EU MARKET SURVEY 2003

NATURAL INGREDIENTS FOR PHARMACEUTICALS

CENTRE FOR THE PROMOTION OF IMPORTS FROM DEVELOPING COUNTRIES

EU MARKET SURVEY 2003

NATURAL INGREDIENTS FOR PHARMACEUTICALS

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REPORT SUMMARY

The natural ingredients for pharmaceuticals in this survey fall into the following groups:
- Medicinal & aromatic plants
- Medicinal and vegetable saps and extracts
- Vegetable alkaloids

Consumption and trends
There certainly is a market for natural ingredients for herbal medicines in Europe. Global demand for herbal medicines has increased dramatically during the last ten years. Herbal medicines represent a range of product types. These include products sold as raw herb (dried or fresh), and others which are processed to varying degrees, including tinctures (an infusion of herbs in alcohol) and extracts (greater concentration of the active material of the plant with the aid of a solvent). Trade in herbal medicines is estimated at € 10 billion annually and is growing in excess of 10% annually.

According to Nutrition Business Journal, global sales for herbs/botanicals accounted for € 18.5 billion of sales in 2000. The major market is Europe, accounting for some 38 percent of the world market. The leading European market is Germany, accounting for over 42 percent of the European market, followed by France (25%), Italy (9%) and the UK (8%). The medicinal plant trade is largely conducted through Germany. Most importers are found in Germany and it is the leading market for exporters in developing countries. The large European markets (Germany and France) are consolidating, while smaller markets show stronger growth. New markets at a global level include Brazil, Argentina, Mexico, India, China and Indonesia.

Herbal medicines are growing at a faster rate compared to conventional chemical drugs (Gruenwald, 1998). Average annual growth rates in Europe for herbal medicines between 1985 and 1995 were 10 percent, but are expected to slow down to 5-10 percent over the next few years (ten Kate & Laird, 1999).

Trends which have an impact on demand for botanical medicines and, consequently, the demand for natural pharmaceutical ingredients include, amongst others:
- Consumers seek an alternative or complement to pharmaceutical drugs and modern healthcare. The increase in demand for 'natural' medicine is also strongly related to the rise of the green consumption movement.
- The entry of large pharmaceutical and Over-The-Counter (OTC) companies has placed botanical medicines more strongly on the mass market.
- Increased advertising budgets and media attention for botanical medicines have contributed to rapid growth in consumer demand.
- Increased emphasis on safety, efficacy and quality has resulted in more research and development, a shift towards standardised products, and requirements for high-quality raw materials. This expanded research and development has improved the legitimacy of botanical medicines.
- Acceptance of botanical medicines by national (Germany and Japan) and commercial insurance companies (USA). However, at a global level re-imbursement is currently decreasing
- Some claim that the innovation and expansion of the pharmaceutical biotechnology sector, which is based on natural materials, has produced a scientific and financial environment open to the potential medical benefits of other natural products, including botanicals.
- Moreover, more and more innovative companies are requesting organically certified raw material or value added products, especially for the development of new products. There is increasing demand for certified raw material and value added products.

Trade structure
European-based companies, and German companies in particular, dominate the global herbal supply industry. The biggest herbal raw materials group is Martin Bauer Group, a German-based corporation with annual sales of over US$ 250 million (ten Kate & Laird, 1999).

About 4,000 to 6,000 botanicals are of commercial importance. Lewington (1993) reported that between 500 and 600 medicinal plants are traded via Hamburg, which made it the world's leading trading centre in plants. However, the position of Hamburg has decreased in recent years.

Manufacturers of herbal medicines used to acquire their raw materials from traders, but now some have their own plantations or have direct contacts with producers. Manufacturers of herbal products are increasingly interested in having direct relationships with producers of the required materials, in order to ensure a sustained source and/or to save costs.

Exporters should realise that the Internet is an important medium in the sourcing of raw materials for herbal products. A number of users/traders of natural ingredients mentioned that they use the Internet in order to find new suppliers.

EU trade and developing countries
In 2001, the leading developing country suppliers of medicinal & aromatic plants to the EU were China, India, Morocco, Egypt, Turkey, Kenya and Chile. About two thirds of EU imports from developing countries of

medicinal and vegetable saps and extracts originated in Madagascar and China. More than eighty percent of vegetable alkaloids from developing countries originated in China, India, Indonesia, Brazil and Mexico. In 2001, EU imports of medicinal plants decreased, imports of medicinal and vegetable saps and extracts decreased, while imports of vegetable alkaloids increased considerably compared to 1999.

Opportunities for exporters

It is not easy to present an overview of promising products for exporters from developing countries. There is a big transfer of natural ingredients from developing countries to the pharmaceutical industry for research purposes. Large pharmaceutical companies are engaged in bio-prospecting, which refers to the exploration of biodiversity for commercially valuable genetic and biochemical resources. This type of trade in natural ingredients is research-driven. Pharmaceutical companies study the properties and effects of specific medicinal plants and the knowledge is used with the aim to develop new medicines, which can be patented.

This so-called bio-prospecting is strongly dominated and controlled by large pharmaceutical companies. Exporters from developing countries will find more opportunities in the trade of ingredients with known properties and effects, which are not patented and which can be traded freely.

In Europe, some 2,000 medicinal and aromatic plants are used on a commercial basis. A number of botanical species are consistently cited by industry representatives in the USA and Europe as the most important today, and likely in the next five years (Laird et al., 2002). Echinacea was cited as the top product now and in the years to come, in both the USA and Europe. European companies continue to consider St Johns wort and Kava kava extremely important, while USA industry representatives tended to think both might be in decline due to controversial recent studies and bad press. Other important botanicals cited include: Gingko, Ginseng, Valerian, Goldenseal, and Garlic. USA companies also cited Black cohosh and Astragalus as good performers, while European companies have had continued success with Hawthorn and Chamomile.

Most buyers in The Netherlands are not interested in plant material, but in plant extracts. There are only a few developing countries, which are able to supply extracts conforming to the requirements of western industry.

Current issues in the trade are Good Agricultural Practices / Good Manufacturing Practices, organic production and certification. A proper marketing strategy for ingredients takes into account these issues as well as CITES regulations on certain protected species. A number of companies supply certified organic ingredients and a new development is certification based on criteria and principles of the Forest Stewardship Council. In 2001, a Brazilian company earned FSC certification for 80 thousand ha of native forest, where extraction of raw materials for producing medicines and cosmetics takes place.

Marketing strategies still have to be adapted to national regulations, as regulations for herbal products in the EU have not yet been harmonised. However, a positive development with respect to herbal medicinal products is the proposal (COM 2002/1) of 17 January 2002 for a Directive to amend Directive 2001/83/EC, prescribing that no medicinal product may be placed on the market without having obtained a marketing authorisation on the basis of harmonised requirements. Normally, a lot of tests are required for such an authorisation. For many herbal medicinal products, published scientific literature is not available so that a well-established medicinal use cannot be demonstrated. The proposed Directive would provide for a special registration and, hence, the marketing of certain traditional herbal medicinal products without requiring very extensive tests.

CBI services

For information on current CBI Programmes and training & seminars, and for downloading market information and CBI News Bulletins, please refer to www.cbi.nl. Currently, CBI has an export promotion programme for companies that manufacture natural ingredients for pharmaceuticals and/or cosmetics. Other interesting CBI publications are the EU Market Survey *"Natural Ingredients for Cosmetics"* and *"Food Ingredients for Industrial Use"*.

Product group	EU imports in € million, 2001	Main EU importers and their share in EU imports	Share of developing countries in EU imports
Medicinal & aromatic plants	323	Germany (26%), France (19%), Italy (14%)	40%
Medicinal and vegetable saps & extracts	113	Germany (38%), Italy (18%), France (16%)	6%
Vegetable alkaloids	545	Germany (25%), UK (24%), The Netherlands (14%)	6%

Source: Eurostat (2001)

INTRODUCTION

This CBI survey consists of two parts: EU Market Information and EU Market Access Requirements (Part A), and Export Marketing Guidelines (Part B).

Market Survey

Part A
EU Market Information and Market Access Requirements

EU Market Information *(Chapter 1-8)*	**EU Market Access Requirements** *(Chapter 9)*
Product characteristics Introduction to the EU market Consumption and production Imports and exports Trade structure Prices	Quality and grading standards Environmental, social and health & safety issues Packaging, marking and labelling Tariffs and quotas

Part B
Export Marketing Guidelines: Analysis and Strategy

External Analysis (market audit) *(Chapter10)* *Opportunities & Threats*	**Internal Analysis (company audit)** *(Chapter 11)* *Strengths & Weaknesses*

Decision Making
(Chapter 12)

SWOT and situation analysis:
Target markets and segments
Positioning and improving competitiveness
Suitable trade channels and business partners
Critical conditions and success factors (others than mentioned)
Strategic options & objectives

Export Marketing
(Chapter 13)

Matching products and product range
Building up a trade relationship
Drawing up an offer
Handling the contract
Sales promotion

Chapters 1 to 8 of Part A profile the EU market for Germany, France, the UK, Spain, Italy and The Netherlands. The emphasis of the survey lies on those products, which are of importance to developing country suppliers. The major national markets within the EU for those products are highlighted. Furthermore statistical market information on consumption, production and trade, and information on trade structure and opportunities for exporters is provided.

Chapter 9 subsequently describes the requirements, which have to be fulfilled in order to get market access for the product sector concerned. It is furthermore of vital importance that exporters comply with the requirements of the EU market in terms of product quality, packaging, labelling and social, health & safety and environmental standards.

After having read Part A, it is important for an exporter to analyse target markets, sales channels and potential customers in order to formulate export marketing and product strategies. Part B therefore aims to assist (potential) exporters from developing countries in their export-decision making process.

After having assessed the external (Chapter 10) and internal environment (Chapter 11), the (potential) exporter should be able to determine whether there are interesting export markets for his company. In fact, by matching external opportunities and internal capabilities, the exporter should be able to identify suitable target countries, market segments and target product(s) within these countries, and possible trade channels for exporting the selected products (Chapter 12).

Chapter 13 subsequently describes marketing tools, which can be of assistance in successfully achieving the identified export objectives.

The survey is interesting for starting exporters as well as well as exporters already engaged in exporting (to the EU market). Part B is especially interesting for more experienced exporters starting to export to the EU and exporters looking for new EU markets, sales channels or customers. Starting exporters are advised to read this publication together with the CBI's Export planner, a guide that shows systematically how to set up export activities.

Part A
EU market information

1 PRODUCT CHARACTERISTICS

1.1 Product groups

The natural ingredients discussed in this market survey fall under the following groups:
- Medicinal & aromatic plants
- Medicinal and vegetable saps and extracts
- Vegetable alkaloids

These natural ingredients are not only used by the pharmaceutical industry, but also find applications in other product groups such as cosmetics. The complexity of the trade in medicinal plants was already illustrated in the 1982 ITC report on Medicinal Plants and their Derivatives; from which we quote:

'It is not possible to assess the volume or value of the trade in all botanicals that are used medicinally because trade statistics do not identify all the plants individually and of those listed, the statistics do not identify medicinal and other uses separately. Products reported as medicinal plants often include gums, spices and plants used in the food industry; certain plant products include those used for teas and infusions; large volumes of plants such as pyrethrum are used in manufacture of insecticides; plants used by the cosmetic industry are also included'.

The situation in medicinal plants' trade is rather more complicated because of the levels of secrecy maintained by traders and the complexity of the trade structure itself.

There is a range of natural products, which is used as ingredients by the pharmaceutical industry, including essential oils, vegetable oils, natural gums & resins and natural colours. These ingredients, however, do not have a specific medicinal activity and only a small proportion of the total trade in these products is used by the pharmaceutical industry. For more information on these ingredients, please refer to CBI's market surveys *"Natural Ingredients for Cosmetics"* and *"Food Ingredients for Industrial Use"*.

Other raw materials such as vitamins and hormones are not included in this market survey. Although these products partly include natural products or entities derived from natural products, the exact components cannot be determined. Moreover according to EU trade data, only a few developing countries, e.g. Brazil, China and India, play a role in the trade in these products.

1.2 Custom/statistical product classification

On January 1, 1988, a unified coding system was introduced to harmonise the trading classification systems used world-wide. This system is called the Harmonised Commodity Description System (HS) and was developed by the World Customs Organisation (WCO). The system comprises about 5,000 commodity groups, each identified by a six digit code, arranged in a legal and logical structure and is supported by well-defined rules to achieve uniform classification. The system is used by more than 179 countries and economies as a basis for their Customs tariffs and for the collection of international trade statistics. After the six-digit code, countries are free to use further subheadings. In the trade data of Eurostat, an 8 digit system is used. Most codes, however, end with two zeros, i.e. effectively only using 6 digits. In some countries even 10 digits are sometimes used.

Most of the natural ingredients used in the pharmaceutical industry do not have an exclusive HS Code and are incorporated in a broader product code. Below, a four to six-digit list of the main product groups is presented. These product groups can be further divided into sub-groups to the extent of ten digits.

HS code	Product description
1211	Plants and parts of plants (including seeds and fruits) of a kind used primarily in perfumery, in pharmacy or for insecticide, fungicide or similar purposes, fresh or dried, whether or not cut, crushed or powdered
1302 1991	Medicinal and vegetable saps and extracts
2939	Vegetable alkaloids, natural or synthetic, and their salts, ethers, esters and other derivatives

2 INTRODUCTION TO THE EU MARKET

The European Union (EU) is the current name for the former European Community. Since 1 January 1995 the EU has consisted of 15 member states. Ten new countries will join the European Union in 2004. Negotiations are in progress with a number of other candidate member states.

In 2002, the size of the EU population totalled 379.4 million; the average GDP per capita amounted to approximately € 21,023 in 2002.

Within Western Europe – covering 15 EU member countries, Iceland, Liechtenstein, Norway and Switzerland – more than 20 million enterprises are active. Small and medium-sized enterprises (SMEs) accounted for the lion's share. In 2000, the average turnover per enterprise of SMEs and large enterprises amounted to € 600 thousand and € 255 million respectively.

EU Harmonisation
The most important aspect of the process of unification (of the former EC countries), which affects trade, is the harmonisation of rules in the EU countries. As the unification allows free movement of capital, goods, services and people, the internal borders have been removed. 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. Although the European Union is already a fact, not all the regulations have yet been harmonised. Work is in progress in the fields of environmental pollution, health, safety, quality and education. For more information about harmonisation of the regulations visit AccessGuide, CBI's database on non-tariff trade barriers at www.cbi.nl/accessguide

Monetary unit: Euro
On 1 January 1999, the euro became the legal currency within eleven EU member states: Austria, Belgium, Finland, France, Germany, Greece, Italy, Ireland, Luxembourg, The Netherlands, Spain, and Portugal. In 2002 circulation of euro coins and banknotes replaced national currency in these countries. Denmark, United Kingdom and Sweden have so far decided not to participate in the Euro.

The most recent Eurostat trade statistics quoted in this survey are from the year 2001. In this market survey, the euro (€) is the basic currency unit used to indicate value.

Trade figures quoted in this survey must be interpreted and used with extreme caution. The collection of data regarding trade flows has become more difficult since the establishment of the single market on 1 January 1993. Until that date, trade was registered by means of compulsory customs procedures at border crossings, but, since the removal of the intra-EU borders, this is no longer the case. Statistical bodies like Eurostat cannot now depend on the automatic generation of trade figures. In the case of intra-EU trade, statistical reporting is only compulsory for exporting and importing firms whose trade exceeds a certain annual value. The threshold varies considerably from country to country, but it is typically about € 100,000. As a consequence, although figures for trade between the EU and the rest of the world are accurately represented, trade within the EU is generally underestimated.

Overview 15 EU countries, 2002

Population	**379.4 million**
Area	**31,443,000 km²**
Density	**83 people per km²**
Languages	**15 (excl. dialects)**
GDP/capita	**€ 21,023**
Currencies	**€, UK£, DKr., SKr.**
Exchange	**€ 1 = US$ 0.99**

Source: The World Factbook 2002

Population and GDP of selected EU countries, 2002

Countries/category	Population in millions	Age 15-64	GDP (€ billion)
Germany	83.3	68%	2,206
France	59.8	65%	1,556
UK	59.8	66%	1,485
Italy	57.7	67%	1,416
Spain	40.1	68%	836
The Netherlands	16.0	68%	417

Source: The World Factbook 2002

Furthermore, the information used in this market survey is obtained from a variety of different sources. Therefore, extreme care must be taken in the qualitative use and interpretation of quantitative data, both in the summary and throughout the text, as well as in comparisons of different EU countries with regard to market approach, distribution structure, etc.

For more information on the EU market, please refer to the CBI's manual *"Exporting to the European Union"*.

The survey focuses on the 6 major EU markets for ingredients for pharmaceuticals. These are Germany, France, the United Kingdom, The Netherlands, Italy and Spain. These EU member countries will be highlighted, because of their relative importance in terms of consumption, production, imports and exports.

3 CONSUMPTION

3.1 Market size

Data regarding the trade and use of natural pharmaceutical ingredients are scattered and difficult to obtain. One of the underlying problems is that most of the ingredients are also traded for other end-users (e.g. the food and cosmetics industries). Therefore, we will first give an overview of the pharmaceutical market as an entry point so as to gain insight into the market for natural pharmaceutical ingredients. The pharmaceutical market is strongly dominated and controlled by large pharmaceutical companies. Exporters in developing countries will find more opportunities in the trade of ingredients with known properties and activity, which are not patented and which can be traded freely. The herbal medicine market, which is more interesting for exporters, is discussed separately.

Another reference for market information is *"A Guide to the European Market for Medicinal Plants and Extracts"* published by Commonwealth Secretariat and available at £15. Please refer to www.thecommonwealth.org for more information on this guide.

Pharmaceutical market

IMS data show that audited global pharmaceutical sales increased by 8 percent in 2002, reaching € 405 billion. As sales in Latin America slumped 10 percent due to the economic problems there, North America, Europe and Japan cemented their position: in total these regions accounted for 88 percent of audited world-wide pharmaceutical sales in 2002. North America was yet again the strongest performer, growing 12 percent, to reach € 206 billion, accounting for 51 percent of the world's total. Europe grew by 8-9 percent, and Japan, the second-largest individual market, recorded only 1 percent growth. The rest of Asia, Africa and Australia combined showed a healthy increase of 11 percent. Despite economic challenges in the world's leading markets and a lower-than-normal number of new product introductions, the global pharmaceutical industry experienced solid growth in 2002. Generic drug sales strengthened in North America and Western Europe due to several patent expiries, while the Japanese market continued to show nearly flat growth. Ageing populations and the ongoing demand for innovative therapies are expected to effectively sustain pharmaceutical growth in 2003 and beyond.

Please note that IMS publications can be bought online at www.open.imshealth.com, while at www.ims-global.com information on regional markets can be found (e.g. Latin American market).

Table 3.2 Total pharmaceutical and self-medication expenditure, 2001 in € million

Country	Pharmaceuticals	Self-medication
Germany	30,670	4,269
France	23,390	2,063
Italy	17,379	1,275
UK	14,434	2,750
Spain	10,512	868
The Netherlands	4,287	510
Austria	3,296	259
Belgium	3,261	465
Sweden	3,184	310
Portugal	2,609	204
Finland	2,004	263
Greece	1,918	169
Denmark	1,513	206
Ireland	1,043	178

Source: AEGSP (2002)

Table 3.1 Global pharmaceutical sales by region, 2002

World Audited Market	Sales (€ billion)	% of global sales	Growth (%)
North America	206	51	12
European Union	91	22	8
Japan	47	12	1
Asia, Africa and Australia	32	8	11
Latin America	17	4	-10
Rest of Europe	11	3	9
Total	**405**	**100%**	**8%**

Source: IMS (2003)

The pharmaceutical market is increasingly global in scope. Previously, companies might launch a number of products in one or two of the three major markets (USA, Europe and Japan). Today, in order to derive a satisfactory return on R&D, pharmaceutical companies generally launch products in all three markets.

Pharmaceutical products concern a very broad range of products. We will look at the self-medication category as this includes the bulk of herbal medicine sales. As Table 3.2 shows, expenditures on self-medication are highest in Germany, followed by France. In Germany, if prescribed by doctors, patients are reimbursed by the national health services for herbal medicines.

For consumption patters and trends of selected countries, please refer to Section 3.3.

Natural pharmaceutical products

Some 42 percent of the sales of the top 25 selling drugs world-wide are either biologicals, natural products, or entities derived from natural products[1] (ten Kate & Laird, 1999). Modern pharmacopoeia (official publications containing a list of drugs, formulas, doses, etc.) still contain at least 25% of drugs derived from plants (FAO, 1997). Despite the historical and current prevalence of plants in the pharmacopoeia, only between 5 and 15 percent of the approximately 250,000 - 500,000 species of higher plants have been investigated for the presence of bioactive compounds. Estimates for the overall value of natural product pharmaceuticals vary considerably. In 1995, world-wide sales of the following plant-derived pharmaceuticals were significant: opiates (US$ 1.5 billion), taxanes (US$ 400 million), digoxins and related compounds (US$ 200 million), Ergot alkaloids (US$ 150 million), and Catharanthus derivatives (US$ 100 million) (ten Kate & Laird, 1999).

Herbal medicine market[2]

Herbal medicines, as distinct from pharmaceuticals, are produced directly from whole plant material. As a result, they contain a large number of constituents and active ingredients working in conjunction with each other, rather than a single, isolated active compound. Because the drug approval process and patenting systems do not provide incentives for companies to conduct (expensive and time-consuming) research on the synergistic and collective function of active ingredients in whole plants or plant formulas, botanical medicines are often scientifically poorly understood (ten Kate & Laird, 1999). However, most herbal medicines have long histories of traditional use, which confirm safety and efficacy, and as documented are used in many regulatory systems to guide the approval of commercial products.

Herbal medicines represent a range of product types. These include products sold as raw herb (dried or fresh), and others that are processed to varying degrees, including tinctures (an infusion of herbs in alcohol) and extracts (greater concentration of the active material of the plant with the aid of a solvent). Herbal medicines are part of larger markets, referred to in the USA, for example, as the 'dietary supplement' market. Dietary supplements encompass vitamins, minerals, herbs/botanicals, and other natural medicines.

Trade in herbal medicines is estimated at € 10 billion annually and is growing in excess of 10 percent annually. Consumption of vitamins, minerals and herbs/botanicals was estimated at € 42 billion in 2000 (NBJ, 2000). The largest markets for herbal medicines are found in Germany, China, Japan, the USA, France, Italy, the UK and Spain (ten Kate & Laird, 1999).

According to Nutrition Business Journal, global sales for herbs/botanicals accounted for € 18.5 billion of sales in 2000. The major market is Europe, accounting for some 38 percent of the world market. The leading European market is Germany, accounting for over 42 percent of the European market, followed by France (25%), Italy (9%) and the UK (8%). The medicinal plant trade is largely conducted through Germany. Most importers are found in Germany and it is the leading market for exporters in developing countries. The large European markets (Germany and France) are consolidating, while smaller markets show stronger growth. New markets at a global level include Brazil, Argentina, Mexico, India, China and Indonesia.

Around the world, demand for herbal medicines has increased dramatically during the past ten years. In general, herbal medicines are growing at a faster rate compared to conventional chemical drugs (Gruenwald, 1998). Average annual growth rates in Europe for herbal medicines between 1985 and 1995 were 10 percent, but are expected to slow down to 5-10 percent over the next few years (ten Kate & Laird, 1999).

Top-selling species used in commercial herbal medicine products vary by country and region. The bulk of the

[1] Biologicals: an entity that is a protein or polypeptide either isolated directly from the natural source or more usually made by recombinant DNA techniques followed by production using fermentation (e.g. insulin).
Natural product: an entity that though occasionally manufactured by semi-synthesis, is chemically identical to the pure natural product (e.g. Vitamin C, paclitaxel, and cyclosporine).
Derived from a natural product: an entity that starts with a natural product which is then chemically modified to produce the drug (e.g. penicillin, simivastatin).

[2] The term herbal medicine is common in Europe, while in the USA the term botanical medicine is used. We will mostly use the term herbal medicine, but when referring to specific reports, we will use the term used in the report quoted.

Japanese and Chinese markets, for example, are based on Traditional Chinese Medicine. European markets tend to follow similar species.

Regulatory frameworks set standards for proof of safety, efficacy, and quality; determine the scope of claims made about products, the information included on labels, and the content of advertisements. As a result, they help determine the nature of the industry, including the demand for 'new' materials. In most of Europe and in Japan, monographs are produced for herbal medicines in trade, and research and testing in support of claims to safety and efficacy is required. Materials 'new' to these markets previously took a slower route to the consumer than in the USA, where products were considered safe unless proven otherwise. This situation has changed now and standards are being developed in the USA. Over-the-counter (OTC) drugs must meet a US Pharmacopeia and National Formulary (USP-NF) existing or proposed monograph(s) for active ingredients or botanical drug substances.

