PROMPEX
Lima, Perú

EU Market Study for Fresh Culinary Herbs

Index

1 INTRODUCTION AND METHODOLOGY

The present EU market was carried out in charge the Peruvian Export Promotion Programme (PROMPEX). This study focuses the main importing countries of the EU: Germany, The Netherlands, UK and France and includes the following elements:

- Basic information regarding the requirements for a successful commercial trading venture in conventional (IPM) and organic herb products mainly within the food industrial sector
- Analysis of the market dynamics for the selected herbs
- Evaluation and definition of packing, product quality and transportation requirements and regulations applied to this sector in the EU in general and the above mentioned countries in particular
- Main channels for trade
- Product pricing structures
- Identification of herbs with the most promising market prospects and suited production in Peru
- Main competitors and potential trading partners

Since no former market studies with special focus on fresh herbs within Europe have been carried out during the near past, the study relies on the following sources of information:

- Articles released in trade press (such as Biopress Magazine, Foodnews, ZMP statistics)
- Manuals for trade promotion (released by CBI, PROTRADE, SIPPO etc.)
- Internet data sources
- Interviews with wholesalers, agents and retail traders
- Interviews with producers, processors and consumers
- Screening of selected local markets and points of sale in Germany and the Netherlands

The above mentioned interview partners were in general open for information exchange. Nevertheless, information that importers, traders and manufacturers are rarely willing to provide are purchasing prices, volumes of sales and detailed information about customers. Privacy of this information was respected according to EU law if not given voluntarily.

2 GENERAL SCOPE

Exhaustive studies have been undertaken by several countries in the near past to analyse the general structure and the consumer behaviour in the EU. Some mayor preconditions and important trends in the food sector should be pointed out as mentioned below:

Important long term influences on the European consumers behaviour:

- increasing affluence
- high mobility
- increasing employment rates among women
- less time for family and food preparation
- more self responsible consumption by adolescents
- decreasing size of households (Germany is the largest single market in the EU accounting for 38.8% of turnover, followed by France, the United Kingdom and the Netherlands)

For these reasons, convenience products, prepared and preserved food as well as food consumption out of home had high growth rates during the last 10 years and are also expected to have increasing relevance even for the next years. In Germany the average weekly expenses for food consumption out of home have increased from DM 52,27 in 2000 to DM 56,55 in 2001, while the inflation within this period was 1,9%. During the same time the significance of lettuce and herbs in the range of dishes increased from 12,3 to 12,8%. As shown in the table below, the trend of consumer's behaviour moves towards more fresh and healthy food.

Growth rates of turnover in retail of food (2001 compared to 2000 in %):

products of daily consumption in general	5,1
Fresh food	7,2
Preserved food	6,6
beverages in general	2,7
Non alcoholic beverages	6,6
Alcoholic beverages	0,7
Sweets and snacks	2,5

As a result of several food scares (BSE / mad cow disease, dioxine etc.) consumers also pose questions on the production process and demand open, honest, and informative labelling. This has resulted in a discussion in the fruit and vegetable industry about "tracking and tracing". With good chain management and control within the chain, distributors are able to supervise all kinds of aspects of fresh fruit and vegetables such as plant material, growth, harvest, storage, distribution and processing. The food industry is increasingly paying attention to chain management and labelling systems with which products can be traced back to the producer.

The above mentioned indicators lead to the following trends of consumption in the European Union:

Key Consumption Trends to 2010

- Greater demand for convenience
- More diversity of choice
- Growth of demand for ethnic and exotic ingredients
- Increased demand for organic products
- More ready-cooked, take-out foods
- High growth in private label
- Polarisation of markets (premium and budget)
- Demand for open, honest, and informative labelling

Source: Food Marketing, October 1999

2.1 The conventional market

The world market for imported spices and culinary herbs is large, valued at just over US$ 2.3 billion. Major export products within this sector refer to fresh and dried herbs and spices, among them black pepper, paprika, coriander, cumin, cinnamon, ginger and turmeric. From 1995 to 1999, annual world imports averaged 500,000 tonnes, growing at an average 8.5% a year. The shares of the European Union are estimated at 132.000 t which represents 26,4% of the world market. Although the international trade of dried herbs and spices is far larger than the trade of fresh produce, the high growth rate is considered as an indicator also for the recent increase in consumption of culinary herbs.

Significant changes have occurred in the industry over the past few years. The biggest changes have been in the outlet side where the changes relate to what is being eaten, where it is being eaten, and the form of how it is being eaten. For the production side of the culinary herb industry this has meant significant changes, especially in the standard and form of the product being presented to the buyers.

Total sales continue to rise by around 10 per cent per annum in line with greater demand at retail level and among caterers.

The trade channels for fresh and dried herbs are absolutely different from each other and do not have anything in common. Nevertheless, the few existing statistics for international trade of herbs do not distinguish sufficiently between fresh and dried herbs. Therefore, most data released by official bodies is not a valuable source of information regarding the volumes and product flow for fresh herbs commercialised and consumed within the EU.

2.2 The Organic market in Europe

Retail sales of organic foods were estimated to be worth US$14 billion in Europe for 2000, compared with sales worth US$1.7 billion in 1990.

Predictions by the European Community (EC) strategy review are that this will rise to US$45 billion by 2006 with an expected market share close to 15%, an outcome accepted as both realistic and desirable. In northern Europe, the multiple retailers (supermarkets) represent about 50% of organic food sales, compared with the dominance by health-food shops when the market was in its infancy.

The rate of development of organic markets and organic production varies between countries. Some countries predict enormous movement towards organic products. For example Switzerland expects organic products may account for 30% of the total market in the future. In Denmark and Austria the market share of some organic foods is expected to exceed conventional foods within 10-15 years.

- Germany - largest organic market in Europe
- France - large organic market.
- United Kingdom - expanding market with considerable imports.
- Netherlands - major existing re-export within the EU.

The UK's organic food market increased by 40% to £365 million in 1998/99 and is still the fastest growing market in the EU. Predictions are that the organic sector will increase to 8% of the national food market. Estimates for future sales of organic products in the UK vary, ranging from £2,5 billion in 2004 to aprox. £5 billion by 2006. A number of other EU countries are also reported to have good demand for organic and clean products. These include Italy, France, Sweden, Austria, Denmark and Norway. In Sweden and Denmark, organic food consumption accounts for 3-5% of total national food consumption, in Germany 2,5% and in France 1,5%.

3 MARKET STRUCTURE AND TRENDS FOR FRESH HERBS

3.1 The European market for fresh herbs

The European market for fresh herbs is divided into three main segments:

1. Fresh cut herbs in bulk for manufacturers and processors

For several reasons this segment has a highly increasing relevance.
Manufacturers and processors demand fresh or frozen herbs in considerable volumes.
In eastern Germany, southern France and southern England a small range of agricultural open field production dedicated to the production of parsley and chives in bulk is found as supply of manufacturers and processors for convenience products (preserved, tinned and deep frozen food). The competitiveness of the European producers for this segment is mainly based on low transport costs and subsidies for specialised agricultural production.

2. Fresh cut herbs in retail packs (bunch or bag)

Since the food consumption out of home for working people has increased considerably, caterers, industrial kitchens and restaurants play an increasing role regarding the nutrition habits in Europe.

3. Fresh herbs in pots

Although the offer of fresh herbs in pots increased considerably during the past few years, this had no negative effect on demand and price structure of fresh herbs in bunch. Therefore traders in Europe consider these segments to have parallel demands without a direct competition among each other and low mutual influence.

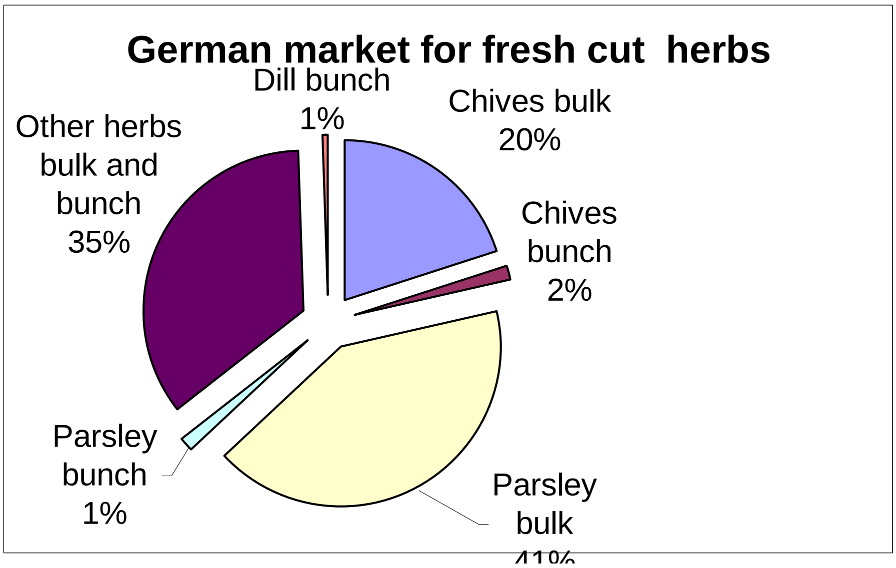
Analysing the market dynamics the following conclusions were made:

- Most buyers place price close to but not at the top of their hierarchy of requirements when buying herbs. They state that price is always relative to quality and what the market will bear.
- For a successful approach of the EU market constantly high quality is required although some criteria especially physical and organoleptic attributes are still lacking uniform standards and are subject to individual interpretation.
- For the off season period buyers do not have an automatic preference for the origin of an imported product.

