COMMISSION OF THE EUROPEAN COMMUNITIES

STUDIES

Production and marketing of bananas from the Associated African States and Madagascar

SUMMARY

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Production and marketing of bananas from the Associated African States and Madagascar

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INTRODUCTION

This summary of the study on the production and marketing of bananas from the Associated African States and Madagascar (AASM) is presented by the Directorate-General for Development Aid in order to provide better knowledge of a product that plays an important role in the economy of some of the Associated African States and Madagascar.

This volume summarizes the main results of the investigations, which have been dealt with in three parts comprising:

- production and marketing in the producing countries,
- carriage by sea,
- marketing in the consumer countries,

by the following authors: Prof. Ferdinando Bigi and his colleagues, Dr Wolfgang Suhren, and the Nederlandse Stichting voor Statistiek.

The division of the research project into three parts by three independent experts was occasioned by the different nature of the three main subjects; this made it necessary to have as much specialization as possible not only in the research methods but also in the presentation of the results.

The section on production and marketing in the producer countries, from plantation to the loading of the bananas at the port, seeks to give as comprehensive as possible an account of the operations of the producer and of the traders involved in marketing in the producer country and in exporting. In this connection, the author does not restrict himself to describing the operations, but he supplements this with figures, especially as regards cost price, which were available locally.

The chapter carriage by sea covers all stages from loading in the exporting country to landing of the bananas, which usually takes place in the consumer country. It appeared useful to include in this chapter comprehensive and world-wide information on the technical aspects of carriage by sea that are important to the marketing process.

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The section on marketing in the consumer countries is to a certain extent a continuation of the chapter on bananas in 'The Coffee, Cocoa and Banana Market in the European Common Market Countries' (1963), in which the Nederlandse Stichting voor Statistiek had already cooperated. This comment in no way detracts from the independent nature of this section, particularly in view of the comprehensive material included on which the economic analysis is based.

These three sections are available in the mother tongues of the authors, i.e. Part 1 in Italian, Part 2 in German, and Part 3 in Dutch, and in the French translation. In view of the considerable scope of these Parts, which contain material that is of special importance only to experts interested in the particular subject, the Commission considered that publication of the whole study in the official languages of the Community could be dispensed with.

In view of these considerations and the different presentation of the subjects occasioned by the specialization of the authors and by the different nature of the subjects covered, the Commission has decided to publish this summary of the Study in the official languages of the Community and in English. The object of this summary, which has been drawn up by Dr Dieter Link (formerly of the Institut für Gärtnerische Betriebslehre und Marktforschung of the Technische Universität, Hanover) in close collaboration with the offices of the Commission, is not only to condense the content of the three Part Studies, but to make possible a greater uniformity in presentation, this not having been an aim at the level of the Part Studies. Finally, some of the numerical data in the three chapters of the summary could be brought up to the 1968 position. The Part Studies themselves could not extend up to 1967, since the experts did not have later material available at the time. This basic defect is explained by the difficulties of securing reliable statistical data, especially in the producing countries.

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The importance attached to the statistical tables and graphs (which make up over one third of the Summary), makes possible an adequate knowledge of the content and results of the whole study even in a limited time. On this basis the interested reader can judge whether he should go more deeply into one or more of the Parts. For this purpose, the Commission has prepared a limited number of copies of the Part Studies in the languages referred to above and in the French translation. These may be ordered free of charge from the European Communities Commission, Dienststelle für Schriftennachweis und Verteilung, 1040 Brussels, rue de la Loi, 200.

Although the Office of the Commission laid down the general lines of the research project and endeavoured to follow them in collaboration with the experts, the scientific responsibility for the four sections rests entirely with the authors.

The Commission has at this point the pleasant duty of expressing its sincere thanks to the economic agencies, organizations and institutes concerned for the understanding and cooperation given to the inquiries of the experts appointed by the Commission. This greatly facilitated the execution of the study.

The Commission wishes the Banana Study to have a very wide distribution, in the hope that it will make a useful contribution to the production and marketing of this important product.

Contents

1. The World Market for Bananas

11. General considerations

Banana cultivation is widespread in the tropical and subtropical zones. Until the beginning of this century, bananas were produced only for local demand, but since then exports have increased in importance. Industrialization combined with technical progress provided the pre-requisites for this. Thus on the one hand the development of refrigerated ships made it possible to transport these delicate fruits over long distances, and on the other hand increasing concentrations of population and rising mass purchasing power caused demand to reach the level necessary for the employment of special ships. In particular, in the more industrialized countries of the Western hemisphere, consumption has expanded considerably during the last 70 years. Bananas have become the most important fruit in world trade.

Only certain regions however produce bananas for supply to other countries. This is mainly because productivity in banana plantations differs greatly within the area of distribution, and only regions with favourable conditions can compete on the world market. Further, a number of structural and organizational pre-requisites are necessary for exporting, and only certain countries possess these.

The banana trade is characterized mainly by the easy spoiling of the fruit. For this reason, special marketing channels with special transport systems exist for this product. These differ from those for other bulk goods, particularly in more rapid disposal and the use of special transportation facilities. For other fruit, there is no such great specialization as in the banana trade. Because of the relatively constant supply throughout the year, long transportation distances and large quantities, bananas present particularly suitable conditions for marketing through special trading systems.

The banana trade makes high demands upon the capital of firms, especially as concerns carriage by sea. For this reason alone, there is in the banana trade a

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strong trend towards concentration of business and integration of the preliminary and subsequent stages of trading. The better opportunities for larger firms to gain advantages from rationalization are a further incentive towards the increasing mergers.

The trend towards concentration is associated with intensified competition, and has resulted in a number of changes both in the consuming and in the producing regions.

The battle for shares of the market in the consumer countries is increasing. This leads to increasing differentiation of the relatively anonymous supply by the use of trade marks and special marketing systems, sometimes extending to the retail trade.

As regards production, it has been shown that large-scale cultivation (especially in the hands of or under the auspices of leading trading firms) is steadily increasing its productive capacity. Intensive cultivation and the use of Cavendish varieties are the typical features of this. As a result of this development, the decline of other producers is increasing considerably.

In recent years, concentration of production has increased in regions with the best natural and structural conditions. The number of such regions has been extended by the use of Cavendish varieties. These varieties are resistant to Panama disease and are relatively storm-resistant. A number of Central American regions which could no longer grow Gros Michel, the previous main variety, because of Panama disease have consequently been able to recommence the growing of bananas. Thanks to the relatively short time a plantation needs to grow, these regions reached considerable levels of production within a few years.

The spread of the Cavendish varieties led to further important secondary changes both in production and the trade. This is because large trading firms, that were mainly active in the new regions, promoted Cavendish varieties and so

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pushed these to the centre of demand. Marketing of the Gros Michel variety therefore became increasingly difficult.

Conversion to Cavendish varieties is however limited in certain regions, since in contrast to Gros Michel this type needs intensive cultivation, for which the pre-requisites are often lacking.

The spread of the Cavendish varieties further promoted conversion to cardboard packing. The sensitiveness of this variety during transport was a distinct obstacle when dispatching whole stems, but this became much less important when packing in cardboard boxes. This form of packing made it possible to reach new consumer areas and so led to a general increase in demand for bananas; however, this also required greater investment in the producer regions and additional organizational arrangements. As a result, the less well-organized growing regions experienced great difficulties, especially if the business structure was unsuitable. Further, these regions often could not raise the investment for a cardboard factory, and because of the high cost of imported cardboard they had to accept considerable competitive disadvantages.

The conversion to cardboard packing is now almost complete. The majority of producing countries export Cavendish varieties almost exclusively.

12. Quantitative survey

There is frequently no information on the total production of bananas in the individual producing countries, and the statistics available often leave much to be desired as regards comparability and reliability.[1]

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[1] Production statistics of particular products are often quite inexact, even in countries with relatively well-developed systems of data-collection. Special collection difficulties are the reason for this. In the case of fruit, they result mainly from the widely scattered production, mixed cultivation, and the fluid boundaries between production for market and for home consumption. Further, plantains are not counted separately in data-collection.

More reliable and comprehensive data are however available on production for export and on foreign trade. These figures also contain some discrepancies, but the deviations are usually relatively small.[1]

Within the scope of this investigation, the main interest is in figures on foreign trade. Such figures are therefore the core of the following discussion. Production for export often takes place in special centres relatively independently of the widely scattered production for the home market. For this reason the export figure usually corresponds to the production intended for export. Somalia and Ecuador are exceptions. In Somalia the peak supply occurs in months of relatively low demand. During this period the whole harvest frequently cannot be disposed of. In Ecuador there is a certain excess supply of the Gros Michel variety throughout the year.

121. World exports

A rough breakdown of world exports shows that Latin America and the Caribbean, with 76.8%, have by far the greatest share of world banana exports (Table 1, Fig. 1).

In second place, at 14.1%, is Africa, including the Canary Islands. Of this, the AASM accounts for 5.6%. Finally, Asia at 8.7% is of some importance.

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[1] The data given in the following were assembled as follows: FAO statistics formed the initial basis. Data on the African countries were often different from those obtained in this investigation. In such cases the figures from this investigation were used. Certain data could be obtained only from the English report 'Fruit' and the publications of the French 'Institut National de la Statistique et des Etudes Economiques' and the 'Ministère d'état chargé des Départements et Territoires d'Outre Mer'. Foreign trade is defined as in the FAO statistics, i.e. trade between mother country and overseas territories (France, United Kingdom, Spain, Portugal) is included in foreign trade.

Figure 1

WORLD TRADE IN BANANAS, 1967

- WORLD EXPORTS -

(in 1 000 t)

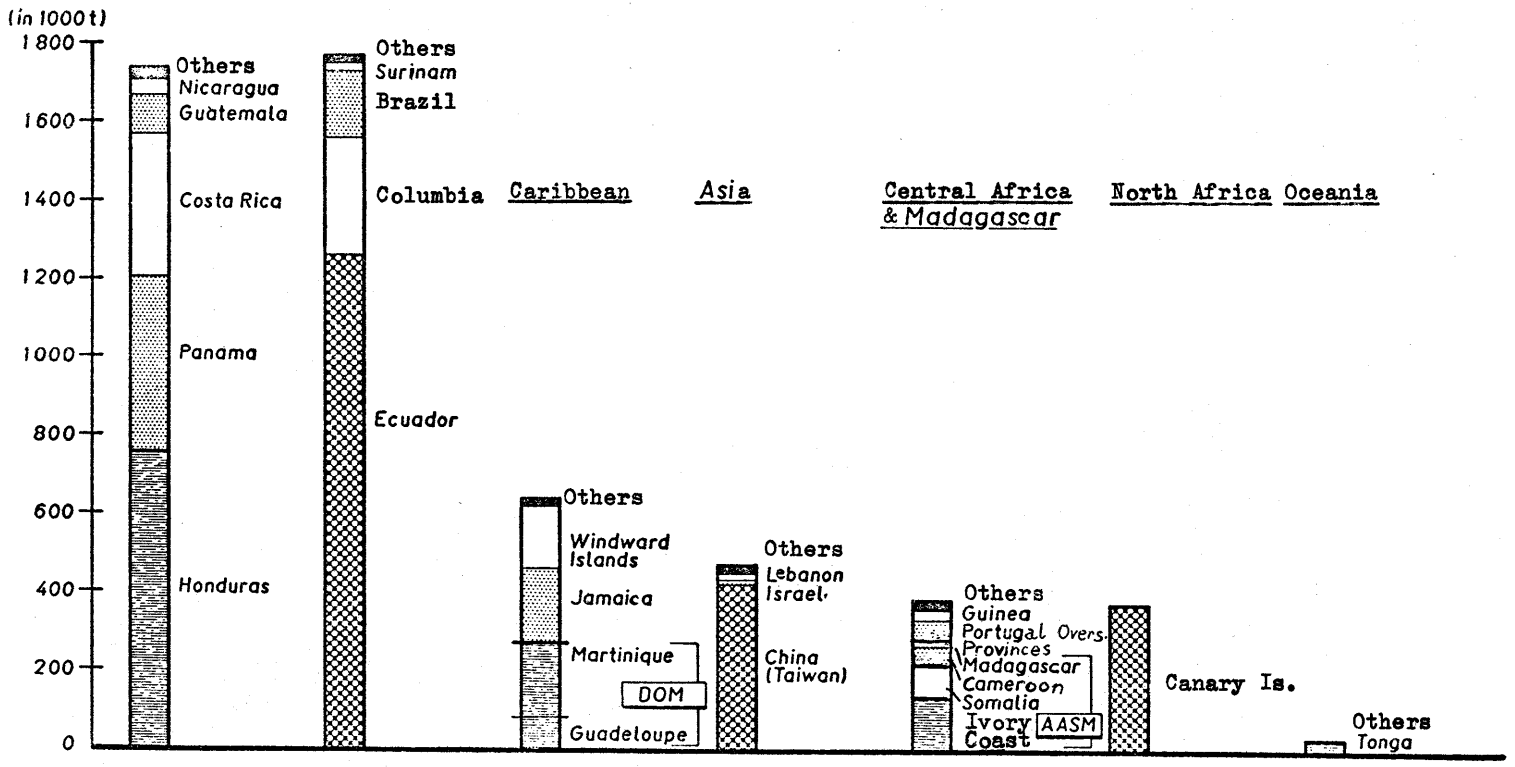

Table 1

World exports of bananas by continents, 1967

	1 000 t	%
Africa incl. Canary Islands	752.6	14.1
of this, AASM	299.3	5.6
Latin America & Caribbean	4 141.3	76.8
of this, DOM	270.7	5.0
PTOM	23.0	0.4
Asia	469.1	8.7
Oceania	25.4	0.4
World exports, total	5 388.4	100.0

Subdivision of the exports of individual continents by regions and countries gives the following picture: AASM accounts for 39.7% of Africa's exports. The Ivory Coast accounted for almost half the exports of the AASM in 1967, and Somalia for rather more than a quarter (Table 2).

Table 2

African exports by countries, 1967

	1 000 t	% of exports		
		of AASM	from Africa	of world
Central Africa & Madagascar	385.9		51.6	7.2
AASM	299.3	100.0	39.7	5.6
Cameroon	48.3	16.1	6.4	0.9
Congo	3.9	1.3	0.5	0.01
Ivory Coast	142.6	47.6	19.0	2.6
Madagascar	21.4	7.2	2.8	0.4
Somalia	83.1	27.8	11.0	1.5
Guinea	25.0		3.3	0.5
Portug. Overseas Prov.	47.0		6.3	0.9
Others	14.6		2.0	0.3
North Africa	366.7		48.7	6.8
Canary Islands	366.7		48.7	6.8
Africa, total	752.6		100.0	14.0

.../...

Table 3

Latin American exports by countries, 1967

	1 000 t	% of exports	
		of Latin America	of world[1]
South America	1 765.4	42.6	32.7
Ecuador	1 262.8	30.4	23.4
Columbia	305.6	7.4	5.7
Brazil	170.0	4.1	3.1
Surinam	23.0	0.6	0.4
Others	4.0	0.1	0.1
Central America	1 739.5	42.0	32.3
Honduras	757.9	18.3	14.0
Panama	454.0	11.0	8.5
Costa Rica	367.7	8.8	6.8
Nicaragua	35.4	0.9	0.7
Others	124.5	3.0	2.3
Caribbean	636.4	15.4	11.8
French Overseas Dept.	270.7	6.5	5.0
Martinique	192.7	4.6	3.6
Guadeloupe	78.0	1.9	1.4
Jamaica	194.5	4.7	3.5
Windward Is.	164.2	4.0	3.1
Others	7.0	0.2	0.1
Latin America, total	4 141.3	100.0	76.8

[1] 5 388 400 t = 100%.

Table 3 gives a subdivision of exports from Latin America. Ecuador, at 30.4%, is here the most important exporting country, followed by Honduras at 18.3% and Panama at 11.0%.

Of Asia's exports, which are 8.7% of world exports, Taiwan accounts for about 90%.

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As concerns the development of exports from 1960 to 1967, exports of the AASM and South America from 1960 to 1963 have risen to 123% and 117% respectively of the basis year (Fig. 2). In Central America (excluding the Caribbean) they fell to their lowest level in 1964, i.e. 87.7% of the 1960 figures. In the DOM (French Overseas Départements) exports fell even more. The causes of this decline were on the one hand storm damage and on the other the spread of Panama disease. The restoration of yields in the storm-damaged areas, conversion of plantations to Cavendish varieties, and the rapidly rising demand (particularly from the introduction of cardboard packing) caused a rapid increase in exports from these countries in the following years, which did not tend to level out until 1967. In the AASM, however, exports fell back to the 1960 levels. Development in the individual countries is described in Section 13.

122. World imports

Subdivision of world imports shows that in 1967 almost half (48.5%) went to Western Europe and 33.6% to North America (Table 4, Fig. 3). These two regions together accounted for 82.1% of world imports. Asia was next with 10.4%.

Table 4. World imports of bananas by continents, 1967

	'000 t	%
Western Europe	2 628.4	48.5
of this, EEC	1 561.1	28.8
North America and Caribbean	1 823.4	33.6
Asia	562.1	10.4
South America	243.8	4.5
East Europe and USSR	80.0	1.5
Africa	50.0	0.9
Oceania	30.4	0.6
World imports, total	5 418.1	100.0

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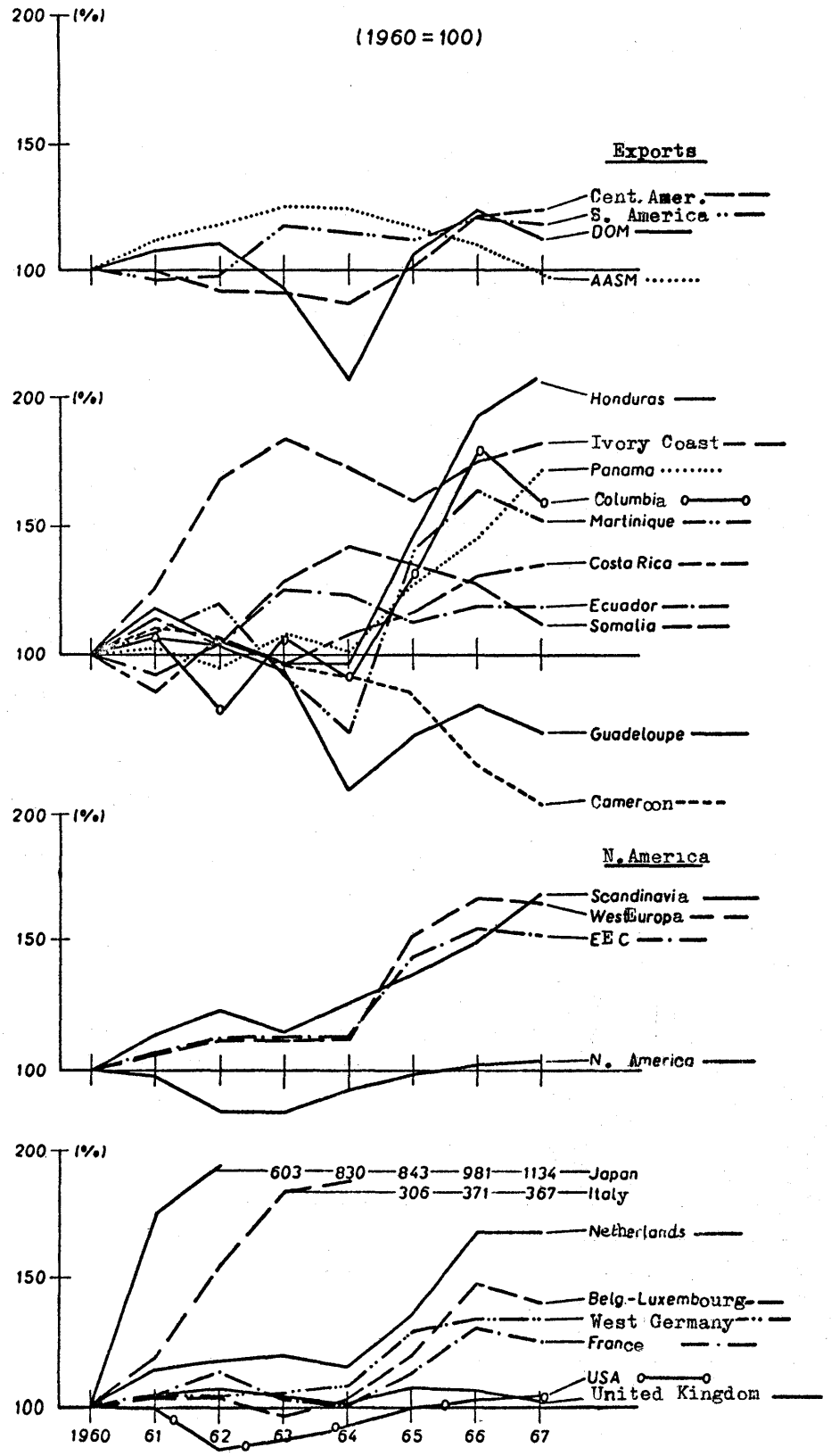
Figure 2

DEVELOPMENT OF FOREIGN TRADE IN BANANAS



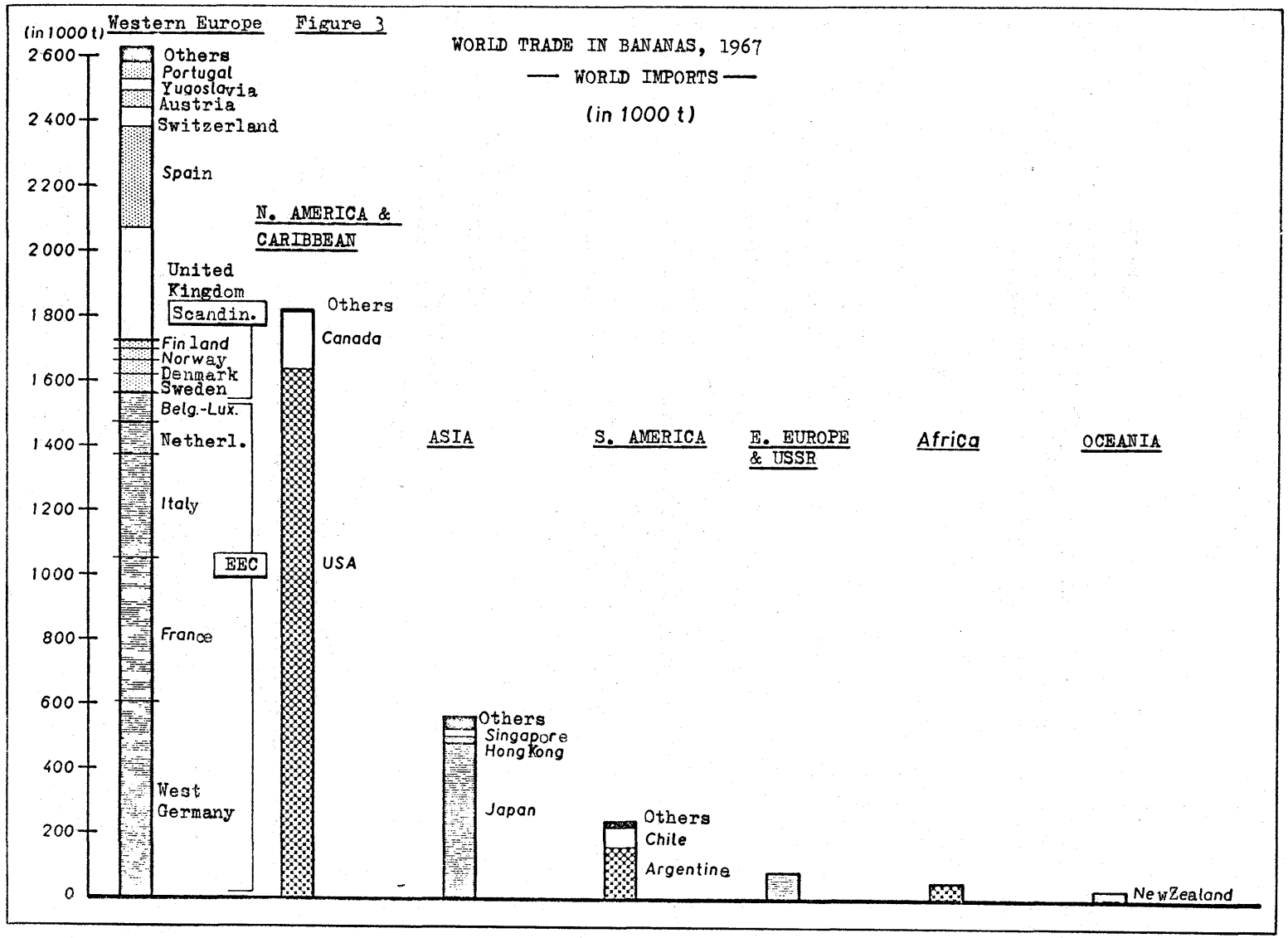


Figure 3
WORLD TRADE IN BANANAS, 1967
— WORLD IMPORTS —
(in 1000 t)
(in 1000 t)
Western Europe
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
Others
Portugal
Yugoslavia
Austria
Switzerland
Spain
United Kingdom
Scandin.
Finland
Norway
Denmark
Sweden
Belg.-Lux.
Netherl.
Italy
EEC
France
West Germany
N. AMERICA & CARIBBEAN
Others
Canada
USA
ASIA
Others
Singapore
Hong Kong
Japan
S. AMERICA
Others
Chile
Argentine
E. EUROPE & USSR
Africa
OCEANIA
NewZealand

Analysis of West European imports shows that the EEC countries account for 28.8% of world imports, representing 59.4% of West European imports (Table 5). Of the EEC countries, West Germany is the most important consumer, accounting for 11.2% of world imports and nearly a quarter of West European imports. In the case of Belgian imports it should be remembered that considerable amounts are re-exported.

The USA accounts for about 90% of North America's imports, and Canada for nearly all the remainder. Small amounts are taken by the Caribbean. The USA is therefore the greatest importing country in the world, but the imports of the EEC countries together are only slightly less.

Table 5. West European imports, 1967

	'000 t	% of West European imports	% of world imports
Belgium-Luxembourg[1]	93.1	3.5	1.7
France	444.0	16.9	8.2
West Germany[1]	605.2	23.0	11.2
Italy	318.6	12.1	5.9
Netherlands	100.2	3.8	1.8
EEC total	1 561.1	59.4	28.8
Scandinavia	162.9	6.2	3.1
United Kingdom	354.9	13.5	6.5
Others	549.5	20.9	10.1
Western Europe total	2 628.4	100.0	48.5

[1] Re-exports: Belgium, 16 400 tons; Germany (FR), 4 700 tons.

Eighty-five per cent of the imports of Asia go to Japan; all the imports of Oceania go to New Zealand.

In Western Europe, imports up to 1964 showed a relatively slight rise, then increased unusually sharply to 1966 and remained at this level in 1967 (see Fig. 2).

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The rise in the EEC was by comparison less than the West European average. In North America, after an initial decline in 1963, an upward trend also set in, but not to the same extent as in Europe.

13. Development of foreign trade relations

131. Determining factors

As concerns trade relations between producer and consumer countries in the banana trade, it may be said that a not inconsiderable part of exports is marketed within the framework of preference arrangements in certain consumer countries (Table 6). These marketing channels are far removed from the open competition of the world market.

Table 6. Foreign trade in bananas within the framework of import preferences, 1967

	'000 t	% of world imports
Deliveries from overseas regions	530.8	16.3
United Kingdom	354.9	6.5
France	249.4	4.6
Spain	244.5	4.5
Portugal	36.9	0.7
Imports within the framework of quotas and trade agreements[1]	671.7	5.9
France	184.4	3.5
Various countries from Canary Is.	52.4	1.0
East Europe	80.0	1.5
Imports within the framework of duty and tax preferences		
Italy	128.2	2.4
Total	1 330.7	24.6

[1] Excluding the Italian import quota which has relatively few restrictions as to amounts.

.../...

With the aid of import quotas, France and the United Kingdom apportion their total demand to particular producer countries and regions. Total imports are so assessed that import prices are at a desired level. Over 90% of the French market is reserved for the French Overseas Départements (Martinique and Guadeloupe) and the Associated States of the franc area. The UK market is reserved for the Commonwealth countries. Spain is supplied exclusively by the Canary Islands. Several countries take bananas from the Canary Islands within the framework of bilateral trade arrangements with Spain.

Individual countries ensure preferential treatment by reduced duties and taxes. In Italy the imports from Somalia enjoy reduced consumption tax up to a certain amount, while bananas from the Associated African States are granted exemption from duty on import into the EEC.

