

OPPORTUNITIES FOR MARKETING ISRAELI AVOCADOS IN WESTERN EUROPE

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INTRODUCTION

There are commercial avocado plantations today in tropical America, the West Indies, Cuba, the United States (California, Florida, and Hawaii), Argentina, Chile, Mexico, Brazil, South Africa, West Africa, Australia, New Zealand, Puerto Rico, Malaya and Israel. Other Mediterranean countries like Morocco, Egypt, Sicily and France are tending to start planting avocados commercially. There are a few plantations in the Canary Islands and Maderia, and there are plans in these islands to expand production.

We made divide the world production into three main regional areas: (1) America (North America, South America, the Caribbean), (2) Mediterranean area and Africa, and (3) Far East, Australia, and New Zealand.

The international marketing of avocados is relatively small compared to the total international marketing of fruit. In relation to total avocado production, with the exception of Israel, the export portion in those countries which export avocados is very small, as for example in South Africa and Argentina. Israel is the only country in which planned export is greater than local consumption (at the present time 50 percent of production is devoted to export and 50 percent to local consumption). Israel was the greater exporter in the 1966/67 season with exports of about 1,800 tons. Most production in other countries was for local consumption and any trade done was carried on within the regional "block." In the "Far East block" there was little production and there was no international trade. In the "block" of America, in the past there was some trade among the countries of South America and the United States, but since 1964 the United States has not imported avocados. Small shipments of avocados from the United States and South American countries are delivered to Europe. Difficulties in sea transportation and the high cost of shipping by air are some of the reasons why "American block" export to Europe is so limited.

In the "Mediterranean African block" international trade is also on a relatively small scale, but there is a trend in a few Mediterranean and African countries to develop the avocado industry for export to Western Europe. For example in the market of the United Kingdom, avocados are supplied by countries other than Israel. While Israel increased its export to the United Kingdom from 145 tons in 1961/62 to 380 tons in 1965/66, and to about 600 tons in 1966/67, the second ranked importer, South Africa, sends about 250-300 ton a year (out of total production of about 3000 tons a year). Small quantities were imported also from Argentina, Jamaica, the United States, India and Maderia.

In the United Kingdom, as well as in other Western European countries, most of the imports from countries other than Israel were in late spring, early summer and early autumn while Israel was the sole supplier during the winter period (Table 1).

Israel has the advantage of supplying most of the avocados during the winter season when fruits and vegetables are relatively scarce and expensive and of being able to supply the fruit during a long season of eight months, which attracts dealers and chains because of the constant and regular supply.

Table 1
Avocado Fruit Supply Calendar to United Kingdom

Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Argentina	Israel	Israel	Israel	Israel	Israel	Israel	Israel	Israel
Mad- eria	Mad- eria	Mad- eria	Mad- eria			South Africa	South Africa	South Africa
							U.S.A.	U.S.A.
							India	Argen- tina Jamaica

Source: H. F. Tysser, ed., *The Fruit Annual, 1966* (London: British Continental Trade Press Ltd.), pp. 61-62.

Summarizing the international activity in the avocado industry, we may say that in the "Mediterranean-Africa block" there are countries such as South Africa and Israel in which the industry has already been introduced and the main problems of growing the fruit have been determined. (Knowing the problems is half of their solution.) In these countries there is a lot of knowledge about varieties suitable for growth, number of trees per dunam (or acre), methods of cultivation, etc. These countries are at a stage of avocado development in which their main interest is to solve the problems of marketing rather than growing.

The other group of countries — Egypt, Morocco, the Canary Islands, Maderia and Spain —has "natural" climate and soil, suitable for growing avocados. Another advantage in these countries is the availability of cheap labor. But the difficulties these countries have in producing avocados concern growing problems. After these countries solve problems of growing the fruit (and in our technically advanced world it is not difficult), they may be substantial producers of avocados; then they will have to meet marketing problems. These countries are interested in the industry mainly for export purposes.

Among the producers in the other "block," the United States is the most serious potential rival, not necessarily because of present production for export, but because marketing is organized and regulated by an agricultural order. If an unexpected increase in yields occurs again, and markets within the United States are satisfied, special efforts can be devoted to exports. The industry in the United States is more able than other growers to develop such an export market in a short time in order to keep local prices at a reasonable level.

