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MARKETING OF EXOTIC AND OUT-OF-SEASON FRESH FRUIT AND VEGETABLES IN THE EUROPEAN COMMON MARKET

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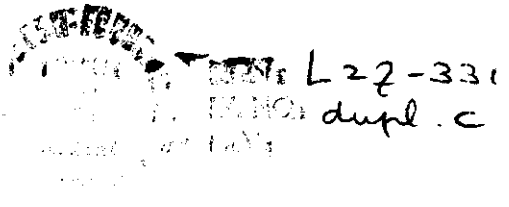

Agricultural Economics Research Institute

Division: Horticulture

ABSTRACT

MARKETING OF EXOTIC AND OUT-OF-SEASON FRESH FRUIT AND VEGETABLES IN THE EUROPEAN COMMON MARKET.
Plas, M. van der, A.P. Verhaegh, et al
The Hague, Agricultural Economic Research Institute
192 pag., tab., figures

This publication is a collection of lectures concerning the export of fruit and vegetables from developing countries to the European Common (EC-) Market.
Topics are:
- production: interdependencies of production, demand and trade developments
- consumption: factors influencing consumption EC-market
- market-behaviour: responses to changes in prices and supplies
- distribution channels and outlets in the EC-countries
- imports and exports of exotic and out-of-season produce
- trade barriers at the EC-border for developing countries
- trade terms
- production and trade costs
- chances of success for introduction on EC-market
- checklist to test the effectiveness of production and marketing

Marketing/Fresh fruit/Fresh vegetables/Developing countries/ Imports/European Community

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Foreword

Developing country exporters of fruit and vegetables to EC-markets often meet serious difficulties in the field of trade barriers, different trading institutions and customs, etc. A better knowledge and information could prevent many of such difficulties.

The International Agricultural Centre (IAC) - in particular the Director of Studies in Horticulture, Dr. S.S. Apte, therefore decided to include this subject in the selected Optional Programme of the 14th International Course on Vegetables Growing.

On the request of the IAC the Agricultural Economics Research Institute (LEI) prepared this part of the programme, covering the various theoretical and practical issues involved in the problem.

Because of the great importance attributed to the subject by the participants of the course the institute decided to publish the material in order to make it available for a wider use.

A.P. Verhaegh, in collaboration with M. van der Plas, undertook the editing of the publication which besides their own contributions also contains contributions by J.S. Buurma, A.F. van Gaasbeek and E.H.J.M. de Kleyn.

The LEI hopes that this publication will be a useful guide for exporters from developing countries interested in the EC-market and a valuable contribution to the Netherlands Programme of Co-operation with Developing Countries.

The Director,

(J. de Veer)

The Hague, August 1986

1. Introduction and contents of the course

The optional course "Marketing of exotic and out-of-season fresh fruits and vegetables in the EC-market" was divided in two weeks:

- during the first week (24/9 - 28/9/84) we concentrated our attention to theoretical aspects and visited some enterprises in order to see how things are done in practice. The theory was linked as much as possible to the practical examples and to the problems one could meet when starting off in export achieving.
- during the second week case-studies were carried out about preparing plans to export fruits and vegetables to the EC-market.

This course was not intended to make the participants experts in exporting but to give some ideas to explore the EC-markets, to mention some of the many problems new exporters meet and to suggest some points to think over before starting.

The course was a selected optional programme of the 14th International Course on Vegetable Growing. In the general course all important aspects of commercial horticultural production, like extension service, auctions, research, educations, etc., were discussed in detail and therefore the optional programme was restricted to the factors important for a good mutual understanding between production, trade and consumers.

Contents of the course (see appendix)

The first three sessions were used for a short introduction to the theoretical aspects of market analysis. Consumers and producers meet each other on the market. On a theoretically perfect market with a lot of consumers and producers, demand will be equal to supply. When supply grows and/or demand decreases, the prices will go down to reach a new equilibrium.

Some factors were discussed in brief which can influence demand and supply for fruits and vegetables. The total demand for fruits and vegetables in a country depends among others on: prices, the number of inhabitants, the income level, fashion, traditional attitudes towards certain produce (determined by birth, nationality, race, etc.) and competition of other produce. The total supply in a country will depend on: prices, climate, knowledge and specialisation, advisory services, production and external circumstances like infrastructure, etc. These factors which determine supply and demand were discussed in sessions 1 and 2.

Not only the quantities of supply and demand but also factors like quality, duties and levies and packaging influence the price-setting on markets. In the third session another market phenomeon was discussed: supply and demand-elasticities. Supply-elasticities: what happens when a market is overstocked with supplies from exporting countries in a certain season? Demand-elasticities: what kind of produce will in demand, when income levels and also total demand rise, the difference between luxurious and necessary goods, etc.

After discussing this more general picture of demand, supply and markets, the course was continued with a programme more focused on exporting fruits and vegetables to the EC-market. The outlets these produce have to pass to arrive on the EC-market are shown in fig. 1.1. This presentation is of course schematic and not at all complete.

Figure 1.1 Fruits and vegetables from producers abroad to the EC-market consumers: levels and attention points

Levels		Attention points
1.	Producers in developing countries	large- or small-scale production, advisory services, financing, etc.
2.	Collecting wholesalers	packing, grading, quality control, storage, transport, ect.
3.	Exports of first class produce	choice of outlet for export produce, means of transportation: air-freight, sea-transport or by truck
4.	Imports in the EC-market	trade-barriers, harbour-facilities, spezialisation of import-outlets
5.	Wholesale markets in the EC-market	organisation of trade in the EC-countries, importance of wholesale markets
6.	Retail trade	integrated retail trade or traditional spezialized retailers.
7.	Consumers	factors determining consumption.

Following points refer to those mentioned in fig. 1.1:

1. Production: questions to be answered are among others:
   - how to organize production, large- or small scale? On large firms labourers are less concerned about the farm, but an advantage is, that one is able to plan the whole production;
   - how to organize advisory services: local or more regional?
   - how to choose the kind of produce to export?
   - how to finance production?

   In session 1 a number of these questions was discussed.
2. Packaging 1), grading, quality control, storage, transportation in the exporting country, etc., can be centrally planned by the Governement (Marketing Boards). Other possibilities are cooperatives and individual exporters (sessions 1 and 4).
3. Quality-control, etc. is very important because the Western European consumer only buys first class produce and most of the import countries do require a very high quality of import produce (phytosanitairy requirements, etc.). Since production costs will only be a small part of the price paid on the European market, it will be a waste of money (transportation costs, packaging, duties and levies, etc.) to export produce of poor quality. It is better to sell the low grade quality produce on the home market.
4. The EC-market has trade-barriers, reference-prices, duties and levies etc. Dependent on the produce there are minimum prices during some months (tomatoes and cucumbers), import levies (citrus fruit) and maximum quantities (flowers). When Spain joins the EG-market it is possible that those trade barriers will increase further for third countries (citrus fruit), (session 6: Import rules).
   Some harbours are specialized in certain kinds of produce: banana's in Antwerp, pineapples in Marseille, citrus fruit in Rotterdam, Hamburg and Bremen. However most of the EC-countries handle their own imports. Only the Netherlands do handle produce for West-Germany for instance: re-exports of citrus fruit and convey tomatoes and cucumbers in transit (session 5: Trade streams).
5/6. The organization of trade, the importance of import-auctions, wholesalers, wholesalemarkets and retail trade differs from country to country. Integrated retail traders, importing their own produce, have a large market-share in West-Germany and Denmark. In the other EC-Countries however the market share of the integrated retail trade is smaller (session 4: Outlets).

1) Packing and storage are important items on the post harvest handling sessions of Ir. W.S. Duvekot (Sprenger Institute).

7. Consumption, attitudes of consumers towards certain produce and factors which influence consumption are discussed in session 2. Another session on consumer behaviour is session 9, which deals with chances of new produce. In this session a possible market-survey will be discussed.

Before one starts to produce and to export products, it is absolutely necessary to investigate the following market-aspects:

a. Which produce do consumers want to buy?
b. What are the prices on the world market?
c. For which produce a surplus demand does exist?
d. What are the possibilities of new produce?
e. How to set up a sales promotion campaign?
f. Which consumer groups do you want to reach (possibilities of market-segmentation)?
g. What are the production and transport plus marketing costs?

These questions were discussed in session 2 (consumption) and session 9 (Chances of new produce) and some will be mentioned in other sessions. Unfortunately it is not possible to discuss all these important questions in a comprehensive way.

The first week ended with the sessions 8 and 10 covering the whole distribution-channel from producer to consumer: session 8: what kind of expenses do you have before you are able to sell produce in the EC-market? Examples were given for the determination of expenses and calculation of margins of produce to be exported.

In session 10 discusses was on some criteria to judge wether or not an exporting organization has success on the Ec-market; also some reasons of failure were mentioned.

Because it is not possible to tell everything about exporting to the EC-market in this short course, we spent the second week on studying literature and writing reports 1). The purpose of this second week was to get some ability to gather figures and information and to study literature.

The participants were advised write down investigation in a systematic way, so that collegues and superior chane the opportunity to judge the plans.

Literature

Mission to the ACP-producer countries (1981), General report of survey in ACP Caribean States, Liaison Committee for African Caribean and Pacific (ACP) countries, Producers of Tropical Fruit and Off-season Vegetables. Head office in Brussels, Delegation General in Paris and Secretariat, 5 Rue de la Corderie, Centra 342, 94586 Rungis CEDEX, France, tel. 6870206.

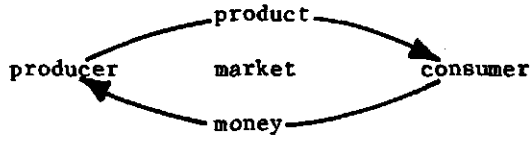
1) Due to organizational problems it was not possible to give the second part of this course planned for 8/10-12/10/84 (See: evaluation).

This report deals with Caribbean produce like mango, limes, avocado, other fruits, vegetables, spices and flowers. It considers the production situation, the transport means and costs and possibile outlets offered by the EC-market. The report ends with an inventory of possibly actions which could be taken to increase the exports to the EC-market, e.g. better organisation of picking and local transport, better grading and packing of exports produce and refrigerated storing and shipping places.

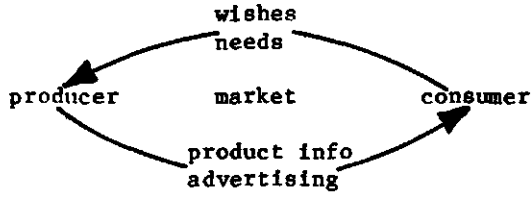
2. Consumption of horticultural produce

2.1 Introduction

In the introduction session of this course the products stream going from producers to consumers is mentioned. As we are talking about trade: a process of exchanging things, there is an equal stream going the other way: money. With these two streams we have the first circular flow with producers on one side, consumers on the other side and the market as an interfase.



However there is, or at least ought to be, a second circulair flow which streams in the opposite direction. This is a stream of information.



Both circular courses work at the same time.

From a marketing point of view there is something special about these circles, they start with the consumer. Their needs and wishes should be the impuls to start production. In complex markets which exist today and especially in exportmarkets, information about consumers needs and wishes does not reach producers all by itself. So producers have to do market research in order to trace consumers wishes and continuesly watch whether these wishes and needs are changing and influence consumption.

2.2 Factors that might influence consumption

When we focus on the common market we have about 300 million potential consumers. For horticultural products we may assume that all 300 mill. are in one way or an other actual consumers of these products.

In 1981 these 300 million people have consumed about 30 milliard kg of vegetables. On the average this means that every consumer eats about 100 kg a year (included are home grown and processed products). When we look at the actuals consumption a head in the various countries, we see that an average over 10 countries does not say much because of the large differences.

Table 2.1 Consumption in kg/head/year (1981/1982)

Country	Vegetables	Fruit	Citrusfruit
Netherlands	84	52	92
Belgium/Luxemburg	64	49	21
France	115	54	20
Italy	158	69	40
West-Germany	69	64	28
United Kingdom	80	33	14
Ireland	82	31	15
Danmark	61	32	9
Greece	208	76	75

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In table 1.1 we see that geographical location influences horticultural consumption. Apparently there is a different consumption pattern in the various countries, due to cultural differences and probably availability of various vegetables.

For instance when an Italian moves to West-Germany, he has to change his consumption pattern because some vegetables will not be available. On the other hand he probably still will eat more vegetables than the average German. Also he will ask for those vegetables which he was used to eat but cannot get. So he will stimulate the introduction of new vegetables in West-Germany.

In recent years, this mechanism has taken care of a succesfull introduction of "Long beans" on the Dutch market. In the 1970th there was a large stream of people from Surinam, a former colony of the Netherlands, coming to our country. They formed a market for "Long beans", which was large enough for a succesfull introduction. Here we see that migration, especially when it concerns large groups of people, can change consumption.

An analogous mechanism works through holidays abroad. In foreign countries people get acquainted with other vegetables. After coming home they also want to buy these products on the home market. Examples are for instance the introduction of aubergine and courgette on the Dutch market.

So we see that consumption patterns change in time. In the Netherlands the consumption of fresh vegetables and fruits has inclined significant during the past 30 years.

Table 2.2 Total consumption of fresh fruits and vegetables in million kg a year

Produce	1955	1960	1965	1970	1975	1979
Vegetables	475	506	544	620	666	729
Fruits	307	322	372	486	456	481
Citrusfruit	164	257	323	372	433	490

PGF

A first explanation of this growth is of course furnished by the number of inhabitants. From 1955 to 1979 population has grown with more than 3 million or almost 30%.

Population growth has been an important factor for inclining consumption and still is for some countries. However since the population-grow-rate in the EC is declining, this factor is getting less important.

Table 2.3 Number of inhabitants million

	Neth.	B/Lux.	Fr.	I.	W-G.	D.	Ir.	UK	EC(9)
1976	13.8	10.2	53.0	56.3	61.4	5.1	3.2	56.0	259.0
1981	14.2	10.3	54.0	57.2	61.7	5.1	3.4	56.0	261.9
Grow-rate	2.9	0.9	1.9	1.6	0.5	0	6.2	0	1.1

LEI

When we eliminate population growth we still can see a growing consumption.

Table 2.4 Consumption of fresh vegetables 1) and fruits in kg/head/year

Produce	1955	1960	1965	1970	1975	1979
Vegetables	44.18	44.07	44.25	47.57	48.76	51.95
Fruits	28.59	28.00	30.27	37.26	33.40	34.30
Citrusfruit	15.25	22.41	26.27	28.56	31.69	34.92

PGF

1) Only of proffessional grown produce.

2.3 To predict consumption level

To predict whether this growth will go on in future, we will have to analyse what in the past has caused this inclination. Some reasons can be given:

- As we have seen there has been some succesfull introductions of new vegetables on the Dutch market. Some of these products have a pure supplementary character. This means that for the consumer at the moment of purchase it is not a question of either this product or that product but more and this and that. These products are additional. A good example is "sweet pepper". This product is rarely used alone as a sole vegetable but frequently in combination with other products like: lettuce. Ohter examples are also tomatoes and cucumbers.

Table 2.5 Consumption (kg/head/year)

Produce	1955	1960	1965	1970	1975	1979
Sweet pepper			0.13	0.18	0.55	0.96
Tomatoes	2.31	2.72	0.32	3.36	4.34	5.11
Cucumber	1.91	2.74	3.69	4.37	5.61	6.21

PGF

Since sweet pepper is an additional product, the introduction accounds for a consumption growth of 0.83 kg/head in a period of 14 years.

A second possible explanation is the diminishing number of people in a household. The average number of people in a household has declined from 3.3 in 1973 till 2.8 in 1983. Due to "economy of scale", households with more people have a lower consumption a head. A clarrifying example is mushrooms. In the Netherlands mushrooms are usualy sold in a package of 250 gramms. Due to this discrete quantity consumption declines with a rising number of people in a household.

Table 2.6 Average consumption of mushrooms in the Netherlands

Number of people in the household	1	2	3	4	5
Average consumption gr/week/head	125	62.5	40	62.4	30
Index	100	50	32	50	25

LEI

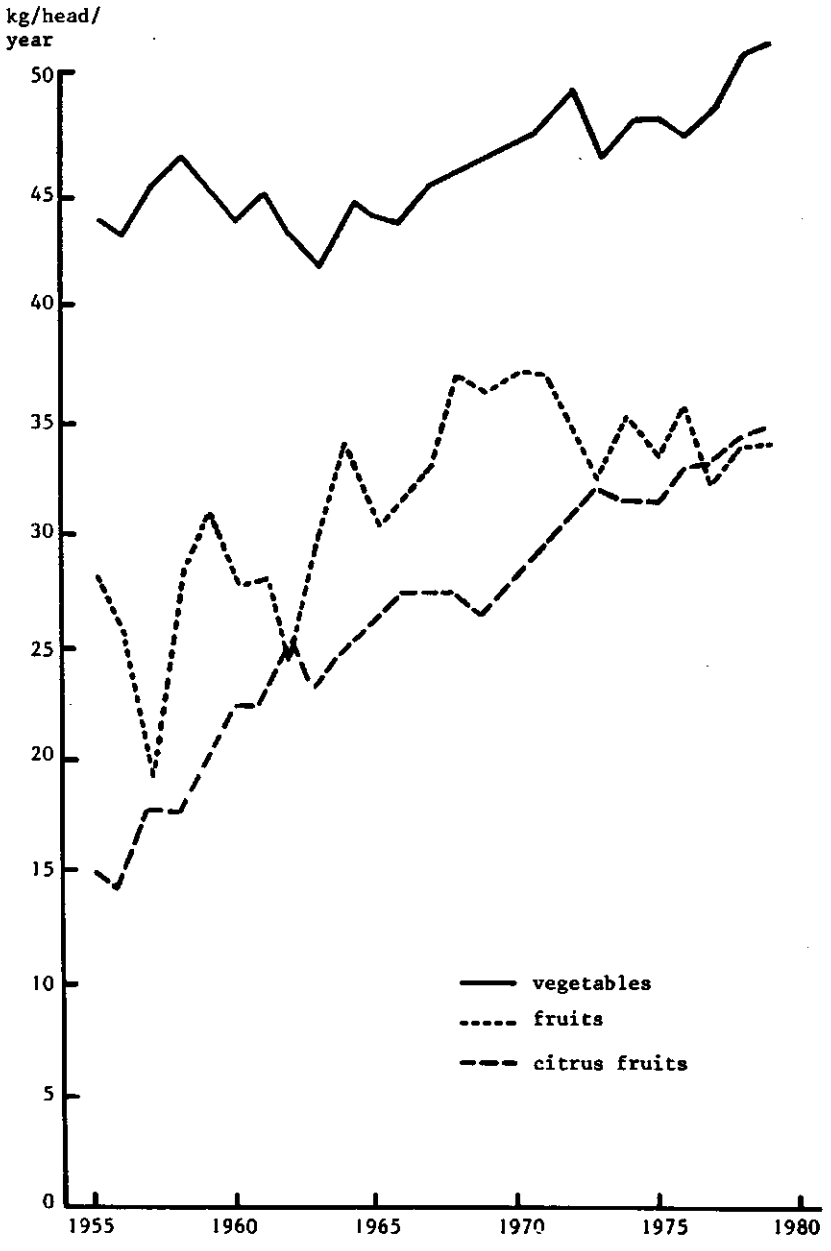
This pattern is also seen by other vegetables which by the nature of the product itself, forms a discrete quantity such as cabbage, lettuse and cucumber.

A third explanation can be found in the rise of average income. People have more money to spend and can afford to have more than one vegetable at one meal, for instance the combination of lettuce, tomatoes, cucumber and sweet pepper. This factor also made it easier to introduce new products. People are able to try out new or out of seasons products, which are often more expensive.

When we accept these three explanations we can predict a continuing growth in consumption in the next few years, however the grow rate will diminish. The possibilities of new additional products are limited especially in the EC since there is a broad assortment already. The declining number of people in a household will slow down and average income did not grow anymore since 1980.

All factors mentioned influence consumption in the long run. When we look at graf. 2.1 we see consumption also changes from year to year often in different directions. An explanation of these fluctuations and changes in consumption in general is the price of a product. How prices influence consumption is dealt with in session 3.

Figure 2.1 Consumption of vegetables and fruits in the Netherlands



PGF

Appendix 2.1 Consumption of fresh vegetables and fruits in kg/head/year (Only produce with a consumption level higher then 1 kg a head a year)

Produce	1965	1970	1975	1979	1980	1981	1982
Kg							
Vegetables							
Endive	3.51	4.07	3.57	3.30	3.30	3.08	3.28
Cauliflowers	5.10	5.95	6.00	6.00	5.98	6.57	6.28
French beans	1.22	1.43	1.50	1.85	1.56	1.86	1.79
cucumbers	3.72	4.37	5.58	6.21	6.29	6.28	6.54
Lettuce	2.65	2.82	2.87	2.26	2.56	2.27	2.27
Spinach	1.62	1.45	1.33	1.30	1.46	1.47	1.50
Tomatoes	3.18	3.36	4.22	5.10	4.68	4.95	5.03
Fruit							
Strawberries	0.87	0.96	0.88	1.38	1.38	1.21	1.28
Grapes	1.22	1.70	1.93	2.33	2.21	2.61	2.38
Melons	0.40	0.43	1.07	1.35	1.42	1.56	1.58
Peaches	0.47	0.85	0.87	1.31	1.23	1.35	1.44
Plums	0.84	1.16	0.69	1.20	1.01	0.82	1.18
Subtropical fruit (fresh)							
Bananas	6.60	6.69	8.04	7.80	7.59	7.30	6.73
Lemons	0.82	0.72	0.91	1.00	0.92	0.90	1.08
Oranges and Mandarins	17.92	8.33	1.60	3.00	22.94	20.63	21.66
Others	0.93	1.12	1.78	2.10	2.59	2.26	2.22
	1965/66	1970/71	1975/76	1979/80	1980/81	1981/82	1982/83
Vegetables							
Cabbage	2.56	3.31	2.87	3.08	2.93	3.57	3.10
Carrots	3.70	3.36	3.64	3.91	4.58	3.97	4.11
Leek	1.32	1.66	2.35	2.76	2.84	2.89	3.09
Sprouts	1.44	2.24	2.28	2.59	2.62	2.39	2.74
Unions	3.03	3.24	3.28	3.55	3.87	3.87	3.82
Chicory	1.60	2.33	1.85	2.69	2.13	2.58	2.70
Fruit							
Apples	20.80	24.28	25.18	21.01	22.33	16.81	24.28
Pears	4.64	6.24	4.06	5.02	4.59	4.29	4.22

Source: Organisation of producers of fruit and vegetables (PGF), published in horticultural figures (Tuinbouwcijfers 1984).

Figures inclusive weight losses in trade outlets and exclusive not professional grown products.

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3. Production

3.1 Introduction

This course "Marketing of exotic and out-of-season fresh fruit and vegetables in the EC-market" is only a small part of the "International Course on Vegetables Growing". The main course deals with factors that greatly influence the production for example, breeding, irrigation, extension service, farming systems, experimental stations, banking, education, co-operations, trade unions etc., etc.. In this chapter only factors with a strong influence on horticultural poduction will be discussed factors with which the salesman has to be familiar.

For selection of suitable location of the horticulture industry policy makers, researchers and others usually focused their attention mainly on three aspects; climate, labour and distance between production and consumption area. However for a successful horticultural industry other factors are of equal importance; technical progress, infrastructure, produce innovation and last but not least organization and a good coordination between the management activities in various sectors of the industry.

For a successful horticultural industry a good co-operation is necessary between trade and production. A good understanding can only be realized when both parties know how each one is working.

3.2 Production factors

3.2.1 Climate

In The Netherlands one can buy fresh French beans produced by the Dutch growers from the end of May up to the beginning of October included. Pulse crops are sold on the Dutch auctions in June, July and August. It is possible to buy Dutch lettuce the whole year around, it is produced in the open and in winter in glasshouses. All tomatoes and melons are produced in glasshouses. The auctions sell tomatoes from the end of March up to the first half of November included. Melons are produced in June up to October (see appendix 3.1 for other produce). These production patterns are caused by the temperature, the radiation and day-length. Here is given the supply figures from the Netherlands. You will find the same pattern in the surrounding countries, such as Germany, Belgium, Denmark and England. In the south of Europe (Italy, Spain, Greece) the climate is subtropical so the temperature are higher in winter and summer and there's more radiation in winter.

The supply of produce produced in the open field is limited to the natural season. This is a great disadvantage not only for producers but also for trade. Every year the traders have to start a new promotion campaign, because consumers have to get used to the product again. The disadvantage for the producers is that only during the natural season they are able to use their land, labour and capital intensively. So they have relative high costs per unit of product.

Crops can be protected by glass, plastic and other materials. First of all one has to protect crops against low temperatures (Netherlands), but also against wind, undesirable rainfall, hot sunshine etc. The use of glass gives the grower the opportunity to manage the growth of the crops much better. Compared to open air crops protected cultivation gives better quality and a higher yield per square metre. In The Netherlands the harvest on year basis of tomatoes and sweet peppers (capsicum) cultivated under glass is on average 280,000 resp. 150,000 kilogramme per hectare with an export quality of 95 per cent. An other advantage is the production during a longer period, even the whole year round. Next to these better results yields are more certain. With open air crops the yields are greatly dependent on climate conditions. By fluctating supplies you get an unstable market. Traders don't like this situation because they want a continous supply at stable prices. When the seller is not able to guarantee that they will look for other suppliers.

For exporting produce to the EEC it is very important to know in which period the home production is on the market. Before and after this period the price is better. The consumer is willing to pay more for out-of-season-produce. When the import product is supplementary to the EEC's own production the greatest chance of a successful business is guarantied too. It is always very difficult to compete with home production.

3.2.2 Labour

In horticultural production labour costs account normally for about 30-45% of the total production costs and consequently have a dominant effect on total production costs (see appendix 3.2).

Compared to wages in Developing Countries wages in Western Europe are very high, in particular in The Netherlands, Germany and Sweden. In the Netherlands in 1984 costs of one hour labour are f 25.80 inclusive social costs (28%). This is charged for skilled permanent labourer, working 1840 hours a year. So the year salary is now f 47,616. In Italy and England and particular in Greece wages are the lowest of the EEC countries.

The costs for casual or seasonal labour are lower. But in The Netherlands only a small part of the total labour hours needed is covered by this kind of labour (appendix 3.2).

Price is only one aspect of labour, another aspect is skill. The price per hour depends on the level of skill. The level of the skill is shown in the achievements, both quantitatively and qualitatively. In horticulture the qualitative aspect is very important. In horticultural production one has to give much attention to the individual plant and harvested product. This applies for all types of work such as manuring, watering, picking, packing etc. There are only a few jobs that can be done by unskilled workers. On my father's holding only very high skilled labourers were permitted to pick French beans for the fresh market. The losses of broken beans, forgotten beans and especially the destruction of flowers and young not ripe beans were to high when unskilled labourers were used. Many horticultural projects failed or will fail in the future because the level of skill was or will be too low or because of insufficient tuning of the different kinds of jobs. This is true for the simpler work as well as for the more difficult jobs like planning, transport and production (management).

3.2.3 Technical progress

Technical progress can be measured in productivity-figures. Productivity measures the relationship between output and input in physical quantities. It is one of the most important measures of the economic viability of firms. The best way to show the importance of technical progress is an example, for instance the developments in growing tomatoes under Dutch circumstances.

In 1954 a grower needed 1170 hours to plant, to take care of and to harvest tomatoes on 1,000 square metre. In that period a grower harvested 7,700 kilogramme on the same area. Thus the labour productivity per hour was 6.6 kilogramme in 1954. By mechanization, automatization, alterations in the culture, new types of glasshouses, better varieties, better management and many other developments growers reached a labour productivity of 40.3 kg per hour labour in 1982 (see appendix 3.3). This means an enormous progress.

In this way the very strong increase of labour costs was compensated. The same happened with energy. Including other costs like seed, delivery, fertilizer, pesticide and others the total production costs per kg early tomatoes were f 1.89 in 1982. If in 1982 the yield had been on the same level as in 1975 the cost price of one kilogramme early tomatoes in 1982 would have been f 4.18. By increasing productivity growers managed to halve the cost per kilogramme in 7 years. When after 1954 no productivity had been realised, Dutch early tomatoes would have been unpayable nowadays.

Thanks to increasing productivity, costs per kilogramme stayed low and even decreased excluding inflation. The real consumer price decreased and more and more consumers bought Dutch

early tomatoes. Not only did the yield per square metre increase, but so did the growing area and the number of growers. Enormous quantities of Dutch tomatoes found their way from producers to consumers. Thanks to the adaptability of the traders consumers and producers could meet each other.

In the whole productivity story yield increase is very important. This is characteristic for the intensive way horticultural produce are produced. The high level of yield per square metre has a great relation to other aspects too, such as the scale of production, the specialization on one kind of crop etc.

3.2.4 Scale of production

Small or large scale production must be decided primarly from the point of view of care for individual plants. Good care is necessary for obtaining a high yield with a high percentage of export quality. You can say for most horticultural produce that good care for the individual plant is incompatible with large scale production. However, good care can only be realized when the extra costs are compensated with better quality and/of an increasing yield per square metre. For instance it will be profitable to take good care of melons if it is possible to harvest five instead of two melons per plant while the use of water etc. will remain on the same level.

Through technical developments some horticultural produce in the past produced on small fields, are now produced on a larger scale. However these on large scale produced produce are not sold on the fresh market on the whole.

When local people are not familiar with horticulture it seems attractive to start with a large scale production thinking that knowledge can be organized. Educated people and people with experience from outside the region have to do the management. However, on a horticulture holding the growing proces needs a lot of management. You can't do it from behind the desk.

Producing on a large scale with unskilled fieldworkers can only be successful when a low yield level is acceptable and when there is a home market, for a high percentage of the produce will not be suitable for export.

A second argument for producing on a large scale is the organization of the exports. For export you need big quantities and continuous supply. Who has to organize the export? The grower must organize it himself or a group of growers (co-operation) or an independent large scale organization (marketing board)? This is a very important question since many exporters and export-combinations failed to organize properly. In any case the interest of production side must be fulfilled.

The experience in horticultural industry is that some things have to be done on a large scale and other things mostly fail on a large scale. In general you can say that a large "scale" is

preferable on the delivery side and on the sale side. Price, quality, storage and other things can be done generally much better on a large scale production, however, can preferally be done on a small scale.

Developing the production on a small scale takes more time. There has to grow a "horticultural atmosphere", not only promotors but also workers in the field have to think horticulturally.

In The Netherlands horticultural and agricultural production is done mainly on small scale. In total there are 120,257 hectares of horticulture, of which 8,837 hectares with glasshouses and 111,420 in the open field (appendix 3.4 and 3.5).

In the Netherlands we have 32,404 holdings which cultivate horticultural produce in the open field. This means an average area of 3.4 hectare per holding. 16,973 holdings have less than 2 hectaren and 840 holdings have more than 15 hectares (appendix 3.4).

In The Netherlands potatoes are not a horticultural crop. The area of potatoes for direct consumption is 100,900 hectares with 4.0 hectares potatoes on the average farm (appendix 3.6).

3.2.5 Specialization

Specialization is an indispensable factor to explain the enormous progress in the productivity of the tomato industry in The Netherlands. Specialization isn't only profitable for the grower on the side of costs, but it gives more advantages on the side of yield. The high yield level is a characteristic property of horticulture production. The effect of specialization is the greatest when more growers are specialized on the same crop and they are located side by side.

In The Netherlands horticulture production is concentrated strongly on specialized holdings; nearly 95% of the glasshouses are situated on holdings which are specialized in crops under glass. Specialization means more than 60% of the capacity of the holding is used in this case for crops in glasshouses. We see a strong specialization on crops in the holdings too. Many growers grow only one crop e.g. tomatoes or grow one main crop and an additional, less important second crop after harvesting the main crop e.g. tomatoes-lettuce. Only a few grow three or more crops. The bulb-, the fruit- and the tree nurseries also show a strong specialization (see appendix 3.6).

Vegetables which are easy to mechanize are grown on both horticultural and arable farms. On arable farms they grow mainly contract crops for the canned industry. For the next vegetables produced in the open field you will find between brackets the percentage of contract in 1982: endive 547 ha (15), borecole 493 ha (48), French beans 6,182 ha (86), cabbage 780 ha (43), carrots 3,446 ha (46), leek 1,970 ha (11), celery 1,630 ha (37), spinach 2,222 ha (61), brussels sprouts 668 ha (11), and chicory roots 3,808 ha (28).

3.2.6 Infrastructure

Pernicious products require a rapid and reliable transport. So the horticulture district orientated on export should be located near a highway, airfield or harbour. Inside the region the network of roads must also be very good. Shortening the period of time between producer and consumer must have one of the highest priorities in fresh horticulture trade. The location of the holdings and the infrastructure have a great influence on this period.

The second reason for a good infrastructure is the characteristic property of the high yield level in horticulture production. A high density of holdings is required. It must be easy for the growers to have regular and short contacts with each other. So the holdings have to be located near each other. Other aspects of the infrastructure are size and position of the lots, the watersystem, the location of the delivery firms, banks, sale points, etc.

For a good horticulture industry you need a good extension service and research. The extension workers have to visit more growers a day and should be able to have intensive contacts with practical research in particular. This requires a localization of all persons and institutes concerned in the same region near each other. The information "system" has to be optimal.

3.3 Market factors

3.3.1 Distance to the consumption area

You will often find horticulture near big consumption areas. In the past vegetables and soft fruit were grown in or near towns. In that period roads were bad, produce were very pernicious and communication lines were bad. Even at this moment distance is very important. Not only because of transportation costs, but also because of shorter communication lines. Although communication by telex, telephone and post are easier, personal contacts are still an important factor in trade. Having a agency in consumption areas far away isn't good enough as information source. For good contacts growers, exporters and other representatives of the production area have to know the consumption area and traders (wholesalers, retailers) have to visit the production area to be aware of the problems and possibilities. In horticulture there are constant changes in demand and supply. Both traders and producers have to be aware of these changes. They are dependent on each other to make the right decisions. Both partners have to understand each other's problems.

3.3.2 Local and exportmarkets

When there is only a local market and growers are producing for consumers in their own region, growers have more contacts with trade and consumers. In local (home) markets growers compete with each other more directly. When growers increase the area of a crop the supply grows very much, particularly in the case of small produce. Price fall will be the consequence. Growing for a small market implies that growers must spread the risk. This can be reached by producing several crops in small quantities. However in this way the advantage of specialization on yield and cost-side is lost. In The Netherlands growers bring the produce to an export auction. For exportmarkets greater quantities of produce are necessary. In this situation the influence of the individual grower on the supply is small and the marketprice is more stable. This creates possibilities for specialization.

3.3.3 Product innovation

A driving force behind the increase in productivity of production is innovation, renewals on all aspects of culture and products. Product innovation implies the introduction and development of new crops or varieties and, indeed, the presentation of older and traditional crops in a new form. Together with productivity increase product innovation is one of the major factors guaranteeing survival of the horticultural industry in each country and region.

The aim of product innovation is to widen the range of crops, thus making the growers less dependent on only a few products. It also gives trade a more secure position in the markets.

The background of product innovation can be found in the life cycle of a product. All products have a life cycle. After the introduction period, each product has a period of growth and a period of saturation.

In the growing period the supply and the total turnover can increase very strongly. Saturation is a period in which an increase of the total supply gives a decrease of the total turnover. In the period of growth the individual grower can enlarge the area, he can bring up the yield per square metre and there is place for new growers. In the saturation period the group of growers should not increase the supply, the total return will fall.

However, from the point of productivity the individual grower has to increase the yield per square metre in the saturation period, too. This means that an increasing number of growers have to stop and switch over to other products. New crops have to be decided on the basis of market and economic surveys.

Trade plays an important role which varies in the three periods. It is very important that trade can handle this. On the production side specific things there must be done, too. The ini-

tial period after launching a new product on the market is very expensive. It is crucial that sufficient quantities are available in the markets for as long as it takes to convince the consumer of the desirability of the new products. This may take three or more years. On the production side, growers need price guarantee for the produced produce in this initial period.

Promoting a new product which the consumer cannot easily buy in his usual shopping area is a waste of time and money. Marketing history is full of examples of new products which failed because these elementary principles were not recognized.

It has become practically impossible today for an individual grower or a horticultural company or beginning countries to introduce a new product on a national or international scale, because of the high costs involved. They have to work together (see 4.5 too).

3.4 Organization and coordination

As mentioned before, specialization has positive effects on the results. Specialization here means not only in crops but also in all aspects of horticultural industry. In this way many people and firms, independent in their own special activity, participate jointly in the organization of the horticulture.

There must be a close co-operation between all these parties, this means among extension, research, manufacture, banks, seed industry, market, local and national governments, growers and other interests. It is important that all the groups have free communication with one another. Special attention should be given to the group of growers, who serve as the main driving force behind developments. The group of growers may be specialized further so as to be able to concentrate on specific crops and aspects of the culture, such as out of season growing, watering, fertilizing, variety trials and so on. Not only must the group of growers be helped by the specialist but this group should have their say in projects to be carried out by research, experimental stations and trade.

In the past growers produced for a market with unlimited capacity for sale; the European Common Market knew no saturation. It was the grower who decided what to grow, thus the grower was "king". In the last 25 years the situation has changed. Now the growers are working for fully saturated markets, making the consumer a "king". The growers have to adapt themself to the wishes of the consumers. The traders got a new task, to bring over the new wishes of the consumers to the producers. This demands a great flexibility of traders and producers because the consumers' behaviour changes very fast. To get a good co-operation the "machine" of the horticultural organization must be oiled increasingly better.

Remarkable achievements in horticulture are not caused by differences in radiation, distance, wages etc. but are due to effective organization and coordination. In The Netherlands we call it "centre function" (an other word is team spirit), which can be found in everything and everyone engaged in or connected with the industry. It is the key to success. In the years ahead - more than at any time in the past - the survival of a horticultural industry in a country will depend on whether it can match the competition of other countries. This competition can only be effective with an organization and coordination as good as possible. This is also true for developing countries.