The trading relations of the countries which grant or receive preferential treatment are mainly determined by these concessions. The more advantageous they are, the less able are the producer countries to sell on markets without corresponding concessions. They often restrict their production to the amounts that can be marketed under the preferential arrangements.

In the countries without export or import preferences, trading relations in the banana industry depend upon various factors. In view of the high transport costs, the nearest importing countries are generally supplied first. Thus Africa exports to Europe and the Near East, Latin America to North America, Taiwan to Japan, and Oceania to New Zealand. However, production and consumption do not always correspond to the North-South axis. A considerable part of European demand is therefore supplied by Latin American countries, which also supply some of Japan's imports.

Further, the trading relations of the import firms play in the foreign trade network of the banana industry. These relations also depend greatly on the quality, capacity and regularity of supply, and on the competition in the supplying

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countries. The hitherto often close relations between individual producer and consumer countries are becoming increasingly looser and more flexible because of the concentration of trading firms at the international level.

132. Development in individual exporting countries

132.1 AASM

The development of exports of the AASM to the individual consumer countries is mainly determined by the preferences of the importing countries, but a number of other criteria also play a part. Figure 4 gives a survey of AASM exports under countries of destination for the period 1960-67.

In Cameroon, exports greatly declined. Banana production in this country is in an increasing state of crisis. The main reasons are the necessary conversion to Cavendish varieties, as a result of the spread of Panama disease, in association with a general uncertainty as regards soil properties and incorrect assumptions in the field of organization. There was the loss of West Cameroon preferences for supplies to the United Kingdom in 1963. After this loss, this part of the country tried to sell to Italy via United Fruit. The very low prices led to great reduction in production. It was only possible to stabilize the situation to some extent by transferring a part of the French import quota which could no longer be filled by West Cameroon to East Cameroon. At present, production of both parts of Cameroon is no longer sufficient to fill the French import quota. All exports therefore go to France.

Within the AASM, the Ivory Coast has been most successful in absolute terms in expanding its exports. These usually exceed the French quota. The surplus amount was sold mainly to Italy. Exports to Algeria were important only in 1965; exports to Senegal have recently increased.

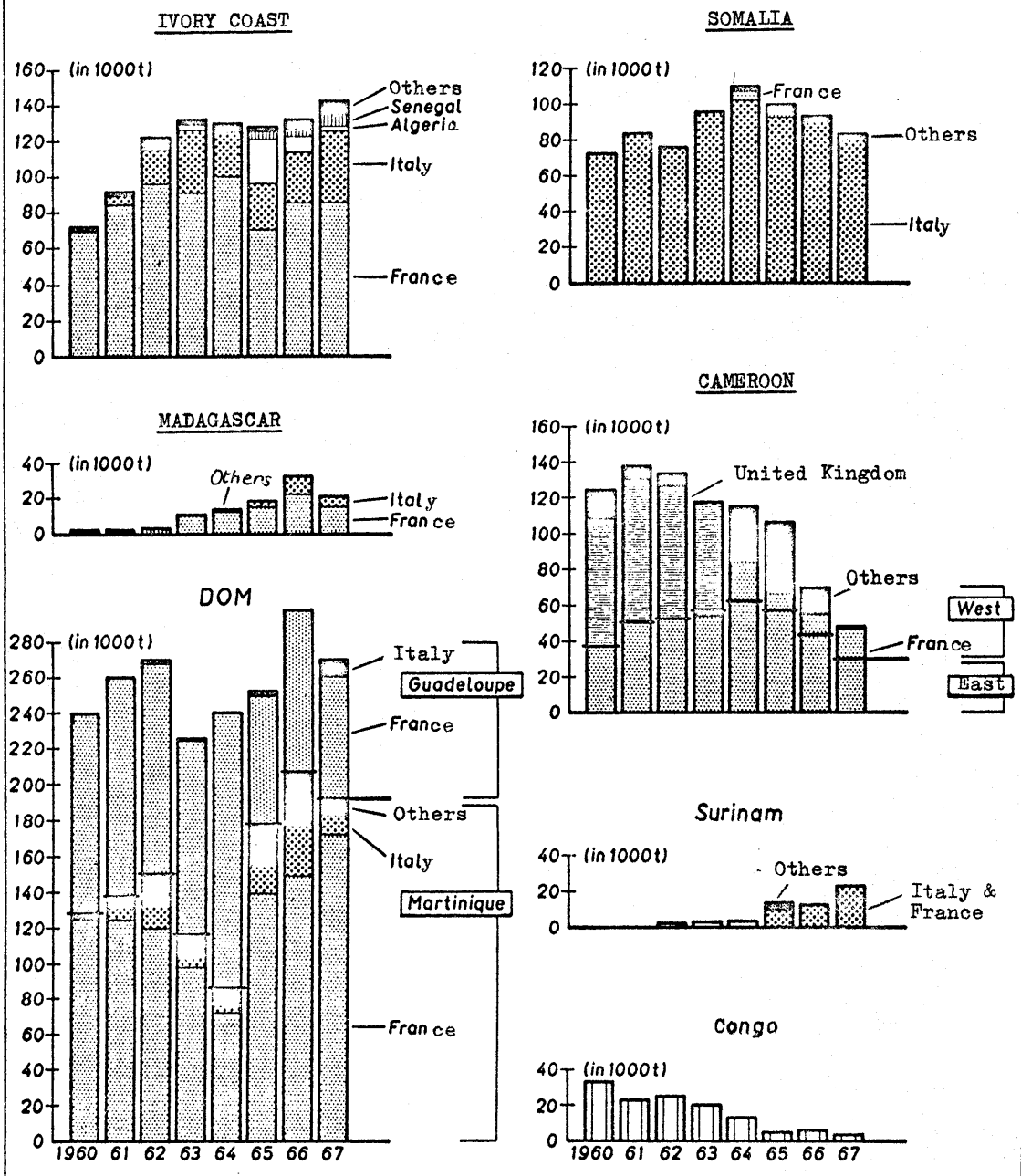
Figure 4

EXPORTS OF BANANAS ACCORDING TO COUNTRIES OF DESTINATION

AASM AND DOM

1960 - 1967

(in 1000 t)



Madagascar has exported significant amounts within the framework of a French quota only since 1962. Since 1965 additional sales have been made to Italy. There was a decrease in exports following the closure of the Suez Canal in 1967.

Exports from Somalia increased up to the year 1964. The increase in consumption in Italy was of direct benefit to Somalia, since this country had a preferential position on the Italian market because of the banana monopoly. With the end of the banana monopoly, there were despite certain preferential treatment marketing difficulties which became more acute with the closure of the Suez Canal in 1967.

In the Congo, the breakdown of connections with Belgium, the former main buyer, and increasing difficulties in the sale of the Gros Michel variety, caused banana exports to come almost completely to a stop.

Surinam only began exporting bananas during the present decade. Exports have hitherto been mainly to France within the framework of the quota granted by France to the Associated States outside the franc area.

132.2 Third countries in Latin America

Among Latin American third countries, the Central American States in particular have been able to increase their exports in recent years (Figs. 2 and 5). Honduras achieved the highest growth rate. Exports of the South American countries increased much less significantly. Better production conditions, shorter transport distances, and more favourable conditions for the activities of the big trading firms in the Central American countries are important reasons for this. Exports from these countries (with the exception of Honduras) are mainly to the USA. Ecuador and Colombia on the other hand export more to Europe. Ecuador also delivers to Japan. The statistics for 1963 and 1964 covering exports to Japan are suspect.

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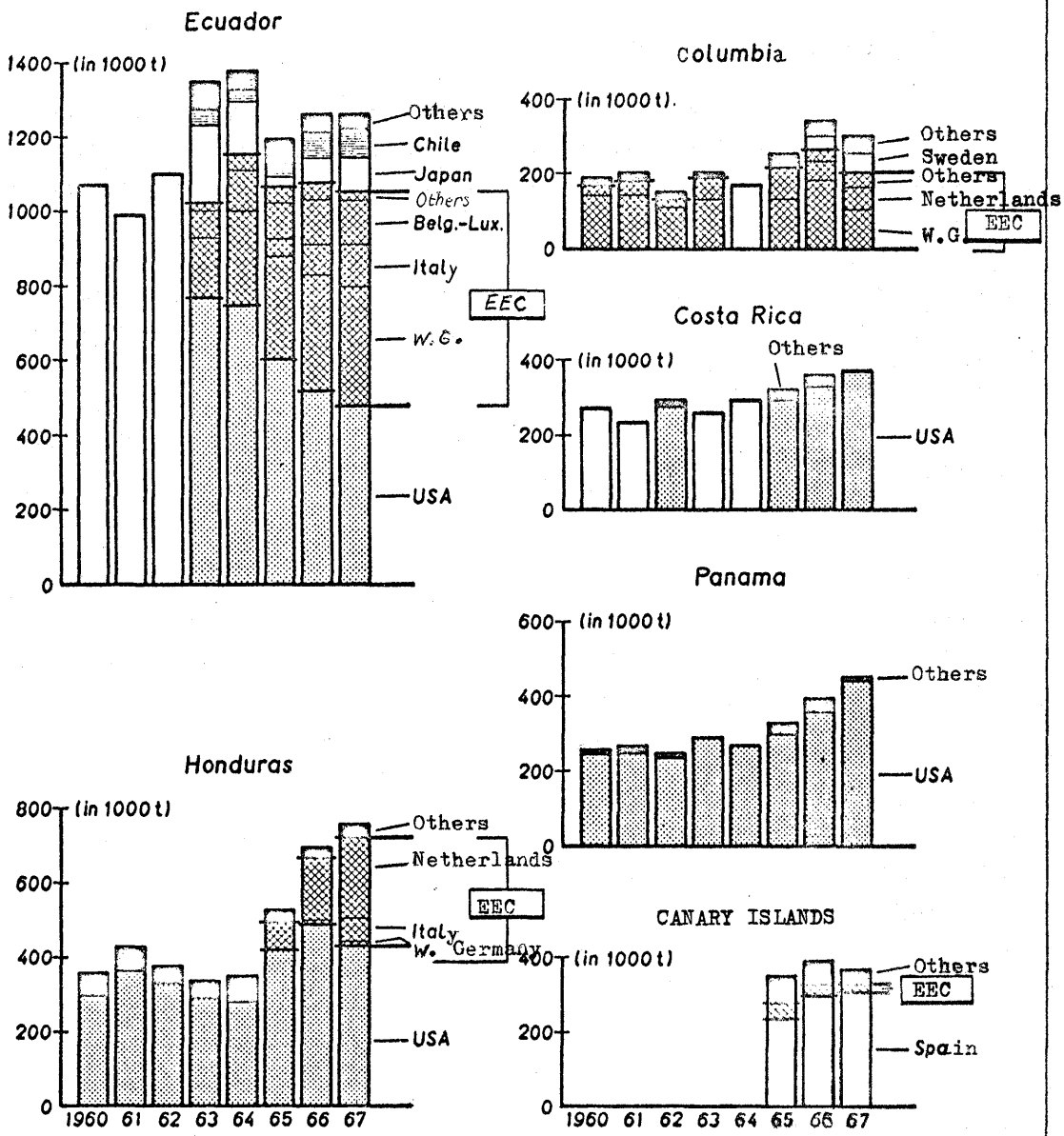
Figure 5

Exports OF BANANAS ACCORDING TO COUNTRIES OF DESTINATION
BY MAIN THIRD COUNTRIES
1960 - 1967
(in 1000 t)



133. Developments in individual importing countries

As concerns the development of trading relations with imports into individual consumer countries, the following picture emerges:

133.1 EEC countries

Consumption in the Benelux countries in the last four years has been met almost exclusively from third countries. Ecuador and Colombia account for over 80% (Fig. 6). In the early sixties, imports from other third countries and from the Congo were of greater importance.

In the data on the sources of imports into the Netherlands, it should be noted that the item 'Others' included up to 1967 a considerable proportion of exports from Belgium, mainly originating in Ecuador.

As concerns the relative increase in total imports from 1960 to 1967, the Netherlands and Belgium/Luxembourg among the EEC countries occupied second and third place behind Italy (Fig. 2).

Imports into the German Federal Republic come almost entirely from third countries. Ecuador and Colombia supplied 70-80% from 1960 to 1965; in the following years the other supplying countries lost their share of the market since Honduras was able considerably to expand its exports.

France receives over 90% of its imports from the DOM (Overseas Départements) and AASM. The share of the total which is reserved for these countries and regions is determined by agreement.[1] The ratios used at present have been in force since 1964. The actual imports show certain deviations from the agreed ratios, mainly because Cameroon has not been able to fulfil its quota owing to restriction of production, and in some years the productivity of the French Antilles has been impaired by storms.

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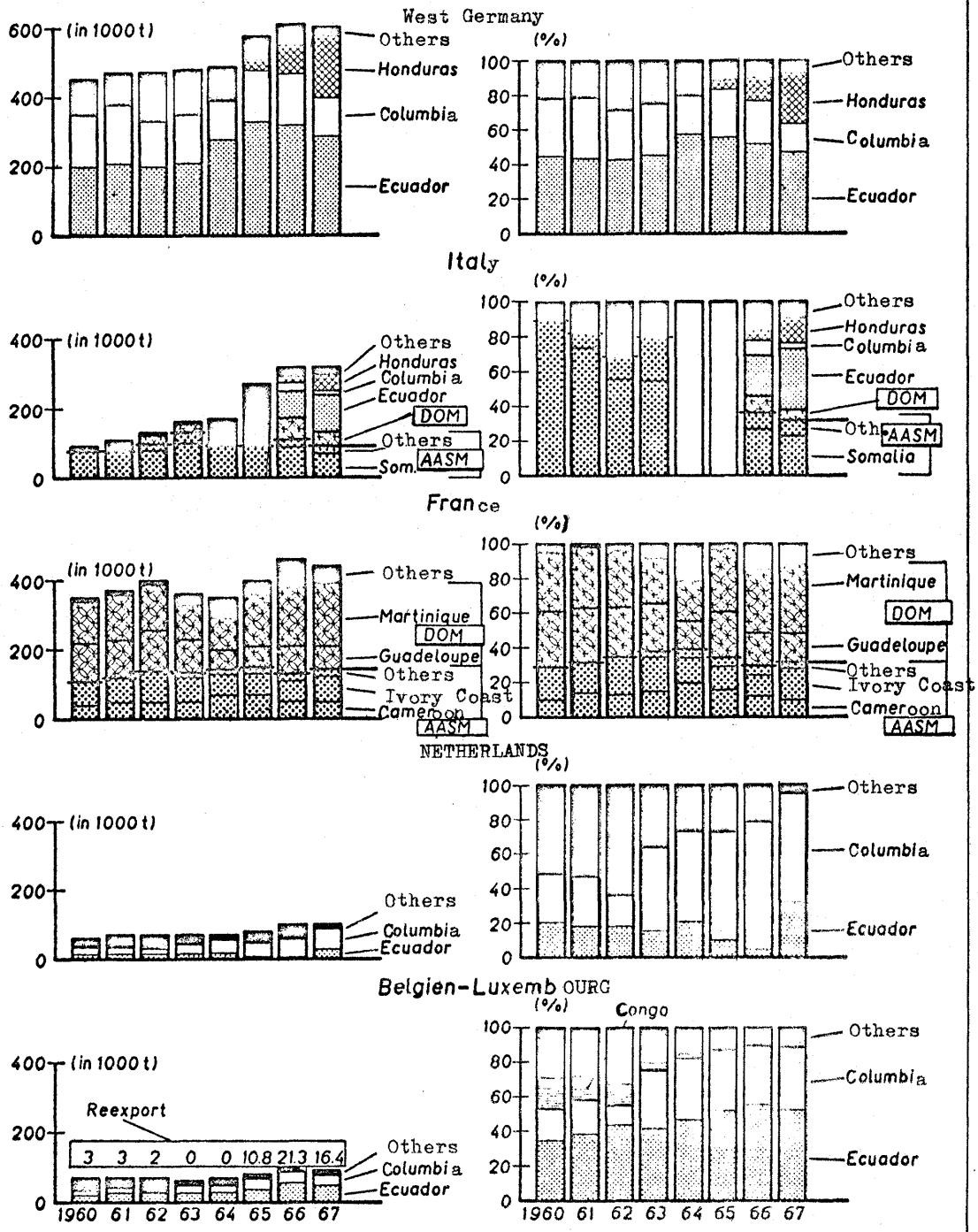
[1] Agreed ratios: DOM 2/3 (of which 52.73% is from Martinique and 47.27% from Guadeloupe); AASM franc area 1/3 (of which 75/140 is from the Ivory Coast, 53/140 from Cameroon and 12/140 from Madagascar).

Figure 6 Imports OF BANANAS BY EEC COUNTRIES, ACCORDING TO COUNTRIES OF ORIGIN

1960 - 1967



Imports from other countries are within the quota system. A considerable part of these imports comes from the AASM outside the franc area. Their quotas have been extended in recent years, and amounted to about 20 000 t in 1967. French total imports have risen least among all the EEC countries.

Up to the end of the banana monopoly on 1 January 1965, Italy was supplied mainly from Somalia. During the latter years of this monopoly, increasing amounts were imported from the Ivory Coast. Upon the ending of the banana monopoly, imports from third countries, especially Ecuador, increased greatly, while imports from the AASM fell off slightly. Increasing competition and the closure of the Suez Canal were the main reasons for this.

133.2 Third countries

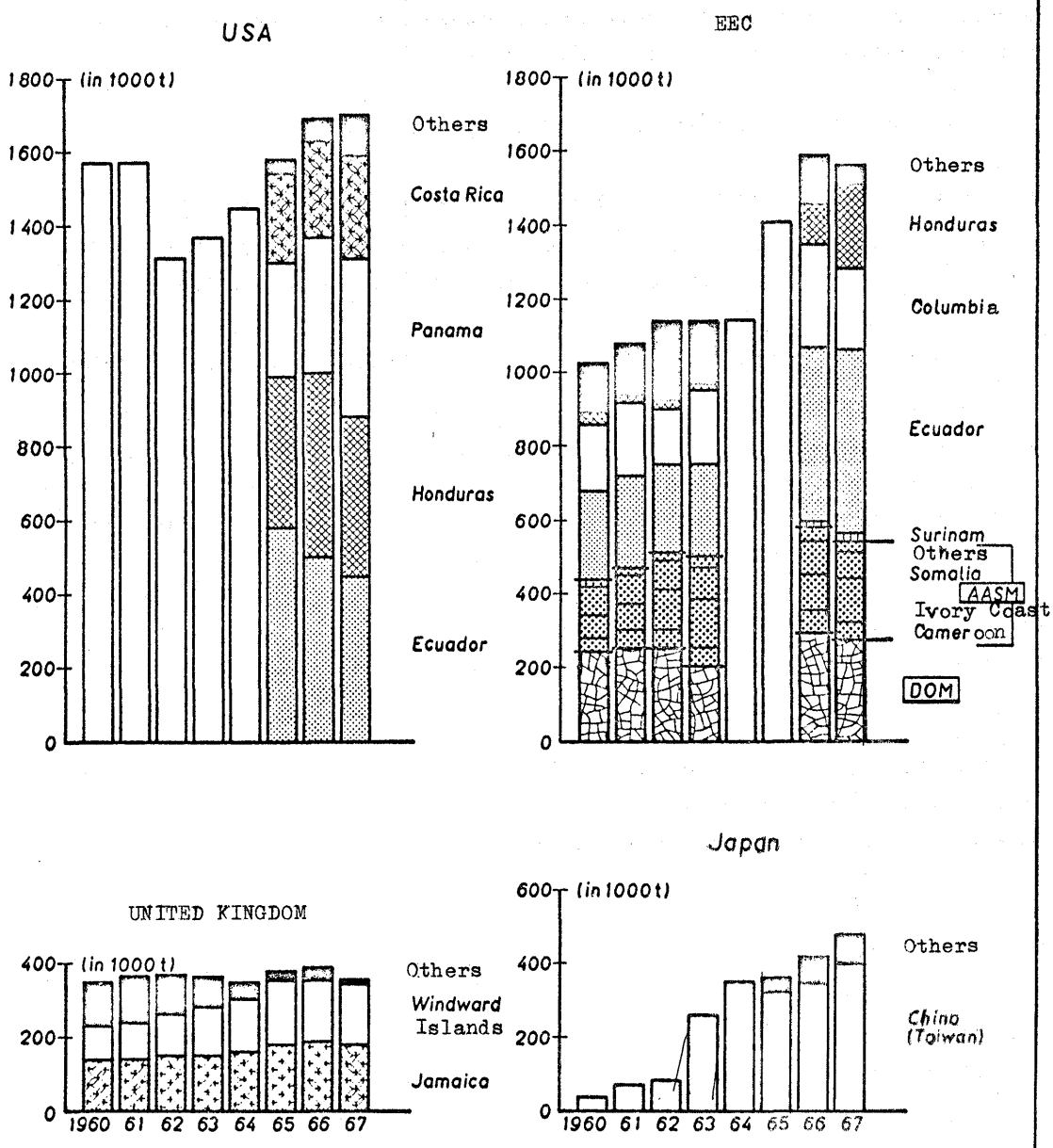
In the case of the third countries, we shall only briefly review imports into those countries with the highest figures, i.e. USA, United Kingdom and Japan (Fig. 7). Imports into the USA in 1967 were one quarter each from Ecuador, Honduras and Panama, and 20% from Costa Rica. Imports from Ecuador declined in the previous years to the advantage of the other supplying countries. The United Kingdom was supplied almost entirely from Jamaica and the Windward Islands. Japan imports mainly from Taiwan, and recently also from Ecuador.

Imports into the USA and the United Kingdom from 1960 to 1967 showed only a slight rise (Fig. 2). In the USA this quantity was achieved only after a temporary fall. Japan has however shown a sharp rise. This is partly attributable to a lessening of import restrictions.

.../...

Figure 7

Imports OF BANANAS BY EEC AND IMPORTANT THIRD COUNTRIES
ACCORDING TO COUNTRIES OF ORIGIN
1960-1967
(in 1000 t)



2. Production and marketing in the producer country[1]

The discussion of production and marketing in the producer country is divided into sections according to the individual stages of production and marketing. By way of introduction, costs in the different countries are compared. An appended description of the special circumstances provides an insight into the causes of cost differences and the possibilities of reducing these.

The following States are included in the comparison:

Associated States: Cameroon, Congo, Ivory Coast, Madagascar, Somalia, Surinam

Third countries: Costa Rica, Ecuador, Honduras and Panama. Only limited data are available from the last two countries.

21. Data on the banana industry in the countries included in the comparison

The most important data on the banana industry in these countries are summarized in Table 7. Although the Ivory Coast is the most important exporting country in the Associated States, the other countries falling far behind, exports from the Ivory Coast are much lower than those of the two third countries. As regards the importance of bananas in foreign trade, it may be seen that they account for 25-50% of the total exports of Costa Rica, Ecuador and Somalia while banana exports of the Ivory Coast and Cameroon (4%) and of Surinam, Madagascar and the Congo (0.1-1%) are much less important in total export trade.

The regional data for most countries only cover plantations producing mainly for export. As was shown in Section 1, the reliability of cultivation statistics usually leaves much to be desired. Regional data and export quantities calculated on the basis of these data therefore provide only a rough guide.

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[1] Up to the fob stage.

Table 7 Comparative data on the banana industry in producer countries

	Cameroon	Congo Kinshasa	Ivory Coast	Madagascar	Somalia	Surinam	Ecuador	Costa Rica
Total exports (1 000 t)	48	4	143	21	83	23	1 263	368
Banana exports as % of foreign trade[1]	4	0.2	4	1	45	1	50[4]	25
Total area of banana plantations (ha)	.	3 400	.	.	.	.	185 000	.
Plantations mainly for export (ha)	6 600	.	9 315[3]	2 000	7 789	1 555	158 960[5]	16 830
Export/ha[2]	7.3	.	15.4	10.5	10.3	15.5	7.9	21.3

[1] Approx. shares 1964-67.

[2] Calculated from line 1 divided by line 4.

[3] 1966 "homologized" area.

[4] Large annual fluctuations.

[5] Under plant-protection control.

22. Costs of production, marketing and exports in the producer country

Table 8 and Figure 8 below give an overall picture of costs of production, marketing and exporting in the producer country.[1] It will be seen that the total cost per ton of bananas leaving the producer country is among the States listed between 54 and 119 u.a. (units of account).[2] The values for the Associated States at 91-119 u.a. are far removed from those of the Latin American countries, which are in the region of 54-75 u.a. Among the Latin American countries, Costa Rica has the lowest and Ecuador the highest costs. Among the Associated States, costs

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[1] In presenting the following data it should be noted that the costs of production within a country differ according to the size of the undertaking and the region. The figures refer to those regions of the countries where the main production takes place, and to banana areas under modern intensive management of a size typical for the particular region. Small undertakings were used, only for Madagascar, since there they account for almost all exports. The banana areas per undertaking were as follows: East Cameroon 50 ha, West Cameroon 300 ha, Ivory Coast 60 ha, Somalia 60 ha, Ecuador 50 ha, and Costa Rica 200 ha. As concerns the reliability of the data, it is relatively easy to determine values based on payments for supplies to third parties. This applies mainly to data in the field of marketing. Basic material relating to the deliveries of producer undertakings was inadequate. The values therefore had to be determined as part of this investigation, but the time available for this was limited. In order to ensure that the values reflected accurately the differences between the individual countries, at least comparatively, the data were collected by the same experts, except in the cases of Madagascar, Congo and Surinam. Finally, the reader will be able to form his own judgement from the description of the items responsible for the differences.

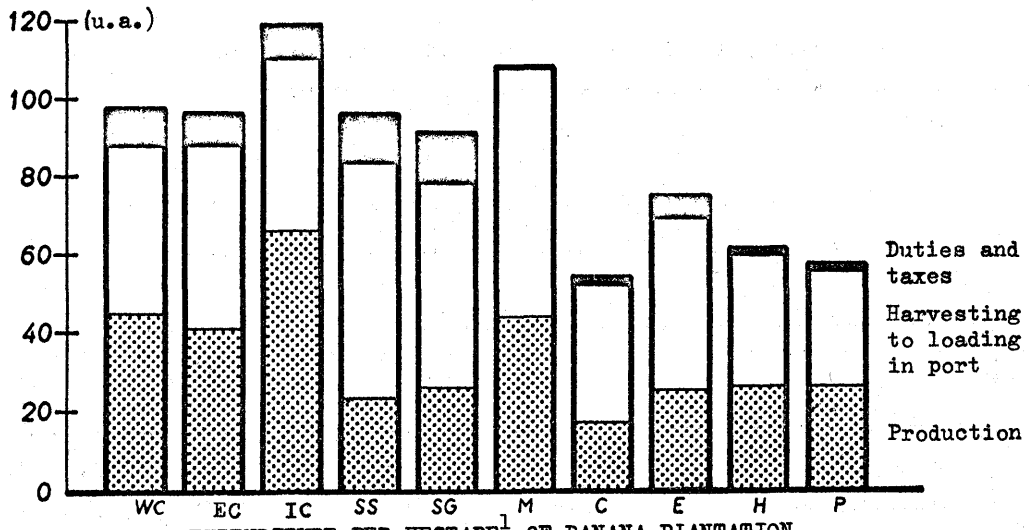
Congo-Kinshasa and Surinam could be included in the comparison only in certain fields. The funds available for this investigation did not allow us to carry out our own data collection in these countries. Failing this, it was not possible to collect data for all areas of the comparison.

[2] 1 unit of account = $1.