Table 3.3 lists the top selling medicinal plants in Europe. A study by Laird et al. (2002) shows that a core of botanical species was consistently cited by industry representatives in the USA and Europe as the most important today, and likely in the next five years. Echinacea was cited as the top product now and in the years to come, in both the USA and Europe. European companies continue to consider St. John's Wort and Kava extremely important, while USA industry representatives tended to think both might be in decline due to controversial recent studies and bad press. The position in Europe towards Kava has changed now. In June 2002, Germany banned the supply of the herbal remedy kava-kava after reports linking it to fatal liver failure. Britain's Medicines Control Agency (MCA) has proposed to ban kava-kava and the Order has come into force on January 13, 2003. In the EU, all licensed kava-kava products have been removed from the market while in Canada, investigations have concluded that there is insufficient evidence to support the products' safety and they have also been withdrawn from the market. In Australia, products have been voluntarily removed from the market while an investigation is conducted and in the USA consumers have been warned of the risk of liver toxicity pending the outcome of an investigation by the FDA.

Other important botanicals cited include Gingko, Ginseng, Valerian, Goldenseal, and Garlic. USA companies also cited Black Cohosh and Astragalus as good performers, while European companies have had continued success with Hawthorn and Chamomile.

Data charts on the global nutrition industry are available at a fee at www.nutritionbusiness.com. Some interesting data charts are included under the heading Herbal and Botanical Supplements Market Data. Charts provided are Top 29 Herb & Botanical Raw Material Suppliers in 2001, 2001 Top Herbal Supplement Manufacturers, 2000 Wholesale Herb & Botanical Sales by Company, 2000 & 1999 Top 75 Herb & Botanical Consumer Sales, Top Herb & Botanical Raw Material Suppliers in 2000, 1999 Top Herb & Botanical Manufacturers/Marketers, Top Herbal Product Manufacturers, Top Herb & Botanical Raw Material Suppliers in 1998. Prices of the charts are generally around US$ 100.

3.2 Market segmentation

The market for natural ingredients for pharmaceuticals can be segmented into:

- ingredients required by the pharmaceutical industry
- ingredients required by the herbal medicine industry.

Table 3.3 Top selling medicinal plants in Europe

Product	US$ million	Product	US$ million
Gingko	600	Butcher Broom	120
Valerian	300	Evening Primrose	110
Horse Chestnut	250	Pygeum	105
Saw Palmetto	230	Melilot	100
Bitter Orange Extract	220	Grape Seed	90
Garlic	200	Milk Thistle	80
Hawthorn	140	Melissa	65
Ginseng	140	Nettle	60
Psyllium	125	Bilberry	60
Echinacea	120	Chamomile	45
Total			**3,160**

Source: M.K. Eaves, 1998 in Commonwealth, 2000

Pharmaceutical industry
Pharmaceutical companies are traditionally large, vertically-integrated concerns that conduct the full range of activities, from creating libraries of compounds to marketing the drugs which emerge from their pipelines. However, since the 1980s the number of small pharmaceutical biotech companies has grown rapidly. Today, there are some 1,000 such companies in Europe (ten Kate & Laird, 1999). There is growing opportunity for partnerships, since large, traditional drug firms increasingly out-source research and development through alliances, collaborations, and joint ventures with smaller drug discovery companies, academia, and research institutions.

The majority of companies does not conduct field collections, but relies instead on existing in-house collections of material, or buying in-compound or culture collections. Most companies outsource, or contract to others, the acquisition of samples for their screening programmes. They obtain samples through brokers, agents, or through specific deals with supplier organisations. The bulk of collecting activities is conducted by non-profit organisations (universities, research institutes, botanical gardens) (ten Kate & Laird, 1999).

Herbal medicine industry
The herbal industry is experiencing rapid growth world-wide. Annual growth rates are between 10 and 20 percent in most countries.

Diversity within the industry is also apparent in the structure and nature of participating companies. The company size and function vary widely, with some companies employing only a handful of staff, and others a few thousand. Some companies emphasise a standardised, proven effective and safe products, while others are primarily in the packaging and marketing business, placing little emphasis on proven product efficacy (and sometimes quality); still others incorporate environmental and social concerns into their business practices. However, a trend exists towards uniformity in the global herbal medicine market, as a result of increased emphasis on quality control, safety and efficacy. As a result, relationships between processing and manufacturing companies and the sources of their raw material are becoming closer. Increasingly, companies seek high quality, reliable supplies of cultivated material, although wild-collected / wild-harvested material continues to play a significant role in the industry.

In this market segment, exporters in developing countries will find opportunities in the trade of ingredients with known properties and activity, which are not patented and which can be traded freely. The market segment of herbal medicines, produced directly from whole plant material, is of particular interest to exporters in developing countries. In general, the market for herbal medicines is growing at a faster rate than that for conventional chemical drugs. For an overview of the trade structure in this industry, please refer to Chapter 7.

Opportunities for developing country exporters
There certainly is a market for natural ingredients for herbal medicines in Europe. As mentioned earlier, global demand has increased dramatically during the last ten years. Trade in herbal medicines is estimated at € 10 billion annually and is growing in excess of 10 percent annually (Nutraceuticals International, January 2001). Consumption of vitamins, minerals and herbs/botanicals is estimated at € 42 billion in 2000 (NBJ, 2000). At the end of the 1990s, the market for herbal medicines was growing at a faster rate than for conventional chemical drugs. However, since 2000, the USA market slowed down significantly due to negative press on safety and efficacy. In the EU, however, sales remained strong. This is due to a number of factors, including historical differences in the marketplaces, the active role of pharmacists, doctors, and researchers in botanicals in Europe, and stricter quality control and regulation in Europe (NBJ, March 2001; Gruenwald, 2000). One of the reasons that the market in the USA grew relatively very fast was that new materials could previously be more easily introduced in the USA than in the EU or Japan, as USA legislation considered products safe unless proven otherwise. This situation has changed now and standards are being developed in the USA. Over-the-counter (OTC) drugs must meet a US Pharmacopeia and National Formulary (USP-NF) existing or proposed monograph(s) for active ingredients or botanical drug substances.

Manufacturers of herbal medicines used to acquire their raw materials from traders, but now some have their own plantations or have direct contacts with producers. Manufacturers of herbal products are increasingly interested in having direct relationships with producers of the required materials, in order to ensure a sustained source and/or to save costs. In some cases, these producers require a certain minimum supply of the raw material. In other cases, however, you can easily access the market with 10 kg of extract, or 100 kg of flowers. Small producers need to search for small demand, which is easier in the organic market. Salus-Haus in Germany, for example, is a medium-sized company, only buying organic certified raw material. Moreover, in Germany a number of phyto-pharmaceutical companies demonstrated their commitment to the conservation of natural medicine resources by signing a Joint Declaration for the Health of People and Nature (refer to Section 3.3). Regarding the requirements for organic products, please refer to EU Regulations EEC 2092/91 and EC 1804/1999 (refer to Legislation in Force at http://europa.eu.int/eur-lex/en/search.html), or contact Skal (see Appendix 2.6).

3.3 Consumption patterns and trends

Trends which have an impact on demand for botanical medicines and, consequently, the demand for natural pharmaceutical ingredients are the following:

Consumers seek an alternative or complement to pharmaceutical drugs and modern healthcare. The increase in demand for 'natural' medicine is also strongly related to the rise of the green consumption movement.

The entry of large pharmaceutical and Over-The-Counter (OTC) companies has placed botanical medicines more strongly on the mass market. Increased advertising budgets and media attention for botanical medicines have contributed to rapid growth in consumer demand.

Increased emphasis on safety, efficacy and quality has resulted in more research and development, a shift towards standardised products, and requirements for high-quality raw materials. This expanded research and development has improved the legitimacy of botanical medicines. Acceptance of botanical medicines by national (Germany and Japan) and commercial insurance companies (USA). However, at a global level re-imbursement is currently decreasing. Some claim that the innovation and expansion of the pharmaceutical biotechnology sector, which is based on natural materials, has produced a scientific and financial environment open to the potential medical benefits of other natural products, including botanicals.

Current problems in the trade are the relatively slow amount of new products and the on-going price battle.

A positive development with respect to herbal medicinal products is the proposal (COM 2002/1) of 17 January 2002 for a Directive to amend Directive 2001/83/EC, prescribing that no medicinal product may be placed on the market without having obtained a marketing authorisation on the basis of harmonised requirements. This would mean that exporters would no longer have to deal with different national regulations for herbal products. The application for such an authorisation has to contain the results of tests and trials on quality, safety and efficacy of the products. However, for many herbal medicinal products, which are used for a long period, sufficient published scientific literature is not available so that a well-established medicinal use cannot be demonstrated. The proposed Directive would provide for a special registration and, hence, the marketing of certain traditional herbal medicinal products without requiring particulars and documents on tests and trials on safety and efficacy. If the pharmaceutical market becomes more easily accessible for producers of some herbal medicinal products, this would also have positive effects for producers of natural ingredients for pharmaceuticals.

- **Certification and conservation issues**

Another trend in the phyto-pharmaceutical[3] market is that more and more innovative companies are requesting organically certified raw material and value added products, especially for the development of new products. There is increasing demand for certified raw material and value added products. Another indication of this trend is that more and more conventional importers and traders receive approval to deal with organically certified material. Regarding the requirements for organic products, please refer to EU Regulations EEC 2092/91 and EC 1804/1999 (see Legislation in Force at http://europa.eu.int/eur-lex/en/search.html), or contact Skal (see Appendix 2.6).

Opportunities for exporters in developing countries

There is a big transfer of natural ingredients from developing countries to the pharmaceutical industry for research purposes. Large pharmaceutical companies are engaged in bio-prospecting, which refers to the exploration of biodiversity for commercially valuable genetic and biochemical resources. This type of trade in natural ingredients is research driven. Pharmaceutical companies study the activities and properties of specific medicinal plants and the knowledge is used with the aim to develop new medicines, which can be patented.

Controversial examples of medicinal plants, which were patented, include ayahuasca and neem. An American citizen received a USA patent for what was commonly thought to be a variety of ayahuasca, originally cultivated by an indigenous community in Ecuador. When indigenous leaders, activists and environmental lawyers at the Centre for International Environmental Law (CIEL) learned of the patent, they mobilised an international campaign to repeal the patent. The Patent Trade Office (PTO) eventually suspended the patent in November 1999. At the same time that the ayahuasca patent was being challenged, the government of India was challenging several USA patents on a number of traditionally utilised Indian plants (P. Shanley, 2002).

This so-called bio-prospecting is strongly dominated and controlled by large pharmaceutical companies. The interest in equitable partnerships between pharmaceutical companies and indigenous communities or local universities is increasing, but still in its infancy. For a good overview see Laird (2002). Exporters in developing countries, however, will find more opportunities in the trade of ingredients with known properties and activity, which are not patented and which can be traded freely.

[3] Phytopharmaceuticals are plant and herb-based remedies.

In October 2000, representatives from the phyto-pharmaceutical industry in Germany (e.g. Weleda, Madaus, Martin Bauer), practitioners' associations, and international organisations including the International Council on Medicinal and Aromatic Plants (ICMAP), WWF, IUCN and TRAFFIC demonstrated their commitment to the conservation of natural medicine resources by signing a Joint Declaration for the Health of People and Nature. Working Groups have been formed to establish criteria for the use of medicinal plants, to discuss labelling and legislation and to exchange market information (for more information contact honeff@wwf.de).

There is not only increased interest in certified organic production, but also in other forms of certification. An interesting publication on certification is "Tapping the green market" by P. Shanley et al. (2002). The purpose of the manual is to explore the feasibility of certification of non-timber forest products. It includes details on criteria for certification based on Forest Stewardship Council (FSC) principles. In 2001, a Brazilian company earned FSC certification for 80 thousand ha of native forest where extraction of raw materials for producing medicines and cosmetics takes place.

Research by TRAFFIC Europe conducted in 2000 in Belgium, France, Germany, The Netherlands and the United Kingdom showed that there is low awareness among retailers and traders of the EU laws and regulations governing the trade in certain Traditional Chinese Medicines (TCM). TCM products claiming to contain CITES-listed species were available in all of the five countries surveyed. The findings of this study were made available to national enforcement agencies in all five countries, leading to a number of significant seizures of illegal TCM. As a follow-up activity, TRAFFIC Europe will commence outreach and awareness work towards the TCM communities in Western Europe.

TRAFFIC Europe is also studying the TCM user communities in Germany. There are two main user groups, one being composed of Asians living in Germany - traditional users of TCM who buy their medicines in Asian speciality shops or import them from overseas. According to recent population figures, almost 800,000 Asians live in Germany with the majority of potential TCM users being of Vietnamese or Chinese origin. Furthermore, over 20 organisations in Germany teach TCM, mainly to German medical practitioners. The largest TCM association claims to have over 10,000 members. TRAFFIC's investigation will involve contact with members of the Chinese communities in Germany, with communication conducted in their own languages, to establish the extent and nature of the use of TCM. For more information please refer to www.traffic.org and www.naturheilkunde-online.de.

The most important characteristics of the selected individual EU consumption markets for pharmaceuticals according to Euromonitor are listed below.

Germany

- The OTC healthcare sector in Germany amounted to € 4 billion in 2001, indicating an increase of 0.9 percent compared to the previous year. This reflects the ongoing trend towards self-medication in Germany, due to fewer medicines being described in line with governmental budgetary controls and the increased need for German consumers to develop health awareness.
- In terms of value, vitamins and dietary supplements and cough, cold and allergy remedies were the most important products, however, the most dynamic products were smoking cessation aids and eye care.
- Sales of vitamins and dietary products stagnated due to high level of saturation in the sector, while sales of cough and allergy remedies performed poorly due to a mild winter.
- The German OTC market is even more fragmented than in other European countries. More than 132 pharmaceutical companies were active with one or more products in 2001. In an increasingly competitive climate, there is a strong trend towards mergers and acquisitions throughout all sectors, which will consolidate the industry in the long-term.
- The three major manufacturers within the German OTC market segment in 2001 held a combined share of 16 percent in 2001, with Bayer Vital GmbH & Co KG ahead of Boehringer Ingelheim Pharma KG and Novartis Deutschland GmbH.
- Private labels increased their value share of OTC sales, with drugstores playing the most influential role within the sector in 2001. Pricing appears to be an issue, with consumers choosing private labels over higher priced products when they are uncertain about the actual difference between products.
- The planned introduction of a "positive list" in 2003, containing products and active ingredients that will be reimbursable by statutory insurance systems, is expected to eliminate a range of products, with total sales worth 2 billion. Trade associations and consumers are concerned about the shrinking budget for prescriptions and the significant cuts in health spending incorporate in the German government's latest health reforms, and further proposed measures. Herbal preparations are expected to be hit hardest by the introduction of the positive list.
- Alternative treatments, such as homeopathy and traditional medicine are strong in Germany. They are often preferred to conventional medicine, and are likely to become even more prominent as budgetary controls for doctors reduce prescriptions for conventional preparations. The spa culture, although somewhat reduced by decreasing spending from compulsory health insurance agencies, is alive and

well in the light of increased health awareness among German consumers.

- The revival of treatments using herbal remedies has been halted by the negative side effects of some products. The interference of St. John's Wort with other chemical preparations, and media coverage regarding kava-kava causing liver damage, have added to industry concerns about safety controls of herbal remedies.
- The main emerging trends are expected to be growth in generics and biotechnology, and increased quality assurance when it comes to herbal remedies, as well as pharmaceuticals in general.

France

- Despite the French authorities' willingness to decrease government spending on health, through de-listing and encouraging self-medication, the OTC healthcare market in France was only moderately dynamic, increasing by a mere 12 percent in value terms between 1997 and 2001. This trend continued in 2002, with major product types such as cough, cold and allergy remedies and digestive remedies declining by 1.5 percent and 0.2 percent respectively. Self-medication in France remained to some extent less developed than in other European countries, such as Germany and the UK, as many consumers preferred to visit a doctor and have their medicines prescribed. Semi-ethical brands represented the majority of OTC healthcare sales.
- Sales of vitamins and dietary supplements continued to grow rapidly in 2002, with a 3.8 percent increase in value terms, as they increasingly appealed to consumers with busy lifestyles who wanted a healthy diet.
- Eye care products also became increasingly popular, with sales up by 3 percent, and were particularly boosted by sales of allergy eye care products. Wound treatment sales, also up 3 percent in current value terms in 2002, benefited from the continuous trend towards greater product sophistication, with manufacturers particularly focusing on offering greater convenience.
- In terms of distribution, pharmacies remained by far the most common channel for OTC healthcare products, with almost 90 percent of sales in 2002. This was because this was the only channel to offer a wide choice of OTC products of all types. However, OTC products became increasingly offered in channels other than pharmacies over the review period, despite relatively restrictive legislation preventing their greater availability in channels such as grocery outlets and discounters.
- The French market for OTC healthcare products is to some extent fragmented among a large number of players, with the combined share of the top five companies standing at less than 25 percent in 2002. This partly reflects the variety of products included, combined with the fact that manufacturers are present only in a limited number of sectors.
- Sales of OTC products are expected to grow by only 4 percent in constant value terms over the forecast period. Self-medication is likely to remain less common than in many other European countries, as it may be hindered by the fact that consumers prefer to have their medicines prescribed. The increasing trend towards generic products could also drive down prices, thereby limiting potential for value growth, and offsetting the positive impact of possible future switches.

UK

- Smoking cessation was the strongest performer in OTC showing growth in value terms of 15.3 percent. While NRT gum showed only marginal growth in current value terms of 0.4 percent, growth was stronger in patches, which expanded by 11 percent. However, the leading product in smoking cessation was the NiQuitin CQ Lozenge, which pushed growth in "other" NRT to 125 percent taking in sales of £8.5 million (12.2 million) in its first full year of sales. The NiQuitin CQ patch was the leading patch in the UK and the NiQuitin CQ Clear was the leading variant. The CQ Clear offered consumers discreet NRT and came in both a 16 hr and a 24 hr format. All this made for an exciting year for GlaxoSmithKline in smoking cessation. GlaxoSmithKline's share leaped from 22.6 percent to 33.6 percent.
- In 2002, the MCA (Medicines Control Agency) announced significant changes to the process for medicine reclassification or switching. The new process is intended to encourage more manufacturers to apply for their medicines to be sold OTC and to decrease processing time for straightforward applications.
- Also in 2002, a review of advertising restrictions placed on some OTC medicines was announced, with a relaxing of advertising expected in 2003. In January 2003, deregulation of the National Health Service (NHS) system for dispensing prescriptions was announced. This will allow any grocery outlet to dispense NHS medications under the supervision of a pharmacist, doing away with the previous contract system which limited the number of NHS dispensing locations to just over 12,000.
- Grocery outlets saw the strongest growth in OTC distribution, increasing their retail share to 30 percent. They made particular gains in analgesics, cough, cold and allergy and digestive remedies. Grocery outlets choose to focus on price as the key to attract customers and to driving targeted top brands including Nurofen, Lemsip and Rennie for price discounts in the hopes of luring more OTC customers. Following the collapse of RPM (Resale Price Maintenance) in May 2001, grocery outlets were primarily responsible for slowing growth in

OTC value sales. Their increase in share came at the direct loss by chemist/pharmacists.

Italy

- Sales of OTC products recovered in 2002, after performing badly in both 2000 and 2001. The 4.7 percent growth seen in value terms in 2002, however, was larger due to a rebound from the losses recorded for two consecutive years in a number of product types and increased unit prices, rather than a stable new trend emerging.
- In 2002, cough, cold and allergy demonstrated the most dynamic performance, increasing by 7 percent in value terms, as such products recovered from the losses of 2000 and 2001. An important contribution to the recovery was a wave of important new launches in combination products, which rapidly reached previously unseen sales levels.
- Vitamins and dietary supplements ranked second to cough and cold remedies in terms of performance, posting an increase of 5.7 percent in terms of value in 2002. While sales of vitamins and dietary supplements have been growing for years, what was new in 2002 was that growth came from multivitamins and dietary supplements included in the 'other other dietary supplements' category, rather than natural remedies as in previous years.
- Angelini remained the leading OTC producer in Italy in 2002, having made important gains due to a successful launch policy that significantly strengthened its position in cough, cold and allergy remedies and in vitamins and dietary supplements. Roche remained in second place with Novartis in third, both with an unchanged overall value share in 2002.
- OTC healthcare products in Italy are expected to see a constant rise. Prices are expected to keep growing as they did during the last few years. Some other factors will, however, serve to maintain growth at relatively low levels, namely the continuing competition posed by homeopathic and herbal products.

Spain

- Value sales of OTC healthcare in Spain grew 5.6 percent in 2002, recovering the strong performance trend experienced over the review period, but broken in 2001. The virulent outbreak of flu – which attained the qualification of "epidemic" by the Spanish health authorities at the beginning of 2002 – boosted value sales of cough, cold and allergy remedies and analgesics, which together accounted for 49 percent of OTC sales, and represented the main factor behind the market's recovery.
- Calming and sleeping products, eye care and smoking cessation aids were the most dynamic products, witnessing their sales growth of over 8 percent in 2002 value terms. By contrast, ear care sales declined by over 8 percent in 2002, which represented the least dynamic performance that year.
- In 2002 beauty and energy came in a pill. As Spanish culture relies more on physical appearance as a social value, those products helping to acquire the perfect image saw value growth. This fact induced companies to increase their investment in research and development of products such as nutri-cosmetics. Nutri-cosmetics are dietary supplements whose final goal is to improve the quality of skin, nails and hair by providing the nutrients required by their physiology.
- As Spanish working hours lengthen and consumer lifestyles become increasingly hectic, demand for energy-providing products increases. This is particularly relevant to vitamins and dietary supplements, where most new launches focused on providing energy in a pill – examples being Davitamon for Energy by Chefaro España and Berocca by Roche.
- In 2002, the performance of herbal-based products was the result of two opposite factors. On one hand, the general trend among Spanish consumers favouring the consumption of natural-based products, evident in the increasing number of specialists selling such offerings and in the rising amount of shelf space allocated to their sale by supermarkets and hypermarkets, and on the other hand, the bad publicity that the withdrawal of over 200 herbal-based products by the Spanish health authorities created among the general public. Herbal-based sales gained weight over standard medicines in 2002.
- Spanish law states that medicinal products can only be sold through pharmacies. In 2001, there was an attempt promoted by ANGED to obtain the licence to sell OTC products through the grocery channel. The proposal was rejected. Hence, the 19,766 pharmacists still represent the only distribution channel through which OTC products may be purchased.
- Nevertheless, herbal medicines can be sold in specialist shops provided they are packaged according to specifications.
- Value sales of OTC healthcare products are expected to grow by more than 11 percent in terms of value. The final performance strongly depends on any political decisions that may boost OTC sales, such as strong de-listing, and manufacturers being given permission to use umbrella brands, which is currently forbidden in Spain.

The Netherlands

- Although the Netherlands market for pharmaceuticals is quite a small market, it increased by more than 7 percent in 2001.
- Growth was most notable in vitamins and dietary supplements. In 2001, vitamins and dietary supplements overtook cough, cold and allergy

remedies as the largest area of the OTC healthcare market, with a value share of 29.6 percent, against 29 percent for cough, cold and allergy remedies.

- Market growth was driven by increased health awareness in The Netherlands among a broader segment of the population.
- The Netherlands OTC industry is calling for the government to allow self-service of non-prescription medicines in pharmacies and drugstores. Neprofarm, the Netherlands medicines manufacturers' association, pointed out that the consumer favoured self-service, as they think this system would provide better point-of-sale advice.
- Kruidvat will operate Superdrug as an independent operation within the group. This acquisition is part of the Dutch group's aggressive expansion plans for Europe. Kruidvat Beheer has more than 700 drugstores in the Netherlands under the Kruidvat and Trekpleister banners. The Kruidvat holding represents more than one fifth of the total number of stand-alone Dutch drugstores.
- In addition to the drugstores in The Netherlands, Kruidvat operates 100 outlets in Belgium, and the group has interests in 153 drugstores in the Czech Republic, Hungary and Poland through a 50/50 joint venture with German chain Rossmann. The acquisition of the Superdrug chain has doubled annual sales by Kruidvat to more than € 3 billion, putting the Kruidvat chain in the top three drugstores in Europe.

4 PRODUCTION

Medicinal and aromatic plants
Medicinal and aromatic plant material is obtained both from plants growing in the wild and from cultivated stock. Collection in the wild still plays a vital role in the use of, and trade in, medicinal and aromatic plant material in Europe, since cultivation has not proved to be profitable for the majority of plants traded. This is because: many plants are difficult to cultivate; many are required in small quantities; the quality of some wild-harvested material is supposed to be superior; the costs associated with obtaining plant material from the wild are relatively low. Moreover, collection in the wild contributes to a wider distribution of cash-income in rural areas, originating in fair-trade market partnerships.

Lange (1998) estimates that about 2,000 medicinal and aromatic plant species are used on a commercial basis in Europe, of which two-thirds are native to Europe. In the EU, medicinal and aromatic plants are cultivated on an estimated 70,000 ha. Leading species are: lavender *(Lavandula spp.)*, Opium Poppy *(Papaver somniferum),* Caraway *(Carum carvi)* and Fennel *(Foeniculum vulgare).* France and Spain are EU countries with many hectares under cultivation. However, in Spain wild-harvesting and cultivation of medicinal and aromatic plants has declined. There is some cultivation in Germany, where leading producers of herbal medicines have their own plantations for popular products. Finzelberg, for example, cultivates St. John's Wort and Echinacea in Germany. The area under cultivation, however, is small as cultivation in Eastern European countries is much cheaper.
Eastern European countries such as Bulgaria, Hungary and Albania are major EU suppliers of material from medicinal and aromatic plants. For detailed information about production of medicinal and aromatic plants in Europe, please refer to the publication "Europe's Medicinal and Aromatic Plants: Their trade use and conservation" by Lange. This publication is obtainable through Traffic (see Appendix 2.6).