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Appendix 3.1 Sales pattern on Dutch auctions, 1982 (percentages)

Fresh vegetables	Jan.	Febr.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	
Champignons	8	8	10	8	11	8	6	8	7	10	8	8	Mushrooms
Rode kool	13	11	14	9	6	5	4	6	6	9	10	7	Red Cabbage
Witte kool	10	8	13	7	10	5	3	9	7	10	12	6	White Cabbage
Sla	9	11	19	14	8	5	5	6	4	5	7	7	Lettuce
Selderij	8	7	11	8	10	7	7	9	8	9	8	8	Celery
Kroten	8	10	11	8	9	10	7	10	6	7	8	6	Beetroat
Peen	8	8	10	6	5	3	4	9	8	15	14	10	Carrots
Prei	7	7	8	11	9	4	6	8	10	14	10	6	Leek
Peterselie	3	3	6	8	12	11	8	11	9	11	9	9	Parsley
Raapstelen	3	9	33	28	17	-	-	-	-	-	-	-	Turnip Tops
Rabarber	-	4	8	16	30	33	5	3	-	-	-	-	Rhubarb
Sjalotten	-	3	12	22	27	17	7	5	-	-	-	-	Shallots
Koolrabi	-	-	14	27	13	7	3	7	6	7	12	3	Kohlrabi
Radijs	-	-	13	16	21	11	9	7	6	6	4	3	Radish
Spinazie	-	-	11	18	29	8	9	7	10	5	-	-	Spinach
Komkommers	-	-	10	12	20	17	15	12	9	5	-	-	Cucumbers
Andijvie	-	-	7	10	15	12	10	12	9	10	6	3	Endive
Aubergines	-	-	-	7	17	17	21	18	12	6	-	-	Eggplant
Tomaten	-	-	-	7	22	20	18	15	10	6	-	-	Tomatoes
Chinese kool	4	-	-	19	22	8	6	8	9	9	6	5	Chinese Cabbage
Paprika	-	-	-	6	13	12	13	18	13	15	7	-	Sweet Pepper
Asperges	-	-	-	-	63	33	-	-	-	-	-	-	Aspargus
Peulen	-	-	-	-	25	56	18	-	-	-	-	-	Sugar Pea, Podded Pea
Spitskool	-	-	-	-	14	24	16	15	10	12	6	2	Conical Cabbage
Augurken	-	-	-	-	5	11	32	44	8	-	-	-	Gherkins
Snijbonen	-	-	-	-	9	11	23	40	9	5	-	-	French beans for slicing
Bloemkool	-	-	-	-	6	13	17	17	18	25	-	-	Cauliflower
Postelein	-	-	-	-	7	23	20	20	16	11	-	-	Purslane

Appendix 3.1 Continuation 1

FRESH VEGETABLES	Jan.	Febr.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	
Tuinbonen	-	-	-	-	-	81	18	-	-	-	-	-	Broadbeans
Erwten	-	-	-	-	-	74	25	-	-	-	-	-	Green pea
Sperziebonen	-	-	-	-	-	4	28	38	24	6	-	-	French beans
Pronkbonen	-	-	-	-	-	-	7	48	38	7	-	-	Runner beans
Savooie kool	15	7	7	3	-	-	4	10	12	15	14	10	Savoy cabbage
Spekbonen	-	-	-	-	-	-	-	73	24	-	-	-	(Pork) beans
Koolrapen	17	15	12	-	-	-	-	3	9	17	14	10	Turnips
Uien	12	11	13	8	6	3	-	6	8	13	10	8	Onions
Spruiten	12	8	4	-	-	-	-	-	11	27	22	15	Brussels sprouts
Veldsla	9	14	29	10	3	-	-	-	3	7	9	12	Corn salad
Witlof	18	16	16	9	4	-	-	-	-	7	13	15	Witloof chicory
Boerenkool	22	7	-	-	-	-	-	-	-	18	23	26	Borecole (Curley Kale)
Schorseneren	3	9	42	24	-	-	-	-	-	3	15	4	Scorzonera
FRESH FRUIT													
Aardbeien	-	-	-	3	14	59	15	6	-	-	-	-	Strawberries
Perziken	-	-	-	-	14	12	28	10	35	-	-	-	Peaches
Kersen	-	-	-	-	-	50	50	-	-	-	-	-	Cherries
Frambozen	-	-	-	-	-	17	81	-	-	-	-	-	Raspberries
Rode bessen	-	-	-	-	-	24	57	18	-	-	-	-	Red currants
Kruisbessen	-	-	-	-	-	9	88	3	-	-	-	-	Gooseberries
Zwarte bessen	-	-	-	-	-	4	91	5	-	-	-	-	Black currants
Meloenen	-	-	-	-	-	5	22	51	18	4	-	-	Melons
Morellen	-	-	-	-	-	-	61	39	-	-	-	-	Sourcherry
Pruimen	-	-	-	-	-	-	9	79	11	-	-	-	Plums
Bramen	-	-	-	-	-	-	3	63	30	4	-	-	Black berries
Druiven	6	3	-	-	-	-	5	10	14	46	10	4	Grapes
Appelen	10	9	10	5	6	3	4	9	10	17	11	7	Apples
Peren	11	10	9	5	-	-	-	6	22	17	11	8	Pears

Appendix 3.1 Continuation 2

CUT-FLOWERS	Jan.	Febr.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	
Iris	9	11	15	15	13	6	3	3	3	7	8	7	Iris
Fresia	7	9	16	17	15	9	4	3	3	3	6	8	Freesia
Snijgroen	7	7	9	10	11	11	8	8	8	7	7	7	Cut green
Anjer, tros	6	5	6	7	7	14	13	11	12	8	6	5	Carnation
Anthurium (gesneden)	6	6	5	7	10	12	11	10	10	9	7	7	Sword lily
Chrysant, tros	5	5	6	9	9	9	8	9	11	11	10	8	Chrysanthemums
Anjer, standaard	4	4	5	6	8	15	17	14	11	7	5	4	Carnation
Gerbera	4	7	12	15	12	10	7	7	7	8	6	5	Gerbera
Lelie, kelk	3	2	4	8	11	14	10	11	9	10	10	8	Lily (Lalyx)
Lelie, tak	3	3	5	8	13	15	10	10	9	10	9	5	Lily
Roos	3	4	7	9	11	12	11	11	11	9	7	5	Roses
Gladiool, nanus + colv.	-	-	-	-	17	27	28	17	7	-	-	-	Gladioli
Gladiool, grootbl.	-	-	-	-	4	12	22	33	21	5	-	-	Gladioli
Nerine	4	-	-	-	-	-	3	7	25	34	21	2	Guernsey lily
Chrysant, geplozen	-	-	-	-	-	-	3	6	17	38	22	5	Chrysanthemums
Hyacint, met bol	11	9	7	-	-	-	-	-	-	-	15	56	Hyacinth (bulb)
Anemoon	13	15	24	19	12	-	-	-	-	-	6	9	Anemone
Sering	17	20	20	11	-	-	-	-	-	-	5	25	Lilacs
Narcis	19	23	26	18	-	-	-	-	-	-	2	11	Daffodils
Tulp	17	24	26	18	5	-	-	-	-	-	-	9	Tulips
Hyacint, gesneden	13	31	45	6	-	-	-	-	-	-	-	5	Hyacinth (cut)
POT-PLANTS													
Anthurium	8	10	18	17	10	7	3	6	7	5	5	4	Flamingo plant
Bromelia	7	7	7	11	8	10	6	8	9	8	10	9	Bromeliads
Saintpaulia	6	6	10	11	9	10	8	9	7	7	9	8	Saintpaulia
Kalanchoe	6	10	11	9	7	9	7	10	9	8	8	6	Kalanchoë

Appendix 3.1 Continuation 3

POT-PLANTS	Jan.	Febr.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	
Begonia	5	6	11	13	12	12	8	9	7	6	6	5	Begonia
Cyclamen	11	7	3	-	-	4	5	8	11	12	17	19	Cyclamen
Azalea	12	16	18	8	-	-	-	-	7	11	11	15	Azalea
Cineraria	12	18	26	29	10	-	-	-	-	-	-	4	Cineraria
Chrysanten	-	4	9	11	10	11	9	10	12	14	4	4	Chrysanthemum
Pelargonium, zonale	-	-	4	24	50	16	5	-	-	-	-	-	Pelargonium, zonale
Hibiscus		-	2	10	23	16	11	19	14	4	-	-	Hibiscus
Pelargonium, peltatum	-	-	-	17	70	12	-	-	-	-	-	-	Pelargonium, peltatum
Poinsettia		-	-	-	-	-	-	-	-	-	-	-	Poinsettia

Source: PVS.
Perc. lower than 3 percent are not given.

Appendix 3.2 Labour use and costs on average per holding in the Netherlands (1981)

Labour (hours, costs):	Horticulture in the open field 1) (glass area: 200 m2, open area: 78.100 m2)			Horticulture under glass 2) (glass area: 9.200 m2, open area: 2.300 m2)		
	hours	cost	cost per hour	hours	cost	cost per hour
Farmers' 3)	2,962	f 70,470	f 23.79	3,202	f 76,210	f 23.80
Farmers' wife	515	f 8,780	f 17.04	626	f 10,520	f 16.81
Other members of the family	129	f 2,130	f 16.51	350	f 5,820	f 16.62
Other labourers 4)	1,417	f 13,400	f 9.46	3,349	f 55,740	f 16.64
Total	5,023	f 94,780	f 18.87	7,577	f 148,290	f 19.70
Total costs		f204,560			f 479,160	
Labour cost in perc. of total costs		46			31	

1) Based on 59 holdings representative for the vegetable growing in the open on specialized holdings in the Netherlands.
2) Based on 260 holdings representative for the glasshouse industry in the Netherlands.
3) Number of entrepreneurs per average holding 1.3.
4) Other labourers, this means 91% casual labourer and 9% permanent labourer in the open. In the glasshouses holding these percentages are 38 and 72%.

Source: Agricultural Economics Research Institute. The Hague.

Appendix 3.3 The productivity of labour, fuel and durable production means by tomatoes from heavy heated glasshouses in the Netherlands

	1954	1958	1963	1969	1975	1982
Yields per 1000 m2:						
Kg harvest before June	1,850	3,500	5,300	6,100	7,500	8,500
Kg harvest after June	5,850	6,000	5,000	6,900	7,500	20,500
Kg total	7,700	9,500	10,300	13,000	15,000	29,000
Used production means per 1000 m2:						
Oil 3,500 sec in ton's	35	44	57	63	65	38
Capital (dpm) in f 1000,- 2)	28	34	38	42	50	66
Labour in hours	1,170	1,030	800	650	650	720
Productivity per:						
ton oil	220 1)	216	181	206	231	763
f 1000,- capital	275	280	271	310	300	439
hour labour	6.6	9.2	12.6	20.0	23.1	40.3
Cost per kg tomatoes:						
fuel costs	0.44	0.35	0.36	0.39	0.24	0.54
dpm costs	0.37	0.36	0.36	0.32	0.33	0.44
labour costs	0.21	0.20	0.21	0.28	0.38	0.53
	1.02	0.91	0.93	0.89	0.95	1.51

1) 7,700 : 35 = 220.
2) dmp = durable production means.

Appendix 3.4 Holdings with horticultural crops in the open according to size of area and (main) type of holding, 1982, in the Netherlands

Type of holding	Number of holdings with ... ha horticulture in the open:							Total holdings	Total area ha	Area per holding ha
	0.01-1.00	1 - 2	2 - 3	3 - 5	5-10	10-15	15 e.m.			
Glass holdings 1)	3,718	686	194	104	30	11	6	4,749	3,483(3.1)	0.73
Open field vegetable holdings	710	755	544	717	677	214	144	3,761	17,116(15.4)	4.55
Bulb holdings	430	414	338	424	533	231	155	2,525	13,424(12.0)	5.32
Fruit holdings	411	569	354	433	870	431	182	3,250	18,781(16.9)	5.78
Tree holdings	1,384	690	309	249	166	45	40	2,883	6,006(5.4)	2.08
Glass/open field holdings	146	166	79	82	53	3	6	535	1,345(1.2)	2.51
Mixed horticulture holdings	1,021	622	311	316	351	99	51	2,771	8,105(7.3)	2.92
Cattle holdings	1,676	691	343	267	165	16	6	3,166	4767(4.3)	1.50
Arable holdings	582	661	756	1,223	1,315	356	145	5,038	24,720(22.2)	4.9
Mixed agriculture holdings	938	703	553	669	599	161	103	3,726	13,678(12.3)	3.7
Total holdings	11,016	5,957	3,781	4,484	4,759	1,567	840			
Total (area)	4,986 (4.5)	8,167 (7.3)	8,978 (8.1)	16,991 (15.2)	32,789 (29.4)	18,612 (16.7)	20,899 (18.7)		111,420(100) (100)	3.4

Between brackets percentage of the total.
1) Glass holdings means specialized, mainly on cultures under glass, besides the sector glass there are a number of growers with a relative small part of vegetables in the open area.

Appendix 3.5 Horticulture under glass, area and number of holdings, Netherlands, 1982

	Number of holdings with ... ha horticulture glass:						Total holdings	Total area	Area per holding
	0.01 to 0.25	0.25 to 0.50	0.50 to 1.00	1.00 to 2.00	2.00 to 5.00	5.00 and more			
All holdings and farms	5,549	2,682	4,441	2,229	428	25	15,354	8,837 (100)	0.6
Of which glass holdings:	2,271	2,263	4,361	2,216	428	25	11,564	8,425 (95)	0.7

Between brackets percentage of the total.
Source: CBS.

Appendix 3.6 Area of horticulture and agriculture according to type of holding and land use, hectares, 1982, in the Netherlands

Produce	Agriculture		Horticulture				Mixed holdings	Total area
	cattle holdings	arable holdings	glass holdings	open field one years crops	open field more years crops	other hort. holdings		
Glass area	6	1	8,425	98	65	223	18	8,837
Open field production:								
Vegetables	3,221	15,550	2,363	19,340	488	2,352	8,703	52,016
Onions (seed)	157	8,294	42	1,320	96	125	1,882	11,916
Pome and stone fruit	1,202	368	217	215	19,274	984	1,872	24,131
Flower bulbs	108	173	113	12,959	21	210	605	14,189
Flower nursery	5	24	523	601	38	191	29	1,411
Tree nursery	36	8	104	9	5,554	226	82	6,018
Horiculture Seeds	34	305	122	681	37	55	506	1,739
Total horticulture	4,767	24,722	11,908	35,223	25,577	4,364	13,697	120,297
Arable and grasland	1,246,364	505,281	4,479	14,208	8,433	3,555	102,640	1,884,962
Total area	1,251,132	530,002	16,387	49,431	34,005	7,925	116,337	2,005,219

Source: CBS.

Appendix 3.7 Area of arable crops 1982, the Netherlands

Products	Area in hectare	Number of holdings 1)	Area per holding (ha)
Cereals for grain	204,500	22,489	9.1
Liguminous plants for grain (Pulses)	10,400	3,186	3.3
Crops mainly for industrial purposes	18,000	2,239	8.0
Agricultural seeds	18,000	3,281	5.4
Ware potatoes	100,900	25,438	4.0
Starch potatoe (industry)	65,100	5,287	12.3
Sugar beets	13,400	22,070	6.1
Green fodder (maize)	146,900	41,742	3.5
Other arable crops	4,500	-	-
Total area	702,300		

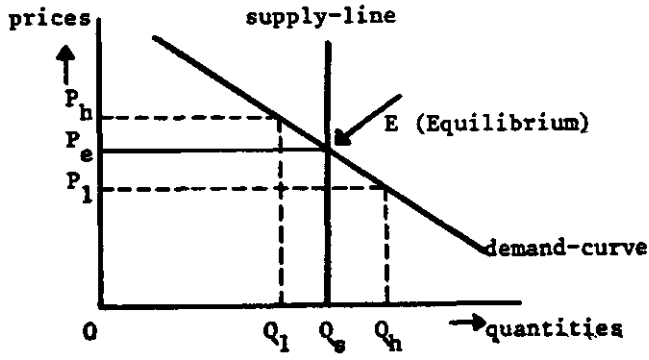
1) Source: CBS.

4. Markets for agricultural products

4.1 Market: short-term situation

Producers sell their products on the markets to consumers or traders. On these markets producers and consumers have to agree about quantities and prices. When supply exceeds the demand, prices will go down. In the opposite situation, when there is an excess in demand, prices will rise up to the point where the excess-demand is zero and total-demand equals total-supply. These effects are illustrated for the short-term in figure 4.1.

Figure 4.1 Short-term equilibrium



In agriculture and horticulture the supplies are known. One is not able to change the supplies on short-term base, because it takes some time to grow the products. On short-term base the quantity of supply is fixed (fig. 4.1. Supply-line Q_s).

The demand depends in the first place on prices: higher prices (P_h) will give lower demands (Q_l) and lower prices (P_l) will give more demand (Q_h). This relationship is illustrated by the demandcurve, which is quantified by demand-elasticities.

In the situation as in figure 4.1, a price P_l will give an excess in demand of (Q_h - Q_s), so producers can ask higher prices for their products; prices will rise and demand goes down just untill demand equals supply (Q_s) in point E. The opposite situation appears as one starts at a too high price-level (P_h), which cause an excess supply (Q_s - Q_l), so that producers have to lower their prices to P_e to sell everything.

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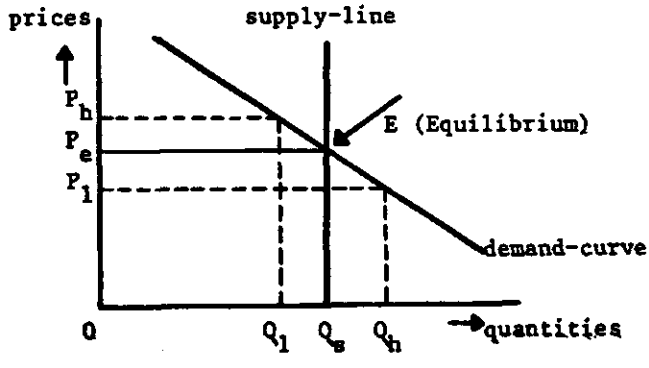

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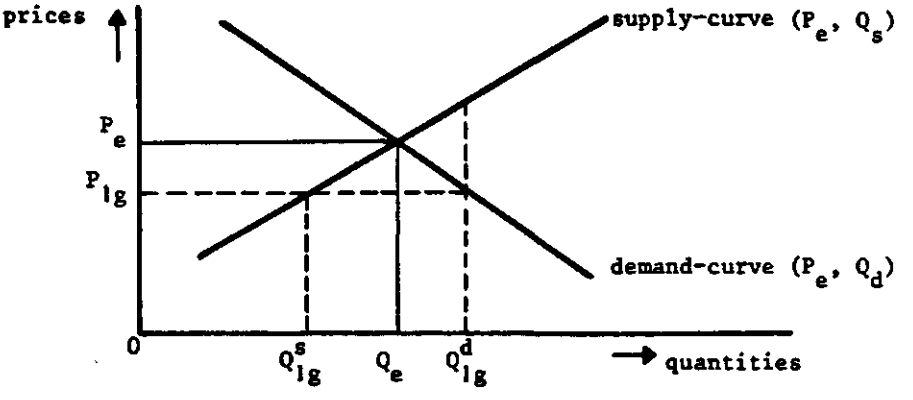
4.2 Market: long-term situation

This is the situation on the short term. On the long-term producers can adjust their production according to prices and profitability. This relationship between Q_s and P_e is illustrated by the supply-curve in figure 4.2.

Figure 4.2 Long-term equilibrium



When the equilibrium price P_e is high and producers make a high income, it will be attractive to enlarge production. This happened for example with the supply of tomatoes in March: in 1965 the supply was 0.1 million kg and the auction-price f 7,60 per kg. Since this was an attractive price-level, the supply increased (1978/80 ca. 20 million kg) and prices decreased (ca. f 3,75 per kg) on long-term base.

In the opposite situation, when auction-prices are too low, production will decrease. Also prices and contribution margins (prices minus production costs) of competitive crops are important, since a grower has to have alternatives.

The implications of the supply and demand curves drawn in figure 4.2 can be illustrated by an example: government intervention in market-prices.

a. Government sets a price (P_{lg}) which is less then the market price, because it wants to stop inflation.
   Short-term effect: potential demand grows ($Q^d{}_{lg}$) so there will be an excess in demand of ($Q^d{}_{lg} - Q_E$).
   Long-term effect: production goes down ($Q^s{}_{lg}$) and the excess in demand grows to $Q^d{}_{lg} - Q^s{}_{lg}$).
   To do something about this situation one can enlarge imports, give subsidies to the growers to produce more, impose production quota or ration consumption. This is a situation which occurs in many countries in Eastern Europe, South America, Africa and Asia.

b. Government sets a price which is higher then the market price to guarantee the farmers income:
   - short-term effect: less consumption;
   - long-term effect : more production.

Government measures to do something about this excess in supply can be: enlarge exports, give subsidies to consumers and impose production quota. This situation occurs for instance in the E.E.C. and the U.S.A.

When one knows the effects of changes in prices and quantities, as given in figure 4.2, one will be able to determine the effects of e.g.:
- government measures: fixed prices, taxes, subsidies, etc.;
- short-term changes in supply due to for instance weather conditions and occasional imports;
- long-term changes in supply due to for instance cheaper and/or other production methods and structural imports;
- changes in the demand-curve due to higher income-levels, other consumption pattern, fashion, etc.

4.3 Market analysis

To give some idea of the way one should analyse markets for agricultural products some marketing concepts will be defined and illustrated with examples. Very important for this analysis are the slopes of the demand and supply-curves in figure 4.1 and figure 4.2. Well-known measures of the slope of the demand-curve are demand-elasticities and price-elasticities.

The demand elasticity is defined as the change in the quantity demanded (in %) caused by a price change of 1% (see fig. 4.2): $P_E + 1\% \longrightarrow Q_d - x\%$).

Figure 4.3 Demand elasticity to the month for tomatoes on Dutch auctions (LEI-Vad., 1981)

Demand elasticity	-[1]	-	-5.5	-1.1	-0,5	-0.8	-0.8	-0.9	-0.9	-2.5	-
	Jan.	Febr.	March	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.

1) means no supply.

Examples: Given an auction price of f 4,- per kg, a supply of 1.5 million kg and a Demand Elasticity (fig. 4.3) of -5.5 in March, one is able to calculate the total turnover, when prices fall with 1% (table 1). As calculated in table 4.1, the total turnover of tomatoes in March will increase with 6.26-6.0 = 0.26 million dfl. or 4%. In May however demand only increase with 0.5%, so total turnover decreases with 0.64 million dfl. or -0.5% (see table 4.2).

Table 4.1 Calculation of total turnover in March when prices fall with 1%

	Old situation	Changes	New situation
Auction price (dfl/kg)	4	-1%	3.96
Quantity (million kg)	1.5	+5.5%	1,575
Total turnover (million dfl)	4 x 1.5=6.0	-	3.96x1.575=6.26

1) Price change -1%, Demand Elasticity -5.5%, so the change in quantity demanded is -1% x -5.5 = +5.5%.

Table 4.2 Calcultation of total turnover in May, when prices fall with 1%

	Old situation	Changes	New situation
Auction price (dfl/kg)	1.80	-1%	1.78
Quantity (million kg)	70.0	+0.5%	70.35
Total turnover (million dfl)	126.0	-	125.36

The conclusion of this exercise can be: stimulate consumption in March by lowering the prices, when one is able to produce at a costprice which is less then f 3,96. Another conclusion will be: it is of no use to stimulate consumption by lowering the prices in May because the total turnover will be less.

Price elasticity: The change in the price (in %) caused by a change in the supply of 1% (vgl. figure 4.2: $Q_S + 1\% \longrightarrow P_E - x\%$).

Figure 4.4 Price elasticity to the month for tomatoes on Dutch Auctions (LEI-Vad., 1981)

	Jan.	Febr.	March	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Price elasticity	-	-	-0.2	-0.9	-2.2	-1.9	-1.2	-1.2	-1.1	-1.1	-0.4	-

As shown in figure 4.4 the price of tomatoes in March on Dutch autions will only decrease with 0.2% as supply increase with 1%. So one is able to enlarge his total turnover by producing more tomatoes in March (table 4.3).

Table 4.3 Calculation of total turnover in March when the supply grows with 1%

	Old situation	Changes	New situation
Auction price (dfl./kg)	4	-0.2%	3.99
Quantity (million kg)	1.5	+1%	1,515
Total turnover (million dfl.)	4 x 1.5=6.0		3.99x1.515=6.05

In May however there is no use in producing more: 1% more production gives a decrease in price of 2.2% and total turnover will go down with 1.5 million hfl. or 1.2%.

In general it will be profitable to enlarge production when the price elasticity is larger then -1: an elastic market, and it is not profitable as price elasticity is less then -1: an in--elastic market. In the latter case one should use other methods to enlarge total turnover e.g.: advertising, exporting, trying other outlets (figures in appendix 4.1).

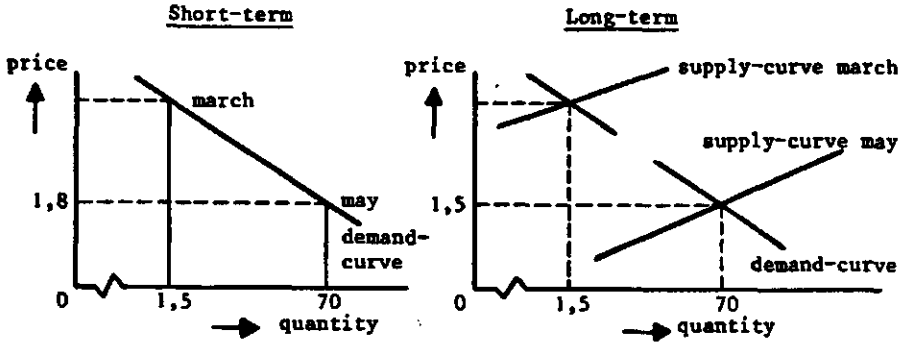
It is obvious that to enlarge the market one should know more about these elasticities and the reasons behind them. Reasons for different price and demand elasticities are already mentioned in the first session e.g.: fashion, luxery and necessary goods, competitive products, type of consumers (social group), pricel level and availability. In this case the availability and the existence of competitive products have an important impact on the price level.

Availability: there is a large difference between the levels of supply of tomatoes in March and May (resp. 1.5 and 70 million kg). Also the prices differ a lot.

Assuming there is no competition of other products and the consumers are indifferent between eating tomatoes in March and May, demand will be the same when prices are equal. However the supply is less. So according to figure 4.5 (Short-term equilibrium) prices are higher in March than in May. This will also be a long-term equilibrium, because the production costs of tomatoes are higher in March then in May, so the supply curve of March is higher then of May (fig. 4.5 Long-term equilibrium).

In July/August and September/October the supply drops to a lower level, resp. 60 and 35 million kg a month, and an equilibrium is reached at a price level of resp. dfl. 1,-/kg and hfl. 0.80/kg. In this period production and consumption is more or less stable. On the consumer side there are enough alternatives for consuming tomatoes.

Figure 4.5 Market-situation of tomatoes in March and May



4.4 Possibilities for developing countries

A conclusion of the analysis in par. 4.3 is for instance that one should not start exporting tomatoes in May or during the summer months but in April or during the winter months, when there is little supply. One should look to the so-called "Out of Season produce". This can be illustrated with some graphs of the auction supply in 1983 (source P.G.F.):

- The supply of Dutch fruit has a very strong seasonal pattern. In Holland we are trying to do something about it by growing strawberries under glass, but most of these "Out of Season produce" are imported: Melons from Spain and Israël, Apples from South America, etc.
- The supply of mushrooms does not show a seasonal pattern. Seasons do not influence production and consumption.
- The supply of vegetables differs to the kind e.g.: cabbage in winter and tomatoes, cucumbers, spinach, etc. in the other months. The graphs of spinach also how season is extended by growing in glasshouses.

When one wants to be able to say something about the possibilities of developing countries, it is not enough to consider only the graphs showed. These are graphs of the supplies. The question to be answered is however: is there an excess in demand? This is partly shown by the prices: high prices (relative to production costs) give an indication of an excess in demand.

So for example for cabbage there is no supply, but also no demand, during the summer months. The consumers rather eat other produce such as spinach, french beans, etc. This is the socalled substitution effect: consumers exchange in a certain situation one produce for another. In this case the substitution depend on prices and reason (weather).

For other produce (e.g. strawberries and chicory) it may be possible to sell more "Out of Season" produce against profitable prices (graph 4.1, 4.2 and 4.3).

4.5 Introduction of new produce

Until now only existing products were traeted. However it is also possible to create new markets for new products: lately they introduced mango's, kiwi's and other tropical produce on the Dutch market. In earlier days we had the same with tomatoes and grapes (figure 4.6).

Before World War II grapes were an important produce of Dutch horticulture. After World War II we started to grow tomatoes. Reasons for this shift are among others (see session3): higher profitability of growing tomatoes due to lower costs and higher yields and competition of Mediterrenian countries. Nowadays growing grapes is very rare in Holland and ca. 50% of the supply on Dutch auctions exist of tomatoes. The life-cycle of Dutch tomatoes in figure 4.6 shows that especially between 1955 and 1970 the supply of tomatoes grew fast. Nowaday the growth is less due to the earlier mentioned saturation in May-October.

So the introduction of tomatoes was a successful innovation. More recent other innovations such as the introduction of sweet peppers, aubergine, etc., were also a success. Nowadays however innovations are more difficult also because income and consumption is not growing anymore. So we are doing more and more marketing-research before we try out new produce. However it is hard to say beforehand which produce will be a success or not. On the A.E.R.I. a method was developed that can be of some use when one has to choose. Some factors which are of influence are:

- income situation: when income grows, one will be more eager to try other produce;
- fashion and shifts in taste (session 2);
- immigration of people who eat other produce;
- quality: new produce have to look attractive and taste good. When one tries out something new and it is of poor quality and does not taste good, one will not try it again;
- cost per unit: producers and importers have to earn a good margin by selling the produce, although consumer prices should not be too high. Since costs of packing and transporting are most of the time higher then production costs, one should be keen on good quality.
  Costs spent for produce, which have to be thrown away because of quality reasons, are a waste of money.

- good agreements with the importers (wholesalers in the importing country: good contracts, concentration of supply (no competition between produce grown by growers in the same country), acting according to the agreements, etc.;
- offering more then one product: easier to negotiate with importers, less transporting costs (bigger quantities), a spread of risks, etc.

LITERATURE

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Appendix 4.1 Elastic and in-elastic markets

During the last decades the A.E.R.I. gathered a lot of figures about supply, demand and market prices. Using these figures they were able to estimate the price-elasticities of some important vegetables, cutflowers and potplants. The estimated market situation of 5 important Dutch vegetables grown in glasshouses (90-95% of the total glasshouse production) are (see figure A.4.1):

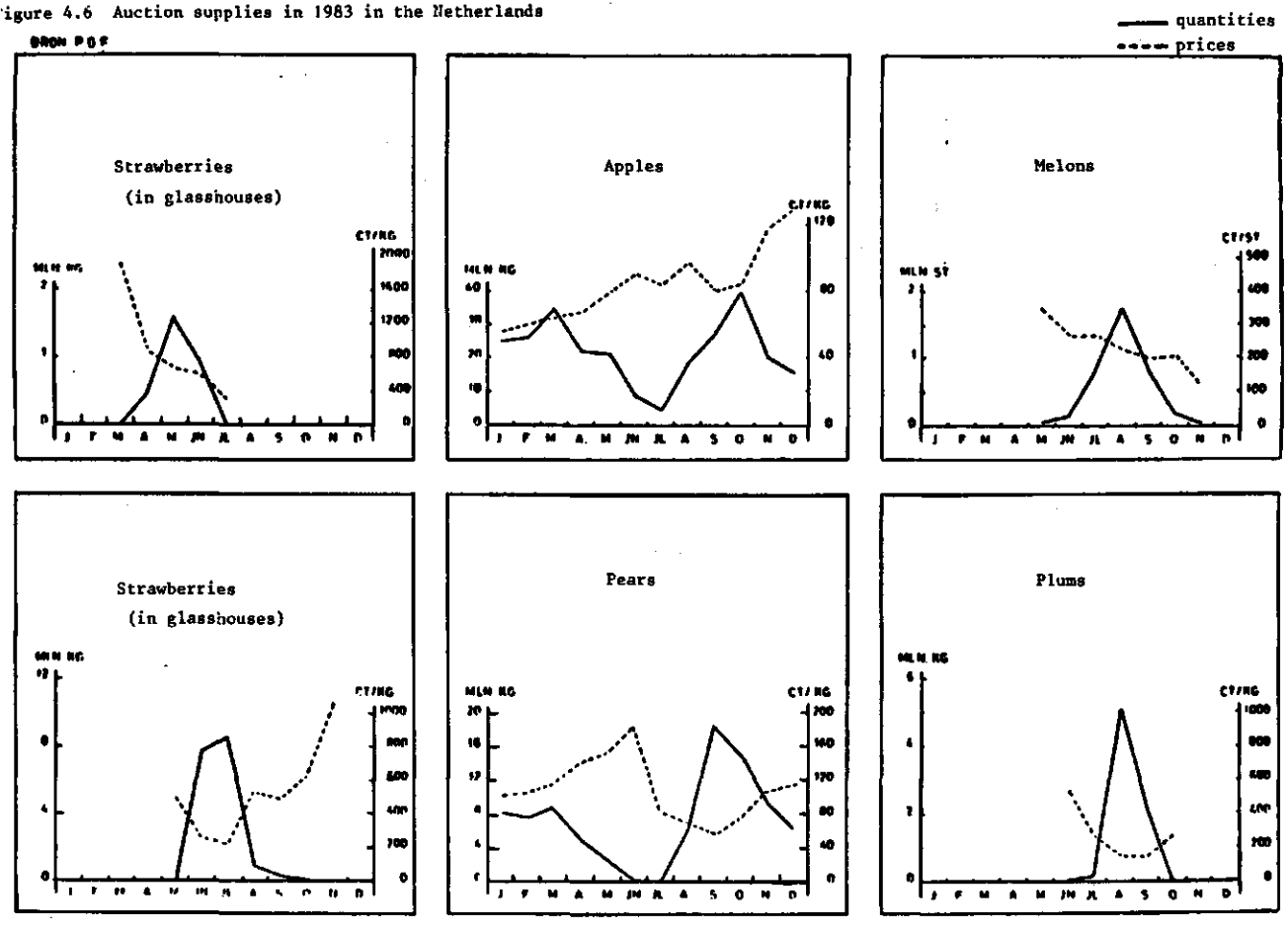
Tomatoes : elastic market from November untill April included;
in-elastic market from May untill October included;
Cucumbers: elastic market from September untill March included;
in-elastic market from April untill August included;
Sweet peppers: elastic market the whole year around;
Lettuce : elastic market from November untill January included;
in-elastic market from February untill October included;
Radish : elastic market the whole year around.

One has to be very careful in using these figures, while these estimations are mean figures during a longer period in the past. Each year the situation can be different, due to for instance weather conditions. Especially when the price elasticity is near to -1 (figure A.4.1) it is dangerous to take these figures for granted.

Figure A.4.1 Price-elasticities to the month on Dutch auction (LEI, Vad. 1981)

Product	Jan.	Febr.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Tomatoes	-	-	-.2	-.9	-2.2	-1.9	-1.2	-1.2	-1.1	-1.1	-.4	-
Cucumbers	-	-.2	-.5	-1.3	-1.6	-1.6	-1.6	-1.6	-.7	-.7	-.4	-
Sweet peppers	-.2	-	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.2	-.2	-.2
Lettuce	-.9	-2.1	-2.1	-1.7	Supply of open field lettuce					-1.2	-.6	-.8
Radish	-.1	-.1	-.4	-.4	-.4	-.3	-.3	-.3	-.3	-.3	-.1	-.1

Figure 4.6 Auction supplies in 1983 in the Netherlands



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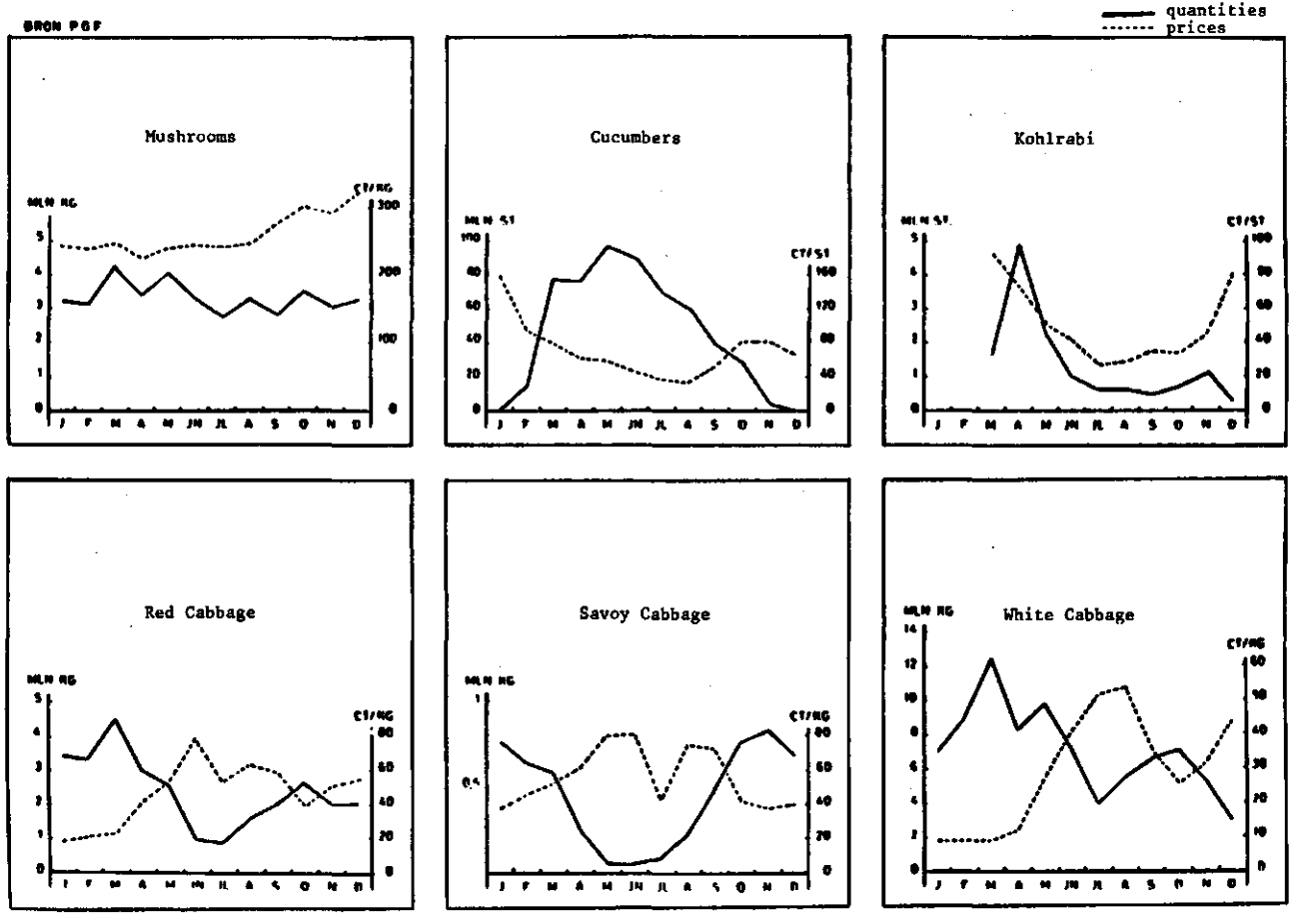

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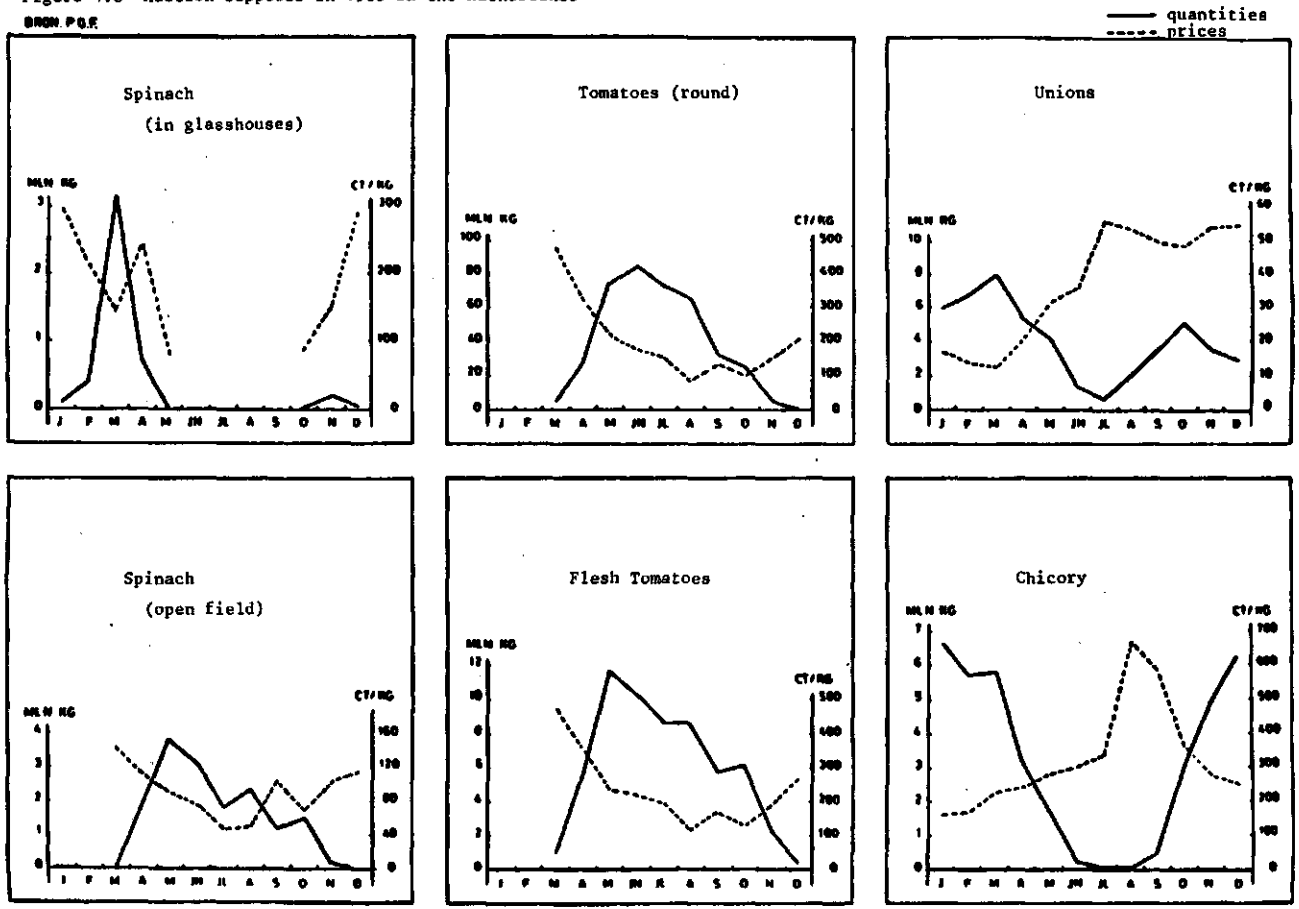
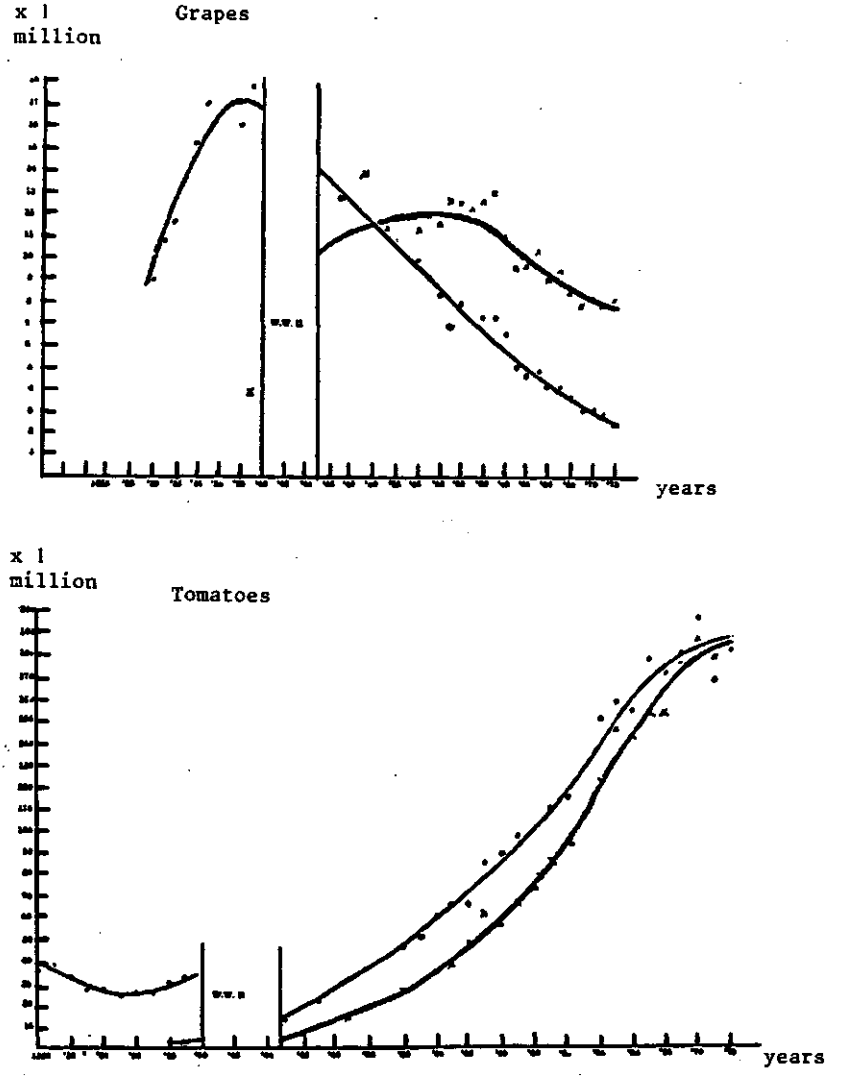


Figure 4.9 Life cycle of the grapes and tomatoes cultivated in the Westland



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Cucumbers	-	-.2	-.5	-1.3	-1.6	-1.6	-1.6	-1.6	-.7	-.7	-.4	-
Sweet peppers	-.2	-	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.2	-.2	-.2
Lettuce	-.9	-2.1	-2.1	-1.7	Supply of open field lettuce					-1.2	-.6	-.8
Radish	-.1	-.1	-.4	-.4	-.4	-.3	-.3	-.3	-.3	-.3	-.1	-.1

5. Outlets for fruit and vegetables

5.1 Introduction

The task of trade is to provide for the distribution of goods from producers to consumers. Traders have to fill up the gap between the production of goods on a certain place and time and the consumption of these goods on another place and time. So trade has to take care of:

- gathering : they have to supply the consumers with a complete assortment in small quantities;
- pre-packing: producers, transporters, retail trade and consumers all have their requirements concerning package.
  Nowadays traders want to adjust package to all the requirements by introducing package, which is only to use once, standardization of shapes, using pallets for transport and storage, etc.;
- transport : not only from the producing to the consuming country, but also from importers to retail trade and consumers;
- importing : customs, unloading the stock, temporary storage, etc.;
- financing, collecting proceeds and paying the producers. Both commission business and traders, who buy and sell on their own account, are possible. In the former case producers have to worry about collecting their proceeds. In the latter case traders bear the risks of price-changes and changes in foreign currency. They also have to finance stocks for some weeks, while it is not unusual to pay 4 to 6 weeks after delivery;
- quality-control: only some traders are able to influence quality, others are limited to maintain the quality-level as good as possible;
- promotion: advertising, sales-promotion, etc.