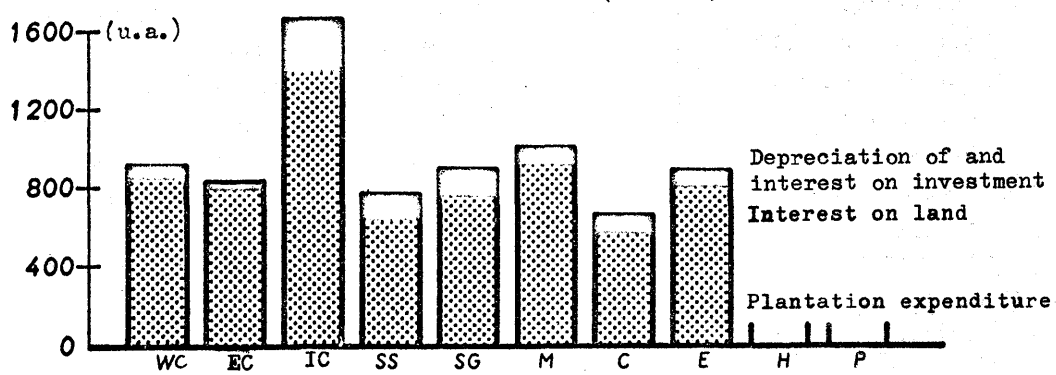
Figure 8

COSTS PER TON OF BANANAS FOR PRODUCTION, MARKETING AND EXPORTING IN THE PRODUCING COUNTRY

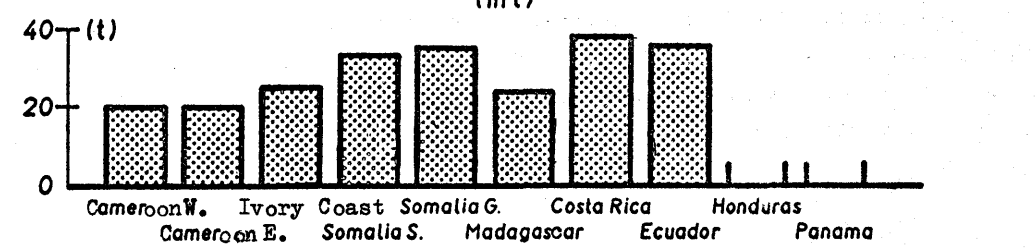
(in units of account (u.a.))



EXPENDITURE PER HECTARE[1] OF BANANA PLANTATION PER ANNUM (in u.a.)



YIELD PER HECTARE[1] OF BANANA PLANTATION PER ANNUM (in t)



1) With sustained yield.

in Somalia and Cameroon are relatively low at 91-99 u.a.; they are considerably higher in Madagascar at 108 u.a. and in the Ivory Coast they are nearly 11 u.a. higher than this.

A breakdown of the total costs shows that, with the exception of the Ivory Coast, the harvesting to loading section accounts for more expenditure than production.

Table 8. Costs of production, marketing and exporting in the producer country (u.a./t)

	Production	Harvesting to loading	Export dues[1]	Total
Cameroon West	45.82	47.25	5.46	98.53
Cameroon East	41.98	44.84	9.91	96.73
Ivory Coast	66.74	41.86	10.36	118.96
Madagascar	44.37	63.75	-	108.12
Somalia (Scebeli)	23.26	60.16	12.69	96.11
Somalia (Giuba)	25.63	52.64	12.74	91.01
Costa Rica	17.31	35.97	0.69	53.97
Ecuador	25.05	44.07	6.22	75.34
Honduras	26.27	34.16	0.69	61.12
Panama	26.27	30.48	0.69	57.44

[1] Average level in recent years. Because of falling import returns, the dues in certain AASM countries were temporarily lowered.

Within the individual items, the differences in the field of production are greater than in the field of marketing. The range in the field of production covers 50 u.a./t (17-67 u.a./t), whereas it is only 30 u.a./t (36-64 u.a./t) for the costs from harvesting to loading. It may be seen from this that the conditions in the various countries differ more as regards production than as regards

.../...

marketing. The greater fluctuations in production costs are mainly due to the great differences between the African countries. The cost of production as a proportion of total costs for production and marketing are highest in the Ivory Coast and lowest in Somalia. The absolute production costs in Somalia cover about the same range as those of the three Latin American countries: Ecuador, Honduras and Panama. Only in Costa Rica are costs of production clearly lower. Production costs in Cameroon and Madagascar are about the same, and fall between those of Somalia and Ivory Coast.

Cost of harvesting and marketing in the producer country are in most of the African countries higher than in the Latin American countries. However, in contrast to production costs among the Associated States, Somalia is in the upper bracket and the Ivory Coast in the lower bracket. Thus the Ivory Coast can partly compensate for high production costs by its lower marketing costs, which are below those of Ecuador. This also applies to a certain extent to Cameroon. Somalia however loses its advantages in production by high costs in marketing which, as in Madagascar, are the cause of the high total costs.

There are also considerable differences between the countries in export charges and dues. These are not as important as the two other items, but they increase the fob price by up to 10% in some African States. Among the Latin American States, export dues are significant only in Ecuador, but even here the absolute amount (about 6 u.a./t) is less than in most African countries.

In the following sections the three items of cost for the producer country are further analysed. To facilitate comprehension of the groups of costs arising from a further subdivision, a systematic survey is given in Figure 9.

.../...

221. Cost of total production

221.1 Production cost per ton

Production cost per ton is arrived at from expenditure per unit area (ha) divided by the yield. Expenditure per hectare is largely independent of the level of yields. The higher the yield, the lower the cost per ton, expenditure per unit area remaining the same.

As shown in Table 9 and Figure 8, the African countries, apart from Somalia, achieve relatively low yields despite relatively high expenditure. The differences between the African and Latin American countries therefore increase considerably in cost/ton compared to expenditure/ha, with the exception of Somalia.

In evaluating yield and expenditure per ha, it should be remembered that the figures refer to a plantation with continuous product, as is usual in banana growing. As concerns the duration of yield of the plantations, the position to which the figures relate is made up of different age stages. With a 3-year cropping period and continuous production, the position must include at any time 1-year, 2-year and 3-year plants (a third of each).

Table 9. Cost per ton of bananas[1]

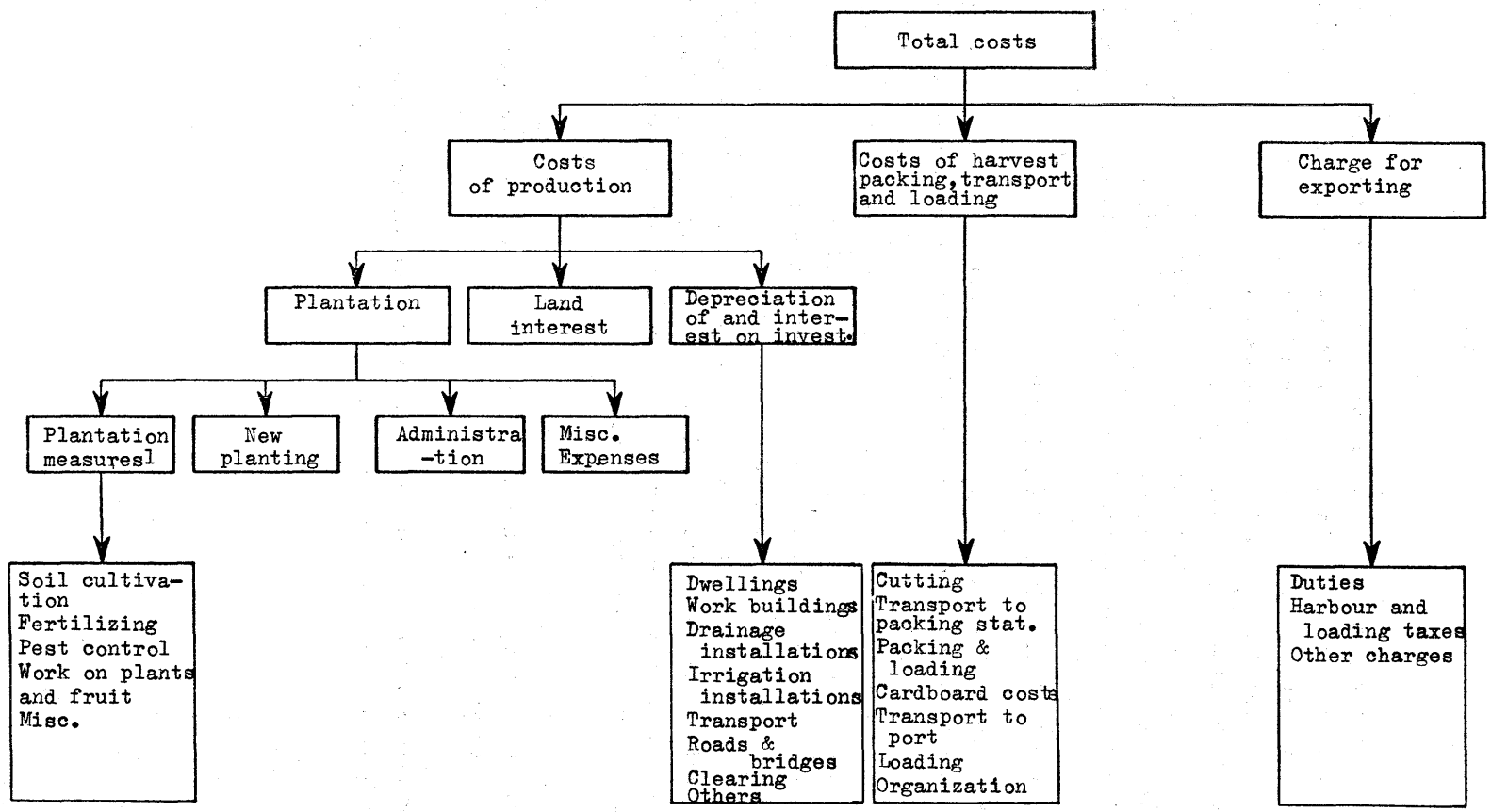
	Annual expenditure (u.a./ha)	Mean yield (t/ha)[1]	Costs (u.a./t)[1]
Cameroon West	916.33	20	45.82
Cameroon East	839.67	20	41.98
Ivory Coast	1 668.49	25	66.74
Madagascar	1 042.69	23.5	44.37
Somalia, Afgoi	767.48	33	23.26
Somalia, Giuba	897.12	35	25.63
Costa Rica	657.79	38	17.31
Ecuador	889.15	35.5	25.05

[1] Exportable goods.

.../...

Figure 9

BREAKDOWN OF COSTS FOR PRODUCTION, MARKETING AND EXPORTING (to fob stage)



1 Incl. maintenance of installations, vehicles, transport facilities, roads and buildings are included in the misc. expenses item.

The limited period of yield of plantations in African countries is an important reason for the relatively low yields. Because the period of yield is so short, the proportion of the less productive young and old plantations increases. The average period of yield in the African countries is 3-4 years (Ivory Coast and Cameroon 3, Somalia 3 1/2, Madagascar 4), while in Latin America it reaches 6-12 years (Ecuador 6, Costa Rica 12). The fact that Somalia achieves relatively high yields despite the short period of yield is evidence of the high average productivity of the plantations during the full-yield period in this country.

221.11 Annual expenditure per hectare

The annual expenditure per ha of banana cultivation is broken down in Table 10 into cultivation expenditure, land rent, depreciation and interest on investment.

The amounts for the individual items show ratios similar to those of the annual expenditure per ha. Cameroon is a special case. For East Cameroon, the determination of the level of rent and depreciation is open to question. In view of the great restrictions on production in this country, investment has been considerably reduced for many years. The plentiful buildings and establishments already written off but still usable were mostly employed. Since the most important investment in earlier years had been in packing stations, interest and depreciation were shown for these only.

Figures on the level of the investment are also lacking for West Cameroon. However, recourse could be had to the depreciation rates employed by the Cameroon Development Corporation.

Renewed expansion in Cameroon has meant that higher charges for interest and depreciation must be taken into account.

.../...

Table 10. Expenditure per hectare of banana plantation (u.a./ha/year)

	Cultivation expenditure	Land rent	Depreciation + interest on investments	Total
Cameroon West	851.56	64.77		916.33
Cameroon East	821.09	18.58[1]		839.67
Ivory Coast	1 409.42	259.07		1 668.49
Madagascar	917.49	12.14	113.06	1 042.69
Somalia, Scebeli	635.60	9.38[2]	122.50	767.48
Somalia, Giuba	765.24	9.38[2]	122.50	897.12
Costa Rica	570.80	9.62	77.37	657.79
Ecuador	801.04	5.50	82.61	889.15

[1] Only for packing centre.

[2] Including 2.38 u.a. land tax.

221.111 Cultivation expenditure

By breaking down the annual cultivation expenditure, it is possible to determine more accurately the reasons for the differing total expenditures per hectare in the individual countries. The values are given in Table 11 and Figure 10.

Let us first examine the expenditure on cultivation. In this case the figures for Somalia are lower than those for the two Latin American countries. Expenditure on the Ivory Coast is clearly the highest. The ratios between the values of the individual items in a country depend mainly upon the site conditions. The level at any time is also determined by the price and efficiency in the use of labour and means of production. In countries with adequate rainfall, e.g. in Costa Rica, the expenditure for watering is low, and for pest control and, on heavy soils, drainage is high. In countries with low rainfall, e.g. Somalia, the ratios are reversed.

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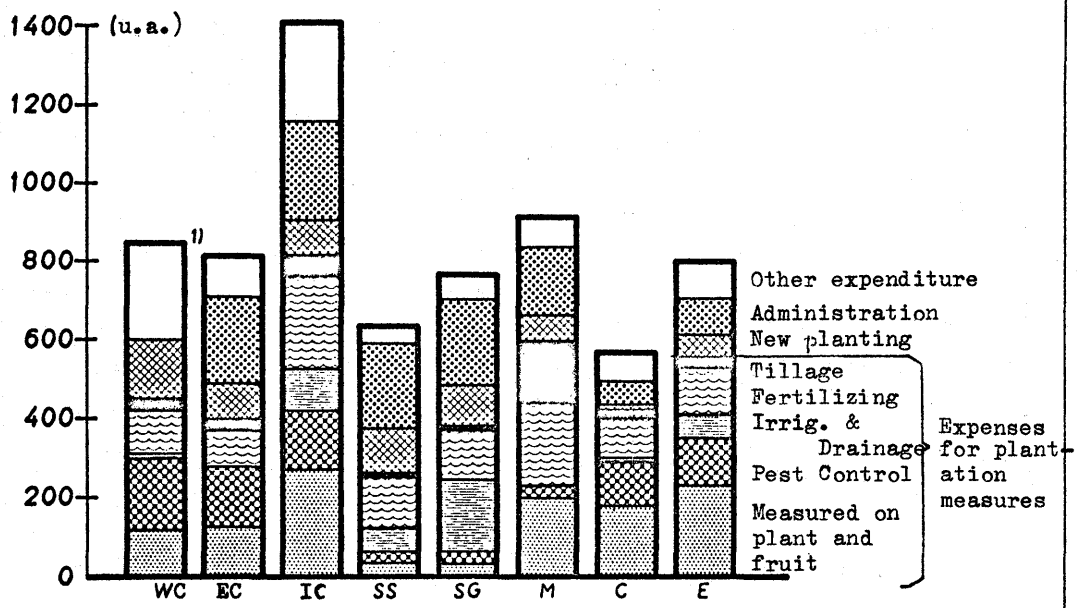
Figure 10

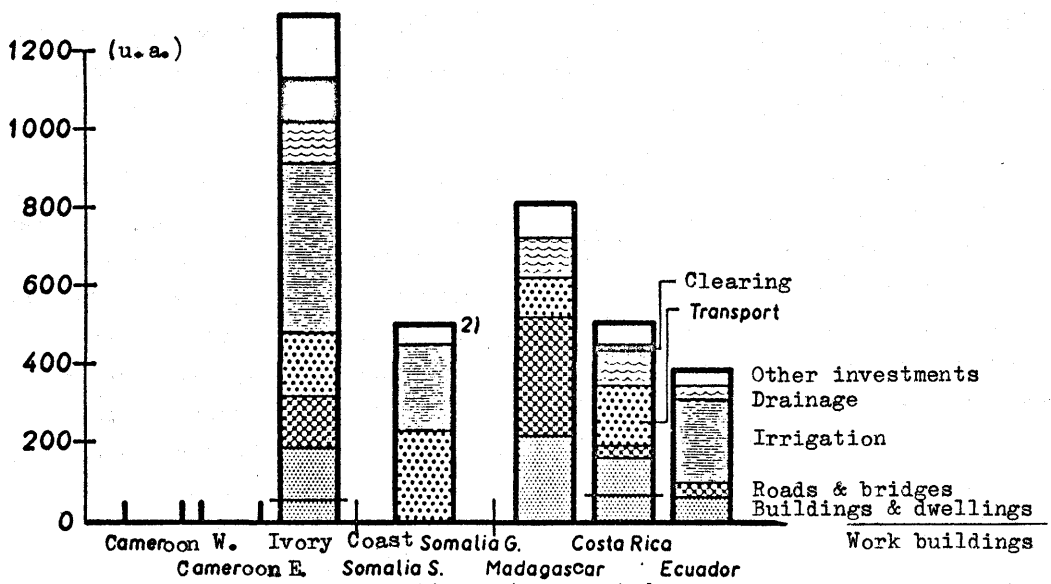
ANNUAL PLANTATION EXPENDITURE PER HECTARE OF BANANA PLANTATION BROKEN DOWN INTO INDIVIDUAL ITEMS

(in UNITS OF ACCOUNT (u.a.))



INVESTMENT PER HECTARE OF BANANA PLANTATION

(in units of account (u.a.))



1) Other expenses and administration not separated

2) Somalia: both plantation regions here equal investments

Table 11

Breakdown of plantation expenditure (u.a./ha/year)

	Expenditure on cultivation						Administration	Other expenses[1]	New plantings	Total
	Tillage	Fertilizing	Watering	Pest control	Work on plant and fruit	Total				
Cameroon West	31.09	109.39	12.95	182.49	123.27	459.19	240.87		151.50	851.56
Cameroon East	30.36	87.84	-	158.32	125.49	402.01	222.64	106.99	89.45	821.09
Ivory Coast	56.17	238.43	105.25	153.83	274.47	828.15	256.36	240.45[2]	84.46	1 409.42
Madagascar	156.65	210.73	-	29.06	196.28	592.72	175.56	90.88	58.33	917.49
Somalia (Scebeli)	8.96	130.48	64.40	28.00	25.20	257.04	217.00	55.16	106.40	635.60
Somalia (Giuba)	8.96	130.48	182.00	28.00	25.20	374.64	217.00	67.20	106.40	765.24
Costa Rica	23.09	104.58	8.98	114.95	176.67	428.27	66.72	63.62	12.19	570.80
Ecuador	24.20	123.20	57.75	122.84	229.40	557.39	99.00	88.00[3]	56.65	801.04

[1] Including maintenance of buildings, vehicles and transportation plant.

[2] Including 95.13 u.a. vehicle maintenance.

[3] Including maintenance of irrigation and drainage installations.

The high incidence of sunshine in regions with low precipitation usually also leads to advantages in growth and yield. If long periods of dry or wet weather occur, this results in relatively high expenditure on several items, for example on the Ivory Coast.

Low cultivation expenditure is however not attributable to favourable site conditions in every case. It is sometimes due to low intensity. The yields then often show an unfavourable relationship to expenditure, and also under these circumstances the quality of the products leaves something to be desired. The problem of optimum intensity is often found not to have been satisfactorily solved in African undertakings.

221.112 Expenditure on administration, new planting and other expenses

Expenditure on administration, new planting and other expenses in African countries is much higher than in Latin American countries. In African countries the undertakings are usually managed by Europeans, whose salaries are about 1 000 u.a. per month, while the income of indigenous staff in Costa Rica, for example, is only about 250 u.a. per month. This alone accounts for 10-20% of the extra expenditure per ha in the Associated States.

The differing level of annual expenditure on new planting also helps to increase the differences between Latin American and African countries. The shorter plantation life in African countries involves more frequent replanting. This problem has already been mentioned. The costs on plantations in African countries are also increased by the relatively dense planting. In African countries, there are 2 000-2 500 plants/ha, in Costa Rica only 650, and in Surinam and Ecuador 1 600 plants/ha.

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Other expenditure includes maintenance expenses, which could not be assigned directly to specific items. A certain percentage of the total costs was also added for contingencies. The level of other expenditure is therefore closely related to total cultivation expenditure.

221.113 Investments, interest and depreciation

The level of interest and depreciation is determined by the type and extent of investment. Investment also determines the capital requirements of the undertakings.

General investment falls more heavily upon undertakings in regions under development for banana cultivation than in older centres. Investments already written-off are available, especially in Cameroon, Somalia and Ecuador. In addition, expenditure in these countries is mainly for clearing. The use of old installations sometimes impairs productivity.

The total level of investment per ha of banana plantation and the individual subgroups are given in Table 12 and Figure 10. Total investment per ha is highest on the Ivory Coast, and is about three times higher than in Ecuador, the country with the lowest investment. In Somalia, investment is at about the same level as in Costa Rica.

The breakdown shows that, particularly on the Ivory Coast, installations for irrigation and drainage require much higher expenditure than in other countries. In Madagascar, investment on roads and bridges accounts for the above-average level of total investment.

.../...

Table 12 Total investment, and investment broken down into groups (u.a./ha)

	Clearing	Dwellings	Industrial buildings	Drainage	Irrigation	Transport [3]	Roads and bridges	Misc. contingencies	Total
Ivory Coast	121.44	141.68	52.62[1]	101.20	445.28	161.92	129.54	137.63	1 291.31
Madagascar	-	222.64		105.25	-	101.20	303.60[4]	76.91	809.60
Somalia	-	-	-	-	233.24	225.12	-	45.64	504.00
Costa Rica	24.38	103.92	64.90[2]	89.81	-	153.96	29.51	57.23	523.71
Ecuador	-	55.00		39.33	220.00	-	33.00	34.71	382.04

[1] Excluding packing station.

[2] Including packing station.

[3] Vehicles, cableways.

[4] Including clearing.

23. Factors determining production costs

The level of annual expenditure per ha of banana plantation depends mainly upon the following factors:

- labour costs and production material prices
- natural conditions (climate, soil)
- business structure
- organization and cooperation
- cultivation technology.

231. Labour costs and production material prices

The level of production costs depends mainly upon the labour costs and production material prices. Proper combination of the individual factors of production can however reduce the effects of differing wage rates and prices on production costs. Management methods are therefore also determined by the level of labour costs and the production material prices. Table 13 shows data for the various countries considered.

Table 13. Labour costs and prices of materials in different countries (u.a.)

	Ivory Coast	Cameroon	Madagascar	Somalia	Costa Rica	Ecuador
Unskilled labourer per day[1]	1.01	0.93	0.86	0.56	2.55	1.38
Skilled worker per day[1]	1.25	1.66	1.07	0.77	3.20	1.94
Diesel oil[1]	0.12	0.12	.	0.14	0.05	.
Petrol[1]	0.17	0.18	.	0.17	0.11	0.05
Urea (t)	101.25	105.20	112.30	126.00	85.00	121.00
Potassium chloride (t)	75.32	60.70	73.90	.	51.30	.
Superphosphate (t)	.	.	.	.	79.00	.

.../...

[1] 8 hr/day incl. social costs.

Labour costs (wages and social costs) are particularly important, since they account for a considerable part of production costs. Labour costs for an unskilled worker are lowest in Somalia, followed in ascending order by Madagascar, Cameroon and Ivory Coast. Labour costs in the two Latin American countries are much higher than in Africa. In Ecuador they are 0.37 u.a. and in Costa Rica 1.54 u.a. above those of the Ivory Coast. Costs for a skilled worker show a similar pattern, but they are higher in Cameroon than on the Ivory Coast. The cost of managerial staff is, as we have already shown, much higher in the African countries than in Latin America.

Fuel prices in Latin American countries are lower than in Africa. Only in Costa Rica are mineral fertilizers cheaper than in Africa. Ecuador and Somalia have the highest prices for urea, and the Ivory Coast for potassium chloride.

232. Natural conditions (site factors)

The natural conditions (site factors) are determined mainly by climate, soil, and topography. They determine the area of distribution of bananas, and largely govern productivity. The more these natural conditions deviate from the optimum for bananas, the more uneconomic becomes production. Artificial manipulation of site factors is for economic reasons very limited in banana cultivation. However, site disadvantages can to a certain extent be compensated by other advantages, e.g. proximity to consumer, concentration of production, etc.

Site disadvantages become apparent in relatively high expenditure, low yield, inadequate quality, and non-uniform production. In particular, if supply fluctuates sharply and quality is unsatisfactory, it is usually possible, and therefore essential for steady marketing to adopt measures to compensate for the site disadvantages. These measures are usually relatively expensive as concerns capital.

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Differences in natural conditions are present in the banana-producing countries in different regions. Among climatic factors, differences particularly in rainfall, sunshine, wind and air humidity play a part. Inadequate rainfall can often be compensated by irrigation. Temperatures are satisfactory in most growing regions.

As concerns soils, there are usually differences in structure and nutrient content. The availability of irrigation water and the presence of soil pests can be considered as parts of the soil factor in the broad sense.

Differences seldom arise in relation to topographical position. Banana plantations are usually to be found in depressions on flat terrain. Only in Congo-Kinshasa are the plantations mainly in hilly terrain.

232.1 Climate

The level and distribution of rainfall in the most important production regions are shown in Table 14 and Figure 11. Table 14 also shows the number of months in which artificial irrigation is an advantage.

Table 14. Level of precipitation and necessary duration of artificial irrigation in some producer countries

	Rainfall (mm/year)	Duration of irrigation (months)
Cameroon		
East	2 700-3 800	-[1]
West	2 100-2 700	4
Ivory Coast	1 300-2 000	4-7
Congo-Kinshasa	1 000-1 200	6-7
Madagascar	3 000-4 000	-
Somalia	500	8-10
Surinam	1 800	3
Costa Rica		
Atlantic	2 100-4 200	-
Pacific	3 400-4 200	3-4
Ecuador		
North	600-800	8-9
Middle	1 500-3 000	6-7
South	600-800	8-9

[1] Artificial irrigation is not carried out, although it is thought that this would give considerable yield increases.

As Figure 11 shows, nearly all countries considered have a marked rainfall maximum in certain months. During this period rainfall far exceeds requirements. Heavy soils need drainage during this period. The number of months in which rainfall is less than the plants require differs in the various countries. The absolute level of rainfall is seldom a criterion for this.

Somalia and certain regions of Ecuador have the longest period of low rainfall - up to 10 months. In Madagascar, Costa Rica (Atlantic Coast) and certain parts of Cameroon, the rainfall has been hitherto regarded as adequate

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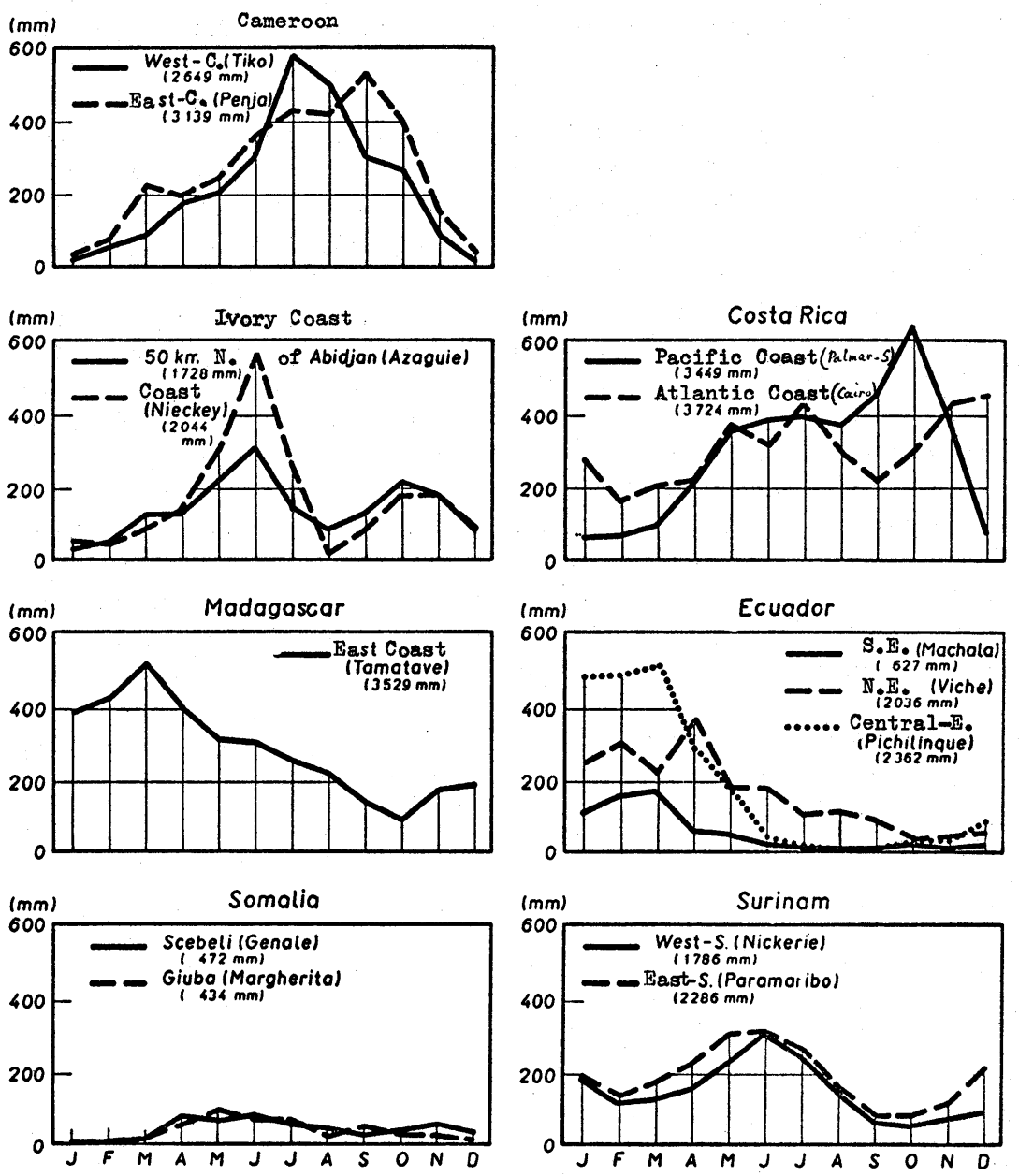
Figure 11

MONTHLY DISTRIBUTION OF RAINFALL IN IMPORTANT PRODUCTION AREAS
(long-term)



throughout the year. Recently, however, it has been found that in Costa Rica and in Cameroon, artificial irrigation in certain months is advantageous. In the other countries, irrigation for 3-6 months is considered necessary.