Data reported in the Commonwealth report *"A Guide to the European Market for Medicinal Plants and Extracts"* are listed in Table 4.1.

The world production and processing of medicinal herbs remains concentrated in Europe, in particular France, as well as in a number of Asian countries. Other significant production areas include Yugoslavia (the former), Bulgaria, Germany and Hungary. The largest percentage of medicinal herbs is brokered through Germany. Similarly, Hungary developed the first research centre for medicinal herbs in the early 1900's. China and Korea are the two major producers from the Asian region. They offer vast experience along with highly skilled workers using labour intensive techniques.

Table 4.1 Medicinal and aromatic plant production in Europe

Country	Hectares
France	25,000
Spain	19,000
Germany	7,500
Austria	4,300
The Netherlands	2,500
Italy	2,300
UK	2,000
Finland	1,900
Total	**64,500**

Source: Commonwealth, 2000

There are two distinct trends in European medicinal plant production. Large-scale cultivation of relatively low value products such as Evening Primrose, Thyme and Milk Thistle is generally on the decline and is being replaced by imports. Production of more specialist plants is, however, increasing, especially using organic or bio-dynamic cultivation techniques (Commonwealth, 2000).

Medicinal and vegetable saps and extracts
The EU is a leading producer of extracts. Germany is among the leading pharmaceutical plant importers and big extract producers such as Finzelberg, Spreewald, General Extract Products and Gehrlicher are located in Germany. Other leading producers are Indena and Hammer Pharma in Italy.

Vegetable alkaloids
According to our information, there is no production of cinchona or ephedrine in Europe. There are, however, companies such as Buchler GmbH in Germany that process and trade these products.

Enlargement EU
In 2004, some ten more countries, primarily from the Central and East European (CEE) region, will join the European Union: Hungary, Poland, the Czech Republic, Slovakia, Slovenia, Estonia, Latvia, Lithuania, Malta and Cyprus.

As part of the integration process, these countries are adopting the common body of law in the EU. The new

member countries have also entered into bilateral agreements with the EU in areas such as industrial and agricultural tariffs, and standards and certification procedures.

In this Section, the impact of the EU enlargement on exports of natural ingredients for pharmaceuticals by developing countries will be briefly discussed.

Threats from the enlargement

East-European countries (mainly Hungary, Poland, Albania and Bulgaria) cultivate medicinal plants on a large scale. Many companies in CEE have a competitive advantage over their competitors in developing countries, because of their access to highly skilled, and low-cost labour.

After the enlargement, therefore, imports from developing countries may expect to be partially replaced by imports from the new member states. However, this will only be the case for product groups, which can be cultivated in Europe, such as lavender (Lavandula spp.), Opium Poppy (Papaver somniferum), Caraway (Carum carvi) and Fennel (Foeniculum vulgare). For some product groups, cultivation is not a good alternative. Collection from the wild may occur for medicinal plants which grow slowly, are difficult to domesticate or for which only small quantities are needed. The cost of wild-collection is typically much less than that of cultivation. In these cases, the position of developing countries will not deteriorate.

Although developing countries have a dominant position in the global production of natural ingredients, the competition from industrialised countries and East-European countries remains strong. For instance, in the case of natural ingredients for the cosmetic industry, developing countries account for approximately 55 percent of total inputs, while industrial countries and East European countries supply 35 percent and 10 percent of global production respectively. Industrialised countries remain in a dominant position where high yield and full mechanisation make cultivation competitive, compared with countries that rely on low labour costs. A possibility exists that industrialised countries will out-source their production to East-European countries where labour costs are low.

Opportunities of the enlargement

The accession of the new member countries will add another 100 million consumers to the EU marketplace. This will obviously increase the overall EU buying power noticeably. However, keep in mind that the average income of consumers in the ten new countries is considerably lower than the average of the current 15 member countries.

One of the greatest attributes of EU membership in terms of how it benefits exporters in developing countries is the transparency and homogeneity of the EU regulatory system. As the countries of CEE move through the accession process, they are required to adopt EU laws and regulations. Each of the new member countries already has these EU laws in place, or is in the process of adapting their laws to EU standards. As a result, transaction costs for exports from developing countries will be reduced because the harmonised rules and regulations now cover a larger area.

Prior to actual membership, a number of the new member countries (such as Hungary, Czech Republic, Poland, Slovakia, Lithuania, Latvia and Estonia) already enjoy duty-free access for their products entering the EU market. In other words, the situation for exporters competing with East-European companies will not change after the actual accession. On the other hand, duties currently applying to exporters to CEE countries will most probably diminish after these countries have become part of the EU market. This is the result of the fact that most EU tariff levels for developing countries' products are generally lower than those imposed in CEE countries. On the subject of tariff barriers, the overall effect of the enlargement on the developing countries' comparative advantage will be positive.

5 IMPORTS

5.1 Total imports

Table 5.1 provides an overview of the imports of the product groups falling under ingredients for pharmaceuticals. It is not particularly worthwhile to give an indication of total imports of natural pharmaceutical ingredients. Besides the medicinal & aromatic plants, the medicinal & vegetable saps & extracts, and the vegetable alkaloids, there is a range of natural products that is used as ingredients by the pharmaceutical industry, including essential oils, vegetable oils, natural gums & resins and natural colours. These ingredients, however, do not have a specific medicinal activity and only a small proportion of the total trade in these products is used by the pharmaceutical industry. For more information on these ingredients, please refer to CBI's EU Market Surveys *"Natural Ingredients for Cosmetics"* and *"Food Ingredients for Industrial Use"*. Moreover, it is important to note that most of the ingredients are not only traded for the pharmaceutical industry, but also find their way to the food and cosmetics industry.

Table 5.1 Imports by EU member countries of selected product groups falling under ingredients for pharmaceuticals, 1999-2001
€ thousand/ tonnes

	1999		2000		2001	
	value	volume	value	volume	value	volume
Medicinal & aromatic plants	313,942	111,839	338,774	117,961	323,497	122,754
Intra-EU	107,187	25,953	120,921	26,705	106,681	33,031
Extra-EU	206,755	85,886	217,853	91,256	216,816	89,723
Medicinal & vegetable saps & extracts	151,482	2,999	127,137	2,574	113,157	2,977
Intra-EU	117,032	2,499	93,031	1,856	83,497	2,018
Extra-EU	34,450	500	34,106	718	29,660	959
Vegetable alkaloids	390,900	7,634	531,323	10,778	545,383	12,391
Intra-EU	220,842	5,808	264,423	8,188	289,088	10,176
Extra-EU	170,058	1,826	266,900	2,590	256,295	2,215

Source: Eurostat (2002)

5.2 Imports by product group

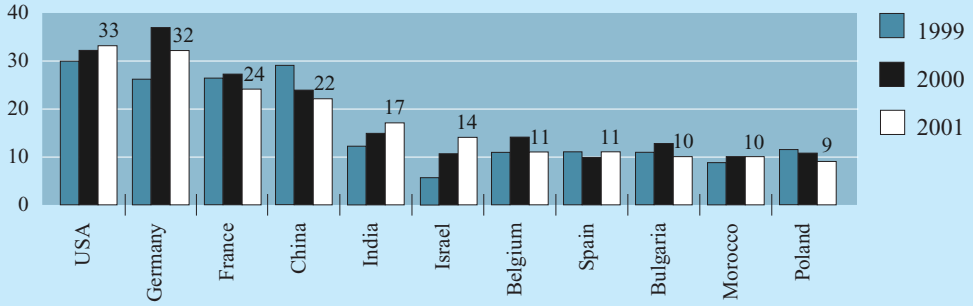
Medicinal & aromatic plants

Figure 5.1 shows that, in terms of value, the leading suppliers of medicinal & aromatic plants to the EU were the USA, Germany, France and China. Between 1999 and 2001, the total value imported by EU member countries fluctuated somewhat, amounting to about € 323 million in the latter year. In terms of volume, imports increased by 10 percent during the same period, reaching 123 thousand tonnes in 2001

About two thirds of the imports (in value) was supplied from extra-EU sources, of which more than 60 percent represented by developing countries.

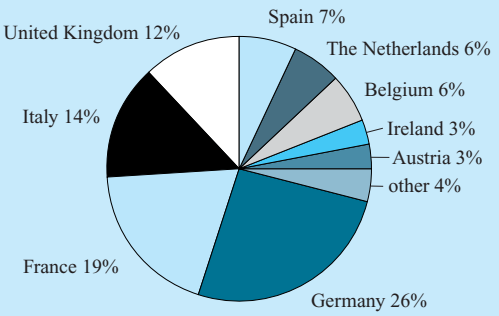
Figure 5.2 shows that in 2001, Germany was, by far, the leading EU importer of medicinal & aromatic plants, accounting for a quarter of total imports (in value). Between 1999 and 2001, however, Germany saw its imports decrease in terms of value, while the United Kingdom and, even more so, The Netherlands experienced a considerable increase in imports during the same period.

Figure 5.1 Leading suppliers of medicinal and aromatic plants to the EU, 1999-2001
€ million



Source: Eurostat (2002)

Figure 5.2 Leading EU importers of medicinal & aromatic plants, 2001
% of total EU import (in value)



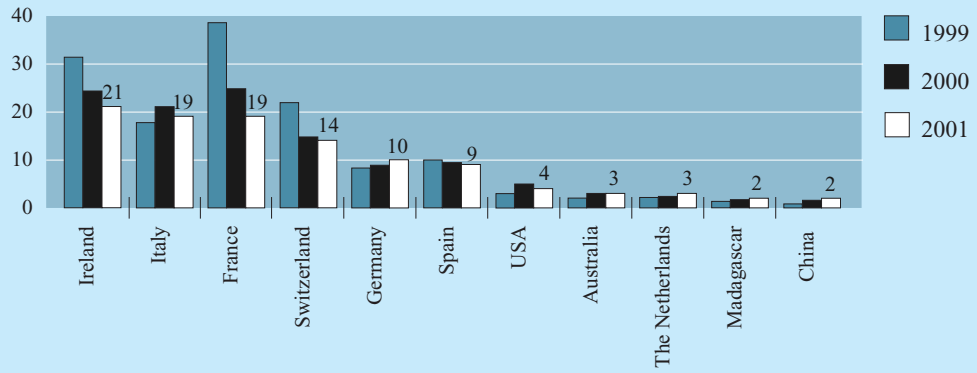
Source: Eurostat (2002)

Medicinal & vegetable saps & extracts
As from 1999, imports by EU member countries of medicinal & vegetable plants & extracts decreased by a quarter in terms of value, reaching € 113 million in 2001. In terms of volume, imports fluctuated from 3 thousand tonnes in 1999 to 2.6 thousand tonnes in 2000 and back to 3 thousand tonnes in 2001.

The leading suppliers to the EU were Ireland, Italy, France, Switzerland, Germany and Spain, together supplying more than 80 percent of the imported value of medicinal & vegetable saps & extracts by EU member countries in 2001. About a quarter of the imported value was supplied by countries outside the EU, of which 20 percent consisted of developing countries.

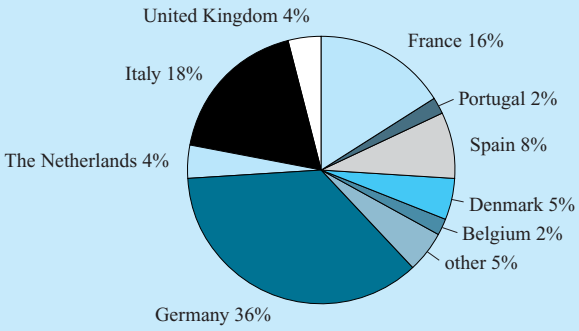
Figure 5.4 shows that Germany is, by far, the leading importer of medicinal & vegetable saps & extracts, followed by Italy and France. All these countries, and particularly the first two, saw their imports decrease between 1999 and 2001, which was in contrast with relatively smaller importers like Denmark, The Netherlands and the United Kingdom, all of which managed to increase their imports considerably during the same period.

Figure 5.3 Leading suppliers of medicinal & vegetable saps & extracts to the EU, 1999-2001
€ million



Source: Eurostat (2002)

Figure 5.4 Leading EU importers of medicinal & vegetable saps & extracts, 2001
% of total EU import (in value)



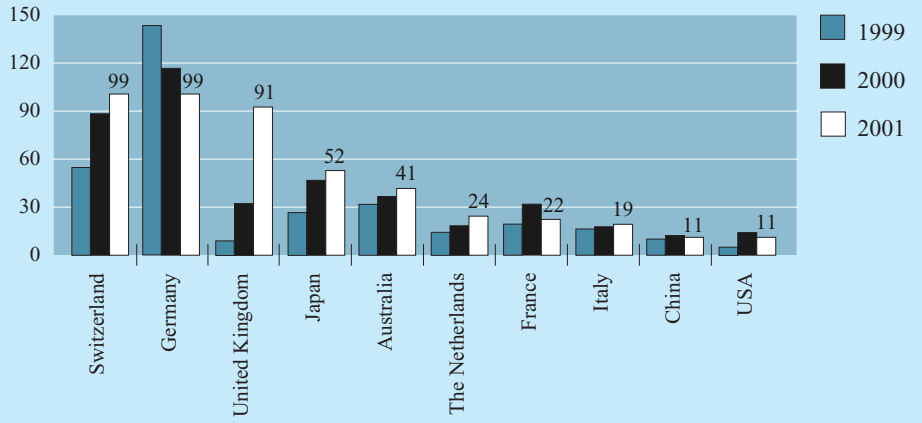
Source: Eurostat (2002)

Vegetable alkaloids
Between 1999 and 2001, imports by EU member countries of vegetable alkaloids, increased by 40 percent in value and by 60 percent in volume, amounting to € 545 million / 12.4 thousand tonnes in the latter year. In 2001, the leading EU suppliers were Germany, Switzerland and the United Kingdom, together accounting for over half of total imports (in value). Almost 50 percent of the imported value was supplied from extra-EU sources, of which less than 15 percent was represented by developing countries.

Figure 5.6 shows that the United Kingdom was the leading EU importer of vegetable alkaloids, followed by The Netherlands, Germany and Spain. Most remarkable was the development of Netherlands imports, which increased from less than € 9 million in 1999 to € 73 million in 2001. The other leading countries also increasing their imports during the survey period.

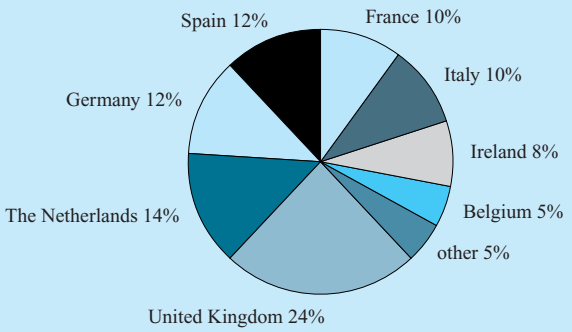
Under the group HS 2939 of vegetable alkaloids, some derivatives from medicinal plants have a specific HS code (including quinine, alkaloids of cinchona and ephedrine(s)).

Figure 5.5 Leading suppliers of vegetable alkaloids to the EU, 1999-2001
€ million



Source: Eurostat (2002)

Figure 5.6 Leading EU importers of vegetable alkaloids, 2001
% of total EU import (in value)



Source: Eurostat (2002)

Table 5.2 Imports by EU member countries of selected vegetable alkaloids, 2001
€ thousand

HS Code	EU imports	DCs	Leading suppliers
HS 293921	17,171	6,059	Indonesia (4,682), The Netherlands (4,388), Germany (3,453)
HS 293929	4,720	440	The Netherlands (3,266), Germany (451), India (428)
HS 293941	3,968	166	Japan (2,032), UK (911), Germany (410), India (162)
HS 293949	2,750	57	UK (1,962), Japan (409), Germany (269), India (45)

HS 293921: Quinine and its salts (from medicinal plant Cinchona sp); HS 293929: Alkaloids of cinchona (excl. Quinine and its salts) and their derivatives and salts.; HS 293941: Ephedrine and its salts (from Ephedra sp); HS 293949: Ephedrines and their salts (from Ephedra sp).
DCs: Developing countries
Source: Eurostat (2002)

5.3 The role of the developing countries

Medicinal & aromatic plants
In 2001, developing countries were particularly strong in the supply of medicinal & aromatic plants, accounting for more than 40 percent of imports by EU member countries in terms of value and more than 50 percent of imports by EU member countries in terms of volume. During the past few years, the share of developing countries in EU imports has fluctuated closely around these levels.

China and India, as a result of their long tradition in the field of natural medicine and their vast land area, comprising all climatic zones, were leading producers of natural ingredients for pharmaceuticals. Fiji increased its exports of medicinal & aromatic plants to the EU from just over US$ 2 million in 1997 to US$ 12 million in 1998. This was the result of the exploding international demand for kava kava, which is endemic to the South Pacific. Vanuatu is another Pacific Island, which profited from the increased demand. After 1998, EU imports from Fiji decreased again to their previous level. In June 2002, Germany banned the supply of the herbal remedy kava kava after reports linking it to fatal liver failure. Britain's Medicines Control Agency (MCA) has proposed to ban kava kava in 2002 and the Order has come into force from January 2003. From the box below, it also becomes clear that East European countries were major suppliers of medicinal & aromatic plants to the EU.

Although The Netherlands was a relatively small European importer of medicinal & aromatic plants in 2001, relatively it obtained the biggest share of its imports from developing countries. Kenya and India together supplied 40 percent of The Netherlands' imports (in value) in 2001.

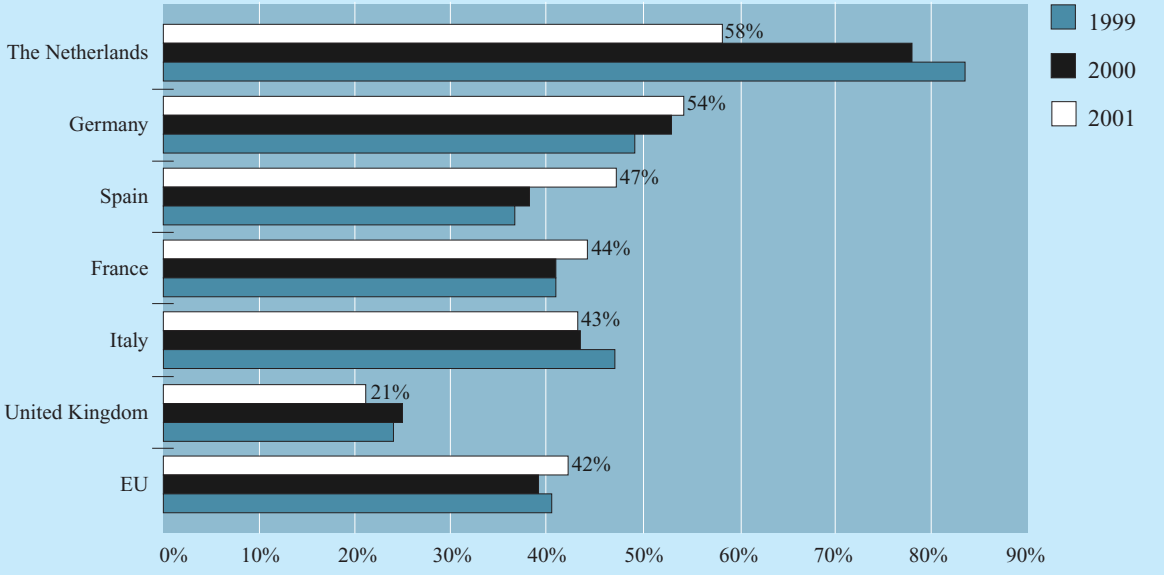
Medicinal and vegetable saps and extracts
In 2001, developing countries accounted for 6 percent of the imported value by EU member countries of medicinal and vegetable saps and extracts. About two thirds of the supplies from developing countries originated in two countries, i.e. Madagascar and China. Other important developing country suppliers were Ecuador (8%), India (7%), Argentina (6%) and Honduras (3%). In 2001, France accounted for 30 percent of the imports (in value) by EU member countries originating in developing countries, Italy for 23 percent and the UK for 18 percent.

EU imports of medicinal & aromatic plants from selected developing countries, 2001
€ million

China	21.6	South Africa	5.2	Mexico	2.1	Madagascar	1.2
India	17.3	Brazil	4.3	Azerbaijan	1.8	Peru	1.2
Morocco	10.1	Albania	4.2	Iran	1.6	Fiji	1.1
Egypt	8.1	Thailand	3.5	Pakistan	1.5	Tunisia	1.1
Turkey	7.8	Argentina	3.0	Togo	1.5	Cameroon	1.1
Kenya	7.6	Croatia	2.8	Namibia	1.3	Ghana	1.0
Chile	7.4	Sudan	2.5	Congo	1.3	Macedonia	1.0

Source: Eurostat (2002)

Figure 5.7 Share of developing countries in imports of medicinal & aromatic plants into selected EU countries, 1999-2001
% of imported value



Source: Eurostat (2002)

Vegetable alkaloids
In 2001, developing countries supplied 6 percent of the imports (in value) by EU member countries of the product group vegetable alkaloids as compared to 13 percent in the preceding year. China supplied about a third of the total value originating in developing countries, followed by India (20%), Indonesia (15%), Brazil (11%), Mexico (8%) and Turkey (6%). In 2001, Germany accounted for more than a quarter of imports (in value) by EU member countries originating in developing countries, The Netherlands and the UK each for 14 percent and France for 13 percent. Please also refer to Table 5.2.

Although they do not feature in Eurostat figures, other countries of origin and of value-added production of quinine products, next to Indonesia and India, are Ecuador, Bolivia, Brazil, Tanzania, Rwanda and Congo (Dürbeck, p.c.). There is forestry containing cinchona varieties in these countries and in most of them value-added processing has been conducted through local companies. The cultivation and processing in Rwanda and Congo is done by European companies from Germany and The Netherlands. Tanzania and Ecuador are traditional exporters of the dried bark of cinchona varieties. In Bolivia, Brazil, Indonesia and India, the extraction is done by local companies primarily for the local markets, but also for the export of extracts. The products from cinchona varieties in the international market are Quinine hydrochloride and Quinine sulphate.

Ephedra has been used in China for over 4,000 years. Several companies in Europe use the extract for herbal medicines. Extraction of Ephedra alkaloids is carried out in China and in Europe.

Opportunities for developing countries

It is not easy to present an overview of promising products for exporters in developing countries. In Europe, some 2,000 medicinal and aromatic plants are used on a commercial basis. A number of botanical species is consistently cited by industry representatives in the USA and Europe as the most important today, and likely in the next five years (Laird et al., 2002). Echinacea was cited as the top product now and in the years to come, in both the USA and Europe. European companies continue to consider St Johns Wort and Kava extremely important, while USA industry representatives tended to think both might be in decline due to controversial recent studies and bad press. Other important botanicals cited include: Gingko, Ginseng, Valerian, Goldenseal, and Garlic. USA companies also cited Black cohosh and Astragalus as good performers, while European companies have had continued success with Hawthorn and Chamomile.

Most buyers in The Netherlands are not interested in plant material, but in plant extracts. There are only a few developing countries, which are able to supply extracts conforming to the requirements of western industry.

Exporters should focus on ingredients with known activity. The box below gives a selected overview of top selling herbal medicines and their claimed activity.

Claimed activity of selected top selling herbal medicines

Product	Plant part	Activity
Ginseng	Root	Increases energy and sex drive
Siberian ginseng	Root	Defuses nervous tension and fights fatigue
Kava kava	Root	Combats anxiety and stress
Green tea	Leaves	A powerful anti-oxidant and cholesterol reducer
St. John's wort	Herb	Anti-depressant
Psyllium	Seeds	Anti-constipation; helps weight loss
Hawthorn	Fruit	Lowers blood pressure
Saw palmetto	Seeds	Treats prostate problems
Valerian	Root	Relieves insomnia, anxiety, menstrual cramps, headaches
Liquorice	Root	Treats ulcers and stomach disorders
Wild yarn	Roots	Alleviates PMS and menopausal symptoms
Aloe	Leaves	Treats wounds and skin problems
Chamomile	Flowers	Alleviates moods and skin problems, calming
Garlic	Bulb	Boosts the immune system; lowers cholesterol
Calendula	Flowers	Soothes skin; fights bacterial, viral and fungal infections
Echinacea	Root, flowers	Boosts immune system; prevents colds
Ginger	Rhizomes	Treats nausea; inflamed joints
Gingko	Leaves	Improves energy, mood and brain function

Source: ten Kate & Laird (1999)

Product profiles of Echinacea and Cat's Claw are included in Part B, Chapter 10 of this survey.

Although farmers in developing countries have no knowledge of plants not native to the tropics, a number of medicinal plants, which are not day-length sensitive (i.e. requiring many hours of sun-light), were successfully moved into sub-tropics. Argentina, for example, has substantial cultivation areas of Chamomile and St. Johns Wort. Top-selling species such as Echinacea are now also supplied by developing countries such as Bolivia, Costa Rica and Malawi.

6 EXPORTS

Table 6.1 provides an overview of the exports of the product groups falling under ingredients for pharmaceuticals. These export data should be interpreted with caution, since a substantial amount of these products is traded, further processed and re-exported at a higher value. Moreover, the exported products may be used for multiple purposes and not only for the production of pharmaceuticals.