THE INDUSTRY IN ISRAEL

The first avocado trees were introduced in Israel in the 1930's and small plantings were added in the 1940's and early 1950's. The main increase was in the last decade: in 1956 there were only 1,085 dunams¹ of plantings, most of them young. In 1966 there were more than 10,000 dunams.

The Common Agricultural Planning Center (CAPC), authorized the planting of an extra 700 dunams each year for the five years beginning with 1965, so that total plantings by 1970 will be 13,500 dunams.

A special committee which examined possibilities for planting larger areas than those authorized by the CAPC recommended in the summer of 1966 the planting of an extra 6,500 dunams in the period from 1965/66 to 1970/71 to 20,000 dunams. The recommendation was not accepted by the Fruit Producing and Marketing Board (FPMB), not because there is not suitable area in Israel for the planting of the additional avocados, but because of their concern about the potential markets for the production.

The avocado industry in Israel has been developed toward export (Table 2). In 1969/70 export is expected to be 60 percent of total production. The assumption is that only about 60 percent of the production will be suitable for export. The lower quality fruit will be directed to local markets as long as the local markets are able to absorb this fruit. The residual will be processed for other uses, such as cosmetics. The same policy has been successfully employed in Israel for several years in the citrus industry.

Table 2
Dunamage and Uses of Avocado Production in Israel

Year	Dunams Planted	Total Production in Tons	Local Consumption		Export		Processing	
			Tons	Percent	Tons	Percent	Tons	Percent
1956	1,085	—	—	—	—	—	—	—
1962/63	4,598	1,049	659	62.8	390	37.2	—	—
1965/66	10,000	2,062	1,129	54.8	933	45.2	—	—
1966/67	10,700	3,350	1,900	56.7	1,500	43.3	—	—
1967/68	11,400	4,400	2,100	47.7	2,300	52.3	—	—
1968/69	12,100	5,600	2,400	42.9	3,200	57.1	—	—
1969/70	12,800	7,000	2,700	38.6	4,200	60.0	100	1.4
1970/71	13,500	8,300	3,000	36.1	5,000	60.2	300	3.7
1970/71*	20,000	8,650	3,000	34.9	5,200	60.2	450	5.1
1978/79**	13,500	13,500	4,000	29.6	8,100	60.0	1,400	10.4
1978/79*	20,000	20,000	4,000	20.0	12,000	60.0	4,000	20.0

* According to recommendation of the special committee.

**Plantings of 1970/71 will be in full bearing in 1978/79. Today there are no plans for expansion after 1970/71.

Source: Unpublished report of the Special Committee on Avocados.

Although avocados were unknown to the Israel consumer a few years ago, the fruit was adopted relatively rapidly by Israeli's. Actual consumption in local markets doubled from 1962/63 to 1965/66 compared to an increase of only 10 percent in the population.

The special committee, assumed 1.0 kg per capita consumption in the 1970's compared

to a few grams a decade ago. As the actual per capita consumption in 1966-67 was about .800 kg, it seems that to assume 1 kg in 1970's is not too optimistic.

Exportation of Israeli avocados to Europe first started about ten years ago. During the last decade commercial shipments were extended to the United Kingdom and France, and in smaller quantities to Germany, Switzerland, Sweden, Belgium, Denmark, Finland, Netherlands, Norway and Italy. (Table 3).

Table 3
Israeli Export of Avocados to Principal Markets
1961/62 to 1965/66, Tons

Year	<u>United Kingdom</u>		<u>France</u>		<u>Germany</u>		<u>Others</u>		<u>Total</u>	
	Ton	Per- cent	Ton	Per- cent	Ton	Per- cent	Ton	Per- cent	Ton	Per- cent
1961/62	145	64.7	69	30.8	4	1.8	6	2.7	224	100.0
1962/63	179	45.8	178	45.7	5	1.3	28	7.2	390	100.0
1963/64	280	44.1	300	47.2	10	1.6	45	7.1	635	100.0
1964/65	248	46.4	214	40.1	26	4.8	45	8.7	533	100.0
1965/66	380	40.8	417	44.7	53	5.7	83	9.8	933	100.0

Source: Fruit Producing and Marketing Board.

The total quantities exported until early March, 1967 were about 1,300 metric tons. The revised forecast is that total export in 1966/67 will be about 1,800 tons. About 600 tons apiece will be shipped to France and the United Kingdom (50 percent more than in 1965/66); 600 tons will also be shipped to other countries (compared to 136 tons shipped to other countries in 1965/66).