The need for artificial irrigation increases with the use of Cavendish varieties. If water supply is inadequate, their yield decreases much more than that of the Gros Michel variety.

Amount of sun and air humidity do not determine the productivity of plantations to the same extent as rainfall. Differences are however apparent in the competitiveness of the individual regions. There is usually a close relation between the two factors. Air humidity increases and sunshine decreases with an increasing level of rainfall. High air humidity favours the development of fungus diseases; high amounts of sunshine shorten production cycles and increase yields. High amounts of sunshine often compensate for increased expenditure on artificial irrigation. Somalia has a particularly high sunshine figure; about 3 000 hours per annum. The coastal strip of Madagascar where banana cultivation is carried out is favoured as regards sunshine, despite the high rainfall. The sunshine figure in Cameroon and Ecuador is relatively low - about 1 000 hours/year. Costa Rica also has no advantage in this respect. The Ivory Coast, with 1 500 hours, has somewhat better conditions. In Cameroon, certain parts of Ecuador and Costa Rica, continuous intensive control of fungus diseases is essential because of low amounts of sunshine and high relative humidity. In Somalia, Madagascar and the Ivory Coast, seasonal control of infection foci is usually sufficient.

In certain regions, storms occur regularly at the same seasons. The beginning of the rainy season in Cameroon is usually accompanied by storms, which often

.../...

cause reductions of up to 15% in yield. In Madagascar and on the Ivory Coast, strong winds also occur at times. These lead to direct damage only in Madagascar, while on the Ivory Coast they only reduce growth. Ecuador and Somalia are in least danger from wind. Destruction of complete plantations by storm, as repeatedly occurs in the Caribbean Islands, is rare.

232.2 Soil

In contrast to climate, which is usually uniform over large regions, soil often displays great differences over a short distance. Since bananas are very demanding in relation to aeration and nutrient content of the soil, often only a certain part of an area is suitable for banana production if the soil is not uniform. Dispersal of plantations results from this.

For transportation reasons, banana cultivation for export is usually practised near the coast. Alluvial soils are very widespread in these areas. Their high clay content often gives them an unsuitable physical structure, and they need drainage. In regions where irrigation is necessary, production has been concentrated near the rivers.

The nutrient content of the soil depends upon the parent rock and on leaching. The following table gives a summary of the amounts of fertilizer usually applied in intensive undertakings in the different countries. The high nitrogen requirement of bananas makes it necessary to apply nitrogen in all countries. Soils in the Ivory Coast and Madagascar also need heavy fertilizing with other elements. The total cost of fertilizing has already been given in Table 11.

.../...

Table 15. Annual amounts of fertilizer applied in some producer regions (kg/ha)

	N_2	P_2O_5	K_2O
Cameroon East	360	-	-
Cameroon West	230	-	300
Ivory Coast	350	60	680
Madagascar	270	-	750
Somalia	460	-	-
Costa Rica	60	160	340
Ecuador			
central alluvial	200	45	45
central volcanic	200	90	30
south alluvial	250	-	-

As concerns the nature of the soils in the various countries, it should be noted that in Cameroon, except for the Tiko region, banana plantations are mainly on soils of volcanic origin. In their physical and chemical structure they are among the best in the countries investigated. The alluvial soils in the Tiko region are poorer in nutrient, and would require drainage.

Soils in Congo-Kinshasa suffer from lack of nutrients. Soil quality on the Ivory Coast is very heterogenous, and cultivation is therefore dispersed. In the regions around Abidjan, even peaty soils are used for banana cultivation. Most soils on the Ivory Coast leave something to be desired as concerns nutrient and physical structure. They often require expensive improvement.

Madagascar has very suitable soils for banana cultivation in the river valleys. The areas are however usually small. Banana cultivation is also very dispersed here.

.../...

Soils are good in Somalia, and their productivity can be further increased by drainage. Soils are usually rather better in the Giuba valley than in the Scebeli valley.

Banana cultivation in Surinam is on heavy dry soils near the coast. They sometimes have a peat layer and require good drainage.

Banana cultivation in Costa Rica is also on good soils, but they usually need drainage.

Soils in Ecuador are very varied, but generally good.

Most of the countries have large areas available for extension of cultivation. Production in most countries could be doubled without cultivating poorer soils. Large reserve areas are often available, for example in Costa Rica and Somalia. On the Ivory Coast, however, considerable extension of production would involve large investment. In Ecuador, the opportunities for irrigation impose limits on extending the area. It is still very possible to increase production by raising intensity, especially in countries with a relatively high proportion of large plantations. If producer prices were suitable, the undertakings would be prepared to increase banana production at the expense of other crops. In some instances not enough labour is available. Expansion then depends upon labour availability (Costa Rica).

As concerns the availability of irrigation water in countries with inadequate rainfall, in East Cameroon the prerequisites for adequate irrigation of plantations are often absent. Since there is some rain even in the dry season, artificial irrigation has not been undertaken to any extent hitherto. Additional irrigation generally pays, as has been proved by the experimental station there. In the Tiko region of West Cameroon, where rainfall is lower and irrigation must therefore be carried out, sufficient water is available.

.../...

Only a small number of the plantations in the Congo can be irrigated. Supply therefore differs a good deal seasonally. On the Ivory Coast, cultivation is mainly in regions having an adequate water supply. Banana production in Somalia is possible only in irrigated areas. In the growing regions in the Scebeli valley, except Afgoi, water is led from the river into an irrigation network. In Afgoi and the Giuba valley the undertakings use water from the river itself. The Scebeli river dries up for about 3 months a year. During this period, ground water is pumped up from a depth of 80 m.

Some areas of Ecuador cannot be irrigated, and the Gros Michel variety is therefore favoured in this country.

Among soil pests, nematodes impair the yield of plantations. They are difficult to control and occur in nearly all production regions. Intensive control has hitherto been needed only on the Ivory Coast and in Cameroon.

233. Structure of the undertaking

233.1 General

In banana cultivation, as in agriculture generally, the trend is towards larger business units. The reasons are to be found in production costs, which decrease as the size of the undertaking increases. This size-dependent decrease in costs is particularly high in banana cultivation.

The trend towards increasing size in undertakings is associated with increased use of capital, the employment of modern production methods and more rational organization. As the trend progresses, the profitability of small businesses decreases, particularly if they produce by traditional methods. Small businesses are at a disadvantage not only in production but also in marketing. Thus the harvesting of the product, which because of continuous production and the fact that

.../...

bananas easily spoil must be carried out at short intervals, is relatively expensive. Further, the collection of small amounts into the large lots necessary for carriage by sea gives rise to additional costs. Finally, supplies collected from many businesses usually leave something to be desired in quality and uniformity.

The size structure of the undertakings is difficult to influence. Therefore, in various regions small businesses are increasingly dropping out of the exporting field. Steps are taken in other regions to support them, mainly for social reasons. Efforts are being made by the introduction of better methods of production and cooperation in harvesting and marketing to compensate for the disadvantages of small size. To obtain a picture of production in the various countries and regions, it is necessary to consider both the size structure of the undertakings and the intensity of cultivation. As concerns intensity, we can distinguish between:

- modern intensive cultivation
- cultivation at average intensity
- extensive cultivation.

Modern intensive cultivation is possible only in monoculture. In Africa it is called 'European' or industrial cultivation - 'European' because these undertakings are largely in the hands of Europeans, in contrast to the small businesses. Intensity usually increases with the size of the concern. Mixed cultivation usually increases simultaneously. With the Gros Michel variety, satisfactory yields can be obtained at certain seasons in the "extensive" small businesses, while the Cavendish varieties at present in demand do not give satisfactory yields under extensive cultivation. Table 16 shows data concerning the size distribution of the 'European' and 'African' businesses on the Ivory Coast. There are no comparable data for other African countries, but both groups take part in production.

.../...

Table 16. Breakdown of banana-producing businesses on the Ivory Coast into 'European' and 'African', 1967

Amounts exported per business (t)	No. of businesses		
	European	African	Total
Over 15 000	1	-	1
10 000 - 15 000	-	-	-
5 000 - 10 000	-	-	-
2 000 - 5 000	11	-	11
1 000 - 2 000	17	2	19
500 - 1 000	30	5	35
200 - 500	21	27	48
100 - 200	3	56	59
50 - 100	2	77	79
20 - 50	2	108	110
below 20	3	314	317
In all	90	589	679
Cooperatives and associations with less than 20 t	-	275	275
Total	90	864	954

233.2 Intensity

Table 17 shows the share of the different intensity classes in total exports from the countries concerned.

Table 17. Share of the intensity classes in exports from individual countries (%)

	Modern intensive cultivation	Semi-intensive cultivation	Extensive cultivation
Ivory Coast	70	15	15
Cameroon West	65	-	35
Cameroon East	60	-	40
Congo	33	-	67
Madagascar	-	5	95
Somalia	75	25	-
Surinam	100	-	-
Costa Rica	100	-	-
Ecuador	66	14	20

.../...

This shows that the bulk of exports comes from extensive cultivation in Madagascar and the Congo only. As an exporting country, the Congo is still of very little importance, and can therefore be ignored. Costa Rica and Surinam have only intensive cultivation, and in Somalia also the proportion of intensive undertakings is relatively high. Some production on the Ivory Coast and in Ecuador is from "extensive" businesses, and in Cameroon the figure is 35-40%, but this has probably decreased since the figures were collected.

233.3 Size of concerns

There are many more small businesses than would be expected from their share in exports. We shall consider below the number of businesses in the different size classes in relation to quantity of exports or size of plantation. As a guide, we shall show the number of businesses in the different size classes in relation to total exports and total area respectively. The figures unfortunately have different reference bases, so they cannot be compared in a table. No figures were available for certain countries.

The figures for the Ivory Coast and Somalia relate to the amount exported per business.

Table 18. Breakdown of export businesses on the Ivory Coast and in Somalia by quantity exported annually, and by share in total exports (%)

Quantity exported per business (t)	% of businesses		% of total exports	
	Ivory Coast[1]	Somalia	Ivory Coast[1,3]	Somalia
Under 100	82[2]	50	15	5
100 - 500	11	28	35	21
500 - 1 000	4	14)		27
1 000 - 2 000	2	5)	50	19
over 2 000	1	3)		28
Total	100	100	100	100
Total number of businesses and total export quantities	954	222	142 573 t	83 084 t

[1] Excluding Sassandra region.

[2] Of these, 62% under 20 t (cooperatives and associations 29%, individual undertakings 33%).

[3] Estimate based on size of the plantations.

.../...

This shows that in 82% of the businesses on the Ivory Coast, the quantity exported annually is less than 100 t; in Somalia it is only 50%. The difference between these two countries is greater than these figures show, since 62% of the businesses on the Ivory Coast export less than 20 t per annum. Figures are not available for Somalia, but the share of the small businesses there is much lower than on the Ivory Coast.

Table 19 gives a breakdown of businesses producing for export in Ecuador and Madagascar by size of banana plantation. It may be seen that in Madagascar the largest banana areas for one business are about the same size as the smallest in Ecuador. Madagascar is probably the only banana-exporting country in which production is almost exclusively confined to small businesses. About 3/4 of the businesses have banana areas of under 0.3 ha. In Ecuador the 10-25 ha class has the highest percentage (36%), but the 100-500 ha class (34.4%) accounts for the greatest share of the banana area.

Table 19. Breakdown of exporting businesses in Madagascar and Ecuador by size and area of plantation, and by share of the banana area of the country (%)

Area of plantation (ha)	% of businesses		% of the banana area of country	
	Ecuador	Madagascar	Ecuador	Madagascar
Under 0.3	)	73	)	.
0.3 - 1	) 16.6	17	) 2.1	.
1 - 5	)	9	)	.
5 - 10	)		)	.
10 - 25	36.0	)	12.7	.
25 - 50	24.5	) 1	19.3	.
50 - 100	13.5	)	20.8	.
100 - 500	8.8	)	34.1	.
500 - 1 000	0.5	)	6.8	.
over 1 000	0.1	)	4.2	.
Total	100	100	100	
Total number of businesses and total area	3 000	1 873	158 960 ha	

.../...

The figures for Cameroon do not permit an accurate survey of the small businesses, but their number is relatively high. Large-scale intensive cultivation in East Cameroon consists of light units of 8 to 450 ha. In West Cameroon only the State Cameroon Development Corporation has three undertakings with intensive plantations, totalling 835 ha.

In Congo-Kinshasa about $^{2}/_{3}$ of exports come from small businesses.

Banana cultivation in Surinam is carried out mainly in large undertakings. The six State undertakings account for about 85% of the area.

In Costa Rica, the whole planted area of 9 500 ha on the Pacific side of the country is in the hands of United Fruit, which owns 8 000 ha of plantation divided into three units. The other 1 500 ha belong to six independent producers who are associated with United Fruit. Of the 7 330 ha of plantation on the Atlantic coast, 2 128 ha are owned by Standard Fruit, the rest being divided into 22 business units managed as companies and consisting of several individual businesses. Their sizes are as follows: 11 units of over 160 ha, 8 units of 80 to 160 ha, and 1 unit of under 40 ha. Mergers into larger business units are already necessary for borrowing purposes. On the Atlantic side the Bataan project also envisages banana cultivation in smaller businesses. The banana producers' cooperative already has 130 members. The total area should reach 800 ha, of which 170 ha was already effective in 1967.

233.4 Development of the size structure of undertakings

Increasing competition has in recent years caused rapid changes in the size structure of undertakings. In many cases the State has taken steps to facilitate adaptation. The situation in individual countries is as follows:

233.41 AASM

In Cameroon, the State has taken certain steps to develop small businesses, but they are largely ineffective because the organizational structure necessary for

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the success of such measures is lacking. The Government has recently proposed reforms to improve the structure of the African family businesses. About 2 000 ha in East and West Cameroon are to be converted to Cavendish varieties.

In West Cameroon, the small businesses' banana area has declined since 1964 from 10 000 to 4 000 ha. They now have only a small share in exports. A similar decline is to be seen in East Cameroon. After the loss of the UK import preferences and as a result of the possibility of participating in the oil-palm planting project promoted by the EDF (European Development Fund), the larger private businesses have given up banana cultivation entirely. However, the transfer of part of the French quota to West Cameroon caused the State Cameroon Development Corporation to continue banana production.

In Congo-Kinshasa, within the framework of the 'Mission de Relance Agricole' programme and with the support of the EDF, measures were undertaken with a view to the reconstruction of the banana industry and improvement of its size structure.

Steps have been taken on the Ivory Coast, within the framework of projects aimed at improving the whole banana trade, to bring the small businesses together in certain regions and to rationalize production. A legal basis has been created for this containing very accurately formulated requirements as to the businesses to be assisted and their method of operation. The 'African' businesses are to be brought together into four centres, whose development will be carried out by the State. In general, the whole banana production of the Ivory Coast will be concentrated within a radius of 200 km of the port of Abidjan. As concerns the proposed forms of business, three groups will be recognized:

- artisan (peasant) ... 1-5 ha, yield 13 t/ha
- medium ... 5-25 ha, yield 20 t/ha
- industrial ... over 25 ha, yield 30 t/ha

.../...

The execution of the proposed measures is often for social reasons not in accordance with the results envisaged in the regulations.

Small businesses in Madagascar seem to have been relatively successful in overcoming the difficulties associated with increasing competition. Exports were rising up to the closure of the Suez Canal.

Until 1955, exports from Somalia were confined in practice to the European planters. Since then, increasing quotas have been given to the generally small Somalia businesses, but the quality of their production does not reach the level of the European undertakings. Increasing deliveries from the smaller businesses caused the uniformity of the total delivery to be impaired.

233.42 Third countries

Businesses in Ecuador of below-average size occupy much larger areas than in most African countries, but the competitiveness of these smaller concerns has increasingly declined in recent years. As the example of Costa Rica showed, businesses in the other Latin American countries have a much larger average size. The fact that some sites do not permit cultivation of Cavendish varieties also increases the difficulties for Ecuador.

The structure of businesses in Costa Rica is very favourable, and consequently there have been no significant changes in recent years.

234. Organization and cooperation

The situation as regards organization and cooperation profoundly affects the efficiency of banana production in a country.

A number of production and selling functions can be performed and considerable advantages of rationalization can be achieved only on a large scale (plant protection, procurement of materials, improvement of structure, marketing, research, advice). The smaller the businesses, the more they profit from centralization

of such operations. Certain functions can be performed by third parties without the cooperation of producers, but organized cooperation is indispensable and at very least more advantageous. Readiness to adopt this differs considerably in the various countries and regions. Coordination or collaboration with third parties is often essential for common trading. In this the State is primarily concerned, since its main interest is the productivity of the country's economy. But firms and organizations that carry out marketing often support measures to improve production, or even perform certain tasks themselves.

234.1 AASM

Exports from the AASM are usually through producer organizations. These operate only in some countries and even then they have central responsibility in the production field only to a limited extent. In other countries banana producers have succeeded, themselves or with state aid, in creating certain arrangements at a level above that of the individual undertaking, and in improving organizational arrangements. In the Associated States of the French-speaking community there are state experimental stations which in the field of planting technology have done much to increase production. The problem of the short duration of yield is however not yet solved. There are many large gaps in the field of management and marketing research. Somalia has no experimental station dealing with bananas.

Conditions in the advisory field are poor in all African countries. Production techniques, especially in the smaller businesses, could be considerably improved by suitable arrangements.

Organization and cooperation in the banana trade in Cameroon is relatively poorly developed. Producers appear to be unprepared for common trading. With the help of various laws, the State is trying to gain control in certain fields,

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but the measures so far taken are inadequate and incomplete. The state-organized plant protection centre closed down in 1968.

The organizational substructure on the Ivory Coast is good. Both the State and the marketing cooperatives promote productivity, but the emphasis is rather on general structural improvements and consolidation than on improvement in production techniques, which are still backward in the small businesses.

Organizational conditions in Madagascar are being increasingly improved. In this relatively young exporting country, certain deficiencies are regarded as teething troubles. The Government, in cooperation with producer cooperatives, has recently undertaken a reorganization in the banana industry, and has created a broad basis for an advisory organization.

In Somalia, the State is still rather passive towards the banana industry, and the producers themselves have as yet shown no urge to improve conditions at levels above that of the individual business. The somewhat unsatisfactory cultivation technique and the infrastructure reflect these conditions.

234.2 Third countries

In most Latin American countries marketing is entrusted to the exporting firms. They often have special facilities available for research and advice. In Costa Rica, for example, prices paid by the export firms are varied in accordance with the use of these services. In Ecuador, where the big banana firms are less active and production is more scattered, plant protection is carried out through a state organization.

24. Costs from harvesting to loading

The costs from harvesting to loading at the exporting port depend primarily on the geographical position of the production regions in relation to the ports,

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but marketing methods and the quantities involved also have a decisive effect upon the level of costs.

The importance for the competitiveness of a region of efficiency in collection and loading can be assessed if one considers that, in nearly all the countries under comparison, these operations account for over half of the export proceeds fob, and also that the processes from harvesting to loading are of considerable importance to selling costs and marketability of the products in the succeeding stages. Examples of these processes are: grading, speed of collection, and preliminary disposal of the necessary quantities.

Table 20. Costs from harvesting to loading in port (u.a./ton)

	Cutting	Transport to pack. station	Cardboard	Packing + loading	Transport to port	Loading	Organization	Total
Cameroon W.	3.00	0.93	30.36	6.89	1.62	4.45	-	47.25
Cameroon E.	4.05		29.84	2.03	5.83	2.69	0.40	44.84
Ivory Coast	2.18	- [1]	19.81	6.24	4.79	7.93	0.91	41.86
Madagascar	1.55	3.11	32.38	12.14	7.29	5.26	2.02	63.75
Somalia (Sceb.)	1.84	0.75	32.62	9.06	2.73	8.26	4.90	60.16
Somalia (Giuba)	1.98		31.50	1.82	5.41	7.73	4.20	52.64
Costa Rica	2.15	0.54	19.20	2.02	8.89	3.17	-	35.97
Ecuador	3.03	1.87	17.13	9.34	6.07	6.63	-	44.07

[1] Included in production costs.

Table 20 and Figure 12 give a picture of the composition of costs from harvesting to loading. The differences between the individual countries are considerable for all items. The cost of cardboard is clearly decisive, as it usually accounts for about half the total cost in this phase. The costs for individual countries fall into two groups. The first includes the two Latin

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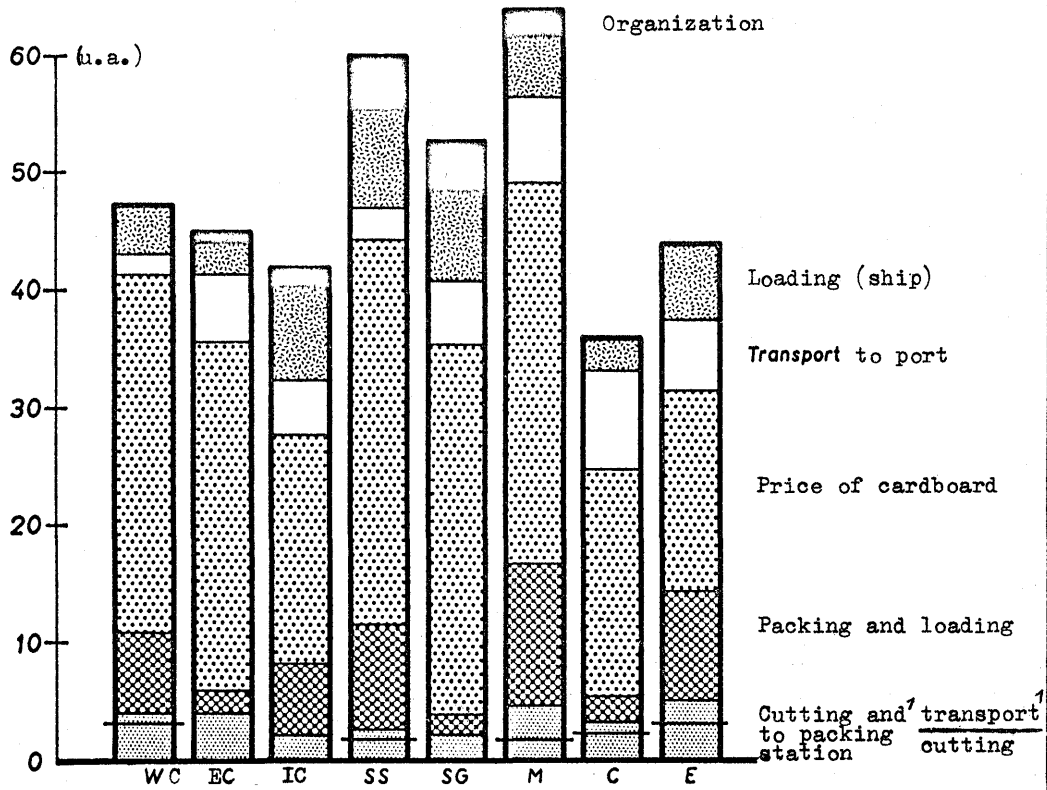
Figure 12

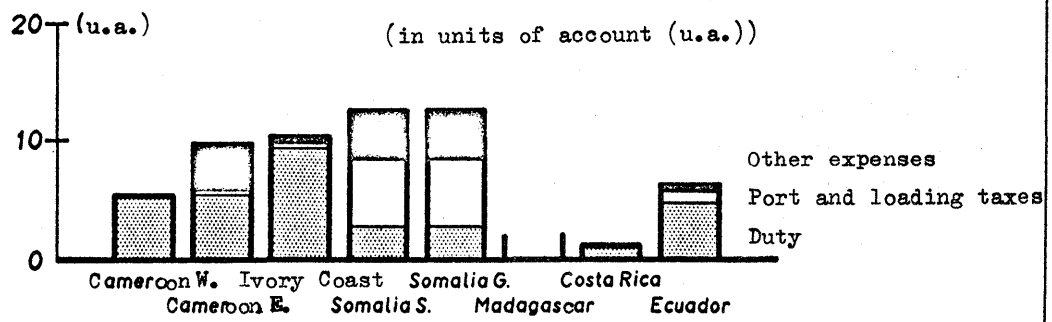
COSTS PER TON OF BANANAS, NET, FOR THE HARVESTING TO LOADING IN PORT SECTION

(in units of account (u.a.))



DUTIES, TAXES AND CHARGES OF EXPORTS PER TON OF BANANAS, NET

(in units of account (u.a.))



1/ On the Ivory Coast partly included in the production costs.

American countries and the Ivory Coast, with prices of 17-20 u.a./t; the other group consists of the other African States, with costs of 30-33 u.a./t. Low costs depend primarily upon the manufacture of cardboard in the country. In Madagascar, cardboard costs are already lower than those given, since a cardboard factory began operations in 1968.

Packing and loading on to vehicles to the port is the item relatively showing the greatest differences. Costa Rica and East Cameroon have here a clear advantage, while Somalia (Scebeli), Madagascar and Ecuador have relatively high costs. In the long term the Ivory Coast costs are probably somewhat lower than the figures given, since the packing centres are being depreciated quickly, so forming a heavy burden only during the period of the report.

The costs for transport to the port depend mainly on the distance between packing station and port of loading, road and rail conditions also playing a part. Most African countries here have an advantage over the two Latin American countries. In particular, the Tiko region in West Cameroon is in a favourable position because of its proximity to the port and the available rail installations. Costs are also low in the Scebeli region of Somalia.

As concerns costs for ship loading, they are in most African countries more disadvantageous than in the two Latin American countries. At Merca in Somalia, where ships have to be loaded in the roads and at Chisimaio, where loading installations are inadequate, there appears to be more reason for the high values than on the Ivory Coast. Loading costs in East Cameroon are relatively low, but it should be remembered that here, as will be shown, long loading periods are necessary, and these affect the freight costs.

Export organization is assisted in those African countries where certain functions of collection and marketing are carried out by producer organizations. In the Latin American countries these are usually performed by the producer undertakings or the trading firms. As in the latter case these costs are included in

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the price, they need not be calculated, while the producers debit these sums in their general expenses.

In the case of harvesting to loading, it is not only a matter of the level of direct costs but also of the duration of collection, loading and the handling of the goods. Rapid and careful collection, preparation, transportation and loading is associated with lower losses in quality, and short loading times also reduce freight costs. Table 21 gives the times for the disposal of the quantities loaded as an average per ship in the different ports, the loading times, and the intervals in sailings. In Cameroon East and West and in Madagascar there are relatively long periods between cutting and loading, but in East Cameroon, Madagascar and Somalia (Scebeli) the loading itself takes longer than average. In Somalia and Madagascar sailings are at relatively long intervals. With the use of larger ships on the Cameroon run, time intervals will also increase here. Cutting should however be carried out every 6 days at the most. Therefore, using ships of about 2 000 tonnage, an annual quantity of exports of 120 000 t is necessary.

Table 21. Times for disposal and loading, and intervals in sailings, 1967

	Cutting to loading (hr)	Loading (hr)	Av. quantity loaded per ship (t)	Interval between sailings (days)
Cameroon East	48-72	48[2]	600	8
Cameroon West	48	10	400	8
Ivory Coast	24[1]	24	1 800	3-5
Madagascar	48	72[2]	1 000	10
Somalia (Sceb.)	24	60[2]	1 300	10-12
Somalia (Giuba)	24	16	1 300	10-12
Surinam	.	.	.	7-10
Costa Rica Atl.	24	24	2 300	3-4
Costa Rica Pac.	24	8	2 300	3-4
Ecuador	24-36	24	2 200	7[3]

[1] Time between cutting and loading or storage in the cold room at the port.