Table 6.1 Exports by EU member countries of selected product groups falling under ingredients for pharmaceuticals, 1999-2001
€ 1,000/ tonnes

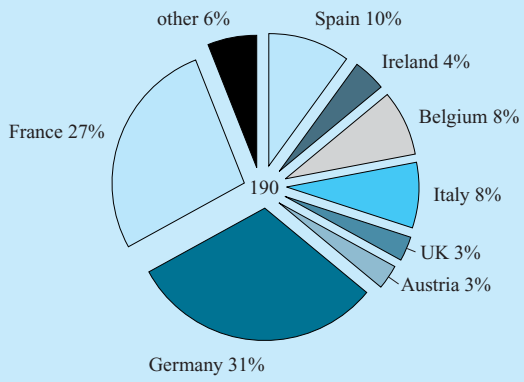
	1999		2000		2001	
	value	Volume	value	volume	value	volume
Medicinal & aromatic plants	174,735	41,814	201,816	43,213	190,233	40,086
Intra-EU	111,577	27,056	127,890	29,585	123,632	26,506
Extra-EU	63,158	14,758	73,926	13,628	66,601	13,580
Medicinal & vegetable saps & extracts	223,135	6,831	186,581	5,014	187,346	4,197
Intra-EU	125,636	5,611	108,970	3,928	97,959	2,943
Extra-EU	97,499	1,220	77,611	1,086	89,387	1,254
Vegetable alkaloids	451,724	10,805	560,240	11,688	630,744	12,255
Intra-EU	183,029	4,162	210,728	4,091	270,810	5,232
Extra-EU	268,695	6,643	349,512	7,597	359,934	7,023

Source: Eurostat (2002)

Medicinal & aromatic plants

In 2001, EU member countries together exported € 190 million worth of medicinal & aromatic plants, representing a volume of 40 thousand tonnes. In the same year, the leading destination was France, importing 14 percent of exports (in value) by EU member countries, followed by Germany (12%), Switzerland (9%), Italy (7%), the UK (6%), USA (6%), Belgium (5%) and The Netherlands (5%). Figure 6.1 shows the leading EU exporters.

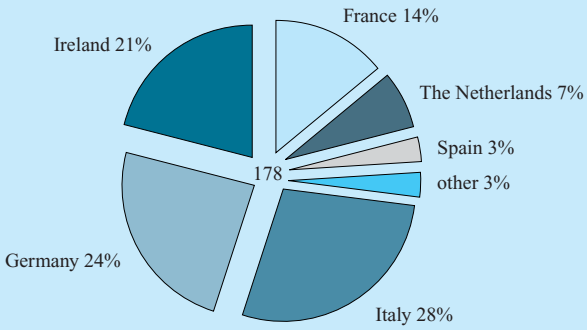
Figure 6.1 Leading EU exporters of medicinal and aromatic plants, 2001
% of total value, value in € million



Source: Eurostat (2002)

Medicinal & vegetable saps & extracts
Between 1999 and 2001, exports by EU member countries of medicinal & vegetable saps & extracts decreased by about 15 percent in value and 40 percent in volume, amounting to € 187 million / 4.2 thousand tonnes in the latter year. The leading destination was France, receiving 20 percent of the exported value in 2001, followed by Germany (17%), the USA (13%), Switzerland (6%), Italy (6%) and Japan (3%). Figure 6.2 shows the leading EU exporters.

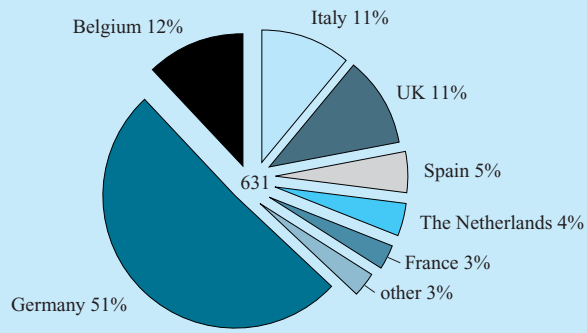
Figure 6.2 Leading EU exporters of medicinal & vegetable saps & extracts, 2001
% of total value, value in € million



Source: Eurostat (2002)

Vegetable alkaloids
As from 1999, exports by EU member countries of vegetable alkaloids increased by 40 percent in value and 13 percent in volume, amounting to € 631 million / 12.3 thousand tonnes in 2001. The leading destination was the USA, receiving 20 percent of the total exported value in 2001, followed by Italy (15%), France (9%), Japan (4%), Brazil (4%) and the UK (4%). Figure 6.3 shows the leading EU exporters.

Figure 6.3 Leading EU exporters of vegetable alkaloids, 2001
% of total value, value in € million



Source: Eurostat (2002)

7 TRADE STRUCTURE

7.1 EU trade channels

Pharmaceutical industry
Advances in research techniques have allowed the pharmaceutical industry to conduct large-scale natural products screening programmes, which over the past decade have increased demand for natural product samples, many collected from the biologically-rich tropical countries. The bulk of these samples is collected by sub-contracted collectors, most of whom are based in developed countries.

The collection of biological samples for industry (biodiversity prospecting) generally involves two or sometimes three direct relationships:

- that between the company and the contracted collector (usually described in a contract which is legally binding under the law of the country in which the company is situated);
- that between an outside collector and in-country collaborators (usually more informally defined, although increasingly detailed in agreements of some kind, and regulated by national legislation);
- that between an ethnobotanical collector and local communities that provide traditional knowledge on collected samples, which will subsequently be supplied to commercial companies.

The transfer of samples from a collector to a company is the most direct path by which biological and cultural diversity travels to commercial interests, and generally the most direct path upon which benefits return. However, there are many other groups which are indirectly involved in and affected by this exchange although they are not written into two-party

Structure of the botanical medicines industry

Cultivation or wild-collection of plants
Plants are cultivated or wild-collected. Plant material is cleaned and dried. The majority of plant material in trade is in dried form. Drying methods must bring moisture content down to <14 percent, while retaining the chemical composition of the plant. A minority of material is traded fresh, or preserved in alcohol.

Exporters/importers/wholesalers/brokers/traders
Plant material is purchased either directly from wild-crafters or cultivators, or after it has passed through a number of traders (e.g. local dealers, village co-operatives, district traders). Brokers and agents act on behalf of purchasing companies. Wholesalers, importers and exporters may specialise in a few raw materials, or in a few thousand, which they sell as commodities to a number of different companies. Wholesalers/traders may also process plant material. Some companies apply testing, or use voucher specimens at this stage, to ensure correct species identification and quality.

Bulk ingredient suppliers and processing companies
Plant material is tested for contamination (e.g. pesticides). It is formed into bulk ingredient, either coarsely cut, rasped, or ground into powdered form (for use in crude herbal products and in the preparation of extract). Due to consolidation in the industry, the production of bulk ingredients is often undertaken by wholesalers/traders. Further processing in the form of extraction, particularly standardised extracts, is undertaken by processing companies, many of which also produce branded lines, which they sell directly to distributors or retail outlets.

Manufacturers of finished products
Bulk and processed ingredients are supplied to companies which manufacture (e.g. might add excipients to extracts to make tablets and capsule products, based on in-house formulae), label, and package products for retail sales. Some sell lines directly to health professionals, others sell directly to consumers through multi-level marketing and mail order. Some companies use brokers or distributors to supply their products to retail outlets, others market directly to mass and specialty outlets.

Distributors
Some manufacturers (usually smaller companies) use distributors to sell finished products to retail outlets.

Retail/consumer sales
The bulk of finished products is sold through retail outlets, either mass market (e.g. chain pharmacies, supermarkets, grocery stores) or speciality (e.g. health food stores, pharmacies), although direct sales command a significant proportion of the market.

Source: ten Kate & Laird, 1999

arrangements, but are increasingly addressed in international and national law and policy such as: communities which live in biodiversity-rich areas where samples are collected; national governments which, as written into the Convention on Biological Diversity (CBD), now claim national sovereignty over their country's genetic and biochemical resources; the international community which, through documents and agreements such as the CBD, have expressed interest in the conservation and sustainable and equitable use of biodiversity.

Herbal medicine industry

European-based companies, and German in particular, dominate the global herbal medicine supply industry. The biggest herbal raw materials group is Martin Bauer Group, a German-based corporation with annual sales of over US$ 250 million (ten Kate & Laird, 1999). Martin Bauer Group owns Finzelberg, Plant Extract, PhytoLab and Phytocon, and acquired Muggenberg (which took over Heinrich Ambrosius earlier), another large German supply company. Other leading companies include the German Madaus of (US$ 400 million annual sales from herbal medicines alone) and the Italian Indena (US$ 200 million).

Lewington (1993) reported that between 500 to 600 medicinal plants are traded via Hamburg, which made it the world's leading trading centre in plants. However, the position of Hamburg has decreased in recent years.

The boxes in which the structure of the industry and trade are presented are relevant for the product group Medicinal and aromatic plants. Processed products falling under the product group Vegetable saps and extracts, in which developing countries do not have an important stake, are directly traded with manufacturers of finished products (e.g. bark extract of Prunus africana to Indena in Italy). Quinine, a vegetable alkaloid, is traded via trading houses. Internationally, there are more than 60 trading houses trading quinine, of which 15 in Germany and 12 in the United Kingdom. Trading houses in Germany include Buchler GmbH and Henry Lamotte, in the United Kingdom they include StanChem International.

With respect to TCM, research by TRAFFIC Europe revealed that twelve major distributors of Chinese drugs and patented medicines in Germany import their products from Hong Kong and China or obtain them from one of the few large European importers.

Structure of the botanicals trade in Germany

Drug brokers

Seven brokers or agents are involved in the trade in Germany. Most are active on a global scale, although some specialise in specific countries. Brokers represent foreign import-export companies, traders, farmers and manufacturers. They deal mostly for wholesalers, and to a lesser extent for pharmaceutical companies or herbal tea companies. Most brokers also trade in spices.

Wholesalers (traders in bulk material)

In Germany, the mainstream bulk trade in botanicals is dominated by about 20 wholesalers, with further consolidation of the trade in the past few years. 95 percent of plants sold by German wholesalers are sold as dried plants and plant parts, with the remaining 5 percent comprised of plants preserved in alcohol, mainly for use in homeopathy. Traders deal with a range of customers including the food industry, pharmaceutical companies, cosmetics, liqueur, extract-producing companies, and colouring agent companies. Overall volumes imported by individual traders range from 1,000 tonnes to 30,000 tonnes annually. On average, each company trades in 400-500 botanical species.

Processing

Wholesalers are often responsible for processing the plant material before sale, including cleaning, cutting and grinding it into a powder. Some wholesalers are also involved in producing extracts, herbal teas, or herbal mixtures.

Manufacturing

Processed material is supplied to manufacturers of pharmaceuticals, plant extracts, cosmetics, liqueurs, dyes, etc., as well as to second-level retail suppliers, and to other wholesalers and tea-packing companies. Bulk extract producers and pharmaceutical companies often manufacture intermediary products, which are then sold to cosmetics, pharmaceuticals, or food companies which manufacture finished products.

Source: ten Kate & Laird, 1999

7.2 Distribution channels for developing country exporters

Exporters should realise that the Internet is an important medium in the sourcing of raw materials for herbal products. Several users/traders of natural ingredients mentioned that the Internet is an important source for finding suppliers.

A very interesting link for exporters is www.herbworld.com/cropshop/, where growers and buyers of botanicals can get together. Growers can list which crops they have available, date of availability, price, quantity, etc. Buyers can also list what they are looking for.
The site www.ingridnet.com is a marketing instrument for companies, which supply ingredients. The database includes contact details of 10,000 ingredient suppliers and is used by the food, cosmetic and pharmaceutical industries to source ingredients.

Many of the importers have an Internet site, where interested parties can find more information on the field in which these importers are active. Most of the interesting contacts can be found in Germany. Agrimedia has published the Business Guide 2000: Medicinal and Spice Plants including over 1,500 addresses of organisations and companies active in this field.

Interesting contacts in the market for medicinal and aromatic plants are for example Alfred Galke, Cealo and Madaus in Germany. There are only a few companies importing extracts directly. Indena (Italy), for example, imports bark extract of *Prunus africana.*

Organisations working with pharmaceutical companies in bio-prospecting arrangements are referred to the Earthscan publication "Biodiversity and Traditional Knowledge" (for contact details see Appendix 2.6). This practical manual demonstrates how to arrive at equitable and successful arrangements on access to, and commercial development of, genetic resources.

Exporters should realise that the Internet is an important medium in the sourcing of raw materials for herbal products. A number of users/traders of natural ingredients mentioned that they use the Internet in order to find new suppliers.

8 PRICES

8.1 Price developments

The prices of natural ingredients for pharmaceuticals can fluctuate widely depending on the raw material. The price level of natural ingredients is influenced by:

- **Quality factors** Determined by the country of origin, the climate, the crop, the concentration of the ingredients and the extraction method.
- **Economic factors** Based on supply and demand. The supply depends on the size of the current crop, the carry-over from previous crops and the existence of synthetic substitutes.

Table 8.1 should be considered purely indicative and reflects the price of a specific phytochemical characteristic from a specified origin. The level of marker compounds (for chemical standardisation of extracts) referred to in quotes are those commonly found in the industry. They do not imply any sort of "trading standard".

The prices are indicative retail prices. However, as the products are bought by bulk, these prices vary according to negotiation with the companies.

Great care should be taken when comparing prices of medicinal plants and extracts from differing origins as form structure and biochemical activity may differ considerably between very similar products.

For information on price setting, please refer to Section 13.3.

8.2 Sources of price information

Internet is a good source for obtaining an idea of retail prices for raw materials. Please refer to Appendix 2.2 for addresses. At some sites professional users can request samples and offers for ingredients.

The Internet site of the Herb Growing and Marketing Network includes a herb crop shop, where growers and buyers of botanicals can come together (www.herbworld.com/cropshop/).

Prices for the following raw materials are published weekly in the Public Ledger (see Appendix 2.2):

- crude drugs including balsam, bayberry root bark, cochineal, echinacea and valerian
- herbs and spices including cloves, ginger, black pepper and turmeric
- waxes and gums
- 38 essential oils including amyris, geranium, lemongrass and vetiver
- oilseeds, oils and fats including soya oil, sunflower seed oil, groundnut/peanut oil, palm oil and castor oil.

At the end of 2000, ITC started with a Market News Service for Medicinal Plants and Extracts. The MNS includes price information.

Table 8.1 Indicative prices of botanical extracts, June 2003
US$/€ per kg

Product	%	Price (US$)	Price (€)
Asian ginseng root *(Panax)*	25	152	131
Black cohosh rhizome *(Cimicifuga foetida)*	2.5	85-89	73-77
Devil's claw secondary root tuber *(Harpagophytum procumbens)*	5	55-85	47-73
Echinacea angustifolia root	4	250	216
Ginkgo leaf *(Biloba)*	24/6	39-80	34-69
Milk thistle fruit *(Silybum marianum)*	80	78-80	67-69
St John's wort herb *(Hypericum perforatum)*	0.3/3.0	20-30	17-26
Saw palmetto fruit *(Serenoa repens)*	85-95	110-150	95-129
Willow bark *(Salix Alba)*	15	85	73

Source: ITC (June 2003)

9 EU MARKET ACCESS REQUIREMENTS

This chapter will only deal briefly with the relevant issues within this subject. References to relevant information sources will be made. Since CBI's AccessGuide is an important instrument providing the larger part of the information described below, references to AccessGuide will be made.

AccessGuide
AccessGuide is CBI's database on European non-tariff trade barriers, specially developed for companies and business support organisations in developing countries. Registered companies and organisations have unlimited access to AccessGuide information.

Exporters in developing countries wishing to penetrate the European Union should be aware of the many requirements of their trading partners and EU governments. Standards that are being developed through legislation, codes, markings, labels and certificates with respect to environment, safety, health, labour conditions and business ethics are gaining importance. Exporters need to comply with legislation in the EU and also have to be aware of the many market requirements. AccessGuide provides clear information on these standards and their implications.

For more information please refer to www.cbi.nl/accessguide

9.1 Non-tariff trade barriers

9.1.1 Legislative requirements

EU legislation
In this section, an overview of the legislation concerning pharmaceutical end-products will be presented. This overview serves as background information, before we discuss the standards for ingredients.

In order to enter the EU market with pharmaceutical products, companies must apply for registration of their products. This application must be accompanied by documents, which provide the results of tests and trials carried out on the product concerned. The application and quality requirements are such that they represent an actual regulatory and technical barrier to entering the EU market.

A new authorisation system for registration (Council Regulation 2309/93) became operational on January 1, 1995. The new system offers two routes for authorisation of medicinal products:

- **Centralised procedure:** Applications are made directly to the European Agency for the Evaluation of Medicinal Products (EMEA), leading to the granting of a European marketing authorisation. Use of this procedure is compulsory for products derived from biotechnology, and optional for other innovative medicinal products.

- **Decentralised procedure:** Is applicable to the majority of conventional medicinal products. Applications are made to EU Member States selected by the applicant and the procedure operates by mutual recognition of national marketing authorisations. Where this is not possible, the EMEA is called on to arbitrate.

Purely national authorisations remain available for medicinal products to be marketed in one Member State.

The most relevant Directives adopted by the European Commission are:
- 65/65/EEC
- 75/318/EEC
- 75/319/EEC
- 87/176/EEC
- 89/341/EEC
- 89/342/EEC
- 89/343/EEC
- 89/381/EEC
- 91/356/EEC
- 92/73/EEC.

Directive 65/65 created the framework for all subsequent EU pharmaceutical regulation. Directive 75/318 added new rules on the information and pharmacological, toxicological and clinical data needed for an authorisation application. Data must demonstrate therapeutic efficacy and state all characteristics of a product, including adverse reactions.

At the same time, Directive 75/319 set up the Committee for Proprietary Medicinal Products (CPMP) and the first multi-stage application procedure for product authorisation. It also provided for the licensing of manufacturing operations. The CPMP was set up to speed the mutual recognition of authorisations. Since the establishment of EMEA, CPMP is the principal scientific body for pharmaceutical products for human use. Explanatory notes on the principles and methods for use by applicants in respect of testing standards for medicines were adopted in February 1987 (Recommendation 87/176).

Various Directives further extended the scope of Directives 65/65 and 75/319 and laid down additional provisions for particular products:

Directive 92/73 → laying down additional provisions on homeopathic medicines.

Directive 91/356 → requiring *all* pharmaceutical firms to follow Good Manufacturing Practice (GMP) for medicinal products. It sets guidelines on quality management, control and assurance, personnel, premises and equipment, etc.

Council Regulation 1768/92 → adoption of a supplementary protection certificate (SPC) for medicinal products. The aim of SPC is to compensate for the shortening of the effective period of patent protection suffered by pharmaceuticals due to the long testing procedures. An SPC will take effect immediately a product's patent expires and will be valid at most for five years. It will ensure a maximum of 15 years' protection from the date of the first marketing authorisation in the EU.

Council Directive 65/65/EEC defines the basic criteria for medicinal products. Herbal preparations are considered as medicinal products if they meet the definition of this Directive. Herbal medicinal products, like all other medicinal products, need to obtain a marketing authorisation before they can be placed on the market. Proof of quality, safety and efficacy has to be provided. Preparations are not considered medicinal products if they are intended to be used as food, cosmetics, etc. and are not intended or presented for treating, preventing or diagnosing diseases or restoring, correcting or modifying psychological functions. Herbal preparations, which are not medicinal products, do not require a marketing authorisation. Homeopathic preparations, covered by Directive 92/73/EEC, are likewise not considered as herbal medicinal products.

For up-to-date information on EU legislation, please refer to the Internet sites:

- http://www.escop.com/
- http://dg3.eudra.org.

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

Known as CITES, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, entered into force on 1 July 1975 and now has a membership of 160 countries. These countries act by banning commercial international trade in an agreed list (Appendix I) of endangered species (including plants) and by regulating and monitoring trade in others (Appendix II) which might become endangered. More than 230 medicinal plants species have been added to CITES appendices. Medicinal species on CITES Appendix II include: False hellebore *(Adonis vernalis),* desert cistanche *(Cistanche deserticola),* Asian ginseng *(Panax ginseng),* Himalayan may-apple *(Podophyllum hexandrum),* Himalayan yew *(Taxus wallichiana)* and snake-root *(Rauvolfia serpentina).* Under this listing, commercial trade is permissible, provided specimens of listed species are legally harvested without detriment to wild populations, and valid CITES documentation is obtained prior to shipping.

The lists of species are available through CITES Internet-site at www.cites.org. Council Regulation EC/338/97, Commission Regulation EC/938/97 and EC/2307/97 are the legislative instruments regulating the trade in wild fauna and flora at EU level. These regulations fully implement the provisions of CITES and include a number of stricter measures. For up-to-date information on species included in CITES Appendix I and II, please refer to www.cites.org.

EU product legislation on environmental and consumer health and safety issues is compulsory and, therefore, of utmost importance. Cosmetic ingredients as well as pharmaceutical products have to comply with several legal EU requirements on safety, marketing and Good Manufacturing Practices. Moreover, the Convention on CITES is relevant. In AccessGuide you will find an analysis of all EU requirements that are applicable in the EU member states. In addition, more strict legislation in The Netherlands, Germany and the United Kingdom is included in the database. You should note however, that the scope of the database is at the moment limited to these countries, although this does not imply that in other EU Member States there is no additional legislation.

9.1.2 Quality and grading standards

The Ad hoc Working Group on Herbal Medicinal Products was established in 1997 at EMEA. It has carried out a comprehensive review of existing guidelines and updated/adapted them to the particular needs of herbal medicinal products. The aim is to further develop and update guidelines to clarify the situation for herbal medicinal products, with the final objective of allowing their free circulation throughout Europe. The group's work is meant to include the verification of monographs proposed by the European Scientific Co-operative on Phytotherapy (ESCOP) and the World Health Organisation (WHO) in order to come to generally accepted European summaries of Product Characteristics for widely-used medicinal plants. At www.escop.com, one can find a list of available European Scientific Co-operative (ESCOP) Monographs, currently consisting of 60 leading herbs, and order them.

It is advisable that medicinal herbs and separate medicinal herbs present in the herbal medicines should meet the requirements of the European Pharmacopoeia (if there is a monograph present), or the requirements of specific countries. If medicinal herbs and herbal medicine are imported as medicines, they have to meet the requirements of the European Pharmacopoeia as mentioned above.

Good Agricultural Practice of Medicinal and Aromatic Plants
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 EU regulations. The main aim of GAP guidelines is to ensure that the plant raw material meets the demands of the consumer and thus fulfils high quality standards. It is therefore important that the plants:

- 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 contamination in the raw plant material to the lowest possible minimum. All participants in the production process (from primary producers to traders) are requested to comply with these guidelines voluntarily and to develop practical measures in order to realise them. For further information, please refer to www.inaro.de/Deutsch/Rohstoff/industrie/HEILPFL/GAPengl.htm

In general fumigation, is not mandatory for botanicals from developing countries, although many of the products will be fumigated on arrival at their country of destination.

The most important requirements mentioned by company representatives interviewed are:
- quality (consistent supply)
- reliability.

Quality requirements in the pharmaceutical industry are extremely high. Quality of raw material can vary considerably, so suppliers of natural ingredients should be able to submit detailed information about their products. If a company is interested in a particular plant, it will ask for samples, which will be tested in its laboratory on quality and content of active material.

If an exporter wants to offer plant extracts, there are stringent requirements regarding content and purity. The percentage of the plant material in the extract has to be indicated and should not vary between different batches.

Good Manufacturing Practice
Good manufacturing practice (GMP) is a system for ensuring that products are consistently produced and controlled according to quality standards. In contrast to GAP, which aims on raw material, GMP focuses on processed raw material (ingredients).

It is designed to minimise the risks involved in any pharmaceutical or cosmeceutical production that cannot be eliminated through testing the final product. The main risks are:
- unexpected contamination of products, causing damage to health or even death;
- incorrect labels on containers, which could mean that patients receive the wrong medicine;
- insufficient or too much active ingredient, resulting in ineffective treatment or adverse effects.

GMP covers all aspects of production; from the starting materials, premises and equipment, to the training and personal hygiene of staff. Detailed, written procedures are essential for each process that could affect the quality of the finished product. There must be systems to provide documented proof that correct procedures are consistently followed at each step in the manufacturing process - every time a product is made.

WHO has established detailed guidelines for good manufacturing practice. Many countries have formulated their own requirements for GMP based on WHO GMP. Others have harmonised their requirements, for example in the Association of South-East Asian Nations (ASEAN), in the European Union and through the Pharmaceutical Inspection Convention.

More detailed information can be found at the Internet site: http:www.who.int.

Guidelines and standards for sustainable medicinal and aromatic plant use
Rapidly growing demand for herbal products is raising concerns on the sustainability of medicinal and aromatic plant use. Appropriate guidelines and standards, taking environmental and social sustainability into account, are

needed. Unfortunately, most of the existing efforts are deficient as a recent review of standards and guidelines and WWF-UK's comments on two respective European- and global-level efforts show.