The British herb market has seen phenomenal growth from commercial catering and food manufacture through to retailing. Fresh sales at retail level alone are now worth over £23.6 million, up 20 per cent on the £19.6 million for the 52-week period ending March 2000 and more than double the £11.3 million of 1999.
Within this, parsley takes the number one slot with a 25 per cent share at £5.9 million, a significant rise of 22 per cent over the previous year. Next comes coriander and basil on £5.1 million and £4.8 million, both rising by more than 40 per cent on the corresponding period in 2000 to hold retail shares of 22 per cent and 20 per cent, respectively. Mint, which ranks as the fourth most popular in Britain, has also seen ongoing expansion, with sales valued at £1.5 million in 2001, as against £1.1 million and £968,000 for the two years before. It holds a 6.3% share, followed by chives on 4.9%. Thyme has seen the biggest rise overall. Fresh retail sales are currently worth

£1.1 million, a 219 % jump over 2000 levels. This herb represents 4.8 per cent of the market, as against 2.9% in 1999.

In Germany the market of fresh cut culinary herbs covers 7% of the fresh vegetable market with an estimated volume approaching 500 tonnes in 2001.

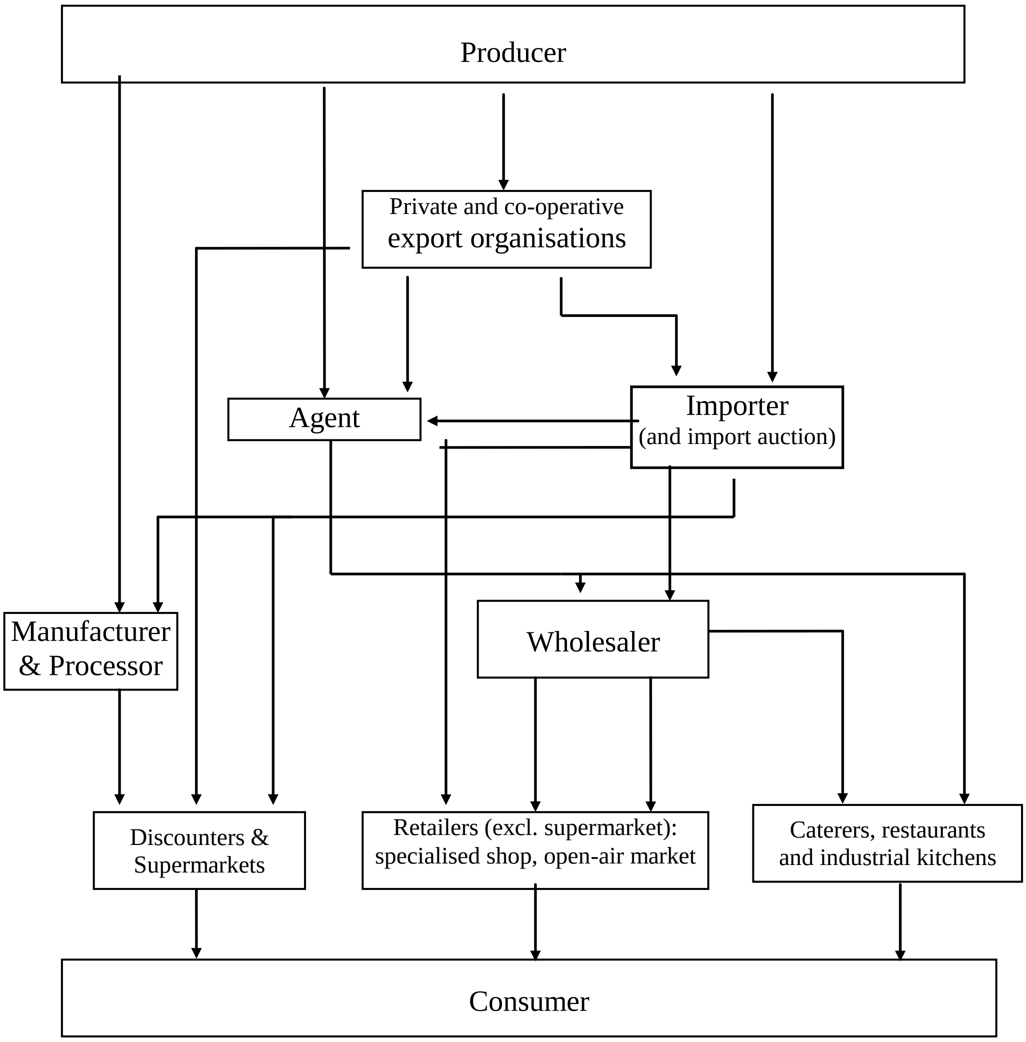


The above shown relation indicates that the few herbs dominate the demand, while all other herbs, traded either in bunch or bulk, cover only one third of the traded volumes. The annual demand of other herbs in bunch is estimated to be less than 2 mt each and even less than 1 mt for the off season. Therefore, statistics for these herbs do not specify detailed data regarding other than the above mentioned herbs.

3.2 Trade channels for fresh cut herbs

The market for fresh herbs has the following basic end-consumers: the traditional home buyer, restaurants, caterers and canteens, manufacturers and processors. While culinary herbs in the form of fresh bunches still go to the first three outlets, product in fresh and frozen bulk go to the latter two.

Figure: Trade channels in the EU for fresh cut herb from abroad



<u>Importers and wholesale market</u>

Most importers of fresh herbs are settled directly at the ports of entry and are permanently present on the main wholesale markets that go along with these ports of entry. Most of the importers are wholesalers at the same time. Merchandise is sold to smaller wholesalers, re-packers and distributors.
Except fresh herbs in bulk, more than 90% of the fresh herbs from import and local production in Europe are traded via wholesale markets for fruits and vegetables. These markets are found in all mayor cities. The most important ones are directly linked to the ports of entry for fresh produce from abroad. Minor wholesale markets and weekly markets are supplied by orders to importers placed at these ports of entry. In Germany a certain trend towards specialisation can be observed regarding

the type and origin of fresh products. More than 50% of the potted herbs (2,5 million units) imported to Germany are traded via Stuttgart. The mayor part of fresh herbs coming from the Italian Riviera is traded via Munich.

The main wholesale markets are:

Germany: Hamburg, Berlin, Frankfurt, Cologne, Munich
France: Paris, Marseille, Le Havre
Netherlands: Amsterdam, Rotterdam
Great Britain: London, Liverpool, Glasgow

The remaining 10% refer to direct supply of supermarket chains by local producer associations and regional or direct marketing of fresh herbs from organic production.

<u>Agents</u>

Since outsourcing has become a successful strategy of enterprise management, agents for supply management have gained an increasing role within the trade channels during the last few years. Their main customers are manufacturers, canteens and industrial kitchens.

<u>Manufacturers</u>
Manufacturers and processors buy either fresh herbs directly from open field production within Europe for immediate processing or blocks of shock frozen herbs in container loads as direct import from abroad for the year through and off season supply.

<u>Caterers, canteens and restaurants</u>
The supply of these consumers is mainly based on daily orders to wholesalers and increasingly also agents for supply management. Usually orders consider boxes with herb volumes between 1 and 4 kg per box in raw bunch or bulk.

<u>Weekly market</u>
At these points of sale conventional retailers who purchase their merchandise from the wholesale market and direct marketers for organic herbs are found. On the weekly markets herbs are sold in pots or bunch only (no pre-packed herbs). Clients are the traditional home user and smaller restaurants.

<u>Supermarkets</u>
Herbs are either purchased as contract supply directly with producer associations or – mainly during off season – from the wholesale market. Most supermarket chains have their own centres or companies for supply organisation. Herbs are ordered daily from these supply centres. Herbs in bunch that are not sold within 24 hours are reduced in price (40 to 50%off).
Supermarket chains rely increasingly on regional marketing. The trend goes from bunch for retail towards pre-packed and labelled herbs, since these are more secure and have labels with barcodes. Although normally a wide of herbs is range is listed in supermarket supply catalogues, the common offer does not exceed 3 to 5 herbs of the main stream: parsley, dill and chives in bunch, hard pack or bag, basil (pots), and rucola (bunch, bag or hard pack).

3.3 Market situation and trends

For products with a longer shelf life such as herbs in pots and shock frozen herbs, the seasons of the northern and southern hemisphere more or less follow each other, or there is partly an overlap of the respective supply periods. It has to be noted, however, that overlapping periods occur more frequently than before. This is due to improved growing techniques and improvement in the storage life of the product. This means that the off-season period, in which the EU is highly dependent on suppliers from outside Europe, is becoming shorter. However, the demand in this period is increasing.

The trend in Bio-food goes towards more fresh products. While the supply by European organic producers during the season of herbs has improved considerably through the last 3-4 years, the off season offers interesting and even increasing potentials for importers from abroad. Growing demand and insufficient supply for organic fresh cut herbs during the period from November through March in the sector characterise the main difference compared to the conventional demand. Except for herbs in pots, several experiences made in the Netherlands, France, Poland and Germany indicate that in northern and central European countries the climatic and economic preconditions are not suitable for an off season (greenhouse) production organic of fresh cut herbs.

3.3.1 Fresh herbs in pots

For fresh herbs in pots stable market volumes for the next few years are expected after growth rates of 6 to 8% during the past 2 years. In this segment a considerable concentration has taken place and producer prices have been declining for up to 30%. The market is shared among few well organised local producer associations like the "Gartenbauzentrale Papenburg e.G." which covers almost 60% the German demand with year through production from conventional and organic origin (EC organic certificate and Naturland label). The "Gartenbauzentrale Papenburg e. G." i. e. offered 30 different herbs in 2002 and increased the list to more than 40 different herbs in pots in 2003.