It depends on the distance between producers and consumers, the kind of product, etc., how many different trade organizations have to take care of these tasks and how many outlets the products do pass on their way from producer to consumer in the so-called distribution channel.

In this session we will consider the way on which the imported fruits and vegetables pass the distribution channel and which outlets pay a role in this process. We will start at the pre-import trade level; the outlet, which offers products to traders in the importing country (importers, etc.). Out of order are transport to the importing country, forwarding-agents, export and import regulations, etc.

The distribution channel of fruits and vegetables from pre-import trade to consumers is listed in figure 5.1. Whether or not a product will pass all the listed outlets depends on:
- the organization of pre-import trade;
- the kind of product: perishable or non-perishable, shape, etc.;
- the organization of trade in products grown in importing countries;
- the organization of retail trade;
- the size of the consumer market in a region or country;
- the way consumers want to do their shopping: buy everything in one place, keen on low prices, etc.;
- the existence of re-exports to other importing countries.

The distribution channels shown in figure 5.1 are an illustration of this relationship: the distance from producer to consumer and the organization of trade (producer-auctions) are critical for the length of the distribution channel in the Netherlands.

Since the mentioned critical points are different for each EC-country, it is obvious that the organization of the distribution channel will also be different. After a discription of the in figure 5.1 mentioned outlets, we will discuss these differences and look at the division of the mentioned tasks of trade over the different outlets (graph 5.9).

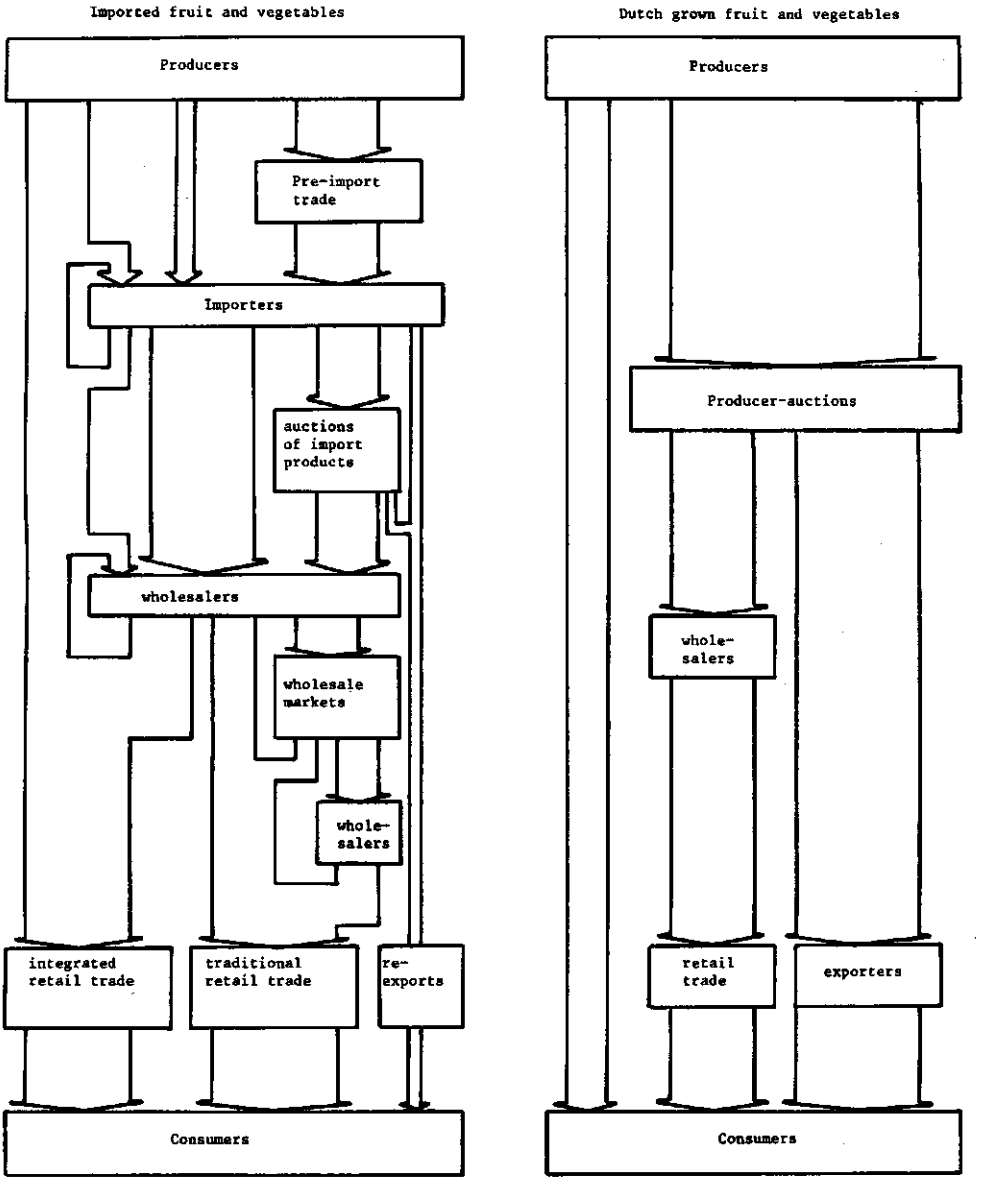
Since the production of fruits and vegetables in the Netherlands is important on the EC-market, especially in West-Germany, we will also look at the handling of Dutch produce. In the distribution channel of Dutch produce, producer-auctions play an important role (figure 5.1). Producer-auctions of fruits and vegetables only handle Dutch produce. Flower-auctions also sell imported produce. On these auctions flower-prices for the world-market are determined. The advantages of producers-auctions are listed in par. 5.8).

5.2 Pre-import trade organization

Pre-import trade organizations are ment to smooth the relations between exporters or producers in the exporting countries and importers. Three pre-import trade organizations are distinguished:
a. Marketing Boards, organized by exporting countries.
b. Agents and Brokers: commission business.
c. Representatives of a certain country or exporter.

ad a. Marketing Boards are public bodies set up by the government of the exporting country, who charge them with the export of certain products. These boards have a monopoly in ex-

Figure 5.1


Imported fruit and vegetables
Producers
Pre-import trade
Importers
auctions of import products
wholesalers
wholesale markets
whole-salers
integrated retail trade
traditional retail trade
re-exports
Consumers
Dutch grown fruit and vegetables
Producers
Producer-auctions
whole-salers
retail trade
exporters
Consumers

porting certain kinds of fruits and vegetables. They receive graded products direct from growers, transport the products to the importing country and organize the handling in these countries. Mostly they sell the products by using so-called "panellist": importers and/or wholesalers (par. 5.3) who are selected by the boards.
Countries who make use of Marketing Boards are among others: New Sealand (apples), South Africa (apples, citrus), Israël (citrus, flowers), Maroc (citrus, tomatoes) and Algeria (citrus). Most of these Marketing Boards have central offices in the EC to coordinate the handling of products.

ad b. Agents and Brokers only trade on commission basis, they do not buy or sell on their own accounts. They charge about 3% commission on turnover. Examples of such agents (Courtiers, Agentür) are:
- in Germany (Köln): GEDELFI - Grosseinkauf, a purchase-centre for German food-chain stores;
- in Denmark: FDB (Faellersforenigen for Denmarks Brugsforeniger) a consumer-cooperation.
  NAF (Nordisk Andelsforbund) a consumer-cooperation in Norway, Denmark, Sweden, Finland and Ireland.
- Agents handle most of the exports between the EC-countries. Exporting countries outside the EC, which use brokers are Spain and Eastern Europe. The latter have sole-distribution to handle their products.

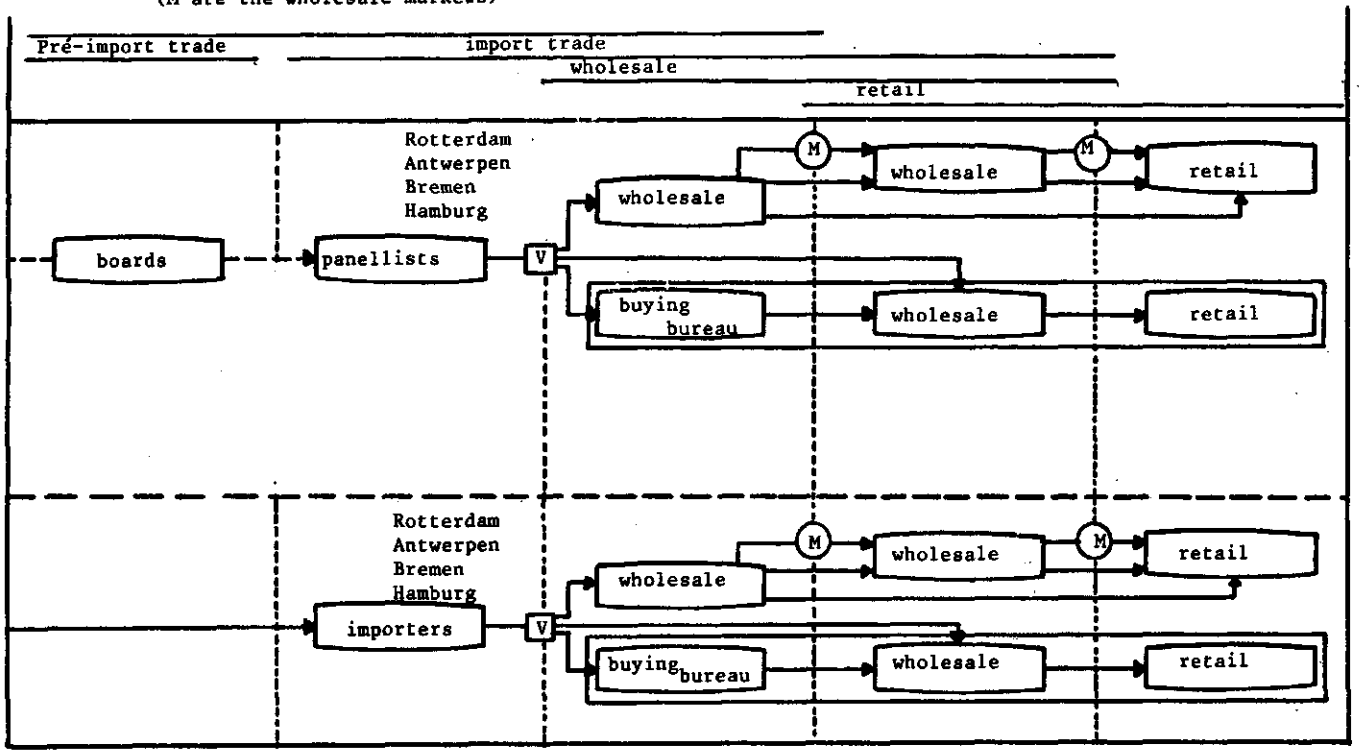
ad c. Representatives are more or less permanent settlements of exporting countries in European cities. They have to coordinate and distribute the exported products. Examples are representatives of the Canaries in Rotterdam and London, of Spain in Perpignan and a temporary representative of Chile. The latter controls the distribution and the price-levels of apples shipped to the EC in the period March-July.

Pre-import trade organizations are not necessary in the distribution channel of fruits and vegetables (see figure 5.1). It is also possible that they are integrated with other outlets, for example importers. So it will not always be possible to recognize this pre-import trade as easy as suggested in figure 5.1.

5.3 Importers

We will mention three kinds of importers of fruits and vegetables:
1. importers who handle large quantities of produce and sell them in smaller parts to wholesalers;

Figure 5.2 Importers selling their produce (citrus, apples) on auctions of import produce (v). (M are the wholesale markets)



2. importers/wholesalers, who import small quantities of produce and buy produce from other importers, to sell the whole assortment to retail traders;
3. import organizations, who import produce on behalf of their members (integrated retail trade, chain-stores, etc.).

The last two categories are importers integrated with other outlets. Par. 5.4 and 5.5 will give some examples of these categories.

The number of "real" importers (category 1) in a country depends on the size and the organization of trade in that country. In small countries the situation for imported fruits and vegetables is simple:
- Ireland: about 6 importers take care of 90% of the total imports;
- Denmark: about 4 importers take care of two third of the total imports.

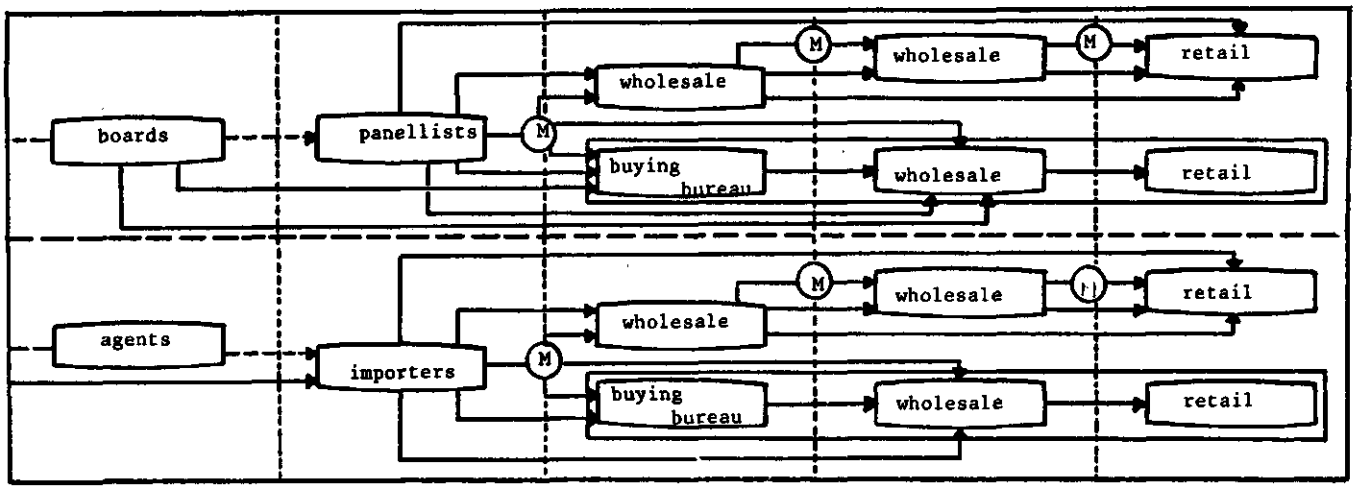
In the large EC-countries the situation is more complicated. In these countries there are some enterprises who operate all over the country, and also a lot of smaller importers. Examples of large enterprises are:
- in France : Pomona, Omêr-Décugis, Cie Fruitière;
- in West-Germany : Harder, Meiser and Co., Olfo (Scipio-Gruppe);
- in the United Kingdom: Fyffes, Geest Industries, Glass Glover, Francis Nicholls, Mark Organization and Saphir.

To describe the "real" importers in a more systematic way, one has to divide them into:
- panellists, who sell produce on behalf of Marketing Boards (par. 5.2);
- "free" importers, who sell produce of countries without a Marketing Board.

Both groups can be subdivided to the way they sell their produce:
- on auctions of import produce, these firms are mostly settled nearby the ports of Rotterdam, Antwerp, Bremen and Hamburg (fig. 5.2).
- on wholesale markets to wholesalers and retail trade (fig. 5.3);
- direct to wholesalers and retail trade (fig. 5.3), especially the deliveries direct to the integrated retail trade are growing.

Most of the "real" importers ("free" importers and panellists) handle produce of more than one exporting country or Marketing Board. It is also possible that a Marketing Board uses more than one panellist in an importing country.

Figure 5.3 Importers selling their produce (perishable produce) on wholesale markets (M) or direct to wholesalers and retail trade



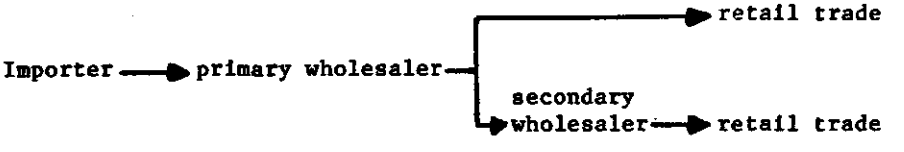
5.4 Auctions of import produce

The auctions of import produce are situated in Antwerp, Rotterdam, Bremen and Hamburg (figure 5.4). The main produce sold on these auctions are citrusfruits and apples. Other more perishable import produce, like tomatoes, cucumbers and peaches do not pass these auctions, since these auctions only function during one or two days a week.

Although these auctions are still important in the distribution channel of citrusfruits and apples, especially in Belgium, West-Germany and the Netherlands (re-export), market shares are declining. One of the reasons of this decay is the integration of the distribution channel and direct deliveries to the integrated retail trade are becoming more interesting for Marketing Boards and panellists.

5.5 Wholesalers

Wholesalers are mediators between importers and retail trade (fig. 5.1). The number of wholesalers, who handle fruits and vegetables, varies from country to coutry: in 1975 80 in Ireland and 4,000 in West-Germany. To illustrate the differences between the EC-countries we will outline the situation in Ireland and in France. In Ireland one can distinguish the following outlets:



The main task of primary wholesalers is to gather import products and to supply their customers (retail trade and secondary wholesalers) with a complete assortment of products. The secondary wholesaler takes care of the distribution to retail traders in smaller cities and in the country.

In France, next to wholesalers, wholesale markets are important mediators. Wholesale markets of national importance are (see fig. 5.4):

- mainly for french products: Toulous-Lalande, Perpignan, Lyon and Paris-Rungis;
- also for import products : Dieppe, Rouen, Nantes, Bordeaux, Perpignan, (St. Charles) and Marseille.

These markets are examples of the integration of importers and wholesalers (see par. 5.3).

Figure 5.4 Important wholesale markets for imported fresh fruits and vegetables

AERI/The Hague, October 1975

Although there are differences in scale, in general we are able to distinguish two kinds of wholesalers in all the EC-countries:

- collective wholesalers situated around wholesale markets near big cities, who supply not only retail traders and large-scale consumers attending these markets, but also the distributive (secondary) wholesalers;
- distributive wholesalers, who supply smaller wholesale markets and wholesalers and retail trade situated in the country.

However the number of wholesalers and the importance of the wholesalemarkets in the distribution process differs from country to country (see par. 5.6).

5.6 Wholesale markets

Wholesale markets are mediator between, on the supply side, importers and wholesalers and, on the demand side, wholesalers and retail trade (fig. 5.1). Dependent on the size of these markets one finds 10 to 30 importers, 100 to 400 wholesalers and 100 to more then 1,000 retailers. Since the place of wholesale markets in the distribution channel is illustrative for the whole distribution process, we will discuss the situation in all the EC-countries:

The Netherlands: there are only 3 rather small wholesale markets in Rotterdam, Amsterdam and the Hague. In some smaller cities you will find meeting points of wholesalers, where they exchange information and products. Reasons for this comparatively small number of wholesale markets are:

1. small distance: every wholesaler is able to buy on the import auction in Rotterdam or to order importers or wholesalers to bring the needed quantities within some days;
2. there are only 3 big cities;
3. producer-auctions. Exporters, wholesalers and some retailers buy a large part of their stock on the Dutch producer-auctions (see fig. 5.1) and are situated around them.

Belgium: in this country one finds the same situation as in the Netherlands: four wholesale markets located in Brussels, Antwerp, Luik and Gent and important auction of import produce in Antwerp.

Figure 5.5 The main wholesale markets in the United Kingdom

AERI/The Hague, May 1976

Denmark: in Copenhagen there is one large wholesale market (KGT) and around the producer-auctions (GASA'S) in Odense, Aarhus and Aalborg one can also find a concentration of wholesalers. The reason of the minor function of wholesale markets is the strong integration of the distribution channel in Denmark (par. 5.7).

Ireland: Ireland has one wholesale market in Dublin, which handles about 10 to 20% of total supplies. The importance of this market is declining, due to further integration of the distribution channel and more direct deliveries of importers to wholesalers in the country (see par. 5.5).

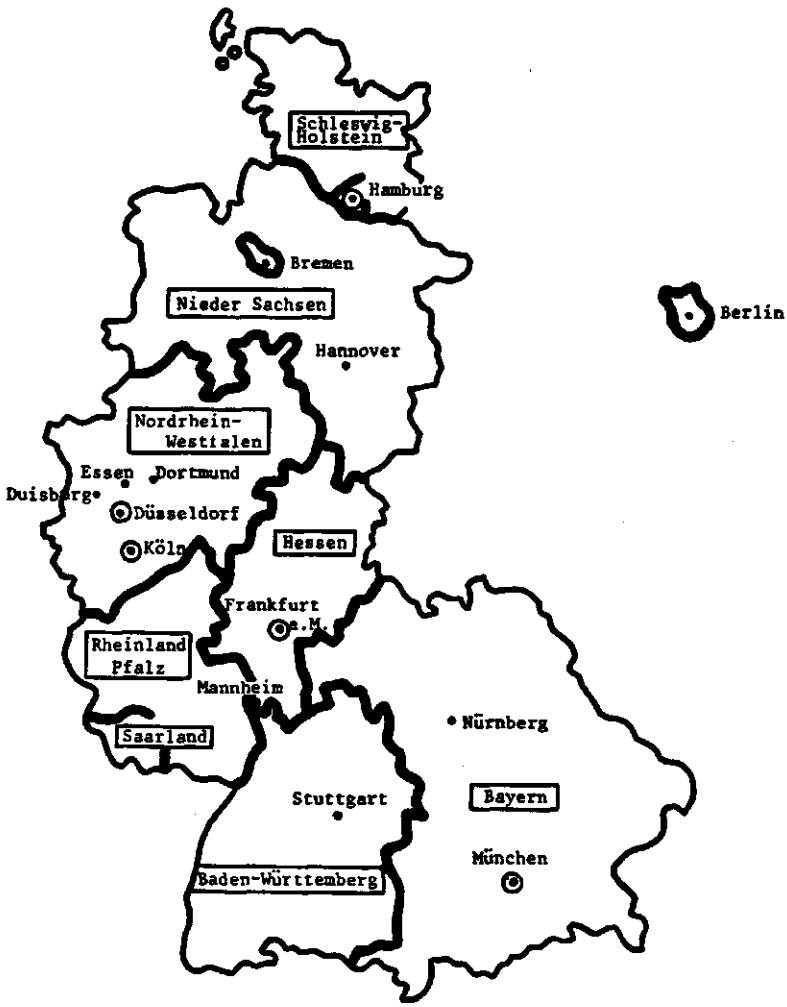
Italy : the most important wholesale markets in Italy are situated nearby big cities in the north: Milaan, Turijn, Bologna, Vérona, Genua, Florence and Padua. These markets handle mainly produce coming from the south of Italy.

France : the wholesale markets in France are situated nearby cities of more then 50,000 inhabitants. In the north-east, east and centre part, wholesale markets are of minor importance due to chain-stores, cooperative stores and "grossiers du service complet". In region Parisienne, le Nord, l'Quest, le Sud-Quest and Midi-Méditarranêen wholesale markets are more important: in this region there are more traditional retailers (par. 5.7) and local producers. Important wholesale markets in France are Paris-Rungis, Marseille, Lyon, Toulouse, Nice, Bordeaux, Nantes, Strassbourg, Lille and Rouen (fig. 5.4).

The United Kingdom: in this country wholesale markets are important, especially those in London (New Covent Garden, Western International, Spitalfields, Borough and Stratford) and in Liverpool. The location of the other wholesale markets are shown in fig. 5.5.

West-Germany: The important German wholesale markets are shown in fig. 5.6. It depends on the export country (organization of exports and distance to West-Germany) whether or not they use wholesale markets as an outlet for their produce:
- Dutch produce go mainly direct to the integrated retail trade;
- Italy, Eastern Europe and Greece bring most of their produce to wholesale markets in München, Hamburg and Stuttgart;

Figure 5.6 The main wholesale markets in West-Germany



AERI/The Hague, August 1975

- Spain and the Canaries make use of the markets in Hamburg, Köln, Düsseldorf and Frankfurt am Main. However most of the Canarian tomatoes and cucumbers go in transit via Rotterdam direct to the customers.

The market-shares of the West-German wholesale markets are:
- 35% of the supply of tomatoes and cucumbers (Dutch and Canarian products);
- 40% of the imported apples, especially those shipped to Germany via Hamburg;
- 80% of the peaches from Greece and Italy;
- 50% of the oranges from Italy, Israël, Spain and Maroc;
- 50% of the mandarins from spain, Maroc and Turkey;
- 80% of the lemons from Spain, Italy, Greece and Turkey.

A conclusion of this short analysis is that the wholesale markets in France, the United Kingdom and West-Germany are still important for import produce (a market-share of 50 to 60%). In the smaller EC-countries they have a smaller market-share.

5.7 Retail trade

In general one can distinguish two kinds of retail trade:
- traditional retail trade specialized in fruits and vegetables, who buy most of their stock through the traditional outlets: importers and wholesalers;
- more general food stores not specialized in fruits and vegetables, mostly members of large organizations. These large organizations make it possible to integrate the different outlets. Examples are: department stores, chain stores, supermarkets and cooperative stores.

The market-shares of the first group are:
- in the Netherlands (50-60%), especially in fresh vegetables and fruits;
- in Denmark (30%), the market-share for import produce is even smaller;
- in West-Germany (20%), mainly consumer-markets once or twice a week (16%);
- in France (35%), mainly consumer-markets. The differences between the regions are large: Region Parisiènne (55%) and Centre-Est (10%). The indepent food stores (not specialized in fruits and vegetables) have a large share of the market (35%);
- in the United Kingdom (65%), local specialized fruits and vegetable stores (35%).

Lately the market-share of the traditional retail trade does not decline anymore, since people are more keen on fresh fruits and vegetables and want more information about for instance pre-

paring new produce. However also supermarkets an chain-stores start to render these services.

Especially in Denmark and West-Germany the integration of importers, wholesalers and retail traders has gone far. In Denmark one chain-store organization (Irma) has a market-share of ca. 20%. In West-Germany two of the four largest importers are connected to chain or cooperative-store organizations: Edeka and Coöp. (Frütera). Other large retail trade organizations in West-Germany are Réwé and Spar). Just as "real" importers (par. 5.3), these retail trade organizations are settled around the harbours and the larger wholesale markets.

The market-shares of the traditional retail trade will vary to the kind of product. To illustrate this we will present you a survey of the Dutch consumer-market in 1981/84 (fig. 5.1).

Table 5.1 Outlets for fruit and vegetables on the retail trade level in the Netherlands in 1981/84 1) (Market-shares in %)

	Vegetables 2)	Fresh vegetables	Pre-packed vegetables	Fruits 3)
Expenses per household per 4 weeks	Dfl 19,-	Dfl. 15,-	Dfl. 3,-	Dfl. 21,-
Traditional retail trade	42	47	25	47
- shop	24	26	15	21
- weekly consumer-markets	18	21	10	26
Food-stores	55	49	73	45
- chain-stores	12	12	13	10
- multiple shop-stores	36	30	53	30
- independent food-stores	7	7	7	5
Growers	3	4	2	8

1) Marktonderzoek PGF, NIAM-panel.
2) Vegetables include fresh vegetables, pre-packed vegetables and pre-cut vegetables.
3) Panel figures of April (12 weeks untill 23/4/1983 included).

As table 5.1 shows food-stores have a large market-share in:
vegetables: a market-share of more then 50% in carrots, leek, unions, chicory, mushrooms, cauliflowers, lettuce, cucumbers, tomatoes and pre-packet vegetables;

Fruits: a market-share of more then 40% in apples, grapes, peaches, melons, banana's and citrusfruit.

In general food-stores have a strong position in produce of which one is able to plan the supply some time ahead: imported produce, mass-produced articles (tomatoes, cucumbers) and produce, which do not need special attention in the shop (pre-packed vegetables and uniform produce like leek, mushrooms and unions).

Growers and weekly markets have a strong position in fruit produce which are grown in the Netherlands (apples, pears, strawberries, etc.).

Traditional retailers have rather constant market-shares. Produce, which are above the mentioned means are: soft fruit, lemons, pine-apples and some other imported produce (kiwi's and mango's). Also the market-shares of endive and spinach (30%) are above the mean of vegetables (24%).

This short analysis illustrates the fact that the outlets for imported fruits and vegetables differ from produce to product. Only when an imported product becomes more important and fits into the whole assortment, food-stores will be interested. However they want to buy large quantities against the lowest possible prices.

5.8 Distribution of Dutch grown fruit and vegetables

The distribution of Dutch grown produce differs from the situation in other EC-countries on two main points (see fig. 5.1):

- the strong position of producer-auctions;
- the large quantities of produce that are exported.

ad 1. Dutch producer-auctions have a market-share of 95 to 99% of the total supply of Dutch grown fruits and vegetables. Some auctions handle mainly export produce (Bleiswijk, Westland-Noord, Westland-Zuid and Pijnacker), others are aiming on the domestic market (Barendrecht).

Functions of these auctions are:

- to determine prices: prices are determined in public and buyers have to compete with each other. Traders are not able to try out individual growers. Minimum prices are introduced to have a floor in the market;
- to gather supplies : although most of the Dutch growers are specialized on one crop, it is possible to buy the whole assortment of produce in one place. Of course auctions have to have a certain size to fulfil this function;

- to guard quality : concentration of supplies makes it possible to maintain uniform quality-standards and to control them in a sufficient way;
- to collect proceeds: auctions collect the proceeds and control the creditability of buyers.

So producer-auctions take care of some important functions of trade (par. 5.1), which saves time and money. Time-saving because growers do not have to be at the sale and traders spend less time buying. Money-saving because large quantities and quick handling make auctions a low-cost outlet.

Next to these main functions, auctions also render other services like packing and exporting facilities, storage, etc.

ad 2. The Netherlands have an export of fruit and vegetables of Dfl. 4.3 milliard. These exports go to West-Germany (52%), France (11%), the United Kingdom (12%) and Belgium (10%). They include Dutch grown produce, produce in transit and re-exports.
About 60% of the Dutch grown produce (fresh vegetables (Dfl. 2.3 milliard) and fruits (Dfl. 0.4 milliard)) is exported.
Because Dutch growers are not able to produce some produce the whole year around, there are some imports in certain seasons (tomatoes in winter, apples in spring, etc.). A part of these imports is reexported or goes in transit, mainly to Germany.
Produce in transit do not pass customs in the Netherlands, but are sent on to the country of destination.
Reexports do pass customs in the Netherlands. An example is citrusfruit, which is sold on the auction of import produce in Rotterdam.

In the Netherlands there are 300 firms exporting fruit and vegetables and about 550 firms exporting flowers. About 30% of those firms have a turnover of more than Dfl. 5 million 1).

5.9 Division of tasks among the different outlets

As we have seen in the preceeding paragraphs, there is a movement towards more integration of the distribution channel. Advantages of an integration of outlets are among others:
- lower handling costs;
- better quality control.

1) Cijfers en Trends. 50 Branches uit het midden- en kleinbedrijf. Rabobank 1984.

Along with this integration the mentioned tasks and responsibilities (par. 5.1) have changed. To illustrate this fig 5.1 has been worked out for six kinds of distribution channels (fig. 5.7).

The first and second channel show how Marketing Boards sell their products.

Channel 1: Panellists sell their produce, mainly citrusfruits and apples, on auctions of import produce in Rotterdam, Antwerp, Hamburg and Bremen. Buyers on these auctions are wholesalers and integrated retail-traders. Wholesaler sell to retail-traders (direct and through wholesalemarkets) and reexport some produce (Rotterdam).

Channel 2: Panellists and Marketing Boards sell their produce, also perishable produce, on wholesale markets, to wholesalers and also direct to integrated retail traders. This distribution channel is used in countries without special importauctions and for perishable produce like tomatoes, while import-auctions only function once or twice a week.

Channel 3: Selling citrusfruit and apples on import-auctions without using Marketing Boards. Suppliers contact importers to handle the produce for them.

Channel 4: Is followed by most of the perishable produce and mandarins. This channel is important in countries without import-auctions.

Channel 5: Integrated Retail Trade, who import their own supplies, is only in West-Germany and Denmark significant (par. 4.5).

Channel 6: Independent wholesalers, who import their own supplies, are only of minor importance.

Outlets, who fulfil the mentioned tasks of trade are:

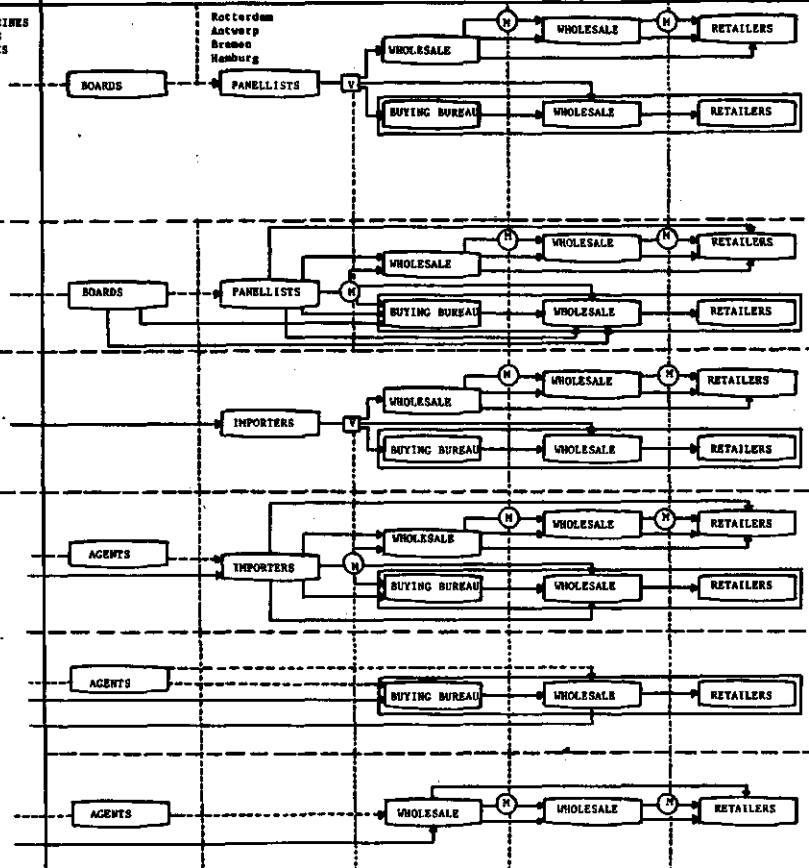
- gathering : most of this job is done in the third and the fourth outlet as drawn in fig. 5.7: wholesalers, wholesale markets and integrated retail-traders;
- pre-packing: Marketing Board (1, 2), importers (3,4), integrated retail trade (5) and wholesalers (6) have to take care of this task. However it is not usual by now, that producers are advised, what kind of package they should use;
- transport : in almost all outlets, they do transport the products. Pre-import trade and importers mostly board out this task to for example forwarding agents. Wholesalers and Integrated Retail Traders use their own means of transportation;
- importing : panellists (1,2), importers (3,4), integrated retail trade (5) and wholesalers (6) take care of the imports and all tasks around it;

Figure 5.7
ORIGIN
Country and produce

MOST IMPORTANT DISTRIBUTION CHANNELS (OUTLETS) IN THE EEC
PRE-IMPORT TRADE — IMPORT TRADE — WHOLESALE — RETAIL

● = not important
● = important
X = very important

Outlet no.		T	K	A	F	S	M	C	
1	S = ORANGES M = MANDARINES C = CITRON A = APPLES K = CUCUMBER P = PEACHES T = TOMATOES Algeria S.M. Marocco T.S.M. Israël S.C. South-Africa A.S.C. New-Zealand A.	–	–	●	–	X	X	X	Netherland
		–	–	X	–	●	●	●	Belgium (L.)
		–	–	X	–	●	●	●	Fed.Rep.of Germany
2	Algeria S.M. Marocco T.S.M. Israël S.C. South-Africa A.S.C. New-Zealand A.	–	–	–	–	–	–	–	Netherland
		–	–	●	–	X	–	●	Denmark
		●	–	–	–	●	●	–	Fed.Rep.of Germany
		–	–	X	–	X	●	●	England
		–	–	X	–	X	–	●	Ireland
		X	–	●	–	●	X	–	France
		●	–	–	–	●	–	–	Belgium (L.)
		–	–	–	–	–	–	–	Italy
3	Egypt S. Turkey C. Cyprus S.C. Spain T.P.S.M.C. Argentina A.S.C. Brazil S. Chile A. Australia A. USA A.S.C.	–	–	X	–	X	X	X	Netherland
		–	–	–	–	●	●	X	Belgium (L.)
		–	–	●	–	–	–	●	Fed.Rep.of Germany
4	Bulgaria T.K.P. Tunisia T.K.P. Albania T. Hungary A. Tunisia S. The Canaries T.K. Egypt S. Turkey C. Cyprus S.C. Spain T.P.S.M.C. Greece K.P.C. Argentina A.S.C. Brazil S. Chile A. Australia A. USA A.S.C. Canada A.	X	X	●	●	●	●	●	Netherland
		X	X	X	X	X	X	X	Denmark
		X	X	●	X	X	X	X	Fed.Rep.of Germany
		X	X	●	X	X	X	X	England
		X	–	●	–	–	●	●	Ireland
		●	–	●	X	X	X	X	France
		X	–	–	●	X	X	X	Belgium (L.)
		–	–	–	–	–	–	–	Italy
5		–	–	–	–	–	–	–	Netherland
		●	●	●	–	●	●	●	Denmark
		●	●	●	●	●	●	●	Fed.Rep. of Germany
		–	–	–	–	–	–	–	England
		–	–	–	–	–	–	–	Ireland
		–	–	–	–	–	–	–	France
		–	–	–	–	–	–	–	Belgium (L.)
6		–	–	–	–	–	–	–	Netherland
		–	–	–	–	–	–	–	Denmark
		–	–	–	–	–	–	–	Fed.Rep. of Germany
		–	–	–	–	–	–	–	England
		–	–	–	–	–	–	–	Ireland
		–	–	–	–	–	–	–	France
		–	–	–	–	–	–	–	Belgium (L.)



V = import auctions M = wholesale markets

Source: AGRI The Hague, November 1975

- collecting proceeds and paying producers:
  Marketing Boards, who are mostly controlled by the government, do collect proceeds and pay the producers the collected amount minus the expenses. In the other channels it depends on the way the product is sold; shared risks, fixed prices or on commission basis. Agents are mostly only mediators, so exporters have to collect their own proceeds;
- bearing the risks of changes in proces:
  Marketing Boards, panellists, auctions, most of the importers and some wholesalers work on commission-base. So producers bear the risk of price-changes and changes in foreign currencies Integrated retail trade and most of the wholesalers also have to bear a part of the risks of changes in prices. Especially when a big chain-store starts a sales-promotion program of a certain product and a wholesaler has to guarantee a certain quantity against a fixed price.
- promotion : mostly producers have to promote their own produce. Sales programs promote a certain product from a certain country, so the individual exporter cannot afford to do much about it. Marketing Boards however have an export monopoly and are able to do some advertising ot introduce new products. For them it is also easier to stick to certain quality standards, since they can charge producers for bad quality.

Sales-promotion programs planned by chain-stores and other integrated retail-traders mostly consist of a competition with prices. In this way it is difficult to introduce new produce; introducing new produce has to start a promotion program of producers in a certain country, so they have to cooperate one way or another.

Table 5.2 shows which distribution channel is the most satisfactory one for, in this case German, importers and wholesalers. You see that not only the developed countries (Israël, USA, Spain, South-Africa) have a high rating, but also countries with a Marketing Board (Marocco, Israël, South-Africa). Another country with a high rating is Ivory Coast. In this country the export of pineapples is also centralized, three export organizations are in charge of this. Fortunately there are only a few countries with a low rating: Egypt, Turkey and Rumania.