[2] Loading only by day.

[3] Varies greatly for the individual firms.

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25. Factors determining the costs from harvesting to loading

251. Distribution of the plantation areas

The distribution of the plantation areas plays an important part in the costs of collection and transportation of bananas. These tasks can be carried out more efficiently where plantations are concentrated into a few places and distances to the port are shorter. Table 22 gives distances to the port in individual producer countries. Production is closest to the port in Surinam and in the Scebeli valley of Somalia, while in Ecuador and the Ivory Coast the average distances are highest.

Table 22. Transportation distances to the port of loading

	Average distance* (km)	Range (km)
Cameroon West	60	50- 80
Cameroon East	100	90-100
Ivory Coast	110	30-160
Madagascar	70	60-140
Somalia (Scebeli)	35	20- 55
Somalia (Giuba)	85	50-125
Surinam	20	12- 25
Costa Rica	60	40- 95
Ecuador	140	30-200

*Weighted by quantity.

The appendix to this part contains maps of the producing countries showing the main plantation centres for export. As concerns conditions in individual countries it should be noted:

251.1 AASM

In Cameroon, there are 1 388 ha of large-undertaking plantations in the western part of the country, and 835 ha in the eastern part. In both parts they are in the coastal region of the Gulf of Guinea, up to about 80 km inland. The centres of production are Mungo Province in East Cameroon and the regions of Tiko, Ekona and Molyko in West Cameroon. There are also other centres, mainly with small businesses, of less importance.

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In Congo-Kinshasa production is in the Mayumbe region. It is very scattered, and distances to the port of Boma can be high.

Planting on the Ivory Coast is carried out in numerous smaller regions within a radius of about 200 km around Abidjan. There is a small plantation region in the neighbourhood of the port of Sassandra. A law of 1961 aims at transferring the plantations from the more remote regions nearer to the port of Abidjan, where modern management units are to be formed.

The areas of the individual plantation regions concerned in the object of this law, and distances to the port, are shown in Table 23. The Divo region is gradually to be given up because of the long distances.

Table 23. Distribution of banana plantations on the Ivory Coast in the individual regions

	Area, 1966 (ha)	Mean distance to Abidjan (km)
Aboisso	330	110
Adzope	440	140
Agboville	1 940	100
Azaguie	1 380	40
Tissale	1 330	140
Divo	1 600	220
Abidjan	1 720	20
Sassandra	575	- [1]

[1] Loading at the port of Sassandra.

The banana production region in Madagascar is on the eastern side of the island, mainly in river valleys up to 140 km from Tamatave. The plantation zones are relatively scattered and mainly small.

There are two plantation regions in Somalia. The first is in the Scebeli valley, and consists of the Genale/Bulo/Mererta centre and two rather more remote zones around Audegele and Afgoi. The area of the banana plantations in this region in 1967 was 4 832 ha. In relation to shipping, this region is 35 km from

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the port of Merca. The other region is concentrated, and lies on the Giuba river between 50 and 125 km from the port of Chisimaio. The plantation area in 1967 was 2 957 ha. Both regions are close to the rivers because of their dependence on irrigation. In the Giuba valley planting is up to 3 km from the river, and in the Scebeli valley up to 15 km from the river.

Production in Surinam is concentrated in the immediate vicinity of the ports of Paramaribo and Nickerie.

251.2 Third countries

The plantation areas in Ecuador are in various parts of the country, usually far from the coast. In view of the large total area, the distribution into several planting zones is understandable. Over half the total banana area is concentrated in Los Rios, the largest region being roughly in the centre of the country (Table 24).

Table 24. Distribution of the banana areas of Ecuador in the individual provinces[1]

	Area (ha)
Esmeraldas	5 299
Pichincha	15 782
Los Rios	85 350
Cotopaxi	12 152
Guyas	16 068
Canar	1 842
Bolivar	125
El Oro	22 298
Total	158 916

[1] Areas under plant protection control.

Costa Rica has plantation regions on the Atlantic and the Pacific coasts. There are 7 300 ha (1967) on the Atlantic, of which 2 500 ha are in a southern centre, and the remainder in three zones north-west of the port of Limon, from which the bananas are exported from this region. On the Pacific coast there are

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about 9 500 ha in three zones (Rio Coto, Palmar and Laureles), which load their bananas at the port of Golfito. Distances to the port are between 40 and 95 km.

252. Collection, packing, transportation and loading

In most countries collection, packing, transportation and loading are carried out by marketing cooperatives or trading firms. The need for a central organization arises from the fact that deliveries from a large number of producers are necessary for loading a ship, so that rapid assembly of the necessary quantities needs strict coordination. The organizations or trading firms which prepare the goods in the port are generally also concerned, wholly or in part, with the further marketing of the fruit.

In the African countries these tasks are performed by producer organizations, in which the State often participates. They usually also arrange for the carriage by sea of the bananas (by agreement with shipping firms) and for the sale (which is usually done by agents at the import stage). Membership of the selling organization is obligatory for producers delivering bananas for export.

Collection in the Latin American countries is largely carried out by trading firms who either themselves retail the bananas in the consumer country or are closely associated with wholesale firms. Where these trading companies do not own their own ships, they are often closely associated with firms. These firms are often integrated at the production stage through their own plantations or by delivery agreements. Several such firms are usually active in regions of high production. Although they usually take over the risk for the goods only at the port, they ensure a rational flow of collection, packing, transportation to the port, and loading.

The special features in the systems in Africa and Latin America give rise to important differences between the supply of the two regions. In the Latin American countries, the selling firms are direct trading partners with the producers.

.../...

To a certain extent they select the goods themselves in the production regions and consequently set the tone, with the emphasis on the buyer, for the requirements of the market. In the following stages these firms are forced, in competition with other firms, to transport the goods as efficiently as possible to the consumer country and to distribute them there.

In the associated countries, the collection and marketing organization supported by the producers is inserted between producers and distributors. In this case, the buyers' demands are transmitted only indirectly through supervisory organizations. Lacking direct participation in marketing, they are often in no position (with their present organization) to lay down the same strict criteria as the trade. Quality in countries where the collection is via producer organizations often therefore does not reach the same level as in countries where the trade takes over the goods directly.

Further, the monopolistic position of the producer organization removes competition from many regions. As this effect on the market, which is important for the efficiency of the firms, is lacking, the efficiency of these organizations, and therefore the competitiveness of the supply, depends mainly on their own initiative. There are considerable differences between the individual organizations. The following points concerning conditions in the various countries should be noted.

252.1 AASM

252.11 Cameroon

The organization of collection, loading and marketing in Cameroon is not unified. Two organizations were set up in 1964 by law to take over the central functions in the banana trade: the 'Organisation Camerounaise de la Banane' (OCB) and the 'Comité de Coordination de l'Economie Bananière'. However, because of inadequate finance these organizations have not as yet been very active.

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Further, the State has taken over a number of functions. Above all, it negotiates with the various contracting parties the prices for transportation of the bananas from the producing regions to the consumer country, and for the associated processes. The necessary organization for smooth and efficient marketing is not yet adequate. The State Cameroon Development Corporation (CDC), which deals with most of the plantations in West Cameroon, is an exception. It has available the necessary quantities etc. to carry out all the processes in the producer country, including ship loading.

Bananas from the other businesses in West Cameroon and from East Cameroon are collected and loaded as follows:

The larger undertakings usually own their own packing stations; for the smaller businesses there are five cooperative packing centres set up with state aid, four in East Cameroon and one in West Cameroon. All the undertakings with an annual production for export of over 25 t (in the Mungo region, all undertakings) are required to join a cooperative so that loading and transportation can be unified.[1] The cooperatives are in practice important only for packing and deliveries from the small businesses. Cardboard boxes are imported by the firm Plasticam.

Organization of rail transportation to the port is in the hands of the Compagnie des Bananes, which sells up to 95% of the bananas from Cameroon to France.

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[1] In East Cameroon there are three cooperatives for the large producers (SOBACA north, central and south) and six for the small African growers. Both groups belong to the Union Générale des Coopératives Bananières du Mungo (UGECOBAM). This association collects the data for yield forecasts three months in advance, and sends them to the Comité Interprofessionnel Bananier in Paris. The small businesses in West Cameroon are in 35 cooperatives, which belong to umbrella organizations. There are no longer large private undertakings in West Cameroon. Because of the decline in production, some of the cooperatives in East and West Cameroon are in liquidation.

Transportation from packing station to port is mainly by rail, as in East Cameroon a railway line runs through the main production region, and in the Tiko region the CDC has its own narrow-gauge railway.

In East Cameroon, ships are loaded at Bonaberi, and in West Cameroon at Tiko. Ships call at both ports, since the amounts at one port are not sufficient for a full load. During 1967, 18 920 t were loaded at Tiko, and 33 662 t at Bonaberi. There are special banana quays at both ports, but because of the great decline in banana exports they are also used for other goods. In West Cameroon loading is carried out by the CDC, and in East Cameroon by the firm of Chargeurs Réunis, which effects carriage by sea.

The efficiency of the individual processes in collection, transportation and loading is lower than in most of the countries. This becomes more masked as production decreases. Banana collection by the cooperatives from the small businesses is defective in proper organization and careful handling of the fruit. Access roads to these businesses are usually in a bad condition. Irregular deliveries and the high rate of rejects from small businesses at the packing station (up to 70%) means that the availability of quantities large enough for export is unreliable. Railway wagons (capacity 15 t; mean loading in 1967: 8.5 t) and ships are therefore often not fully loaded.

The low capacity of the packing stations is an important reason for the long loading times for ships. This is because packing is carried out by the staff of the producers, for whom cutting and packing form a double work peak. This applies not only to the packing centres owned by undertakings but also to cooperatives. As deliveries decline, the cooperative packing centres have reduced their staffing to supervision personnel.

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The capacity of the railway would easily allow the loading of one ship a day. The truck fleet is only 50% utilized.

Shipping firms would prefer to use only the port of Bonaberi. There is however still no road from Tiko to Bonaberi, so this would involve considerable disadvantages for the CDC, which transports to the port of Tiko. This problem will become more difficult with the use of modern ships on the Cameroon run (planned for 1969), as the channel to the port of Tiko is clearly not deep enough for such ships.

Quality control by the Compagnie des Bananes is effected at the packing centres owned by the undertakings. Here the quality is satisfactory. In the cooperatives the goods are checked on acceptance by the Service de Contrôle de Conditionnement des Produits. Even so, the goods from these centres can usually be sold only as quality II. This organization also inspects at the port. Official standards at present exist only for stems of fruit, but the criteria used for cardboard-packed bananas are to be employed officially as standards.

252.12 Congo-Kinshasa

About a third of the products for export in Congo-Kinshasa are in the hands of the exporters. These also market the production of other undertakings. Transportation to the port of Boma is by ship or truck. By land, with bad roads and long distances, it is relatively expensive.

252.13 Ivory Coast

On the Ivory Coast, the Cooperative Bananière et Fruitière de la Côte d'Ivoire (COBAFRUIT) is the central organization for the marketing of fruits for export.

For certain functions there are other organizations associated with COBAFRUIT, and in whose administration COBAFRUIT participates.

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Packing the bananas is in the hands of the Société National de Conditionnement (SONACO). This firm has 18 packing stations in the producer regions in which all the goods exported from Abidjan are packed, and also a cardboard factory and a cold storage depot on the banana quay. The funds for financing these installations, which were made available by the government and the European Investment Bank, amount to 2.3 million u.a.

Turnover in the port (ship loading and supplying the cold storage depot) is in the hands of SIMAFRUIT, which also owns the mobile loading installations.

The Organisation Commerciale de la Production (OCP), domiciled in Paris and represented in Italy, handles the sale of the bananas.

COBAFRUIT itself organizes transportation from the packing stations to the port and by sea. Transportation to the port is carried out in trucks by contractors. The roads are generally good. Loading of bananas is carried out 95% in Abidjan and 5% in Sassandra. At the port of Abidjan there is a special, very modern, loading installation for bananas. At Sassandra, ships load in the roads. Quality control is effected by COBAFRUIT.

The capacity of the arrangements at the various stages is sufficient for good delivery for ship loading. Half a shipload can be stored in the cold storage depot at the port before the ship arrives, and delivery can therefore start a day before.

Cost savings are possible in the packing phase by cutting staff, reducing the amounts written off to cover depreciation, and by building a cardboard factory. It should be noted that steps are being taken in this direction. Further improvements are also possible in loading at the port. The other phases work very efficiently.

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252.14 Madagascar

The central organization in Madagascar is the Coopérative fruitière de Madagascar (COFRUMAD). It began regular exports of bananas in 1962. All producers for export belong to this organization. It carries out collection and transportation of the fruit from the producer to France, the main consumer country. Selling there is effected by the Société Bananière de Madagascar (SOBAMAD). The partners in this company are the State of Madagascar, COFRAMAD, and some French ripening agencies.

Packing is in a series of small stations which are combined into a cooperative. The building of 21 more stations is planned.

Harvesting and transportation are often not properly performed in relation to the delicacy of the bananas, since the fruit is not handled with proper care. Further, transport vehicles often do not have special equipment. Transport to the port is by truck and rail, and a considerable part is by water. The main coast road is in good condition; the side roads are mostly poor.

The port of Tamatave has no special loading installations for bananas, although it is otherwise well equipped. Up to three days are needed for loading a banana boat. This long loading time is due to the inadequate organization, both of delivery and of loading. The installations would permit loading in 12 hours. Ships are often not fully loaded. The government recently decided to build a cold storage depot at the port, and the organization of delivery will be improved.

Quality standards were laid down in 1961, but there is no legal basis for their use.

252.15 Somalia

Each of the two production regions in Somalia has a central organization for the collection and sale of bananas: in the Scebeli valley it is the SACA, which has

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14 packing stations with its own staff (construction costs 350 000 u.a.). In the Giuba valley the SAG is responsible. Here the businesses or the associations of businesses possess their own packing stations. There are 82 in all, sometimes very simple installations. Both organizations import the cardboard boxes.

Transportation to the port is by truck. Transportation capacity is sufficient for demand, and movement is well organized. Roads in the Scebeli valley leave something to be desired, but those in the Giuba valley are satisfactory.

Loading of the Scebeli production is carried out by the Ente Porti della Somalia at the port of Merca. The ships must here be loaded at anchor in the roads about 2 km from the shore. Loading is therefore difficult and can be effected only by day and in good weather. The number of lighters is inadequate. The daily rate is therefore only 500-600 t.

In Chisimaio, where the Giuba production is loaded, ships can tie up and loading is direct from the truck. A ship can be loaded in one day. The port installations are good, although there is no special equipment. Loading is therefore carried out entirely by the ship's gear. Loading is in the hands of the COGIU cooperative.

At the time of the banana monopoly, Italy took nearly all its requirements under the annual quotas from Somalia. The fruit was taken up at fixed prices at fob rates. Upon the liquidation of the banana monopoly and its importing organization, Somalia had to seek other buyers. The two producer organizations which had hitherto opposed the banana monopoly in a common organization (FEBAS) entered into separate agreements with fruit importers; SACA with the Società Commissionaria e Commerciale con l'Africa SpA (COMAFRICA), which took the goods on commission, and SAG with the Compagnia Italiana della Frutta, a subsidiary of United Fruit, which

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purchased the bananas on an fob basis. In 1966, SACA became the Compagnia Generale Interscampi (COGIS) and also sold on an fob basis. Upon the closure of the Suez Canal, the agreements between the trading firms and the producer organizations of the two organizations were dissolved. Selling was on a commission basis, with declining quantities.

Since the end of 1967, bananas have again been sold on an fob basis. SACA delivers to COGIS, while SAG together with COGIS has established an import firm, Società Mercantile Oltremare (SMO). In July 1968 the two producer organizations in Somalia again formed a common association, Somalbanane. This is intended to be the central banana organization in Somalia, and has taken over all the shares of SMO.

252.16 Surinam

In Surinam, 85% of production is in the hands of the six State undertakings. Surinam bananas are marketed under a five-year agreement with the Dutch branch of United Fruit through this company.

The undertakings own their own packing stations. Cardboard boxes are made available by United Fruit. Transportation to the harbour is by truck. Transportation begins one day before the ship arrives. Loading is at the ports of Paramaribo and Nickerie. Ships call at both ports.

252.2 Third countries

252.21 Costa Rica

The sale organization in Costa Rica is in the hands of the local branches of the United Fruit and Standard Fruit. These two companies control nearly all the plantations in this country. Further export firms were established in 1966 and 1967, some of which are also active in production. These include the Compagnia

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Bananera Atlantica (COBAM), which belongs to a German group, Tica Bananera SA representing a Belgian/Dutch group, and the Corporación de Desarollo Bananero de Costa Rica (BANDECO), which was established by the American West Indies Fruit Co. The trading firms in Costa Rica, except for United Fruit, wish to increase their exports considerably in the coming years. They have signed long-term fixed-price agreements with producers for up to 10 years.

United Fruit exports through the port of Golfito on the Pacific coast. Most of the plantations of this firm lie close to this port. Transportation to the port is by truck or by narrow-gauge railway. The firm has its own high-capacity port installations (6 800 t in 24 hrs). Packing is carried out very carefully at the firm's own station, at hourly wage rates. Cardboard boxes are imported, but it is intended to set up a cardboard factory.

Standard Fruit exports through the port of Limon on the Atlantic coast. The plantations are on average 60 km from the port. Transportation to the port is by rail, truck feeders often being necessary. Transportation capacity is adequate, and in 1969 transportation by waterway will be possible for part of the deliveries. This should effect a saving of 60% in transportation costs.

The bananas are loaded under priority on a quay administered by the railway. Loading is carried out on orders of the railway by a private firm. The capacity is 2 300 t in 24 hours. The use of conveyor belts instead of elevators should soon double the loading capacity. Further, it is planned to extend the port installations by two quays.

Packing is by private firms under piece-work rates. There is one centre for every 250 ha of plantation, which represents 1-2 businesses. Imported paper is processed in a cardboard factory.

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252.22 Ecuador

Collection and exporting in Ecuador are in the hands of private firms. There are in all about 30 trading undertakings concerned with the export of bananas, eight of them handling about 90% of the exports. These are listed in Table 25. Some of these are local agencies of European owners and trading firms.

Table 25. Export companies in Ecuador, 1967

	Amounts of exports	
	t	%
Standard Fruit Co.	346 551	27.5
Exportadora Bananera Naboa S.A.	261 604	20.7
Union de Bananeros Ecuadorianos S.A.	182 996	14.5
CAM Exportadora Frutas Ecuador	163 742	12.8
Consorcio de Productores Bananeros	70 121	5.6
Banana Export S.A.	38 923	3.1
Banana S.A.	37 999	3.0
Compagnia Frutera Sud Americana S.A.	24 967	2.0
Jointly	1 126 903	89.2
Others (23 firms)	135 849	10.8
Total	1 262 752	100.0

The Dirección Nacional del Banano (DNB) occupies a central place in the banana industry. It was established by law in 1963 as an executive organ of the Ministry of Agriculture with the task of handling all problems in the selling of bananas, and also of carrying out plant protection. It was given extensive powers. It is not directly active in the banana industry.

Organization of marketing is as follows: exporters take over the goods on board ship. They are there examined by the firm's own inspectors. Through the numerous middlemen (charges 10%) and direct contacts with producers, the importers quickly ensure the availability of the necessary quantities according to ship arrivals. Contractual arrangements between producers and exporters are rare.

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They extend at the most to taking Cavendish varieties, and then usually run only for one year. Efficient producers however often have close relations with exporters.

Packing is carried out in private packing stations. In 1965 there was a total of 285 such installations, 135 of which packed the owner's production only; 113 also undertook packing for other businesses, and 37 packed only against payment. The number of these packing stations in 1967 was estimated at 400. Boxes were manufactured from imported material at two factories in Guayaquil.

The main exporting port in Ecuador is Guayaquil, which loads 90% of exports. Certain amounts from the northern part of the country are loaded at the port of Esmeraldas, and from the south at the port of Bolivar.

Transport to the port is by truck or by boat. The importance of the land route is increasing. The roads to the port are in a varying state of maintenance. Only some of the plantation regions have water communications. Transport distances are up to 300 km, the main production region being about 200 km from Guayaquil.

At Guayaquil, about 30% of the quantities delivered are loaded from a banana quay erected in 1963. The second largest exporter in the country (the firm Naboa) has its own quay. Other deliveries are brought by lighter to ships at anchor in the river. Although the new quay has equipment for banana loading, for socio-logical and political reasons loading is entirely by hand and is therefore expen-sive. At Esmeraldas and Bolivar, ships are mainly loaded in the roadsteads. About half the loading is carried out by the more costly night-shift.

26. Exporting charges

There are considerable differences in exporting charges between the countries. Table 26 gives the individual values. Charges are highest in Somalia, at 12 u.a./t, and are also high on the Ivory Coast and in West Cameroon. Charges are insignificant in Madagascar and Costa Rica.

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As regards the make-up of the charges, it will be seen that on the Ivory Coast, in Cameroon and in Ecuador export duties are the most important items, while in Somalia harbour dues and income tax are the most significant.

Charges in Cameroon were reduced in August 1967 from 17.58 to 9.91 u.a. Charges in Somalia (except for duties) have been set aside for the duration of the closure of the Suez Canal.

Table 26. Duties, taxes and charges in the export of bananas (u.a. per ton net)

	Duty	Harbour or loading dues	Income tax	Other charges	Total
Cameroon West	5.46	-	-	-	5.46
Cameroon East	5.46	0.30	-	4.15[1]	9.91
Ivory Coast	9.72	0.33	-	0.31[2]	10.36
Madagascar	-	-	-	-	-
Somalia S.	2.80	5.60	3.92	0.36[3]	12.68
Somalia G.	2.80	5.60	3.92	0.42[3]	12.74
Costa Rica	0.69	-	-	-	0.69
Ecuador	5.19	0.75	0.28	-	6.22

[1] Including specific tax (former fee for Cercospora control) 3.04 u.a.; financial tax 0.30 u.a.

[2] Charges for cold storage depot.

[3] Plant protection control.

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3. Carriage by sea

Transportation from the producer countries to the consumer countries occupies a central position in the marketing of bananas. Because of long transportation distances, large quantities, and the perishable nature of the fruit, carriage by sea is economic only in special ships with refrigerated and ventilated holds and relatively high speeds. Only on short routes(Canary Is. to Spain, or Central America to Southern USA) can ships whose holds are merely well-ventilated be used, but only a small fraction of world trade is on these routes.

The ships used for the carriage of bananas can be divided into two groups : the first group consists of fruit ships, usually old, which were specially built for the carriage of fruit and can be cooled to about 0°C, or sometimes down to -12°C, while bananas need about + 12°C; the second group consists of cooled and refrigerated ships which can reach temperatures as low as - 20°C and are therefore used for the carriage of deep-frozen meat and fish.

The carriage of bananas is almost entirely in so-called fully refrigerated ships whose entire storage space can be cooled. Small quantities are also transported in ships which are only partly refrigerated, i.e. they have individual cold stores. These amounts on a world scale are small, but all the bananas from Congo-Kinshasa and some of the bananas from other AASM are carried in such ships.

31. Costs of carriage by sea

The carriage of bananas by sea is mainly on a charter basis. The shipping firms hire their ships directly or through other shipping firms to charterers, who then use them for carriage. Charterers are usually trading firms or producer marketing organizations. Some trading firms also run their own ships. [1]

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[1] These ships are usually operated by separate shipping companies. In the banana trade, firms are usually in groups, so that ownership of the shipping company rarely coincides precisely with that of the trading company. The capacity of these fleets usually meets the basic requirement of the trading firms, and in periods of high demand, tonnage is taken from the market.

Various forms of agreement are common between shipping firms and charterers. The two most import forms of agreement are time and voyage charters.[1] In both cases the basis for determining rates is usually the cold storage capacity of the vessel. Only on the Cameroon-France route are the freight rates based on weight.

The cost of carriage by sea is determined by various factors, the most important being:

- sea freight costs
- utilization of the ships
- transport losses.

Sea freight costs, which are related to shipping space, are the decisive item in the level of carriage costs. Utilization of the ships and transport losses can however cause considerable variations in carriage costs even if the freight costs are the same. A relatively complete picture of sea freight costs was obtainable, but data on the other factors was inadequate. Some information could however be provided.

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[1] The time charter is mainly used for longer agreements. Most time charter agreements run from three months up to one year (medium-term). For short periods, especially for round trips, voyage charter agreements are usually concluded. In time charter rates, costs associated with the voyage (fuel, canal and harbour dues, insurance) are not included. The charterer must pay these. However, these costs are included in the lump-sum fios* voyage charter rates.

The level of rates depends upon supply and demand on the refrigerator ship market. The shorter the period of the agreement, the greater the seasonal variations. As the length of the agreement increases the rates generally approach an average annual figure. The rates are highest for short-term agreements during the European peak consumption period for bananas from February to June.

The level of the settlement rates where shipping firms overlap with trading companies is regulated mainly by the market rates, but often prime costs and other factors are taken additionally into account. For this reason, settlement rates often deviate from market rates and cannot therefore be included in the following comparison. In addition, little information is available on these rates.

*Translator's note: free in-and-out and stowed.

311. Sea freight costs

The bases for the following comparison of sea freight costs are the time charter rates, which are most important in banana shipping. Except in the case of long-term fixed rates on certain routes, the figures were obtained on the basis of a large number of time charter agreements and other information. Conference rates are not considered, since they have virtually no part in the carriage trade for bananas. We have used mainly medium-term carriage agreements in the evaluation.

The costs borne by the charterer for fuel, port and canal dues and insurance are not included in the time charter rates. Since the level of these costs (apart from insurance) depends upon the tonnage of the ship, the duration of the journey and the route, they could be calculated with sufficient accuracy.

Insurance premiums are between 0.5 and 3% of the fios rate. In view of the varying amounts, they are not considered in the following data.

Loading and unloading costs are not included in the charter rates, since the agreements are generally concluded on a fios basis. These costs are not generally included in costs of carriage by sea, and are therefore ignored in this section.

From the sea freight costs per unit of space, carriage period and the specific weight of the load (storage factor), the cost of carriage per unit of weight is calculated. It must here be remembered that packing (cardboard) accounts for about 10% of total weight.

Sea freight costs per ton are shown in Table 27 and Figure 13. The values given are for the open market at the margin, in order to show the usual fluctuation dependent upon the market situation and the capacity of the ships. Rates for the Cameroon-France run are not directly comparable with others, since on this route the rates refer to the weight carried, utilization being already included in them.

.../...

Table 27

Carriage by sea costs[1], carriage distances and quantities carried for some important banana trade routes, 1967/68

	Carriage by sea costs, u.a./t	Distance sm	Carriage per 1 000 ton
Africa-Europe:			
Cameroon - France[2] (Douala - Le Havre)	63.5	4.340	46
Madagascar - France			
(Tamatave - Marseille via Cape)	63.5	8.200	17
(" - " " Suez)	.	5 090	.
Somalia - Italy			
(Chisimaio - Naples via Cape)	57 - 61	8 780	74
(" - " " Suez)	.	3 740	.
Ivory Coast - France (Abidjan - Marseille)	50.5	3 380	95
DOM - France:			
Martinique) Guadeloupe) - France (Fort de France - Rouen)	40	3 680	250
Latin America - Europe:			
Ecuador - Italy (Guayaquil - Naples)	44 - 48	6 160	110
Ecuador - Belgium - Holland - West Germany (Guayaquil - Hamburg)	42 - 46	5 920	361
Central Amer. E. Coast - Belgium - Holland - West Germany (Santa Marta - Hamburg)	35 - 39	4 730	413
Central Amer. E. Coast - Italy	38 - 42	.	60
Other routes (selected)			
Ecuador - Japan (Guayaquil - Yokohama)	.	7 990	87
Ecuador - USA (Guayaquil - New York)	.	2 840	453
Formosa - Japan (Keelung - Yokohama)	.	1 140	395

[1] Carriage by sea costs not including the utilization of capacity, insurance, losses, and return freight.

[2] Based on quantity transported.