Monthly average producer prices for potted herbs during the off season period 2001/2002, ZMP Germany:

Pots	October	November	December	January	February	March
All herbs*, Eur/100 pots	44,87	37,07	35,54	41,50	43,79	41,17

* The full range of 20 to 30 different herbs is usually offered at the same price

The availability of certified organic herbs in pots is higher than the current demand. For this reason premium prices paid for organic pots have been declining during the past two years from 40-50 down to 30-35% above the pricing level for conventional pots.

In the UK the situation is similar with an important role of local producers organised in the "British Herb Growers Association". Hazlewood VHB, the UK's largest single supplier of potted herbs holds a 90 per cent share of the British market. The company has witnessed a 30 per cent increase in potted sales year-on-year, while those for fresh cut, taken on board in January 2000, have more than doubled. Recent trends on production level move very much towards diversification. Greater diversity of offer, particularly into specialities, such as cinnamon thyme and Thai basil to name just a few are the current trend also in the UK.

3.3.2 Fresh herbs in bunch

The European market for fresh herbs in bunch is slightly increasing and continuously adopting to a changing demand. Consumers of fresh herbs in bunch are mainly caterers, restaurants and home buyers. The latter is represented by an increasing group of single households that express a demand of small units. Therefore an increasing range of herb is not offered in units less than 50g, although the 50g unit is yet the most common. Most of this home buyers demand is met by supermarkets and in a smaller range by weekly market retailers and natural food shops.
Caterers and industrial kitchens are rather directly supplied by wholesalers and sometimes agents. These consumers prefer larger bunches or purchase boxes of raw bunch (not equalised) or loose herbs per kg in 1-4kg cartons.

It must be pointed out that the sales of single bunches usually do not carry a label. For this reason the size of bunch may vary considerably and it is common among wholesalers to import loose herbs in boxes and bind bunches sizes in convenient relation to the purchase price. During the market study sizes between 40 and 75 g were found in different supermarkets at the same common price of EUR 0,99.

For prices of selected fresh herbs in bunch imported from Israel during the beginning off season 2002/2003 see Annex 7.1.

3.3.3 Fresh herbs in bulk

The largest volumes of fresh herbs are consumed by manufacturers and processors for convenience products (i. e. tinned or deep frozen food). Besides supermarket chains, this segment of the herb market is the far most demanding in quality assurance and certified quality control systems. The market dynamics are influenced by large open field production close to the processing areas and competing offers of shock frozen herbs from abroad (mainly from the USA and China). In addition to low cooling and transport costs the market position of the European producers yet benefits from subsidies for this type of agricultural production. Due to the ongoing policy of the European Commission, these subsidies may be cut down considerably within the next years and the segment may then become even more interesting for exporters from abroad. Fresh and shock frozen herbs of mayor concern in this sector are parsley and chives. While this segment of herb has become of increasing interest for exporters from abroad during the past few years, the demanding side has passed through a considerable process of concentration and is now mainly represented by global players such as Langnese-Iglo, Bonduelle and Frosta.

3.4 Recent development of the organic market for herbs

Most of the European producers of organic herbs in bunch or bulk are small enterprises with an average of 4,7ha open field production. 86% of the organic producers for fresh herb rely on direct marketing through “on farm sales”, weekly markets and natural food shops.

Although the recent developments of the organic markets in Europe (see 2.2) would promise interesting market potentials also for organic herbs, European producers have reacted very soon to the upcoming change of demand.

Although in 2000 the demand for organic parsley, chives, thyme, camomile, and fennel increased considerably, since 2001 the production of certified organic herb in bunch or bulk and especially in pots within the EU during the summer period was even higher than the demand. Even in 2002 part of the organic produce during the period between June and September was sold to conventional outlets.

During the off season the situation is totally different. Due to shortage of supply, caterers, restaurants and smaller retailers have to rely on herbs from conventional origin although they would accept prices between 50 and 100% higher than for conventional herbs. As organic fresh herbs in bunch are rarely found during the off season, price information was available only for the period between June and September, as shown in the table below:

European producer prices for organic fresh herbs in bunch, Germany 2002:

Herb species	Producer price per bunch in direct marketing, June through September (range in Euro):
Dill	0,89 – 0,98
Tarragon	n. a.
Oregano	0,70 - 0,90
Parsley	0,87 – 0,91
Peppermint	0,68 – 0,81
Rosemary	n. a.
Rucola	0,96 – 1,13
Sage	0,71 – 0,80
Thyme	0,76 – 0,94
Melissa	0,71 – 0,83
Chives	0,88 – 0,91
Lovage	0,73 – 0,80

(Sources: Biopress 1/2002, ZMP 2002)

3.5 Production and consumption of fresh herbs in the EU

The production and commerce of fresh culinary herbs is considered as part of the vegetable production. The international HS code classification system does not comprise specific categories for fresh herbs. Therefore most statistics mention fresh cut culinary herbs as items of minor relevance within the sector of vegetables. Within Europe, the main producers of medicinal and culinary herbs are France, Spain and Germany with the following areas under cultivation (2.000):

Europe, total:	70.000 ha
France	25.000 ha
Spain	19.000 ha
Germany	10.800 ha (thereof > 1.100 ha parsley, 600 ha chives, 55 ha dill, 5,5% of the domestic production is certified organic)

The largest British producer, Hazlewood VHB, currently produces 21 acres of herbs, with 17 acres down to potted and four to fresh-cut. This includes investment in a new five-acre unit in October 2000, now in full production. Virtually all crops are grown under organic regimes, with fresh-cut product recently Soil Association certified.

For the consumption of fresh herbs again only general data for the whole sector of fresh vegetables is available The leading country is Germany followed by France, Italy, the UK and Netherlands.

4 IMPORT SITUATION AND COMPETITORS

It is difficult to estimate the total imports of fresh cut herbs into Europe, but it is in excess of 1,300 metric tons annually. The switch to imported herbs usually accompanies the first frosts.

Winter herbs are sourced from Israel, which is dominating the market and represented by the leading supplier Agrexco Ltd. with EU subsidiaries in London, Frankfurt, Madrid, Milan, Paris, Rotterdam and Vienna, offering conventional and organic fresh cut herbs, and the second most important importer Arava Export Growers Ltd., with subsidiaries in Holland and UK, conventional production of fresh cut herbs and recently beginning organic production.

Other exporters of fresh cut herbs to the EU, but with minor relevance only, are from the Canary Islands, Cyprus, Morocco, South Africa, Colombia and Abu Dhabi.

Agrexco Ltd. from Israel is the largest producer of fresh cut culinary herbs world-wide with a production of more than 1.200 tonnes in 2001 and by far the leading off season supplier on the European market. The UK market takes 25 per cent of the Agrexco production, worth some £6.5 million. The rest of Europe takes a further 55 per cent, with gains being achieved in Germany, the Netherlands, France and Belgium. A 20 % share of the company's output of fresh cut herbs is exported to the US. The sales of fresh herbs by the subsidiary in UK have grown by more than 85 per cent over last 5 years. Most of Agrexco's herb exports go directly to the supermarkets, which they are able to supply year-round with consistent quality. Agrexco has supplied aprox. 350 tons of herbs to the U.K. during the 12 month period from April 2000 through March 2001, with winter (November-March) volumes approaching 10 tons per week about double that of summer volumes. The product portfolio runs to over 20 herbs and includes also the selected herbs mentioned under chapter 6. Agrexco's top products in the UK are coriander and mint. On the EU mainland parsley, chives and basil predominate. Mayor gains have been achieved with rucolla and roquette.

Arava Export Growers Ltd. from Israel is the second largest supplier of fresh cut herbs to the EU during the off season, although detailed figures were not available. In 1999 the company started a project for organic production, including fresh cut herbs.

The Israeli production of fresh cut herbs is estimated to exceed 85% of the off season imports to Europe. In contrast to the early 1990s when emphasis of the Israeli companies was on winter offer, now the supply starts shifting to a year-round basis. Main production areas are Israeli settlements in the Jordan Rift Valley. In 2001, Israeli growers were facing rising costs for fuel and labour, which have increased by 11 per cent.

5 REQUIREMENTS AND STANDARDS OF QUALITY AND PACKING

Regarding the product profile, importers point out the following basic criteria as important factors for a satisfactory supply of fresh herb:

- Year through or at least period through availability (i.e. permanent product availability throughout the off season)
- Physical appearance (Variety, size, shelf life etc)
- Organoleptic quality
- Safety (fungal, pesticide, heavy metal and microbiological issues)
- Labelling in accordance to legal requirements
- Packing accordance to common market rules (and legal requirements)
- Price

5.1 Requirements and standards of quality

As the common EU market allows free movement of goods and services, an important aspect of trade in the EU countries is the ongoing harmonisation of rules. Goods produced or imported into one member state can be moved around between the other member states without restrictions. A precondition for this free movement is uniformity in the rules and regulations concerning locally produced or imported products. Work is in progress on uniform regulations in the fields of environmental pollution, health, safety and quality.
Regarding microbiological requirements (defined as Total Plate Count), fungal, heavy metal and pesticide contamination (defined as residues in mg/100g) the EC has established standards for food, these are also applicable to fresh herbs and will form a uniform legal framework for all EU member states after ending the harmonisation process.

Important is to utilise already existing guidelines and standards which are accepted within the leading EU member states like policies and objectives according to the principle of Hazard Analysis and Critical Control points (HACCP). Official regulations for specific quality standards of fresh herbs have not yet been developed. Producer associations and main supermarket chains within the EU have established own but yet no official standards for definition of physical and organoleptic quality.