At a recent meeting, organised by the WWF-UK International Plants Conservation Unit and the WWF-Germany Species Unit, representatives from WHO, IUCN, TRAFFIC and WWF discussed the need to revise the 1993 "Guidelines on the Conservation of Medicinal Plants". These are global guidelines that were published by WHO, IUCN and WWF following the historic 1988 Chiang Mai Declaration "Saving Lives by Saving Plants".

All participants recommended the revision of the 1993 guidelines in light of significant new developments in the field of medicinal plant conservation and use over the past decade (e.g., community involvement in conservation, incentive-based approaches/certification). The usefulness of an up-to-date global framework document was highlighted strongly. Apart from governments and NGOs a new key audience for the revised guidelines will be the commercial sector (e.g., herbal medicine industry, traders). This sector can contribute significantly to conservation and sustainable use of medicinal plants through socially and environmentally sound sourcing practices.

To achieve maximum buy-in, the revised guidelines will be developed through a global consultation process, which should be completed by December 2004. TRAFFIC will be the fourth author of the revised document.

The work will be guided by a steering committee comprised of two representatives of each organisation.

If you wish to participate in the electronic consultation please send a message to Dr Wolfgang Kathe, (wkathe@traffic-europe.com) copying in Ms Anne van den Bloock (anne.vandenbloock@freebel.net). TRAFFIC-Europe is co-ordinating this effort.

9.1.3 Trade related environment, social and health & safety issues

Despite their importance, medicinal plants are, for the moment at least, seldom handled within an organised, regulated sector; most are still exploited with little or no regard for the future. Escalating demand is resulting in indiscriminate harvesting of wild plants, this damaging both ecosystems and their precious biodiversity. The damage is especially serious when bark, roots, seeds and flowers - all essentials for the species' survival - are removed.

Concern is growing that many medicinal plants are on the verge of extinction. The need to protect rare medicinal plants seems to be urgent. China's situation gives some sense of the scope of this problem. There, more than 80 percent of the 700,000 tonnes of plant material harvested each year comes from wild sources. The destruction of forests, overgrazing of meadows, expansion of industry and increasing urbanisation, as well as the excessive collection of wild plants, all means that the natural sources of medicinal products for a billion people are being rapidly reduced.

However, protection without any utilisation schemes has proved not be very effective. Examples are the plants *Pterocarpus santalinus* (red sandalwood) and *Saussurea costus.* These plants were strongly protected when the plant came to the brink of extinction. Currently, there is commercial interest for these plants, leading to sustainable management schemes. The whole chain, from collection to manufacturing, should be encouraged, while keeping in mind sustainable practices.

Despite the problem of unsustainable harvesting, there is a limited number of measures for controlling international trade in medicinal plants. Currently, the main form of regulation is through CITES (see Section 9.1.1).

A few governments[4] are trying to protect some local species. Their efforts include improving the methods of collection as well as the deliberate cultivation of the plants. The goal is normally to ensure proper quality control and to regulate commerce for the protection of both consumer and producer. These few governments are also involved in educating their populations and in creating greater awareness of the importance of medicinal plants as a whole.

The World Bank proposes that policies should be developed to regulate medicinal plant conservation, cultivation, processing, and marketing. Among the points, which need to be addressed by each nation, according to the World Bank are the following:
Is the use of medicinal plants encouraged in healthcare programmes?
Are there policies for conserving medicinal plants and incentives to encourage local community participation?

- Is there a policy for restoring plants harvested in the wild?
- Are there incentives for collectors and farmers to keep the production of medicinal plants sustainable?

[4] In its report 'Medicinal Plants: An expanding role in development'(1996), the World Bank mentions examples of national conservation activities in the following countries: China, Thailand, Indonesia, India, Bangladesh, Sri Lanka, and Ethiopia. It must be noticed, however, that in many countries there are also private and non-governmental conservation activities.

- Does the government support research into medicinal plants
- What are the policies regarding the export of medicinal plants?
- Are only raw materials exported?
- Is 'in-country' processing (which may further help the trade in medicinal plants) being promoted?

Many factors have often failed to provide central governments, the private sector, or local and indigenous populations with sufficient incentives to preserve biological resources. Such factors are for example: uncertain property rights, the lack of entrepreneurial, technical and financial resources, and high political, economic and technological risks.

Most of the current conservation efforts seem to be led by non-governmental organisations and privately funded international agencies, such as Worldwide Fund for Nature (WWF), Conservation International, International Union for the Conservation of Nature, and several botanical gardens, mainly Kew, Edinburgh, Missouri and New York.

The fact that there is little or no legislation restricting the use of wild-harvested materials in finished products, or for assuring the sustainable utilisation of medicinal plants, is a serious concern. There needs to be greater awareness amongst the end users, e.g. the pharmaceutical, phytopharmaceutical and health products companies, as to the consequences of their trade on the future availability of medicinal plant resources.

Efforts are underway on a number of fronts to create guidelines for sustainable harvesting and codes of conduct for collectors. Within industry, some companies are involved in monitoring the trade in raw materials. East West Biotics, for example, has entered into a partnership with the Royal Botanic Gardens, Kew, and the Institute for Medicinal Plants in Beijing to establish research links, and monitor Traditional Chinese Medicinal (TCM) plants in the UK trade for correct identification, as well as to ensure CITES species are not marketed (ten Kate & Laird, 1999).

Manufacturers of botanical medicines used to acquire their raw materials from traders, but now some have their own plantations or have direct contacts with producers. Manufacturers of botanical products are increasingly interested in having direct relationships with producers of required materials, in order to ensure a sustained source and/or to improve transparency of the supply chain, meaning to save costs for the establishment of the product documentation as GMP requirement (Dürbeck, p.c). These producers, however, require a certain minimum supply of the raw material.

Organic certified raw material
Another trend in the market is that more and more innovative companies are requesting organically certified raw material and value added products, especially for the development of new products. There is, therefore, increasing demand for certified raw material and value added products. Another indication of this trend is that more and more conventional importers and traders receive approval to deal with organically certified material.

Guidelines for the production, processing, labelling and marketing of medicinal plants and products from organic farming has been established within the work of the CODEX ALIMENTARIUS of FAO/WHO and the EU organic products regulations EC 1804/1999 supplementing Regulation EEC 2092/91.
Please refer to the following Internet sites:
- http://www.codexalimentarius.net/
- http://europa.eu.int/eur-lex/pri/en/oj/dat/1999/l_222/l_22219990824en00010028.pdf
- http://europa.eu.int/eur-lex/en/search.html

A new development, besides organic certification, is certification based on criteria and principles of the Forest Stewardship Council. In 2001, a Brazilian company earned FSC certification for 80 thousand ha of native forest, where extraction of raw materials for producing medicines and cosmetics takes place.

For more information, please refer to CBI's EU Market Survey *"Food Ingredients for Industrial Use"* and *"Organic Food Products"*.

Environmental and consumer health and safety are important for this product group, since the use of cosmetics and pharmaceuticals has to be very safe for the final consumer. Therefore, compliance with additional market requirements might give an added value to the product on EU markets. Like the trend in the food sector, European consumers wish to purchase safe products. As for natural products, product safety is also partly related to the environmental aspects of production (e.g. the use of pesticides). Environmental labels that are gaining importance are the organic production label mainly used in the UK and the international label FSC for (non-timber) products from sustainable forestry. The internationally accepted environmental management system is ISO 14000. Finally, increasing attention is given to the impact of production processes on local environments. In order to encourage 'environmentally sound production', producers made aware of on either 'end-of-pipe' measures or, preferably, preventive pollution measures. AccessGuide contains several documents on this topic.

9.1.4 Packaging, marking and labelling

Packaging, marking and labelling for herbal raw material is principally carried out according to the requirements of the buyer. At present, general requirements are part of the "Good Agricultural Practices for Medicinal and Aromatic Plants (GAP)" (www.inaro.de/Deutsch/Rohstoff/industrie/HEILPFL/GAPengl.htm), which is currently under negotiation within the EU.

Packaging and labelling

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 affixed and be made of non-toxic material.

In general, legal requirements for raw materials specify that the following aspects must be indicated on the label:

- of which material it is; and
- from which batch the material comes.

Further, it is highly recommendable to include the following aspects on the label:

- name and address of the producer/exporter;
- net weight; and
- recommended storage conditions.

The overall trend in Europe is towards facilitating re-use and recycling of packaging through incentives. In order to harmonise the different forms of legislation, the EU has issued a directive for packaging and packaging materials (Directive 94/62/EC) in which minimum standards are regulated. Maximum concentrations of lead, cadmium, mercury and chromium allowed in packaging are: 250 ppm and 100 ppm after 30 June 2001.

Most of the time, packaging policy does not affect 'foreign' manufacturers because importers will be held responsible for the packaging. However, sensible marketing requires taking the obligations for the importer into consideration. That means that packaging materials should be limited and re-useable or recyclable. Otherwise the importer will be confronted with additional costs, thus reducing the competitiveness of the exporter.

Re-usable packaging materials should be well cleaned and perfectly dried prior to their usage. It must be guaranteed that no contamination takes place by re-using bags.

Storage

In the period before transportation, packaged dried materials 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.

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

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.

Organic certified raw material

As mentioned in the previous Section, guidelines for the production, processing, labelling and marketing of medicinal plants and products from organic farming has been established within the work of the CODEX ALIMENTARIUS of FAO/WHO and the EU organic products regulations EC 1804/1999 supplementing Regulation EEC 2092/91.

Extracts

Regarding the trade in value-added medicinal plant products, the principles and guidelines of good manufacturing practice for medicinal products for human use (Commission Directive 91/356/EEC) are applicable, reflected in the National Legislation of the EU Member States Annex 7 "Manufacture of Herbal Medicinal Products" explains in detail the specific requirements for packaging, marking and labelling. Council Directive 92/27/EEC, on the labelling of medicinal products for human use and on package leaflets, applies in this context as well.

At http://europa.eu.int/eur-lex/en/search.html, one can find the exact content of these Directives, by searching for Legislation in Force.

9.2 Tariffs and quota

In general, all goods entering the EU are subject to import duties. External trade conditions in the European Union are mostly determined by EU regulations. The level of the tariffs depends on:

- country of origin,
- product.

In order to support exports from developing countries, the EU operates the Generalised System of Preferences (GSP). Under the GSP scheme of the EU, imports from a number of developing countries are admitted at a reduced tariff and imports from a group of least developed countries at a zero tariff.

Product group	General tariff	Tariff for DC
Medicinal and aromatic plants	0-3	0*
Medicinal and vegetable saps and extracts	0	0
Vegetable alkaloids	0	0

* Excluding China, Ukraine, Myanmar and Syria.
Source: Internet site of the Dutch Customs: www.douane.nl/taric-nl (July 2003)

Based on the outcome of the Uruguay Round, and the general trend towards liberalisation of world trade, it was felt necessary to reconsider the GSP. A general lowering of trade barriers would mean an erosion of the relative advantage of the preferences received by developing countries. A renewed GSP was therefore required. The renewed preferential scheme was introduced on 1 January 1995.

The EU Commission has established a new scheme of preferential rights since 1 January 1997. This new scheme was formally published under Regulation EC 1256/96. It also applies to natural ingredients for pharmaceuticals.

Import duties specified are applicable for a number of developing. A form A or EUR I form has to be provided, in case a tariff is applicable and the exporter in a developing country wants to take advantage of the GSP tariff.

Regarding natural ingredients for pharmaceuticals, no quotas are applied.

Value Added Tax (VAT)
All fiscal borders disappeared in the EU on 1 January 1993. The EU decided at that moment that all VAT (tax levied at the consumption level) rates for pharmaceutical products should be harmonised at a low level.

For information on VAT rates applied in the member states to natural ingredients for cosmetics, please refer to CBI's EU Survey *"Natural Ingredients for Cosmetics"*.

Useful Internet sites

Netherlands Custom Services
www.douane.nl/taric-nl

Directorate General XXI
http://europa.eu.int/comm/taxation_customs/publications/info_doc/taxation/tva/taux_tva-2003-5-1_en.pdf

Thus far, the previous part of this market survey – Part A – provided market information on the EU market for natural ingredients for pharmaceuticals and on the requirements for market access. The next part – Part B – aims at assisting (potential) exporters in developing countries in their decision-making process as to whether to export or not.

Table 9.1 VAT rates on pharmaceutical products as at 1 May 2003

Country	Percentage	Country	Percentage
Belgium	6 or 21	Luxembourg	3 or 15
Denmark	25	The Netherlands	6 or 19
Germany	16	Austria	20
Greece	8 or 18	Portugal	5 or 17
Spain	4 or 16	Finland	8
France	5.5 or 19.6	Sweden	25 or 0
Ireland	0	United Kingdom	0 or 5 or 17.5
Italy	10 or 20		

Note: * the reduced tariff rate depends on the product, which is imported. For a number of products the standard rate is applied while, for a number of product groups, the reduced tariff is applied.
Source: European Commission, Directorate-General Taxation and Customs Union (2003)

Part B
Export marketing guidelines: analysis and strategy

PART B

How do you get involved in the international marketplace? How much time and money will it take? Should you make exporting part of your business plan? These are common concerns of producers who realise the importance of international trade, but are not sure if exporting is for them. That is what Part B is all about: to help you to evaluate whether to get involved in international business, and learn how to go about exporting.

The first Chapters 10, 11 and 12 aim at assisting potential exporters in the **decision-making process** whether or not to export. By matching external opportunities and internal capabilities, the exporter will be able to identify suitable export products, target countries, market segments, and possible trade channels.

Subsequently, Chapter 13 provides sector specific knowledge and sources to enable the exporter to further investigate what to export, to which markets, through which channels, and at what prices. In other words, which **marketing tools** can be used to build a successful business relationship?

Keep in mind that the export marketing process is integrated; each individual part is inter-linked.

The information provided in the previous parts of this survey is an essential ingredient in conducting the analysis and formulating a clearly targeted export strategy. Where applicable, reference will be made to the concerning sections in Part A.

For general information on export marketing and how to conduct market research, please refer to CBI's *"Export Planner"* and CBI's new manual on market research.

10 EXTERNAL ANALYSIS: MARKET AUDIT

The external analysis assists the exporter to identify market opportunities, suitable sales channels and other relevant external factors.

10.1 Market developments and opportunities

As a first step towards the identification of the most suitable export markets, the exporter needs to research the importance of potential markets and understand the ongoing developments that shape the market structure. This should be done by means of a systematic method of market research, involving a preliminary screening of potential markets followed by a more detailed assessment of the targeted markets.

Markets may be researched using primary or secondary data sources. Primary market research means collecting data directly from the foreign marketplace through interviews, surveys, and other direct contact with market participants. Primary research has the advantage of being tailor fit to meet your company's needs and provide answers to specific questions, but this data collection can be very time-consuming and expensive.

For a global scan of the market, most companies make use of secondary data sources such as trade statistics, to focus its marketing efforts. This type of research is a valuable and relatively easy first step for a company to take. Specific market developments as described in Chapters 3, 4, 5 and 6 of this market survey, for instance, can be used as a starting point for your export market research.

Results of the research informs the company of the largest markets for its product, the fastest growing markets, market trends and outlook, market conditions and practices, and competitive firms and products. Based on all the information, a company must decide which markets are the most promising.

Questions that need to be answered:

- Market size: What is the (estimated) market size for your potential export products? Try to first focus on your product group, then on your specific products.
- Market developments: How has the total market volume developed during the last 3-5 years? If there is no information on the specific natural ingredient itself, then try to obtain information on the development of the market for finished products. It is for instance not possible to obtain exact figures on sales of Asian Ginseng root. Still, from the stagnating sales of finished Ginseng tablets, you can determine that the market for them in all probability is also sluggish. It must be noted that, for some products, this kind of determination is difficult since those products are not used solely by the pharmaceutical industry, but also by the cosmetic and food industry.
- Imports: How have imports developed during the last 3-5 years? Again, there probably is no information on all specific products available.
- Are importers and potential business partners in the EU interested in new suppliers of your particular products?
- Price development: How have the prices of your product developed during the last few years? Again, there probably is no information on all specific products available.

Where to find information?

ⓘ The market information described in **Part A of this market survey** can be very useful as a starting point for your export market research. Where applicable, also the sources for this market information are mentioned in the specific chapters.

ⓘ For more general information, you can use the EU statistics bureau **Eurostat:**
http://europa.eu.int/comm/eurostat

ⓘ **Trade press**
Useful sources for information on market developments are (international) trade magazines, which can be relevant for exporters who want to develop a better insight into the EU markets. Some of the most interesting magazines for exporters of natural ingredients for pharmaceuticals are:

- Drogenreport (English, German)
- Pharma marketing service (English)
- Zeitschrift für Arznei- und Gewürzpflanzen (German)
- Fitoterapia (Italian)
- European Journal of Herbal Medicine (English)
- Herbalgram (English)
- Journal of Herbs, Spices & Medicinal Plants (English)

ⓘ Last but not least, **Internet** provides you easily more and more direct market information. In this survey several examples of useful Internet sites are given.

Please refer to Appendix 2.4 for a more extensive list of names and addresses of publishers.

Market access requirements

Quality standards and other non-tariff barriers

Section 9.1 of this survey described a wide array of non-tariff barriers, which are applicable to exporters natural ingredients for pharmaceuticals. It is important to determine which standards and regulations apply to your situation. Not all standards are compulsory or widely recognised by your potential customers.

For exporters of natural ingredients for pharmaceuticals, a compulsory regulation like Directives 65/65/EEC or 75/318/EEC can embody a major obstacle to export to the European Union.

It is advisable that medicinal herbs and separate medicinal herbs present in the herbal medicines should meet the requirements of the European Pharmacopoeia (if there is a monograph present), or the requirements of specific countries. If medicinal herbs and herbal medicine are imported as medicines, they have to meet the requirements of the European Pharmacopoeia as mentioned above.

What is more, many European importers entering into a co-operation agreement with an African, Asian or Latin-American company introduce their own quality system. Regarding quality standards, an exporter should distinguish between product quality standards (GMP) and management quality standards (ISO 9000 and ISO 14000). Legislative requirements and GMP are even more important than ISO, since those requirements often determine whether or not the European importer decides to enter into a relationship. In some cases, the importer will assist the exporter with product adaptations so that traded products comply with European requirements.

Since importers face an additional cost factor in establishing the GMP documentation in Europe, they prefer ingredients accompanied by the necessary documentation. Therefore, exporters in developing countries need to develop or acquire technologies necessary to improve quality control in cultivation, harvest, post-harvest and transport. In other words, the implementation of the appropriate GMP will be necessary in order to better compete in the international market.

Currently, many countries including the United States, Australia, Japan and the members of the European Union require ingredient disclosure on cosmetic products. Furthermore, the majority of these countries requires that the ingredients be listed using the International Nomenclature for Cosmetic Ingredients (INCI) system. Companies distributing natural cosmetic ingredients should include a listing of ingredients on their products.

Keep in mind that regulations and standards can change from time to time. Therefore, it is recommended to check the up-to-date situations with importers or the relevant organisations.

Questions that an exporter should answer are:

- What standards are set on the quality of products?
- What standards apply to the quality of your company (ISO)?
- To what degree do GAP/GMP apply to the products?
- Especially in the case of medicinal plants collected in the wild, it is important to check if CITES regulations apply.
- What is the importance of environmentally and sustainably sound production methods?

Where to find information?

- ⓘ In Sections 9.1 of this survey, you can find information on quality standards; trade-related environmental, social and health & safety issues; and packaging, marking and labelling. This section also provides Internet-Sites like CBI's AccessGuide which can be of assistance in obtaining product specific information.
- ⓘ Other potentially useful information sources are colleague exporters and European importers.

Tariff barriers

Section 9.2 dealt with current tariffs on imports of ingredients for pharmaceuticals. Exporters should not only look at the current tariff, but also consider whether the tariff will remain the same for the coming years. It is also important to bear in mind that changes in the level of import tariffs applicable to other countries may influence your competitive position.

Questions that an exporter should answer are:

- Are there import restrictions that limit sales opportunities?
- Which import tariffs apply to your export products?

Where to find information?

- ⓘ Refer to Section 9.2, for information on applied import tariffs. This section also provides Internet sites that are helpful to find product specific information.

10.2 Competitive analysis

Generally, competitors and their pricing will have a direct effect on the potential of your trade opportunities. Therefore, competitive analysis is an important part of your external analysis.

In many cases, suppliers of ingredients for pharmaceuticals in developing countries benefit from their climatic conditions, labour costs, costs of raw material, costs of land etc. This is often one of the most important factors that positively distinguishes your company from competitors in other countries, particularly from competitors in Europe. Other positive factors already mentioned in the previous section are low or zero import duties.

Other factors can weaken your competitive position. European companies for instance have the advantage of being, both in a geographical and cultural context, close to their customers, which in general makes marketing of products and communication easier. Another important difference is the fact that processing technology and input is readily available to European companies (see Chapter 4 of part A).

Suppliers of ingredients for pharmaceuticals in other developing countries also represent an important group of potential competitors. You can find useful information in Chapter 5 of Part A on product streams originating in these countries. Furthermore, several weak points of ingredient producing companies in developing countries, that have to compete with better organised companies in the world are given in the internal analysis of Chapter 11.

Below a step-wise approach to learning more about your competitive environment is lined up:

Step 1: Key competitors.
Prepare a list of all competition and then pick out your main competitors. To learn more about competition you can do a secondary research study of your industry and ask customers and suppliers for their opinions.

Step 2: Main competitors analyse.
If possible, visit competitors' companies to learn how products are priced and distributed. You can prepare a list of your main competitors' strengths and weaknesses.

Step 3: Where to expect new competition?
The pharmaceutical ingredient sector is a very dynamic sector. Constantly check with trade news, customers, suppliers and your competitors to see if they have heard of any new businesses.

Step 4: Where and how does the competition sell their products?
You need to find out which trade channels are used by your competitors, and why. For instance, do your competitors supply directly to European importers (and are they thus able to produce required quality), or do they use the expertise of a European counterpart?

Step 5: Trade show activity.
Of course, trade shows can be helpful for making contact with new customers and learning about market developments. It is, however, also an excellent opportunity to find out more about competition. Take the time to attend trade shows to see what your competition is like.

☛ Please note that, although it is always good to observe your competitors, in case of ingredients for pharmaceutical often a partnership between exporters is recommended. Because demand is larger than supply, exporters can together keep the prices high. Moreover, a partnership can lead to better logistic systems, better purchasing conditions for packaging, combined promotion actions, lobbying etc.

Important questions to be answered are:

- How many suppliers are currently active in the market?
- Who are your main competitors? What are their strengths and weaknesses compared to your company?
- To what degree is the sector in the target market supported by the local government?

10.3 Sales channel assessment

☛ The information provided in Chapter 7 of Part A should be used as a starting point.

Having assessed the prospective markets and market segments, it is now also important to understand the trade structure and supply chains supplying these market segments. After the assessment of the exporter's capabilities (next chapter), the exporter is able to determine the most suitable sales channel.

The majority of large pharmaceutical companies does not conduct field collections, but relies instead on existing in-house collections of material, or buying in-compound or culture collections. Most companies outsource, or contract to others, the acquisition of samples for their screening programmes. They obtain samples through brokers, agents, or through specific

deals with supplier organisations. The bulk of collecting activities is conducted by non-profit organisations (universities, research institutes, botanical gardens) (ten Kate & Laird, 1999).

People in medicinal industry feel that long-term relationships with raw material suppliers benefit the product quality, the growers and the environment (ten Kate & Laird, 1999). Manufacturers of botanical products increasingly become interested in having direct relationships with producers of required materials, in order to ensure a sustained source and/or to save costs (Dürbeck, p.c).

Important questions to be answered are:

- Which potential sales channels exist?
- Which products are traded in the different sales channels?
- What are the most important requirements of the identified sales channels? What are the conditions for an exporter to take part in a specific supply chain?
  - What quality standards do the sales channels demand?
  - What kind of packaging is used in the various sales channels?
  - What are the requirements concerning production process (environmental, ISO, GAP, GMP, etc.)?

ⓘ Refer to Chapter 7, and Section 7.2 in particular, for information on potential sales channels.

ⓘ To get in touch with an European partner (for a joint venture for example) it is recommended to contact a local embassy of the country you want to export, the local European delegation, a local Chamber of Commerce or Export Development Board. These organisations can also give you information on when trade delegations from the EU are visiting your country. Direct match-making is also possible through for example the CBI News Bulletin, in which you can offer products and proposals.

ⓘ Again, customers, importers or colleague exporters are useful information sources!

10.4 Logistics

When transporting products overseas, the exporter ideally looks for the fastest and most efficient mode(s) of transportation that will deliver the product in perfect condition at the lowest possible costs. The actual selection will be a compromise among these factors.

Transport
In the 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.

In the case of natural ingredients for pharmaceuticals, three types of international transportation can be recognised: ocean cargo, air cargo and truck cargo.

- Ocean transportation takes longer than airfreight, but the costs of transportation are usually lower. This kind of transportation is most suitable for dried raw materials and for a number of oils.
- The cost for moving products by air tends to be higher than the cost of ocean transportation. This type of transportation is used for value added products, such as essential oils and extracts.
- Truck cargo in the EU can only be used for imports from nearby located countries such as Turkey, Balkan and other countries in Eastern Europe, and Morocco. Different options of formats etc. exist for this method of cargo.

Freight rates also vary depending on the product being shipped, its value, level of service provided, destination, weight, and seasonal variations in demand for cargo space. Please pay attention to which system is being used: the metric system (used in most EU countries) or Anglo-American (used in the United Kingdom).