Although the shipments of Israeli avocados, which were about 90 percent of total avocado imports by Europe during the marketing season of Israeli avocados, increased very rapidly, there was no substantial change in prices.

THE POTENTIAL MARKET FOR ISRAELI AVOCADOS General

As avocados are defined as a luxury product, it is reasonable that producers will look for a market where per capita income is high and increasing, a market where consumers are "open" to new ideas and receptive to "new" and "attractive" commodities. This market should be one in which the population can be informed about the "new product" and its qualities and uses by well-developed advertising media such as newspapers, magazines, radio and television. Finally, this market should have many consumers and extensive channels of distribution (chains, supermarkets, self-service stores, etc.). We shall describe briefly the countries in Western Europe and try to determine how many of the characteristics described above exist (or will exist) in Western European countries.

Population

The total population in Western Europe in 1965 was 322.7 million of whom 181.6

million, about 58 percent of the total population, were in the European Economic Community (EEC). About 214 million or 66 percent lived in four countries — West Germany, the United Kingdom, Italy and France. The average annual growth in population is about 1 percent.

Gross National Product

Those 322.7 million are not a homogeneous society (it is hard to find a homogeneous society in any community), but after excluding small regions such as Southern Italy, most of Greece, Spain and Portugal, there remains a community with a relatively high income in 1965 and with a remarkable growth in its GNP during recent years. The average growth in GNP in Organization for Economic Cooperation and Development (OECD) countries in 1958 to 1965 increased by 4.7 percent annually compared to a 4.5 percent growth rate in the United States. In countries like West Germany (5.7), Italy (5.8), Finland (6.2), Denmark (5.2), the Netherlands (5.4), Norway (5.2), and Switzerland (5.7), the annual growth rate in GNP was even faster.

The national income per capita in these countries in 1965 was relatively high (although two-thirds to one-half of the United States), and it ranges from \$780 in Ireland to \$2,208 in Sweden, compared to \$2,860 in the United States. These countries have highly industrialized economics. The average breakdown of the working population is 10 to 20 percent in Agriculture, about 40 to 45 percent in industry and about 40 to 45 percent in services. As a result of this economic structure most of the population lives in urban centers and only about 20 to 25 percent live in communities of less than 5,000 people.

Moreover, the production and income of the population in the urban industrialized centers is higher than that of the population in rural areas. This situation is similar in other industrialized Western European countries.

Consumption

The growth in GNP caused a growth in the rate of consumption. This same trend was true in the United Kingdom where from 1954 to 1964 overall consumer spending went up 63 percent, an average of 6.3 percent annually. The contribution of consumption to GNP was more than 60 percent. According to economic forecasts of European organizations, the growth trends in GNP and consumption will probably continue in the future, although at slower rates.

The increasing expenditure for consumption in these markets creates an ideal environment for introducing new and better products. Consumers do not greatly increase their consumption of commodities they presently use, so they are always looking for new and better products.

The Change in Retailing Structure

Today's self-service stores are large, modern, well-equipped facilities. Through such stores, it is easier to introduce new products, especially perishable ones. Since there is

a large turnover of consumers, grocers can generally be assured that they can sell a minimum amount of a new product.

In the case of avocados, it is easier to convince the manager of a supermarket to try to sell a box of avocados than to convince a small private retailer. Moreover, by convincing the management of a supermarket chain, the behavior of a large number of large stores will be influenced. In the United Kingdom, self-service stores and supermarkets are gaining in popularity, especially in the grocery trade where it is estimated that they account for 37 percent of sales against 5 percent in 1954. In 1962 there were 12,000 self-service shops including 1,000 supermarkets.² In France, according to the Institute Francais du Libre-Service et des Techniques Modernes de Distribution, there were no less than 641 lower priced chain stores covering an overall sales area of some 551,057 square meters. At the beginning of the War 113 stores of this type were scattered throughout France. From 1957 to 1961, 101 stores were opened and from 1962 to 1965, 134 stores. Two of the Centrales d'Achat, SAPAC-Prisunic and SCA-Monoprix, control between them 549 stores.