Good Agricultural Practices (GAP):
The European Herb Growers Association (EUROPAM) completed a draft document of GAP for the cultivation, post harvest handling and transport of herbs (see Annex 7.6). Although these guidelines are not yet a legal framework, the European Commission is interested in including the “Eurepam GAP Guideline” into the Directive GMP for Starting Material.

Good Manufacturing Practices (GMP)
Traders and manufacturers in the EU are increasingly being required to provide GMP certificates for their third country imports of starting material. In this context, the absence of an inspection and certification would be a significant disadvantage in the near future.

In accordance to the individual type and size of production the following certification systems for quality control and food safety are applicable:

- Safety and Quality of Food (SQF) 2000© (basic capabilities of QC for primary production, processing, distribution)
- HACCP Small Scale (for less than 10 employees)
- HACCP Certification (audited standalone system)
- HACCP 9000 (for complex operations)
- Supermarket Quality Management Standards

Since no specific legal framework for the commerce of fresh exists regarding classification, packing and labelling, the same legal framework as for vegetables is used.

5.2 Legal requirements for import of potted herbs

Fresh plants in pots are subject to plant quarantine to prevent a possible invasion of pests which may be inhabiting these plants. It is stipulated that a phytosanitary certificate issued by the authorities of the exporting country is attached to the export documents, that crops are inspected at growing site in exporting country and that these plants are imported through designated ports of entry. Import plants are classified into three categories : 1; Import-banned items, 2; Items subject to quarantine, 3; Items not subject to quarantine. Life plants are mainly shipped by aircraft and are subject to cargo inspection at the port of entry.
As mentioned in chapter 3.3.1, no market potential was identified in the EU for the import of fresh herbs in pots, neither as juvenile plants nor as retail units. The growing import market for such items refers almost exclusively to ornamental plants.

5.3 Transport and Packing

All herbs imported to Europe from abroad are transported by aircraft and require a permanent cooling chain with ventilated cool containers. The period between harvesting through to the arrival at the wholesale market is to be less than 24 hours.
Products are cut and processed on the first day, transported in the late evening or early night and should arrive at the port of destination until 02.00 o clock. The main business on the European wholesale markets is done between 3.30 and 5 o clock early morning. Products are then directly delivered to their points of retail sale such as supermarkets, natural food stores and weekly market or distributed for direct consumption by caterers, industrial kitchens etc. normally before 9.00 o clock.

Except for large volumes of herbs in bulk, all fresh cut herbs are offered in cartons with quantities from 1 to 5kg. For easy handling, the same cartons as for vegetables are used. Research work for improved cooling and ventilation systems of full pallets and longer shelf live is ongoing, but yet no reliable information is available.
Cartons are offered carrying loose or raw bound bunches of herbs for medium scale consumption by caterers and industrial kitchens and retail bunches or perforated polythene or cellophane bags with average size of 40 to 50g. For salads such as mizuna and rucola retail units are larger, the common sizes are 250 and 500g in bags or transparent plastic shapes sealed with perforated cellophane.
On the weekly markets herbs are sold in pots or bunch only (no pre-packed herbs).
As single bunches do not carry a label, the size of bunch (quantity of herb in grams) varies considerably. It is common among wholesalers to import raw, not equalised bunches or loose herbs in boxes and bind bunch sizes in convenient relation to the purchase price. During the market study sizes between 40 and 75 g were found.

The trend for retail packing goes towards smaller units, decreasing from 50g standard bunch to small bags and hard packs of 30 and 40g. While caterers,

restaurants and weekly market retailers prefer the bunch for the reason of lower volume and easy handling, the transparent hard pack avoids the client's direct contact with the product and is for safety reasons more accepted by supermarket chains.
Since the main suppliers of fresh cut herbs offer a range of carton sizes usually between 1 and 4 kg of herbs and different types of retail units along with loose cut herbs, details of packing are subject to permanent individual negotiation between exporter and importer and usually include different types of packing ordered at the same by a single importer.

In UK local growers usually pack their herbs in 2 kilo boxes, with 20-30 bunches per box. Imported herbs generally arrive in Europe in cardboard, plastic-bagged one-kilo boxes, with 10-12 bunches per box. Fresh herbs such as parsely, coriander, basil, chives, mint, dill, rosemary, thyme, tarragon, marjoram and chervel are sold in UK supermarkets in small, resealable, 25-30g polythene packs. Israeli product is packed in 1 kilo boxes, with 10 bunches per kilo and repacking is done by the supermarkets.

Although 1kg cartons with loose herbs and raw bunches predominate as the most frequent units for imported fresh cut herbs and part of it is re-packed within the EU, at least a variety of carton sizes and types of retail or consumer packing (polythene or cellophane bag, raw bunch of 200 to 250g and retail bunch with 50g) need to be offered. Specific negotiations need to consider the conditions and facilities of the ongoing production from the producers side, the exporter's daily demand and the direct link between each other.

6 IMPORTANT HERBS

Regarding the EU market for fresh herbs, the selected crops can be divided into three main categories:

1. Herbs with mayor demand and traded also as commodities in higher volumes in bulk (fresh and shock frozen), in bunch and pots are: Chives, Parsley, Green Basil and Dill. These species represent the main demand of manufacturers, caterers and industrial kitchens and are always found in mayor supermarket chains and on weekly markets.
2. Herbs with minor demand as fresh produce, traded in bunch and/or pots are: Coriander, Mint, Tarragon, Oregano, Rosemary, Thyme, Melissa, Red Basil. Although these products are listed in the catalogues of the main supermarket chains, the orders are limited to less than 50% of the points of sale due to low demand. Even specialised shops for fruits, vegetables and delicatessen hold very limited stocks of these items.
3. Species used as lettuce vegetables: Mizuna, Red Mustard, Rocket and Roccolla (Rucola). Thereof only the two latter ones are of mayor commercial importance while the other two products represent the recent trend of diversification with limited volumes.

As far as available, additional information for some important herbs is listed in the following chapter. As Europe is a common market, the supply faces almost the same conditions of availability for fresh cut herbs in Germany, U.K and The Netherlands during the off season. Except for France, Spain and Italy, where local producers have a longer vegetation period in autumn, the supply situation and off season for each herb is similar. The off season determination and supply situation of herbs not mentioned in statistics was subject to statements of interviewed importers and distributors of conventional and organic fresh cut herbs. Contact information of 3 leading buyers of fresh cut herbs in the 4 main importing countries are found in annex 7.2..

For most EU countries the off season sales of fresh herbs are considered as of low economic relevance and not documented in terms of volumes and prices. Price schedules for the off season period at wholesale level exist only for the German market and even in this case only for the herbs of mayor volumes traded (chives, parsley and dill in bunch and basil in pots). More detailed data about pricing and information regarding the percentage of market share of main competitors for each herb in particular would necessarily be subject to a mayor research work. A screen shot with prices at wholesale and retail level was made in Germany during the market study and is found in annex 7.1.
As all herbs go through the same trade channels the required shelf life for any of the selected herbs is to be presentable in general during 4 days at least, thereof max. 24 hours for processing, transport and delivery to the point of retail sale or processing as detailed under chapter 5.3, 36 hours in shelf (thereof the last 12 hours with reduced price) and minimum 36 hours for household consumption.

6.1 Chives

Latin name: *Allium schoenoprasum* L.

Characteristics: Commodity within the sector of herbs, for high quality production long and thick, medium to dark green leaf required

Off season: End of November to March

Main Competitor: Agrexco Ltd.
For fresh cut chives the preconditions in the Near East are not ideal, the company has become the leading off season supplier due to a 12 year intensive work in selection of varieties and improvement of production techniques.

Rate demand[1]: Conventional market: 3
Organic market: 3

Main market: Germany

Off season producer prices for chives 2001/2002, monthly average:

	October	November	December	January	February	March
Large vol. Bulk, Eur/t	590,56	619,8	n.a.	n.a.	807,94	n.a.
EUR per 100 bunch (50g each)	15,37	18,64	17,83	20,03	23,42	17,59

(Source: ZMP Germany, 2002):

Packing:

- 5 raw bunch á 200g in 1kg carton
- 20 bunch á 50g in 1kg carton, 40 bunches in 2kg carton
- 40 polythene bags á 50g in 2kg carton
- Unbound in 4 kg carton
- Recent trend towards 40g hard pack for supermarkets

[1] 1 being oversupplied, 2 being balanced market, 3 supply shortage

6.2 Parsley

Latin name: *Petroselinum crispum* (Mill.) ex. A.W. Hill ssp. *crispum*

Characteristics: Traders and consumers distinguish between two different types of parsley: Varieties with smooth, even leaf and varieties with curl leaf (curly parsley). The two types have different uses and a parallel demand, the price and packing for both types is the same.
Parsley is the most important commodity among fresh herbs besides chives.

Off season: December to end of March

Main Competitor: Agrexco Ltd
In small scale green house production from EU countries

Rate demand: Conventional market: 2
Organic market: 3

Main market: Germany

Off season producer prices 2001/2002, monthly average:

	October	November	December	January	February	March
Large vol. Bulk, Eur/t	73,26	94,21	92,13	n.a.	n.a.	n.a.
EUR per 100 bunch (50g)	17,61	17,66	21,06	29,41	30,86	31,02
Quantity bunch sold	11.377	11.148	9.964	7.969	7.799	9.623

(Source: ZMP Germany, 2002)

Packing:

- 5 raw bunch á 200g in 1kg carton
- 20 bunch á 50g in 1kg carton, 40 bunches in 2kg carton
- 40 polythene bags á 50g in 2kg carton
- Unbound in 3 kg carton

6.3 Green Basil

Latin name: *Ocimum basilicum* L.