Freight forwarders
It is a good idea to use a freight forwarder to arrange transportation services on your behalf. They can simplify the shipping process because they are familiar with import and export regulations. It is important to use a forwarder that is experienced in handling natural ingredients or other perishables, as well as one that is experienced in the destination country. Freight forwarders can also assist you in handling all the documents. Freight forwarders are cost effective to use, because they can negotiate the best rates with airlines. They usually operate on a fee basis paid by the exporter, and these are part of the cost price.

Cold chain
Cold chain is required for a limited number of products (fresh plant material or special plant extracts, mostly used for intermediate products of Aloe vera). Critical point of interest regarding transport, just as during storage, is proper refrigeration. In handling perishable products, maintaining a cold chain is a major logistical issue. It determines for a large part the quality of the product as it arrives at the destination. The saying is “one hour lost in departure to being refrigerated will be one day less for the sale in the destination”. Check whether you and your freight forwarders are able to manage the

cold chain. Make use of temperature recorders to check whether your products travel in optimal climatic conditions during their entire voyage. A reliable freight forwarder with a cold store at the airport or good management of the temperature in the containers is recommended to keep the cold chain in control.

Packaging
Packaging is used for hygienically purposes and to protect against mechanical damage. It is an essential factor in determining the product's quality. However, according to the way in which packaging sometimes is applied in developing countries, it can also be a risk to quality, due to bruising and less than optimum conditions of temperature.

The packaging has to satisfy conditions in the field of handling. The transportation volume must be as efficient as possible and a high level of uniformity is desirable. Packaging design should take the following into account:

- Proper storage and transport;
- Standard packaging sizes;
- Recyclable materials or two-way systems.

Documentation
Producers, traders and processors of medicinal and aromatic plants, should comply with the GMP guidelines. They should document their products by a waybill (batch documentation) and demand that their partners also adhere to these requirements. Minimal information included in the waybill should cover the geographical definition of growth place, the country of origin and the responsible producer.

☛ In Chapter 9 several methods of packaging for different natural ingredients are described. The exporter should always discuss the preferred type of packaging with his European trading partner or organisation.

Points of interest when choosing the right packaging:

Have your customers ever complained about the quality of your products?
Look for possible causes:
Unsuitable packaging material (avoid unnecessary re-packing by the customer)
Insufficient cooling during transport
Too many damaged boxes on arrival
Differences in weight mentioned and real weight
Other causes

In the case of marine transport, different kinds of products shipped together in one container should have compatible:
Temperature needs
Relative humidity needs
Airflow characteristics

Does your importer use special transport packaging?
→ Perhaps you could use this special transport packaging as well? Using the wrong packaging size can have a negative effect on your business.
→ Maybe you could make use of the importer's packaging know-how.

Fully recyclable packages must be used when trading with certain business partners.
→ Colouring materials, used for printing, should not be harmful to the environment.
→ Do not use metal clips for the cartons.
→ Avoid waxed boxes or any combined packaging materials.

Important logistic questions to be answered are:

- How often does the sales channel require delivery? What cycles of delivery does this channel require? Are you able to deliver this often?
- What lot sizes does this sales channel demand? What lot sizes are you able to produce?
- What formalities does the sales channel require to be handled by the exporter?
- What are the typical costs of logistics? (Check with freight forwarders)
- Is it profitable to co-operate with other exporters?

ⓘ Airfreight forwarders and air carriers are the best sources for obtaining freight rates. There are also companies that specialise in publishing air cargo tariffs. These publishing companies charge a fee for their services.
ⓘ International Federation of Freight Forwarders Association (FIATA): http://www.fiata.com
ⓘ Directory of Freight Forwarding Services: http://www.forwarders.com
ⓘ International Air Transport Association (IATA): http://www.iata.org
ⓘ Extensive lists of freight forwarders can be found at: http://www.cargoweb.nl and http://www.shipguide.com

10.5 Value chains

The value chain covers the full range of activities required to bring a product from its conception to its end use and beyond, such as research and development, raw material supply and all activities of production, marketing and sales to international buyers, and beyond that to disposal and recycling. Activities that comprise a value chain can be contained within a single company or divided over different companies, and can cover a single geographical location or be spread over wider areas.

The value chain approach is a systematic approach for designing strategy with respect to buyer requirements and market conditions (market access regulations, standards and consumer preferences) that a company has to conform to, in order to gain access to a market and be competitive.

The value chain approach builds upon sustainable supply chain management, by providing a framework to:
- improve efficiencies within the existing supply chain (thereby enhancing sector competitiveness);
- capture and retain a higher proportion of the product's final market value within the existing value chain;
- increase the sector's added-value by establishing new value chains within the sector;
- improve the sector's contribution to development objectives.

From a company perspective, the value chain approach offers more than a theoretical concept. It is a very practical tool for analysing linkages in the supply chain and for accessing potential for capturing, retaining and adding value to the company's product, keeping in mind its final user.

Guiding value chain analysis at company level

a. Try to note all the steps required to progress from raw materials to end-users.
b. Make this list as detailed as possible since one of the objectives of value chain analysis is to understand where, when and how to simplify or adjust the chain.
c. Determine the value each step adds to the final product from the point of view of the end user.
d. Once this chain is clear you can explore avenues to increase your profitability as well as increase the benefits to the end user; for example:
   → identify which steps can be combined to more efficiently add value;
   → determine which steps are not adding any value but just adding costs;
   → determine better communication flows in both directions to assist rapid change to market factors;
   → determine your own "value niche" along this chain.

It is important to understand where you, as a processor, fit into the supply chain, to ensure that the value you add continues to be important both for your direct customers as well as you customers' customers. The value chain can be a useful tool to help in this process.

Value addition in the supply chain

The first level of the supply chain is the collection or cultivating of the medicinal plants. Value addition at the collector's level is often limited, due to a lack of technical knowledge and equipment, and limited market knowledge. The potential for value addition by collectors/growers usually comprises cleaning, drying, and sorting of raw materials, which is otherwise usually captured by traders.

Collectors/growers then sell the products to local traders as cleaned, dried, and mould-free raw material, or directly to processors for value addition. Some traders dry natural ingredients and sort them into larger bales and sacks. At this level, potential for value addition is determined by capacity to comply with national/regional (e.g. ASEAN or Andean Pact) legislation, and with industrial buyers' quality standards (GMP, including good agricultural and collection practices, as defined by WHO; see http://www.who.int).

Usually, local traders subsequently interact with three potential buyers: larger regional dealers, industrial buyers, and foreign buyers.

Generally, large dealers have greater capital investment in storage facilities, packing, and transport machinery. These dealers are capable of handling a much larger volume.

Local traders sometimes sell directly to industrial manufacturers, who process the ingredients into their final form.

As an example, Figure 10.1 shows the value chain for Kava (Piper methysticum).

Figure 10.1 The Kava value chain

GROWERS grow, dry, basic chopping/processing of the root

Costs/Inputs
- Labour
- Time
- Land

US$5-8 per kg

WHOLESALERS AND EXPORTERS collect from growers, ship dried root

Costs/Inputs
- Goverment taxes
- Packaging
- Shipping

US$22-28 per kg

Examples of exporters of kava:
- Vanuatu Commodotities Marketing Board (VCMB)
- Carpenters Company

EXTRACTION COMPANIES grind root into powder; make extracts

Costs/Inputs
- Labour
- Materials (eg alcohol)
- Overheads (electricity, heat)

US$250-300 per kg of 30% kavalactone extract

Examples of companies processing kava:
- Madis Botanicals (USA)
- Hauser (USA)
- QBI (USA)
- East Earth (USA)
- Finzelberg (Germany)
- Muggenberg (Germany)
- Schwabe (Germany)

MANUFACTURING COMPANIES manufacture capsules and tablets

200 mg 30% kavalactone extract produce 60 mg kavalactone capsule/tablet

Costs/Inputs
- Labour
- Equipment and overheads
- Marketing

Prices obtained for products containing ground root - not based on a standardised extract - vary widely, but are consistently much lower than for standardised extracts

US$6-12 for 30 capsules/tablets containing 60 mg kavalactones

Examples of US companies manufactoring kava:

Mass market:
Rexall-Sundowne; Leiner; Pharmavite

Speciality/health food:
Solgar; Twinlabs; Nature's Way; Country Life; Nature's Plus

RETAILERS sell products through the mass market, pharmacies, and natural or health food outlets

average margin on products: 50%

Costs/Inputs
- Store space
- Overheads
- Marketing

US$12,95-19,95 retail product 30 capsules containing 60 mg of kavalactones

Outlets:
- Natural product/speciality stores
- Pharmacies
- Mass market

Source: Ten Kate and Laird (1999)
Note: Import and trade of Kava is currently under review by EU authorities.

Foreign buyers come from all parts of the world, mostly selling onwards to the next level in the supply chain: manufacturers of final products. These final manufacturers include pharmaceutical, cosmetic, and health food/dietary supplement industries (which have to conform to GMP for pharmaceuticals and cosmetics), processing natural ingredients into their final form (capsules, pills, cosmetics, teas, lotions, etc.), to be distributed throughout Europe, North America, Australia and Asia. Products are sold in retail or wholesale sales centres including over-the-counter drug stores, prescription drug pharmacies, cosmetic stores, health food stores, and catalogue sales. Products are then sold to the final level in the supply chain, the consumer.

Costing and pricing in the value chain
Also shown in Figure 10.1 is the value addition at the various stages of the supply chain. Growers or collectors sell their products at a price of US$ 5-8 per kg to exporters. Exporters, after partly processing the products, ask US$ 22-28 per kg, indicating a price increase of minimum US$ 17 per kg. The added value could be analysed by deducting all costs from the market prices. As is also clear from the Figure, prices paid for materials increase significantly along the value chain. This analysis requires involvement of all stakeholders in the supply chain, in order to be able to identify proper cost and price calculation. Only if there is transparency at the different levels, will it be possible to determine fair costing and pricing, which in turn will enhance awareness and importance of the potential for value addition in the supply chain, and thus the potential for sector development in a national context.

Critical factors for building a competitive advantage
The presentation of success stories by entrepreneurs in developing countries highlighted the following as **critical factors** for building a competitive advantage:

- Increasing the range of products and identifying market demands.
- Cost and price calculation on the basis of a business plan.
- Putting the emphasis on the quality of the product, and exercising strong control on the tracking and tracing of products.
- Introducing the use of new technologies.
- Promoting involvement and loyalty of staff, as well as integration into the life of the local community.
- Co-operating with buyers, in order to obtain necessary pre-financing, technologies or packaging.
- Reducing the number of middlemen.

☛ Factors that contribute to **success** are: niche products for niche markets, moving up the value chain through R&D and processing, responding to the ever-rising demand from consumers for higher quality standards, or shortening the distribution chain to capture a greater market share.

Please also refer to Chapter 8 and Section 13.3 for information on developments of prices and price setting.

For more information about the value chain approach, see e.g. http://www.tradeforum.org/news/fullstory.php/aid/529.

10.6 Product profiles

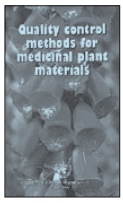
In the Herbal Education Catalog at www.herbalgram.org, exporters can find and order publications on a range of herbs, including two of the products described in these product profiles, i.e. Echinacea, and Cat's Claw.

Furthermore, the British Pharmacopoeia can be ordered at this site. This Pharmacopoeia contains 169 monographs on definition, identification, and standards for plant materials commonly used in herbal products on the market. The Pharmacopoeia includes, amongst others, Devil's Claw, Echinacea root, Kava kava, Cinchona bark, Cola, Jamaica Dogwood, and Liquorice root.

At http://www.escop.com/publications.htm, one can find a list of available European Scientific Cooperative (ESCOP) Monographs, currently consisting of 60 leading herbs, and order them. The Monographs include, amongst others, Devil's Claw and *Echinaceae pallidae radix, Echinaceae purpureae herba,* and *Echinaceae purpureae radix,* Java tea, and Cape Aloes.

The following publications focus on local markets, but can be of interest to traders in medicinal plants in developing countries. They can be ordered at www.herbalgram.org.

World Health Organisation (WHO) Monographs on Selected Medicinal Plants, (WHO, 1999). This publication contains 28 monographs covering the quality control and traditional and clinical uses of medicinal plants. Plants included are selected on the basis of their widespread use, particularly in countries, which rely heavily on medicinal plants to meet primary health care needs.



Quality Control Methods for Medicinal Plant Materials, (WHO, 1998). This publication contains a collection of recommended test procedures for assessing the identity, purity and content of medicinal plant materials intended to support development of national standards based on local market conditions.

The following tables list the product profiles of 2 important natural ingredients for pharmaceuticals: Echinacea and Cat's Claw.

Product profile: ECHINACEA

1. Product name:
Echinacea

Interesting links for this product:
www.herbs.org, www.geocities.com/chadrx/echin.html, www.forthrt.com/~roland/herbfarm.html, www.hcrc.org/faqs/echinac.html

Use:
Echinacea is best known for its reputation for shortening the duration of colds or flu.
main species: *Echinacea purpurea, Echinacea angustifolia*
other species: *E. pallida, E. paradoxa, E. simulata, E. atrorubens, E. sanguinea, E. leevigata, E. tennesseensis*

2. Market requirements:
Quality standards:
ESCOP Monograph for whole, cut, and pulverised Echinacea. Importers/manufacturers will first request a sample and test it for active ingredient content. Demand and price are determined on the basis of this test. Please refer also to information on Good Agricultural Practice in Section 1.1 and at www.inaro.de/Deutsch/Rohstoff/industrie/HEILPFL/GAPengl.htm

Minimum labelling:
Legal requirements for raw materials specify that the following aspects must be indicated on the label:
- product name
- of which material it is, and
- from which batch the material comes.

3. Market structure:
Prices:
Pal./ang. mix £ 20/kg. (Public Ledger, April 10, 2000)

Main markets:
The main European market for Echinacea is Germany. The top retail product is Echinacin of Madaus.

Market trends:
Due to stricter regulations for herbal medicines internationally, cultivation (instead of wild-crafting) of Echinacea has increased strongly.

4. Main suppliers:
Echinacea can be found in the USA and also in Germany, where leading producers of botanicals have own plantations for popular products.

Known sources for Echinacea in developing countries are Bolivia, Costa Rica, Malawi and South Africa.

continued

Product profile: ECHINACEA *continue*

Further, it is highly recommendable to include the following aspects on the label:

- name and address of the producer/exporter;
- net weight; and
- recommended storage conditions.

Packaging:
For 10-30 kg of raw material paper bags, poly bags covered by paper bags, or jute bags are used.

Import documentation:
It should be documented in a waybill (batch documentation) that cultivation, harvesting and production have been performed in accordance with the Good Agricultural Practice (GAP) guidelines. Minimal information included in the waybill should cover the geographical definition of growth place, the country of origin and the responsible producer.

5. How to improve the quality:
Quality can be improved through harvesting of the proper plant part (root), prevention of adulteration, and appropriate drying procedures.

Source used: Plantas Amazonicas de Uso Medicinal, CIFOR, Walter Nalvarte et al. (1999).

Product profile: CAT'S CLAW

1. Product name:
Cat's claw

Interesting links for this product:
www.geocities.com/chadrx/catsclaw.html, www.austriantrade.org/AustrianTrade/bulletin/us/immodal.htm, www.cats-claw.com/piu/thirdparty/herbqfr.htm, www.kcweb.com/herb/catsclaw.htm

Use:
The bark of the root of this plant is reputed to be a remarkably powerful immune system booster and effective in treating a wide array of maladies including cancer, systemic candidiasis, genital herpes, and AIDS.

Main species of interest:
Uncaria tomentosa and Uncaria guianensis

2. Market requirements:
Quality standards:
Importers/manufacturers will first request a sample and test it for active ingredient content. Demand and price are determined on the basis of this test. Please refer also to information on Good Agricultural Practice in Section 1.1 and at www.inaro.de/Deutsch/Rohstoff/industrie/HEILPFL/GAPengl.htm

Minimum labelling:
Legal requirements for raw materials specify that the following aspects must be indicated on the label:
- Product name
- of which material it is, and
- from which batch the material comes.

Further, it is highly recommendable to include the following aspects on the label:
- name and address of the producer/exporter;
- net weight; and
- recommended storage conditions.

Packaging:
containers (glass/aluminium/steel/plastic), depending on the specification of the buyer.

Import documentation:
It should be documented in a waybill (batch documentation) that cultivation, harvesting and production have been performed in accordance with the

3. Market structure:
Prices:
Prices in for raw material in Peru were reported at US$ 0.5-1.0 (March 1998). The price of extracts, ready for capsulation, is around FOB US$ 200/kg (depending on quality).

Main markets:
The leading EU manufacturer and importer is located in Austria. Most research work is conducted by Austrian companies, which also own of all major patents. The leading EU consuming markets is probably Germany.

Market trends:
Uncaria tomentosa, reputedly the most effective of several Cat's claw species, is endemic to the Peruvian Amazon and is gaining international attention for its documented curative qualities. Peruvian production of Cat's claw showed an upward trend between 1992 and 1996, amounting to 694 tonnes in 1996. In recent years, however, the market has declined a bit.

4. Main suppliers:
Peru is the leading supplier of *Uncaria tomentosa.*
Ecuador and Colombia only supply *Uncaria guianensis.*

continued

Product profile: CAT'S CLAW *continue*

Good Agricultural Practice (GAP) guidelines. Minimal information included in the waybill should cover the geographical definition of growth place, the country of origin and the responsible producer.

Export regulation: Officially no raw material can be exported from Peru. Only extracts, capsules and other processed Cat's claw products can be exported.

5. How to improve the quality:
A major problem for quality assurance is that, in producer countries, there is hardly any infrastructure to execute a proper quality control.
A more open market scenario would contribute to the quality of the raw material. Currently, the trade is very price orientated. Buyers do not pay much attention to what part of the plant is presented, bark of the root (which is high in active principal) or bark of the vine. There is a high incidence of adulteration and no proper identification of plant parts.

Source used: Plantas Amazonicas de Uso Medicinal, CIFOR, Walter Nalvarte et al. (1999).

11 INTERNAL ANALYSIS: COMPANY AUDIT

The internal analysis or company audit is a review of the company's strength and weaknesses in terms of all company resources such as export marketing capabilities, finance, personnel, internal organisation, management, infrastructure, etc. As a result of this internal analysis, you will be able to assess to which extent your company is able to take advantage of the opportunities identified in the former chapter. Furthermore, with a thorough understanding of your company's unique capabilities, you are able to invest in opportunities that exploit your strengths.

Questions an exporter needs to answer:

- Which products are you currently producing? How comprehensive is your product range?
- Which products do you consider to be the main products you are specialised in?
- What new products would you be able to collect / cultivate / produce / process?

11.1 Product range

A product range can consist of several product groups (range width), each with several different products (range depth). Again, one product can consist of several varieties (see example).

A supplier can only select a suitable business partner when armed with correct information about the range that he or she is able to offer. A precise review of the product range, therefore, aims at matching products on offer with market opportunities. Keep in mind that varieties are sometimes known under different trade names overseas.

11.2 Product standards, quality, USP and production capacity

In understanding your own company, it could be very helpful to develop a Unique Selling Proposition, or USP. Your USP is what differentiates your product or service from your competitors. Your chances in the market greatly increase when you have a USP!

There are two major benefits in developing the USP. First, it clearly differentiates your business in the eyes of your current and potential customers or clients. Second, it focuses your staff on delivering the promise of the USP, thus helping to improve your internal performance.

Example of a company's product range

Product range (range width)	Products (range depth)	Varieties
Medicinal & aromatic plants	Cat's claw *(Uncaria)*	• Uncaria tomentosa • Encaria guinaensis
Vegetable alkaloids	Quinine *(Cinchona)*	• Cinchona officinalis • Cinchona calisaya • Cinchona succirubra

The next step is to review product characteristics of the products and varieties on offer.

Example of product characteristics

Product	Variety	Chemical properties	Use	Packaging	Availability
Cat's claw	Uncaria tomentosa	This herb contains mainly pentacylic alkaloids, substances responsible for the most well-researched effect of cat's claw, namely immune stimulation.	Effective in treating a wide array of maladies including cancer, systemic candidiasis, genital herpes and AIDS.	Containers (glass /aluminium/steel/ plastic) depending on the specification on the buyer.	Cat's claw is already being radically over harvested in the wild, and therefore, rare.
etc.					

What a USP could look like:
- One sentence.
- Clearly written, so that anyone can understand it.
- It should be believable.
- Composed of one benefit that is unique solely to your company or product.

How to develop your USP? Sit down with a notebook and:
- ☐ Brainstorm.
- ☐ List all the benefits your company or product can offer.
- ☐ Prioritise those benefits in order of what is the strongest, and most unique to your business.
- ☐ Write one sentence that conveys the first benefit on the list.

☛ Thinking about what happens with your export product, after the importer has received it, can help you bring to new ideas.

Quality

Quality is probably the main competitive factor in every business. It is an absolute requirement for European importers to receive natural ingredients for pharmaceuticals that comply totally with EU regulations. It is therefore obvious that it is also the key issue when looking for suppliers in developing countries.

☛ Products originating in developing countries should be produced hygienically and with care. Microbiological load should be minimised and the negative effect on plants in the course of cultivation, processing and storage should be limited.

Also mentioned in Section 10.1, quality refers not only to product quality, because management quality is just as important. Documentation according to GMP and ISO 9000.2000 is a must, because importers of natural ingredients will have to channel the ingredients into their GMP systems. Notably, documentation reflects costs and addition of value.

Questions an exporter needs to answer:

- What quality standards does your product and production process comply with?
- What is the general level of your product quality compared to other products in the identified market?
- In the case that environmental labelling could significantly improve the competitiveness of your export product, which one is the most interesting for your situation?

Check your current quality standards with the voluntary and compulsory standards described in Section 9.1. Also refer to Chapters 9 and 10 for information on the importance of the various quality standards for your product-market combinations.

Production capacity

The foreign buyer is seldom looking for a 'spot' purchase. Instead, he is looking for a quality product at a fair price with continued availability. If you are merely seeking to market your sporadic surplus capacity, then the entry into the foreign trade market will probably be a disappointment. On the other hand, if the company is willing to devote even 10 percent of its production capacity to foreign markets and the servicing of these accounts, it can reasonably expect to build substantial and permanent trade in those markets suited to its products.

Questions that need to be answered:

- How efficiently is the present capacity being used?
- Will new export activity hurt domestic sales?
- Is it possible to expand your production capacity if necessary?
- What will be the cost of setting up additional production capacity?
- What cycles of production apply to your products and how does this match up to the demand in the target market?

☛ However, keep in mind that often, the volume of the product marketed is not as important as a consistent and reliable supply of the actual product.

11.3 Logistics

It is a good idea to use a freight forwarder to arrange transportation services on your behalf. They can simplify the shipping process because they are familiar with import and export regulations. It is important to use a forwarder who is experienced in handling natural ingredients, as well as one that is experienced in the destination country.

Freight forwarders are cost effective to use, because they can negotiate the best rates with airlines. They usually operate on a fee basis paid by the exporter, and these are part of the cost price.

Questions that need to be answered:

- How often are you able to deliver?
- What lot sizes do you generally produce or are you able to produce?
- Are there cold-room facilities at your production base?
- Are you able to maintain a cold chain during the transportation of the products (air-conditioned domestic transport, cold-room facilities at the airport)?
- What are the typical costs of logistics? (Check with freight forwarders)

11.4 Marketing and sales

How do you sell to current export markets? What works in one European market is likely to work in another, subject to refinement based on market intelligence and knowledge about specific trade channel requirements.

What existing contacts does the company have in the target markets - relatives, friends, suppliers, etc? It is an advantage to have some local presence in the target market that can gather information, monitor progress and follow up leads.

A serious export marketing campaign requires substantial management time to execute it properly. Therefore, the company needs to be realistic as to how much time can be devoted to export marketing.

More information on how to make use of your marketing tools to foster your export activities will be described in Chapter 13.

Questions that need to be answered:

- Does your company have people specifically assigned to marketing and sales activities?
- Which persons do you know in the target markets?
- What sales support material is available?

A proper marketing strategy for natural ingredients takes into account current issues in the trade such as Good Agricultural Practices or Good Manufacturing Practices (providing guidelines for cultivation, harvest, processing, packaging and storage) and CITES regulations on certain protected species.

Marketing strategies still have to be adapted to EU national regulations, as regulations for herbal products in the EU have not yet been harmonised. However, a positive development with respect to herbal medicinal products is the proposal (COM 2002/1) of 17 January 2002 for a Directive to amend Directive 2001/83/EC, prescribing that no medicinal product may be placed on the market without having obtained a marketing authorisation on the basis of harmonised requirements. Normally, a lot of tests are required for such an authorisation. Published scientific literature is not available for many herbal medicinal products, so that a well-established medicinal use cannot be demonstrated. The proposed Directive would provide for a special registration and, hence, the marketing of certain traditional herbal medicinal products without requiring very extensive tests.