A more rapid development took place in Germany. By the end of 1964 there were already 1,000 supermarkets in the Federal Republic. Altogether, 30 percent of the food stores in Germany are self-service. They account for 50 percent of total food sales.³

Self-service food stores are located mainly in the wealthier northern part of Italy which has 45 percent of the population and 57 percent of the net national product. Per capita net product is 25 percent higher than in the central region and more than double that of the southern part. In 1957 there were only 33 self-service food stores. By the end of 1958, the number had increased to 100 and by 1962 it had risen to 312. One of the major companies operating in this field is the Affiliate of La Rinascente-Supermercato S.P.A. which now operates 30 self-service stores.⁴ The development in Italy has been slower than in other European countries but as the trend is towards expansion, even the existing system of supermarkets is an appropriate channel for beginning the marketing of avocados.

A rapid development has taken place in Sweden where self-service stores have increased markedly from 1950 to 1963 (from 200 to 7,500). These stores account for more than half of all sales in the food business. The supermarket is also developing rapidly; virtually non-existent five years ago, there are about 150 in existence today. By 1970 it is projected that these stores will distribute 20 percent of the total food trade.⁵

According to the *Belgium Trade Review*⁶, the development of self-service stores was: 10 stores in 1950, 288 in 1960, 583 in 1962, 738 in 1963, and 1,115 in 1964. Even with this rapid development, the small store is still dominating the Belgian market.

This brief description has shown that a change in the retail structure is now in process. There are countries (or more precisely, regions within countries) where this process is more developed, such as in the United Kingdom, Germany, France and Sweden, and others like Italy or Belgium where the development is slower. But the most important concern, which will be studied later, will be the state of these facilities in the early and mid-seventies when the shipment of avocados will be growing. Since the process of a changing retailing structure will continue, we shall find by the mid-seventies a much improved retailing system.

Development of Advertising

The change in the food marketing structure has been accompanied by a rapid development in advertising expenditure and media. The United Kingdom with 2.1% of her GNP invested in advertising is the leader among European countries. West Germany with 1.8 percent of its national product spent on advertising is the leader among the EEC. Also, there is a high level of advertising expenditure in Denmark (1.9), Finland (1.8), and Sweden (1.6). Advertising is relatively less developed in France (.8), Italy (.7) and the Netherlands (.2).

Again, most of the advertising in the mass media will be needed only in the seventies. It is probable that advertising facilities will be developed further in the years to come.

THE DEMAND FOR AVOCADOS IN WESTERN EUROPE

Difficulties in Measuring Demand in Western Europe

As noted previously the supply of Israeli avocados to European markets, especially to the United Kingdom and France, has increased considerably in recent years. (Table 2). Israel is almost the sole supplier of avocados to these markets from October through May (Table 1). Although quantities supplied have increased, prices obtained have been generally the same, and occasionally even higher.

This situation does not allow analysis of the past data in order to get an idea about the forecasted demand curve for avocados. It appears that the demand curve for this product is changing because every year the class of consumers of this commodity is always increasing. Therefore, nothing can be said about the nature of the demand from only one observed point.

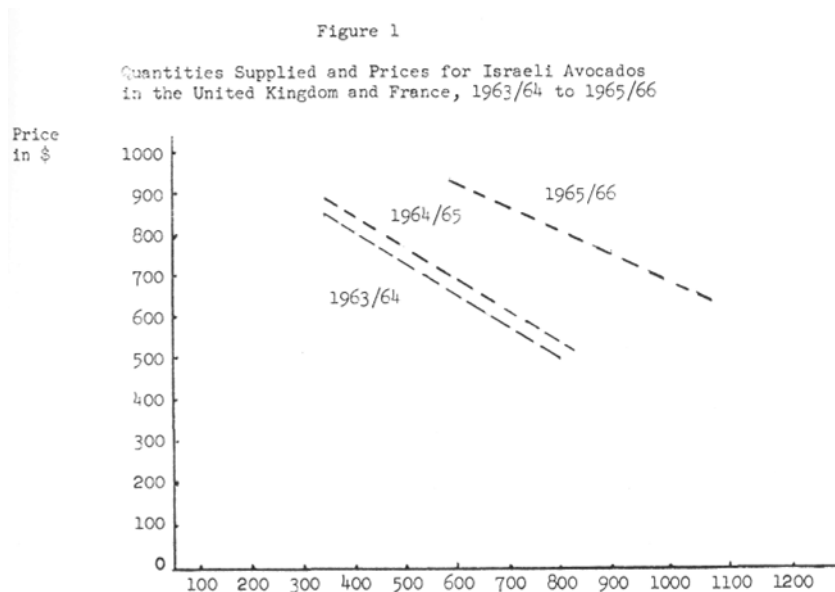
The points in Figure 1 are based on the data of Israeli export to the United Kingdom and France.

