB

UPEB (Unión de Países Exportadores del Banano) was established in 1974 as a permanent inter-governmental organization open to all exporting countries. Presently, the member countries of UPEB are Colombia, Costa Rica, Dominican Republic, Guatemala, Honduras, Nicaragua and Panama. In 1979 they accounted for about 49% (3.5 million tons) of world exports.

The objectives of UPEB are to secure remunerative prices for bananas; to promote common policies with a view to rationalizing output, exports, transportation, marketing and pricing policies; to explore new markets; to harmonize export availabilities and export demand; to develop technical assistance programs with respect to cultivation, processing, marketing and transportation of bananas; to ensure a greater participation of member countries in the world banana economy; and to promote diversification programs, as appropriate.

In order to commercialize bananas and banana products internationally, COMUNBANA (Commercializadora Multinacional de Banano, S.A.) was formed within UPEB in 1977. It began operations in 1978 and has concentrated initially on promoting exports of bananas, mainly to non-traditional markets. As of February 1979, COMUNBANA had exported approximately 23,300 tons of bananas to Yugoslavia, Hungary and Greece.

B. Towards an International Banana Agreement

In 1975 a Working Party was created to consider possible elements of an international agreement for bananas. Several meetings have been held to consider the possible elements of the agreements. The principal measures to be taken into account in the agreement are:

(a) Regulation on export quotas:

- Basic quotas;
- Initial annual quotas and mechanism for readjustment;
- Treatment of small exporters;

- Treatment of new markets;
- Treatment of preferential markets.
- (b) Measures concerning price objectives:
 - Minimum prices;
 - Indicator prices;
 - Real price supports.
- (c) Obligations of importing and exporting countries.
- (d) Other complementary measures:
 - Promotion of consumption;
 - Diversification;
 - Development of new markets and the elaboration of new uses for bananas;
 - Quality improvement;
 - Compensatory financing;
 - Crop insurance.

C. Possible Effects of Export Price Adjustments on Export Earnings

Bananas have come to be known as a low-priced fruit. Whether banana exporting countries can increase their export earnings by raising export prices is an important issue. This problem has been examined by FAO (2) and Nusbaumer (3).

Export prices fob account for about 20 to 30% of the retail prices in importing countries. Transport costs and trade margins account for the bulk of the difference between the fob and retail prices. Therefore, an increase in export prices would result in a less than proportionate increase in retail prices.

The impact of raising export prices on retail prices and consumption in importing countries and hence on export earnings of exporting countries depends mainly on the price elasticities of demand. If the price elasticity of demand is less than unity an increase in price would lead to a less than proportionate decrease in quantity demanded, and hence increase total consumer expenditure. Conversely, if the price elasticity of demand is greater than unity, an increase in prices would result in a more than proportionate decrease in quantity demanded, and hence lead to a decrease in total consumer expenditure. Recent estimates of the price elasticity of demand for bananas in major importing countries are generally less than unity. The implication of

elasticities of this magnitude is that export earnings of exporting countries can be increased by raising export prices. The less the elasticity, the more the increase in export earnings will result from the same increase in export prices. For example, Table VI-1 indicates that if the real export price increases by 5.5% each year between 1978 and 1981, export earnings will be increased by US\$164 million under the assumption of demand elasticity, of -0.2 but by only US\$141 million under a demand elasticity of -0.6.

Table VI-1 BANANAS; EXPORT PROJECTIONS UNDER ALTERNATIVE PRICE AND ELASTICITY ASSUMPTIONS /a

MARCH 1982

		Assumed Annual Increase in Price 1978-81		Price Elasticities of demand		
		%		<u>-0.2</u>	<u>-0.42</u>	<u>-0.6</u>
<u>F.o.b. price (\$/ton)</u>						
	A	0		162	162	162
	B	3.0		177	177	177
	C	5.5		190	190	190
<u>Retail price (\$/ton)</u>						
	A	0		585	585	585
	B	3.0		600	600	600
	C	5.5		613	613	613
<u>Demand and export volume ('000 mt)</u>						
	A	0		6,268	6,268	6,268
	B	3.0		6,237	6,199	6,174
	C	5.5		6,205	6,143	6,086
<u>Export earnings (million \$)</u>						
	A	0		1,015	1,015	1,015
	B	3.0		1,104	1,097	1,093
	C	5.5		1,179	1,167	1,156

/a The calculated price and volume figures are rounded.

Source: FAO document CCP: BA/EXPO 78/3, July 1978.

VI - 4

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