Although it helps to look at the European market, developing country exporters should draw up a marketing strategy aiming at markets at national, regional, and international level. While adopting this approach, developing country exporters will not be solely dependent on one market sector. In this way, fluctuations in the international market can be buffered by demand in the national and regional market. In its June 2001 edition, The Natural Foods Merchandiser published the article "Latin America: Emerging Markets For Botanicals, Organics". The article specifically discussed the following countries: Argentina, Brazil, Chile, Costa Rica, Ecuador, Honduras, Mexico and Peru. Moreover, the exhibition organiser Penton launched its first Natural Products Expo Asia in Hong Kong in May 2002. It included 5 concurrent events: Traditional Chinese Medicine Asia, Herbal Asia, Nutraceuticals Asia, Functional Foods Asia and Organics Asia. Target countries included Hong Kong, China, Taiwan, Japan, Korea, Australia, India, Malaysia, Thailand and Indonesia.

11.5 Financing

Export marketing is expensive. If financial resources are limited, then marketing plans will have to be modest. It is not sound to develop five new markets if the company only has the money to develop one.

Financing is often necessary for product and process adaptation to EU standards. Often domestic products cannot be exported unchanged. The extent to which the exporter will modify products sold in export markets is a key policy issue to be addressed by management. If the exporter produces more than one product he should choose one that is nearest to the target market requirements and progress from there.

Sometimes local banking systems in developing countries are insufficient for exporting. It is therefore recommended to use an international bank that is also located in the importing country. Moreover, this will also simplify the payments between you and your business partner. Each country has a list of their local banks with their correspondent banks in other countries

or special relationships with financial institutes outside their country. Choosing the right bank can facilitate and speed up money transfers considerable.

For methods and terms of payments please refer to Section 13.4.

Questions that need to be answered:

- What amount of money can be allocated to setting up new export activities?
- What level of export operating costs can be supported?
- How should the initial expenses of export effort be allocated?
- What other new development plans are in the works that may compete with export plans?
- Is outside capital necessary to support efforts?

11.6 Capabilities

Commitment to export
It is important to consider whether or not the company has staff who are able to sell and develop an international business. The company should be able to generate the physical and administrative infrastructure to deal with increased activities related to exporting - not only in dealing with orders but also with processing Customs and shipping documentation. If this type of infrastructure is limited, then it is a weakness in developing sustained export activities.

Questions that should be answered are:

- What kind of commitment is the top-level management willing to contribute to an export effort? How much senior management time should be allocated? How much could be allocated?
- What organisational structure is required to ensure that export sales are adequately serviced? Who will be responsible for the export activities (export department's organisation and staff)?
- What are the management's expectations of the effort?

Export experiences
It is important to learn from past experience. If the company has tried and failed to penetrate an export market previously, this can be analysed to determine where things went wrong.

Questions that should be answered are:

- In which countries has business already been conducted?
- From which countries have inquiries already been recieved?
- What general and specific lessons have been learned from past experience?

Language skills
When dealing with European trade partners in the natural ingredients for pharmaceuticals business, English is the most used language. Although most European trade partners will not be native speakers themselves, the vast majority speaks English fluently. In almost all cases, foreign language skills, particularly English, are essential when entering the European market. When dealing with France, knowledge of the French language is a distinct advantage. If you can communicate in Spanish, you have a competitive advantage if you address the Spanish market.

Questions that should be answered are:

- Which language skills are necessary when dealing with your selected markets?
- Which language capabilities are available within the export company?

On the few occasions when correspondence and documents in English will not suffice, exporters can usually find sources of translation capabilities for the more popular European languages. Language capability can be advantageous since it facilitates cultural and social relationships.

12 DECISION MAKING

Answers to the questions mentioned in Chapters 10 and 11 can help an exporter not only to decide whether or not to export but also determine what methods of exporting should be initially used. A SWOT analysis can be used as a tool to analyse the identified opportunities and threats and the company's identified relative strengths and weaknesses. Carrying out an analysis using the SWOT framework helps an exporter to focus his activities into areas where he is strong and where the greatest opportunities lie. It should be noted that the matrix included in Section 12.1 should be treated as an example and that it should be adapted to the exporter's own situation.

Questions that should be answered:

Strengths:

- What are your advantages?
- What do you do well?
- What relevant resources do you have?
- What do other people see as your strengths?

☛ Consider this from your own point of view and from the point of view of the people you deal with. Do not be modest, but be realistic. If you are having any difficulty with this, try writing down a list of your characteristics. Some of these will hopefully be strengths.

☛ In looking at your strengths, think about them in relation to your competitors. For example, if all your competitors provide high quality products, then a high quality production process is not a strength in the market, it is a necessity.

Weaknesses:

- What could you improve?
- What do you do badly?
- What should you avoid?

☛ Again, consider this from an internal and external basis: Do other people seem to perceive weaknesses that you do not see? Are your competitors doing any better than you? It is best to be realistic now, and face any unpleasant truths as soon as possible.

Opportunities:

- Where are the good opportunities awaiting you?
- What are the interesting trends you are aware of?
- Useful opportunities can come from such things as: changes in technology and markets on both a broad and narrow scale, changes in government policy related to your field, changes in social patterns, population profiles, lifestyle changes, etc.

☛ A useful approach to looking at opportunities is to look at your strengths and ask yourself whether these open up any opportunities. Alternatively, look at your weaknesses and ask yourself whether you could open up opportunities by eliminating the weaknesses.

Threats:

- What obstacles do you face?
- What is your competition doing?
- Are the required specifications for your job, products or services changing?
- Is changing technology threatening your position?
- Do you have bad debt or cash-flow problems?
- Could any of your weaknesses seriously threaten your business?

☛ Carrying out this analysis will often be illuminating - both in terms of pointing out what needs to be done, and in putting problems into perspective.

☛ You can also apply SWOT analysis to your competitors. This may produce some interesting insights.

☛ **Simple rules for successful SWOT analysis**

- Be realistic about the strengths and weaknesses of your organisation.
- Analysis should distinguish between where your organisation is today, and where it could be in the futures.
- Be specific. Avoid grey areas.
- Always analyse in context to your competition i.e. better than or worse than your competition.
- Keep your SWOT short and simple.

12.1 SWOT and situation analysis

A SWOT analysis is a framework for analysing strengths and weaknesses, the opportunities and threats an exporter is facing. This will help an exporter to focus on his strengths, minimise weaknesses, and take the greatest possible advantage of opportunities available. A SWOT analysis is just one of many good techniques that can help an exporter to build a strong competitive position for his organisation. An example of a SWOT analysis for an exporter of natural ingredients for pharmaceuticals in developing country is given in table 12.1.

Within the SWOT figure, a distinction can be made in the SWOT figure between internal factors (strengths and weaknesses) and external factors (opportunities and threats). Nevertheless, factors of sectoral and of company level are both found under the internal factors in this figure. For example, "lack of marketing knowledge" and "low level of organisation of the industry" are both internal factors, although the first is at company level and the latter at sectoral level.

Such an analysis should be adapted to your personal circumstances since the factors differ for each exporter in the world. While for one exporter of natural ingredients for pharmaceuticals "negotiation skills" is a weakness, for another exporter this problem does not exist.

Please note that also within a company a threat or weakness can change into an opportunity or strength. A

Table 12.1 Example of a SWOT analysis for exporters of natural ingredients for pharmaceuticals in developing countries

INTERNAL FACTORS

Strengths

- Access to natural resources
- Low raw material prices
- Low labour costs
- Low or zero import duty
- Long tradition in using ingredients
- Sustainable supply chain management
- Human resources
- Active Business Support Organisations
- Established legal framework for GMP
- Important contribution to the supply of national and regional consumer products
- Value addition at the origin

Weaknesses

- Entrepreneurial capacity
- Negotiation skills
- Language and communication
- Certification
- Lack of marketing knowledge
- Lack of knowledge of supply
- Limited knowledge of properties of medicinal plants beyond traditional knowledge and belief
- Limited knowledge of intellectual property rights
- Lack of information on regulations, prices etc
- Low level of organisation in the industry
- Access to finance / banking systems

EXTERNAL FACTORS

Opportunities

- Shortage supply and high demand in Europe
- Enlargement of EU
- Markets open to limited natural resources
- Rural income generation through sustainable sourcing including wild collection, cultivation and forest management
- UN guidelines for cosmetics and pharmaceuticals are implemented through national and regional laws
- The same global rules for production and processing on the basis of WHO guidelines

Threats

- Entrance of East European countries to the EU
- Tariff barriers
- Technical trade barriers
- High investments needed
- Over-collection
- Sustainable use of the raw materials (biodiversity)
- Globally applied guidelines are promoting strong competitive development of national and regional markets regarding export to Europe.

good example concerning this matter is "technical trade barriers and new regulations imposed by the EU". The regulations can be a threshold for exporting to the EU. However, when an exporter has adapted the export product to EU standards, he will have access to the EU market. In this way, the factor of technical trade barriers can be seen as an opportunity instead of a threat.

Be aware that success in export is by no means guaranteed by taking into account all the factors mentioned so far. Your environment consists of other critical conditions and success factors, that are often more difficult to influence as an individual company, than changing for example internal factors. Some of the critical conditions such as low level of organisation in the industry and financing have already been included in the figure above. However, other factors (sector-specific) should also be included in the SWOT analysis are:

- sector policies;
- availability of sector/branch organisations;
- clustering/co-operation within the sector, organisation of supply and production, value chain management (please also refer to Section 10.5);
- know-how and technical assistance;
- foreign trade assistance;
- financing.

☛ Inquiring of local business support organisations or colleague exporters can be a good starting point in being aware of other critical conditions for successful exporting.

12.2 Strategic options and objectives

Through of conducting the external analysis (market audit) and internal analysis (company audit) (Chapters 10 and 11), you will be able to come to a decision whether or not to export.

- ☑ You have identified products suitable for export development. Also, you know what modifications, if any, must be made to adapt them to overseas markets.
- ☑ You know what countries and market segments you are going to target for sales development and/or co-operation agreements.
- ☑ You have identified the best sales channel (direct exporting or co-operation agreements).
- ☑ You know what special challenges pertain to the selected markets (competition, import controls etc.) and what strategies you will use to address them.

Once a company has determined that it has exportable products, it must still consider whether the development of an export business adheres to the company objectives. In order to arrive at this conclusion the management should ask itself the following questions:

- What does the company want to gain from exporting?
- Is the goal of exporting consistent with other company goals?
- Are the benefits worth the costs or would company resources be better spent developing new domestic business?

Companies can waste a lot of time and money attempting to enter markets which do not have potential or for which their product is not suitable. To be successful in export marketing, exporters need to focus on specific products and markets and be prepared to deal with all foreseeable situations. Therefore, several possible strategies have to be considered.

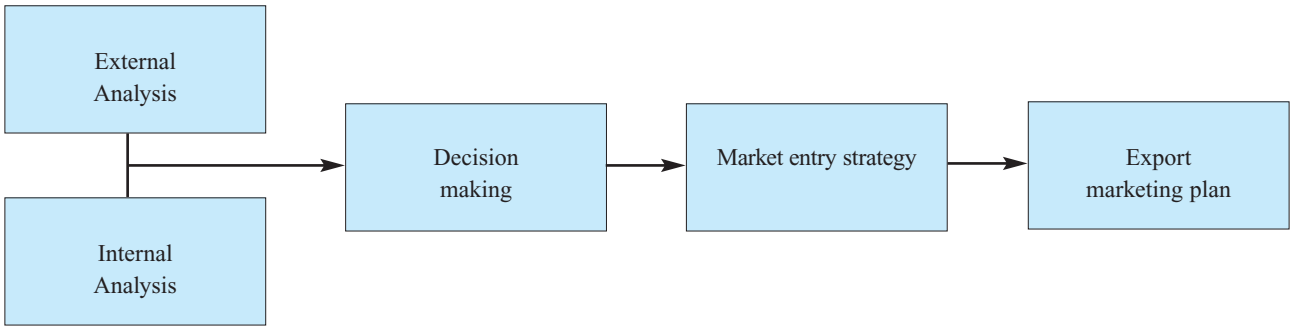
☛ **Advantages and disadvantages of exporting**

Advantages:

- enhance domestic competitiveness
- increase sales and profits
- gain global market share
- reduce dependence on existing markets
- exploit corporate technology and know-how
- extend the sales potential of existing products
- stabilise seasonal market fluctuations
- enhance potential for corporate expansion
- sell excess production capacity
- gain information on foreign competition

Disadvantages

- develop new promotional material
- subordinate short-term profits to long-term gains
- incur added administrative costs
- allocate personnel for travel
- wait longer for payments
- modify your product or packaging
- apply for additional financing
- obtain special export licenses



The above figure could be summarised in the following strategic steps:

- External analysis (market audit, Chapter 10) and internal analysis (company audit, Chapter 11)
- SWOT (Chapter 12)
- Decision making & formulation objectives (Chapter 12)
- Elements which can be used as inputs for the Market Entry Strategy and Export Marketing Plan (Chapter 13).

If you have come to the decision to export, the next phase of the export marketing process is to draw up an Export Marketing Plan (EMP) which defines a marketing strategy stating how the company is going to penetrate the identified market. The marketing strategy is designed around the information collected in the internal and external analysis and the marketing tools will be described in the following chapter.

☛ **An international business plan should define your company's:**

- readiness to export
- export pricing strategy
- reason for exporting
- potential export markets and customers
- methods of foreign market entry
- exporting costs and projected revenues
- export financing alternatives
- legal requirements
- transportation method
- overseas partnership and foreign investment capabilities
- corporate commitment to the exporting process

Formulating an export marketing strategy based upon sound information and its proper assessment increases the chances that the best options will be selected, resources will be utilised effectively, and efforts will consequently be carried through to completion.

For assistance in writing an EMP and formulate answer on the questions asked in this chapter, please refer to the CBI's *"Export Planner"*.

13 EXPORT MARKETING

Which marketing tools are available to you to help build up your export business? This Chapter will provide you with insights and give tips on how to make use of your marketing tools to promote the sales of your products and to build a favourable trade relationship.

13.1 Matching products and the product range

In the company audit (see Section 11.1), the exporter reviewed the company's product range and product characteristics. The aim of this review was to enable the exporter to match market opportunities with the company's products on offer. This review can also be used as a starting point for considering opportunities for improving the exporter's product range.

In most cases, exporters will find out that the current product range does not match the demand of the identified market segments and sales channels. The cause of this mismatch can, for example, lie in the fact that currently produced varieties are outdated.

In the case of exporters who are looking for varieties to improve their product range, a couple of possible sources exist:

- ⓘ **Trade magazines**
- ⓘ Visiting **trade fairs** is also a good way of becoming informed about potentially interesting varieties.
- ⓘ From more **detailed trade statistics** (for instance auction sales), you can often determine which varieties are most popular in the target markets.

Note that one of the most important issues in selecting new varieties is the question whether or not the variety can be successfully produced under your production circumstances.

13.2 Building up a relationship with a suitable trading partner

One of the most ominous obstacles for exporters can be the search to contact, attract and secure a good importer or trade partner. Many avenues are available for locating trade partners. You should employ any and all, which seem appropriate for your product-market combination.

How to find a potential trading partner
The main ways European importers use to look for new suppliers from developing countries are the following:

- Visiting the country in which one intends to set up/expand production capacity;
- Recommendation by someone he knows; and
- International trade fairs.

The best ways for exporters in developing countries to approach potential European customers are:

- Direct mail: You can write a letter (post, fax or e-mail) directly to a European company. Most companies will respond that they are not interested or that they already carry a competitive line. However, only a few positive replies are needed to continue your search and evaluation of prospective distributors.
- Personal visits: Once you have received a number of interested replies, plan a trip to that market. Additionally while travelling, stop in other potential markets to assess the situation as well as attempt to make contacts. Many times a personal visit will pay for itself in terms of the benefits gained.
- Invite EU importers or potential business partners to visit your company;
- Build a network in order to extend your contacts;
- Visit international trade fairs;

Also refer to the recently published CBI manual *"Your Image Builder"*.

In the case of natural ingredients for pharmaceuticals, a number of European importers mentioned that a good way to approach the market is by establishing direct contact with them. Note that this should not be organised through trade fairs. Importers are not always positive about trade fairs as an instrument to promote the access of exporters in developing countries. This opinion may be obvious as, at the fair, exporters gain direct contact with European growers, while big importers prefer to maintain in control of the trade.

For European manufacturers, however, importing via large importers may be the most effective way to come in contact with suppliers of natural ingredients for pharmaceuticals. Large importers know the language of the region, they know all about logistics and transport tariffs (by sea and air) and they are familiar with the payment methods. Furthermore, they are constantly in contact with the producers in developing countries and they generally have their own personnel overseas or regular travel to suppliers, in order to guarantee constant quality and to coach local staff wherever necessary.

How to identify the most suitable trade partner?
Evaluate the potential trade partners on which you have obtained information, using the following criteria:

- ❑ Is the information complete? (full address, telephone / fax number, e-mail address, contact person)

Cultural differences

The single most common reason for export failure is inattention to cultural factors, a maxim frequently repeated in international business literature. People choose service providers and strategic business partners with whom they feel at ease, and this comfort level is dictated initially by cultural factors. National cultures are numerous, and subcultures are even more so. Increased travel has resulted in a large group of people socialised in more than one culture, and widespread television access gives exposure to different cultural values.

The factors that can affect cross-cultural business include:

- who speaks first
- attitude to God and nature
- decision-making time
- thought patterns
- personal space
- social behaviour
- material possessions
- family relationships
- risk avoidance
- competitiveness
- short- and long-term planning

For example in Germany, first names are reserved for family members and close friends. Moreover, in German business culture, it's not uncommon for colleagues who have worked together for years not to know of each other's first names.

☛ It is important to be aware of and deepen yourself in cultural differences between your country of origin and European countries. By the way, even great varieties in cultural behaviour exist between the EU countries themselves!

❑ Is the importer active in the country you selected?
❑ What kind of trade relation is the potential trade partner interested in (arm's-length, co-operative agreement, joint-venture)? Does this correspond with your preferred type of relations?
❑ What is the position of the potential trade partner in the market?
❑ What is the financial status and credibility of the company?

Using these criteria, draw up a priority list of the contacts you have received.

Going by the priority list, you must identify the trade partners best matching your own company profile, product range and export strategy. Particularly in the case of future long-term close co-operation, it is important to gain a clear picture of the company you are dealing with and understand their business activities.

13.3 Drawing up an offer

There are two different kinds of offers:
1. general offer or company introduction; and
2. specific offers.

(a) Drawing a general offer

- The purpose of a general offer is to make the first contact with potential trading partners who the supplier does not yet know personally.
- A general offer consists of sending a short profile of your own company and a summary of your product range.
- In a personal letter, briefly introduce your company and what you have to offer.

(b) Drawing up a specific offer
A specific offer is legally binding for a certain period of time. You must therefore be capable of fulfilling the terms of your offer. You should make up a specific offer only when you know the business partner personally or after you have made the initial contact.

When sending a specific offer, it should include:
- Name of the person responsible in your company;
- Exact description of the products offered;
- Price of the products offered in accordance with the Incoterms 2000 (if applicable, split up by delivery quantities or quality); and
- Possible delivery date.

In case a sample of the product is required:
- Product samples must correspond to the goods available for delivery (if they do not, this can have a lasting negative effect on business relations).

Other tips:

- It is important to ask (by telephone or e-mail) whether the offer (and the samples, if applicable) has arrived in good shape.
- It is a good idea to invite your customer to visit your company.
- Possibly propose a visit to the country of destination.
- In that case:
- If necessary, hire an interpreter.
- Ask your own consulate, trade promotion organisation, or other intermediary for assistance.

- First time exporters should start with small samples, rather than large high-value commercial shipments. An exporter should be testing whether his products meet the legislative requirements of the destination country, transportation routing, airline handling and packing methods.

Price setting

To establish an overseas price natural ingredients for pharmaceuticals, you need to consider many of the same factors involved in pricing for the domestic market. These factors include competition; costs such as production, packaging, transportation and handling, promotion and selling expenses; the demand for your product or service and the maximum price which the market is willing to pay.

In most cases, an exporter will have to follow market prices. However, in case of some products, like novelty products, you will be able to set your own export price. There are two common methods of calculating your price for exports:

- *Domestic Pricing* is a common but not necessarily accurate method of calculating prices for exports. This type of pricing uses the domestic price of the product as a base and adds export costs, including packaging, shipping and insurance. Because the domestic price already includes an allocation of domestic marketing costs, prices determined using this method might be too high to be competitive.
- *Incremental Cost Pricing* determines a basic unit cost that takes into account the costs of producing and selling products for export, and then adds a mark-up to arrive at the desired profit margin. To determine a price using this method, first, establish the "export base cost" by stripping profit mark-up and the cost of domestic selling. In addition to the base cost, include genuine export expenses (export overheads, special packing, shipping, port charges, insurance, overseas commissions, and allowance for sales promotion and advertising) and the unit price necessary to yield the desired profit margin.

How you price your product is worth a good deal of thought and effort since it directly affects your ability to make a profit. Take some time to research the following management questions:

Questions to ask when setting your price

How much does it cost to grow your product?

→ Production costs not only include costs for cultivating/collection, but also for packaging, distribution and promoting your products.

→ The costs of unsold products also should be included.

What are your profit goals?

→ A profit goal states how much a business should earn.

→ You can set the profit goal as a percentage (margin) above the product costs or set the total profit figure for the entire business.

→ A profit goal can guide decisions on the amount of produce you will grow and the price you will charge.

How will you market your product?

→ Are you producing natural ingredients for pharmaceuticals on a contract basis for a European manufacturer?

→ Do you sell your products on an arms-length basis to customers in Europe?

What price do competitors charge?

→ Try to gain an industry focus on your pricing by researching your competitor's price levels.

→ By walking through the steps indicated in Section 10.2 you will know the prices competitors charge and why they charge what they do. Use the competitive analysis to develop the upper limit of your price range. Be sure you compare your products to competitors.

→ If competition is intense, you should price at the lower end of the price range unless you can distinguish your product through quality or a unique selling feature.

What is the customer demand for my product?

→ How unique is your product (or production location in the case you offer propagation capacity)?

→ To price according to demand you have to know more about the size and nature of your customer base and their feelings about pricing.

→ You will need to keep an eye on general market trends, particularly if your product range has many substitutions. See also Chapter 3.

Understanding how to price your product is an essential step in developing your business. You must continually monitor your price including your costs of production, your competition and your customers and be prepared to make adjustments.

Below you find an overview of the way you can calculate the price of your export product (for information on Incoterms refer to the Internet site http://www.iccwbo.org/incoterms/preambles.asp).

Export price calculation

Total costs per unit
+ Profit
+ Commissions
+ Domestic banking fees
+ Palletisation / export packing
+ Freight forwarding and documentation fees
+ Other direct expenses related to special shipping requirements such as temperature recorder charges
= EXW price (Ex Works)
+ Inland transportation
= FAS price (Free Alongside Ship)
+ Terminal handling charges
= FOB price (Free On Board)
+ Ocean freight charges
+ Ancillary charges
= CFR price (Cost & Freight)
+ Insurance
= CIF price (Cost, Insurance, Freight)

13.4 Handling the contract

When handling the contract, you should consider the terms and the fulfilment:

Contract terms

Terms of payment

There are various methods of receiving payment for your exports. The most commonly used terms in the natural ingredients for pharmaceuticals are documents against payments (D/P) and payments in advance.

- **Documents against payments**
  Also known as cash against documents (CAD). The buyer takes possession of the goods only after payment. Although this method is not very popular, it is very safe and the costs amount to one pro mille. One can also make use of a 'documents against acceptance of a bill of exchange'. However, the bill of exchange is not commonly used in the European Union and it does not guarantee that the bill will be paid; it is less secure than the D/P.
- **Payment in advance**
  This method is the most desirable from the seller's standpoint, because all risk is eliminated. While cash in advance may seem most advantageous to you, insisting on these terms may cost you sales. Just like domestic buyers, foreign buyers prefer greater security and better cash utilisation. Some buyers may also find this requirement insulting, especially if they are considered credit worthy in the eyes of the rest of the world. Advance (partial) payments and progressive payments may be more acceptable to a buyer, but even these terms can result in a loss of sales in a highly competitive market.

Most export shipments are partly pre-paid before the natural ingredients are shipped. Because collections from customers are more difficult overseas, it is recommended to get a minimum of 50 percent in advance. Once on-going business and trust is established, exporters should grant their foreign customers standard payment terms. Because of the possible complications and costs, letters of credit are often avoided in the ingredient trade.

In the case of co-operation agreements with overseas companies, payment terms could also include periodical payments.

Terms of sale

Export terms of sale determine what costs are covered in the price of the cargo. They also indicate at what point ownership transfers to the buyer and at what point responsibility for the cargo is transferred. International commercial terms (Incoterms) provide "the international rules for the interpretation of trade terms."

The most commonly used trade term is:

- **FOB (Free on Board)**

Under this term, the seller quotes a price for goods that includes the cost of loading at the port of departure. The buyer arranges for transportation and insurance.

Other trade terms less frequently encountered are:

- **CFR (Cost and Freight)**
  For shipments to designated overseas port of import, the seller quotes a price for the goods that includes the cost of transportation to the named point of debarkation. The buyer is responsible for the cost of insurance. This is referred to as C&F in the old Incoterms. The seller pays for the cost of unloading cargo at the port of destination, to the extent that they are included in the freight charges. If the charges are separate, they fall to the account of the buyer.
- **CIF (Cost, Insurance, Freight)**
  Under this term, for shipments to designated overseas port of import, the seller quotes a price for the goods, including insurance costs and all

transportation and miscellaneous charges, to the point of debarkation from the vessel or aircraft. The seller pays for the cost of unloading cargo at the port of destination, to the extent that they are included in the freight charges. If the charges are separate, they fall to the account of the buyer.