Each year there is a new curve which goes to the right and upward. From preliminary data for 1966/67 it seems that the same trend will continue. The problem is to define how much this curve will continue to "go" up and to the "right" and where this curve will start to "stabilize" and remain the same from year to year. What will be the shape of the demand curve?

What will be the elasticity of the demand in various parts of the curve? Once this data is obtained, a forecast of prices according to the quantities which will be supplied can be made.

As consumer behavior in Europe is not measurable from the data available today, a general orientation can be achieved from an analysis of another market where more data is available and which has characteristics similar in some degree to the European market — the market in the U.S.A.

The per capita consumption of avocados went in the U.S.A. from 125.1 grams in 1949 to a peak of 394.5 grams in 1959, then back to 285.5 grams in 1965.



The price (based on a 1957-1959 = 100 base) of avocados went from $t > 449$ per short ton received by farmers in 1949 to the low price of \$107 per short ton in 1959. The price went up again to \$371 in 1964 and then to \$252 in 1965.

The estimated demand which calculated from the data on prices, quantities sold and disposable income is 1.07 in the farmers level. Elasticity at the retailer level is usually higher⁷.

The elastic demand for avocado confirms again the assumption above that avocado is a luxury product. A change in price will contribute a remarkable change in quantities demanded by consumers. This finding has a crucial importance when a marketing strategy is developed.

Forecasted demand — A normative approach

As it is difficult to derive the forecasted demand from the existing data because of so many restrictions on estimating the forecasted demand, a normative approach was developed.

The relevant population

How many of the 323 million people in Western Europe may be potential consumers of avocados in the near future? Assuming that the avocado is a luxury product, the population in the lower income classes must be excluded. Another assumption is that avocados can be marketed only in populous communities because of inadequate marketing conditions in small villages (small quantities marketed, small stores and less acceptance of new products in rural areas). Because of the relatively low income per capita, the whole population of Greece (\$482 per capita income), Spain (\$488), Portugal (\$353) Ireland (\$780) and Southern Italy (\$883) can be excluded. Population in these

areas number 73 million. There is, however, a good potential market in the urban centers of these countries for the upper income classes and for tourists.

The rural population in the remaining Western European countries is about 20 percent, so an additional 50 million can be excluded, although transportation facilities in these countries are developed and rural inhabitants are used to shopping occasionally in urban centers. From the remaining population the low income classes can be subtracted, about 25 to 40 percent or 50 to 80 million. The surplus, 120 to 150 million, may be the potential market.

In the more distant future it seems that the Eastern European countries will become potential consumers of avocados. Standards of living are increasing in these countries and a more liberal economic environment is being created there. From experience with citrus fruits, consumption is increasing in Eastern European countries and we may assume that with adequate means of introducing and teaching the uses of the avocado, some avocados will be marketed in Eastern Europe in the future.

Quantity Forecasted Per Capita

How many avocados will the "potential consumer" eat? The per capita consumption in the United States ranged from 125 grams in 1949 up to 395 grams in 1959 and less than 300 grams during the sixties. The whole yield was consumed each year and the fluctuations in quantities were caused by fluctuations in yields rather than by changes in consumer preferences. This average was achieved by calculating the average according to total population; but it is clear that there are reopens where consumption is much higher and areas where the product is relatively unknown. According to the people of Calavo Growers of California, the per capita consumption where avocado pears were available was much higher than in other districts. By advertising and making the fruit available where it had not been well-supplied (like the middle west countries), the total and per capita consumption will increase.

The Israeli population with a per capita national income of \$1,040 accepted avocados very rapidly. In a society in which the fruit was unknown ten years ago, the total consumption now is about 800 grams per capita. This figure agrees with the forecast of about 1,800 to 2,000 tons total consumption. As substantial parts of the population are still not consuming avocados and as there are potential future users, it seems that the forecast of 1,000 grams per capita is not too optimistic.

The experience of the United States and Israel cannot be applied blindly to the population of Western Europe, but this experience can give some idea about ranges of consumption. It seems that assuming an annual consumption of 200 to 300 grams of avocados for the related population is reasonable. If this is true, the whole potential market might absorb from about 25,000 to 45,000 tons of avocados a year.

The analysis above is based on the assumption that an efficient advertising campaign accompanied by a reduction in consumer prices will enable the potential market described above to be reached.

Optimum Marketing Strategy for Israeli Avocados

At the moment demand is restricted to a small market — the high income classes and first class hotels. As a result, relatively high prices are obtained.