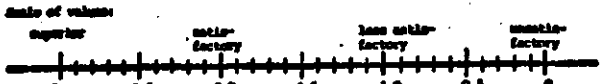
Table 5.2 . **Valuation of Exporting Countries under Certain Aspects**

Statements	Egypt	Ethiopia	Brazil	Bulgaria	Ivory Coast	Greece	Israel	Kenya	Morocco	Pakistan	Rumania	Senegal	Spain (excl. Can. I.)	South Africa	Turkey	U.S.A.	Venezuela
	Number of Importers[1]																
	15	15	6	11	14	20	12	13	13	9	10	14	22	13	15	10	3
	Average Valuation[2]																
1. Importers' thorough knowledge of requirements in the importing business	1,1	1,6	2,2	2,3	2,4	2,0	2,1	2,2	2,6	2,1	2,1	2,0	2,4	2,5	1,6	2,5	2,3
2. Personal Deliveries	1,1	2,0	2,3	2,0	2,4	1,9	2,1	2,0	2,3	2,0	1,9	1,9	2,3	2,7	1,3	2,6	2,3
3. Continuity of Deliveries	1,7	2,2	1,8	1,9	2,3	1,9	2,5	2,1	2,5	1,8	1,7	1,9	2,4	2,5	1,4	2,7	2,0
4. Uniformity of Deliveries	1,2	2,2	2,0	2,0	2,4	2,1	2,2	1,8	2,5	2,0	2,3	2,0	2,4	2,8	1,3	2,7	2,0
5. Sufficient Quantities Delivered	1,5	2,0	1,8	1,9	2,2	2,1	2,4	1,9	2,3	1,7	2,1	2,0	2,3	2,1	1,8	2,4	1,3
6. Grading, Packaging and Marking of Products	0,9	1,7	2,0	1,9	2,2	2,0	2,7	2,0	2,5	2,3	2,0	2,0	2,4	2,6	1,3	2,7	2,0
7. Basis of Confidence between you and the exporters	0,9	1,0	2,2	2,0	2,3	1,9	2,5	2,1	2,3	2,1	1,8	2,1	2,4	2,2	1,4	2,3	2,7
8. Settlement of Customers' Complaints	0,3	1,0	1,0	1,9	2,2	1,7	2,3	2,0	2,1	1,7	1,8	2,1	2,1	2,4	1,3	2,3	2,0
9. Importers' Understanding for the Requirements of our Market	0,9	2,1	1,0	1,9	2,2	2,0	2,4	2,0	2,3	2,1	2,0	2,3	2,2	2,6	1,4	2,0	2,0
10. Qualitative Condition of Products after Arrival	1,1	2,1	1,8	1,8	2,3	2,0	2,2	2,1	2,1	2,0	1,9	1,5	2,2	2,7	1,4	2,3	2,3
Average Valuation	1,1	2,0	2,0	2,0	2,3	2,0	2,4	2,0	2,4	2,0	1,9	2,0	2,3	2,5	1,5	2,5	2,1

Question: "In the following I enumerate organizational conditions for a smooth-running course of your import business transactions. Please value with Superior, satisfactory, less satisfactory or unsatisfactory how far these conditions are existing in the named exporting countries."

1) Directly dealing with the named country.

2) Scale of values:



The valuations "superior", "satisfactory", "less satisfactory", "unsatisfactory" got in this order of succession 3, 2, 1 or 0 points. These were added per statement and exporting country and then divided by the relevant number of importers.

Source: Hörmann (1975)

5.10 Important outlets in the EC-countries

The most important outlets for imported fruits and vegetables are for the different EC-countries:

The Netherlands (fig. 5.8):

- the auction of import produce in Rotterdam accounts for more than 50% of the imports of citrusfruit and apples for the Dutch market (channel 1);
- produce to reexport are tomatoes, cucumbers, apples and some citrusfruit. As discribed in par. 5.8 only citrusfruit passes the auction, other produce are exported in transit (channel 5).

Belgium and Luxembourg (fig. 5.9):

- "real" importers (channel 4) handle more than 50% of the imports of tomatoes and citrusfruit. They sell most of these
- produce to wholesalers, traditional retailers and integrated retail trade. As in the Netherlands, the four wholesale markets (M) are not important as an outlet for imported fruit and vegetables (par. 5.6);
- the auction of import produce in Antwerp (channel 1 and 3) accounts for 10-50% of the imports of citrusfruit and more than 50% of the imported apples.

Denmark (fig. 5.10):

- integrated retail trade (channel 4) account for 20-30% of total imports;
- "real" importers (channel 2) handle more than 50% of total imports.

Ireland (fig. 5.11)

Secondary, distributive wholesalers only have a minor part of the market for fruits and vegetables (see par. 5.6).

United Kingdom (fig. 5.12)

There are no auctions of import produce in the United Kingdom. Port markets (M) and Inland markets (O) function as mediator between, on the one side, importers and panellists and, on the other side, distributive wholesalers and integrated retail trade.

Marketing Boards (channel 1) have a large share of the market for apples and oranges. Agents, representatives, importers and importer/wholesalers account for more than 50% of the import of tomatoes, cucumbers, peaches, mandarins and lemons (channel 2).

France (fig. 5.13)

Wholesalemarkets account for the major part of the imported fruits and vegetables, it does not make much difference which outlet (channel 1 or 2) does import these produce.

West-Germany (fig. 5.14)

Agents and importers account for the major part of the imported produce. Most of these produce will also pass the wholesalemarket (par. 5.6).

Integrated retail trade handles about 20-30% of the imported fruits and vegetables (channel 5).

The auctions of import produce in Bremen and Hamburg handle more than 50% of the imported apples and 10-50% of the imports of citrusfruit.

The import of fruits and vegetables in Italy from countries outside the EC is of minor importance.

Figure 5.8 The Netherlands

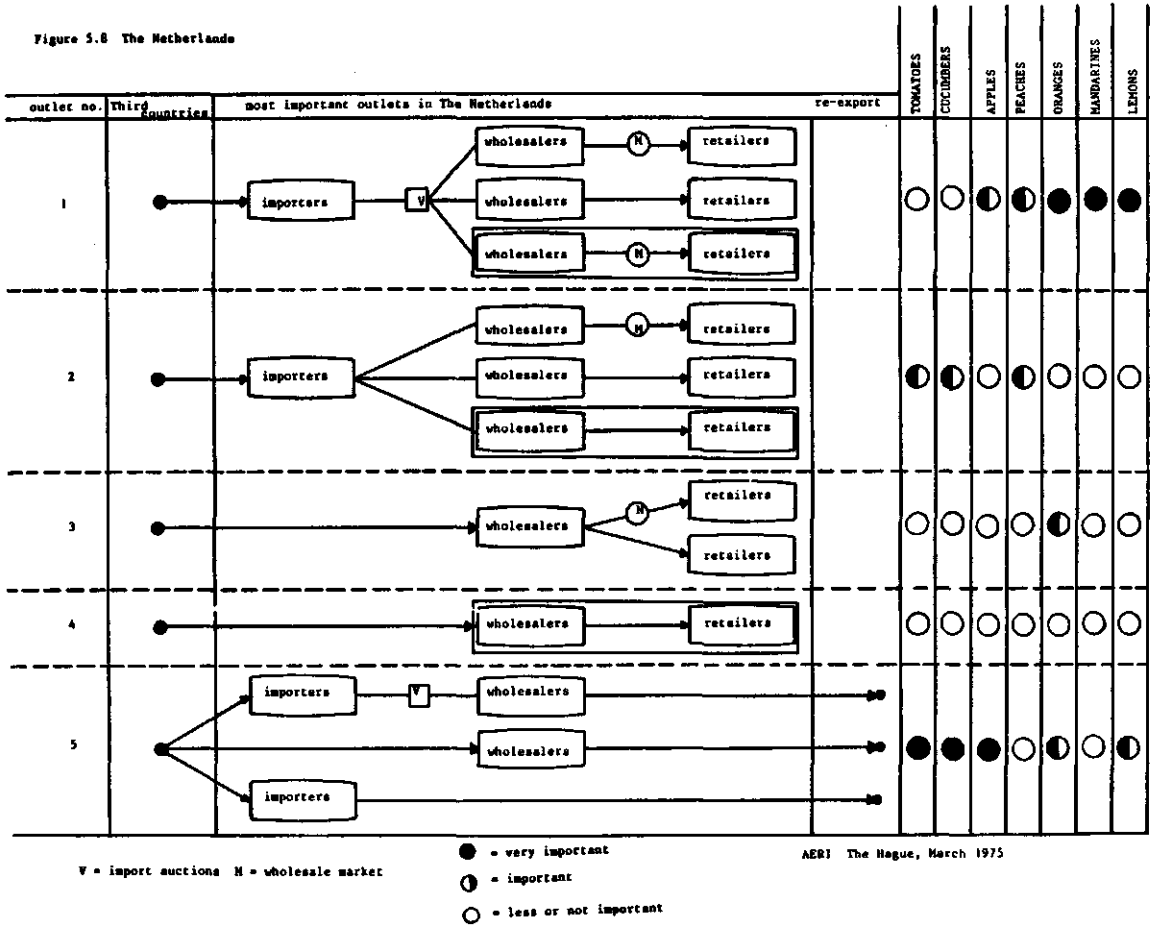
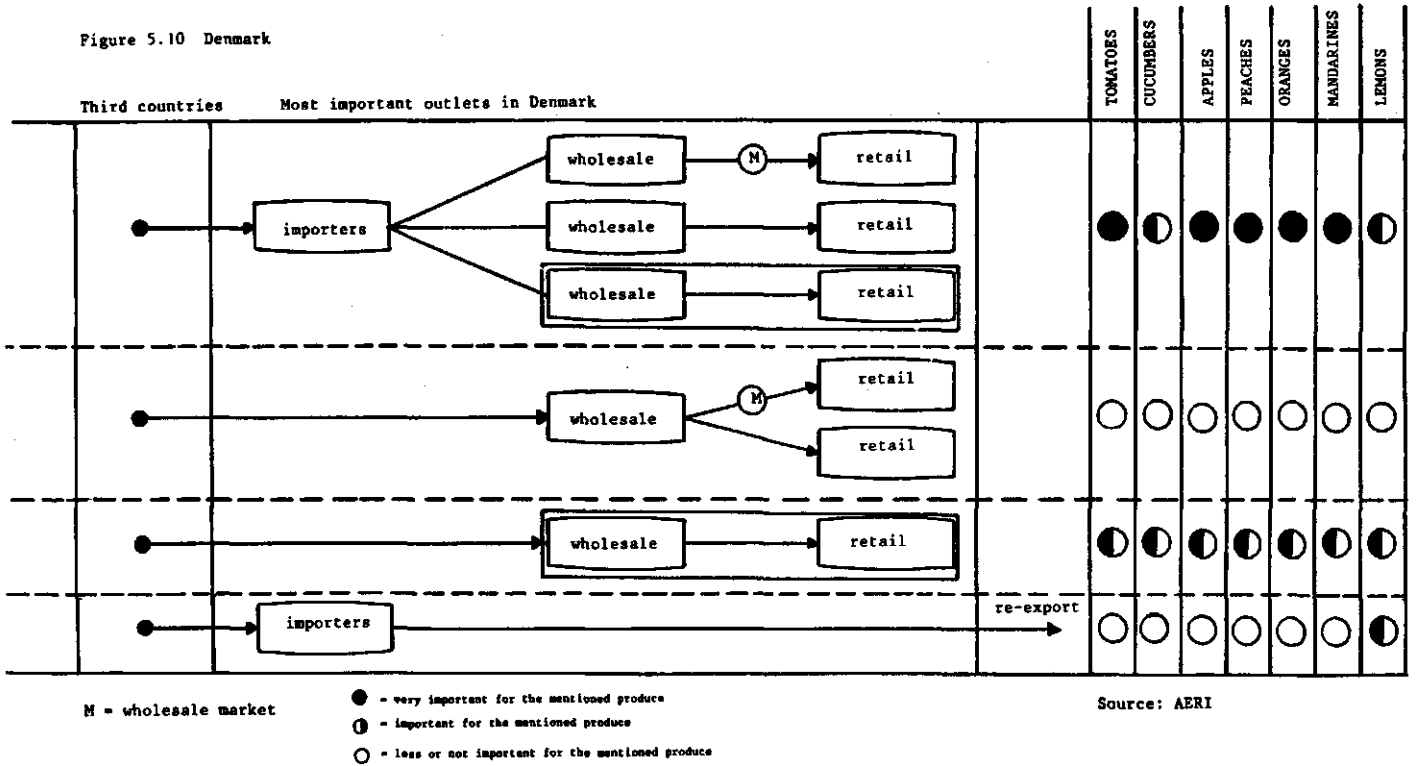


Figure 5.9 Belgium and Luxembourg
Most important distribution channels (outlets) in Belgium (1)

Figure 5.10 Denmark



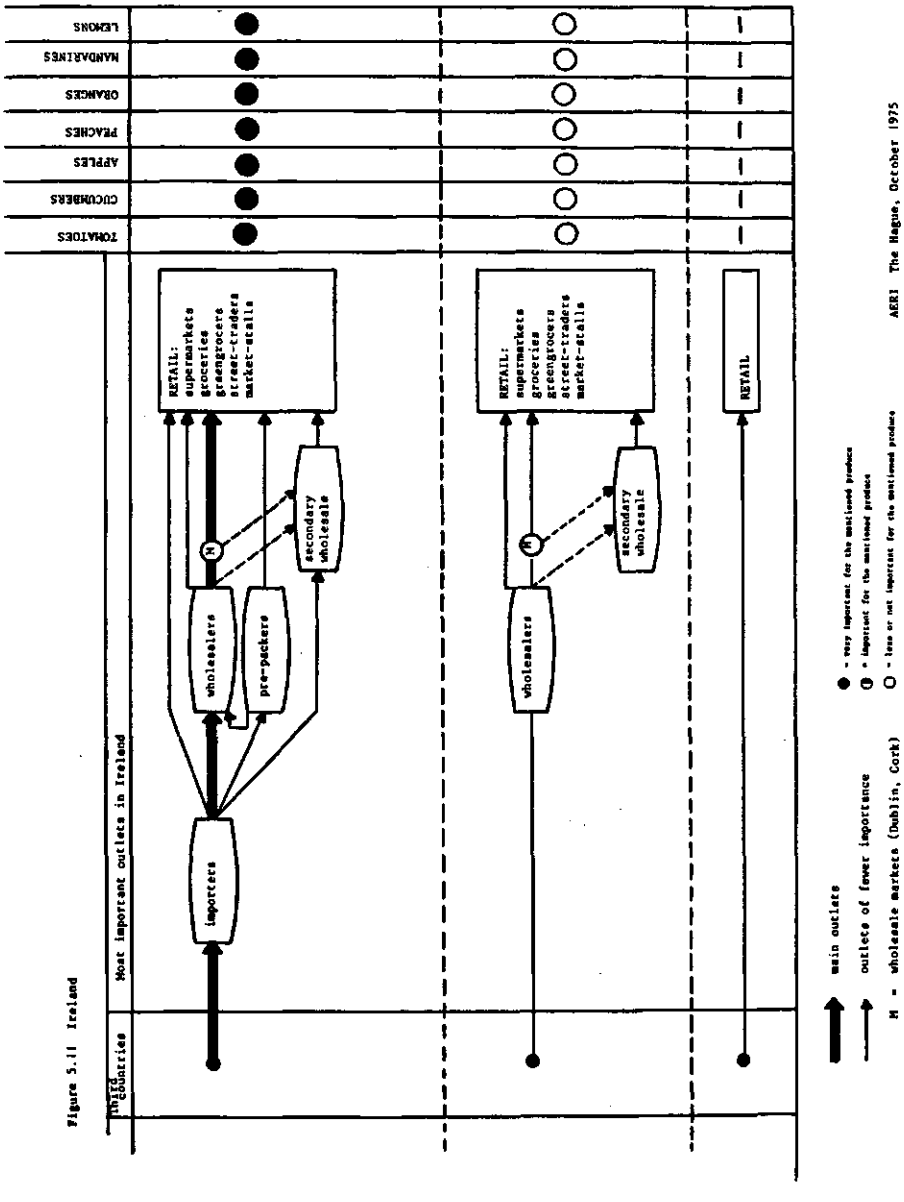
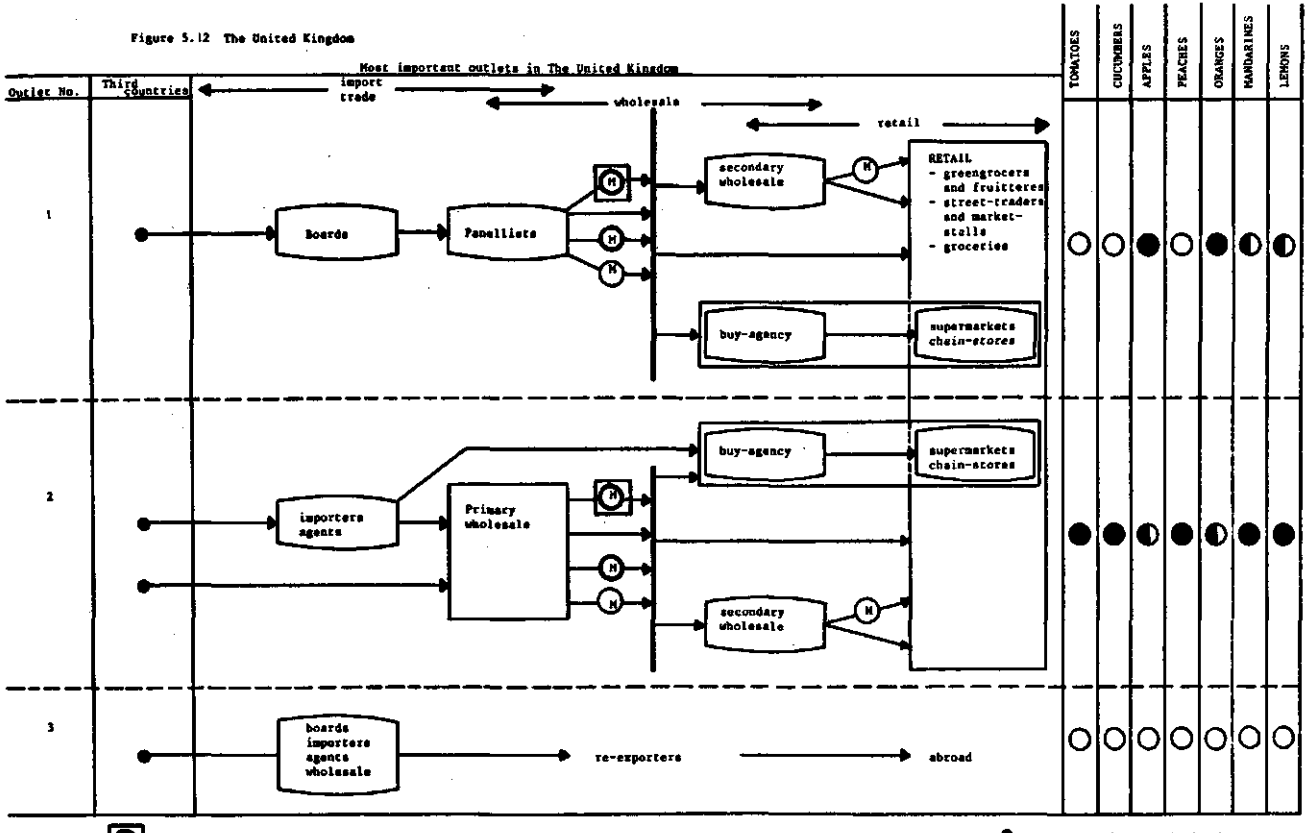


Figure 5.11 Ireland

Figure 5.12 The United Kingdom



Port-markets (London, Liverpool, Hull, Bristol, Southampton, Cardiff, Leith and Edingburg, Glasgow)

Inland Primary Markets (Manchester, Leeds, Newcastle, Birmingham, Sheffield)

Inland secondary markets (Nottingham, Leicester, Coventry, Wolverhampton, Bradford, Brighton, Barnsley, Ba..on, Pre: Middlesborough, Swansea, Portmouth, Plymouth)

● = very important for the mentioned produce
◑ = important for the mentioned produce
○ = less or not important for the mentioned produce

Source: AERI. The Hague, November 1975

Figure 5.13 France

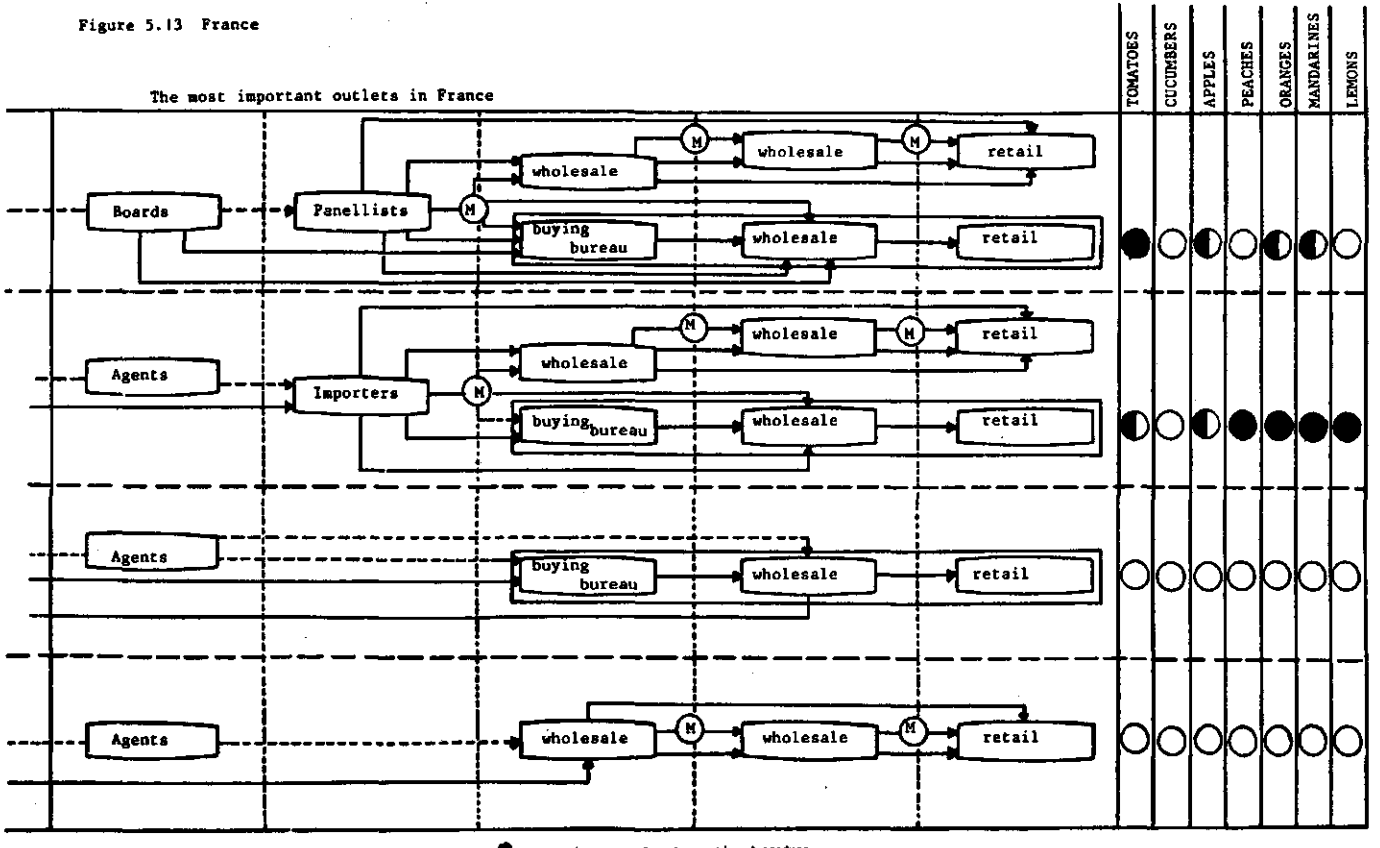
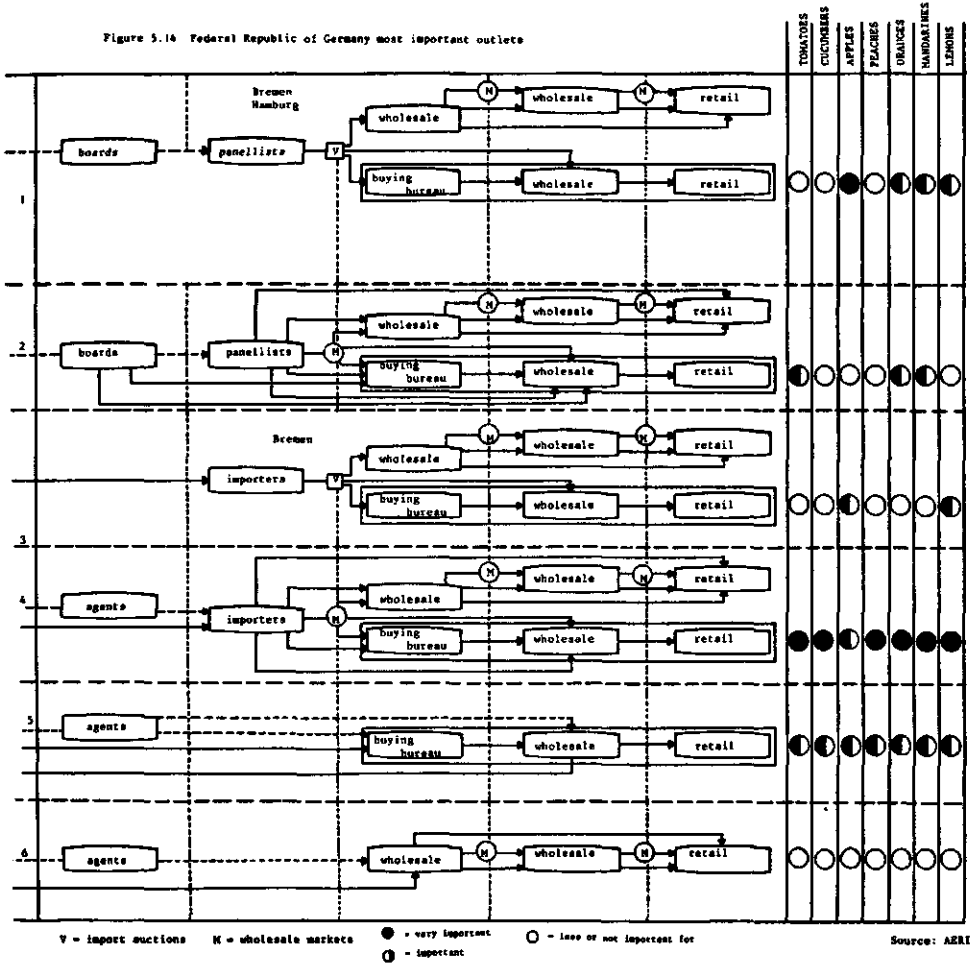


Figure 5.14 Federal Republic of Germany most important outlets



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6. Imports and exports of exotic and out-of-season fresh fruit and vegetables

One of the most important West European markets for exotic and out-of-season fruit and vegetables is the market of the Federal Republic of Germany. This is evidenced by its large population of about 60 million inhabitants, high income per capita and stable currency. This market will be given additional attention by describing the Western European market.

Among the different out-of-season fruit and vegetables offering opportunities for export to the EC-market, most of the information is given about sweet peppers, aubergines and melons. As regards the different exotic information is given about pineapples, avocados, mangoes and kiwis.

Some data are also given of other out-of-season and exotic produce.

6.1 Sweet pepper

Federal Republic of Germany: in the Federal Republic of Germany in 1982 sweet peppers are imported to the amount of 194.000.000 DM. Sweet peppers are imported during the whole year

Table 6.1 Federal Republic of Germany: Imports of fresh sweet peppers x 1000 kg

Month	1979	1980	1981	1982	1983	Percentage index 1979=100
January	4867	5809	5476	6138	6673	137
February	4996	4484	4601	6363	6521	131
March	4267	4164	4099	7189	5065	119
April	4840	5049	4627	6464	6635	137
May	6885	6653	7626	7426	8904	129
June	9300	8090	9457	8916	10171	109
July	10007	10597	10606	10042	11513	115
August	12009	11731	11992	12437	13245	110
September	20228	19396	18536	17681	17067	84
October	15701	19068	16325	12336	13602	87
November	6188	7926	6429	7380	9363	151
December	4387	4625	4648	5606	-	-
Total	103675	107592	104511	107977	(108759)	
Percentage	100	104	101	104	(105)	110 1)

1) Estimation.

Table 6.3 Imports of fresh sweet peppers, by origin and destination x 1000 kg

Origin		Destination					
		England	Sweden	Norway	Finland	Denmark	Belgium
Import countries total:							
	1979	11321	8273	1878	2844	2501	4922
	1980	13621	8809	1996	3326	2846	5590
	1981	17163	9322	2353	3977	2904	5231
	1982	19875	9876	2660	4612	3544	5231
	1983	20996	9752	- 2)	- 2)	- 2)	- 2)
Export countries:							
Netherlands	1979	3265	1230	1226	1632	825	1538
	1983	7756	1775	1707 3)	2290 3)	470 3)	1870 3)
Canary Islands	1979	4421	-	-	-	391	-
	1983	6399	-	-	-	846	-
Israël	1979	1271	1286	356	874	664	320
	1983	1744	602	601	1170	291	-
Spain	1979	711	773 1)	109 1)	91 1)	140	-
	1983	4236	4431	224	982	1310	644
Italy	1979	429	2527	47	123	347	1618
	1983	124	1965	51	85	291	989
France	1979	444	-	-	-	-	805
	1983	530	-	-	-	-	1137
Bulgaria	1979	-	397	-	-	2	-
	1983	-	148	-	-	118	-
Other Balkan States	1979	-	303	-	33	-	-
	1983	-	140	-	45	-	-
USA	1979	-	649	74	64	-	-
	1983	-	23	-	22	-	-
Rwanda	1979	-	-	-	-	-	162
	1983	-	-	-	-	-	107
Roumania	1979	-	747	-	-	129	-
	1983	-	569	-	-	129	-

1) Including the Canaries. 2) Not known. 3) 1982.

with a peak in summer. In the five-year period under review the import increased with nearly 10 per cent as appears from the data tabulated before. In the period under review Spain supplied ever larger quantities. In 1983 Spain became the leading supplier to the Federal Republic, accounting for 36,000 tons or 38 per cent of the market (table 6.2). The Italian supply decreased in summer (open field production) and in particular in the period outside the summer (plastic and glasshouse production) (see appendix 6.1).

Table 6.2 Federal Republic of Germany: Imports of fresh sweet peppers, by origin x 1000 kg

Origin	1979	1980	1981	1982	1983 up to and including November
Spain	5198	10036	11763	26008	(35929)
Italy	45159	48064	38219	35699	(28207)
Netherlands	9648	9705	9480	12311	(14171)
Greece	14858	7370	7796	3444	(4556)
Hungary	5255	7732	10059	8974	(6419)
Roumania	1507	2013	2427	2788	(4016)
Bulgaria	3196	3555	1142	1255	(2221)
Yugoslavia	1311	2106	1616	554	(373)
Turkey	740	1140	1795	2783	(4346)
Israel	6688	7059	4446	4517	(2013)
The Canaries	5512	5126	6516	7255	(4572)
Morocco	1378	1188	1097	529	(46)
France	313	273	1081	870	(1240)
Other countries	2912	2189	1069	990	(632)
Total	103675	107592	104511	107977	(108759)

The Spain supply interfere with the off-season trade. Israël, Morocco and other far away situated production countries fell back also.

England, Sweden, Norway, Finland, Denmark and Belgium: in England sweet peppers are only produced in glasshouses with an area of 48 hectaren in 1979 and 55 hectare in 1982. In the other countries the glasshouse production is limited or negligible. In all named countries the imports increased in the period considered (table 6.3). Again Spain grew very rapidly, the same is true for the Netherlands. Italy and far away countries are mostly losers.

Italy: in Italy the area cultivated with sweet peppers decrease, the total production decrease also in the four-year period under review (8%) as shown in table 6.4. Nearly 20% of the production is from glass/plastic houses and about 30,000 tons is for industry.

Table 6.4 Italy: sweet pepper (x 1000 kg)

	1979	1980	1981	1982	1983
Area x ha	19800	19400	18800	19100	18400
Total production	481000	470500	455800	449600	444900
Exports: total	72958	71594	59875	56065	-
of which:					
- Federal Republic of Germany	52733	53438	42405	39985	-
- Swiss	7164	6280	5900	5883	-
- France	4851	4640	-	-	-
- Austria	-	2201	1588	1716	-

The decreasing exports are caused by the competition of Spain and by an increase of the demand in Italy itself. An indication about this is the increasing import. In the first 7 months of 1983 the import increase from 1650 to 2460 tons.

Spain: this country is the largest European producer and the largest exporter of sweet peppers at this moment. France is the most important import country of agrarisch sweet peppers.

Table 6.5 Spain: sweet pepper (x 1000 kg)

Destination	1978	1979	1980	1981	1982
Area x ha	29700	28600	26900	27800	-
Total production	522400	538300	554800	570700	559300
Exports: total 1)	27725	38719	55620	74802	-
of which:					
- Federal Republic of Germany	2021	4087	14402	13620	
- Netherlands	4793	8164	10005	15400	
- France	16529	20559	19207	30811	
- England	3857	4899	4729	9283	
- Swiss	546	476	565	2373	

1) Including Canary Islands.

Canary Islands: in 1982/83 the growth stagnated. The expansion of the Spanish continent is apparently stronger. Only on the English market the losses are small (smaller difference in transport time).

Table 6.6 Canary Island: exports of sweet peppers x 1000 kg

Period	1979/80	1980/81	1981/82	1982/83	1983/84
October	40	72	246	38	(2)
November	465	817	1385	1055	(194)
December	796	1787	942	1219	(989)
January	1614	3332	3509	1707	(1892)
February	2331	2637	3976	2389	(2660)
March	2316	2362	3258	2586	
April	1720	1982	1591	2030	
May	362	365	670	843	
Total	9644	13354	15577	11867	(5737)
Destination:					
- Netherlands	6663	8080	9914	7209	(3114)
- England	2862	3965	5307	4653	(1598)
- Other countries	119	1309	356	5	(1025)

France: the production in France increased a little (table 6.7). In the five-year period under review there was nearly a doubling of the export (table 6.8). In the same period the import increased stronger, with 10,000 ton. The import out Spain pushed away the import from Israël, Italy and African countries (table 6.9).

Table 6.7 France: supply figures of the markets. Chateaurenard, Cavaillon and Carpentras x 1000 kg

Period	1979	1980	1981	1982	1983
May	2	35	97	76	70
June	355	437	539	521	444
July	1272	1073	972	1174	1120
August	2067	1993	2375	2209	2344
September	1210	1396	1417	1602	1452
October	961	1409	1836	1674	1577
November	205	382	221	540	588
December	-	34	5	4	9
Total	6072	6759	7462	7800	7604

Table 6.8 France: exports of fresh sweet peppers 1) x 1000 kg

Destination	1979	1980	1981	1982
Total	2769	2561	5161	5146
England	449	423	2378	495
BLEU	916	688	1165	1338
Federal Republic of Germany	766	739	438	2181
Swiss	254	356	410	478
Netherlands	321	209	351	204
Italy	19	93	324	307

1) Including freeze.

Table 6.9 France: imports of fresh sweet peppers x 1000 kg 1)

Origin	1978	1979	1980	1981	1982
Total	26292	28300	29314	34205	38692
of which from:					
- Netherlands	122	47	123	87	50
- Spain	15870	20286	22268	29377	34639
- Italy	5330	4316	4529	2959	2759
- Morocco	1001	1286	743	649	329
- Canary Islands	178	246	.	60	.
- Israël	1282	556	538	320	143
- Cuba	459	645	423	124	126
- Senegal	978	451	120	183	361
- Mali	425	336	130	282	64
- Kenya	203	103	71	47	.

Netherlands: due to climate sweet peppers cannot be grown in the open ground in the Netherlands. The glasshouse production has increased rapidly. The total production increased by 62 per cent during the period 1979-1983 with 26,910 tons in 1979 and 43,649 ton in 1983 (table 6.10). The quantities produced at the moment have influence on the market structure. However, the productions season falls mainly during the summer months, so that these supplies do not seriously interfere with the off-season trade.

General remark: Different sources are used, sometimes export figure differs for the same import figure of export of sweet peppers from Spain to France and the imports of sweet peppers in France (tabel 6.5 and 6.9).

Table 6.10 Netherlands: auction supply (x 1000 kg) and prices (ct/kg) of fresh sweet peppers

	1979		1980		1981		1982		1983	
	sup- ply	price	sup- ply	price	sup- ply	price	sup- ply	price	sup- ply	price
January	103	465	95	509	90	658	51	526	18	512
February	4	500	2	250	7	595	5	494	3	492
March	635	477	575	575	718	673	541	540	1002	645
April	2108	476	2186	503	1974	700	2399	606	3032	594
May	3640	335	3872	436	3474	554	4842	470	3879	633
June	3620	245	3814	344	4042	306	4668	361	4910	332
July	3301	230	3701	231	4250	256	4907	263	5838	319
August	5013	169	4636	276	5440	248	6921	198	8195	198
September	3001	240	3707	201	3834	236	4860	213	5673	223
October	3411	308	4446	237	5072	260	5827	261	6771	176
November	1568	364	2368	315	2487	287	2484	300	3281	195
December	506	435	879	464	808	415	675	516	1048	349
Total	26910	284	30299	316	32196	336	38190	315	43649	309

The export of fresh sweet peppers produced in the Netherlands increased, with 32,915 tons in 1983 (table 6.11). With the export of 14,505 tons the Netherlands are the third largest exporter to the Federal Republic of Germany and with 7,756 tons the leading supplier to England.

Re-exports of sweet peppers in the Netherlands is important and directed to neighbouring countries, in particular Federal Republic of Germany (table 6.12).

The imports rose by 125 per cent in the five year period covered by table 6.12, to reach 18,852 tons in 1983. Of the import was re-exported 54 per cent in 1979 and 71 per cent in 1983. In 1979 Canary Islands was by far the leading supplier, in 1983 the Canaries and Spain were both large importers. The imports from Israël, United States, Ethiopia, Senegal, South Africa declined in the five year surveyd. The off-season exports consists partly of high quality sweet peppers grown in hot-business and partly of re-exports.

The re-exports have developed thanks to the Netherlands central location in Europe and to the excellent system of communications that links the Netherlands with all major European cities. An other reason for the growth of Netherlands exports is that the port of Rotterdam is particularly well equiped to handle shipments of fresh fruits and vegetables. This and the know how it has acquired make Rotterdam as favourite point of unloading for exporters of fresh produce.

Table 6.12 Netherlands: imports of fresh sweet peppers, by origin x 1000 kg

Origin	1979	Of which re-export	1980	Of which re-export	1981	Of which re-export	1982	Of which re-export	1983	Of which re-export
Canary Islands	3274	2496	4451	3296	6091	5105	9347	8376	7780	6879
Spain	551	324	1071	924	3697	2386	5128	3658	8465	6259
Italy	415	15	539	-	565	4	681	-	446	2
Hungary	300	-	237	5	493	-	698	-	413	-
France	241	1	186	-	334	-	228	-	248	-
Israël	1376	320	1191	437	922	247	1118	247	696	110
United States	384	357	510	510	109	169	31	22	143	47
Ethiopia	4 96	451	627	550	16	3	-	-	3	2
Senegal	422	-	9	-	141	-	76	-	10	-
South Africa	224	224	192	149	16	26	82	56	47	35
Cuba	21	11	13	4	109	40	73	43	11	12
Other countries	340 1)	378	225	114	341	174	572 2)	56	590 3)	10

1) Of which Greece 360 tons.
2) Of which England 360 tons and Federal Republic of Germany 100 tons.
3) Of which England 289 tons and Federal Republic of Germany 151 tons.

Table 6.11 Netherlands: exports of sweet peppers, by destination x 1000 kg

Destination	1979	1980	1981	1982	1983
Federal Republic of Germany	9648	9705	9482	12311	14505
England	3264	4677	6214	6822	7756
BLEU	1538	1880	1704	1870	2069
Sweden	1228	1364	1470	1837	1775
Norway	1225	1229	1510	1707	2011
Finland	1631	1796	2262	2290	1410
Denmark	823	630	519	470	704
Swiss	325	270	263	291	449
Austria	120	153	152	143	244
Ireland	74	185	208	324	634
France	84	132	100	72	162
Other countries	2	6	32	108 1)	1196 2)
Total	19962	22027	23966	28245	32915

1) Of which Arabia 80 tons, United States of America 20 tons and Canada 3 tons.
2) Of which Arabia 208 tons, United States of America 557 tons and Canada 416 tons.

Prices

Prices payed by retailers and other buyers on wholesole markets in the Federal Republic of Germany for fresh sweet peppers are illustrated in appendix 6.2. Consumers are generally very price- and quality conscious. The great price differences between Dutch and Italy produce are caused by quality aspects.

Prices for sweet peppers fluctuate substancially during the year, which reflects variations in the supply situation but they always follow the same pattern with the lowest price in summer and higher "prices" in winter time, reaching a peak in January/-February.

6.2 Aubergine

Table 6.13 shows the Federal Republic of Germany imports of fresh aubergines by during the period 1979-1983. The total imports increased from 9.9 to 11.7 million kg in 1982. Aubergines used to come only from producing countries in Southern Europe or from other countries with similar climate. Aubergines is now supplied in ever larger quantities by the Netherlands as well (table 6.14). The Netherlands ranked second among all the

suppliers with 3,795 tons or 32 per cent of the market in 1982. The season for Netherlands aubergines extends from March to November (table 6.23), with a peak period in the summer months, so that these supplies do not seriously interfere with the off-season-trade. The Netherlands substitute imports from Italy and make use of the increasing demand. In the winter months Israël losed to benefit of the Canaries and Italy. Despite the low Dutch prices Turkey increased imports.

On wholesale markets in Germany the price payed in August 1983 amount f 2,68 for one kg Dutch aubergines and f 1,78 for aubergines imported from Italy. This difference is caused by quality. Prices for aubergines follow always the same pattern, with the lowest price in summer and high prices near winter time (table 6.15 and 6.23).