Characteristics: Improved and cold tolerant varieties with large leaf required. The product is the most sensitive herb regarding handling, storage and shelf life. For this reason Basil is offered more often in pots than in bunch and small end users have adopted their habits to this situation. Anyway, pots are very inconvenient for caterers and restaurants and there is also a demand for bunch and loose herb in boxes.

Off season: November to March

Main Competitors: Agrexco Ltd., aprox 50%
Gartenbauzentrale Papenburg, aprox. 35%

Main market: UK and Germany

Rate demand: Conventional market: 2
Organic market: 3

Packing:

- 5 raw bunch á 200g in 1kg carton
- 20 bunch á 50g in 1kg carton, 40 bunches in 2kg carton
- 40 polythene bags á 50g in 2kg carton
- Unbound in 3 kg carton

6.4 Red Basil

Latin name: *Ocimum basilicum* L.

Characteristics: Coloured variety of the above mentioned basil, used mainly by caterers and gourmet restaurants. Typical product of diversification.

Off season: November to March

Main Competitor: Agrexco Ltd

Packing:

- 5 raw bunch á 200g in 1kg carton
- 20 bunch á 50g in 1kg carton, 40 bunches in 2kg carton
- 40 polythene bags á 50g in 2kg carton
- Unbound in 3 kg carton

Rate demand: Conventional market: 2
Organic market: 3

Packing:

- 5 raw bunch á 200g in 1kg carton
- 20 bunch á 50g in 1kg carton, 40 bunches in 2kg carton
- 40 polythene bags á 50g in 2kg carton
- Unbound in 4 kg carton

6.5 Dill

Latin name: Anethum graveolens L. var. hortorum

Characteristics: Improved varieties for short stems and high foliage production available.

Conv. market: Commodity (fresh in bunch and bulk, small market for shock frozen). Recent improvement of varieties regarding cold tolerance have the EU production period and decreased the off season.

Off season: December to March

Main Competitor: Agrexco Ltd >70%
Small quantities from Italy and Spain

Rate demand: Conventional market: 2
Organic market: 3

Off season wholesale prices for dill 2001/2002, (Source: ZMP Germany, 2002):

	October	November	December	January	February	March
Bulk, Eur/mt	225,56	159,78	153,40	678,33	n.a.	n.a.
EUR/100 bunch (50g)	17,20	17,92	24,04	31,31	33,34	22,55

Packing:

- 5 raw bunch á 200g in 1kg carton
- 20 bunch á 50g in 1kg carton, 40 bunches in 2kg carton
- 40 polythene bags á 50g in 2kg carton
- Unbound in 3 kg carton
- Recent trend towards 40g hard pack for supermarkets

6.6 Coriander

Latin name: *Coriandrum sativum* L.

Characteristics: Besides the traditional coriander for seed production a wide range of improved varieties for leaf production is available.

Main Market: GB
Since coriander is a basic ingredient of many Asian dishes, turnover is high only in places where large numbers of Asian immigrants reside (Birmingham and Bradford).

Rate demand: Conventional market: 3
Organic market: 3

Packing:

- 5 raw bunch á 200g in 1kg carton
- 20 bunch á 50g in 1kg carton, 40 bunches in 2kg carton
- 40 polythene bags á 50g in 2kg carton
- Unbound in 3 kg cartonMint

6.7 Melissa

Latin name: *Melissa officinalis* L.

Characteristics: Wide range of varieties for large leaf and high foliage production available.

Off season: November to early April

Main Competitor: Agrexco Ltd

Rate demand: Conventional market: 2
Organic market: 3

Packing:

- 5 raw bunch á 200g in 1kg carton
- 20 bunch á 50g in 1kg carton, 40 bunches in 2kg carton
- 40 polythene bags á 50g in 2kg carton
- Unbound in 3 kg carton

6.8 Mint

Latin name: Mentha spicata L. (Spearmint)
Menta x piperita L. (Peppermint)

Characteristics: On the fresh herb market the specification “mint” refers to spearmint (Menta spicata). A parallel market exists for peppermint (M. piperita). A wide range of varieties and hybrids for high percentage of oil and foliage production is available for agricultural production.

Main Market: United Kindom

Off season: Early November to March

Main Competitor: Agrexco Ltd

Rate demand: Conventional market: 3
Organic market: 3

Packing:

- 5 raw bunch á 200g in 1kg carton
- 20 bunch á 50g in 1kg carton, 40 bunches in 2kg carton
- 40 polythene bags á 50g in 2kg carton
- Unbound in 3 kg carton

6.9 Oregano

Latin name: Several species used, among them *Origanum syriacum, O. hirtum, O. vulgaris, O. creticum* and *O. heracleoticum*

Characteristics: No registered varieties available, Greek and Turkish origins are most recognised for good quality and high essential oil.

Off season: November to early april

Main Competitor: Agrexco Ltd

Rate demand: Conventional market: 2
Organic market: 3

Packing:
- 5 raw bunch á 200g in 1kg carton
- 20 bunch á 50g in 1kg carton, 40 bunches in 2kg carton
- 40 polythene bags á 50g in 2kg carton
- Unbound in 3 kg carton

6.10 Rosemary

Latin name: *Rosmarinum officinalis* L.

Characteristics: Apart from cultivation rosemary is still gathered from the wild in Mediterranean countries. For this reason, no may efforts have yet been undertaken to register improved varieties. Types with long leaf and strong odour (high percentage of oil) are preferred.

Off season: November to April

Main Competitor: Agrexco Ltd

Rate demand: Conventional market: 2
Organic market: 3

Packing:
- 5 raw bunch á 200g in 1kg carton
- 20 bunch á 50g in 1kg carton, 40 bunches in 2kg carton
- 40 polythene bags á 50g in 2kg carton
- Unbound in 3 kg carton

6.11 Tarragon

Latin name: *Artemisia dranunculus* L.

Characteristics: Two types of the same species with different characteristics are distiguished in the market: French tarragon (more aromatic and higher price) and German tarragon (more resistant to cold climate).

Off season: November to April

Main Competitor: Agrexco Ltd

Rate demand: Conventional market: 2
Organic market: 3

Main market: UK

Packing:
- 5 raw bunch á 200g in 1kg carton and 20 bunch á 50g in 1kg carton
- 40 polythene bags á 50g in 2kg carton
- Unbound in 4 kg carton

6.12 Thyme

Latin name: *Thymus vulgaris* L.

Characteristics: Different varieties including specialities such as Lemon thyme available. Larger growing varieties with good volume of foliage and high percentage of oil preferred

Off season: October to April

Main Competitor: Agrexco Ltd

Rate demand: Conventional market: 2
Organic market: 3

Packing:
- 5 raw bunch á 200g in 1kg carton
- 20 bunch á 50g in 1kg carton, 40 bunches in 2kg carton
- 40 polythene bags á 50g in 2kg carton
- Unbound in 3 kg carton

6.13 Rucola

Latin name: *Rucola silvatica*

Characteristics: The term rucola and is often translated to the English as rocket. For this reason most wholesale and retail traders consider them to be the same and usually offer either one of them. Rucola has recently become a terrific green. In the UK the alternative name of arugula has recently become more popular is less confusing.

Main market: Germany

Rate demand: Conventional market: 3
Organic market: 3

Off season: October to February

Main Competitor: Agrexco Ltd, small quantities from Italy
Organic market: 3

Off season wholesale prices for rucola 2001/2002, (Source: ZMP Germany, 2002):

	October	November	December	January	February	March
EUR per 1kg carton bunch (50g)	10,30	9,50	11,60	12,80	8,50	4,80

Packing:
- 20 bunch á 50g in 1kg carton
- 500g (GB: 1 lbs.) in transparent hard pack, sealed with perforated polythene

6.14 Rocket

Latin name: *Eruca sativa* L.

Characteristics: Rocket has round or slightly oval leaves, shorter than rucola, with small tiny teeth. Eruca sativa bears a small range of improved but yet not officially registered or protected varieties

Main Market: UK
It is rarely found in France and the Netherlands. In Germany is not found at all for the above mentioned reason. Instead (Valeriana locusta), named “Rapunzel” or “Feldsalat” in german, a traditional and quite cold tolerant salad is available on the German market.

Rate demand: 2

Off season: November to March

Main Competitor: Agrexco Ltd, small quantities from Italy

Packing:
- 20 bunch á 50g in 1kg carton
- 500g (GB: 1 lbs.) in transparent hard pack, sealed with perforated polythene

6.15 Mizuna

Latin name: *Brassica rapa*

Characteristics: The following varieties are used in a very small range as salads for Asian dishes: Brassica rapa var. japonica and B. rapa var. nipposinica. No improved and registered varieties for agricultural production are available.
Mizuna is yet quite unknown on the European market and available only on very few specialised points of sale. The demand is limited to selected gourmet restaurants. Mayor efforts of sales promotion will be required to increase its popularity and to get mizuna listed on the purchasing catalogues of supermarket chains, caterers and industrial kitchens.

Main Demand: UK

Rate demand: 3

Off season: November to March

Main competitors: Fresh Guernsey Herbs Ltd., (under glass during the off season)
Agrexco Ltd

Prices: As the off season trade is very limited, no reliable sources of price are available.

Packing:

- 20 bunch á 50g in 1kg carton
- 500g (GB: 1 lbs.) in transparent hard pack, sealed with perforated polythene

6.16 Red Mustard

Latin name: Sinapeum rubeum

Characteristics: The tender leave is used by few gourmet restaurants and caterers as lettuce, sauces and decoration.