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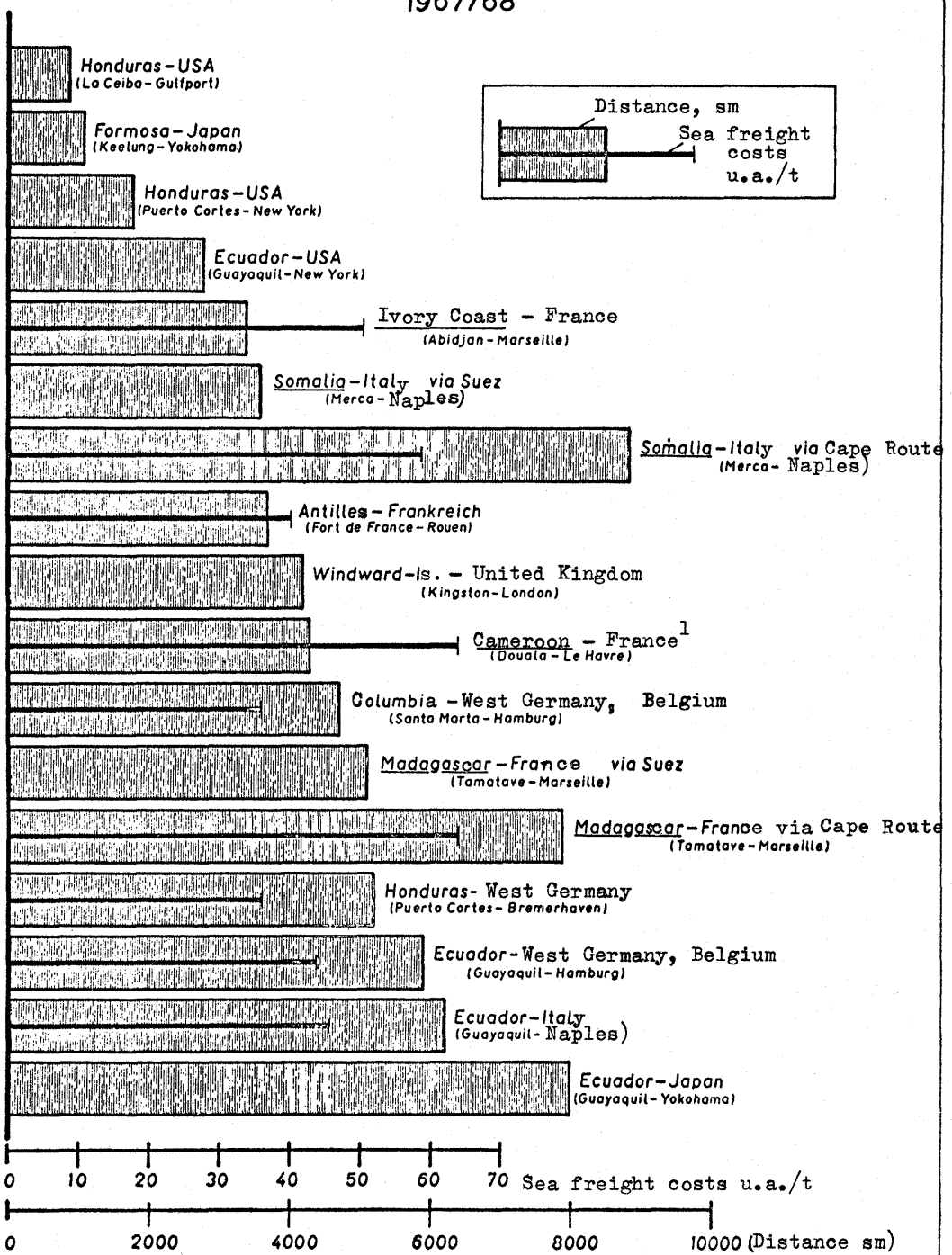
Figure 13

SEA FREIGHT COSTS AND TRANSPORT DISTANCES OF SOME IMPORTANT BANANA TRADE ROUTES, 1967/68

1967/68



1) Amount transported on commission basis; other costs calculated from cold storage capacity at full utilization.

As may be expected, if the routes to France are ignored carriage by sea costs depend mainly upon distance. If it is remembered that the rates for the routes to France are on an average higher than for the remainder of the trade, the same principle applies here also, but with larger variations.

The Ivory Coast, Martinique, Guadeloupe and Somalia via Suez have the shortest distances to their consumer countries, viz. 3 400-3 700 sm (sea miles). Sea freight costs are relatively particularly high for the Ivory Coast-Marseille route: 50.5 u.a./t.

The routes from the Central American East Coast to Belgium, the Netherlands and Germany, and the Cameroon-Le Havre route are 4 300-5 200 sm. The Madagascar-Marseille route via Suez (not now possible) falls into this group at 5 100 sm. On the routes from Central America to the North Sea region, the costs are 35-39 u.a./t, and to Italy 38-42 u.a./t. From Cameroon to Le Havre the costs (not directly comparable) are 64 u.a./t.

The distances from Ecuador to the European ports are 5 900-6 200 sm. Sea freight costs for carriage to the North Sea region are 42-46 u.a./t, and to Italy 44-48 u.a./t.

The longest routes are 8 000-9 000 sm. These include the Ecuador-Japan run, and the routes of East African producers round the Cape of Good Hope. The Somalia-Italy route, almost 9 000 sm, is the longest regularly travelled by banana boats. Sea freight costs at 57-61 u.a./t are here relatively advantageous.

Distances from the Latin American producer countries to the USA are particularly short. Even Ecuador (Guayaquil) to New York is only 2 800 sm. Further, it is only 1 200 sm from Formosa to Japan.

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For a direct comparison of the costs on individual routes, the costs were converted to a standard reference basis viz: the sea freight costs per ton per hour for a ship with a speed of 20 knots and an average berthing time for loading and unloading of 5 days. This gave the values shown in Table 28. It emerges that the routes to France display much higher costs than the others.

Table 28. Sea freight costs per ton per hour for some important banana trade routes, 1967/68[1]

Route	u.a./t/h
Guayaquil-Hamburg	0.103
Turbo-Rotterdam	0.104
Guayaquil-Naples	0.105
Merca/Chisim.-Naples via Cape	0.104
Fort de France-Rouen	0.132
Abidjan-Marseille	0.175
Douala-Le Havre	0.188

[1] Ship fully loaded, and disregarding losses and insurance.

312. Reasons for the differences in sea freight costs

There are various reasons for the differences on various routes. The most important are:

- quantities
- structure of the fleet.

312.1 Freight quantities

Table 27 shows that the quantities transported on the routes from Africa are very small compared with those from Central America. Comparing the number of ships used on the various routes, there were in recent years an average of

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80-100 ships on the run between Latin America and Europe; 50-60 between Latin America and North America; and 15-20 between Africa and Europe. Low freight quantities interfere with the economic use of ships and obstruct competition. No figures are available that permit the freight quantities item to be considered in isolation. However, its importance can be assessed from the differences in the flight prices between the USA-Europe route and other routes of the same length but with less traffic.

The relatively weak links between shipping firms and export organizations in African producer countries usually make it impossible to secure good coordination between transport capacity and the freight quantities, as is generally the case with the better integrated marketing channels of Latin American third countries. The higher transport costs on the Antilles-France route (compared with routes of the same distance) are due to the short-notice tonnage demands of the exporting associations. The shipping firm providing all transport on this route is therefore forced to take short-term tonnage from the market.

312.2 Fleet structure

It will be shown in the following section that the French fleet of refrigerated ships has a relatively unfavourable structure as regards the productivity of the ships and size of the companies. This is partly a consequence of the factors described above.

313. Utilization of the ships

If carriage agreements are on a time charter basis, which predominate in banana shipping, at given sea freight costs the transport costs for the importer or exporter fluctuate according to the utilization of the ships. Only in the rarer cases when rates are related to quantities (as on the Cameroon-France route) is utilization of the ship taken directly into account.

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Utilization of ships depends upon their storage space and their turn-round times. Figures on the degree of utilization on individual routes may be obtained by comparing the maximum performance of a representative number of ships with their actual performance. Adequate data for this are not available.

Table 29 gives the average quantities unloaded per ship on the individual routes, and provides an indirect picture of the utilization of loading capacity. It should be remembered that on the African routes the vessels used are relatively small, and that part-cargoes are often unloaded in Marseille. Even so, the average deliveries suggest low ship utilization on the African routes. On the

Table 29. Average unloadings per ship at important ports of destination from certain exporting countries, 1967

	Av. unloading (t)	No. of runs	Total amount (t)
Hamburg from Ecuador	2 470	144	355 000
Hamburg from Colombia	1 400	52	72 800
Bremerhaven from Colombia and Honduras	1 915	181	346 000
Hamburg from Canary Is.	225	51	11 500
Dieppe from Martinique	1 515	64	96 800
Rouen from Martinique	1 650	57	93 900
Dieppe from Guadeloupe	1 540	28	43 100
Rouen from Guadeloupe	1 555	20	31 100
Marseille from Ivory Coast	970	81	78 600
Marseille from Madagascar	870	18	15 600
Le Havre from Cameroon	955	52	49 600
Civitavecchia from Ecuador	1 890	23	43 500

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Ecuador-Europe route, utilization is known to be relatively high, 90-95%.

A survey of loading times in producer countries has already been given (Table 21). These are often considerably longer in African countries than in Latin American countries. In Somalia and Cameroon, two ports must be visited to make up one load. The Ivory Coast is the exception among the AASM, with relatively short loading times.

The European banana-importing countries, apart from Italy, have very efficient unloading installations, which enable unloading to be effected in a relatively short time (Table 43). Unloading in the Italian ports leaves something to be desired, both as regards time and handling of the goods.

The reasons for the varying ship utilization are mainly to be found in the organization of collection, transportation and loading, the quantity to be transported, and the efficiency of loading and unloading installations.

Ship utilization depends also upon the preparation of an optimum timetable: efficiency can depend greatly upon this, especially with large fleets. Planning for all the ships used by United Fruit on the route to North-West Europe is carried out by the Swedish shipping firm, Salen.

Finally, return freight plays a part in ship utilization. The possibilities for taking on return freight are limited by the special nature of the refrigerated ships (small hatches, inadequate loading gear, low deck heights) and the often long-term fixed timetables. Only certain freight can therefore be considered. The route to the Latin American countries offers European ships an opportunity to carry cars for export to the USA East Coast.[1] Significant freight quantities are

.../...

[1] The mean rate at the beginning of 1968 for a medium-class car was 60 u.a./fios for Hamburg/USA East Coast. A 300 000 cub. ft. ship can take 350 medium-class cars and thus earn a revenue of $21 000 per journey on this route.

transported by United Fruit from the USA and Great Britain to Central America and Jamaica, and by French shipping firms to African countries.

314. Transport losses

Transport costs increase with transport losses. These are due to spoiling, damage and evaporation. The losses increase with carriage time, and usually increase with the length of routes and the age of ships. Transport losses are less with newer ships because the air-conditioning units are more efficient. In so far as transport losses are attributable to different types of ship, they are reflected in the sea freight costs. Transport losses also depend upon the condition of the goods, which alters with origin and season. Detailed figures on the level of losses are available only from Italy from the period before the closure of the Suez Canal. For the relatively old ships then used, they were over 10%. They would today seldom exceed 5% of the cargo.

32. Structure of the fully-refrigerated ship fleet suitable for banana transport

To round off the picture of sea transport, the structure of the fully-refrigerated ship fleet will be considered.[1]

Refrigerated ships are also used for the carriage of other goods (meat, fish, fruit), but the number of ships active in banana shipping is 60-80% of the refrigerated ship fleet, and therefore has a decisive effect upon its structure.

321. Size of the refrigerated ship fleet in the individual countries

Figure 14 gives a general survey. As is apparent, the main concentration of the world's refrigerated ship fleet is in Western Europe. West Germany and Sweden clearly have the biggest fleets and also on average relatively large ships.

.../...

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[1] This does not include ships built solely for the carriage of frozen goods such as meat or fish, or ships under 120 000 cub. ft. cold storage capacity. Ships below this cold storage capacity usually have no part in transoceanic shipping.

Figure 14

HOMELANDS OF THE COOL SHIP FLEET SUITABLE FOR BANANA TRANSPORT

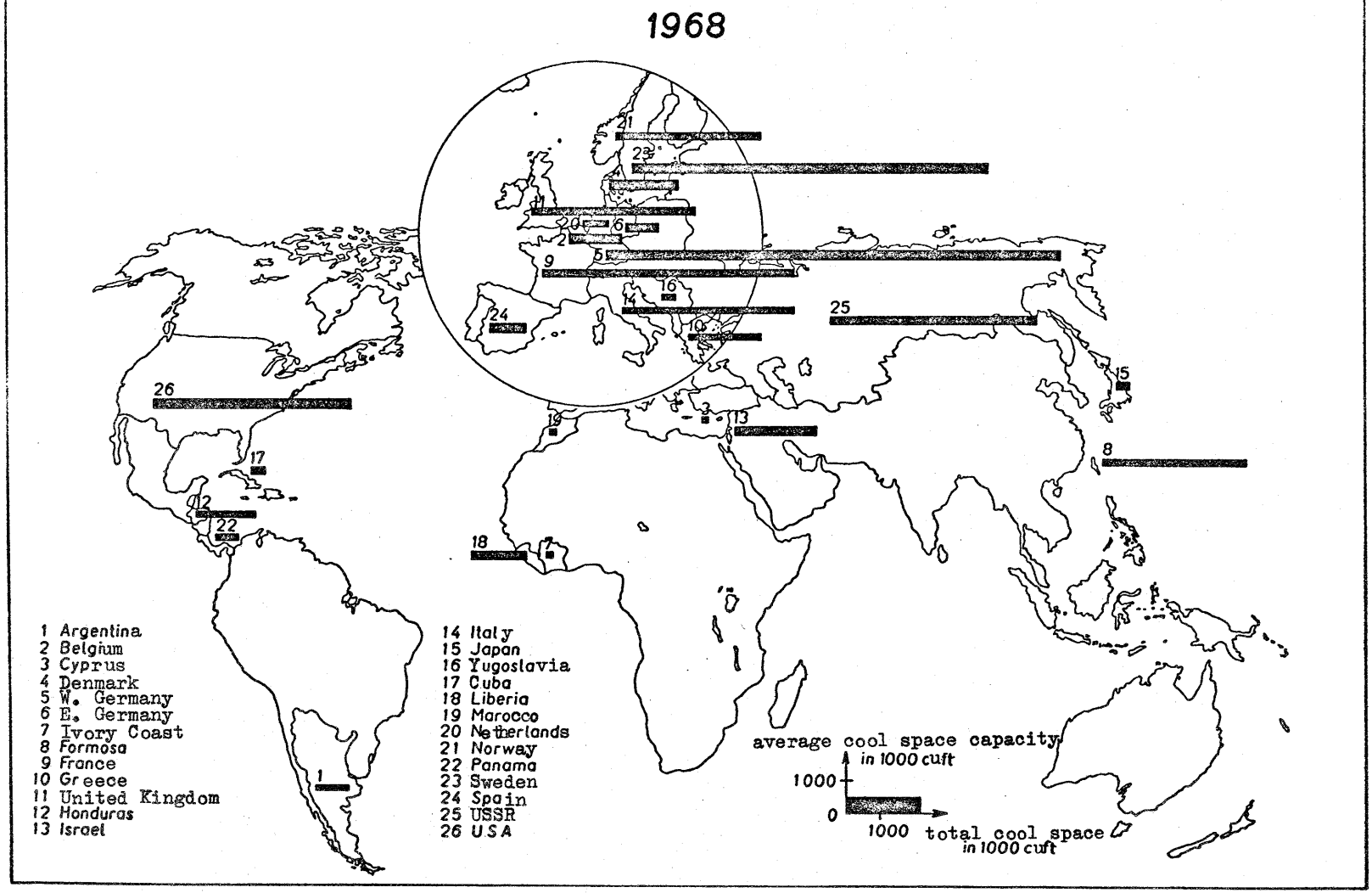

Table 30 gives details of the shares of individual countries in the world's refrigerated ship fleet. The EEC has 35.5%, of which West Germany has 47.5%.

Table 30. Shares of the individual countries in the world's refrigerated ship tonnage, 1967

	No. of ships	Cold storage capacity ('000 cub. ft.)	% of world refrig. fleet	% EEC fleet = 100
West Germany	50	13 722	16.8	47.5
France	39	7 612	9.3	26.4
Italy	24	5 181	6.4	17.9
Belgium	5	1 591	2.0	5.5
Netherlands	4	789	1.0	2.7
EEC total	122	28 895	35.5	100.0
Sweden	34	10 705	13.1	
USSR	26	6 232	7.6	
USA	22	6 033	7.4	
Great Britain	20	4 943	6.1	
Norway	19	4 436	5.5	
Formosa	20	4 267	5.2	
Israel	8	2 626	3.2	
Others[1]	62	13 360	16.4	
Total	333	81 497	100.0	

[1] 24 countries.

As Table 31 shows, cold storage availability in relation to the quantity of exports is relatively high in the EEC compared with the world as a whole. This is largely because of the long distances to producer countries. Within the EEC the shipping firms of West Germany have far more cold storage in relation to the

.../...

quantity of imports than those of other countries. The relatively low cold storage of the Dutch fleet is in part because this country is mainly supplied by the United Fruit fleet.

Table 31. Ratio of cold storage space to quantity of imports in EEC countries and the world, 1967

	Cold storage ('000 cub. ft.)	Imports ('000 t)	Cold storage per t of imports
	1	2	1:2
Belgium-Luxembourg	1 591	93	171
West Germany	13 722	606	226
France	7 612	444	171
Italy	5 181	319	162
Netherlands	789	96	82
EEC total	28 895	1 578	183
World, total	81 497	5 418	150

322. Productivity of fleets of individual countries

The productivity of the fleets of individual countries is determined mainly by the size and speed of the ships. Both factors depend largely on the age of the ships.

322.1 Size and speed

Table 32 gives the average cold storage per ship of the world's refrigerated ship fleet and of the fleets of individual EEC countries. The average cold storage of the fleets of all countries is shown in Figure 14. The EEC average per ship is below the world fleet figure. This is mainly because of the small ships in the French and Italian fleets. The Netherlands fleet also has small units, but because its capacity is small it does not greatly affect the EEC average.

.../...

The average cold storage capacity per ship in the Belgian and West German fleets is above world average.

Table 32. The development of average[1] cold storage per ship, 1942-67 (in '000 cub. ft.)

Year of construction	World	EEC	Belgium	West Germany	France	Italy	Netherlands
1942 and earlier	198	228	-	279	-	195	-
1943-1947	254	-	-	-	-	-	-
1948-1952	192	192	-	-	182	198	-
1953-1957	208	203	-	231	188	191	256
1958-1962	232	207	-	233	192	175	139
1963-1967	304	290	318	306	226	263	-
Average[1]	245	237	318	274	195	216	197

[1] Weighted average.

As increasing quantities are carried, the cold storage and speed of ships (especially on the Latin America-Western Europe route) have in the last 25 years considerably increased, and carriage has therefore become more efficient. As Table 32 shows, ships built before 1942 have average cold storage of 198 000 cub. ft, while the corresponding figure for ships built between 1963 and 1967 is 304 000 cub. ft. There are no direct figures for the increase in speed in relation to year of building, but indirect indications in fact relate speed and size. Ships of the world refrigerated ship fleet with a speed of 16-17 sm/hr have an average of 196 000 cub. ft./t, while ships of 20 sm/hr and over have average cold storage of 303 000 cub. ft./t.

.../...

A further increase in ship size can be expected in the immediate future, but there are limits to the increase in speed.

322.2 Age

Table 33 shows the distribution of the refrigerated ship fleet of the world and EEC countries by age groups. The EEC fleet has a better age structure than the world refrigerated ship fleet. In particular, the Belgian and German fleets have a high proportion of ships built since 1962. The bulk of the French fleet was built in 1958-62. Compared to other branches of shipping, the world refrigerated ship fleet has a very favourable age structure. The great new increases will have the effect that older vessels become obsolete very quickly.

Table 33. Age structure of the refrigerated ship fleet suitable for banana transport (as at 1.1.1968), % of the total fleet

Year of construction	World	EEC	Belgium	West Germany	France	Italy	Netherlands
1942 and earlier	5	4	-	4	-	11	-
1943-1947	6	-	-	-	-	-	-
1948-1952	11	7	-	-	10	23	-
1953-1957	14	15	-	7	27	18	65
1958-1962	24	28	-	29	45	7	35
1963-1967	40	46	100	60	18	41	-
Total cold storage	100	100	100	100	100	100	100

.../...

The number of ships in service or under construction at 1 January 1968 is shown in Table 34. The total is 22 410 000 cub. ft.

Table 34. New refrigerated ships commissioned or under construction (as at 1 January 1968; delivery 1970 at latest)

	No. of ships	'000 cub. ft.	%
West Germany	13	4 635	20.7
France	12	4 208	18.8
Belgium	3	1 081	4.8
EEC total	28	9 924	44.3
Israel	6	2 496	11.1
USSR	5	1 400	6.3
Ecuador	4	1 200	5.9
U.K.	3	1 080	4.8
Brazil	4	860	3.8
Liberia	3	930	4.1
Norway	3	890	4.0
Others	13	3.630	16.2
Total	69	22 410	100.0

This is about 20% of the cold storage of refrigerated ships in use. EEC countries account for about 44% of the cold storage of the new ships, and West Germany for 24%. Twenty-eight refrigerated ships were under construction for the EEC countries. It is notable that no Italian shipping firms have orders in hand and that there is a high contract volume of French undertakings, which put no new ships into service in 1966 and 1967. It is interesting that in France, for reasons of rationalization, six refrigerated ship undertakings have decided to take delivery of eight refrigerated ships of the same type.

323. Size structure and interlocking ownership of shipping companies

In addition, the size structure and ownership are important characteristics of the world refrigerated ship fleet.

.../...

323.1 Size structure

Table 35 gives a survey of the distribution of the shipping companies and of the cold storage of the world fleets and of EEC countries in the individual size classes. The world refrigerated ship fleet is owned by 98 undertakings, 37% of which possess only one ship. These companies, mainly Greek and Nationalist China, have 10% of the cold storage of the world refrigerated ship fleet. Firms with 10 ships or more, which account for only 6% of the total of shipping companies, have 29% of the cold storage of the world fleet. The next largest share is owned by firms with 3-5 ships, which form 30% of the companies and 34% of the cold storage.

The structure of the fleets within the EEC departs somewhat from that of the world refrigerated ship fleet. The percentage of large firms is greater and that of small firms lower than the world average.

West Germany has the highest proportion of large firms, while in France and Italy the bulk of companies are in the 3-5 ships class. The total number of companies in these three countries is between seven and nine. There is only one firm in Belgium with five ships, and in the Netherlands two firms each with two ships.

.../...

Table 35 Size structure of the world and EEC refrigerated ship fleets, 1967

Size	Share of the individual sizes of company													
No. of ships per firm	% of number of firms							% of cold storage						
	World	EEC	Belg.	Germ.	France	Italy	Nether-lands	World	EEC	Belg.	Germ.	France	Italy	Nether-lands
1	37	15	-	-	22	29	-	10	3	-	-	5	8	-
2	19	26	-	38	11	14	100	10	10	100	10	5	7	100
3 - 5	30	33	100	-	56	43	-	34	27	-	-	54	44	-
6 - 9	8	15	-	38	-	14	-	17	28	-	43	-	41	-
10 and over	6	11	-	24	11	-	-	29	32	-	47	36	-	-
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Number of firms							Cold storage (1 000 cub. ft)						
Basis	98	27	1	8	9	7	2	81497	28895	1 591	13722	7 612	5181	789

The average ship size increases with the number of ships per company up to the 8-9 ships per firm group, and then falls slightly for the largest firms, as shown in Table 36.

Table 36. Average cold storage per ship, by size of firm ('000 cub. ft.)

No. of ships per firm	EEC	World
1	199	217
2	207	213
3	216	218
4-5	204	253
6-7	291	259
8-9	270	270
10 and over	254	258
Average[1]	237	245

[1] Weighted average.

323.2 Interlocking ownership

On the national and international plane there is various interlocking between shipping firms, and between shipping firms and trading firms. If the world refrigerated ship fleet is considered, it will be seen that the ownership structure is such that the six largest owners have direct control over about 38% of the total tonnage. The firms and their shares are given in Table 37.

.../...

Table 37. The world's largest refrigerated ship fleets

	No. of ships	'000 cub. ft.	% of world fleet
United Fruit Co., Boston	40	9 463	11.7
USSR Govt., Moscow	26	6 232	7.7
Salén S., Stockholm	18	6 075	7.5
Laeisz & Partner, Hamburg	12	3 436	4.2
Cie Gén. Transatlantique, Paris	15	3 222	4.0
Bruns W. & Co., Hamburg	11	2 976	3.7
Total	122	31 404	38.8

The influence of these six owners is much greater than the figures indicate, since the firms of S. Salén, United Fruit, Cie Générale Transatlantique and the USSR Government (Sovfracht) always have a large number of other refrigerated ships on charter, especially time charter. The Salén group alone at times operates 40-50 refrigerated ships. The Sovfracht vessels are used mainly for carriage of fish and meat. Fourteen of the ships sailing under the United Fruit flag were chartered by the USA Government at the beginning of 1968 for service between the USA and South Vietnam route.

As concerns interlocking between shipping firms and trading firms in the EEC countries, of the 27 shipping firms there operating, six firms accounting for 33% of the total cold storage of the EEC fleet are closely connected, usually in the form of participations in banana exporting or importing firms. Of these six shipping firms, three accounting for 30% of the cold storage of the EEC fleet belong to West Germany. Within these interlocking companies, the ships are generally on long-term charter, often for over a year.

The other 21 shipping firms are independent in law, but even here certain firms work closely together for various reasons.

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4. Marketing in the consumer country

41. General survey

The marketing of bananas in the consumer country is in the EEC countries generally in three trading stages: import, wholesale and retail.

With the exception of France, the import trade largely obtains the goods from the producer regions at its own risk and sells to the wholesale companies in the consumer countries. Associated with this is the carriage from the producer country to the consumer country and the transfer from ship to truck or rail. In France, however, bananas are imported on a commission basis. The risks in pricing and selling in this case lie with the producers, who are responsible for carriage by sea and unloading costs through appropriate organizations. Organization of the unloading itself is in the hands of the importers, who sell the bananas free on truck or railway wagon to the wholesale trade.

Bananas are imported mainly through firms specializing in this product. In cases where general fruit importing firms handle the import of bananas, there is usually a specialized branch of the firm for this purpose. The banana import trade is almost entirely located at the importing ports.

The wholesale trade's function is the regional distribution, and often ripening, of the bananas. The firms are therefore widely scattered, and preferably located in the regional centres of population. If the fruit requirement of a country is met largely by imports and these are mainly distributed through large markets, for example in West Germany, the banana wholesale trade is mainly located

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at these markets. In countries with a high home supply of fruit, where the central markets sell mainly the local produce, the banana wholesale trade's marketing network is often separate from the marketing arrangements for other fruit, for example, in Italy.

Ripening is mainly in the hands of the wholesale firms. To a small extent, purely servicing firms also participate in this activity. As the ripening time can be varied by the ripening temperature, ripening forms an important buffer in the marketing system.

The banana wholesale trade generally comprises one stage, but sometimes there is a secondary wholesale stage, which supplies mainly the retail trade in more distant regions.

The firms at the primarily wholesale stage usually sell only bananas, but the secondary wholesale stage generally sells a full range of fruit and vegetables.

The wholesale trade often supplies the retail trade free at destination. As the selling activities of banana trading firms increases, the trend is towards shortening delivery intervals. The selling risks of the retail trade can in this way be reduced, and a more uniform quality of supply can be provided. Conditions for this generally improve as the number and concentration of buyers increases. Retail firms in the vicinity of large markets or similar centres often themselves go there to obtain all their fruit and vegetable requirements.

The <u>retail trade</u> is widely scattered according to the distribution of consumers. It sells bananas almost entirely as part of a more or less wide assortment of fruit and vegetables. In most EEC countries, general grocery outlets are the most important, but large quantities (especially in France and Italy) are sold through specialist fruit and vegetable stores. Market and street traders also play a certain part in the sale of bananas.

.../...

As regards integration of the trade, the firms in the three levels of trade referred to are to some extent independent, but there are also varying degrees of interlocking. The ties were at one time mainly between the import and wholesale trades, but integration between wholesale and retail trades is increasing in importance. Close collaboration between the import trade and the wholesale trade enables the import trade to sell with less risk, since it can use the ripeners as a regulator. Bananas are therefore often sold before they arrive in port. The arrival of the ships is wherever possible timed for a certain day of the week, and in this way marketing is given a steady rhythm. Arrival days are preferably at the beginning of the week, so that the bananas can be ripened for the peak demand at the weekend.

In the following section, marketing arrangements in EEC countries will be examined in detail. Prices and profit margins will form the initial basis for this. The subsequent investigation of the marketing structure will show the causes determining prices and margins from time to time.