Throughout the period studied, the Netherlands has been the largest supplier to England (table 6.17). This country's relative share rise from 24 per cent in 1979 to 41 per cent in 1983. Till 1982 the Netherlands oust competition from the market and benefit by increasing demand. In 1983 in particular Kenya increased shipments.

In France the total import market is rather stable. The Netherlands more than doubled exports to France in 1983 (table 6.19).

In Italy the area with protected (plastic) cultivation (Sicilië) increase, by this exports of aubergines in winter months increase. Italy has a very large open field production in the summermonths (300,000 tons), a very small part is exported.

6.3 Melon

In the period studied the imports in the Federal Republic of Germany increased very strong, Spain has become a big supplier to this market, accounting for 34 per cent of the market in 1983. Italy is still the major supplier of this item accounting for 38 per cent of the market. In England Spain is with a share fo 75 per cent of the market the leading supplier. Imports from Spain to England increased from 30 millions kg in 1978 to 63 million kg in 1983 (table 6.25).

In the Federal Republic imports existed of water melons for 81 per cent, in England this is 20 per cent. There is strong increase of demand in England, especially in Christmas time (South Africa).

In the Netherlands production of melons - all under glass - was 3.6 millions kg in 1983 compared with 2.2 millions five years earlier. The main production season is June, July, August, September and October (table 6.26), with highest prices in June and July. Price variation is caused also by type and size. On the auction "Westland Nord" the average price for one melon (ogen-melon) with six in a box amounted f 3,17 in 1982 and f 2,67 in 1983, for twelve in the same box the price amounted respective f 1,63 and f 1,80.

6.4 Vegetables and fruit with a short production season

Bij domestic production and at the same time imports, competition is mostly in advantage to the first named. Exporting before and after the natural season offers the best opportunity to countries looking for increasing their exports of fresh fruits and vegetables. In appendix 6.3 the supply patterns are showed of horticultural produce produced in the Netherlands, all with a short supply period.

Fresh aparagus are marketed in two months (May and June). In the other ten months there is no fresh home production. The Dutch consumers prefer fresh above canned, they are prepared to pay high prices for high-quality produce. As table 6.30 shows asparagus are produced also in Greece (April, May), Spain (March, April, May), France (April, May and June) and South Africa in October and November. Imports in the other months are very small or negligible.

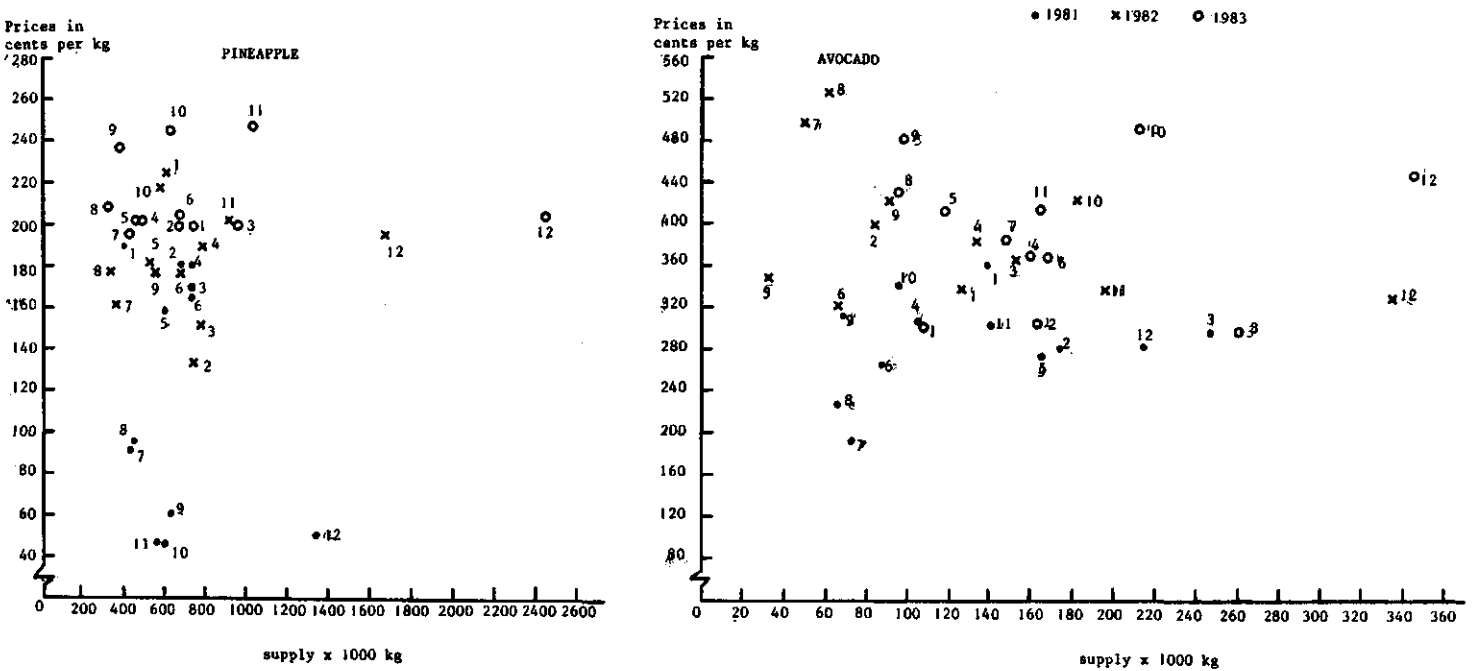
Some of the various names by which the pods of Phaseolus vulgaris L is known are french beans, bobby beans, needle beans, green beans and snap beans. Frenche beans are most in demand on nearly all the European markets. French beans are the lowest priced variety. There is also a great demand for fine and extra-fine needle beans (haricot verts). These are imported at high prices. Western Europe is largely self-sufficient in french beans from May to November (table 6.28).

6.5 Pineapple

Ivory Coast is the biggest supplier of fresh pineapples to the European market. Of the total imports in 1982 this country accounted for 91 per cent in France, 94 per cent in the Federal Republic of Germany and 98 per cent in the Netherlands. France is the leading importer with 29 million kg, followed by the Federal Republic with 12 million kg in 1982. In the period studied imports are irregular as shown in table 6.43 and 6.51. There seems to be a stagnation, but this is only temporary. In 1981 the market is oversupplied, hence the low prices in that year. Quantities supplied in 1983 are on the level of 1981, but prices are better. Much better information about the relation supply and demand is showed in figure 6.1. In December 1982 a higher supply of 23 per cent in comparing with December 1981 goes together with a much higher price. By a much higher supply of 48 per cent in December 1983 in comparing with 1982 the price remained on the same level. In the months September (9), October (10) and November (11) with a supply of about 600,000 kg per month the price increased with about f 0,45 per kg in 1981, f 2,00 in 1982 and f 2,40 per kg in 1983. The demand of fresh pineapples increased yearly, this found expression in a higher price by the

Figure 6.1 Supply and price of fresh pineapples and avocados, imports in The Netherlands

1 = January 2 = February etc.



same supply or an equal price by a higher supply. Quantities supplied to the European market may only increase steadily from year to year.

During the summer months, in particular July and August, when the supply of cheap domestic fruits is abundant, the demand for pineapples is reduced. In this period only small quantities are demanded on a reasonable price level. An increase in demand took place also in these two summer months.

6.6 Avocado

Israël is the major supplying country of fresh avocados to the EC-markets. Of the total imports in 1982 Israël accounted for 60 per cent in France, 62 per cent in the Federal Republic of Germany and 65 per cent in the Netherlands. South Africa ranked second among all suppliers.

South Africa, a minor supplier, exports from March till October. For fresh avocados France is far away the most important market with 41 million kg in 1982 and 51 million kg in 1983. Quantities supplied in 1982 into the Federal Republic amounted 2.8 and in the Netherlands 2.0 million kg (table 6.44, 6.50 and 6.54). Imports of avocados into the Federal Republic of Germany are very small, especially when compared with imports into France. In 1971 466,000 kg avocados are imported in the Federal Republic, twelve years later it is sixfold. In 1979 this market is oversupplied, resulting in low prices. In 1982 the price remedied with a greater supply. The stagnation on the Germany market in 1980 and 1984 was temporary. In figure 6.1 the relation between demand and supply on the Dutch market is showed. In the months 9(September) and 10(October) an increasing of the supply gives an increasing of the price. The same is true in several other months, in winter as well as in summer.

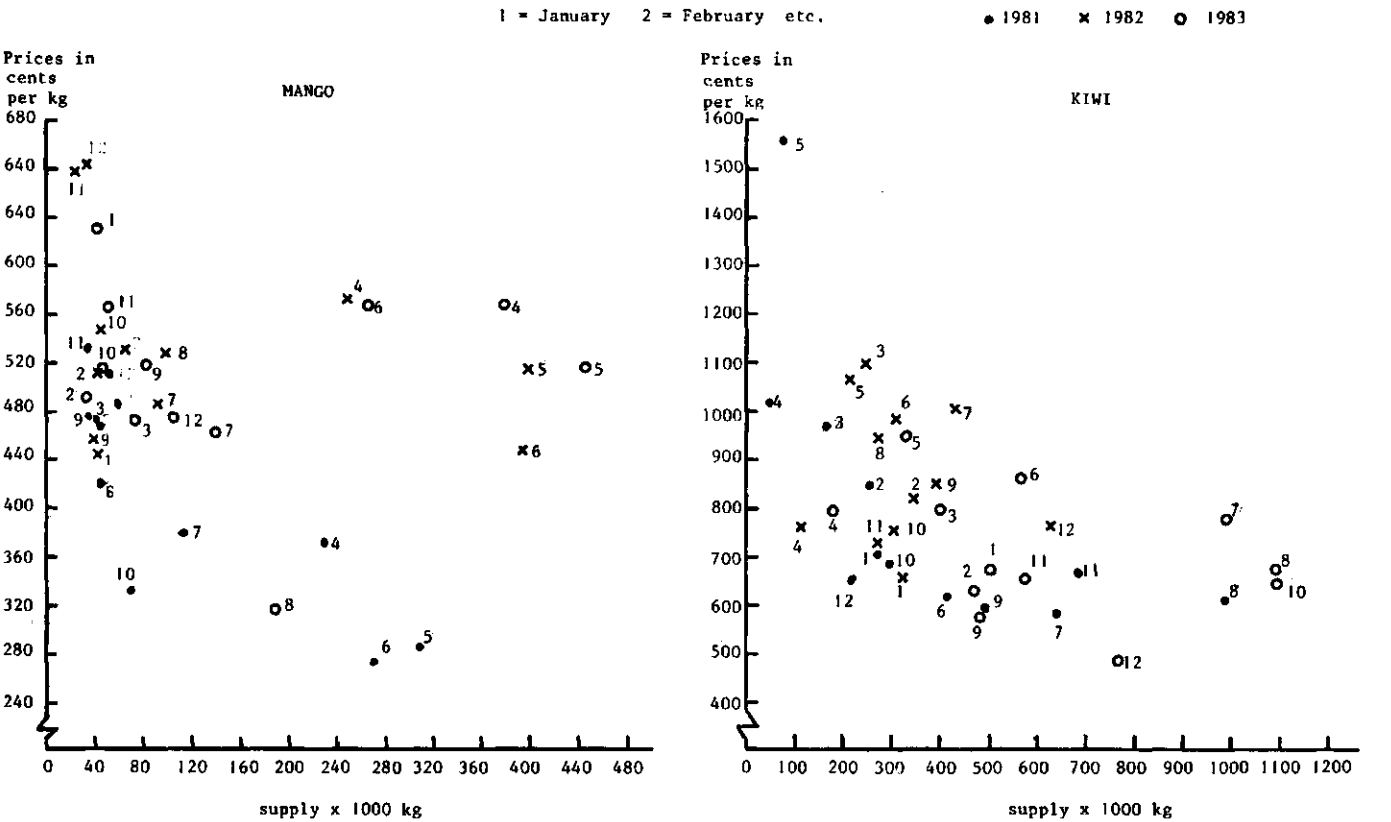
6.7 Mango

High-quality mangoes can be grown during a short period only. Owing to seasonal differences between area, many countries import mangoes into the Western European Markets, each with his own supply period. Table 6.47 classifies imports of mangoes in France per month, by origin, in 1983.

French imports of fresh mangoes have risen by two-thirds in the period of review, 1981-1983, and reached 4,1 million kg in 1983. In 1971 it was still 0.4 million, in twelve years imports of fresh mangoes in France is tenfold.

Upper Volta is the principal supplier to France with a market share of 22 per cent in 1983, closely followed by Mali with a share of 19 per cent. Ivory Coast is the third supplier with a market-share of 10 per cent. Last named country increased imports in 1983 eighteenfold in comparing with 1982. Upper Volta

Figure 6.2 Supply and price of fresh mango and kiwi fruits, imports in The Netherlands



and Mali supply the market in the months March, April, May, June and beginning July. Ivory Coast starts in April and ends in July. The export seasons are the same or almost the same, consequently the supplies of these three countries interfere together. Mexico is the fourth supplier with a market share of 9 per cent. Mexico supplies mangoes over a long period, with a main supply in June, July and August.

Minor quantities are supplied by Egypt (September), Israël (September), Senegal (May-July), Guinea (April-July), Congo (November-January), Kenya (October-April), USA (July-September) and Haïti (March). There is no gap in the flow of supplies and mangoes are imported regurly throughout the year with a peak in April and especially in May.

The imports of mangoes into the Federal Republic of Germany are small in comparing with the imports into France and irregular, with 0.9 million kg in 1979 and 0.7 million in 1982. In 1982 Kenya has been the major supplier of mangoes to the Federal Republic with a market-share of 20 per cent, followed by Mali and Mexico each with a market-share of 14 per cent. In the recent four-year period covered by table 6.52 imports from South Africa and Mexico declined strong, while Brazil, Israël and other countries increased.

The imports of mangoes into the Netherlands amounted 1.3 million in 1981 and 1.9 million in 1983 (table 6.54). Mali is the largest supplier, accounting for 0.9 million kg or 46 per cent of the market in 1983, followed by Mexico (13 per cent) and USA (9 per cent).

The average unit value in the Federal Republic of Germany amounted in 1981 f 3,97 and in 1982 f 5,07 per kg. In the Netherlands the average unit value was in 1981 f 3,55 and in 1982 f 5,11. In the Netherlands there is again a high value in 1983, f 5,09. More information about the unit value can be got from figure 6.2. In the three-year-period under review exist a strong rise of demand in the months April, May and June. In May, 24 per cent of the total year imports in 1983, supply increased with 27 per cent from 1981 to 1982, the price increased with 75 per cent. Supply increased in 1983 with 12 per cent and the price remained the same. This development is only possible by increasing of demand. The same is true for April and June. In the other months the demand is much lower, recognizing in much lower supplies for same prices. This can be caused by consumer behaviour or it may be quality aspects.

6.8 Kiwi

In the recent three-year period imports of kiwis into the Netherlands rose by 64 per cent, 4.5 million kg in 1981 and 7.5 million kg in 1983. New Sealand is by far the leading supplier of

kiwis into the market, accounting for 4.7 million kg in 1983 or a market share of 63 per cent, following by USA with a market-share of 17 per cent.

New Sealand supplies kiwis almost all the year around, except the months March and April. The supply is low in the beginning of the year, while USA's export season extends from December to April. Kiwis are imported regularly throughout the year.

The imports of kiwis into the France market is doubled in 1983 in comparing with 1981 (table 6.45). In 1983 New Sealand supplies 1.9 million kg.

The average unit value is very high (table 6.54). On yearly bases the price in 1981 amounted f 6,70 per kg, in 1982 f 8,57 and in 1983 f 6,68. Supply and demand (prices) per month are showed in figure 6.6. In several months (6, 7, 8) there is a higher supply and a higher price in 1983 comparing with 1982 or with 1981.

6.9 Other exotic produce

Table 6.54 shows the Netherlands imports of other fresh exotic produces during the period 1981-1983. Some of these commodities have an increasing supply (papaya), others remain on the same level or decrease. Data about imports of papaya into the Federal Republic of Germany are showed in table 6.53.

More figures are showed of various and not described produces. Figure about imports of apples, cauliflower, cumcumbers, strawberries, tomatoes, grapes, onions, oranges, peaches, carrots, hot-pepper, lychee, papaya and coconut see tables in the last part of this chapter.

Table 6.13 Federal Republic of Germany, imports of fresh aubergines x 1000 kg

Period	1979	1982	1983
January	355	583	489
February	448	518	479
March	524	862	692
April	756	979	814
May	1054	1135	1071
June	1095	1281	1404
July	1411	1427	1349
August	1179	1376	1588
September	990	1240	1220
October	1050	1051	1138
November	606	681	914
December	388	563	- 1)
Total	9856	11696	11158

1) Unknown.

Table 6.14 Federal Republic of Germany, import of fresh aubergines by origin x 1000 kg

Origin	1979	1981	1982	1983
Italy	4293	5782	5534	4664 1)
Netherlands	3101	2919	3795	4371
The Canaries	570	966	1052	744 1)
Spain	58	315	168	293 1)
Israël	1217	442	377	117 1)
France 2)	355	438	277	-
Turkey	112	234	404	503 1)
Other countries	170	113	89	433 1)
Total	9856	11209	11696	11158 1)

1) Excluding December.
2) Including Martinique and Guadeloupe.

Table 6.15 Federal Republic of Germany average prices payed by buyers on wholesale markets for fresh aubergines in gld/kg

Period	1979		1982		1983	
	Nether-lands	Italy	Nether-lands	Italy	Nether-lands	Italy
March	7.30	4.18	8.04	4.00	6.99	4.61
April	5.88	3.82	5.82	3.84	6.01	4.08
May	4.20	2.53	4.99	3.27	5.47	3.62
June	4.03	2.23	4.31	2.75	4.17	2.86
July	2.85	1.62	3.11	2.00	3.40	2.16
August	3.19	1.44	3.70	1.74	2.68	1.78
September	4.01	1.51	4.31	2.01	3.86	1.89
October	4.35	1.64	5.48	2.14	4.75	1.96

Table 6.16 England, imports of fresh aubergines x 1000 kg

Period	1979	1982	1983
January	287	351	380
February	310	280	374
March	245	378	412
April	319	466	509
May	452	624	536
June	265	383	484
July	407	501	391
August	449	545	515
September	345	413	392
October	434	415	572
November	386	344	440
December	224	425	415
Totaal	4123	5125	5420

Table 6.17 England, imports of fresh aubergines by origin
x 1000 kg

Origin	1979	1981	1982	1983
The Netherlands	1005	2011	2475	2220
The Canaries	908	1139	1279	1263
Kenya	632	558	572	1000
Cyprus	777	195	101	38
Israël	405	201	213	184
USA	165	60	14	18
Spain	69	115	20	227
Italy	40	42	64	120
France	20	185	130	84
Other countries	102	291	257	265
Total	4123	4797	5125	5420

Table 6.18 France, own production of fresh aubergines, supply on some growers markets in the Provence x 1000 kg

Period	1979	1982	1983
June	323	580	454
July	958	1566	1093
August	1769	1797	2019
September	1200	1555	1204
October	747	888	1059
November	73	135	107
Total	5079	6521	5836

1) Cavillion, Chateaurenard, Carpentras, Avignon.

Table 6.19 France, imports of fresh aubergines by origin
x 1000 kg

Origin	1979	1981	1982	1983
Spain	7044	10058	8002	- 1)
Guadeloupe	3490	3248	3724	-
Italy	2406	2481	2931	-
Netherlands	742	724	843	1756
Martinique	1644	605	504	-
Israël	385	689	437	-
The Canaries	367	93	326	-
Morocco	182	75	.	-
Other countries	74	77	25	-
Total	16334	18050	16092	

1) Unknown.

Tables 6.20 France, exports 1) of fresh aubergines x 1000 kg

Destination	1979	1981	1982
Belgium	438	503	305
Federal Republic of Germany	96	164	145
England	.	124	90
Swiss	92	111	58
The Netherlands	331	349	152
Other countries	30	15	6
Total	987	1266	756

1) Including re-export in wintertime.

Table 6.21 Belgium, imports of fresh aubergines by origin x 1000 kg

Origin	1979	1981	1982	1983
The Netherlands	404	384	482	669
Italy	518	476	405	- 1)
France	455	480	300	-
Israël	175	.	.	-
Other countries	15	112	126	-
Total	1567	1452	1313	

1) Unknown.

Table 6.22 Italy, exports of fresh aubergines by destination x 1000 kg

Destination	1979	1980	1981	1982
France	2369	2245	2483	2864
Federal Republic of Germany	4641	5136	7321	5736
Swiss	797	762	774	.
Austria	422	.	.	530
Other countries	503	938	1306	1631 1)
Total	8732	9081	11884	10761

1) Of which for Belgium 687.

Table 6.23 The Netherlands, fresh aubergines x 1000 kg

Period	Auction supply		Auction prices in guilders per 100 kg		Export of own production		Imports 1)	
	1979	1983	1979	1983	1979	1983	1979	1983
January	.	.	.	.	.		370	489
February	.	17	.	616	.	8	240	301
March	56	379	498	541	17	301	255	186
April	391	798	350	393	214	669	151	138
May	1248	1447	247	392	857	1299	29	26
June	1104	1822	262	234	928	1638	.	14
July	1471	2114	129	163	1258	1843	27	5
August	1246	2456	216	136	1144	2147	.	6
September	777	1316	288	270	682	1195	6	2
October	516	833	336	356	533	721	.	36
November	46	126	480	405	85	124	252	303
December	1	.	.	.	2	.	381	450
Total	6856	11291			5720	9945		

1) Including re-export.

Table 6.24 The Netherlands, exports of fresh aubergine by destination x 1000 kg

Destination	1979	1982	1983
Federal Republic of Germany	3100	3795	4371
Belgium	389	482	669
England	1005	2475	2220
Sweden	146	245	222
France	742	843	1756
Swiss	143	156	137
Denmark	117	167	246
Austria	30	84	129
Other countries	48	131	195 1)
Total	5720	8378	9945

1) Of which Norway 60, Finland 47, Ireland 52 and Arabia 31.

Table 6.26 The Netherlands, fresh melons, own production (glasshouses)

	Auction supply x 1000 kg			Auction prices in guilders per 100 kg		
Period	1978	1982	1983	1978	1982	1983
May	21	20	31	365	437	349
June	110	142	149	286	361	266
July	415	643	784	260	301	266
August	968	1484	1738	178	222	227
September	465	514	767	131	255	197
October	160	108	155	145	209	204
November	13	4	2	-	-	-
Total	2152	2915	3626	188	253	231

Table 6.25 Imports of fresh melons by origin x 1000 kg

Origin	Federal Republic of Germany			England			The Netherlands			Belgium	
	1978	1981	1983 1)	1978	1982	1983	1978	1982	1983	1978	1982
Spain	14300	25700	33000	30240	42124	63469	5780	8263	11808	2627	3055
Italy	32100	31900	37400	1530	2826	3000	2790	3530	3396	2128	1855
Greece	12800	14600	15600	2580	3578	2871	1270	1200	1722	.	.
France	700	1200	1700	220	244	2909	560	2150	2049	5685	9290
Belgium	.	.	.	.	.	.	240	100	.	.	.
England	.	.	.	.	.	.	10	70	.	.	.
Federal Republic of Germany	.	.	.	.	.	.	320	760	419	.	.
Israël	6900	8300	3900	7200	6663	5450	1080	1960	984	894	780
Egypt	.	.	.	.	.	.	110	.	.	.	.
Senegal	400	.	100	.	.	.	190	60	52	191	259
South Africa	400	400	400	600	723	964	90	190	237	.	.
Chili	.	.	.	980	1477	1639	330	.	130	.	.
Equador	.	.	.	.	.	.	50	70	13	.	.
USA	.	.	.	.	.	.	.	800	610	.	.
The Netherlands	100	100	500	30	529	401	.	.	.	245	512
Hungary	600	.	700	.	.	.	.	.	.	.	.
Turkey	200	1800	4000	.	.	.	.	.	.	.	.
Cyprus	.	.	.	450	376	444	.	.	.	.	.
Columbia	.	.	.	1760	1017	67	.	.	.	.	.
Peru	.	.	.	70	10	53	.	.	.	.	.
Brasil	.	.	.	10	858	1285	.	.	.	.	.
Portugal	.	.	.	.	494	105	.	.	.	.	.
Other countries	900	1800	800	860	1334	825	480	200	249	126	2304
Total	70000	85800	98100	46530	65424	84541	13330	19350	21670	11896	18055

1) Excluding December.

Table 6.27 Area and production of melons in South Europe

Produce	Area ha				Production x 1000 kg			
	Spain		Italy		Spain		Italy	
	1978	1981	1978	1982	1978	1981	1978	1982
Sugar melon	66100	68300	12800	13100	667500	820600	302100	314800
Water melon	27800	28700	24000	22400	496200	558300	756000	754400

	Production x 1000 kg	
	France	
	1978	1982
Open field	135200	166500
Protected crops	45000	55500

Table 6.28 Supply and prices of French beans

Period	In the Netherlands on the auctions					
	Supply x 1000 kg			Prices in guilders per 100 kg		
	1981	1982	1983	1981	1982	1982
July	2110	3330	1895	193	104	244
August	4120	4480	4837	108	90	98
September	2810	2880	2740	106	92	101
October	710	670	1000	202	181	166
Total	9790	11360	10572	133	100	132

Country	Area in hectares			Production x 1000 kg		
	1981	1982	1983	1981	1982	1983
The Netherlands	5460	6410	4655	66800	76400 1)	57600 2)
Federal Republic of Germany	4020	4150	3370	39900	43100	32200
Italy 3)	35400	36200	34600	199700	193200	171000
France:						
- fresh produce	-	-	-	41500	43200	-
- industry	-	-	-	129700	150800	-

1) Of which contract (industry) 80 per cent.
2) Of which contract (industry) 67 per cent.
3) Including runner beans.

Table 6.29 Federal Republic of Germany, imports of apples per month by origin 1983 (x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1982
Italy	20,697	24,397	35,875	31,894	34,189	28,680	11,103	10,734	8,586	15,255	17,725	15,062	254,197	214,055
France	7,150	6,430	8,285	6,008	7,334	4,561	2,382	6,112	22,181	11,569	7,551	6,464	96,027	113,976
South Africa	-	-	452	4,293	4,066	5,969	6,644	5,969	1,398	166	18	-	28,964	47,767
Chili	-	-	3,294	11,822	15,158	4,705	392	-	-	-	-	-	35,371	39,810
Argentina	-	-	241	5,975	6,152	9,571	7,859	3,019	1,326	-	-	-	34,143	35,409
The Netherlands	2,929	3,158	3,768	2,737	1,512	468	278	1,695	4,712	3,466	3,075	2,446	30,244	25,299
New Sealand	-	-	-	2,744	3,864	4,211	4,799	3,267	28	-	-	-	18,913	23,539
Belgium (L)	586	564	714	481	356	167	53	167	872	1,079	556	382	5,977	5,452
Australia	-	-	-	-	77	559	804	1,168	1	1	-	-	2,610	3,326
Czechoslovakia	274	554	117	-	-	-	-	-	7,683	19,740	7,267	622	36,257	16,481
Hungary	1,520	4,232	1,266	-	-	-	-	241	7,654	21,656	16,431	5,760	58,760	1,966
Spain	-	-	-	-	-	-	-	2,949	878	875	108	6	4,816	2,419
Poland	-	-	-	81	15	-	-	5	5,686	14,397	12,931	1,390	34,505	-
Others	221	218	565	359	34	77	84	227	5,931	20,473	8,536	1,596	38,321	8,437
Total	33,377	39,553	54,577	66,394	72,757	58,968	34,398	35,551	66,927	108,677	74,198	33,728	679,105	537,936
%	4,9	5,8	8,0	9,8	10,7	8,7	5,1	5,2	9,9	16,0	10,9	5,0	100	7

Table 6.30 Federal Republic of Germany, imports of asparagus per month by origin 1983 (x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1982
France	-	10	121	3,231	5,620	1,808	49	0	0	2	0	7	10,848	9,059
The Netherlands	-	4	21	18	1,496	2,200	106	38	-	-	0	1	3,884	3,301
Greece	-	-	64	667	614	14	-	-	-	-	-	-	1,359	1,080
South Africa	-	-	-	-	-	-	-	-	25	74	76	9	185	213
Spain	-	-	159	380	289	0	-	-	-	-	-	-	828	206
Others	5	12	34	122	273	116	1	4	2	31	71	45	716	623
Total	5	26	399	4,418	8,292	4,138	156	42	27	107	147	62	17,819	14,482
%	0	0,2	2,2	24,8	46,5	23,2	0,9	0,2	0,2	0,6	0,8	0,4	100	

Table 6.31 Federal Republic of Germany, imports of cauli flower per month by origin 1983 (x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1982
France	11,073	11,841	14,623	9,236	14,570	2,644	101	5	85	1,697	10,843	8,788	85,514	80,947
Italy	9,581	4,219	11,746	10,116	1,720	26	72	14	82	334	1,941	4,188	44,039	43,550
The Netherlands	-	-	-	14	106	30	79	315	990	476	164	-	2,174	2,397
Belgium (L)	50	95	53	38	155	457	199	177	110	96	188	28	1,646	1,622
Others	35	44	57	30	4	2	30	0	59	28	45	202	536	285
Total	20,739	16,199	26,488	19,434	16,555	3,159	481	511	1,326	2,631	13,181	13,206	133,910	128,801
%	15,5	12,1	19,8	14,5	12,4	2,4	0,4	0,4	1,0	1,9	9,8	9,8	100	

Table 6.32 Federal Republic of Germany, imports of cucumbers per month by origin 1983 (x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1982
The Netherlands	62	2,745	17,983	26,840	32,101	35,271	28,122	21,617	14,344	7,097	2,259	317	188,758	174,442
Greece	5,172	4,947	2,399	489	306	167	3	-	-	1,252	4,352	4,997	24,086	40,484
Spain	608	138	17	6	3	-	-	-	80	1,157	3,448	3,534	8,991	7,293
The Canaries	664	161	50	-	-	-	-	-	-	-	759	2,096	3,730	4,155
Roumania	-	-	-	2,554	944	1,042	50	-	676	592	364	-	6,222	3,969
Belgium (L)	-	-	18	41	116	249	614	544	599	49	101	1	2,332	2,462
France	4	43	160	96	174	236	240	289	142	112	121	45	1,662	2,052
Italy	54	32	51	21	24	492	86	12	11	4	304	34	1,125	1,309
Others	0	14	139	635	958	329	171	79	211	57	0	11	2,604	1,979
Total	6,564	8,080	20,817	30,682	34,626	37,786	29,286	22,541	16,063	10,320	11,708	11,035	239,508	238,145
%	2,7	3,4	8,7	12,8	14,5	15,8	12,2	9,4	6,7	4,3	4,9	4,6	100	

Table 6.33 Federal Republic of Germany, imports of strawberries per month by origin 1983 (x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1982
Italy	-	2	586	6,648	27,583	8,516	314	7	11	145	44	10	43,866	40,782
France	-	3	11	59	2,705	2,640	33	2	6	14	2	7	5,482	5,877
Belgium (L)	-	-	-	-	4	1,870	1,925	-	-	-	-	-	3,799	3,634
Spain	5	14	252	2,344	1,282	261	1	0	1	3	2	1	4,166	3,204
Poland	-	-	-	-	-	2,473	1,106	-	-	-	-	-	3,579	3,023
The Netherlands	-	-	-	7	9	723	1,703	163	78	39	6	0	2,728	2,462
Roumania	-	-	-	-	152	634	50	-	-	-	-	-	836	1,920
Israel	54	240	440	156	-	-	-	-	-	-	1	37	928	1,192
USA	3	22	22	121	-	-	-	-	44	65	5	3	285	530
Others	52	53	46	37	829	319	33	7	1	22	74	133	1,606	1,076
Total	114	334	1,357	9,372	32,564	17,436	5,165	179	141	288	134	191	67,275	63,700
%	0,2	0,5	2,0	13,9	48,4	25,9	7,7	0,3	0,2	0,4	0,2	0,3	100	

Table 6.34 Federal Republic of Germany, imports of tomatoes per month by origin 1983 (x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1982
The Netherlands	174	200	2,277	16,618	34,667	46,473	41,771	33,093	19,386	10,745	3,973	521	209,898	220,247
Spain	7,015	4,631	2,598	1,328	828	684	323	16	861	12,607	13,842	8,840	53,573	50,765
The Canaries	5,781	8,377	10,930	3,651	470	17	-	-	-	16	723	2,602	32,567	26,385
Belgium (L)	23	13	41	312	1,533	4,015	5,534	4,511	2,032	2,000	884	392	21,290	21,511
Marocco	977	58	495	2,709	2,954	657	-	-	-	-	1,606	4,702	14,158	17,097
Roumania	-	-	-	168	600	1,087	3,790	1,112	152	1,556	2,156	-	10,621	6,492
Italy	-	17	111	162	92	792	3,126	1,482	88	77	34	8	5,989	5,020
Bulgaria	-	-	-	16	505	1,585	631	59	-	-	-	-	2,796	2,501
Others	185	181	313	200	1,496	3,177	1,965	828	179	164	263	143	9,094	7,373
Total	14,155	13,477	16,765	25,164	43,145	58,487	57,140	41,101	22,698	27,165	23,481	17,208	359,986	357,391
%	3,9	3,7	4,7	7,0	12,0	16,2	15,9	11,4	6,3	7,8	6,5	4,8	100	

Table 6.35 Federal Republic of Germany, imports of aubergines per month by origin 1983 (x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1982
Italy	172	263	336	416	540	631	458	334	558	578	380	138	4,803	5,534
The Netherlands	-	21	115	287	413	609	852	948	619	266	111	13	4,253	3,878
The Canaries	215	97	105	73	2	-	-	-	-	50	232	253	1,027	1,052
Turkey	-	-	-	-	3	88	73	117	104	89	30	2	506	404
Israel	-	-	-	-	-	-	-	-	-	36	80	159	276	377
Spain	-	-	-	-	-	-	-	-	-	71	102	90	263	168
Others	115	102	104	34	44	25	21	46	23	7	30	54	605	366
Total	502	483	660	810	1,022	1,353	1,404	1,445	1,304	1,097	965	709	11,734	11,779
%	4,3	4,1	5,6	6,9	8,6	11,5	12,0	12,3	11,1	9,4	8,2	6,0	100	

Table 6.36 Federal Republic of Germany, imports of sweet-peppers per month by origin 1983 (x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1982
Italy	180	105	196	404	871	2,417	6,738	7,103	5,394	3,174	1,625	416	28,623	35,699
Spain	4,491	4,587	2,784	4,124	6,015	4,631	1,175	203	171	3,071	4,677	4,000	39,929	26,008
The Netherlands	65	37	305	984	908	1,537	1,816	2,646	2,339	2,117	1,571	521	14,846	12,498
Hungary	-	-	5	22	53	498	770	839	3,581	637	14	8	6,427	8,974
The Canaries	1,115	1,083	1,202	750	287	108	7	-	-	-	20	334	4,906	7,255
Israel	594	499	249	18	-	-	4	-	2	50	615	1,020	3,051	4,517
Greece	-	-	-	-	27	88	314	488	1,725	1,276	638	11	4,567	3,444
Roumania	-	-	-	-	-	-	65	536	1,864	1,326	225	-	4,016	2,788
Bulgaria	-	-	-	10	42	43	80	239	1,195	590	22	-	2,221	1,255
Others	283	243	304	243	622	925	657	907	962	1,124	368	271	6,909	5,726
Total	6,728	6,554	5,045	6,555	8,825	10,247	11,626	12,961	17,233	13,365	9,775	6,581	115,495	108,164
%	5,8	5,7	4,4	5,7	7,6	8,9	10,1	11,2	14,9	11,6	8,4	5,7	100	

Table 6.37 Federal Republic of Germany, imports of grapes per month by origin 1983 (x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1982
Italy	35	32	0	-	-	13	4,323	55,881	64,934	49,620	26,829	3,876	205,543	161,939
Greece	-	-	-	-	-	-	726	8,584	18,558	20,397	4,657	292	53,214	48,113
Spain	1,651	118	14	4	-	3	50	166	160	967	4,943	4,465	12,541	10,480
South Africa	398	1,483	3,808	3,435	2,672	348	112	-	-	-	-	2	12,258	10,033
France	26	2	0	-	-	2	-	758	3,131	1,656	404	115	6,094	9,047
Chili	5	30	595	2,321	1,598	593	131	-	-	-	-	-	5,273	2,216
Others	96	66	37	208	43	115	279	266	379	119	176	112	1,896	2,059
Total	2,211	1,731	4,454	5,968	4,313	1,074	5,621	65,655	87,162	72,759	37,009	8,862	296,819	243,889
%	0,7	0,6	1,5	2,0	1,4	0,4	1,9	22,1	29,4	24,5	12,5	3,0	100	

Table 6.38 Federal Republic of Germany, imports of onions (consumption) per month by origin 1983 (x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1982
The Netherlands	23,926	20,232	19,241	19,346	14,193	3,002	2,618	11,627	9,847	14,517	13,579	12,067	164,195	192,380
Spain	4,508	3,924	3,771	802	8,067	13,010	11,336	13,420	10,809	13,138	4,907	7,613	95,305	82,536
Italy	394	404	995	2,033	1,899	3,424	4,297	3,744	1,285	1,428	886	590	21,379	32,304
Hungary	814	1,135	1,856	575	59	178	913	4,890	4,104	4,128	2,127	1,661	22,440	17,593
Poland	1,282	657	1,112	87	-	-	-	-	528	3,120	4,382	3,370	14,538	13,030
Israel	-	-	-	8	1,099	2,821	46	-	-	-	-	-	3,974	7,484
Czechoslovakia	-	207	326	-	-	-	-	1,169	4,454	1,402	1,541	613	9,712	7,153
France	-	-	103	63	243	2,780	1,943	362	68	83	115	69	5,829	6,446
Australia	-	-	69	1,792	2,183	1,435	560	41	-	-	-	-	6,080	5,840
United Kingdom	535	302	121	100	197	31	463	297	142	259	722	517	3,686	4,504
Austria	180	136	293	776	97	17	541	372	1,698	832	1,106	1,349	7,397	3,541
Egypt	-	-	-	238	3,514	757	202	-	-	-	-	-	4,711	2,877
Others	187	0	1	897	569	135	39	30	36	38	69	96	2,097	5,472
Total	31,826	26,997	27,888	26,717	32,120	27,590	22,958	35,952	32,971	38,945	29,343	27,945	361,343	383,231
%	8,8	7,5	7,7	7,4	8,9	7,6	6,4	9,9	9,1	10,8	8,2	7,7	100	

Table 6.39 Federal Republic of Germany, imports of oranges per month by origin 1983 (x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1982
Spain	38,782	41,380	23,821	3,271	265	27	-	-	-	2,270	36,780	68,990	215,586	222,662
Israel	16,063	23,654	17,790	17,547	3,510	2,514	1,386	1,247	-	-	-	403	84,024	99,039
Marocco	18,420	8,335	10,074	21,351	6,730	2,083	79	30	19	-	942	4,949	73,012	76,905
Greece	11,445	3,217	736	-	-	-	-	-	-	-	1,289	16,598	33,285	44,351
Italy	9,659	14,212	10,453	2,794	343	-	-	1	-	-	95	7,232	44,789	42,743
South Africa	-	-	-	-	229	2,243	4,152	4,692	5,978	4,857	3,338	-	25,489	30,458
Cyprus	111	534	838	1,365	185	6	23	16	-	-	-	-	3,078	3,085
Others	461	504	654	438	1,049	350	574	538	609	1,999	267	730	8,173	7,581
Total	94,941	91,746	64,366	46,766	12,311	7,223	6,214	6,524	6,606	9,126	42,711	98,902	487,436	526,824
%	19,5	18,8	13,2	9,6	2,5	1,5	1,3	1,3	1,4	1,9	8,7	20,3	100	

Table 6.40 Federal Republic of Germany, imports of peaches per month by origin 1983 (x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1982
Italy	-	-	-	-	19	28,550	80,727	75,686	21,756	262	5	-	206,987	163,634
Greece	-	-	-	-	96	13,255	7,728	6,878	1621	14	-	-	28,133	52,163
France	-	-	-	-	17	151	558	2,938	1,901	46	-	-	5,611	4,234
Spain	-	-	-	-	1,217	2,070	222	14	1	0	-	-	3,524	2,510
Others	114	68	50	35	0	27	31	54	1	3	20	73	476	543
Total	114	68	50	35	1,349	44,053	89,266	85,552	23,821	325	25	73	244,731	223,085
%	0,1	0	0	0	0,6	18,0	36,5	35,0	9,7	0,1	0	0	100	

Table 6.41 Federal Republic of Germany, imports of carrots per month by origin 1983 (x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1982
Italy	4,277	3,117	2,449	1,264	448	178	1,847	7,569	13,732	11,492	11,258	6,587	64,218	55,665
France	108	151	151	-	-	-	6,613	13,847	3,383	471	122	53	24,899	27,616
The Netherlands	1,258	563	370	284	152	32	1	240	2,595	2,703	1,621	590	10,409	11,222
South Africa	177	1,911	3,592	1,402	2,476	2,313	1,075	243	7	-	4	-	13,200	10,347
Argentina	-	219	611	1,396	2,819	1,679	987	163	112	-	-	-	7,986	6,850
Spain	-	-	-	-	-	85	4,371	919	221	1	8	-	5,605	3,903
Belgium (L)	274	240	284	214	174	40	-	28	1,048	1,370	683	200	4,555	3,732
Others	132	30	692	990	1,007	533	150	103	664	2,047	675	108	7,131	3,615
Total	6,226	6,231	8,149	5,550	7,076	4,860	15,044	23,112	21,762	18,084	14,371	7,538	138,003	122,950
%	4,5	4,5	5,9	4,0	5,1	3,5	10,9	16,8	15,8	13,1	10,4	5,5	100	

Table 6.42 Auction supply (x 1000 kg), export (x 1000 kg) and prices (Hfl.) of hot pepper

Period	1982			1983			Prices in 1983 on the auction "Westland Noord"		
	supply 1)	price	export 1)	supply	price 1)	export	green	red	variegated
January	4	7.46	-	7	6.21	2	9.09	5.32	4.42
February	0	10.21	-	0	11.31	-	12.38	-	-
March	4	13.32	-	4	12.30	-	12.24	14.50	-
April	10	11.76	-	8	12.50	1	12.37	24.96	-
May	31	10,25	5	27	9.54	5	9.11	28.89	11.50
June	38	7.16	14	37	7.07	18	6.92	19.44	6.10
July	62	3.76	27	64	3.55	34	3.61	9.31	2.55
August	106	2.50	49	118	2.19	63	1.94	3.81	1.19
September	90	3.02	37	108	2.12	47	1.94	2.51	1.19
October	95	3.27	42	105	2.55	51	2.99	2.53	1.63
November	41	4.17	17	62	3.13	28	4.49	2.10	1.39
December	15	5.96	6	32	4.67	19	5.67	5.38	2.49
Total	496	4.29	197	572	3.57	268	4.40	4.16	1.85
Destination									
Federal Republic of Germany			111			144			
England			63			85			
Sweden			16			17			

France imports of exotics x 1000 kg, per month (table 6.43 ~ table 6.49)

Table 6.43 Pineapple (France imports per month x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1984
Ivory Coast	3,153	2,538	2,723	1,683	1,926	2,038	1,027	1,240	1,438	1,813	2,812	6,217	28,608	26,897
Cameroon	221	259	204	218	287	40	4	-	-	28	365	730	2,356	1,278
Martinique	20	52	5	24	169	73	60	9	21	74	82	330	919	921
Guinea	39	68	41	51	28	8	-	-	-	-	-	7	242	154
Togo	22	14	8	1	-	-	-	-	-	-	-	10	55	135
Others	36	13	60	38	2	3	7	2	-	3	7	42	213 1)	101
Total 1983	3,491	2,944	3,041	2,015	2,412	2,162	1,098	1,251	1,459	1,918	3,266	7,336	32,393	-
Total 1982	2,155	2,548	3,091	3,067	2,275	1,780	1,099	943	1,708	2,262	2,529	6,029	-	29,486
Total 1981	3,123	3,534	3,039	4,086	3,108	2,706	1,619	1,035	1,695	2,563	2,987	6,424	-	35,979
By air transport (estimated)	1,040	1,019	1,179	977	1,124	880	369	492	686	1,355	2,135	3,097	14,353	12,736
By water transport (estimated)	2,451	1,925	1,862	1,038	1,288	1,282	729	759	773	563	1,131	4,239	18,040	16,750
	3,491	2,944	3,041	2,015	2,412	2,161	1,098	1,251	1,459	1,918	3,266	7,336	32,393	29,486

1) Of which Kenya 57, Benin 50, Brazil 36, Israel 13, RSA 13, Mali 10, Gabon 8, Réunion 6, Mauritania 4, Tunisia 3, Ghana 2, Irland of Maurice 2, Taiwan 2, Espagne 1, unknown 6 ton.