Main demand: UK

Rate demand: n.a.

Off season: November to March

Main competitors: Fresh Guernsey Herbs Ltd., (under glass during the off season)
Agrexco Ltd

Packing:

- 20 bunch á 50g in 1kg carton

Retail price: Wholesale: n. a.
Retail : EUR 1.60 – 1.90/bunch
£ 5,00/500g in hard pack

7 ANNEXES
7.1 Market data

Wholesale prices for herbs in bunch, origin: ISRAEL, off season 2002/3
These prices comprise c+f price Munich plus wholesale margin.
(All prices in EURO/kg without sales tax)

Herb	1 kg box standard*	1 kg box 20x50g	2 kg box 40x50g bag	bulk in 3 kg box	bulk in4 kg box
Basil green	9,60	10,60	12,00	9,30	
Basil red	9,60	10,60	12,00		9,30
Savory	9,60	10,60	12,00	9,30	
Borage	8,40				6,66
Dill	7,40	8,30	10,80	7,15	
Tarragon	9,70	10,55	12,00	9,40	
Chervil	8,75	9,75	12,00	8,40	
Coriander	7,95	8,35	11,50	7,45	
Lovage	9,10	10,10	12,00		8,80
Marjoram	9,55	10,55	12,00	9,30	
Mint	9,10	10,10	12,00	8,90	
Oregano	9,05	10,05	12,00	8,75	
Parsley	7,10	8,00	11,00	6,70	
Peppermint	9,10	10,10	12,00		8,90
Burnet	8,50	9,50		9,20	
Rosemary	9,10	10,10	12,00	8,55	
Rucola wild	7,60	8,60	11,00	7,40	
Sage	9,60	10,60	12,00	9,30	
Sorrel	8,70	9,70	12,00	8,10	
Chives	11,10	12,10	12,90		10,15
Garlic	11,10	12,10	12,90	10,15	
Thyme	9,10	10,10	12,00	8,75	
Lemon grass	8,10				
Lemon balm	9,60	10,60	12,00	9,25	
Lemon thyme	9,60	10,60	12,00	9,25	

*Standard = raw bunch of aprox. 200g (5 per box), not prepared as retail units (not rebound)

Retail prices, German weekly open market in Euro / bunch or pot (september 2003):

Herb species	bunch 50g	pots
Basil, green	0,95	2,00
Basil, red	0,95	-
Chives	0,95	1,70
Coriander	0,95	-
Dill	0,95	-
Melissa	0,95	2,00
Mint (*M. piperita*)	n. a.	2,00
Oregano	0,95	-
Parsley	0,95	-
Rocket	-	-
Ruccolla	0,95	-
Rosemary	0,95	2,00
Tarragon	0,95	-
Thyme	0,95	2,00
Mizuna	-	-
Red mustard	-	-

Retail prices, German Rewe supermarket chain, in Euro / bunch or pot (september 2003):

Herb species	bunch 50g	pots
Basil, green	-	1,99
Basil, red	-	1,99
Chives	0,79	-
Coriander		1,99
Dill	0,79	-
Melissa		1,99
Mint (M. piperita)		1,99
Oregano		1,99
Parsley	0,79	-
Rocket	-	-
Ruccolla (100g)	1,39	-
Rosemary		1,99
Tarragon		1,99
Thyme		1,99
Mizuna	-	-
Red mustard		-

Availability of selected fresh herbs on wholesale market Hanover, Oct. 2002:

Herb species	Conventional	Organic*
Basil, green	X	-
Basil, red	X	-
Chives	X	-
Coriander	X	-
Dill	X	-
Melissa	X	-
Mint	X	-
Oregano	X	-
Parsley	X	-
Rocket**	-	-
Ruccolla**	X	-
Rosemary	X	-
Tarragon	X	-
Thyme	X	-
Mizuna	n. a.	n. a.
Red mustard	n. a.	n. a.

Availability of selected fresh herbs on weekly market, Osnabrueck, Oct. 2002:

Herb species	Seasonal offer conventional	Seasonal offer organic*	Off season offer conventional (IPM)	Off season offer certified organic*
Basil, green	X	X	X	X
Basil, red	occasionally	occasionally		
Chives	X	X	occasionally	occasionally
Coriander	X	-		
Dill	X	X	X	
Melissa	X	X		
Mint	X	-		
Oregano	X	X		
Parsley	X	X	X	X
Rocket**	-	-		
Roccolla**	X	X	occasionally	
Rosemary	X	X		
Tarragon	X	X		
Thyme	X	X		
Mizuna	-	-		
Red mustard	-	-		

*The supply situation for organic fresh herbs in october is mainly based on supply from local origin. These producers rely on direct marketing.

**Rocket and Roccolla (Rucola) are considered substitutional products. Most dealers have either of these. While Roccolla is predominating in Germany and France, Rocket is more common in the UK and sometimes also found in the Netherlands.

7.2 Addresses of importers

7.2.1 Germany

EDEKA Fruchtkontor GmbH
Address: Amsinckstr. 66, 20079 Hamburg, Germany
Telephone: + 49 (0) 40 302090
Fax: + 49 (0) 40 30209260
E-mail: info@edeka.de
Internet: www.edeka.de

Neumann Import
Großmarkt
Thalkirchener Str. 81
81371 München, Germany
Telephone: + 49 (0) 89 762086
Fax: + 49 (0) 89 7253106

REWE Zentral AG
Address: Domstrasse 20, 50668 Cologne, Germany
Telephone: + 49 (0) 221 1490
Fax: + 49 (0) 221 1499000
Internet: www.rewe.de

7.2.2 THE NETHERLANDS

Albert Heijn BV
major supermarket chain
Address: P.O. Box 3000, 1500 HA Zaandam,
The Netherlands
Telephone: + 31 (0) 75 6599111
Fax: + 31 (0) 75 6313030
Internet: www.ah.nl

Anaco BV
Address: P.O. Box 830, 2678 ZZ De Lier,
The Netherlands
Telephone: + 31 (0) 174 514940
Fax: + 31 (0) 174 517970
E-mail: info@anaco.nl
Internet: www.anaco.nl

BUD HOLLAND B.V.
P.O. Box 411
NL - 3140 AK Maassluis
Transportweg 67
NL - 3155 RJ Maasland
Tel. +31 (0) 174 53 53 53
Fax +31 (0) 174 51 39 12
E-mail: exotics @bud.nl Nico de Jong BV

7.2.3 FRANCE

AZ France S.A.
Address: 18-28, rue du Puits-Dixme, 94320 Thiais
Cedex, France
Telephone: + 33 (0) 1 41803333
Fax: + 33 (0) 1 46862316
E-mail: commercial@azfrance.fr

Georges Helfer S.A.
Address: 1, rue des Tropiques, Entrepôt 133, Bât I-7,
94538 Rungis, France
Telephone: + 33 (0) 1 45123650
Fax: + 33 (0) 1 45604852
E-mail: helferfrance@gofornet.com

Pomona
Address: 21, rue du Pont-Neuf, 75001 Paris Cedex 01,
France
Telephone: + 33 (0) 1 40283000
Fax: + 33 (0) 1 40265895
Internet: www.pomona.fr

7.2.4 UNITED KINGDOM

ASDA Stores *(major supermarket chain)*
Address: Asda House, Great Wilson, Leeds LS11 5AD,
United Kingdom
Telephone: + 44 (0) 113 2435435
Fax: + 44 (0) 113 2418666
Internet: www.asda.co.uk

Mack Multiples Division
Address: Tranfesa Road, Paddock Wood, Kent TN12
6UT, United Kingdom
Telephone: + 44 (0) 1892 835577
Fax: + 44 (0) 1892 831255
E-mail: head.office@mwmack.co.uk
Internet: www.mwmack.co.uk

J. Sainsburys PLC *(major supermarket chain)*
Address: Stamford House, Stamford Street, London
SE1 9LL, United Kingdom
Telephone: + 44 (0) 20 76956000
Fax: + 44 (0) 20 76957210
Internet: www.sainsburys.co.uk

7.3 TRADE FAIRS

GERMANY

ANUGA
Frequency: biennial (2003 Cologne)
Organisation: Kölner Messe
Address: Messeplatz 1, 50679 Cologne, Germany
Telephone: + 49 (0) 221 821 0
Fax: + 49 (0) 221 821 2574
E-mail: anuga@koelnmesse.de
Internet: www.koelnmesse.de/anuga

BIOFACH
Frequency: Anual (2003 Nuremberg)
Organisation: Rottner & Sunder
Internet: www.Biofach.de

FRANCE

Salon International de L'Alimentation (SIAL)
Frequency: biennial (2002 Paris)
Organisation: Salon International de l'Alimentation
Address: 1 Rue du Parc, 92593 Levallois-Perret Cedex, France
Telephone : + 33 (0) 1 49685498
Fax : + 33 (0) 1 49685632
E-mail: sial@sial.fr
Internet: www.sial.fr

THE NETHERLANDS

AGF-Totaal
Frequency: biennial (2003 Rotterdam)
Organisation: Ahoy' Beurzen BV
Address: P.O. Box 5106, 3008 AC Rotterdam, The Netherlands
Telephone: + 31 (0) 10 293 3300
Fax: + 31 (0) 10 293 3399
E-mail: info@agftotaal.nl
Internet: www.agftotaal .nl