The level of prices and margins was arrived at from official price statistics and from special inquiries. The following study is primarily based on average values in recent years. Price trends are considered in a separate section.

42. Prices and profit margins from unloading (cif) to consumer

As shown in Table 38, cif prices in the EEC countries vary greatly. They have in recent years been about 140 u.a./t in Germany and the Benelux countries, and 210 u.a./t in France.

The cif price in Italy has occupied an intermediate position between them. Retail trade prices were between 305 and 526 u.a./t. The margins are therefore between 165 and 356 u.a./t; this is 91-209% of the cif price.

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Table 38. Total profit margins from cif to retail trade

	cif price	retail trade price	total profit margin gross	including		
				duties, taxes, charges	handling and transport	total profit margin net
			u.a./t			
Belgium-Lux.	140	420	280	70	12	198
West Germany	140	310	170	22	14	134
France	210	400	190	6	21	163
Italy	170	526	356	154	24	178
Netherlands	140	305	165	38	12	115
			% of cif price			
Belgium-Lux.			200	50	9	141
West Germany			121	16	10	95
France			91	3	10	78
Italy			209	91	14	104
Netherlands			118	27	9	82
			in % of retail trade price			
Belgium-Lux.			67	17	3	47
West Germany			55	7	5	43
France			48	2	5	41
Italy			68	29	5	34
Netherlands			54	12	4	38

The total profit margin therefore provides only a general idea of the difference between import prices and retail trade prices. Since it includes items that are not under the control of the trade, it forms no criterion of marketing efficiency. For a closer picture it is necessary to break down the total profit margin into the following components: general expenses (duties, taxes, and other charges), handling and transport costs, and the total profit margin net.

.../...

This breakdown (Table 38, Fig. 15) shows that the taxes, duties and other charges are relatively high. In Belgium-Luxembourg they form 50% of the cif price, and in Italy 91%. In West Germany and France this item is relatively low, but in both countries there was a rise in 1968. The nature and level of the duties, taxes and charges in the different countries are shown in Table 39.

The costs of handling in port and transportation to the wholesale trade are 12-24 u.a./t, i.e. 9-14% of the cif price. In France and Italy, handling and transportation are relatively costly.

Table 39. Duties, taxes and charges in the marketing of bananas, 1967

	Import duty %	Import tax %	Import turn-over tax %	Consum. tax u.a./t	Turnover tax		
					ripener %	whole-saler %	retailer %
Belgium-Lux.	18[1]	0.4	14	-	0.7	0.7	5
West Germany	12	-	3.7	-	-	-	5
France	20[2]	1.9	-	-	-	-	-
Italy	20[3]	0.7	-	144[4]	-	-	-
Netherlands	18	0.4	6.75	-	-	-	-

[1] Duty-free imports from Congo-Kinshasa, Rwanda, Burundi, Surinam; 3.7% on imports from the other Associated States.

[2] Imports from the franc area duty-free; other AASM 5%.

[3] Third countries, AASM duty-free.

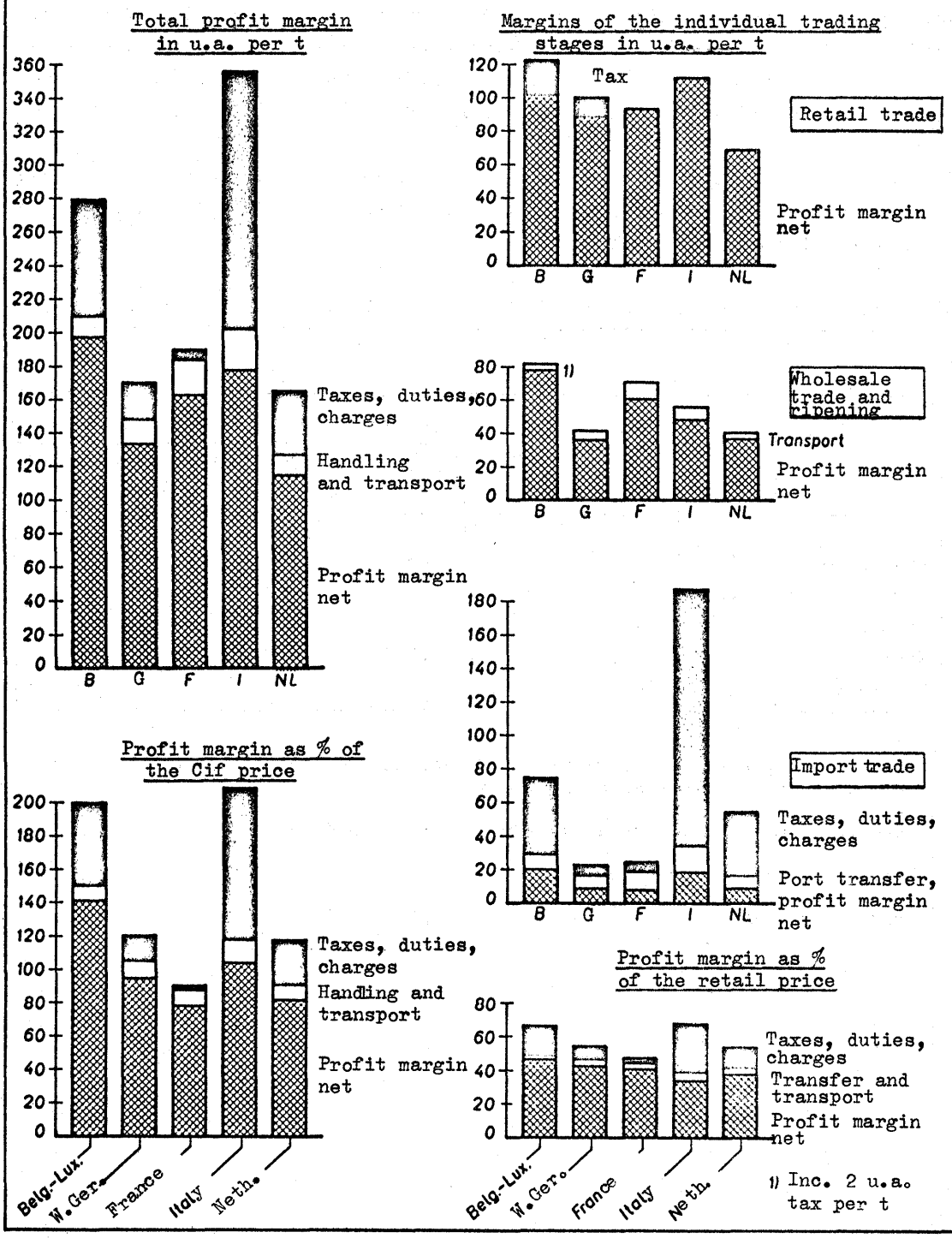
[4] Somalia 96 u.a./t.

.../...

Figure 15

PROFIT MARGINS IN BANANAS, 1966/67

(in units of account (u.a.) per t and %)



The net total profit margin provides an insight into the efficiency of marketing. In comparing this margin in the various EEC countries, the level of the price must be considered, since a higher price level requires a higher absolute margin in view of the greater risks associated therewith.

As concerns the level of the net total profit margin, the figures for the EEC countries are 115-198 u.a./t. They raise the cif price by 78-141%. The figures for France are not directly comparable with those of the other countries, since the French import trade does not have to bear a direct pricing and selling risk because it sells on commission, as previously mentioned. In addition, the retail trade price is legally restricted. It may therefore occur that part of the marketing costs for bananas are switched to other products. There are no figures available on the level of increase which would make the French net total profit margin comparable with that of the other EEC countries, but a small rise would bring it into the area of the figures for Italy and Belgium-Luxembourg; these are 30-40% higher than the margins in the Netherlands and West Germany.

43. Import trade

431. Import profit margin

In addition to compensation for trading operations, the import profit margin also includes cost of transfer from ship to truck or railway. It usually also includes duties, taxes and other general charges. These are sometimes paid by the wholesale trade, but in this investigation they are included in the import profit margin. Compensation for trading, supply and transportation operations which are carried out by import firms outside the consumer country are not included in the import profit margin.

As shown in Table 40, reloading costs in countries with open markets are the same (8 u.a./t), while in France and Italy they are much higher. However, as a

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percentage of import selling price the reloading costs are remarkably uniform (4-5%).

The countries differ considerably in their net import profit margin. In West Germany and the Netherlands it is about half that in Belgium, Luxembourg and Italy. The French margin is not directly comparable, in view of the low risks of commission selling. For the narrower range of operations it is only a little below the margins in Germany and the Netherlands.

The level of the net import profit margin is determined mainly by the trading structure, and the level of reloading costs by the circumstances at the port.

Table 40. Import profit margin

	Price cif	Import selling price	Import profit margin gross	including		
				duties, taxes, charges	port reloading	import profit margin net
			u.a./t			
Belgium-Lux.	140	215	75	47	8	20
West Germany	140	163	23	6	8	9
France	210	235	25	6	11	8
Italy	170	358	188	154	16	18
Netherlands	140	195	55	38	8	9
			% of import selling price			
Belgium-Lux.	-	-	35	22	4	9
West Germany	-	-	14	4	5	5
France	-	-	11	3	5	3
Italy	-	-	52	43	4	5
Netherlands	-	-	28	19	4	5

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432. Structure of the import trade

Figure 16 gives an introductory survey of the market shares of the main importing firms in the EEC countries. The market shares vary considerably between the individual groups of firms. Apart from the French importers, all however attain certain minimum shares. France has no undertakings with very large market shares.

A number of firms and groups of firms operate in several countries, but only the United Fruit Co. is represented in all EEC countries. The quantities sold by United Fruit through subsidiary firms and other agencies are of at least the same order as the most important of other importers, and often greatly exceed these. United Fruit therefore has a dominant position on the banana market of the whole EEC.

There is interlocking between importers of the Benelux countries and of West Germany. The larger firms and groups in West Germany operate almost exclusively in their own country. Import firms in the French market only rarely have connections with the trade in other countries, because of the special circumstances. The French firm associated with United Fruit also purchases outside the central procurement system of United Fruit. Through the sales organization of the Ivory Coast (COBAFRUIT) there are ties between the importing organization in France (OCP) and an Italian importing firm which imports from the Ivory Coast (COMAFRICA). Commission trading and import regulations have limited until now the need for and possibility of concentrating trade and reducing the number of supplying countries. There are in France about 50 importing firms, the largest of which have market shares of 10-16%. Many firms specialize in particular regions. Some producer organizations themselves own or participate in importing firms.

Independent wholesale firms did not appear in Italy until after the liquidation of the banana monopoly on 1 January 1965. Some of these are firms that

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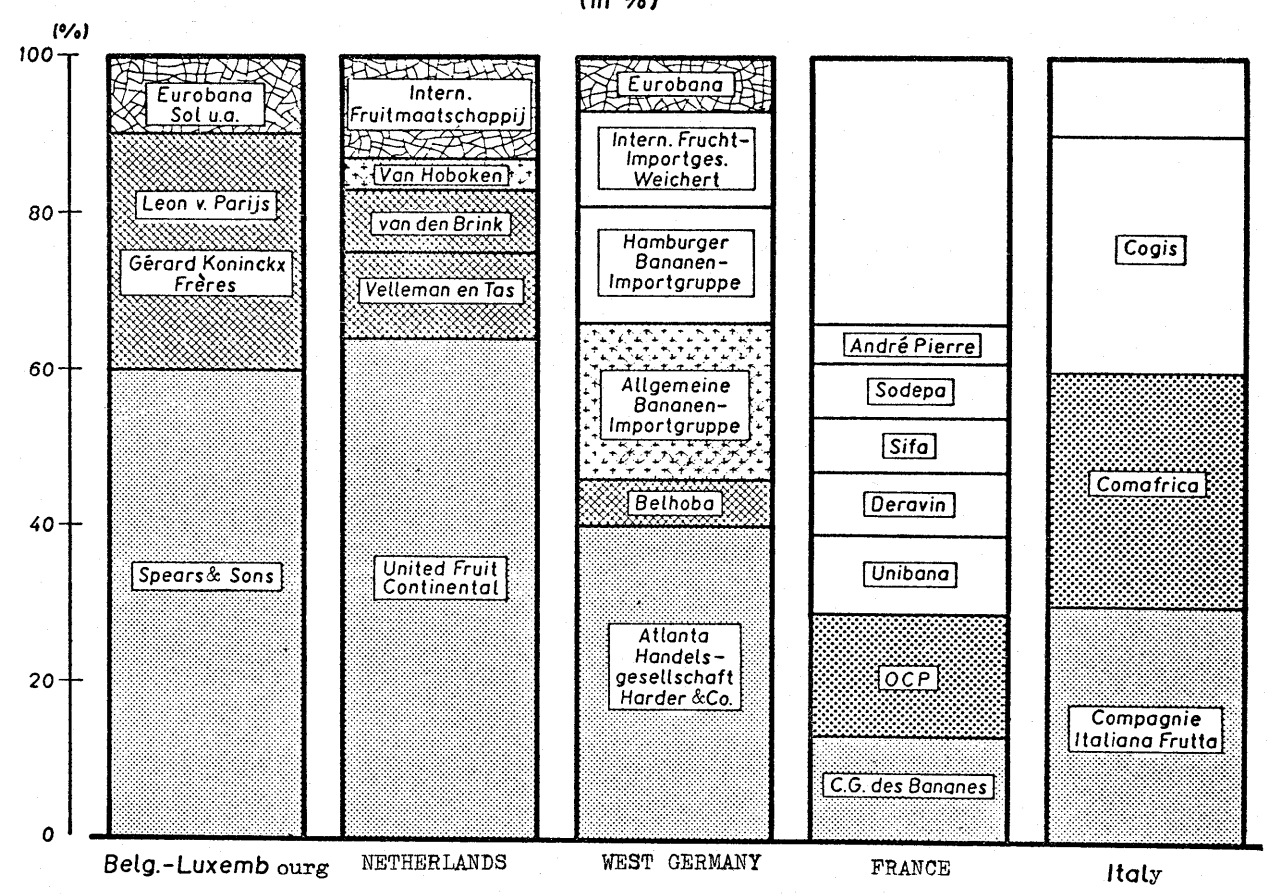
Figure 16

MARKET SHARES OF IMPORTANT BANANA IMPORTING FIRMS AND GROUPS OF FIRMS IN THE INDIVIDUAL EEC COUNTRIES (in %)



supplied the monopoly, before its liquidation, with bananas from countries other than Somalia, or who were active only as distributors.

The Italian trade structure has not yet settled down as concerns the sale of bananas from Somalia. The unified producer organization in Somalia has recently appeared on the Italian market with its own marketing organization.

Details of the importing firms operating within the EEC are given in the next section, which deals first with internationally-active firms (432.1 to 432.4) and then with firms which import into one country only.

432.1 Internationally-active importing firms and groups of firms

United Fruit Co.

The United Fruit Co. (trade mark: Chiquita) is the most important banana trading organization in the EEC. Its direct or indirect market share in the individual Member States is shown in Table 41.

Table 41. United Fruit Co.'s market share in the EEC countries, 1967

Country	Market share (%)	Quantity of imports (t)
West Germany	42	250 000
Netherlands	65	65 000
Belgium	60	46 000
France	14	62 000
Italy	30	95 000
Total		518 000

United Fruit also leads in the world market. It has considerable market shares in the most important consumer countries, such as USA and West European

.../...

third countries. Its head office for Europe is in Rotterdam. It imports and markets in the individual Member States through the following firms:

West Germany	Atlanta Handelsgesellschaft Harder u. Co., Bremen
Netherlands	United Fruit Continental, Rotterdam
Belgium	Spears & Son, Antwerp
France	Compagnie Générale des Bananes
Italy	Compagnia Italiana Frutta C.I.F.

The firms in the Netherlands, Belgium and Italy are subsidiaries of United Fruit; there are contractual ties with the firms in Germany and France.

Bananas for Germany and the Benelux countries are obtained entirely from Central America. United Fruit has its own extensive plantations, supplemented by contract planting with centres in Honduras, Costa Rica and Colombia. The firm's own plantations in Ecuador have meanwhile given up. Only small quantities have as yet been exported to Europe from Costa Rica.

The Compagnie Générale des Bananes in France imports from Cameroon and Surinam. The State import regulations impose limits on the choice of sources. United Fruit operates through contract planting in Surinam.

United Fruit supplies the Italian market from various sources, but here also much of the supply comes from Central America. The main selling centre of the Italian subsidiary is in North Italy.

United Fruit prefers to market bananas of its own variety, Valery; this is a variety of the Cavendish group. It has promoted the changeover to this variety in its supply area, and so instituted a strong trend towards Cavendish varieties with other firms also.

General Banana Import Group, Hamburg (Alba-group; trade mark: Onkel Tuca)

The General Banana Import Group, Hamburg, has about 18-20% of the German market (about 115 000 t) and through the Hoboken firm has 4% of the Dutch market

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(about 4 000 t). The group consists of the following firms:

- O. Lehmann & Sons, Hamburg
- Edeka-Fruchtkontor GmbH, Hamburg
- African Fruit Company Laeisz & Co. (AFC), Hamburg
- Continentale Frucht-Importgesellschaft Maeder Co., Munich
- A.v. Hoboken u. Zn., Rotterdam.

Imports via Hamburg are mainly through the group's own company in Ecuador.

Belhoba group (trade mark: Sundrop, Tropica)

The Belhoba group operates in Belgium-Luxembourg, the Netherlands and West Germany. In Germany it has a market share of 5-7% (about 35 000 t), in the Netherlands 19% (about 20 000 t), and in Belgium-Luxembourg 30% (about 22 000 t). It consists of the following firms:

- Leon v. Parijs, Antwerp
- Gérard Koninckx Frères, Antwerp
- Van den Brink, Rotterdam
- Velleman u. Tas, Rotterdam.

The entry port of this group is Antwerp, with Ecuador as the main supplying country.

Eurobana

This group is associated with Standard Fruit and Shipping Co. of New Orleans. It has a market share in West Germany of 7-10% (about 50 000 t), and in the Netherlands of 13% (about 13 000 t), while in Belgium its share is negligible. The following firms belong to this group:

- Astheimer, Hamburg
- T. Port, Hamburg
- Gebr. Kamstra (Internationale Fruitmaatschappij), Rotterdam.

.../...

This group has its centre in Hamburg, with a sub-office in Brussels. It orders from various Latin American countries, with Antwerp as the entry port.

432.2 Other importing firms and groups of firms

432.21 West Germany

The Hamburg Bananen-Importgruppe (HBI; trade mark: Bajella) has a market share of 14-15% (about 80 000 t) in West Germany. The group comprises the firms Willi Bruns, August Stier and J.A. Kahl. Imports are through Hamburg, and mainly from Ecuador.

The Internationale Fruchtimportgesellschaft Weichert u. Co. (trade mark: Columbia) has 10-12% of the market (about 70 000 t). Imports are through Hamburg and exclusively from Colombia.

Various other Hamburg importers handle exports from the Canary Islands. These are in smaller quantities whose carriage does not require special ships because of the short distance.

432.22 France

The main French importers are shown in Table 42.

Table 42. Main French importing firms

	% of market	Quantity imported (t)
From Martinique		
Unibanana	10	45 000
Sifa	7	30 000
André Pierre	5	20 000
From Guadeloupe		
Deravin	9	40 000
Sodepa	7	30 000
From the Ivory Coast		
O.C.P.	16	70 000
From Cameroon & Surinam		
C.G. des Bananes		
from Surinam	3	15 000
from Cameroon	10	45 000
From the Congo		
Charmasson	.	.
From other countries		
Pomona	8	35 000

.../...

The OCP (Organisation Commerciale de la Production) is the Ivory Coast's marketing organization and markets all produce of this country. The Pomona firm is an important French fruit-trading company with numerous selling organizations. In addition to its own imports it ripens about 55 000 t from other importers.

432.23 Italy

In 1967, 90% of the Italian market was supplied by three firms with about equal shares of the market (30% = about 96 000 t).

COMAFRICA is associated with the Ivory Coast's export company. It operates mainly on a commission basis and sells not only Ivory Coast bananas but also bananas from Somalia, Guadeloupe, Martinique, Ecuador and the Canary Islands.

Compagnia Italiana Frutta is the Italian branch of United Fruit. It buys bananas in producer countries, particularly in the Central American supplying countries of this firm. Imports from Somalia have been greatly restricted.

COGIS (Compagnia Generale Interscampi) includes important Italian firms such as Montecatini, Fiat and Pirelli. They acquire the bananas from the planting regions, mainly from Somalia and Ecuador.

As well as these three firms, there are various smaller concerns which obtain their goods mainly from importers in Munich, Amsterdam and Hamburg. Their market share is about 10%.

433. Banana entry ports

Bananas are unloaded almost entirely at ports with special unloading facilities. Only small amounts, arriving in general cargo boats, are unloaded at other ports. These shipments are insignificant in relation to the total imports of the individual countries. The following table gives a survey of EEC ports with unloading facilities for bananas and their capacity.

.../...

Table 43. Transhipment at the banana ports of EEC, 1967

	Total transhipped (t)	No. of elevators	Unloading capacity	
			t/hr	boxes
Belgium				
Antwerp	217 000	4	208	16 000/13 kg
West Germany				
Hamburg - old install.)	439 300	5	98	7 500/13 kg
new install.)		4	130	10 000/13 kg
Bremerhaven	346 000	4	170	8 500/20 kg
Netherlands				
Rotterdam	135 000	4	240	1 200/20 kg
France				
Dieppe	149 200	5	120	9 000/13 kg
Rouen	129 100	5	120	9 000/13 kg
Marseille	112 700	.	.	.
Le Havre	49 900	.	.	.
Italy				
(no special installations)				
Genoa	150 000		100	9 000/13 kg
Naples	126 700		.	.
Civitavecchia	43 500		.	.

The two German ports (439 000 t and 346 000 t) have the highest transhipments in Western Europe. The transhipments of most other ports is 100 000 to 150 000 t. The quantities transhipped at Le Havre and Civitavecchia are below 100 000 t.

The unloading capacity per unit of time is much more uniform than annual transhipment in the various ports. It follows from this that even smaller ports have to achieve certain unloading times, even if the facilities are not as fully utilized.

Unloading is usually with the help of elevators. These are taken into the holds and convey the boxes from there, protected from the weather, into heated sheds where they are loaded on to railway wagon or truck. In Naples this is

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still carried out by hand. In Genoa also, despite certain technical facilities, unloading is not as efficient as in other EEC countries. Further, Italian ports do not unload continuously; there is a break at night.

As concerns the distribution of ports in the individual EEC countries, in West Germany delivery by sea is possible only in the northern part of the country. The number of ports is also limited in the Benelux countries. The whole of France and Italy is accessible from the sea. Even so, there must be doubts in France about the suitability of unloading at three Atlantic ports, since the quantities could be unloaded at one point as the Bremerhaven example shows. By this means, not only could the unloading costs be lowered but selling could be more centralized. The same applies in Italy for unloading at Civitavecchia.

In the Netherlands, only United Fruit unloads at the Rotterdam installation. Belgian importers unload at Antwerp, as do Dutch importers except for United Fruit. Dutch importers receive small amounts through Hamburg.

Bananas are also unloaded for other countries at the ports of the Benelux countries and West Germany. Quantities transhipped here therefore exceed the countries' consumption. These bananas are mainly for the Scandinavian countries, Austria and Switzerland. The Scandinavian countries are easy to reach by sea, but the small quantities do not make regular runs by banana ships economical.

In West Germany, Bremerhaven mainly imports bananas for United Fruit, while the other importing firms unload at Hamburg.

France has regulations concerning the unloading ports for the various sources. Rouen and Dieppe take shipments from Martinique and Guadeloupe, Le Havre from Cameroon, and Marseille from the Ivory Coast and Madagascar. Bananas from Ecuador are imported mainly through Dieppe; two-thirds of those from the Canary

.../...

Islands enter through Marseille, and the remainder through Dieppe. Small quantities from the various countries are also landed at other ports.

The individual ports in Italy also have unloading quotas, but these are transferable. All bananas from Somalia are landed at Naples. Civitavecchia receives mainly from Ecuador. Imports from other sources go mainly to Genoa, and smaller amounts to Naples.

44. Wholesale trade

441. Wholesale profit margins

Wholesale margins include, as well as compensation for the trading operation, the cost of ripening, transportation from port to wholesale company, and often onward distribution to the retail trade. The cost of ripening can be separated with reasonable certainty, and is therefore included in the net wholesale profit margin. Ripening costs are about 20 u.a./t.

Gross wholesale profit margin is between 41 and 82 u.a./t, i.e. 14-27% of the wholesale selling price (Table 44).

Transportation costs are 4-10 u.a./t. At 1-3% of the gross wholesale selling price, they have little effect on profits. Transportation costs are determined by the extent of the distribution region, and are therefore lowest in the Benelux countries. Surprisingly, Germany is in the next position. Although Germany is accessible for imports only from the North Sea, transportation costs are lower than in France and Italy, where unloading is carried out in different parts of the country.

A considerable part of the marketing costs is to be found in the net wholesale profit margin, which includes the costs for ripening. The figures for Belgium-Luxembourg are here particularly high at 78 u.a./t. The relatively low Italian figure is striking.

.../...

Table 44. Wholesale profit margins

	Importer's selling price	Wholesaler's selling price	Wholesaler's profit margin gross	including	
				Transportation	Wholesale profit margin net & ripening
			u.a./t		
Belgium, Lux.	215	297	82	4	78[1]
West Germany	163	205	42	6	36
France	235	306	71	10	61
Italy	358	414	56	8	48
Netherlands	195	236	41	4	37
			as % of the wholesale selling price		
Belgium, Lux.			27	1	26
West Germany			20	3	17
France			23	3	20
Italy			14	2	12
Netherlands			17	2	15

[1] incl. 2 u.a./t tax.

442. Structure of the wholesale trade

Wholesale undertakings with ripening facilities (hereinafter called wholesale banana undertakings) are often located in the immediate vicinity of central transhipment points or distributor markets for fruit, where these are to be found in the different regions. Table 45 gives figures of the banana turnover of some important main markets.

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Table 45. Turnover of bananas in some important main markets, 1967

	Total turnover, fruit & veg. (t)	Turnover, bananas (t)	% of the total banana imports of the country concerned
Hamburg	440 000	40 000	7
Frankfurt	420 000	28 000	5
Paris	1 111 000	36 000	8
Milan	800 000	40 000	13

This shows that important markets take 5-13% of total banana imports. Certain main markets are also of importance for the marketing of bananas. There are in West Germany altogether about 30 main markets handling about 65% of the fruit and vegetables sold in this country. In other EEC countries, main distributor markets are much less important. There are important central markets in Paris and Milan. The only large distributor market in the Netherlands (at Amsterdam) is of only local importance, as also is the concentration of the fruit and vegetable trade at Brussels. The main markets have in recent years not been able to extend their importance as in the past. The reason for this is the increasing fruit and vegetable turnover of central purchasing arrangement in the retail trade, which by-passes the main markets. With the concentration of the banana wholesale trade, turnover in bananas appears however to be increasingly shifting towards the main markets.

Bananas are transported from the port to wholesale undertakings by truck or by rail. Rail is generally preferred for long distances, particularly if it ensures rapid carriage and when supplying large undertakings, which usually have rail connections. About 30% of bananas in Italy are transported by rail, and more in Germany. Special banana trains run to Southern Germany. Banana ripening

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is also carried out at the wholesale stage. Ripening is necessary because bananas can withstand carriage only in the green state. When ripe, they must reach the consumer within 2-4 days. The ripening period can be varied by the temperature. At a temperature between 10 and 20°C, the period is 3-10 days.

Ripeners and wholesale firms are usually under the same ownership. Special ripeners acting in a service capacity are only of small importance. This is partly because ripening has been greatly simplified by cardboard packing. The bananas remain in the original box, and ripening is virtually only storage under certain conditions. Before the introduction of cardboard packing, the complete stems of fruit were ripened and then had to be broken up and packed. It was then economical to transport bananas to special companies for this operation. In those days the secondary wholesale firms and the larger retail firms often carried out their own ripening. The development of the supply network of the main wholesale firms, which has considerably increased the quality supplied over recent years, making it possible to order ripe goods without risk, has tended to reduce ripening by the small companies.

Table 46 gives details of the number of wholesale banana undertakings in the different EEC countries.

Table 46. Number of wholesale banana undertakings and average turnover, 1967

	No. of firms	Average turnover per firm (t)
Belgium-Lux.	50	1 540
West Germany	225	2 693
France[1]	1 000	444
Italy	300	1 063
Netherlands	130	769

[1] incl. smallest businesses.

It will be seen that the German firms have the largest average quantities, and the Netherlands and France the lowest.