Avocados have the characteristics of a luxury product and the demand for avocados is elastic. By reducing prices, a larger volume of avocados can be consumed in the markets of Western Europe.

Israeli production of avocados is quite efficient at the grower level. The actual cost of production is about \$243 per ton compared to about \$315 per ton in good commercial plantations in the United States.

Considerable savings can be achieved at the packing stage and costs could be cut from about \$134 per ton to about \$100 per ton if volume were increased.

As the 1966/67 crop was most successfully delivered by sea, it seems that future deliveries will be made by sea with a cost of about \$70 per ton compared to more than \$200 per ton when delivered by air. The total cost c.i.f., delivered by sea might be less than \$400 per ton (243 + 100 + 70).

Larger volume would result in substantial cuts in distribution costs once shipments left the port and were handled by truckers, wholesalers and retailers.

In the past season Israel obtained for fruit delivered by sea about \$550 per ton c.i.f. If by large volume (most of the savings will be in the marketing stage) Israel will produce avocados for \$400 c.i.f. in Europe, a range of \$150 will exist. This gives the industry more leverage when it is planning its strategy for developing potential markets.

If the market remains restricted to a small portion of the population, a relatively small additional influx of avocados might damage the entire market. The present high prices are attracting new producers in the Mediterranean-African Block and in the United States. Because of this, an additional supply in the future is unavoidable, by competitors as well as by Israel. In order to prevent a sudden market deterioration, a comprehensive strategy must be started today to develop the middle class as potential consumers in the near future.

A special effort must be directed toward gaining the patronage of the middle income consumer. There are, however, some emotional barriers which prevent the middle income potential consumer from starting to use avocados. This housewife still identifies avocados with caviar (which is really expensive) and not with off-season tomatoes (which she buys in small quantities).

The problem is how to convince consumers to try avocados for the first time. On the one hand the avocado is considered a "gourmet food" and the "little lady" wishes to serve it, but on the other hand the avocado itself is not so cheap and the recipes suggested to her are sometimes fancy and expensive.

The problem is how to break these "barriers" and give the average housewife the feeling that she can buy avocados. She must be made to feel that avocados are a fine specialty dish to serve and that they are appropriate for her budget. There is no unique way to solve such a problem, and a solution to it can be reached only after a thorough investigation of each of the potential markets. But, in general, the recipes offered first-

time buyers have to be based on the consumption of only one unit and they should combine avocados with the regular food consumed by middle income families. Recipes for avocado spread or avocado in soups or with meat seem to appeal to the middle class housewife. These recipes should be available and freely supplied where consumers purchase the fruit.

The Israeli industry is not under the pressure of having great quantities to be marketed at once (as in the case of a newly manufactured product). The quantities available for export are increasing in moderate amounts from year to year which enables an optimum fundamental strategy to be developed accompanied by the other two basic marketing tools — lower prices and advertising.

The Israeli industry is creating the basic markets for avocados. If the industry in Israel is not wise enough to "harvest" most of the markets that have been developed, other sellers will enter and reap what Israel has sown. Only by large-scale production will the Israeli industry reap most of the success it has strived to develop.

As the strategy suggested is to increase rapidly the supply of avocados, there must be planting in larger dunamage than was authorized by the CAPC. It is worth clarifying at this stage that potential growers as well as existing growers have to take into their long-run calculations, not the present illusive high price, but the realistic lower price in the future.

¹ A dunam is one-tenth of a hectare or .247 acre.)

² Norman H. Strouse, "Advertising as a World Force," *The International Advertiser* (May 1966), p. 30.

³ Jochen Coenen, "German Retailing in Facts and Figures," *German American Trade News* (October 1965), p. 6.

⁴ David H. Gibbons, "A Study of Italian Marketing System," Unpublished term paper for B.P.A. 479, Cornell University, Ithaca, N.Y., May 1965.

⁵ Lars R. Olson, "An Analysis of the Swedish Market," Unpublished term paper for B.P.A. 479, Cornell University, Ithaca, N.Y., May 1965, p. 26.

⁶ "Development of Self-Service Stores in Belgium," *Belgium Trade Review* (May 1965), p. 25.

⁷ For further data and discussion on this point see Geoffrey S. Shepherd, *Agricultural Price Analysis* (5th ed.; Ames, Iowa: Iowa State University Press, 1963), pp. 62-63.