Table 6.44 Avocado (France imports per month, x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1984
Israel	5,798	5,410	6,134	2,909	2,037	-	-	-	-	1,215	4,556	7,048	35,107	24,578
USA	5	-	15	319	365	818	451	207	94	258	5	7	2,544	1,949
South Africa	4	-	28	841	1,177	1,658	734	681	335	7	-	-	5,465	7,352
Spain (and the Canaries)	443	278	236	163	58	52	-	-	237	1,059	373	878	3,777	2,434
Martinique	-	-	-	-	-	-	8	1,167	877	185	-	-	2,237	3,153
Ivory Coast	-	-	-	28	55	133	75	54	13	-	-	-	358	368
Mexico	22	16	5	-	-	-	-	-	36	45	267	124	515	155
Kenya	1	3	14	114	49	123	28	31	13	4	-	-	380	385
Cameroon	-	7	11	22	29	50	7	-	-	-	-	-	126	98
Morocco	20	16	15	3	-	-	-	-	-	22	4	24	104	56
Brazil	1	-	4	3	5	3	3	-	13	8	-	-	40	60
Others	4	-	4	8	2	47	4	40	19	9	-	-	137	107
Total 1983	6,298	5,730	6,466	4,410	3,777	2,884	1,310	2,180	1,637	2,812	5,205	8,081	50,790	40,695
Reexport	8	13	4	5	39	4	1	66	150	79	5	53	427	554
Consumption 1983	6,290	5,717	6,462	4,405	3,738	2,880	1,309	2,114	1,487	2,733	5,200	8,028	50,363	-
Consumption 1982	3,047	2,987	5,849	4,023	2,548	2,613	979	1,276	2,186	3,705	6,517	4,411	-	40,141
Consumption 1981	1,980	2,253	1,620	2,489	2,591	2,137	1,044	1,432	873	2,162	4,672	6,153	-	19,406

Table 6.45 Kiwi (France imports per month, x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1984
New Sealand	49	1	1	-	25	329	142	339	191	422	300	71	1,870	-
Total 1983	49	1	1	-	25	329	142	339	191	422	300	71	1,870	-
Total 1982	35	-	-	-	30	73	80	32	78	158	122	186	-	794
Total 1981	10	-	2	-	15	19	209	80	158	159	145	185	-	982

Table 6.46 Lychee (France imports per month, x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1984
Madagascar	2	-	-	-	-	-	-	-	-	-	28	312	342	204
Reunion	-	-	-	-	-	-	-	-	-	-	4	80	84	29
South Africa	127	59	-	-	-	-	-	-	-	-	-	67	253	278
Total 1983	129	59	-	-	-	-	-	-	-	-	32	459	679	-
Total 1982	75	21	-	-	-	-	-	-	-	1	127	287	-	511
Total 1981	51	11	-	-	-	-	-	-	-	-	106	340	-	508

Table 6.47 Mango (France imports per month, x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1984
Egypt	-	-	-	-	-	-	-	3	19	-	-	-	22	34
Israel	-	1	2	-	-	-	-	3	134	1	-	-	141	82
Mali	-	-	78	280	344	75	15	2	-	-	-	-	794	549
Upper Volta	-	-	21	308	439	120	1	-	-	-	-	-	889	950
Senegal	-	-	-	-	8	85	17	-	1	-	-	-	111	151
Guinea	-	-	-	10	45	56	13	-	-	-	-	-	124	50
Ivory Coast	-	-	1	43	175	135	60	1	-	-	-	14	429	24
Congo	7	-	-	-	-	-	-	-	-	-	35	39	81	57
Kenya	13	2	2	3	-	-	-	-	-	8	64	17	109	70
Madagascar	-	-	-	-	-	-	-	-	-	2	4	-	6	1
South Africa	117	124	34	-	-	-	-	-	-	-	-	21	296	35
USA	-	-	-	-	-	2	29	32	56	-	-	-	119	92
Mexico	-	-	10	15	6	82	122	120	25	7	-	-	387	181
Haiti	-	1	38	-	-	-	-	-	-	-	-	-	39	34
French Guiana	-	-	-	-	-	1	1	-	-	-	-	-	2	15
Peru	55	6	-	-	-	-	-	-	-	-	1	146	208	389
Brazil	2	-	-	-	-	-	-	-	1	38	76	164	281	150
Asia	-	2	2	5	7	2	3	-	-	-	1	-	22(1)	17
Others	3	-	-	-	10	8	5	-	1	-	1	11	39	25
Total 1983	197	136	188	664	1,034	566	266	161	237	56	182	412	4,099	2,096
Reexport	1	1	6	36	23	59	12	3	17	2	2	10	172	125
Consumption 1983	196	135	182	628	1,011	507	254	158	220	54	180	402	3,927	-
Consumption 1982	130	119	116	502	794	397	187	128	89	54	75	190	-	2,781
Consumption 1981	133	105	144	326	592	274	123	69	91	106	94	331	-	2,388

1) Thailand 8, Vietnam 8, India 3, Philippines 3 ton.

Table 6.48 Papaya (France imports per month, x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1984
Ivory Coast	1	-	-	-	-	-	-	-	-	-	1	1	3	12
Kenya	-	-	-	-	-	-	-	-	-	1	-	-	1	3
Brazil	12	8	25	12	18	10	10	11	12	30	22	59	229	163
Others	-	1	1	-	-	-	-	-	1	-	1	-	4	3
Total 1983	13	9	26	12	18	10	10	11	13	31	24	60	237	-
Total 1982	8	12	13	20	13	11	7	9	9	14	14	51	-	181
Total 1981	9	14	13	13	10	12	7	7	13	16	19	43	-	176

Table 6.49 Coconut (France imports per month, x 1000 kg)

	Jan.	Feb.	Mrt.	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.	Total 1983	Total 1984
Ivory Coast	123	97	141	153	111	91	105	75	180	178	93	182	1,529	1,451
Republic Dominicaine	40	33	82	81	69	69	24	81	26	10	67	109	691	392
Dominique	-	-	9	-	-	-	-	6	-	-	-	1	16	26
Sri Lanka	9	4	-	-	-	-	-	-	-	-	-	-	13	18
Costa Rica	-	2	-	-	-	-	2	11	-	-	-	-	15	17
Martinique	-	-	-	-	-	-	-	-	-	-	-	7	7	15
Honduras	-	1	2	-	-	-	-	3	8	11	2	-	27	15
Others	13	12	21	47	-	10	44	-	-	1	4	14	166	110
Total 1983	185	149	255	281	180	170	175	176	214	200	166	313	2,464	2,044

Table 6.50 Federal Republic of Germany, imports of avocado

Origin	Quantity x 1000 kg				Prices in DM 1) per 100 kg			
	1979	1980	1981	1982	1979	1980	1981	1982
France	39	35	-	-	274	377	-	-
Kenya	119	121	122	135	380	400	348	405
South Africa	633	574	487	721	278	318	372	389
Martinique	40	58	44	30	265	414	361	453
Israël	1561	480	830	1700	259	328	378	337
The Canaries	-	40	-	-	-	388	-	-
USA	-	208	110	34	-	304	350	353
Spain	-	-	94	-	-	-	434	-
Brazil	-	-	37	42	-	-	338	336
Other countries	29	96	92	93	352	329	434	346
Total	2421	1612	1816	2755	270	333	377	356

1) 1 DM is equal to 0,9 Dutch guilders.

Table 6.51 Federal Republic of Germany, imports of pineapple

Origin	Quantity x 1000 kg				Prices in DM 1) per 100 kg			
	1979	1980	1981	1982	1979	1980	1981	1982
Ivory-Coast	12660	11584	13617	11519	148	155	137	165
Camaroun	468	107	66	-	156	182	267	-
Kenya	467	448	154	143	228	258	149	161
South Africa	164	182	92	91	159	223	151	185
Honduras	2268	-	-	319	75	-	-	166
Taiwan	68	65	70	94	334	360	516	596
Other countries	109	203	112	140	141	150	-	177
Total	16204	12589	14111	12306	141	161	140	169

1) 1 DM is equal to 0,9 Dutch guilders.

Table 6.52 Federal Republic of Germany, imports of mango

Origin	Quantity x 1000 kg				Prices in DM 1) per 100 kg			
	1979	1980	1981	1982	1979	1980	1981	1982
Mali	137	74	56	107	336	381	343	507
Kenya	157	197	214	152	392	403	431	528
South Africa	234	219	97	73	289	278	272	549
USA	45	147	47	37	364	348	332	473
Mexico	245	48	35	105	307	371	360	455
Venezuela	20	33	20	-	430	370	505	-
Israël	25	44	75	52	324	316	265	450
France	-	41	28	17	-	590	754	706
Senegal	-	26	-	-	-	338	-	-
Brazil	-	69	98	92	-	354	421	545
Other countries	84	70	72	111	480	480	506	473
Total	947	968	742	746	342	366	397	507

1) 1 DM is equal to 0,9 Dutch guilders.

Table 6.53 Federal Republic of Germany, imports of papaya

Origin	Quantity x 1000 kg				Prices in DM 1) per 100 kg			
	1979	1980	1981	1982	1979	1980	1981	1982
Brazil	39	91	110	123	464	374	418	513
USA	25	-	-	-	328	-	-	-
Other countries	40	48	22	7	355	323	386	571
Total	184	139	132	130	389	356	413	516

1) 1 DM is equal to 0,9 Dutch guilders.

Table 6.54 The Netherlands imports of exotic on yearbasis

Produce	Supply x 1000 kg			Prices in guilders per 100 kg		
	1981	1982	1983	1981	1982	1983
1. Anona	10	5	3	353	382	-
2. Avocado	1578	1515	2040	290	373	375
3. Banana	109683	98384	92843	96	102	117
4. Citron	21516	24585	29910	134	77	119
5. Date	750	812	522	581	419	645
6. Fig	661	670	883	271	282	272
7. Guaves	16	74	62	656	651	598
8. Indies vegetables	218	681	-	-	-	-
9. Indies fruit	1	1080	-	-	-	-
10. Kaki	140	160	140	180	188	244
11. Kiwi fruit	4547	3855	7463	670	857	668
12. Lychee	105	131	107	591	639	589
13. Manggistang	1	-	-	937	644	656
14. Mango	1299	1534	1864	355	511	509
15. Papaya	69	74	119	461	500	483
16. Passie fruit	-	27	43	-	737	752
17. Pineapple	7957	8583	9254	115	184	215
18. Pomegranate	255	234	196	131	153	156
19. Surinam fruit	9	561	-	-	-	-
20. Surinam vegetables	333	5	8	728	606	538
21. Tropical fruit	1	130	135	638	666	751
22. Tropical vegetables	2	431	437	751	715	679
23. Vegetables not named	613	617	1126	157	180	171

Appendix 6.1 Imports of sweet peppers in Federal Republic of Germany per month

Origin	January		February		March		April		May		June	
	1980	1982	1980	1982	1980	1982	1980	1982	1980	1982	1980	1982
Italy	601	357	332	203	1316	383	1990	843	2033	1558	3912	3877
Spain	835	3098	632	3181	743	3952	1143	3470	2519	3660	2273	2625
Netherlands	89	128	51	47	107	173	504	743	1106	1097	1239	1523
Hungary	-	-	-	-	-	-	36	18	37	23	72	200
Canary Islands	1115	1282	1148	1767	914	1804	714	1029	300	331	12	65
Israël	2541	932	1461	698	71	444	1	19	8	50	39	0
Greece	-	-	-	-	-	-	-	-	-	5	108	77
Romania	-	-	-	-	-	-	-	-	-	3		27
Bulgaria	-	-	-	-	-	-	-	-	153	55	116	100
Other countries	664	1) 428	910	513	968	482	580	379	317	311	322	556
Total	5845	6225	4524	6409	4119	7238	4968	6507	6473	7093	8093	9050
In percentage (1982)		5.7		5.9		6.7		6.0		6.5		8.4

Continuation appendix 6.1

July		August		September		October		November		December		Total	
1980	1982	1980	1982	1980	1982	1980	1982	1980	1982	1980	1982	1980	1982
7572	6971	8801	8579	8846	6460	7594	3958	4129	2013	940	497	48064	35699
745	247	47	43	-	13	88	576	354	2583	658	2250	10036	26008
1502	1764	1472	1939	1061	1675	1166	1803	134	1135	502	471	9731	12448
301	552	252	569	2411	5039	4505	2492	114	81	-	-	7734	8974
-	-	-	-	-	-	-	13	134	296	825	668	5162	7255
-	-	-	-	-	-	96	31	1217	902	1625	1441	7059	4517
268	156	241	121	2990	2039	2907	796	819	250	14	-	7370	3444
-	58	-	112	-	1109	-	1458	-	21	-	-	-	2788
154	38	342	242	1665	513	1081	301	34	-	-	-	3555	1255
174	357	496	551	2462	947	1520	659	310	357	220	186	8910	5726
10716	10143	11651	12156	19435	17805	18957	12087	8045	7638	4784	5812	107614	108164
	9.4		11.2		16.5		11.2		7.1		5.4		100.0

Appendix 6.2 Average prices payed by buyers on wholesale markets in the Federal Republic of Germany for fresh sweet peppers, prices in Dutch guilders per 100 kg

	1980			1981			1982			1983		
	Nether-lands	Spain	Italy	Nether-lands	Spain	Italy	Nether-lands	Spain	Italy	Nether-lands	Spain	Italy
Period												
April: - red	-	-	-	1153.2	600.3	601.5	951.8	493.3	523.9	780.1	452.3	510.7
- green	670.1	-	368.2	789.3	450.1	456.9	602.1	310.5	321.8	823.8	382.8	431.3
May: - red	659.4	-	395.1	1042.2	455.1	602.4	656.3	444.8	492.2	1047.3	541.5	553.8
- green	556.6	218.7	253.7	620.8	284.8	307.6	662.9	268.4	281.5	596.0	225.5	248.2
June: - red	676.8	-	402.8	639.4	412.2	413.5	612.2	346.3	382.6	495.0	347.8	357.3
- green	445.7	205.4	213.1	458.0	205.0	206.9	479.5	255.3	237.8	499.6	234.7	225.8
July: - red	406.7	-	251.2	378.5	-	223.6	474.6	-	254.7	672.8	-	335.6
- green	361.0	171.0	147.7	376.1	-	151.7	345.7	-	145.4	324.5	170.8	154.5
August:- red	570.9	-	252.0	518.3	-	288.4	409.9	-	207.0	351.8	-	237.9
- green	282.7	-	117.8	307.1	-	120.4	254.9	-	114.1	306.6	-	138.4
September: - red	416.3	-	197.3	359.8	-	173.9	340.9	-	154.2	416.4	-	190.5
- green	311.7	-	98.3	317.3	-	118.8	344.4	-	133.0	285.8	-	140.1
October: - red	370.7	-	166.4	480.4	284.5	190.3	481.1	325.1	195.2	319.5	226.0	185.4
- green	302.5	-	114.8	358.8	206.3	156.2	319.5	207.6	141.1	332.9	195.2	151.8
November: - red	572.6	-	223.7	439.2	328.1	237.4	492.3	334.2	264.0	324.8	233.5	189.5
- green	399.7	204.5	113.6	459.2	247.9	168.5	450.8	261.9	165.6	393.7	226.5	158.2

Appendix 6.3 Supply pattern of fresh vegetables and fruit with a short production period on Dutch auctions, in percentages of total supply

	Jan.	Febr.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Rhubarb	-	4	8	12	26	39	6	3	-	-	-	-
Shallots	-	-	15	23	27	16	8	5	-	-	-	-
Asparagus	-	-	-	-	49	47	-	-	-	-	-	-
Sugar pea	-	-	-	-	12	67	20	-	-	-	-	-
Broad beans	-	-	-	-	-	49	48	-	-	-	-	-
Green pea	-	-	-	-	-	44	56	-	-	-	-	-
French beans	-	-	-	-	-	3	17	44	25	10	-	-
Strawberries	-	-	-	-	8	42	41	4	-	-	-	-
Peaches	-	-	-	-	9	9	15	12	51	4	-	-
Cherries	-	-	-	-	-	17	79	-	-	-	-	-
Red currants	-	-	-	-	-	5	60	33	-	-	-	-
Goose berries	-	-	-	-	-	9	75	15	-	-	-	-
Black currants	-	-	-	-	-	-	43	57	-	-	-	-
Sourcherries	-	-	-	-	-	-	37	63	-	-	-	-
Plums	-	-	-	-	-	-	9	79	11	-	-	-
Black berries	-	-	-	-	-	-	-	67	30	-	-	-
Grapes	-	-	-	-	-	-	5	8	16	48	9	6
Rasp berries	-	-	-	-	-	84	12	3	-	-	-	-

LITERATURE

Selected European markets for
Tropical and Off-Season Fresh Fruit and Vegetables
International Trade Centre UNCTAD/GATT,
Geneva, July 1976

SOURCES:

The most data used in this chapter are got from the nex two sources:

- Produktschap voor Groenten en Fruit (PGF)
  Postbus 90 403
  2509 LK 's-GRAVENHAGE
  Tel. : (070)814631
  Telex: 31 406 PGFGNL
  NEDERLAND

  Special thanks to Mr. R. Arron from the Produktschap voor Groenten en Fruit for helping to collect the exotic.

- Centraal Bureau van de Tuinbouwveilingen in Nederland
  Postbus 80 509
  2508 GM 's-GRAVENHAGE
  NEDERLAND

OTHER SOURCES ARE:

- Kwaliteits-Controle-Bureau voor Groenten en Fruit (KCB)
  Groot Hertoginnelaan 6
  Postbus 29736
  Tel.: (070)469657
  2502 LS 's-GRAVENHAGE
  NEDERLAND

- Centraal Bureau van de Statistiek (CBS)
  Postbus 959
  2270 AZ VOORBURG
  Tel. : (070)694341
  Telex: 32 692 cbs nl
  NEDERLAND

- Statistisches Bundesamt
  Gustav-Strezemann -Ring 11
  6200 WIESBADEN 1
  Tel.: (06121)75 24 75
  Federal Republic of Germany

- Zentrale Markt- und Preisberichtstelle (ZMP)
  Godesberger Allee 142-148
  5300 BONN 2
  Tel.: (0228)888-0
  Federal Republic of Germany

SOURCES: Continuation

- Ministry of Agriculture, Fisheries and Food (MAFF)
  Whitehall Place
  London SW 1 A 2 HH
  ENGLAND
  Tel. : 012337356
  Telex: 889351

- Statistical office of the European Communities (EUROSTAT)
  Bâtiment J. Monnet
  LUXEMBOURG
  Luxembourg

7. Trade terms

7.1 Purpose

When exporters want to sell products to importers or other customers, like importer/wholesaler and integrated retailers, they have to be very exact about all the arrangements. They have to agree about for instance:

- Who pays transport costs?
- Who pays customs, duties, etc., both when the products are cleared out in the developing country and when they are cleared in the EC?
- Who is responsible for the loading of the truck, boat, airplane or railwaywagons?
- Who bears the risks fo damage and losses or who pays the insurance premium?
- When do you actually deliver and when starts the responsibility of the buyer?
- When does the buyer accept the products and is it not possible anymore to put claims on the exporters?
- When does the buyer have to pay for the products: by a documentary of credit in advance pay upon shipment, on arrival terms: direct or some time after delivery, etc.

All these questions have to be answered in a contract. To make these arrangements easier for both contractpartners, some international orginisations developed trade terms. These trade terms are known all over the world, when you use them in a contract, it is not necessary to describe the contents. In this session we will describe the contents of Incoterms 1980 1). They handle the division of costs and responsibilities between seller and buyer. They do not say anything about the conditions of payment, one has to describe these next to the Incoterms in the contract. Other trade terms developed by other organisations are:

- The American Foreign Trade Definitions, USA revised in 1941.
- The Rules of Warow and Oxford, proposed by the International Law Association in 1932.
- The General Conditions for Delivery of Merchandise, Council for Mutual Economic Assistance (USSR and some Eastern European countries), revised in 1976.
- Combiterms with code numbers for costs units contained in trade terms. Especially developed (1969) for shipments that do not make up a "full load" and have to be grouped together.

1) Incoterms 1980 are developed by the International Chamber of Commerce, Paris.

The American Foreign Trade Definitions and Combiterms are now being revised to ensure that its terminology will be fully compatible with Incoterms 1980.

7.2 Contents of Incoterms

The 14 Incoterms are:

Ex works

"Ex works" means that the seller's only responsibility is to make the goods available at his premises (i.e., works or factory). In particular he is not responsible for loading the goods in the vehicle provided by the buyer, unless otherwise agreed. The buyer bears the full cost and risk involved in bringing the goods from there to the desired destination. This term thus represents the minimum obligation for the seller.

Free carrier (named point)

This term has been designed to meet the requirements of modern transport, particularly such "multimodal" transport as container or "roll-on-roll off" traffic by trailers and ferries. It is based on the same main principle as FOB except that the seller fulfills his obligations when he delivers the goods into the custody of the carrier at the named point. If no precise point can be mentioned at the time of the contract of sale, the parties should refer to the place or range where the carrier should take the goods into his charge. The risk of loss of or damage to the goods is transferred from seller to buyer at the time and not at the ship's rail. "Carrier" means any person by whom or whose name a contract of carriage by road, rail, air, sea or combination of modes has been made. When the seller has to furnish a bill of lading, waybill or carrier's receipt, he duly fulfills this obligation by presenting such a document issued by a person so defined.

For/Fot

FOR and FOT mean "Free on Rail" and "Free on Truck". These terms are synonymous since the word "Truck" relates to the railway wagons. They should only be used when the goods are to be carried by rail.

Fob Airport

FOB Airport is based on the same main principle as the ordinary FOB term. The seller fulfills his obligations by delivering

the goods to the air carrier at the airport of departure. The risk of loss of or damage to the goods is transfered from the seller to the buyer when the goods have been so delivered.

Fas

FAS means "Free Alongside Ship". Under this term the seller's obligations are fulfilled when the goods have been placed alongside the ship on the quay or in lighters. This means that the buyer has to bear all costs and risks of loss of or damage to the goods from that moment. It should be noted that, unlike FOB, the present term requires the buyer to clear the goods for export.

Fob

FOB means "Free on Board". The goods are placed on board a ship by the seller at a port of shipment named in the sales contract. The risk of loss of or damage to the goods is transferred from the seller to the buyer when the goods pass the ship's rail.

C & F

C & F means "Cost and Freight". The seller must pay the costs and freight necessary to bring the goods to the named destination, but the risk of loss of or damage to the goods, as well as of any cost increases, is tranferred from the seller to the buyer when the goods pass the ship's rail in the port of shipment.

CIF

CIF means "Cost, Insurance and Freight". This term is basically the same as C & F but with the addition that the seller has to procure marine insurrance against the risk of loss of or damage to the goods during the carriage. The seller contracts with the insurer and pays the insurance premium.

Freight or Carriage (paid to)

Like C & F "Freight or Carriage paid to ..." means that the seller pays the freight for the carriage of the goods to the named destination. However, the risk of loss of or damage to the goods, as well as of any cost increases, is transferred from the seller to the buyer when the goods have been delivered into the custody of the first carrier and not at the ship's rail. It can be used for all modes of transport including multimodel operations and container or roll on-roll off trafic by trailers and ferries. When the seller has to furnish a bill of lading, waybill or carrier's receipt, he duly fulfills this obligation by presenting such a document issued by the person with whom he has contracted for carriage to the named destination.

Freight or Carriage (and insurrance paid to)

This term is the same as "Freight or Carriage Paid to ..." but with the addition that the seller has to procure transport insurance against the risk of loss of or damage to the goods during the carriage. The seller contracts with the insurer and pays the insurance premium.

Ex ship

"Ex ship" means that the seller shall make the goods available to the buyer on board the ship at the destination named in the sales contract. The seller has to bear the full cost and risk involved in bringing the goods there.

Ex Quay

"Ex Quay" means that the seller makes the goods available to the buyer on the quay (wharf) at the destination named in the sales contract. The seller has to bear the full cost and risk involved in bringing the goods there.

There are two "Ex Quay" contracts in use, namely "Ex Quay" (duty paid)", and "Ex Quay (duties on buyers account)" in which the liability to clear the goods for import are to be met by the buyer instead of by the seller.

Parties are recommended always to use the full descriptions of these terms, namely "Ex Quay (duty paid)" or "Ex Quay (duties on buyer's account)", or else there may be uncertainty as to who is to be responsible for the liability to clear the goods for imports.

Delivered at frontier

"Delivered at Frontier" means that the seller's obligations are fulfilled when the goods have arrived at the frontier - but before "the customs border" of the country named in the sales contract.

The term is primarily intended to be used when goods are to be carried by rail or road but it may be used irrespective of the mode of transport.

Delivered duty paid

While the term "Ex Works" signifies the seller's minimum obligation, the term "Delivered Duty Paid", when followed by words naming the buyer's premises, denotes the other extreme-the seller's maximum obligation. The term "Delivered Duty Paid" may be used irrespective of the mode of transport.

If the parties wish that the seller should clear the goods for import but that some of the costs payable upon the import of the goods should be excluded - such as Value Added Tax (VAT) and/or other similar taxes - this should be made clear by adding words to this effect (e.g. "exclusive of VAT and/or taxes).

A simple reference to these trade terms, e.g. CIF Incoterms, will be enough to be sure about the costs and delivery conditions. Also when no reference is made in the contract, it is possible that Incoterms are used because it is custom of the trade, it is referred to in standard forms or in statutary rules or by implication. However to be sure about the terms, the best thing to do is to mention them in the contract. Note that special provision and arrangments made in the contract override anything provided in Incoterms.

Not everything can be arranged in contracts, sometimes when unforseen events occur one can use "force-majeure" exceptions for example war-situations, labour disturbances and government interventions or relief clanses.

7.3 Use of Incoterms

Which trade term one should use in contracts depends on various factors. At first glance the best thing the seller can do, is to sell his products Ex Work; leaving all the risks and responsibilities to the buyer.
However there are a lot of complications, such as:

- Market situation:
  a buyer may wish to compare costs of imported products in his domestic market. In this situation sellers have to deliver EX Quay and Delivered Duty Paid or at least C & F or CIF.
- Control of transport and insurance:
  when a seller is used to ship large quantities, he may be able to arrange for relative low transport and insurance costs or to provide for better conditions.
- Government Involvement:
  government may wish to use national shipping lines or other national carriers or to save foreign currency in some other way.

A conclusion of our visits to importers of fresh fruit and vegetables was among others (see par. 12.2) that they mostly use C & F and CIF, because they want to compare prices of products delivered in the Netherlands.

LITERATURE

Guide to Incoterms (1980),
published by International Chamber of Commerce (ICC) services S.A.R.L., Paris

8. Import rules of the EEC for exports of non-member countries

8.1 Introduction

The European Community has import rules and arrangements which apply throughout the Community and are of importance to exporters in non-member countries. The most important of these rules are the Common Customs Tariff, preferential arrangements, references prices, phytosanitary regulations and quality and packaging standards.

8.2 Value-added tax (VAT)

This tax is normally levied on the value added at each stage of production and marketing. In order to ensure fair competition and keep VAT as a general tax on consumption, it is also levied on imports while exports are exempt. In addition to customs duties, the goods imported into each of the Member States of the European Communities are subject to value added tax.

Certain rules are applied in different ways by the member countries of the Community. Value added tax is one of them. In the Netherlands a value added tax of 5 per cent is levied on all horticultural produce.

8.3 Customs duties

The customs duties levied in the EEC's countries on imports from non-EEC countries are those set out in the EEC's Common External Tariff (CET). In the table on next page customs duties of some products are illustrated. By importing tomatoes in the period of 1 November - 14 May a custom duty is levied of 11 per cent and in the period of 15 May - 31 October 18 per cent. For melons you have to pay 11 per cent all year. The tariffs are very varied depending upon product and season.

The tariffs in the next table are general tariffs. Applicable to countries that do not enjoy preferences. Produce from many countries enjoy preferential tariff treatment (reduced or zero duties) on importation into the Community. ACP-states enjoying preferences according by the Lomé Convention. Overseas countries and territories associated which EEC (OCT-countries) have preferences (see list next page). Many other countries have on individual basis special agreements with EEC (Spain, Israël and others).

ACP STATES

Bahamas
Barbados
Benin
Botswana
Burundi
Cameroon
Central African Empire
Chad
Comoros
Congo
Equatorial Guinea
Ethiopia
Fiji
Gabon
Gambia
Ghana
Grenada
Guinea
Guinea Bissau
Guyana
Ivory Coast
Jamaica
Kenya
Lesotho
Liberia
Madagascar
Malawi
Mali
Mauritania
Mauritius
Niger
Nigeria
Rwanda
Senegal
Seychelles
Sierra Leone
Somalia
Sudan
Surinam
Swaziland
Tanzania
Togo
Tonga
Trinidad and Tobago
Uganda
Upper Volta
Western Samoa
Zaire
Zambia

List of overseas countries and territories associated with EEC (OCT)

Saint Pierre and Miquelon
Comoro Archipelago
French Territory of the Afars and Issas
New Caledonia and Dependencies
Wallis and Futuna Islands
French Polynesia
French Southern and Antartic Territories
Surinam
Netherlands West Indies
Anglo-French Condominium of the New Hebrides
Belize
Bermuda
British Antarctic Territory
British Indian Ocean Territory
British Solomon Islands Protectorate
British Virgin Islands
Brunei
Cayman Islands
Central and Southern Line Islands
Falkland Islands and Dependencies
Gilbert and Ellis Islands
Monserrat
Pitcairn
St. Helena and Dependencies (Ascension and Tristan da Cunha)
The Seychelles
Turks & Caicos Islands
West Indian Associated States (Antigua, Dominica, St. Lucia, St. Vincent, St. Kitts-Nevis and Anguilla)

Custom duties on some fresh horticultural produce (CET) 1)

Tomatoes	11 per cent (1 November - 14 May)
	18 per cent (15 May - 31 October)
Melons	11 per cent
French beans	13 per cent (1 October - 30 June)
	17 per cent (1 July - 30 September)
Aubergines	16 per cent
Sweet peppers (Capsicums)	9 per cent
Courgettes	16 per cent
Apples	14 per cent (1 August - 31 December)
	8 per cent (1 January - 31 March)
	6 per cent (1 April - 31 July)

1) Rates in percentage ad valorem.

Imports between EEC-countries enter free of duty. Produce imported from non-member countries and cleared by customs at any Community frontier post may in principle move freely within the Community without being subjected to customs duties or charges having equivalent effect or quantitative restrictions.

8.4 Reference prices

The common agricultural policy of the EEC has the following objectives.

a. to provide a fair income to the agricultural community;
b. to stabilize markets;
c. to ensure that supplies reach consumers at reasonable prices;

To this end reference prices have been establish for a number of fruit and vegetables. The reference prices system involves an "invitation" to respect a minimum cif price in European ports or more correctly a minimum price in representative markets. The EEC don't accept disturbances caused by offers through third country suppliers with abnormal low prices.

For the 13 produce listed in the table on next page reference prices are fixed on annual basis. As noted in the table they do not necessary apply for the full year, and they will tend to be higher at the beginning and end of the EEC season.

Produce for which Reference Prices are Applicable 1983 and Period of Applicability

Apples	(All year)	Lemons	(All year)
Pears	(1 July-30 April)	Table grapes	(21 Juny-20 Nov)
Peaches	(11 June-30 Sept)	Tomatoes	(1 April-20 Sept)
Plums	(11 June-20 Oct)	Cucumbers	(11 Febr-10 Nov)
Cherries	(21 May-10 Aug)	Aubergines	(21 June-31 Oct)
Sweet Oranges	(1 Dec - 31 May)	Courgettes	(21 April-30 Sept)
Mandarins	(1 Nov - 28 Febr)		

The calculations of the reference prices has three elements:

1. The arithmetic mean of producers prices over the preceding three seasons in each Member State, although "excessively" high or low prices can be disregarded.
2. The trend in production cost.
3. The cost of transporting produce from the production areas to the "representative consumption centres" in the Community.

The general rule is that reference prices for any particular period are set equal to the sum of 1 and 2. See table 8.1 below and continuation 1 and 2 on next pages for reference prices for some produce.

A countervailing charge is levied if the "entry" price is lower than the reference price. The "entry price" is the price of imported produce net of all import charges. The countervailing charge is a tax of the difference between the reference price and the "entry" price.

The Member States monitor the prices of imported produce and report these to a Commission. When the "entry" price of produce, from any third country, is less than the reference price for 2 successive days then the Commission will impose a countervailing charge on all supplies of this produce from that country.

Table 8.1 Reference prices of some produce per 100 kg

Period	1982		1983	
	ECU	Hfl.	ECU	Hfl.
Courgettes				
21-30 April	55.50	156.17	60.67	167.18
May	49.68	139.76	54.32	149.69
June	35.43	97.63	37.45	103.20
July	30.97	85.34	33.90	93.42
August	34.89	96.14	38.18	105.21
September	38.50	106.09	42.12	116.07

Table 8.1 Continuation 1

Period	Hfl. 1982/83	Hfl. 1982/83	Increase in percents
Pears			
July	102.45	108.42	106
August	85.64	92.19	108
September	85.01	91.51	108
October	91.76	98.77	108
November	98.35	105.82	108
December	105.54	113.54	108
January-April	109.81	118.12	108

Peirod	1982 ECU	1983 ECU	1983 Hfl.	Increase in percents
Apples				
July	37.69	41.23	111.73	9.4
August	31.97	34.97	94.82	9.4
September	34.39	37.63	101.98	9.4
October	34.57	37.83	102.51	9.4
November	35.21	38.53	104.41	9.4
December	36.02	39.41	106.79	9.4
January	38.36	41.97	113.73	9.4
February	39.78	43.52	117.66	9.4
March	41.59	45.49	123.27	9.4
April	42.59	46.58	126.22	9.4
May	46.88	51.26	138.90	9.4
June	48.79	53.34	144.54	9.4
Cucumbers				
11-20 February	112.72	123.12	399.27	9.2
21-28 February	96.75	105.69	291.24	9.2
March	96.75	105.69	291.24	9.2
April	81.67	87.50	241.12	7.1
May	68.05	73.25	201.85	7.6
June	50.48	55.19	152.08	9.3
July	37.48	41.01	113.01	9.4
August	39.33	43.01	118.55	9.4
September	44.69	48.87	134.67	9.4
October	71.02	75.02	206.73	5.6
1-10 November	77.20	79.43	218.88	2.9

Table 8.1 Continuation 2

Peirod	1982		1983		Increase in
	ECU	Hfl.	ECU	Hfl.	percents
Tomatoes					
April	168.50	474.02	183.95	506.90	9.2
May	121.79	342.62	124.25	342.39	2.0
June - 10 July	83.17	229.19	86.35	237.95	3.8
11 July-August	32.54	89.67	35.62	98.16	9.5
September	35.47	97.74	38.81	106.95	9.4
Oct- 20 December	37.11	102.26	40.60	111.88	9.4

8.5 Phytosanitary regulations

When produce arrives there will be merely a verification that it contains no parasites that could be harmfull to European production. A further inspection may be carried out to ensure that quality is statisfactory and that the produce contains no residue of insecticides or pesticides.

Special the Federal Republic of Germany - one of the world's largest importers of horticultural produce - has always been concerned with food purity. A concern that is reflected in strict regulations regarding pesticide use and permitted levels of pesticide residues in food 1). Imported produce may be inspected twice, once at the point of entry into the Federal Republic and again at the point of sale in one of the states. If no pesticide residue problem appears, the shipment or lot is accepted. But if the tests show the existence of prohibited chemicals or additives, or if excessive residues are found, the entire shipment or portions of it may be denied entry into the country, or the purchaser may be allowed to find alternative uses for it so long as no health risks are involved.

A list of prohibited products and a list of the maximum quantities of pesticides tolerated in fruit and vegetables is available on request.

8.6 Quality and packaging standards 2)

The produce listed on next page must meet EEC quality and packaging requirements. For each of these items at least two

1) Bundesministerium für Jugend, Familie und Gesundheit. Kenedy allee 105-107. 5300 Bonn-Bad Godesberg.
2) The participants of the marketing course visited also the Sprenger Institute.
Ir. W.S. Duvekot (Sprenger Institute) gave more detailed and up to date information about international standardization of vegetables (Organization of Economic Coöperation and Development, Paris).

es have been defined, for some produce there are more, even four. The classes are marked extra, I, II and III. Most produce must conform to prescribed size (length or weight, diameter). Packaging requirements cover the type of package used and the presentation and uniformity of the package produce. Each package is also required to bear certain particulars, e.g. name and address of packer/dispatcher and origin of produce.

Vegetables	Fruit
Cauliflowers	Apples
Tomatoes	Pears
Carrots	Peaches
Onions	Abricots
Spinach	Plums
Witloof chicory	Strawberries
Shelling peas	Grapes
Beans	Cherries
Lettuce	Oranges
Curled-leaved	Mandarins group
Broad-leaved endives	Lemons
Artichokes	
Asparagus	
Cucumbers	
Carlic	
Brussels sprouts	
Ribbed celery	
Cabbage	
Capsicums	

Produce imported from other countries and marked or belonging to one of the quality classes mentioned above must statisfy the requirements for that class. If such produce bear a different marking, they must satisfy the requirements for class I, or at least II, in the latter case each package must be marked II. Produce in class III may not be imported from countries outside the community.

Fresh fruit and vegetables other than those listed above are not required to conform to specific EEC standards.

All these standards can be obtained in English and French from the following address.
Office for Official Publications
of the European Communicaties
Post Box 1003 Luxembourg

In 1983 countervailing charges were been livied as inserted in table 8.2.