UNITED KINGDOM

IFE
Frequency: biennial (2003 London)
Organisation: Fresh RM
Address: 11 Manchester Square, London W1U 3PL, United Kingdom
Telephone: + 44 (0) 20 7886 3100
Fax: + 44 (0) 20 7886 3091
E-mail: ife@freshrm.co.uk
Internet: www.ife.co.uk

7.4 EU BUSINESS SUPPORT ORGANISATIONS

AUSTRIA
Austrian Federal Economic Chamber
Address: P.O. Box 150, A-1045 Vienna, Austria
Telephone: + 43 (0) 1 50104194
Fax: + 43 (0) 1 50105
E-mail: awo.ebiz-online@wko.at
Internet: www.wk.or.at

DENMARK
Danish Import Promotion Office for Products from Developing Countries (DIPO)
Address: Danish Chamber of Commerce, Børsen, 1217
Copenhagen K, Denmark
Telephone: + 45 (0) 33 950500
Fax: + 45 (0) 33 120525
E-mail: dipo@commerce.dk
Internet: www.dipo.dk

Germany
BfAI, Federal Office of Foreign Trade Information
Address: P. O. Box 100522, 50455 Cologne, Germany
Telephone: + 49 (0) 221 2057-0
Fax: + 49 (0) 221 2057-212
E-mail: info@bfai.com
Internet: www.bfai.com

ITALY
ICE
Italian National Institute for Foreign Trade
Address: Via Liszt 21, 00144 Rome, Italy
Telephone: + 39 06 59921
Fax: + 39 0659926900
E-mail: ice@ice.it
Internet: www.ice.it

THE NETHERLANDS
CBI, Centre for the Promotion of Imports from developing countries
Address: P.O. Box 30009, 3001 DA Rotterdam, The Netherlands
Telephone: + 31 (0) 10 2013434
Fax: + 31 (0) 10 4114081
E-mail: cbi@cbi.nl
Internet: www.cbi.nl

NORWAY
Norwegian Agency for Development Co-operation (Norad)
Address: Tolbugaten 31, P.O. Box 8034 Dep, 0030
Oslo, Norway
Telephone: + 41 (0) 22 242030
Fax: + 41 (0) 22 242031
E-mail: postmottak@norad.no
Internet: www.norad.no

SWEDEN
Swedish International Development Co-operation Agency - Department for Infrastructure & Economic Cooperation (SIDA)
Address: Sveavägen 20, S-105 25 Stockholm, Sweden
Telephone: + 46 (0) 8 6985000
Fax: + 46 (0) 8 6208864
E-mail: info@sida.se
Internet: www.sida.se

7.5 OTHER SOURCES OF INFORMATION

Zentrale Markt- und Preisberichtstelle (ZMP)
Stavanger Str. 21
10439 Berlin
Tel. +49 - (0) 30 - 44 67 98 - 0
Fax. +49 - (0) 30 – 44 59 074
Mail: Dr.Andreas.Schwierz@zmp.de

Deutscher Fruchthandelsverband e.V.
Contact: Dipl.-Volksw. Ulrich Boysen
20097 Hamburg
Banksstr. 28
Tel. 040 / 3232 55 0

Fax. 040/ 3232 55 15

EurepGap
(European retailers' organisation for the promotion of good agricultural practice)
Address: P.O. Box 190209, D-50499 Cologne, Germany
Telephone: + 49 (0) 221 5799325
Fax: + 49 (0) 221 5799345
E-mail: info@foodplus.org
Internet: www.eurep.org

ITC's weekly Market News Service bulletin on Spices, Spice Herbs and Seeds
International Trade Centre UNCTAD/WTO (ITC)
Address: Palais des Nations, P.O. Box 10, 1211 Geneva 10, Switzerland
Telephone: + 41 (0) 22 7300111
Fax: + 41 (0) 22 7334439
E-mail: itcreg@intracen.org
Internet: www.intracen.org

Technical information:
Antony Sandana, ITC Senior Commodity Officer
ITC Geneva, Switzerland
Mail: sandana@intracen.org

www.freshinfo.com
The web site of the magazine Fresh Produce Journal provides daily news, information on events and an archive of news and features plus world produce data.
Also contains an on-line fresh produce industry marketplace.
(Language: English)

http://apps.fao.org/page/collections?subset=agriculture
This Internet site contains the statistical database of the FAO (Food and Agriculture Organization). It offers detailed information on production, imports and exports of several kinds of fruit and vegetables.
(Language: English, French, Spanish, Arabic, Chinese)

www.ifoam.org
Web site of the International Federation of Organic Agriculture Movements. Information on fairs, projects, events, regulations, reports and magazines on organic agriculture. Also provides links to other international organisations and databases including a collection of Country Reports on Organic Agriculture.
(Language: English).

europa.eu.int/comm/food/index_en.html
Web site of the European Union, with practical information on food safety and direct links to pesticide regulations, food labelling and many other food safety issues.
(Language: Spanish, Danish, German, Dutch, English, French, Italian, Finnish, Swedish).

7.6 GAP Guidelines for herbs

Guidelines for Good Agricultural Practice (GAP) of Medicinal and Aromatic Plants

EUROPAM

General Remarks

Introduction

0.1 Scope. The guidelines for »Good Agricultural Practice of Medicinal and Aromatic Plants« are intended to apply to the growing and primary processing of all such plants as traded and used in the European Union. Hence, they apply to the production of all plant Materials used in the food, feed, medicinal, flavouring and perfumery industries. They also apply to all methods of production including organic production in accordance with the European Union regulations.

0.2 Those farmers involved in the production of medicinal and aromatic plants should ensure that damage to the existing wildlife habitats is avoided and that efforts are made to maintain and enhance the biodiversity of their farms. It is advisable to regulate wild gathering by a specific guideline.

0.3 The present Good Agricultural Practice guidelines provide additional standards for the production and processing of raw Materials insofar as they mainly focus on identifying those critical production measures that are necessary in contributing to good product quality. In this respect, an attempt will be made to minimise insufficient quality by prevention means.

0.4 The main aim of GAP guidelines is to ensure that the plant raw inateria,1 meets the demands of the consumer and thus fulfills high quality standards. It is therefore important that they:

- are produced hygienically, in order to reduce microbiological load to a minimum,
- are produced with care, so that negative effect on plants in the course of cultivation, processing and storage is limited.

Since medicinal and aromatic plants and their products are exposed to a large, number of microbiological and other contaminants in the course of the production process, the main aim of the present guidelines is to provide guidance for producers to reduce this plant raw material contamination to the lowest possible minimum.

0.5 All participants in the production process (from primary producers to traders) are required to comply with these guidelines voluntarily and to develop practical measures in order to realise them.

Producers, traders and processors of medicinal and aromatic plants, especially of tea-related and herbal medicinal products, should comply with the GAP guidelines, document their products by a way bill (batch documentation) and demand that their partners also adhere to these requirements.

Principles and Guidelines for Good Agricultural Practice (GAP)

1. Seeds and propagation material

1.1 Seeds in use are to be identified botanically, indicating
plant variety, cultivar, chemotype and origin'. The material used should be 100 % traceable. The same applies to vegetatively propagated parent material. Parent material used in organic production has to be certified as authentically organic.

1.2 The parent material should meet the requirements/standards concerning purity and germination (where available: certified seed/propagation material should be used). The parent material should be as free as possible from pests and diseases in order to guarantee healthy plant growth. If resistant or tolerant species or origins are available, they should be preferred.

1.3 The occurrence of plants and plant parts that are not species/variety identical has to be controlled in the course of the entire production process (cultivation, harvest, drying, packaging). Any impurities have to be eliminated promptly. Plant materials or seeds derived from or comprising genetically modified organisms have to comply with national and European Union regulations.

2. Cultivation

2.1 Depending on the method of cultivation e.g. conventional or organic, growers should be allowed to follow different »Standard Operating Procedures« for cultivation (to be elaborated). In general, care should be taken to avoid environmental disturbances. The principles of good crop husbandry must be followed including an appropriate rotation of crops.

2.2 Soil and Fertilisation

2.2.1 Medicinal and aromatic plants should not be grown in soils that are contaminated by sludge. Furthermore, soils should not be contaminated by heavy metals, residues of plant protection products and any other unnatural chemicals. It should therefore be endeavoured to apply the use of chemical products with as minimum negative effect as possible.

2.2.2 The manure applied should be void of human faeces and be thoroughly composted prior to application.

2.2.3 All other fertilizing agents should be applied sparingly and in accordance with the demands of the plant and the particular species (including application between harvests). The use of fertilizers should be in accordance with efforts to minimize leaching.

2.3 Irrigation

2.3.1 Irrigation should be minimized as much as possible and only be applied according to the needs of the plant.

2.3.2 Water used for irrigation should comply with national and European Union quality standards and be as free as possible from contaminants, such as faeces, heavy metals, pesticides, herbicides and toxicologically hazardous substances.

2.4 Crop maintenance and plant protection

2.4.1 Tillage should be adapted to the growth and requirements of plants.

2.4.2 Pesticide and herbicide application should be avoided as far as possible. When necessary, they should be carried out using the minimum effective rates of approved plant protection products. Products for chemical plant protection have to conform with the European Union's maximum residue limits (European Pharmacopoeia, European Directives, Codex Alimentarius). Application and storage of plant protection products have to be in conformity with the regulations of manufacturers and the respective national authorities.

The application should only be carried out by qualified staff using approved equipment. Application should precede the harvest by a period either defined by the buyer or indicated by the producer of the plant protection product.

The use of pesticides and herbicides has to be documented.

2.4.3 All measures regarding nutrient supply and chemical plant protection, should secure the marketability of the product. It is obligatory that the buyer of the batch be informed of the brand, quantity and date of pesticide use in written form.