In Belgium-Luxembourg, 26-28 of the 50 wholesale banana firms market United Fruit bananas almost exclusively. Half of these firms are in the hands of the Belgian subsidiary of this company, the remainder being members of a cooperative (BANACOPERA). This network of firms extends over all Belgium. The BELHOBA import group has six firms, half of which belong to the importers, Leon van Parijs and Gérard Koninckx Frères. This import group also supplies about 20 independent wholesale firms. The number of wholesale firms has not changed significantly since 1961.

In West Germany there are 200-250 wholesale banana undertakings. About 80 of these are branches of the two largest fruit trading firms, Harder Meiser u. Co. (about 50 branches) and Olff Köpke (about 30 branches). These branches are distributed over all West Germany. Both firms sell United Fruit bananas almost exclusively; these are imported through an undertaking associated with the Harder Meiser firm. Of the remaining wholesale firms, some are subsidiaries of other importers, represented mainly on the large central market, and others are independent undertakings, usually closely collaborating with particular importers.

The retail trade purchasing centres are of increasing importance in the sale of bananas. The number of wholesale banana firms has dropped by almost half since 1961.

There are about 1 000 wholesale banana firms in France, but only about 125 of these have turnovers that permit economic operation. With the transfer of the large Les Halles market in Paris to the outskirts of the city, some of the small firms in the Paris area will disappear, since all the wholesale fruit and vegetable trade of this area is required to use the new market.

.../...

At the time of the banana monopoly, there were 82 wholesale banana firms in Italy, over half of which had very modern facilities. The number rose to 300 with the ending of the monopoly. These firms supply the retail trade and about 800 secondary wholesale firms, and 80% have modern facilities. The bulk of business is in the hands of relatively few firms. Table 47 gives details of this.

Table 47. Distribution of Italian wholesale banana turnover

No. of wholesale firms	% of wholesale turnover
10	35
45	50
245	15
300	100

Fifty-five per cent of the firms are north of Florence, 25% between Florence and Rome and 20% in southern Italy.

The Netherlands have about 130 wholesale banana firms, 85 of which market only United Fruit bananas. This firm lays down certain conditions for its distributors. They may handle only United Fruit bananas, and must pay on delivery. The firms are also supervised and advised by United Fruit. The other firms have no fixed ties with importers.

45. Retail trade

451. Retail profit margin

Except for Germany and Belgium, retail profit margins only include compensation for trading operations. In Germany and Belgium, it also includes turnover tax of 5%.

.../...

Net retail profit margins range from 69 to 112 u.a./ton in the individual EEC countries (Table 48). Compared with the margins in the import and wholesale stages, it exhibits remarkably few variations. Margins are lowest in the Netherlands, followed by Germany and France. Belgian margins are higher, and are exceeded only by those of Italy. Margins are 21-29% of the retail price. In view of the great differences in the retail price between the different countries, shares expressed in percentages are not very meaningful.

Table 48. Retail profit margin

	Wholesale selling price (u.a./t)	Retail selling price (u.a./t)	Retail profit margin gross (u.a./t)	including		
				Tax (u.a./t)	Net retail profit margin	
					u.a./t	% of retail price
Belgium-Lux.	297	420	123	21	102	24
Germany	205	310	105	16	89	29
France	306	400	94	-	94	24
Italy	414	526	112	-	112	21
Netherlands	236	305	69	-	69	23

452. Structure of the retail trade

The foodstuffs retail trade in the EEC countries has been undergoing radical changes for some time, and these have affected the preceding trading stages. These changes have their basis in the new opportunities for increasing turnover and rationalization of selling. This means specifically self-service, centralization of procurement, greater choice, and reduction of margins. The concentration process associated with this development leads to a decrease in the number of retail businesses and intensified competition.

.../...

The EEC countries have advanced to varying degrees in this process. Figures relating to the importance of self-service and to concentration in the retail trade in the field of procurement may serve as a criterion. The following two tables show that the number of self-service businesses per million inhabitants is relatively high in West Germany, while in France and particularly in Italy this form of selling is little used. As is shown by the total number of food shops per million inhabitants, the proportion of small businesses is relatively high in these two countries.

Table 50 also shows that the concentration of the trade in Italy is small - 86% of the retail trade is not organized. In France and Belgium the figures are 20-30% and in Germany and the Netherlands 2-4%.

Table 49. Number of self-service shops, supermarkets and total number of retail food shops per million inhabitants in the EEC countries, 1967

	Belgium	West Germany	France	Italy	Netherlands
Self-service shops	.	1 208	252	42	529
Supermarkets	19	25	14	6	16
Total No. of retail food shops	.	2 424	6 365	9 610	2 512

.../...

Table 50. Proportion of the various forms of organization in the total turnover of the retail food trade in EEC countries, 1964

(%)

	Belgium	West Germany	France	Italy	Netherlands
Branches trade	10.8	15.3	19.1	0.8	22.8
Cooperative societies	8.0	8.8	9.2	3.6	6.1
Department stores	15.2	4.5	9.9	2.8	2.7
Large undertakings, total	34.0	28.6	38.2	7.2	31.6
Buying cooperatives	3.4	30.5	16.0	1.9	11.4
Voluntary chain stores	35.1	37.2	22.9	4.6	54.9
Unorganized retail trade	27.5	3.7	22.9	86.3	2.1
	100	100	100	100	100

The incorporation of fruit and vegetables in West Germany into the choice of the general food business and the movement of retail trade demand to the procurement centres has proceeded further than in the other EEC countries. The fruit office of the largest purchasing cooperative (22% of the food market) belongs to a banana importing group. In 1967 it handled 53 600 t of bananas, about 40 000 t of which were ordered through the group. This fruit office therefore met nearly 9% of the country's requirement.

The largest local procurement centres in the retail food trade have a turnover of about 15-20 million u.a., of which about 10% is fruit and vegetables and 0.65% bananas.

.../...

As concerns the importance of the remainder of the retail trade in the sale of bananas (market and street traders, specialist shops), it is noted that as fruit and vegetable sales increase in general food shops, the specialist green-grocery shops are decreasing in importance. In Germany their number is small compared with France and Italy. The market and street traders can claim to meet a special requirement, but they too are declining. Market and street traders play a smaller role in Germany than in France and Italy.

In the case of banana marketing, this trend causes the sale of fruit and vegetables to move to food shops offering a wide assortment of goods. These shops are less accessible to the banana wholesale trade, since they turn increasingly to procurement centres which take over the wholesaling functions for the complete assortment of goods.

In the case of dry goods, the concentration of demand has progressed far. Because fruit and vegetables spoil easily, they have until now been included in the procurement centres' assortment to a much smaller extent. In particular, bananas, whose ripening makes additional demands, have been less affected by this development. Some procurement centres already have ripening rooms, but they ripen only the basic demand themselves and buy-in the rest in order to retain their freedom to balance as necessary. Procurement centres in the retail trade will probably therefore continue to make use of the wholesale banana trade, but to a decreasing extent. Because of the considerable quantities needed by these centres, only large wholesale firms will be able to maintain their positions.

46. Price trends

In the case of bananas, price comparisons are attended by various uncertainties. These depend firstly on the fact that the prices available derive in part from surveys made independently, and there is often no adequate information on the

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methods of survey used. Further, there are no quality standards[1] for bananas, so that price fluctuations cannot always be attributed to differences in quality. Finally, only rarely is the point in time given at which prices went over from whole stems to net weights (without stalk and cardboard box). The 'stem' or 'stalk' only plays a part in the stages up to wholesale; in the following stages the stems are broken up into hands before packing. These uncertainties often prevent an evaluation of the absolute price differences, but it is usually possible to compare trends, as in this case it is relative changes that are considered.

461. Trends in the annual average price

Comparatively reliable information is available of the trends in average retail trade prices over the years 1962 to 1967.[2] Values are given in Figure 17. Prices in Belgium-Luxembourg and West Germany since 1965, and in Italy and the Netherlands since 1966, have shown a falling trend. The decline was greatest in these countries in 1966. The decline is mainly attributable to the average increase in imports in 1965 and 1966 (Fig. 18). This had no effect on prices until 1966, since the sales-promoting effect of cardboard packaging, which considerably increased the market's buoyancy in 1965, slackened off considerably in 1966.

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[1] In contrast to nearly all the other fruits, no generally accepted quality standards have as yet been developed for bananas. The difficulties lie mainly in the fact that the fruit comes to the trade not singly but as part of the stem, which usually contains bananas of different quality. Standardization of individual fruits would present relatively few problems.

[2] Retail prices are provided by the statistical offices of all EEC countries within the framework of price surveys for determining changes in the cost of living. These prices generally refer to top-quality bananas. The surveys are usually made monthly on certain sample days.

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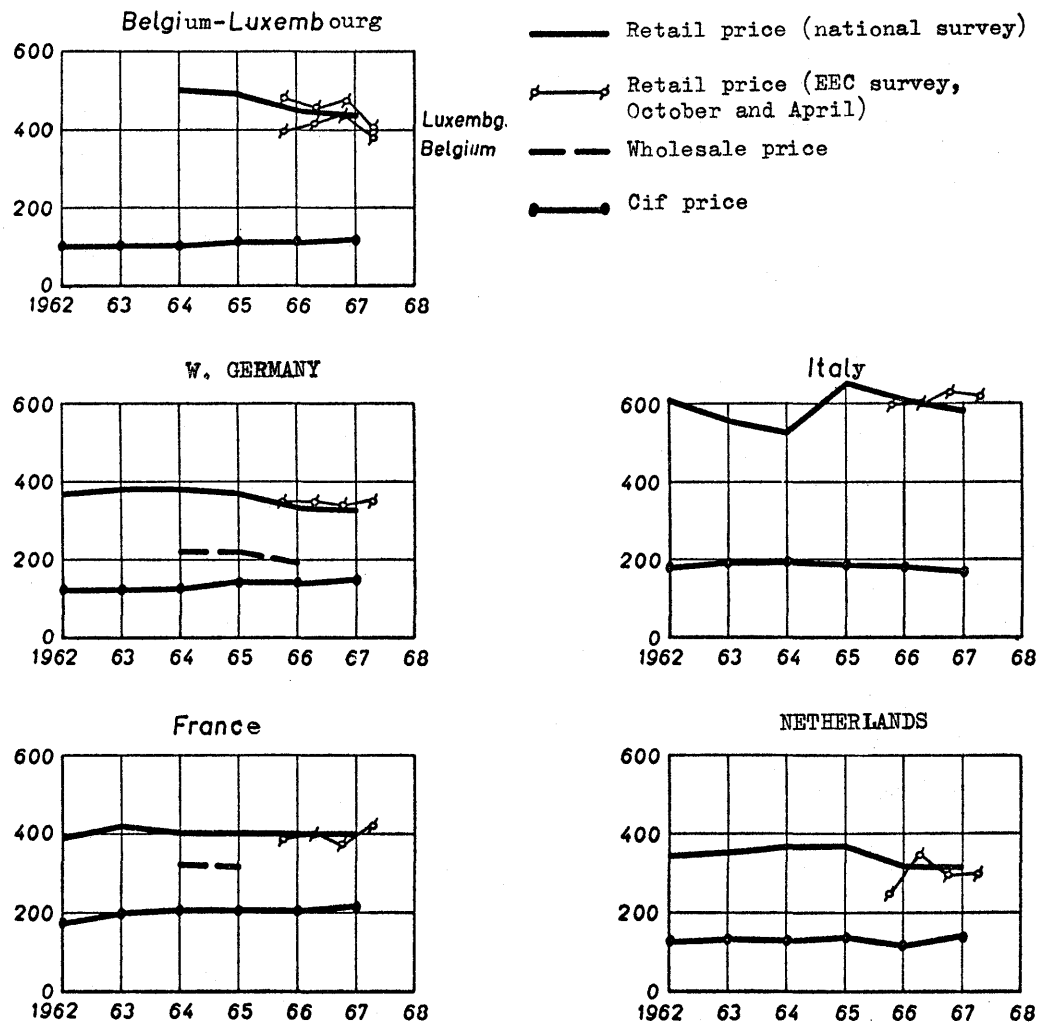
Figure 17

STRUCTURE OF BANANA PRICES IN THE EEC COUNTRIES

(in units of account (u.a.) per t)



Further, there was in these countries (except Italy) a significant reduction in the rise in incomes in the middle sixties (Fig. 18).

In contrast to the other countries, retail prices in Italy rose considerably in 1965, although the imports increased greatly at the same time. This development was a result of the liquidation of the banana monopoly on 1 January 1965.

French retail trade prices showed only slight changes during the period under consideration. This was caused by import regulations and the statutory maximum price.

The cif prices available do not reflect the genuine price changes over the period because of the alteration in the reference basis (from gross to net prices).

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Footnote 2 on previous page contd.

Parallel to but independent of the national surveys, the Statistical Office of the European Communities has since October 1965 carried out a further survey on retail prices in EEC countries. This survey is performed half-yearly (April and October) on set sample days. Special care is taken to determine the prices of goods of the same quality. As shown in Figure 17, the prices of the two surveys are relatively in agreement.

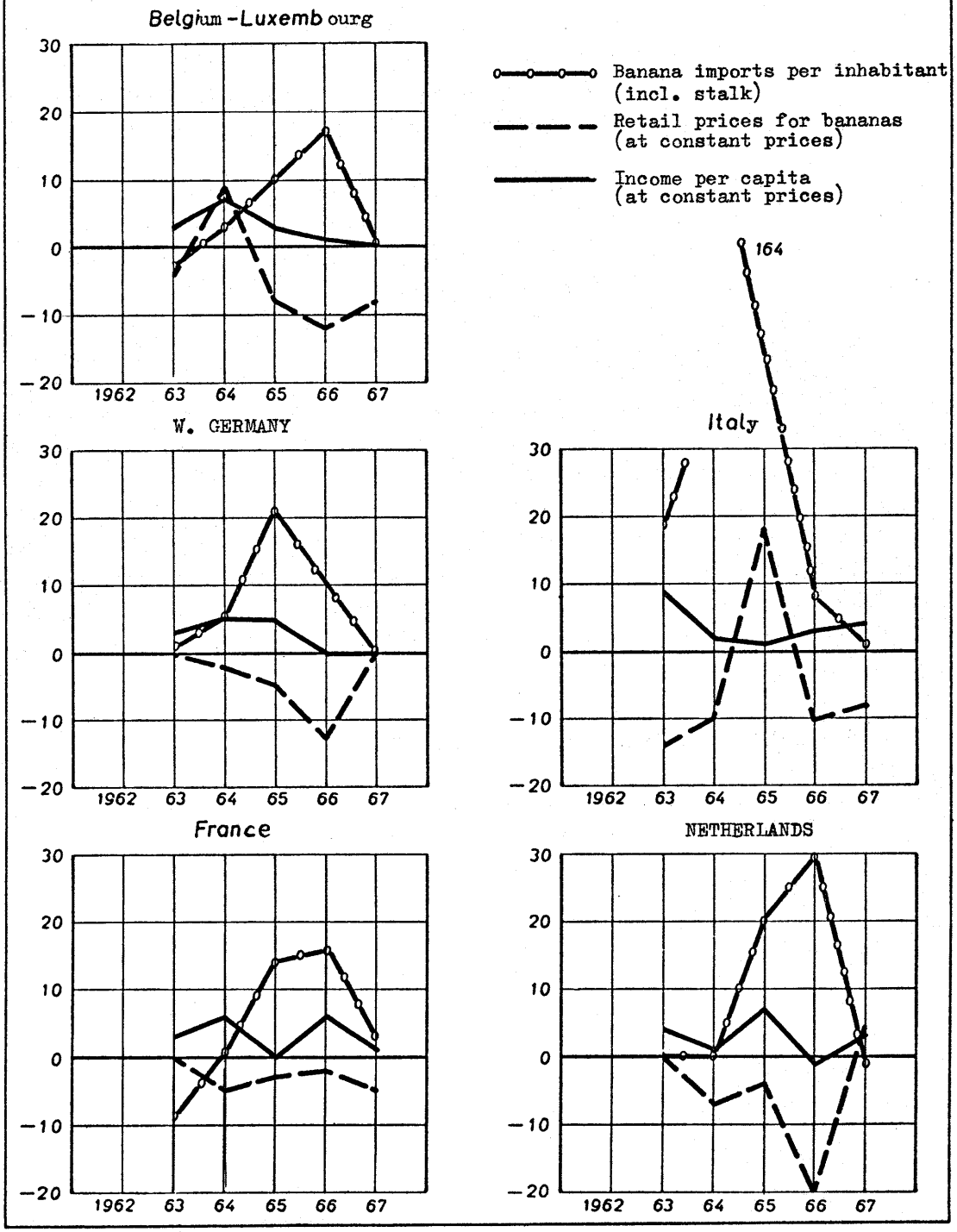
For the prices of the individual countries, it should be noted that Belgian prices refer to the street markets in Brussels, which have an important role in the fruit and vegetable supply of this city. West German prices originate from some 800 individual surveys distributed over a representative selection of cities and municipalities (120 in all) of over 5 000 inhabitants in the different regions of the country. Apart from market and street trading, which is relatively unimportant in this country, all businesses selling bananas are considered in their proper proportions. Prices of special offers are rarely included in the survey because of their exceptional nature and often inferior quality.

French prices relate to the retail shops in the Paris region. As the prices here are close to the upper limit set by the State, it may be assumed that in other parts of the country prices are at a similar level.

Figure 18

ANNUAL RATES OF CHANGE IN PERSONAL INCOME,
RETAIL PRICES AND BANANA IMPORTS PER INHABITANT

(Value of previous year=100)



Since the 'stalk' forms about 15% of the gross weight, there is a genuine price rise only if the increase exceeds this percentage. A lower increase means a fall in net price. The trend in Italian cif prices account for a distinct drop in net prices. In the other countries, net prices did not alter very considerably in the period. It should be noted that the cif price for Belgium is lower than that actually paid, as it is a flat rate fixed monthly in advance.

Figures for the trend in wholesale prices are available only for West Germany and France. These show a close relationship with the trend in retail prices. French prices are quotations from the large Paris market. Wholesale prices for Germany are quotations from five large markets.

462. Seasonal price trends

Figure 19 shows the seasonal trends in some prices. Retail prices reach their highest in most countries in May or June, fall to the end of the year, and then rise again to the middle of the year.

Figures on the seasonal trend of import delivery prices are available only for France and West Germany. French import delivery prices show much greater fluctuations than retail prices. Price movements are relatively irregular. The peculiar movement in prices from Madagascar in 1967 is attributable to the closure of the Suez Canal.

47. Comparison of prices from various sources

The cif prices are given separately by sources, and therefore provide information on the differences in value of deliveries from individual countries. The

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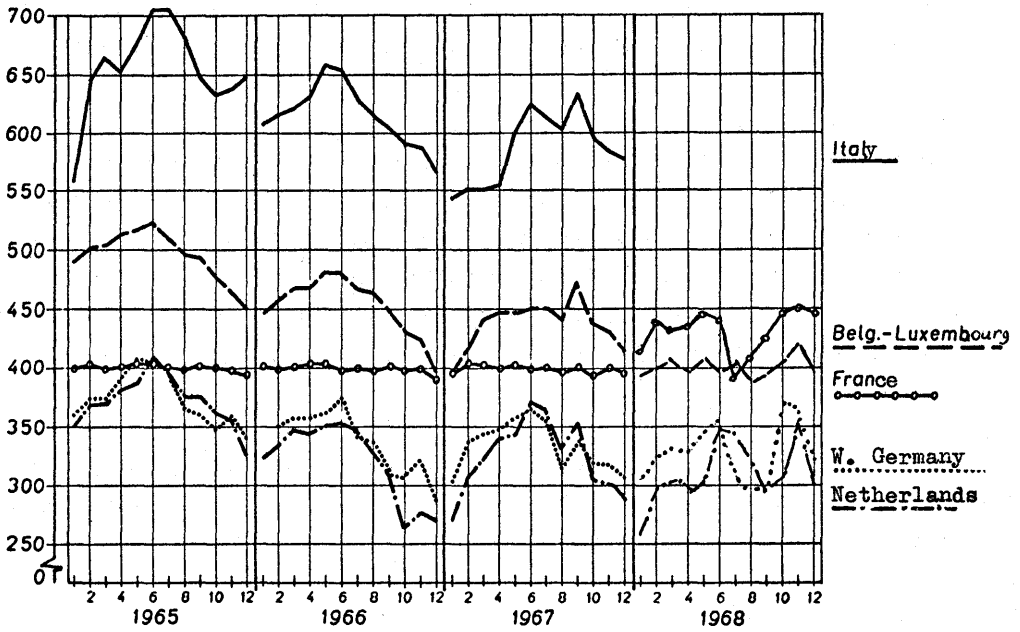
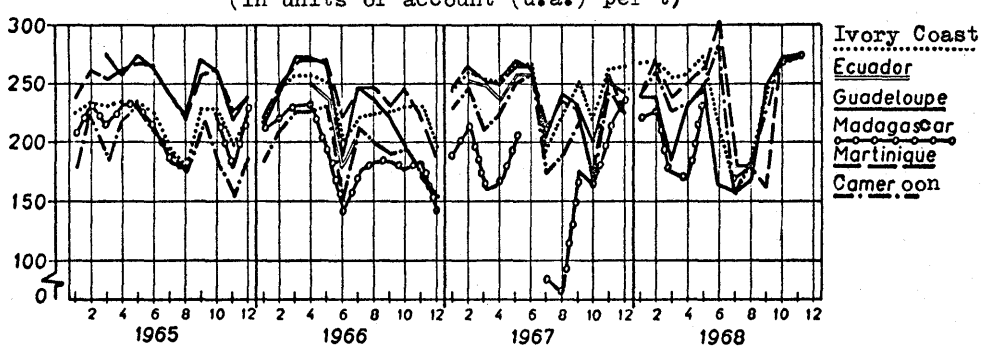
Figure 19

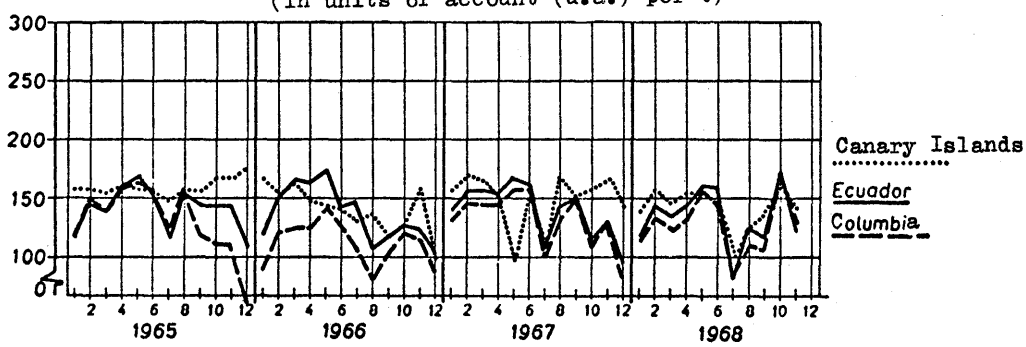
RETAIL PRICES IN EEC COUNTRIES
(in units of account (u.a.) per t)



PRICE EX-WAGON, FRANCE
(in units of account (u.a.) per t)



IMPORT DELIVERY PRICES, WEST GERMANY
(in units of account (u.a.) per t)



differences in value are mainly a reflection of quality. Comparison of prices by sources does not give a correct picture until after the complete changeover to cardboard packaging, which in most of the exporting countries has been complete since 1967. For a comparison, import charges which varied in different countries for the individual sources, had to be added to cif prices, since relatively higher import charges lead to a corresponding decrease in the cif price. As Table 51 shows, Honduras prices in Germany are well above those of Colombia and Ecuador, the two main suppliers. Ecuador secures rather higher prices than Colombia. The higher prices of Honduras bananas arise mainly from the fact that this source is sold mostly under the Chiquita trade mark with special marketing arrangements and strict quality control.

Ivory Coast secured the highest average prices in France in 1967. They were about 20 u.a./t higher than those of the DOM. Prices of bananas from Cameroon and Surinam were about 10 u.a./t below those of the DOM. Madagascar obtained by far the lowest prices. The closure of the Suez Canal accounts for some of this with the addition of the still incomplete changeover to cardboard packaging.

The Italian market offers the widest field of comparison, since it deals in considerable quantities of bananas from the AASM and from the third countries. The two third countries, Honduras and Ecuador, here secure the highest prices, Honduras prices being higher than Ecuador prices. Ivory Coast prices are about 30 u.a. below the average of the two third countries. Bananas from Somalia secure by far the lowest prices. This indicates a relatively wide range in quality in supplies to Italy. In the Netherlands, bananas from Ecuador secure prices somewhat higher than those from Colombia.

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Table 51. Comparison of prices from different sources,[1] 1967

Importing country & supplier country	u.a./t
Belgium, Luxembourg from	
Ecuador	114
Colombia	117
West Germany from	
Honduras	172
Ecuador	140
Canary Is.	135
Colombia	130
France from	
DOM	214
Ivory Coast	233
Cameroon	203
Surinam	200
Madagascar	175
Italy from	
Ivory Coast	326
Somalia	248
Honduras	360
Ecuador	348
Netherlands from	
Ecuador	144
Colombia	133

[1] Cif prices plus import charges, which vary with the supplier. They include 5% import duty for imports to France from Surinam, 96 u.a./t consumption tax for imports to Italy from Somalia, 144 u.a./t consumption tax from other countries, and 20% import duty from third countries.

48. Consumption

Data on the level of per capita consumption in the EEC countries can be obtained from the net imports (total imports less re-exports) per inhabitant. In view of the differences in methods of considering the stalk in import statistics, conversion to a standard reference basis was necessary. The weight including 'stalk' was used for this. The weight of the 'stalk' and the other waste was taken as 15% of the gross weight. Table 52 gives the figures.

.../...

Table 52. Net imports of bananas per inhabitant in EEC countries, 1962-67, and forecast for 1975 (kg[1] per inhabitant)

	1962	1963	1964	1965	1966	1967	1975
Belgium-Lux.	6.9	6.7	6.9	7.6	8.9	8.9	11.0
West Germany	8.1	8.2	8.6	10.4	11.4	11.4	13.9
France	8.6	7.8	7.9	9.0	10.4	10.6	13.0
Italy	2.7	3.2	4.2		6.9	7.0	10.5
Netherlands	5.9	5.9	5.9	7.1	9.2	9.1	11.6

[1] Bananas incl. 'stalk'.

Among the EEC countries, Germany had the highest imports per inhabitant, followed by France, Netherlands and Belgium. Italy fell a long way behind. In 1962, France was in the lead, and Belgium was above the Netherlands.

Over the period, imports rose most in Italy (160%), followed by the Netherlands (54%), and Germany (40%). The rise was lowest in Belgium and France (29% and 23%).

Figure 18 shows the level of annual growth rates of import per inhabitant. They rose in Italy and Germany up to 1965 and in the other EEC countries up to 1966. In 1967, only in France and Italy was there a slight rise, Germany and Belgium remained steady, and the Netherlands showed a slight fall in imports per capita. The reasons for the large increase in 1965 and 1966 were the sales-promoting effects of cardboard packaging, as already referred to. This probably anticipated some of the increase in consumption of the following year.

.../...

Forecasting future consumption of bananas is complicated by special uncertainties. The study carried out on behalf of the EEC Commission in 1963 on 'The Coffee, Cocoa and Banana Market in the Individual EEC Countries' predicted banana consumption for the individual EEC countries up to 1970. The values predicted for the period already completed were not reached in most countries, although marketing activities increased considerably in the mid-sixties and cardboard packaging considerably assisted an increase in sales. The main reason for the over-estimate in consumption was a more rapid decline in elasticity of income under rising incomes than had been estimated from the trend during the reference period (1950-61). It might be assumed that by prolonging the reference period to the present day it should be possible to construct a more accurate model. This, however, was not possible because of the irregular trends in banana consumption during the sixties. Forecasts for 1975 were therefore also calculated upon the model from the previous study, but the results were corrected. For this purpose, a further model was constructed for the period 1962 to 1975, and additional information on the trends in consumption was used. Details are given in Part III of this study. The forecasts are based on the assumption that the rise in income will continue as in the past, and that there will be no great change in prices. Estimated imports per inhabitant in 1975 are also shown in Table 51. For the EEC as a whole, taking into account the increase in population, these figures show banana imports of about 2.4 million t inclusive, or 2 million t without stalk. With the exception of France, a further slackening off of the increase in consumption is expected in the individual countries.

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[1] The abbreviations (d, f, i, n, e) indicate the languages in which the documents have been published : d = German, f = French, i = Italian, n = Dutch, e = English.

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