Table 8.2 Countervailing charges per produce

Produce	Origin	Charges 100 kg net		Period
		ECU	Hfl.	
Cucumbers	Bulgaria	22.75	62,691	12-03-1983 t/m 22-03-1983
"	Spain	7.87	21,687	24-03-1983 t/m 29-03-1983
"	Spain	38.65	106,505	30-03-1983 t/m 07-04-1983
"	Poland	19.55	53,873	16-04-1983 t/m 25-04-1983
"	Bulgaria	0.95	2,618	05-05-1983 t/m 11-05-1983
"	Roumania	18.14	49,987	03-05-1983 t/m 10-05-1983
"	Bulgaria	12.83	35,355	20-05-1983 t/m 22-05-1983
"	Bulgaria	12.83	34,767	23-05-1983 t/m 27-05-1983
"	Roumania	18.22	50,208	20-05-1983 t/m 22-05-1983
"	Roumania	18.22	49,373	23-05-1983 t/m 26-05-1983
"	Poland	32.25	87,391	28-05-1983 t/m 06-06-1983
"	Poland	5.16	13,983	28-06-1983 t/m 11-06-1983
"	Spain	20.62	55,876	07-10-1983 t/m 13-10-1983
"	Spain	5.62	15,229	14-10-1983 t/m 18-10-1983
Tomatoes	Spain	15.94	43,925	27-03-1983 t/m 03-05-1983
"	Spain	1.02	2,811	12-05-1983 t/m 16-05-1983
"	Bulgaria	38.72	106,698	19-05-1983 t/m 22-05-1983
"	Bulgaria	38.72	104,924	23-05-1983 t/m 27-05-1983
"	Roumania	44.23	121,882	20-05-1983 t/m 22-05-1983
"	Spain	17.47	48,141	20-05-1983 t/m 22-05-1983
"	Spain	17.47	47,340	23-05-1983 t/m 25-05-1983
"	Spain	26.72	72,406	26-05-1983 t/m 07-06-1983
"	Morocco	22.19	60,131	02-06-1983 t/m 09-06-1983
"	Poland	4.60	12,465	06-07-1983 t/m 12-07-1983
"	Spain	3.66	9,918	13-10-1983 t/m 18-10-1983
"	Poland	8.90	24,117	13-10-1983 t/m 20-10-1983
"	Roumania	9.98	27,044	19-10-1983 t/m 25-10-1983
"	Spain	14.42	39,075	19-10-1983 t/m 24-10-1983
"	Spain	17.72	47,747	25-10-1983 t/m 27-10-1983
"	Roumania	11.37	30,811	26-10-1983 t/m 28-10-1983
"	Roumania	3.39	9,186	12-11-1983 t/m 17-11-1983
"	Roumania	15.21	41,216	18-11-1983 t/m 23-11-1983
"	Roumania	34.73	94,112	24-11-1983 t/m 06-12-1983
Courgettes	Spain	15.74	43,374	28-03-1983 t/m 03-05-1983
"	Spain	19.29	53,156	04-05-1983 t/m 16-05-1983
"	Spain	22.15	60,022	23-05-1983 t/m 25-05-1983
Plums I	Spain	5.84	14,850	22-07-1983 t/m 27-07-1983
" I	Bulgaria	22.23	60,239	16-08-1983 t/m 23-08-1983
" II	Yugoslavia	7.85	21,272	18-08-1983 t/m 23-08-1983
" I	Yugoslavia	11.23	30,431	13-08-1983 t/m 23-08-1983
" II	Yugoslavia	25.04	67,854	24-08-1983 t/m 31-08-1983
" I	Poland	26.86	72,786	02-09-1983 t/m 12-09-1983
" II	Yugoslavia	6.70	18,156	22-09-1983 t/m 29-09-1983
" II	Roumania	6.70	18,156	22-09-1983 t/m 29-09-1983
Pears	Spain	11.00	29,808	29-07-1983 t/m 05-08-1983
"	Poland	11.15	30,214	16-08-1983 t/m 23-08-1983
Peaches, Nectarins	Spain	16.09	43,601	29-07-1983 t/m 05-08-1983

Source: Jaarverslag PGF (Produktschap voor Groenten en Fruit).

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The Hague

9. Cost-structure

9.1 Introduction

To do a very good and deep analysis of the economic results is a prerequisite before starting with exporting produce to Europe. By economic results we mean the difference between revenues and costs. Here again the revenues refer to the return (output) of the final product and costs refer to the sacrifices of means (input).

Return is built up out quantity of the produce and received price. The exporter has to asses which quantity against which price he can export. Market information can be obtain on wholesale markets, as well as on auctions and from importers. The salesman needs knowledge about cost-structure and cost-level so that he can determine which price is acceptable.

Like market information the cost-side of production, transport and trade is a complicated material. It is further complicated due to the nature of the produce such as highly perishable commodities, fresh vegetables and fruit. A very difficult part is the analysis of the production cost. In this chapter we are giving a short summary (illustrated with practically examples) on calculating production costs an costs of transport and trade before the produce reach the consumer.

9.2 Production costs

With the help of a trading account we got an overall record of the economic performance of the farm. The trading account is a survey of costs and revenues 1) and of the economic result

1) On production level revenues and costs are both in causal relationship with the production activities during a period of time. These two concepts must not be mixed up with the concepts receipts and payments. Payments not costs: Purchase of a durable production mean like a tractor is a payment. For costs the purchase money must be devided over more years (depreciations). Repayments on debts and household expenses are payments also.
Costs not payments: Depreciation, interest and maintenance are costs for the use of durable production means, cost of family labour, interest on own capital, use of owner-occupied land, decrease of stocks.
Receipts not revenues: Sale of product produced in previous year, receipts on forward sales of product not yet produced, subsidies on the purchase fo means of productions, sale of depleted equipment.
Revenues not receipts: Increase of stocks, household consumption of own holding produce, own production of cuttings for own use.

originating from the operation of the holding during a period of time (mostly 1 year, but you can take 5 years or the growing period of the product also). The trading account is composed out seperate producing costs and revenues. In order to have a better insight the revenues and costs should be classified.

9.2.1 Classification of production costs

The economic result of a farm can be expressed in different ways. It should however always indicate also to which extent the grower succeeded in obtaining a sufficient reward for the input of his own labour, land and capital. These rewards must be compared with the rewards in alternative employment (scarcity, 1) opportunity costs 2)).

9.2.1.1 Labour costs

Not only the costs of hired labour but also the costs of the farmer's own manual labour and other family labour should enter the calculation. Family labour (included the farmer himself) should be evaluated at the same wage (incl. social taxes) as hired labour.

For hired labour the labour costs are equal to the payed wages. The costs of the manual labour are calculate on the bases of an estimation of the amount of manual labour done by the farmer and his family (not only son(s) but also farmers' wife(s) an daughters). In the Netherlands this labour is evaluated according to the wages (including social fees) of the Collective Labour Agreements for adult male and female labourers and adolescents. According to this CLA a performance addition, holiday addition are calculated for the farmers and their families. Furthermore the wages are increased with a certificate addition for all working people older than 22 years. The wages calculated for the farmer include a foreman addition.

1) Scarcity is an indispensable concept in economic thinking. It means that the available quantity of some good is scarce in relation to the uses which could be made of it. For example by using an acre of land for vegetable crops, we sacrifice the opportunity for growing for example fruit crops.
2) By making a specifie use of a good, we forsake alternative opportunities. This implies that by making a specific use of a good we must sacrifice alternatives opportunities for a useful application. The cost of the input therefore should be measured by the most attractive alternative use which is sacrified (opportunity cost). For example the real costs of seedlings produced and used by the grower himself is determined by the price we can obtain by selling the seedlings.

The economic result of a holding is expressed by means of the concept of entrepreneur's net balance. It is formed by the difference between the total revenues and the total costs. In the costs no sum is included as wages for the function of managing and directing the holding. Entrepreneur's net balance must be regarded among others as a reward for managing and directing.

9.2.1.2 Fertilizer

The costs are calculated as follow: opening stocks plus purchases less closing stocks. Calculations must be done with prices by present purchases.

9.2.1.3 Planting material (incl. seed)

These costs are easy to calculate. The costs are the kg of seed used multiplied with the price you have to pay by purchase in the year concerned.

9.2.1.4 Delivery costs

In the Netherlands the produce are brought to an auction. The grower had to pay: rent boxes, interiors, rent pallets, auction cost, transport and possible grading costs.

9.2.1.5 Contractors

When jobs are done by contract the total amount of the agreement must be calculated (o.a. soil disinfection, rotary tillage).

9.2.1.6 Ohter materials

Other variable 1) resources are control remedies strings, energy and many others. Only when the cost of a variable resour-

1) Fixed and variable resources: a distinction can be made between fixed and variable resources. Variable resources are resources of which the level of input and the level of costs in the output volume vary directly in dependence on the volume of output and can be changed at short notice (for example 1 year). Resources which can be change at short notice are fertilizer, pesticides, labour etc. Resources which cannot be changed at short notice are machines, tractor, buildings etc., they are the so-called durable production means. The distinction of fixed and variable is not absolute. The capacity of the building could be fixed for one year, but may be adjustable after a longer period. The distinction should be made in relation which the type of management decissions and farm plan considered.

ces is important it is classified seperatly. The small variable resources are put together in the classification "Other materials".

9.2.1.7 Equipment costs

On a holding different machines, implements and other equipment are used. Because these means have a lifetime longer than one production period we call them durable production means. The costs of these resource are expressed in depreciations, interest and maintenance.

Depreciation

After a period of productive use every equipment has to be replaced. During the use a decrease of value take place. The falling course of the value can be linear. Yearly the performance of the apparatus is constant. The depreciation is equal in all years. When the lifetime is 10 years, the depreciation is 10% also. By a lifetime of 8 years the depreciation is 12,5% a year, and so on. Suppose the price by purchase of the speed-balance is f 2.400,- and the lifetime is 10 years. After 10 years the sale price is f 200,- (residual value). The depreciation amount is calculated on f 220,- (10% of f 2.200,-). For every apparatus the lifetime and the purchase value in the year concerned must be checked, the last each year again (see further on "value when new").

For larger objects with a great value or/and a long lifetime (more than 10 years) a degressive falling course of the value of the durable production mean in connection with the decreasing performance is preferable.

The depreciation amount is greater during the first years than later on. The depreciation percentage decrease annually with a certain amount (e.g. ½%). The course of the depreciation can be chosen in such a way that about 65% of the total depreciation is realized at the middle of the establishment depreciation period.

Wear and tear

After a period of use an apparatus is wear out. The reason can be technical. In such a situation we have a "technical wear". When the replacement may rise from the availability of more modern and efficient equipment and further continuation of the use is no longer profitable although the old implement is still usable, we talk about "economical wear".

Value when new

In the period of inflation we have to take into account price rises. Depreciation calculations based on the historical purchase price means imputing too low costs of depreciation and

also for interest. The bases of depreciation must be the present purchase value (the value when new). For example a new speed balance was purchased 7 years ago for f 1.500,-. The present purchase price is f 2.400,-, than the costs of depreciation is f 220,- and not f 130,-. This by a residual value of f 200,-.

9.2.1.8 Interest

Interest must be also calculated on bases of replacement values (value when new). As calculation percentage the interest rate for long term credit must be taken.

Suppose this rate is 10%. On basis of the booking value the interest value in the first years is much higher (see example).

Example:

Value when new f 1.000,- lifetime 4 years, rest value 0, depreciation linear.

		Interest
Value when new (booking value first year)	f 1.000,-	f 100,-
Depreciation	" 250,-	
Booking value second year	f 750,-	" 75,-
Depreciation	" 250,-	
Booking value third year	f 500,-	" 50,-
Depreciation	" 250,-	
Booking value fourth year	f 250,-	" 25,-
Depreciation	f 250,-	
	0,-	" 250,-

For cost-price calculations this isn't correct because the performance of the equipment is yearly constant. On account of practical considerations in general the interest is calculated by the next formule - interest rate over 60% of the value when new -. The number of 60 because mostly there is a positive residual value. For the equipment in the example the yearly interest becomes f 60,- (10% of 60% of f 1.000,-).

Maintenance

This are cost involved in maintain and repair of the equipment. Mostly the maintenance costs per object are not known. On account hereof the maintenance costs are mentioned totally under the classification "miscellaneous".

For cost calculations depreciation, interest and maintenance are often taken together on basis of average figures. For example when the lifetime is 20 years the depreciation is 5 per cent

(100:20), the interest is by an interest rate of 12 per cent 7.2 per cent (12 per cent of 60) with a maintenance of 2 per cent (variation 2-6 per cent depending on the type of equipment). The total equipment costs are in this situation 14,2 (5+7.2+2) per cent of the value when new. Wiht a lifetime of 5 years and further the same conditions the total equipment costs are 29.2 per cent (20+7.2+2) of the replacement value).

Small tools

On each holding you will find small tools like a hammer etc. For all small tools a total amount of investment is estimated. Yearly a high percentage (20%) is depreciated.

9.2.1.9 Land and buildings

For the owner occupier the costs of buildings are calculated on the same way as the equipment costs, this means depreciation plus interest ad plus maintenance. Land has normally no depreciation, only maintenance (including taxes e.o.). For land a very moderated rate of interest must be calculated.

In the case of tenancy we can take the paid rent and add the costs of maintenance and repair of buildings etc. incurrend by the tenant.

9.2.1.10 Miscellaneous

Under this heading will be charged costs made on the holding for telephone, market visits, insurance fees, membership, administration, soil examinition, bank commission, electricity, etc. For big holdings these costs can rise very strong.

9.2.2 Cost-pricing on production level

The cost-price on farm-level can be calculated by dividing the total production costs by the total harvested yields (physical value). The total harvested yields include all produce, the produce for export and the produce sold on the home market. In this way we got an average cost price. Mostly the quality is not equal on the two markets, however on production level the cost are not different. The shortage on one market must be covered by the other market. By adding the several cost-items (see classification of production costs) you will find the total production costs of the holdings. The revenues (money value) must be equal to total costs. In the situation with no home market all revenues have to come from export. The price on farm level must be equal to total production costs divided by exported yields.

In appendix 9.1 you will find a production cost calculation of two pratical holdings. These growers are specialized in the cultivation of sweet peppers growing in heated glasshouses. The

average total costs per one kg sweet peppers for holding A is f 3,27 and for holding B f 3,15. The two holdings are situated in the horticultural district the Westland.

Cost price calculation is very important for price negotiations e.g. with the government, the exporter, marketing board or wholesaler and others. For farm management as such it is of little practical use. For farm management comparison of farm records, like cost items and yield and quality level between different farms or production countries, can be helpful in discover weak spots in management. The differences may lie in production circumstances (prices, land, weather, diseases etc.) or in differences in the efficiency of the management of the farm (labour efficiency, fertilizer efficiency, crop management and others).

Mixed farms

On mixed farms buildings are used for all produced crops, by the most implements will happen the same. The problem is the allocation of joint costs to separate activities. To allocate these costs you can take the area per crop the revenue per crop, the labour use per crop or an other allocation. However it remains highly arbitrary. Nevertheless it is necessary for the insight into the costs per unit output. On mixed farms it is possible to calculate very exactly. A good feeling of the production costs per product will remain, because the costs you have to allocate are only a part of the total costs.

9.3 Transport costs

The shelf life, this is the maximum amount of time a commodity can keep its freshness and remain saleable after harvesting, is very different between horticultural produce. The storage potential varies widely. Onions have a storage life of nearly 6 months and capsicums 9 days. This includes that for many horticultural produce the period of transport is very important. In the short survey on next page you will find some periods of time by sea- and airtransport on the same distance (see map appendix 9.2 also).

For products transported by air freight rates are much higher than for products carried by ships. For that reason seatransport is preferable, the more so as in the competition of the product offered the cost of transport will always be a very important factor and often a determining factor. For highly perishable commodoties which could not survive the long sea route air transport is the only alternative. Land locked countries have no choice. They are compelled to restrict their exports to highly perishable produce on which airfreight rates have to be absorbed.

Table 9.1 Duration of sea- and airtransport

Country	Airport/seaport	Destination	Period of transport time (roughly)	
			airplane	Boat
			hours 2)	days 2)
Argentina	Buenis Aires	Netherlands 1)	19	30
Venezuela	Caracas	"	14	22
Nigeria	Lagos	"	8	16
Kenya	Nairobi/Mombassa	"	10	27
Egypt	Cairo/Alexandria	"	6	12
Indonesia	Djakarta	"	22	40

1) Airport Schiphol (Amsterdam) and seaport of Rotterdam.
2) Excluding charge and discharge.

9.3.1 Air transport

The biggest advantage of air freighted crops is the short period of transport time. The produce arrive in fresh condition. Higher prices are obtained. Other advantage of air transport are the longer period the commodity is fresh in the import country and the greater flexibility in the choice of destination. Air charter shipment can be routed to markets which offer the best prices. The biggest disadvantage we mentioned already is the high costs. Other disadvantage are cargo space is difficult to find, very limited and the flight schedules do not always meet market requirements e.g. flights arriving in Western Europe on Saturday products cannot be marketed before Monday.

An example: KLM (Royal Dutch Airlines)

To get feelings with the costs and the way of working of these transporters we give information of the KLM as an example. Almost all airlines carry shipments of commodities, some are specialized on cargo. KLM-cargo transports among many other things vegetables, fruit, plants and cut flowers. KLM has special cargo expertise for these items. KLM advises the producers of perishables on packing, temperature and humidity requirements from the moment of harvest to consumption. KLM is doing so because a part of the shelf life is taken up by the flight. Much more time is consumed on the ground, between producer and airport, and from destination airport to consumer. For customers with regular transport the KLM works together with the producers to find the right combination of timing and packing for most succesfull shipping. The packaging: ventilated, sealed, wet, dry,

cooled? Will it be bulk packaging or will it be unitized loads (pallets, containers) KLM is helping by certificates (origin and for ownership) import documents and others.

The KLM takes care of the transport from airport to airport. The KLM don't look after transport from producer to airport and from destination airport to consumer. For each shipment there is an air waybill. This is contract of transport. KLM can fill in this air waybill with the help of a forward-instruction. This can be done also by a IATA agent in your country (International Air Transport Association). Write or ring up the IATA for names and addresses of forwarding-agents in your country. You have to pay in advance at the delivery of the goods on the airport. An account can be opened for regular customers. Paying collect is not allowed for perishable produce.

Air freight rates

With the help of the KLM air freightfolder (rates-appendix May, 1984) you will find under number 0007 vegetables and fruit (excluding strawberries). For illustration we take the same cities as before. For a shipment from Lagos to Amsterdam you have to pay 0.747 dollar per kg, the shipment must be 500 kg more. For the distance Buenos Aires-Amsterdam the flight costs are 1.73 US Dollar per kg. Primarly the difference in flight costs are caused by differences in distance, the celestial latitute is about 5,500 resp. 12,000 km. The size of the shipment is also important, especially for small shipments. The price increase very strong for small weights. On the distance Nairobi-Amsterdam for a shipment with a minimum weight of 45 kg you have to pay 42.7 KES per kg. This is 4 time the price of a kg with a minimum weight of 500 kg. More factors, like fuel costs, handling costs, frequency and market situation, cause differences in price (table 9.2).

Special rates

For a shipment with a big volume (less than 1 kg per 6 dm3) and relative low weight you have to pay more (flowers). Unitized loads (pallets, containers) are on long distances cheaper than individual parcels and they are easier to keep cool and moist. Bundle of the boxes is very attractive. Put the boxes on a pallet or in a container you can do it by yourself. Herewith it is very important to take the measurement given by the air companies (see appendix 9.3). Of the six mentioned airports, KLM offers the possibility of pallet/container transport only for Caracas.

Other air transport costs

Take out an insurance against damage by delay or something else is mostly done. The insurance premium for perishables is 2-5% (KLM's shippers open policy).

Further you have to pay import charges on the destination airport like customs warehouse facilities, clearance and possible administrative activities, storage and others (see appendix 9.4 import charges KLM, 1984). Roughly estimated these extra costs amount f 0,10-f 0,18 per kg. You have to pay these costs also on the airport in your own country.

The transport costs from Schiphol to a warehouse in Amsterdam are f 0,50 per box. When there is a necessity of repacking these extra costs are f 1,00 per box. For selecting the costs are also f 1,00 per box. Handling in/out amounts f 0,40 per box. Sometimes there is an official survey, these costs are f 300,- per shipment.

KLM is flying on a limit number of countries (73 countries and 120 cities). Perhaps you have to make contact with other companies. You always have to compare air freight rates of different companies. Before starting to export you should endeavour to negotiate acceptable freightrates with the airplane-companies.

Through a very good organization Dutch growers export flowers to New York with an airfreight rate of f 2,00 per kg (situation end 1984). An exporter have to pay the same rate on the distance Amsterdam-Munich, so it is very worthwhile to have efficient organization and tune production and trade.

9.3.2 Water transport

As we already mentioned before transport by boat is considerable cheaper in comparison with air transport. Other advantages are the greater availability of refrigerated sea cargo space, much larger quantities can be shipped and planning is easier.

The main disadvantage of transport by ship is the long voyage. Many perishables with short shelf life cannot be exported via water transport. Sea transport requires highly specialized technical know how as regards storage, packaging, handling, etc. In particular handling can often be rather rough in the ports and during transport. Freight rates of air-transported goods are calculated on a weight basis mainly, while sea-transport rates are mostly calculated on a volume basis.

Some examples: The collected rates vary widely, we give them arbitrary:

- melons unitized shipped from Caracas to Rotterdam have a rate of 180 US Dollar per 1,000 kilogramme (included bunker, currency and unload). The rates by individual parcels are. 17-20 kg box 3.85 US Dollar, 14-16 kg 3.55 US Dollar and 11-13 kg box 2.90 US Dollar. The rates for other horticultural produce are below or above the melon rate with a maximum diviation of 20 per cent;
- the sea-freight rate per m3 for containers with pine-apples from Mombasse to Rotterdam is 132 US Dollar (included bunker and currency);

- unitized sea-transport from Jakarta to Rotterdam have a rate of 267 US Dollar per m3 (including bunker and currency);
- shipments with a transport period of 18 days from Buenos Aires to Rotterdam and with a minimum weight of 12,000 kilogramme are carried for 180 US Dollar per 1,000 kilogramme (including bunker, currency and unload);
- for transport cost Ivory Coast-Netherlands see appendix 9.5.

From the telex illustrated in appendix 9.5 it appears that airfreight amounts 200 fcfa from Abidjan to Schiphol. This is in Dutch guilders f 1,40 per kg. Including airport charges from both airports the total transport costs are about f 1,70 per kg. Ocean freight amount f 462,- and f 82,- for baf per ton. Including harbour costs of f 0,16 in Abidjan and f 0,05 in Rotterdam. The total transport costs by boat are about f 0,57 per kg.

Comparing air and water transport under favourable conditions the cost of sea transport may be as low as one-third and even one-fifth or air transport. On this point sea-freighted produce will thus be more competitive.

These data are coming from a limited but different forwarding agents and carriers. The prices are from July 1984. During collecting it seems that most boats have no possibilities for cooling. The technical level of refregeration, load and discharge varies widely resulting in great difference in productivity, corresponding prices and period of transport-time diverge strong.

The whole looked over we may conclude that the most advanced technologie is not employed on most lines. This can be one of the factors to renovate first.

You can also work with charter boats and planes. This required an excellent organization otherwise the costs will increase easily to strong.

9.4 Trade costs

The classical pattern of the structure of trade in imported fresh fruit and vegetables is importer-wholesaler-retailer. In this outlet system the importer sells by wholesale the produce to the wholesaler and the lastnamed sells to retailer. Virtually the distribution is handled through much more outlets. Many importers also exercise wholesale functions by distributing to secondary wholesalers and sometimes selling direct to the supermarkets, caterers and even to retailers. On the preconsumption level the most retailers are concentrated nowadays. These supermarket chains have central buing offices that often import direct produce, sold in large quantities, such as pineapples, citrus fruit, potatoes, avocados. Buing offices and independent supermarkets prefer to establish direct supply relations with producers in order to eliminate intermediaries margins and to fulfill their

Table 9.2 Air freight rates per kg or per 6 m3, import in the Netherlands (KLM, 1984)

Origin	Destination	Pay with	Min weight 100 kg		Min weight 250 kg		Min weight 500 kg		Min weight 1,000 kg	
			rcu 1)	local curr. 2)	rcu	local curr.	rcu	local curr.	rcu	local curr.
Caracas	Amsterdam	US Dollar					1.280	1.280	1.230	1.230
Buenos Aires	Amsterdam	US Dollar					1.730	1.730		
Lagos	Amsterdam	Naira					0.747	0.50		
Nairobi	Amsterdam	Kenya Shilling					0.849	9.90		
Cairo	Amsterdam	Eqypt Pound 3)		0.160		0.445		0.450		
Jakarta	Amsterdam	US Dollar			3.264	3.63	2.571	2.87		

1) Rcu rate construction unit, used international for determine the rates.
2) Local currency.
3) 1 Eqypt pound is ± 1 US Dollar.

specific requirements in relation to range, quantity, size of pieces, packing and stable prices. Such agreements they have sometime with importeurs too. Produce with a small turnover, such as most off season and tropical produce are imported by the independent importer/wholesaler. It has been estimated that the biggest quantity of exotic and out-off-season fruit and vegetables imported into Europe is sold by importers and importer/-wholesalers.

Importer/wholesalers operate on consignment/commission basis or purchase on fixed prices. Commission rates are of the order of 3-18 per cent of the wholesale price, depending on the nature of the produce, the quantities shipped, quality of the products, the regularity of shipments, perishable, exclusivity, availability, demand and the services rendered by the importer. Why on commission terms? This is because importers are unwilling to incur the risks attendant upon such highly perishable produce as tropical fruit and vegetables without being absolutely certain that contractuel agreements like quality, quantity and deliveries will be expected.

Secondary wholesaler has a mark-up of 5-10 per cent and more, while the retailer (greengrocer) needs a gross margin of 30 to 80 per cent and even more. The mark-up varies with the product.

Other determined factors are a rapid or a slow turnover, a small or large turnover and the place and type of the shop. The supermarkets usually have lower margins, again the percentage varying with the product. For tropical off-season and exotic products the mark-up can reach 100 per cent.

9.5 Total costs

The production, transport and trade costs together are schematically illustrated below.

Production costs
Transport to the airport/harbour
Costs of marketing board/exporter rate
Clearing and other duties on airfield/harbour in home-country
Transport between continents
Clearing and other duties on airfield/harbour in Europe
Importer/wholesaler rate
Transport costs in Europe
Secondary wholesaler rate
Greengrocer rate
Prepacking/repacking
Storage
Customs duties 1)
Taxes (VAT) 1)
Countervailing charges 1)

1) See the paper "Import rules" of the EEC for exporters of non-member countries chapter 8.

The way horticultural produce is handled, transported and marketed is quite different. This must bear in mind very well by cost calculations.

For a successful export of horticultural crops to distant markets the packaging is an important aspect of the operations. Package should add as little as possible to the transport costs of the volume it contains. The basic functions must be fulfilled; this means to contain the produce, to protect the produce against journey hazards, to inform intermediaries of the nature, and destination of the goods and to inform customers of the quality and origin of the produce. For certain products the produce is repacked before offering it for sale. Regular by the repacking constitutes a second quality-control operation during which defective produce is eliminated. repacking means extra costs and high percentage of elimination influenced the cost price very strong, see calculation example below. The loss by damage in this theoretical situation is 30 per cent (300 kg). The cost price increase from f 3,- to f 4,29 per kg plus prepacking costs.

Table 9.3 The loss by damage and the costprice

	Before repacking	After repacking
Total costs of the goods	f 3.000,-	f 3.000,- plus prepacking costs
Size of the parcel	1,000 kg	700 kg
Costs per kg	f 3,-	f 4,29 plus prepacking costs

Products destinated for the market of France and Switzerland arrive at Marseille by sea. For Germany the most suitable port of unloading is Rotterdam. Other ports may be used but these two ports are prefered due to its geographical position and the excellend port facilities. When transported by air Frankfurt for Germany and one of the Paris airports are prefered for France. Other international airports are to use also (Amsterdam, Geneva, Hamburg, Zurich, etc.). For England London is the port of arrival. After receiving their produce at airport/harbour the importer or import/wholesaler may sell part of it immediately to smaller firms (secondary wholesalers). Than the products are transported mostly by truck to customers all over Europe. Beside the commission/consignment rate wholesalers can deduct a market handling charge and costs/fees incurred by the handling agent who deals with receipt and transportation of the markets and customers.

9.6 The cost-structure of a consumer guilder

The "Produktschap voor Groenten en Fruit" analysed the structure of the Vegetable- en Fruitsector in the Netherlands in 1970 on basic of a calculation-model. The results are more an indication of the level instead of precise figures.

For fresh vegetables the grower in the Netherlands received f 0,61 of every guilder spended by the consumer. The retailer added a value of f 0,25. For home produced fruit we see the same amounts (table A). For imported vegetables f 0,52 of every guilder spended by the consumer in the Netherlands can be destinated abroad. With this amount has to be covered the transport costs, clearance and all other duties and the receipts of the growers (table B).

Table 9.4 The consumer guilder

A. Produce produced in the Netherlands

	Fresh		Canned	
	vegetable	fruits	vegetable	fruits
Grower	0.61	0.63	0.17	0.17
Auction	0.05	0.04	0.02	0.04
Factory	-	-	0.53	0.45
Wholesaler	0.05	0.05	0.05	0.05
Retailer	0.25	0.24	0.19	0.19
Value Added Tax	0.04	0.04	0.04	0.10
Total	1.00	1.00	1.00	1.00

B. Produce imported in the Netherlands

Abroad	0.52	0.54	0.45	0.30
Importer	0.04	0.02	0.02	0.01
Factory	-	-	0.21	0.32
Wholesaler	0.10	0.14	0.06	0.05
Retailer	0.25	0.24	0.19	0.18
Value Added Tax	0.04	0.04	0.04	0.10
Customs duties	0.05	0.02	0.03	0.04
Total	1.00	1.00	1.00	1.00

SOURCES

KLM Luchtvrachtgids Tarieven bijlage.

KLM Vrachtkantoor,
Postbus 7700
1117 ZL Luchthaven Schiphol

Muller & Co.
Waterlaan 1
Postbus 770
3000 AT Rotterdam

Schenker & Co.
Internationaal Expeditie BV
Postbus 1011
Rotterdam

RACK BV
Rotterdam Amsterdam Cargadoors Kantoor
Postbus 23387
3000 KJ Rotterdam

VCK
Vereniging Cargadoors Kantoor Rotterdam
Postbus 54009
3008 JA Rotterdam

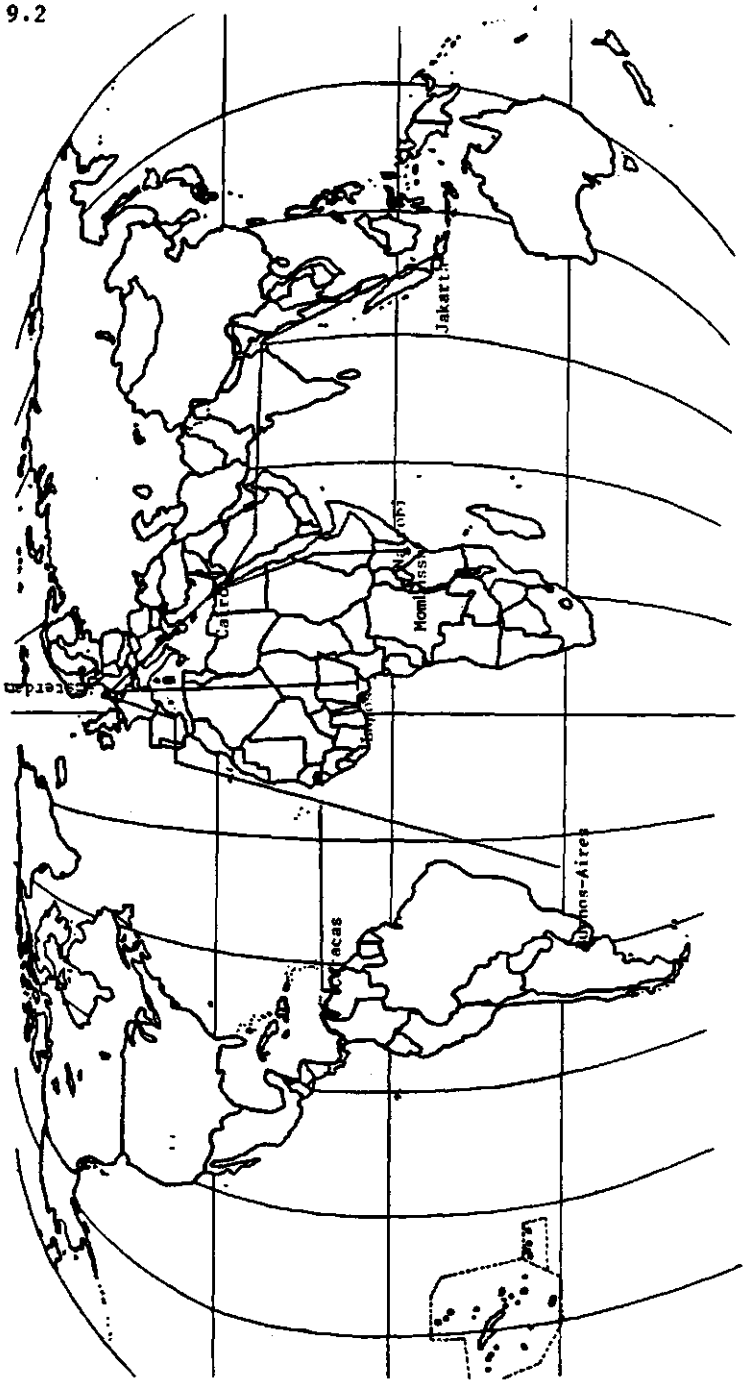
Intermar-Teco BV
Postbus 23232
3001 KE Rotterdam

Agricultural Economics Research Institute
Conradkade 175
Postbus 29703
2502 LS Den Haag

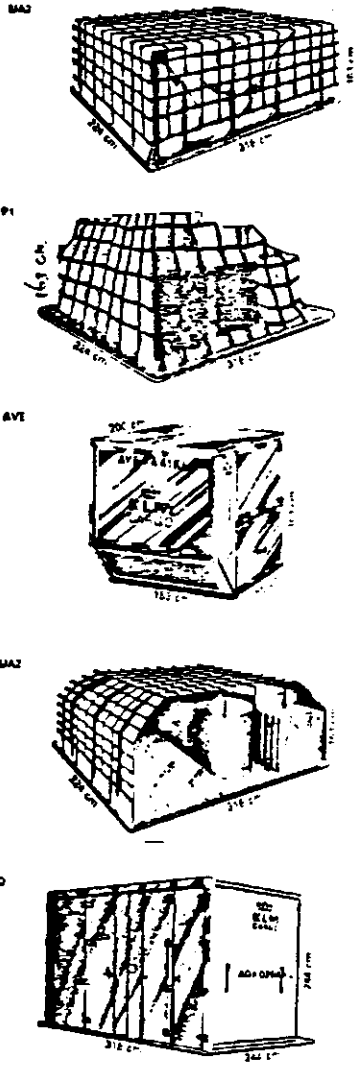
Appendix 9.1 Productions costs: costprice calculations of two glasshouse holdings specialized in sweet peppers, 1982. Location Westland, The Netherlands

Holding	A	B
Area of glass (m2)	13.800	29.100
Number of growers	2	4
Labour need: total number of man years	4.97	8.24
Costs:		
Depreciation:		
- buildings	f 4.541,-	f 6.332,-
- glasshouses	" 27.237,-	" 71.726,-
- heating installation	" 13.651,-	" 62.128,-
- other installations	" 26.285,-	" 47.246,-
- machines, implements	" 2.874,-	" 8.661,-
- ohter equipment	" 1.458,-	" 10.713,-
- cars	" 2.081,-	" 4.318,-
Total depreciation	f 78.127,-	f 211.124,-
Interest: buildings	f 3.657,-	6.749,-
glasshouses	" 18.945,-	" 55.914,-
heating systems	" 7.376,-	" 38.660,-
other installations	" 11.471,-	" 20.851,-
machine implements	" 1.450,-	" 3.965,-
other inventory	" 1.332,-	" 8.651,-
cars	" .337,-	" 1.214,-
ground	" 5.156,-	" 16.794,-
liquid interest	" 7.451,-	" 12.880,-
Total interest	f 57.175,-	f 165.678,-
Labour: grower(s)	f 128.976,-	187.794,-
growers wife(s)	" 28.560,-	-,-
other members of the family	" 4.500,-	" 92.026,-
paid wages permanent personal	" 44.274,-	" 32.726,-
paid labour, usual labour(s)	" 2.500,-	" 15.876,-
paid labour costs contractor	-,-	-,-
Total labour costs	f 208.810,-	f 328.422,-
Soil sterilization	f 19.350,-	f 19.504,-
Spade and spurt	" 7.671,-	" 19.424,-
Total	f 27.021,-	f 20.928,-
Delivery: auction costs	f 13.775,-	f 27.284,-
rent boxes, levy e.o.	" 10.798,-	" 23.692,-
Total	f 24.573,-	f 50.976,-
Maintenance	" 4.862,-	" 32.517,-
Car and other costs	" 8.787,-	" 20.606,-
Energy costs: fuel for heating	f 188.328,-	f 317.779,-
electricity	" 15.131,-	" 29.816,-
Total	f 203.459,-	f 347.595,-
Materials: fertilizer	f 11.960,-	f 18.026,-
young plants	" 48.392,-	" 113.493,-
pesticides	" 8.371,-	" 12.139,-
other materials	" 9.202,-	" 18.873,-
Total	f 77.925,-	f 162.531,-
Crop insurance	" 5.364,-	" -,-
Miscellaneous	" 7.969,-	" 19.654,-
Total costs	f 704.072,-	f 1.360.031,-
Total harvested yields (kg)	" 215.074,-	" 432.390,-
Average costs per kg	" 3,27	" 3,15
Received average auction price per kg	" 3,25	" 3,16
Total proceeds	" 698.736,-	" 1.366.186,-

Appendix 9.2



Appendix 9.3 Measurements of containers and pallets used in KLM-aircrafts



Appendix 9.4 Import charges (1984, source KLM)

1a.	Customswarehouse facilities		
	Per kilogram	f	0,06
	Minimum per shipment	"	17,00
	Surcharge per package	"	0,50
1b.	Handling charges free warehouse		
	Per collo	f	0,50
	Minimum per shipment	"	3,00
2.	Clearance		
A.	Monday through Friday between 08.00 and 18.00 hours:		
	1. Shipment of samples and others, without commercial value and free of import duties: shipments covered by Procedure Art. 220A ("Algemene Wet Douane en Accijnzen") and Art. 179 ("Besluit Douane en Accijnzen") per shipment	f	31,50
	2. All other shipments with one tariff item, declared in guilders:		
	f 1,00 - f 500,-	f	35,00
	f 501,00 - f 1.000,-	"	45,00
	Over f 1.000,-: per f 1.000,- or part thereof	"	8,25
	Maximum	"	350,00
	For each addition tariff item	"	13,00
	Goods with exemption, extra fee	"	10,25
	Preparation "DV 1" forms	"	13,00
	EEC-activities	"	8,25
	3. Preparation customs documents		
	Global documents: rates as mentioned under 2. with a maximum of	f	44,50
	Specific documents and/or Communautaire documents: tariff as mentioned under 2.		
	4. For shipments to be handled with priority extra charges wil be levied.		
B.	Clearance outside under A. mentioned hours and on official holidays: see point 10.		
	Minimum per shipment	f	80,00
3.	Administrative activities	f	12,50
	For telex, telephone, telecopier, photocopies and stamps, if any, actual costs will be charged.		
4.	Storage		
	Storage in the strongroom for valuables, per day per shipment	f	16,00
	Live animals: first 24 hours free of charge.		
	All other shipments: first two working days free of charge.		
	Thereafter per 10 kgs or part thereof, per day	f	0,13
	After 14 days, inclusive weekend and/or holidays, per day	"	0,35
	After 60 days, per 10 kgs, per day	"	0,60
	With a minimum of	"	12,00

5. Storage Public Bonded Warehouse at Schiphol
   Including transportation from carriers' warehouse, per 100 kgs f 18,00
   Minimum per shipment " 26,00

   Extra handling will be charged at actual costs.

6. Taking inventory and/or customsvisitation
   Will be charged in accordance with the number of manhours involved with a minimum of f 11,00

7. Advances and guarantees for duty and taxes
   Over advanced freightcharges, other charges, importduties and VAT, a 2% charge will be levied.
   Guarantees for duties and taxes will be charged at 1% per half year or part thereof over the outstanding amounts.

8. Transfer costs
   Costs for shipments addressed to a bank which after release will be transferred to an agent or broker f 15,50

9. Activities required, not mentioned before such as:
   a. arranging pre-domicile shipments;
   b. import licences;
   c. survey reports;
   d. handling of claims;
   e. requests for refunds;
   f. splitting of certificates of origin;
   g. loading on trucks (heavy and voluminous cargo: see point 10b.).

   may be charged in accordance with actual costs and manhours involved.

   Precious stones, objects of art, antiques, coins and valuable papers will be charges different.
   Rates will be supplied on request.

10a. All charges mentioned above are applicable for activities which have been carried out during normal working hours and for normal merchandise having no excessive weight or dimensions.
   b. In case of exceptions (at the carrier's or forwarder's judgement) extra fees, if any, will be charges in consult with the shipper.
   c. If payment of charges is not made within the terms of payment, legal interest rates will be levied.

Appendix 9.5 Telex: Transport costs Abidjan-Amsterdam

In this appendix is illustrated a teletype destine for Schenker & Co. Rotterdam. It was sended by Schenker Abidjan. Schenker is an international forwarder and airfreight agent. This telex concerns the transport costs of pineapples by air and by boat from Ivory Coast to The Netherlands.

Mr. W. Schutte from Schenker Rotterdam gives us some detailed information. The airport duties on Schiphol are f 0,06 per kg and f 0,50 per box. The customs duties are 9%. The discharge of the boat in Rotterdam costs f 140,- and the other harbour duties are f 129,- per container. BAF is extra allowance (17,7 per cent). One fcfa is equal to f 0,007 and 1 DM is equal to f 1,10. Only the 6 t/20 containers are available.

1. Air freight
   Fob charges at Abidjan airport: fcfa. 25/kg.
   Airfreight Abidjan/Rotterdam: fcfa. 170/kg.
   Minimum 2,300 kgs

   Airfreight rate will certainly be raised 1st October up to 200 fcfa/kg.

2. Ocean freight
   By refrigerated containers.
   Fob charges in Abidjan port: fcfa 23,5/kg brut.
   Minimum 6 t/20' ctr
   12 t/40' "

   This rate includes all formalities: photosanitaire-stacking-control-weighing-shipment of documents by dhl courrier.

   Ocean freight rate Abidjan/Rotterdam: dm. 420/t + baf 17,70
   minimum 6 t/20'
   12 t/40'

   All exporters of pineapples are controled by Cofruitel in Abidjan and all buyers have to contact this company.
   Generally planters deliver their pineapples to Abidjan.
   Our agency in Abidjan has good knowledge of this traffic.
   We are at your disposal for further details.
   Regards.
   M A Royol.

   21213 Sche nl
   scaz z 620591 f

10. Product innovation

10.1 Introduction

Horticulture, just like all other branches in economy, derives its right to exist from the fact it delivers produce the society wants. As the society will change, wishes of consumers alter, and so the opinions about produce from our branche shift.