3. Harvest

3.1 Harvesting should take place when the plants are of best possible quality, according to their different utilisations.

3.2 Harvesting should preferably take place under the best possible conditions (wet soils, dew, rain or exceptionally high air humidity can be unfavourable). If harvesting is done under wet conditions, extra care should be taken in order to avoid the unfavourable influence of moisture.

3.3 Equipment should be kept in clean and technically perfect working condition. Those machine parts, including their housing, that have direct contact with the harvested crop should be regularly cleaned and kept free of oil and other contaminants (including plant left-overs).

3.4 Cutting devices of harvesters must be adjusted so that their collection of soil particles is reduced to a minimum.

3.5 In the course of harvesting, care should be taken to ensure that no toxic weeds are mixed with the harvested crop.

3.6 Damaged and perished plant parts must be promptly sorted out.

3.7 All containers used in the harvest must be cleaned and kept free of the remnants of previous crops: containers not in use, must also be preserved in a dry condition, free of pests and inaccessible to mice/rodents as well as livestock and other domestic animals.

3.8 The harvested crop should not come into direct contact with the soil. It must be promptly collected and submitted to Transport under dry and clean conditions (by use of sacks, baskets, trailers, containers, etc.).

3.9 Mechanical damage and compacting of the crop that may result in undesirable quality changes must be avoided. In this respect, attention must be paid in ensuring that

- the sacks are not overfilled,
- the stacking up of sacks does not result in thickening of the crop,
- the harvested crop is transported and kept in containers or bags in such a way that the occurrence of heating up is prevented.

3.10 Delivery of freshly harvested plant material to the processing facility must occur- as quickly as possible in order to prevent its heating up.

3.11 The harvested crop must be protected from pests, mice/ rodents and domestic animals. Pest control measures should be documented.

4. Primary processing

Primary processing after harvest includes such processing steps as washing, freezing, distilling, drying, etc. All these processes, whether for food or medicinal use, must conform to European Union and other national regulations.

4.1 On arrival at the processing facility, the harvested crop has to be promptly unloaded and unpacked. Prior to processing the material should not be directly exposed to the sun (except where there is specific need e.g. distillation) and it must be protected from rainfall.

4.2 Buildings used in the processing of harvested crops must be clean, thoroughly aerated and should not be used for the housing of livestock.

4.3 Buildings should be so constructed as to provide protection for the harvested crop against birds, insects, rodents as well as domestic animals. In all storage (including packaging) and processing areas, suitable pest control measures, such as baits and electric insect killing machines, must be operated and maintained by professionally qualified staff or contractors.

4.4 Processing equipment must be kept clean and be regularly serviced.

4.5 In the case of natural open air drying, the crop must be spread out in a thin layer. In order to secure unlimited air circulation, the drying frames must be located at a sufficient distance above the ground. Attempts must be made to achieve uniform drying of the crop so as to avoid mould formation. When drying with oil, the exhaust fumes should not be reused for drying. Direct drying should not be allowed except with butane, propane, or natural gas.

4.6 Except in the case of natural open air drying, the conditions (e.g. temperature, duration, etc.) must be selected taking into consideration the type (e.g. root, leaf or flower) and active substance content (e.g. essential oils and others) of the crude drug to be produced. Drying conditions should be documented.

4.7 Drying directly on the ground with direct exposure to sunlight should be avoided unless it is required for a particular plant.

4.8 All material must be sorted or sieved in order to eliminate sub-standard products and foreign bodies. Sieves must be maintained in a clean state and should be serviced regularly.

4.9 Clearly marked waste-bins should be kept handy, emptied and cleaned daily.

4.10 The dried product should be promptly packaged in order to protect it from and reduce the risk of pest attacks.

5. Packaging

5.1 After the repeated control and eventual elimination of low quality materials and any foreign bodies, the product should be preferably packaged in new, clean and dry sacks, bags or chests. The label must be clear, permanently fixed and be made of non-toxic material. Information must conform with the European Union and national labelling regulations.

5.2 Packaging materials should be stored in a clean and dry place that is free of pests and inaccessible to livestock and other domestic animals. It must be guaranteed that no product contamination occurs as a result of using packaging material, particularly in the case of fibre bags.

5.3 Reusable packaging materials should be well cleaned and perfectly dried prior to their usage. It must be guaranteed that no contamination takes place by reusing bags.

6. Storage and Transport

6.1 Packaged dried materials and essential oils should be stored in a dry, well aerated building, in which the daily temperature fluctuations are limited and good aeration is guaranteed. Fresh products (except basil) should be stored between 1'C and 5'C while frozen products should be stored below -18'C (or below -20'C for longer term storage). Essential oil storage must conform to the appropriate chemical storage standards.

6.2 As a protection against pests, birds, rodents and domestic animals, the window and door openings should be protected, e.g. by wire netting.

6.3 It is recommended that the packaged dry crop be stored as follows:

- in buildings with concrete or similar easily cleanable floors,
- on pallets,
- with sufficient distance from the wall,
- · with thorough separation from other crops to avoid cross-contamination
- · and organic products must be stored separately.

6.4 In case of bulk delivery, it is important to ensure that the
transportation conditions are dry. Furthermore, it is highly advisable to use aerated Containers in order to reduce the risk of mould formation or fermentation. As a

supplement, the use of other sufficiently aerated Transport vehicles and other aerated facilities is recommended. Essential oil transportation must conform to the relevant and applicable regulations. In this respect, national and European Union regulations on Transport have to be adhered to.

6.5 Fumigation against pest attack should only be carried out on necessity and must exclusively be administered by licensed personnel. Only registered chemicals should be used. Any fumigation against pest attack should be reported in the documentation.

6.6 For fumigation of warehouses, only permitted substances should be used in accordance with European Union or national regulations.

6.7 Whenever frozen storage or saturated steam is used for pest control, the humidity of the stored material must be controlled after each treatment.

7. Equipment

7.1 Equipment used in plant cultivation and processing should be easy to clean, in order to eliminate the risk of contamination.

7.2 All machinery should be mounted in an easily accessible position. They must be well serviced and cleaned regularly. Fertilizer and pesticide application machinery must be regularly calibrated.

7.3 Preferably, non-wooden equipment should be used unless Tradition requires the use of wooden material. Whenever wooden equipment is used (e.g. pallets, racks, bunkers, etc.), care should be taken to avoid its direct contact with chemical and other contaminated/infected materials, so as to prevent the impurity of the plant material.

8. Personnel and Facilities

8.1 Personnel should receive adequate botanical education before performing tasks that require this knowledge.

8.2 All processing procedures should fully conform with both EU-guidelines on food hygiene and the general food hygienic principles of Codex Alimentarius as well as the European directive on Good Manufacturing Practice (GMP).

8.3 The personnel entrusted with the handling of plant material are required to exhibit a high degree of personal hygiene (including those personnel working in the fields) and should have received adequate training in their hygienic responsibilities. The buildings where the plant processing is carried out have to be equipped with changing facilities as well as toilets and hand washing facilities, with respect to the relevant regulations.

8.4 Persons suffering from known infectious diseases transmittable via food, including diarrhoea, or being transmitters of such diseases, must be denied entry into areas where they may come into contact with the plant material, as per relevant regulations.

8.5 Persons with open wounds, inflammations and skin infections should be kept away from those areas where plant processing takes place, or have to wear appropriate protective clothing or gloves, until their complete recuperation.

8.6 Personnel should be protected from contact with toxic or potentially allergenic plant materials by means of adequate protective clothing.

8.7 The welfare of all staff involved in the growing and processing of medicinal and aromatic plant products should be ensured.

9. Documentation

9.1 All parent materials and processing steps, including the location of cultivation, have to be documented. Field records showing previous cropping and used inputs should be maintained by all growers.

9.2 All batches from coherent areas should be clearly and unmistakably labelled (e.g. by the application of a batch number). This should take place as early as possible.

9.3 Batches from different cultivation areas may be mixed only if it is guaranteed that the mixture in itself will be homogenous. Such mixing procedures should also be documented.

9.4 It is essential to document the type, quantity and date of harvest of the crop, as well as the chemicals and other substances (e.g. fertilizers, pesticides and herbicides, growth regulators, etc.) used during production.

9.5 The application of fumigation agents such as phosphin must be entered into batch documentation.

9.6 All processes and procedures that could bear any impact on the quality of the product must be entered into the batch documentation.

9.7 All agreements (production guidelines, contracts, etc.) between the producer and the buyer should be laid down in written form.
It should be documented in a way bill (batch documentation) that cultivation, harvesting and production have been performed in accordance with the GAP guidelines. Minimal

information included in the way bill should cover the geographical Definition of growth place, the country of origin and the responsible producer.

9.8 Audit results should be documented in an audit report (i.e. copies of all documents, reference index, audit reports, analysis results) and be stored for a minimum of 10 years.

9.9 Any special circumstances during the growth period which may influence the chemical composition e.g. extreme weather conditions or pests - particularly in the harvest period - must be documented.

10. Education

It is highly advisable to educate all personnel dealing with the crop or those engaged in the management of production, in production techniques as well as the appropriate use of herbicides and pesticides.

11. Quality Guarantee

Consultation between producers and buyers of medicinal and aromatic plants, with regard to quality questions, e.g. active principles and other characteristic ingredients, optical and sensoric properties, limited germ numbers, plant protection chemical residues and heavy metals, must be based on internationally recognized or national specifications and should be laid down in written form.

Source: Z. Arzn. Gew.pfl. 1998; 3:166-178. (D Hippokrates Verlag GmbH, Stuttgart 1998