Managers in horticulture have to recognize this change on the market. This requires selecting new products or renewing existing ones. But knowledge about new products is mostly not very wide, because there are no statistics, reactions of the consumers are unknown, there is little information about cultivars etc. etc.

Hence, a qualitative method, will be introduced to solve the problems mentioned above. This method is already put into practice in The Netherlands. We named it profile analysis. It explores systematically all aspects that play a role in the cultivation and marketing of new products or renewals (see the annexed checklist page 167).

10.2 Productprofile

With a productprofile we ought to encader systematiccally and clear all the aspects that play a role in the decisions to start new productions. Only qualitative indications (like nice, fair or bad) are used to see how new products mix capacities and possibilities of the bussiness.

10.3 System

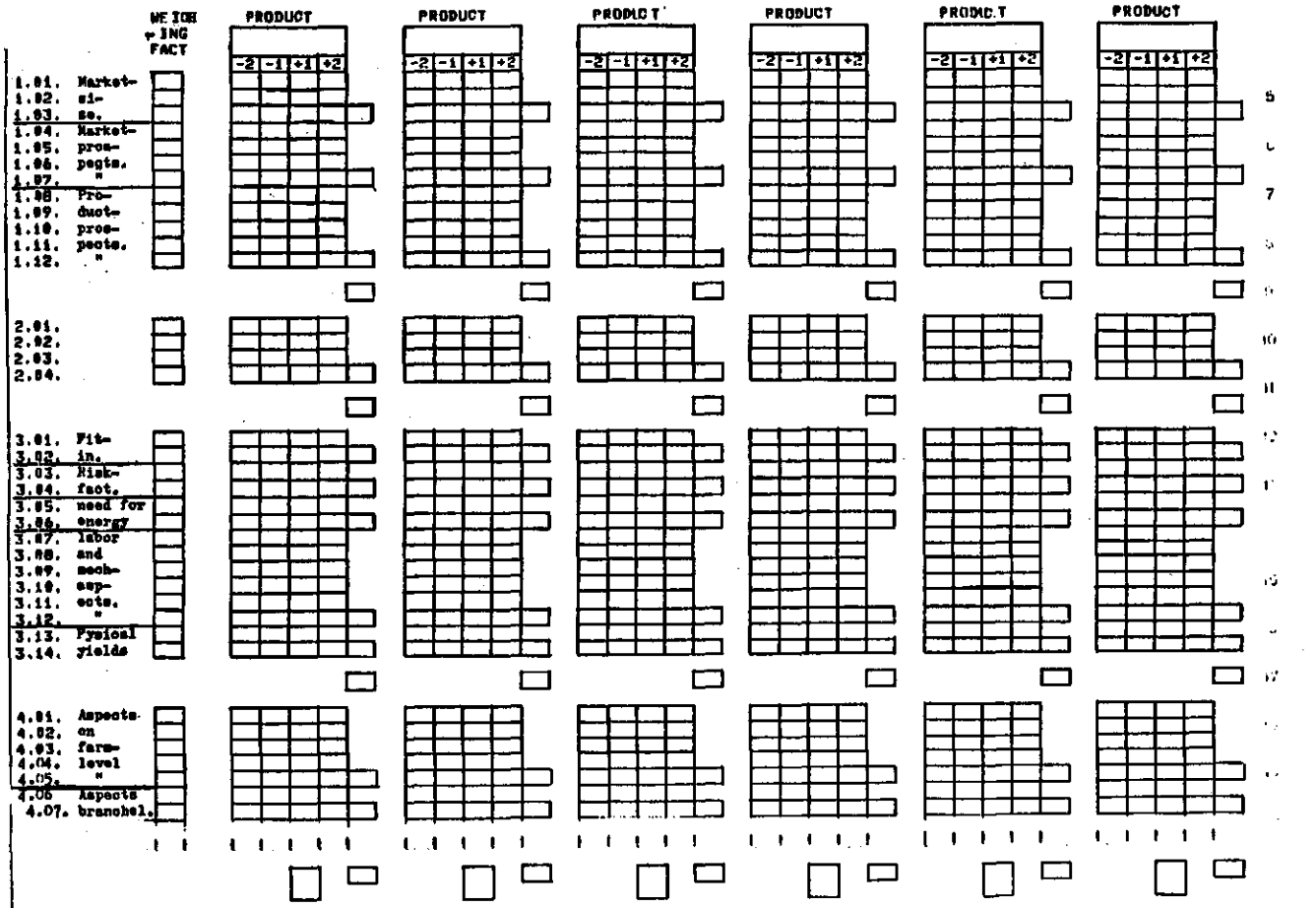
A productprofile arises when a checklist is filled up. The checklist is derived in a number of aspects and they on their turn into criteria. The scores of the different criteria will show a certain picture, that is why it is called a profile.

We distinguish firstly marketing aspects like marketsize, marketprospects and productprospects. On the second place the aspects that deal with the cultivation like cropping circumstandes, risks, fit in of crop scemes, need for energy, labor- and mechanisationaspects and fysical returns. At last the aspects derived from the foregoing, such as research-, financial- and economic issues.

CHECKLIST FOR NEW CROPS IN VEGETABLE GROWING UNDER GLAS

CRITERIA	RATING SCALE			
	- 2	- 1	+ 1	+ 2
1. Marketingaspects				
1. 01. Sales potential to the current consumers	limited	moderate	reasonable	well
1. 02. The number of potential customers	low	moderate	reasonable	many
1. 03. The amount of competition (in connection with quality)	high	moderate	low	none
1. 04. Developments in the markets for similar products	decreasing	stable	slight increase	strong increase
1. 05. Seasonality in selling (number of month)	2	6	10	12
1. 06. Consequences for the existing assortment	inferior	equal	some more	superior
1. 07. Geografical width of the market	regional	national	national + export	international
1. 08. Exclusivity (in how many years can the competitor imitate it)	1	2	4	6
1. 09. Consequences for the existing assortment	direct substituded	strong influence	no influence	complementary
1. 10. Position on the market (product is similar to:)	many products	2 till 4	1	totally new
1. 11. Stability (life cycle of the product in years)	2	5	7	10
1. 12. Applications for the consumer (number of preparation possibilities)	1	2	3	many
2. Researchaspects				
2. 01. Necessary time for development (in years)	more then 5	3 till 5	less then 3	none
2. 02. How many is done in breeding research	nothing known.....	nothing known.....	something known...	a lot known.....
2. 03. " " " " technological research	...also not from..	..only in analogy.	..from the pro-...	..from the pro-.
2. 04. " " " " economic research	..similar products	..of other products	..duct itself.....	..duct itself...
3. Technical aspects in production				
3. 01. Fit in of the new product in crop scems	none	bad	fair	very well
3. 02. Latency in seasonality (possibilities for yearround cropping)	strong	reasonable	low	none
3. 03. cropping risks (in connection with quality)	much	fair	low	none
3. 04. Harvest risks (" " " ")	much	fair	low	none
3. 05. Need for energy	high	fair	low	very low
3. 06. Need for sunlight	high	fair	low	very low
3. 07. Need for labor (labourers per square meter)	one on 2000 M^2	one on 3000 M^2	one on 4000 M^2	one on 5000 M^2
3. 08. Need for casual labor	much	reasonable	low	none
3. 09. Duration of harvesttime /- harvest progress	long with peaks	fair but with peaks	reasonable without peaks	short without p.
3. 10. Possibilities in mechanisation	none	low	fair	much
3. 11. Degree of difficulty in crop attendency	high	fair	low	very low
3. 12. Occurence of messy/ unpleasant labor	much	fair	low	none
3. 13. Possibel increase of production (per square meter)	like lettuce	better then lett.	lower as tomatoes	similar to toms.
3. 14. Mean production per square meter (in pieces or kilograms)	low	fair	reasonable high	very high
4. Financial- and economic aspects				
4. 01. Support in growers income	low	fair	reasonable	high
4. 02. Needed extra investment on working capital (currency per square meter)	high	reasonable	fair	none
4. 03. Proceedings on yearbase (currency per square meter)	low	fair	reasonable	high
4. 04. Cost of nursery plants/ nursery compensatie	expensive	reasonable	fair	cheap
4. 05. Time from start of the production till the start of the harvest (month)	more then 5	3 till 5	2 till 3	lower then 2
4. 06. Possible contribution to the turn-over of the industry	low	fair	reasonable	high
4. 07. Introduction costs in connection with advertisement/promotion	a lot	fair	low	none

CHECKLIST FOR NEW CROPS IN VEGETABLE GROWING UNDER GLASS



10.4 Results

The profile gives at the first glance the weak and strong issues of a concerned crop, also comparison with other new products seems possible. Each time the development of the products comes into a new phase and also when there are other purposes, we have to make a new profile or give another weight to certain criteria.

10.5 Organisation

If you are interested in the profile method, you have to take into account that the best manner to explore it, is to employ it in a group of experts. The profit of working in a group yields that a decision about each criterium is generated after ample discussion by which one is confronted with a lot of views weighted one against another.

The added profile is consigned to Dutch circumstances, more special to the vegetable production under glass. If there are other circumstances (e.g. in your country) or branches (e.g. fruitgrowing), you have to change the related criteria and aspects. The weighing factor you can use for special interests or influences you want take in mind.

11. Checklist for testing the effectiveness of production and marketing

11.1 Introduction

The checklist concerned has been developed by the Institute for Horticultural Economy of the University of Hanover (Germany, FR). This Institute has been dealing with questions of export orientated horticulture in developing countries for about ten years. The results of these many years of research work are the basis of the checklist.
The complete evaluation scheme is composed of:

- criteria of general economic success
- criteria for the assessment of the competitive position
- criteria for testing the efficiency of the production and marketing systems as a competitive factor.

In this paragraph we only discuss the criteria for testing the effectiveness of production and marketing. Experience shows, that these criteria also decide which competitive position is reached and what contribution is offered towards the economic, social and political objectives.

11.2 Management

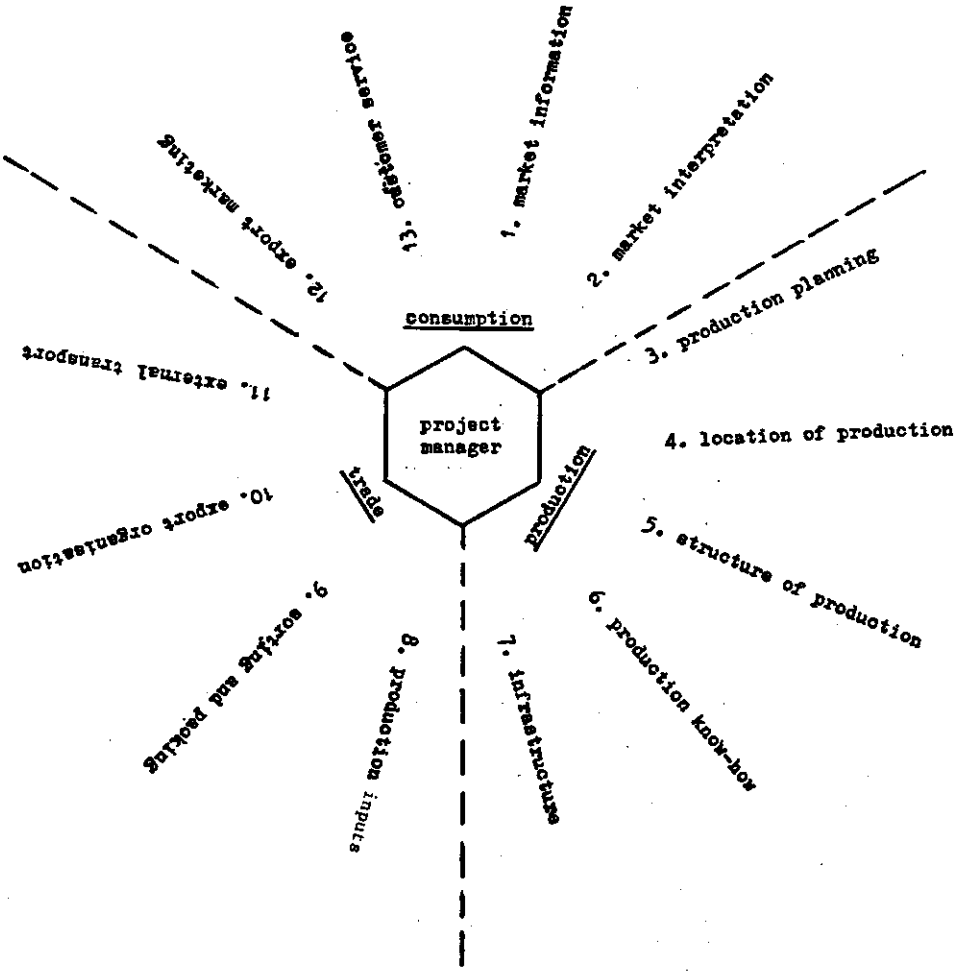
The efficiency of production and marketing depends on management. Many horticultural projects went wrong owing to management problems. So when you are project manager you have a great responsibility. Remains the question, what is good management?

Management is the process of decision making. This process exists of the cycle information-interpretation-optimalization-realization-registration. On basis of introduction the manager has to adjust his planning. Afterwards he has to register the effects of his planning and that gives him information for further adjustment, etc.

In other words: management is solving bottlenecks and learning from your own mistakes and those of your colleagues.

The manager of a horticultural export project has to consider a wide range of functions which are connected with production, trade and consumption. To guide the thoughts we have arranged the most important functions in a "dial" (figure 11.1). This "dial" has the intention to show how market information has to influence production planning and export organization. The project manager has to control the effectiveness of the different functions.

Figure 11.1 Functions of production and marketing



In further sections of this paper the bottlenecks and alternatives of the different functions are discussed. Most consideration/judgements come from the Institute for Horticultural Economy in Hanover.

11.3 Functions of production and marketing

11.3.1 Market information

Before starting a new production season you need information about the sales results in previous years. Which volumes are sold and for which price? What are the strong and the weak products in the assortment? How do the prices develop in the season? How do importers evaluate the quality of the different products? ect.

To get this information you need regular and close contacts with importers, wholesalers, etc. Depending on your export volume you could maintain a permanent settlement in the importing country or maintain a close co-operation with some reliable importers. Effective adjustment of production to consumption is an important criterium.

11.3.2 Market interpretation

On basis of market information you have to make an assessment of the sales prospects for next season. This sales prospects don't only depend on the sales results in previous years, but also on the opening up of new markets and on developments in competing countries.

Assessing the sales prospects it proves useful to take into account the opinions of importers and other experts.

Besides that you have to translate the market information in terms of production. When do you need which product and how much? In some developing countries they have a market information service to answer the questions above. Such institutes will only satisfy when they work rapidly.

11.3.3 Production planning

The next question is how to get produced the different products on the right time and in the right volume. As known, producers react sharply on price signals. So you have to take care that producers are timely provided with price information. You can do this directly or indirectly.

In the former case you give publicity to your market information and assume that producers pick it up. This option only works when your informations reach the producers (e.g. via meeting places) and when they are able to interpret them (education level). Both conditions imply often bottlenecks.

In the latter case you make solid agreements about prices and volumes with interested producers. To get the right supply you can offer a bonus for quality and season. This option makes the producers decision easier and gives him more security. Your advantage is a rather predictable supply.

11.3.4 Location of production

Knowing your sales prospects you have to choose a suitable location for production. Most important criteria are ecological conditions and transport facilities. Judging ecological conditions you have to think in terms of plant production. You need yield certainty. For that purpose watersupply and reliable weather are very important.

Owing to transport facilities most horticultural projects are located around big cities. This choice is rational because you need short transport distances to harbours and airports. Additional advantage might be the presence of a potential domestic market for surpluses and non-exportable qualities.

11.3.5 Structure of production

Horticultural products for the fresh market are mostly grown on relative small holdings. Motive is the management of plant production. To realize yields of high quality and quantity you have to control the development of the individual plant. It is impossible to do this from behind a desk of a big industry. Owing to higher proceeds small holdings have lower costs per unit of production than large holdings.

Besides socio-economic considerations might play a role. Involvement of smallholders gives a better distribution of income and gives a better linkage with present social structures.

Condition for a small scale production is an effective extension service which provides the smallholders with production know-how.

11.3.6 Production know-how

Transfer of production know-how involves on most horticultural projects a big problem. To escape you have to build up an effective research- and extension-service. Both services should be adjusted to practice. So the extension workers have to visit more producers a day and should be able to have contacts with practical research in particular.

An additional possibility to transfer know-how is the establishment of growers' groups. The members of such a group have to grow the same crops. Discussing each others experiences is very instructive. Extension workers might join this growers' groups to report research results and to notice research-requests.

To build up a structure to transfer know-how require much time and efforts. On the other hand such a structure proves to be an important competitive factor.

11.3.7 Infrastructure

Besides a good network of roads you need provisions for a quick communication. Suppose the aeroplane you chartered got troubles and has to postphone departure a few days. In case of perishable products you have to achieve that harvesting is adjusted. So you and your producers need telephone or teleprinter.

In the country network of telephone is mostly restricted. May be you can organise something with packing-stations. This option only works when the producers live concentrated in settlements. Concentration of production is also of great interest from the point of view of internal transport and co-operation.

11.3.8 Production inputs

Owing to import restrictions and unrealiable or incapable tradesman procurement of production means gives often problems. The same problems arise with the procurement of accessoiries and packing material. To relief import restrictions you could try to interest government and foster comprehension for horticultural production.

Problems with tradesman can be prevented by founding purchase co-operations of producers. Experiences with such co-operations are rather satisfying. An other bottleneck might be the financing of the production inputs. In that case the export organization mostly allows credit to the producers. Sometimes private exporters take advantage of the producers' dependence.

11.3.9 Sorting and packing

Sorting and packing represent the first steps on the way from producer to consumer. Consequently form here you have to think in terms of transport and marketing. To preserve quality the period between harvesting and consuming has to be as short as possible. In the case of fresh vegetables every waste of time is pernicious.

Sorting can be done by either the producer or the exporter. In the former case the producer is more involved in the quality of the product. When you offer a bonus for quality in addition, you will start - in average - with a good product. On the other hand central sorting by the exporter will produce more homogenity.

Packing represents the visiting-card of your product. This visitingcard should report trade-mark, quality-class and origin of your product. To inspire the confidence of your customers you

have to achieve that contents and overprint of your packing agree with each other (quality inspection). Besides packing material should be adjusted to handling during transport.

11.3.10 Export organization

In many countries exports are streamlined by Marketing Boards. Such a central export organization has several advantages: stronger position against importers, more possibilities to maintain foreign settlements, better co-ordination of transport, etc..

On the other hand several horticultural Marketing Boards failed. Owing to perishable products, price fluctations, etc. the horticultural export requires a quick-witted management. Frequently Marketing Boards don't meet this requirement. Co-partnership of the industry proves to relief this problem (e.g. Agrexco in Israël).

Many developing countries have institutes for export promotion. These institutes try to support the export organization. Perhaps they can help you in the opening up of new markets.

11.3.11 External transport

This function is very important in view of the high costs. Mostly external transport is carried out by independent companies. So your first job is to bargain for special charges. Frequently airliners calculate special charges for supplementary cargoes. Another entry could be your government who stipulates special charges in exchange of landing rights.

The second job is to make the most of the transport capacity available. Mostly an overall organization of exporters is in charge with this job. Sometimes the government imposes exporters to join the overall organization in exchange of export licences.

11.3.12 Export marketing

Once arrived in the importing country your product has to be conducted through the distribution channel to the consumer. Dependent on the kind of your product you have to choose the most suitable channel. In the case of perishable products the flow through to the consumer is of decisive interest. A few days loss of time might spoil all your efforts.

On the other hand you have to inform your customers that you are (again) in the market. For that purpose you have to go in for advertising, sales-promotion, etc. To achieve the tasks concerned a foreign settlement proves to be useful. The costs of such a settlement have to be kept in proportion to the proceeds.

11.3.13 Customer service

Customer service represents the finishing touch of the marketing system. This function includes miscellaneous aspects like punctuality and continuity of deliveries, presentation of products, settlement of customers' complaints, etc. The aspects concerned are important factors in registration of customers. Most developing countries have a weak position on this field.

LITERATURE

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Research on export oriented horticulture in developing countries - Review and Outlook - Paper presented on the XXIst International Horticultural Congress, Hamburg

Hörmann, D.M. and H. Storck (1981),
Exportorientierter Gartenbau in Entwicklungsländern.
Kriterien zur Beurteilung von Erfolg, Wettbewerbsposition und Effizienz.
München, Weltforum, Verlag, 1981 - 123 p.

12. Evaluation

12.1 Evaluation of the contents of the lectures

In the general discussion during the evaluation and from the written answers it appears that all the given lectures were useful and that participants wanted more time for the lectures. To do this it is necessary to spend at least two weeks on this course. The participants are only able to use the given information when they have time to discuss the subjects and work out some examples. So the second week should given attention firstly to practical cases of export from various countries to EC-market and secondly to the export possibilities from the participants own countries. In this way it is possible to satisfy the specific interests of each participant. After a first week of general information this second week gives more detailed information and gives us more time to consider specific wishes of the participants.

12.2 Evaluation of the visits (1984)

The discussion with importers and wholesalers whom we visited were open and friendly (see appendix 2). Some general items from the discussion with two major importing companies in Amsterdam and Delft are written down in the next text.

For new-exporters the start is difficult. Traders have good contacts with most of the suppliers. Contacts of 10 years and longer are normal. The trade in fresh vegetables and fruit is a trade of confidence. Traders don't switch easely. New competitive produce have to have a finer appearance and a better flavour, should be fresher and of better quality and have the same or lower purchase-prices. Complete new produce should primarily have a good appearance and secondly a good taste. The West-European consumers have to choose without tasting so the appearance of the produce primarily determines these choices. For new produce advertising and promoting is important. Samples are mostly too expensive. One importer said "What does a samply say about the real quality! Importers do prefer fotos or a video-tape giving information on the produce, the boxes, packaging, growing, transport, harvest and information about season, variety and prices. If these factors are satisfying, importers will try out the produce with minimum quantities (about 1,000 kg).

Importers try to have year around produce by regularly contacting other exporting countries. Sometimes there are 8-10 suppliers of one produce during one year. It sometimes occurs that there are 4-5 suppliers of one product during the same period. One company imported from 97 countries during a period of one single year.

The visited importers don't sell so-called bulk produce like citrus, apples and pears. These produce are sold in large quantities with low marketing costs per unit in the harbours of Rotterdam, Antwerp, Bremen and Hamburg (import-auctions). The visited importers handle the produce in smaller quantities. When a small produce meets a bigger demand resulting in increases of import quantities than trade is taken over by wholesalers, who start to buy directly from the export organizations. In this way they can avoid paying margins to importers. Also many porduce from Spain, Greece and Italy go directly from the exporters to wholesalers and to retail trade.

The importers aim to achieve on average yearly gross margin of about 10 per cent. The trade margins vary between 3 and 16 per cent. The producers are mostly paid 2 a 3 weeks after delivery, mostly in local currency. They sell and buy behind their desks by telephone and not at auctions. The task of trade is to look for supply when there is a demand and to look for demand when their exists supply. Transactions are virtually done on cif basis. 99 per cent of all produce is bought against fixed prices. New produce are purchased on consignment basis.

The traders visit the main suppliers each year; personal contacts are very important. In these contacts information and wishes are exchanged, not only about trade aspects but also about production.

The language of the country is often a barrier. Other barriers can be a requirement of a letter of credit. Strong connections with the ex-colonial country could also be a barrier for trade with countries outside the sphere of influence.

The produce is transported by airplanes for 80 per cent. For big quantities airfreight rates fluctuate very much. In winter tomatoes are imported from countries like Spain and Morocco, not from countries like Argentina. Melons are imported from Argentina by boat. Airfreight from Asia is expensive. Because of this reason pineapple from Bangladesh is not within reach. From countries like Bangladesh you have to think of produce that have a high value compared to the weight, like snow peas and asparagus. Sometimes traders import strawberries from New Sealand.

Some participants did have special interest in Greece and Eqypt. However the companies we visited did not have trade with these two countries. Greece has only bulk produce (for example grapes). The grapes are exported by big companies which sell directly on wholesale markets in Munich. Because of this direct trade there is not much information available about prices and quantities. Egypt is a special case. Egypt has big horticultural potential but there is a lack of management. This results in bad packaging, sizing, quality, continuity and so on. Kenya has excellent french beans and very good packaging, also the other items of this country are from high quality.

These two importers have a close contact with air-companies like KLM, but also with Sabena and Lufthansa. The limiting factor

is often the space in the aircraft. This is even more important than cheaper rates. Importers have to have continuity. They are good clients of the air-companies. These companies are willing to give them special services and rights.

The visit to the importer of the so-called Toko-produce was also very interesting for the participants. The participants got a good review of produce and packaging. This importer has three sales departments namely one for the so-called Toko-produces, one for the new produce (primeur) and one for the traditional produce. In the Toko-department produce from all over the world are sold, fresh and canned. Fresh vegetables and fruit are imported from countries like Thailand, Indonesia and Surinam. These produce were very expensive. The customers were retailers who had their shops in the locality with Indonesian and Surinam population living in or in the neighbourhood of the Hague.

The visit to CBI was also successful. CBI is an agency of the Netherlands Government, promoting imports from developing countries.

For the questions asked by the importers/wholesalers see appendix 3.

Visits to ECT (European Container Terminal), KLM-cargo and Boekestijn were lesser evaluated by some participants. Visits with fewer public relation (ECT and KLM) and more exacerbated to vegetables and fruit produce should replace them. For the questions asked at KLM-cargo see appendix 4. The brothers Boekestijn import yucca-stems and coconuts from developing countries and use them as planting materials. One of the brothers travels around the world looking for new produce. At the moment it is still a small produce with a low turnover, but there is a growing market with possibilities not only for planting material but also for half-produce and even for end produce. All the participants had a strong preference for vegetables and fruits and it was hard to get them interested in the export possibilities of other items of horticultural produce.

12.3 Suggestions for improvements for the next course

We believe that an improvement of the course "Marketing Know-how for Exporting to the EEC" can still be made by doing several studies:

- A full description of the concept quality and the influence of quality aspects on prices.
- More information about exotics and out-of-season possibilities.
- Crop and produce studies.
- Margins in dependence on perishability, quantity, competition, price policy and type of retailer.
- Distribution systems in cities: from wholesalers to retailers.
- Promotion and advertising.

- Marketing organization in the Netherlands and developing countries.
- Profiles of major export countries of tropical and out-of-season fresh fruit and vegetables.
- Profiles of major importers of tropical and out-of-season fresh fruits and vegetables in the EC-markets.

Appendix 1. Programme of the course "Marketing of exotic and out-of-season fresh fruit and vegetables in the European Common Market"

Monday	**September 24, 1984**
9.00 - 10.00	Welcome, getting acquainted with each other and presentation of the working schedule of the course registration of special topics.
Pause	
	A. General theory and background of trade
10.30 - 11.15	A.1 Consumption of horticultural produce as a function of income, fashion, population, etc.
11.15 - 12.00	A.2 Production behaviour as a function of climate, land, labour, capital, etc.
Pause/Lunch	
13.30 - 14.15	A.3 Market: Effects of changes in consumption and production on the market prices and quantities.
Pause	
14.45 - 16.30	Preparation of the excursions on Tuesday.
Tuesday	**September 25, 1984**
07.00	Departure to Amsterdam.
08.15	Groothandelsmarkt Amsterdam - discussion with an importer of fruit and vegetables (Windig).
08.30 - 12.00	Schiphol KLM-cargo - possibilities and costs of air-freight.
12.00 - 14.00	Lunch with a short coffee break on our way to Amsterdam.
14.00 - 16.00	Bud-Holland, Delft: Importer of tropical produce.
18.00	Dinner.
Wednesday	**September 26, 1984**
	B. Trade streams and restrictions/problems in the EEC
09.00 - 10.00	Evaluation of the visits.
Pause	
10.30 - 11.15	B.1 Outlets - in combination with evaluation of earlier visit.
11.15 - 12.00	B.2 Trade streams in cooperation with PGF - markt info.
Lunch break	
13.30 - 14.15	B.3 Trade terms.
14.15 - 15.00	B.4 Import rules.
Pause	
15.30 - 16.00	Preparation of the excursion on Thursday.

Appendix 1. Continuation

Thursday	September 27, 1984
07.00	Departure to Rotterdam.
08.15	Groothandelsmarkt, Den Haag, discussion with a wholesaler of e.g. tropical produce.
10.00	Europe Container Terminal (ECT) Rotterdam, handling fruit and vegetables.
Lunch break	
14.00 - 16.00	CBI - Rotterdam: Promoting produce of developing countries.
16.00 - 17.00	Visit of a grower nursing potplants imported as cutlings from developing countries (Boekestijn, De Lier).
19.00	Dinner.
Friday	**September 28, 1984**
	C. How to judge the posibilities of exporting to the EEC.
09.00 - 10.00	Evaluation of the visits.
Pause	
10.30 - 11.15	C.1 Costs of production, transport, marketing and selling in the EEC.
11.15 - 12.00	C.2 Chances of new produce.
Lunch break	
14.00 - 16.45	C.3 Literature: Hörmann, Storck, et al: Marketing activities Judgement criteria.
16.45	Scheme for the second week. (08-12 October)
Second week (08-12 October)	
	Report reading
Monday	**October 8, 1984**
09.00 - 10.00	Introduction in reading scientific reports given certain questions of the reader. Discussion about the questions to be answered.
Pause	(Forming groups of participants).
10.30 - 11.00	Distribution of the case-studies between the groups of participants.

Monday afternoon and Tuesday morning:
- reading the reports.
- preparing the presentation of the results and conclusion according to the questions.

Appendix 1. Continuation 1

Tuesday	October 9, 1984
14.00 - 17.00	Three sessions to discuss the results of the report-reading. Main subjects: - how are exports organized? (Marketing Boards or Cooperations). - what kind of products are choosen and why? - what went wrong?
Wednesday	October 10, 1984
	Writing a report
09.00 - 10.00	Introduction in writing a scientific report, illustrated with a list of remarks. Choosen produce and exporting countries.
Pause	(Forming groups of participants).
10.30 - 11.00	Making further arrangements for the next days.

Wednesday afternoon and Thursday:

Preparing a paper about exporting from the home-land to the EEC.

Friday	October 12, 1984
09.00 - 10.00	Distribution of the prepared papers and reading.
Pause	
10.00 - 12.00	Discussion about the papers.
Lunch break	
13.30 - 16.00	Discussion about the papers.
16.00 - 17.00	Remarks on this course and suggestions for the next one.
17.00	Closing.

Appendix 2. Names and addresses of the visited firms

Importers/wholesalers:

- Windig B.V.
  Ronald, A.M. Poelstra
  Centrale Markthal 16/20
  Jan van Galenstraat 14
  1051 KL Amsterdam

  Bud Holland B.V.
  Paul van Pelt
  Hoornseweg 15
  P.O. Box 8
  2600 AA Delft

  H. Nap B.V.
  Marktweg 144
  2525 JP Den Haag

- D.C. Roodzant
  Groothandelsmarkt
  Industrieweg 40
  Rotterdam

- KLM-Cargo
  Cargo Sales Department (Hans, H.A. Tiessen)
  KLM the Netherlands
  SPL/FQ
  Freightbuilding 11
  P.O. Box 7700
  1117 ZL Schiphol Airport

- Centrum tot Bevordering van de Import uit Ontwikkelingslanden (CBI)
  Coolsingel 58
  Beursgebouw, 5e etage
  P.O. Box 30009
  3001 DA Rotterdam

- Europe Container-Terminus (ECT)
  P.O. Box 7400
  3000 HK Rotterdam

- Handelskwekerij Gebr. Boekestijn
  Burgerdijkseweg 5
  P.O. Box 76
  2678 LP De Lier

- Euro Fruit Center
  T. Port BV
  Marconistraat 1-11
  P.O.B. 1170
  3029 AE Rotterdam

Appendix 3. Questions for importers/wholesalers:

- Windig B.V.
  Ronald, A.M. Poelstra
  Centrale Markthal 16/20
  Jan van Galenstraat 14
  1051 KL Amsterdam

  Bud Holland B.V.
  Paul van Pelt
  Hoornseweg 15
  P.O. Box 8
  2600 AA Delft

1. From which countries do you import fresh vegetables and fruits?
   What are the names of the produce and wich period of the year are these produce imported?

2. Would you give purchase-prices and selling-prices of these produce?

3. Which produce are transported by boat and which by aircraft? What are the transport costs per kg or pieces, what and how much are the other costs (clearance, customduties etc.)? Can you illustrate this with some practical examples from different continents?

4. How do you calculate for produce which are not or less commercial?

5. Do you calculate different gross-margins for different produce?

6. What are your price-agreements?
   a. deal on commission bases
   b. purchase on fixed prices
   c. deal on commission bases with fixed minimum prices
   d. purchase on conto à meta (importer and exporter share in profit or loss).

7. With which kind of exporters are you in business?
   a. exporting producers
   b. private exporters
   c. exporting cooperatives
   d. marketing boards
   e. exported organizations of central planned countries.

8. Do you prefer one of the mentioned export organizations?
   Can you give some weak and some strong points of these organizations?

9. Are you panellist for a marketing board? For which produce?
   Do you have exclusive rights, to sell the imports in a certain region?

10. Quality is very important for the consumer in the West-European market.
    What is your opinion on this point about out-of-season produce and exotic?

11. Is their a need of improvements and innovations of package?

12. Are you able to influence the marketing policy of certain produce?
    In which aspects?
    - quality
    - packaging
    - grading
    - branding
    - choice of varieties
    - time of production
    - exporters sale promotion.

    Can you give examples?

13. What is your opinion about advertising, sales promotion and public relation activities of the exporting countries?
How do they do it?
- done regularly or occassionally?
- on the wholesale level?
- on the retail level? (hostess, display material, training of shoppersonal? by exporters representatives?
- with personal visits of the retailers by exporters representatives?
- with support of importers advertising campaigns?
- with support of retailers advertising campaigns (e.a. posters, recipes, newspaper advertisement)?
Who is paying the costs?

14. Is an own trade mark important?

15. How do you get information about the expected supplies?
- personal visits of the exporters or by their representatives;
- field trips to view the cultivation in the producing countries.
Who pays these trips?
- marketing board;
- exporters;
- governmental delegates from exporting countries.

16. Is the flow of information limited by:
- too small export firms;
- information policy of exporters;
- language barrier;
- technical difficulties, special in getting short dated information;
- different ideas of varieties and qualities.

17. How is the flow of information with exporters in:
- countries with a marketing board (Israël, Morocco, South-Africa);
- idustrialized countries (Spain incl. The Canaries, the USA);
- centrally planned countries (Bulgaria, Rumania);
- countries like Ivory Coast, Senegal, Kenya;
- other developing countries (Turkey, Eqypt and others).

18. Is it true that countries with a marketing board and industrialized countries have built up an important potential of preferences on their export markets with their marketing activities?

19. Are the other suppliers, especially those in the most of the developing countries in direct competition with the countries with a strong potential of preferences as far as the same produce and seasons are concerned. Must this fact be pointed out clearly enough if the export of horticultural produce in developing countries is to be promoted.

20. What is your opinion about the next statements?
- a thorough knowledge of requirements in the exporting business is necessary;
- punctual deliveries;
- continuity of deliveries;
- uniformity of deliveries;
- sufficient quantities delivered;
- basis of confidence between ex- and importer;
- settlement of customers complaints;
- quality conditions of produce after arrival.

21. Can you tell something about your selling-market?

Appendix 4. Questions for KLM 1):

- What are the airfreight rates for vegetable produce for individual parcels on the following distances?

Athene	Amsterdam
Cairo	Amsterdam
Nairobi	Amsterdam
Dar es Salaam	Amsterdam
Dacca	Amsterdam
Montevideo	Amsterdam
Buenos Aires	Amsterdam

- Idem for products which have a low weight?

- Idem for containertransport and palletized product?

- Is there a relation between distance and the level of rate on air-liners. What kind of relation? Which factors cause differences?

- Are freight-rates equal for alle vegetables, fruits and flowers?

- Which products have special rates? What is the size of the deviation?

- Do you have special rates for certain countries. Which countries?

- Is an insurance against damage obliged?

- Do airfreight rates include insurance?

- Can you make an insurance in addition?

- Are there situations of force majeure (fog, strike, machine damage)?

- Who is paying now?

- What is the responsibility for the KLM and for the shipper?

- Which other costs are involved by air-transport? Costs for clearance, documents, customhouse, hangar facilities and other airport duties?

- Are you able to pay in local currency or do you have to pay in US-Dollars?

- Is paying collect allowed? This means it is possible that the importer pays the transport costs when he receives the products.

1) KLM-Cargo
Cargo Sales Department (Hans, H.A. Tiessen)
KLM the Netherlands
SPL/FQ
Freightbuilding 11
P.O. Box 7700
1117 ZL Schiphol Airport.

Appendix 4. Continuation

- Do you have to pay in advance (cash with order)?
- Are there deductions for customers with regular transport?
- What are the possibilities for charterfleights?
- Is container transport possible on the airfields named in question one?
- Temperature and humidity are two important factors for most horticultural produce. Do you guarantee that the right conditions will be maintained during transport, load and discharge?
- Is cooling only possible with container transport?
- Do you have special wishes considering package?
- Do you advise producers on package and storage not only to keep the products fresh on the airplane but also before (transport from farmer to the airport) and after (airport to wholesaler) the flight.
- Do you help new clients with market research?

Appendix 5. List of participants

Marketing know-how for exporting exotic and out-of-season fresh fruits and vegetables in the European Common Market (1984 en 1985).

Argentina
- Cosme, A. Argerich - Agricultural Engineer
  Culture and Management of Vegetable Crops INTA.
  Estación Experimental Regional Agropecuaria
  Alto Valle de Rio Negro
  C.C. 52
  8332 General Roca (Rio Negro)

Bangladesh
- Md. Makhlesur Rahman - Deputy Director (A.S.C.)
  Bangladesh Agricultural Development
  Corporation (B.A.D.C.) Domrakandi
  Faridpur
  P.O.: Komorpur, Faridpur

Brazil
- Joao D. VIEIRA - Technical Rural Coordinator Banco do Estado de
  São Paulo
  (BANESPA) S.A.
  Rua Commendador Assad Abdalla 25
  01022 - São Paulo SP

Eqypt
- Mrs. Rawia El-Basyouny Ibrahim - Assistant Researcher
  Vegetable Research Department
  Horticultural Research Institute
  Agricultural Reseach Center
  MOA
  El Dokki - Cairo

Egypt
- Mohsein Abd El-Maksoud - Research Assistant
  Vegetable Research Department
  Horticultural Research Institute
  Agricultural Research Centre
  El-Doki, Cairo

Greece
- Mrs. Evangelia Lazarou-Kallinaki - Agriculturist
  Agricultural Research Station of Serres
  Serres

Kenya
- Miss Njeri C. Thumbi - District Crops Officer
  District Agricultural Office
  P.O. Box 32
  Embu

Kenya

- Miss Hellen Jepkerich TOO - Farm Manager
  Garissa Irrigation Unit
  Agricultural Development Corporation
  P.O. Box 47101
  Nairobi

Tanzania

- Gideon N. Nanyaro - Agriculture Training Officer
  Horticultural Research & Training
  Institute Tengeru
  P.O. Box 1253
  Arusha

Uganda

- Mrs. Mary ODEDO - Senior Assistant Agricultural Officer
  Ministry of Agriculture and Forestry
  P.O. Box 911
  Mbale

Uraguay

- Carlos A. Colafranceschi - Teaching and Research Assistant
  Horticultural Division
  Faculty of Agronomy
  Universidad de Republica
  Garzon Avenue 780
  Montevideo

Appendix 6. Addresses of institutions or services responsible for trade promotion in the member states of the European community

1. BELGIUM
   Office Belge du Commerce Exterieur
   World Trade Center
   Boulevard Emile Jacqmain, 162

   1000 BRUXELLES — Tel: 02-219.44.50

2. DENMARK
   Ministry of Foreign Affairs
   Trade Department
   Longangsstrae de 21

   DK - 1468 COPENHAGEN K — Tel: 01-124825

   Export Promotion Denmark
   Halmtorvet 20

   DK - 1700 COPENHAGEN V — Tel: 01-246911

3. FRANCE
   Centre Français du Commerce Extérieur
   10, avenue Iéna

   PARIS 16e — Tel: 525-51-00

4. GERMANY
   Bundesstelle für Aussenhandelsinformation

   5 KOLN 1
   Blaubach 13
   Postfach 108007 — Tel: (0221) 23-30-11

   Ausstellungs- un Messe-Ausschuss der
   Deutschen Wirtschaft e.V. (AUMA)
   Lindenstraat 8

   5 KOLN 1 — Tel: (0221) 21-90-91

5. IRELAND
   Coras Trachtala
   Irish Export Board
   Landstowne House
   Ballsbridge

   DUBLIN 4 — Tel: 69-50-11

6. ITALY
   Instituto Nazionale per il Commercio Estero
   Via Liszt, 21

   EUR - ROMA — Tel: 5992

7. LUXEMBOURG
   Ministère National de l'Economie
   19, avenue de la Porte Neuve

   LUXEMBOURG — Tel: 352-2-19-21

Appendix 6. Continuation

8. NETHERLANDS
Economische voorlichtingsdienst

N 1 DEN HAAG — Tel: 070-81-41-11
Bezuidenhoutseweg 151
Netherland Council for Trade Promotion
Prinses Beatrixlaan 7

DEN HAAG — Tel: 070-81-45-51

Centraal Bureau voor invoer
Ontwikkelingslanden
Coolsingel 58

ROTTERDAM — Tel: 010-13-05-95

9. UNITED KINGDOM
British Overseases Trade Board
1, Victoria Street

LONDON S.W. 1 H OET — Tel: 01-215-78-77

Import Opportunities
Office for Developing Countries
69, Cannon Street

LONDON EC 4 N. 5 AB — Tel: 01-248-44-44