Contract fulfilment
It is important that an exporter discusses the 'what ifs' with his trade partner: what if there is a problem with inspection, what if a claim is necessary because the airline mishandles the natural ingredients, and what if your customer has a problem with product quality after arrival.

Important issues are:
- ❏ Procure the delivery documents in good time.
- ❏ If there is a supply agreement, comply strictly with all parts. If you cannot comply with any part of the agreement (e.g. delivery delays or quality problems), inform the customer clearly and in good time.
- ❏ Co-operate on a partnership basis and seek a common solution even if conflicts arise.
- ❏ Fulfilling the contract should have a high priority, particularly when delivering for the first time.

Other more practical questions that should be asked are:
When is the shipment needed?
- Does the customer have a preferred freight carrier?
- Which airport (or ocean port) is most convenient?
- Does he have an agent to clear the shipment through Customs?
- Does the customer want to pay for the shipment to be insured?

13.5 Sales promotion

One of the major critical success factors for exporters of natural ingredients for pharmaceuticals to the European Union is attention to customer requirements and the ability to maintain good relationships with their European business partners. Sales promotion revolves around developing and expanding these customer relations and thereby maintaining and increasing sales volume.

Some tips for developing customer relations:
- Take good care of existing contacts. This includes for example expressions of thanks to business partners, regular information on the company developments like product range, quality improvements, etc.
- Always reply to a letter of inquiry. If you cannot supply this contact, say so, explaining that you will get in touch with him for the next campaign.

Communication
It is advisable to commence with communication measures, which only require a small amount of planning and co-ordinating, such as revising the company's standard printed matter:
- Standardise all printed paper used outside the company (letterheads, visiting cards, fax form, etc.)
- A brochure of your company (including photos of production sites and produce) can be useful for promoting new contacts and sales.

Constant, prompt and reliable communication is a vital prerequisite for maintaining a long-term business relationship with your customers. If possible, smaller firms should also try to be reachable by (mobile) phone at office hours.

Sales organisation
The term "sales organisation" refers to the organisational system that carries out the sales of the company's products. A sales organisation usually consists of back office and sales force.

As most sales are conducted by telephone, fax or e-mail, having well-functioning sales staff is an absolute precondition for successful market participation. This also applies to smaller company where one person has to take up different (sales) functions.

An essential tool used in sales is a detailed and up-to-date customer database. This database can vary from a simple collection of customer data sheets to an advanced customer relation management system. However, the customer database should at least contain the following information:
- Basic information on the customer: name, address, telephone numbers, etc.
- Changing data on the customer: data resulting from business activities with the customer, such as telephone calls, offers, sales information, etc.

The customer database should give the sales person a quick review of the most important customer information when making or answering a telephone call or planning a visit.

If possible, the database should be computerised, because this simplifies changes, updating, sorting and selection procedures, etc. If computerisation is not possible, the customer database should be on file cards (see example).

Internet
As a source of information and means of communication, Internet is generally considered to have many opportunities for companies in developing countries. The main advantages of the Internet are:
- Low cost of communication;
- Fast delivery of information;
- Independence of distance and timeline;
- Multimedia possibilities.

Example customer data sheet

General information

Company name:	Customer no.:
Postal address:	First contact date: _ _ / _ _ / _ _ _ _
Street address	Customer class*: *A B C D*
Country:	Customer type: *(manufacturer, importer, agent)*
Telephone:	Other info:
Fax:	
E-mail:	
Contact name:	

Sales information

Sales realised: *(last year)*
Sales planned: *(this year)*
etc..

Contact record

No. 1 Contact date: _ _ / _ _ / _ _
Contact type: *(telephone, visit, fax, etc.)*
Information:

No. 1 Contact date: _ _ / _ _ / _ _
Contact type: *(telephone, visit, fax, etc.)*
Information:

No. 1 Contact date: _ _ / _ _ / _ _
Contact type: *(telephone, visit, fax, etc.)*
Information:

* Classify your customers by importance to your company (sales, quality of relation, etc.)

Besides one-to-one communication through the use of E-mail, Internet offers opportunities for presentations, (market) research, distribution, sales and logistical improvements. If your target group consists of importers/growers in overseas countries, you can advertise for (new) customers on your Internet site, showing your company, product range and indicating the production circumstances.

☛ Exporters should realise that the Internet is an important medium in sourcing of raw materials for herbal products. A number of users/traders of natural ingredients mentioned that they use the Internet in order to find new suppliers.

Trade fairs

We have stated earlier in this survey that, in the case of ingredients for pharmaceuticals, European importers are not in favour of trade fairs as a means to promote suppliers from developing countries.
However, visiting or even participating in a trade fair abroad can be an efficient tool for communicating with prospective customers. It provides more facilities for bringing across the message than any other trade promotional tool. It can also be an important source of information on market developments, production techniques and interesting varieties.

Important motives for companies visiting European trade fairs are:
- Establishing contacts with potential customers;
- Orientation on the European market;
- Gathering information on specific subjects;

Although significant costs are involved, actually participating in a trade fair could be interesting for a number of companies to meet, for example, European companies interested in setting up natural ingredients production facilities in tropical regions. One of the major advantages of participating yourself in a trade fair is the ability to present your company and products in a more extensive way (3-D presentation, company video, and product displays).

Main European trade fairs

Trade fair	Where?	When?	What?
Vitafoods	Geneva, Switzerland	May 2004	Technology and marketing of ingredients, dietary & herbal supplements and foods for vitality.
Natural Products Expo Europe	Amsterdam, The Netherlands	June 2004	Natural products, including raw materials.
Sana	Milan, Italy	September 2004	Natural nutrition, health, and the environment.
CphI	Milan, Italy	September	Pharmaceutical ingredients and intermediates.
Health Ingredients Europe	Amsterdam, The Netherlands	November 2004	Ingredients for health, functional and organic foods.
BioFach	Nürnberg, Germany	February 2004	Organic Trade Show.
In-Cosmetics	Milan, Italy	April 2004	Raw materials and ingredients for the cosmetics, toiletries, fragrances and personal care market.
Food Ingredients Europe	London, UK		Food ingredients and semi-finished food products.

Trade fairs are organised in many European Union countries. The most relevant fairs for exporters of natural ingredients are listed in the box above. The contact addresses of these and other trade fairs are listed in Appendix 2.3.

For additional information on trade fair participation, please refer to CBI's *Handbook "Your show master - a guide for selection, preparation and participation in trade fairs"*.

Assistance with market entry

Local business support organisations

Before approaching organisations abroad, an exporter should first check with local business support organisations (trade promotion organisations, Chambers of Commerce, etc.) and foreign representatives in his or her country.

Import Promotion Organisations

In most EU countries, there are organisations that promote imports from developing countries through specific export promotion activities:

- They supply information on: statistics and other information on national markets, regular news bulletins, importer databases, and market opportunities;
- Individual assistance is offered: management training, testing products by display and adaptation services; and
- They can establish contacts: collective trade fair participation and selling missions.

Development organisations increasingly promote the cultivation of local and indigenous medicinal plants, as the return is higher than for traditional crops. In Europe, there are also activities in terms policy towards traditional medicine. The European Commission, for example, is working on a possible directive on traditional medicinal products. For more information please refer to: www.mca.gov.uk.

☛ **CBI export development programmes (EDP)**

On the basis of the results achieved in previous programmes and on the basis of expected market opportunities, CBI has initiated a new export promotion programme for companies that manufacture or produce natural ingredients for pharmaceuticals and/or cosmetics. Only companies in a number of selected countries in Latin America, Asia and Africa are eligible for participation.

A step-by-step approach provides intensive support for selected exporters in developing countries, so that they can secure a firm footing on the EU market. Programmes are made to measure, demand-driven and flexible, combined with fixed elements such as:

- pre-selection of candidates based on kick-off workshops;
- technical assistance during company visits and distance guidance by CBI branch experts;
- export marketing training (for instance through the EXPRO seminars);
- market entry (for instance via participation in European trade fairs);
- market consolidation by way of follow-up support, further technical assistance and/or repeat market entry activities.

To date, CBI has organised kick-off workshops in Colombia, Ecuador, Bolivia, Indonesia and Sri Lanka for representatives from companies and institutions involved in the conservation, development, certification and export promotion of natural ingredients for pharmaceuticals and/or cosmetics. April 2003, a number of EDP participants took part in the trade fair In-Cosmetics in Paris (for more information please contact pgilst@cbi.nl).

Branch organisations

As is probably the case in your own country, in most European countries, producers, wholesalers and often retailers are also organised in so-called branch organisations. These organisations can be of use to new exporters to the EU.

Information how to reach these organisations can be found in Appendix 2.5.

Apendices

APPENDIX 1 DETAILED IMPORT/EXPORT STATISTICS

The source of the data presented below is Eurostat COMEXT 2002.

IMPORTS

Table 1 EU imports of medicinal & aromatic plants, by supplying country, 1999-2001, € thousand / tonnes

	1999		2000		2001	
	value	volume	value	volume	value	volume
Total	**313,942**	**111,839**	**338,774**	**117,961**	**323,497**	**122,754**
Intra EU	**107,187**	**25,953**	**120,921**	**26,705**	**106,681**	**33,031**
Extra EU	**206,755**	**85,886**	**217,853**	**91,256**	**216,816**	**89,723**
Developing countries	**126,785**	**59,008**	**131,882**	**63,690**	**134,543**	**64,706**
USA	30,108	5,559	32,498	4,885	32,946	4,309
Germany	26,635	8,425	36,789	9,426	31,576	16,673
France	25,564	5,427	26,771	5,343	24,009	4,642
China	29,261	7,923	24,330	6,570	21,624	6,117
India	13,505	6,911	16,212	6,961	17,270	6,495
Israel	6,551	931	10,625	1,412	13,837	1,755
Belgium	10,946	1,889	13,969	1,891	10,755	1,758
Spain	10,280	2,176	8,763	1,980	10,514	2,969
Bulgaria	11,148	6,845	13,163	8,406	10,263	7,662
Morocco	8,875	6,373	10,108	7,450	10,146	7,176
Poland	11,484	6,720	10,718	6,656	8,568	6,158
Italy	9,752	1,539	6,747	1,736	8,284	1,708
Egypt	7,423	4,677	11,169	6,471	8,149	4,886
Turkey	7,583	3,896	7,897	4,200	7,809	4,676
The Netherlands	8,537	2,541	6,681	1,514	7,732	1,810
Kenya	2,279	1,359	1,241	580	7,644	778
Chile	11,246	3,503	8,224	3,102	7,358	3,204
South Africa	1,990	952	2,404	1,143	5,215	2,026
Hungary	4,505	2,776	4,275	2,566	4,535	2,267
United Kingdom	5,551	661	8,038	867	4,524	500
Brazil	4,158	1,023	5,507	1,042	4,341	859
Albania	5,229	3,732	5,578	3,404	4,163	2,754

Table 2 **EU imports of medicinal & vegetable saps & extracts, by supplying country, 1999-2001, € thousand / tonnes**

	1999		2000		2001	
	value	volume	value	volume	value	volume
Total	**151,482**	**2,999**	**127,137**	**2,574**	**113,157**	**2,977**
Intra EU	**117,032**	**2,499**	**93,031**	**1,856**	**83,497**	**2,018**
Extra EU	**34,450**	**500**	**34,106**	**718**	**29,660**	**959**
Developing countries	**5,408**	**72**	**6,537**	**226**	**6,281**	**264**
Ireland	31,998	90	24,233	56	21,032	191
Italy	17,228	242	21,127	253	19,345	353
France	38,720	455	25,474	607	18,696	554
Switzerland	21,141	253	15,446	265	14,294	205
Germany	8,314	217	8,555	295	9,872	252
Spain	9,945	786	9,509	425	9,154	521
USA	3,043	32	4,726	73	3,990	355
Australia	1,606	3	2,582	5	2,569	8
The Netherlands	1,677	175	1,769	81	2,568	55
Madagascar	1,364	15	2,037	25	2,225	37
China	495	18	1,681	121	2,013	98
Denmark	128	3	87	5	1,450	22
Poland	536	36	555	40	1,017	64
Ecuador	0	0	569	27	531	25
United Kingdom	772	10	242	35	490	28
India	237	15	156	13	452	22
Argentina	16	0	17	0	395	44
Singapore	25	1	141	1	378	2
Belgium	6,796	275	770	49	321	22
South Korea	310	8	203	3	286	4

Table 3 **EU imports of vegetable alkaloids, by supplying country, 1999-2001, € thousand / tonnes**

	1999		2000		2001	
	value	volume	value	volume	value	volume
Total	**390,900**	**7,634**	**531,323**	**10,778**	**545,383**	**12,391**
Intra EU	**220,842**	**5,808**	**264,423**	**8,188**	**289,088**	**10,176**
Extra EU	**170,058**	**1,826**	**266,900**	**2,590**	**256,295**	**2,215**
Developing countries	**34,081**	**1,340**	**66,970**	**1,965**	**32,906**	**1,724**
Switzerland	51,842	85	87,234	125	99,201	113
Germany	141,725	3,311	118,445	2,788	98,660	6,149
United Kingdom	11,902	81	32,851	796	90,949	1,041
Japan	25,211	108	45,810	121	51,688	114
Australia	31,034	72	34,061	82	40,889	87
The Netherlands	10,076	285	16,206	2,206	24,345	176
France	19,539	1,284	32,581	1,397	22,064	1,193
Italy	14,634	471	18,207	413	18,782	687
China	9,649	1,207	12,188	1,327	11,090	1,412
USA	6,058	40	14,187	111	10,554	72
Spain	3,999	166	4,546	110	8,156	224
Austria	916	38	7,648	14	7,941	32
Hungary	4,024	7	2,998	5	7,922	16
Ireland	7,851	49	12,678	352	6,807	39
India	3,055	84	3,991	112	6,718	119
Czech Rep.	5,245	10	3,911	2	6,126	7
Belgium	3,045	56	16,329	47	5,077	40
Indonesia	4,076	80	4,441	97	5,055	97
Sweden	6,489	16	3,908	13	4,767	46
Brazil	6,576	3	11,070	6	3,559	2
Slovakia	3,193	30	3,076	35	2,692	50
Mexico	2,478	12	2,307	1	2,538	1

Table 4 **EU imports of medicinal & aromatic plants, by importing country, 1999-2001, € thousand / tonnes**

	1999		2000		2001	
	value	volume	value	volume	value	volume
Total	**313,942**	**111,839**	**338,774**	**117,961**	**323,497**	**122,754**
Germany	97,042	42,257	97,390	44,533	83,737	38,878
France	59,931	23,705	56,889	23,649	60,073	26,833
Italy	42,871	12,580	49,063	12,824	45,332	12,963
United Kingdom	27,594	6,931	39,746	8,577	38,505	7,046
Spain	27,989	10,148	27,386	11,505	24,019	11,330
The Netherlands	1,932	1,030	1,680	871	20,992	4,463
Belgium	21,083	5,983	21,483	5,362	19,108	4,262
Ireland	10,811	3,233	12,100	3,110	10,576	2,955
Austria	6,489	1,874	6,348	1,786	8,369	2,281
Denmark	5,964	705	15,737	2,028	3,873	751
Sweden	4,232	467	3,643	455	3,211	444
Portugal	2,205	530	2,438	560	2,021	429
Greece	1,911	1,381	2,234	2,271	1,821	9,640
Luxembourg	2,642	395	1,755	105	1,010	55
Finland	1,243	620	887	325	855	424

Table 5 **EU imports of medicinal & vegetable saps &extracts, by importing country, 1999-2001, € thousand / tonnes**

	1999		2000		2001	
	value	volume	value	volume	value	volume
Total	**151,482**	**2,999**	**127,137**	**2,574**	**113,157**	**2,977**
Germany	57,427	1,551	51,087	927	41,617	1,023
Italy	44,656	683	26,188	584	20,016	483
France	20,281	326	18,806	397	18,388	425
Spain	13,580	69	11,199	177	8,659	177
Denmark	3,483	39	4,626	42	5,668	43
The Netherlands	2,411	45	5,121	122	4,559	81
United Kingdom	1,657	44	3,087	122	4,480	461
Portugal	2,484	22	2,170	18	2,472	13
Belgium	2,585	125	2,013	76	2,189	117
Finland	581	10	329	10	1,715	36
Sweden	808	29	1,088	46	1,671	56
Austria	1,423	55	1,263	36	1,558	39
Greece	105	1	147	15	115	21
Ireland	3	0	16	2	43	2
Luxembourg	0	0	0	0	5	0

Table 6 **EU imports of vegetable alkaloids, by importing country, 1999-2001, € thousand / tonnes**

	1999		2000		2001	
	value	volume	value	volume	value	volume
Total	**390,900**	**7,634**	**531,323**	**10,778**	**545,383**	**12,391**
United Kingdom	115,924	441	153,745	476	125,987	3,629
The Netherlands	8,633	274	47,358	943	72,970	974
Germany	39,891	615	61,326	746	66,228	972
Spain	28,125	832	45,086	1,089	65,939	1,140
France	73,970	991	72,446	731	57,237	672
Italy	52,724	1,711	64,620	1,638	56,856	1,301
Ireland	28,862	2,157	31,319	1,963	43,205	3,055
Belgium	11,033	112	27,923	2,665	28,511	154
Denmark	9,010	133	6,792	150	7,777	129
Austria	6,390	194	7,105	217	6,950	199
Portugal	4,604	66	3,787	67	4,340	99
Sweden	4,607	37	3,625	62	4,162	49
Greece	5,078	28	4,809	16	3,599	8
Finland	1,974	42	1,285	13	1,592	10
Luxembourg	88	1	98	2	37	0

EXPORTS

Table 7 **EU exports of medicinal & aromatic plants, by exporting country, 1999-2001, € thousand / tonnes**

	1999		2000		2001	
	value	volume	value	volume	value	volume
Total	**174,735**	**41,814**	**201,816**	**43,213**	**190,233**	**40,086**
Intra EU	**111,577**	**27,056**	**127,890**	**29,585**	**123,632**	**26,506**
Extra EU	**63,158**	**14,758**	**73,926**	**13,628**	**66,601**	**13,580**
Germany	61,574	16,127	62,017	14,620	58,686	13,520
France	43,377	9,264	58,769	10,259	51,204	8,146
Spain	18,060	4,652	19,171	5,826	18,419	6,870
Belgium	9,712	1,695	13,181	1,883	15,825	2,115
Italy	15,572	3,758	16,053	3,715	15,435	3,580
Ireland	1,971	334	6,239	630	8,499	737
United Kingdom	6,061	607	6,341	568	5,985	484
Austria	6,402	2,711	9,619	3,937	5,001	2,411
The Netherlands	5,840	1,532	3,736	1,115	4,721	1,604
Sweden	3,389	37	4,504	44	3,192	25
Greece	1,819	926	1,220	417	2,325	463
Denmark	654	68	424	89	375	37
Portugal	208	87	251	99	299	74
Luxembourg	62	10	282	11	255	20
Finland	39	6	12	0	8	0

Table 8 **EU exports of medicinal & vegetable saps & extracts, by exporting country, 1999-2001, € thousand / tonnes**

	1999		2000		2001	
	value	volume	value	volume	value	volume
Total	**223,135**	**6,831**	**186,581**	**5,014**	**187,346**	**4,197**
Intra EU	**125,636**	**5,611**	**108,970**	**3,928**	**97,959**	**2,943**
Extra EU	**97,499**	**1,220**	**77,611**	**1,086**	**89,387**	**1,254**
Italy	73,476	755	59,279	712	52,792	687
Germany	50,444	922	41,920	882	44,332	756
Ireland	46,784	2,602	50,342	978	39,034	92
France	43,157	452	25,259	394	25,321	458
The Netherlands	2,643	186	2,223	114	13,910	420
Spain	2,234	99	3,067	192	6,192	373
Belgium	1,281	76	1,348	48	1,951	67
Austria	2,418	1,718	2,313	1,628	1,628	1,140
United Kingdom	462	15	451	56	934	156
Sweden	157	4	55	1	835	10
Finland	14	1	48	2	221	16
Denmark	60	0	227	2	190	22
Portugal	5	1	49	5	7	0
Greece	0	0	0	0	1	0
Luxembourg	0	0	0	0	0	0

Table 9 **EU exports of vegetable alkaloids, by exporting country, 1999-2001, € thousand / tonnes**

	1999		2000		2001	
	value	volume	value	volume	value	volume
Total	**451,724**	**10,805**	**560,240**	**11,688**	**630,744**	**12,255**
Intra EU	**183,029**	**4,162**	**210,728**	**4,091**	**270,810**	**5,232**
Extra EU	**268,695**	**6,643**	**349,512**	**7,597**	**359,934**	**7,023**
Germany	234,094	7,272	307,129	8,676	322,869	8,431
Belgium	8,650	147	26,688	68	73,435	78
Italy	62,479	982	74,455	832	71,246	926
United Kingdom	38,894	127	56,025	193	69,148	268
Spain	22,541	722	30,938	1,049	31,018	996
The Netherlands	11,690	106	19,130	330	25,345	816
France	20,219	718	30,805	245	16,375	391
Austria	1,808	68	4,659	30	7,452	27
Ireland	42,641	422	5,954	58	5,646	27
Sweden	4,211	11	1,175	5	4,563	15
Denmark	1,157	94	3,047	109	2,613	114
Finland	3,126	135	96	93	683	162
Portugal	206	0	146	0	337	4
Greece	13	1	0	0	13	0
Luxembourg	0	0	0	0	0	0

APPENDIX 2 USEFUL ADDRESSES

2.1 Standards organisations

INTERNATIONAL

The World Health Organization
E-mail: info@who.int
Internet: www.who.org

EUROPEAN UNION

European Agency for the Evaluation of Medicinal Products (EMEA)
E-mail: mail@emea.eu.int
Internet: www.emea.eu.int

Comité Européen de Normalisation (CEN)
European Normalisation Committee.
E-mail: infodesk@cenorm.be
Internet: www.cenorm.be

FRANCE

Association Française de Normalisation
E-mail: norminfo@afnor.fr
Internet: www.afnor.fr

GERMANY

Deutsches Institut für Normung eV (DIN)
E-mail: peter.anthony@din.de
Internet: www.din.de

ITALY

Ente Nazionale Italiano di Unificazione (UNI)
E-mail: uni@uni.com
Internet: www.unicei.it

THE NETHERLANDS

Nederlands Normalisatie Instituut (NEN)
Telephone: +31 (0)15 2690390
Internet: www.nen.nl

SPAIN

Asociación Española de Normalización y Certificación (AENOR)
E-mail: info@aenor.es
Internet: www.aenor.es

UNITED KINGDOM

British Standards Institution (BSI)
E-mail: cservices@bsi-global.com
Internet: www.bsi-global.com

2.2 Sources of price information

International Trade Centre (ITC)
MNS Medicinal Plants & Extracts
E-mail: tirc@intracen.org
Internet: www.intracen.org

UNITED KINGDOM

Agra Europe Ltd.
Publisher of 'The Public Ledger'
E-mail: marketing@public-ledger.com
Internet: www.public-ledger.com

INTERNET

Herb crop shop
(at Herb Growing and Marketing Network)
www.herbworld.com/cropshop

Sites for retail prices for herbal materials include:
- www.herbmarket.com
- http://libertynatural.com

2.3 Trade associations

AESGP Association of the European Self-Medication Industry
E-mail: info@aesgp.be
Internet: www.aesgp.be

European Federation of Pharmaceucial Industries and Associations
E-mail: info@efpia.org
Internet: www.efpia.org

The European Pharmaceutical Wholesaler Association (GIRP)
E-mail: euro.keys@euro-keys.com
Internet: www.girp.org or www.euro-keys.com

A source of useful addresses is the Internet site: http://www.girp.org/.

European Scientific Cooperative On Phytotherapy (ESCOP)
E-mail: secretariat@escop.com
Internet: www.escop.com

2.4 Trade fair organisers

BioFach (certified organic products)
NürnbergMesse GmbH
Frequency: annual (Nuremberg)
Internet: www.biofach.de

CphI
Expoconsult B.V. trading as
Frequency: annual
Fax: +31 (0)346 5738 11
Internet: www.cphi.com

Fi
Expoconsult B.V. trading as CMP Information
Frequency: annual
E-mail: fi@cmpinformation.com
Internet: www.fi-events.com

Health Ingredients Europe
Expoconsult B.V. trading as CMP Information
Frequency: annual
E-mail: fi@cmpinformation.com
Internet: www.hi-events.com

Natural Products Expo Europe
New Hope Natural Media
Frequency: annual
Internet: www.expoeurope.com

IN-COSMETICS
Reed Exhibitions
Frequency: annual
Internet: www.in-cosmetics.co.uk

SANA
Exhibition of Health Food, Health and Environment
Frequency : biennial (2003 Bologna)
E-mail: info@sana.it
Internet: www.sana.it

Vitafoods International Ltd.
Frequency: annual (Geneva, May 2004)
Email: vitafoods@iirx.co.uk
Internet: www.vitafoods.co.uk

2.5 Trade press

GERMANY

Drogenreport
E-mail: info@drogenreport.com
Internet: www.drogenreport.com

Pharma Marketing Service
E-mail: vertrieb@aerztezeitung.de
Internet: www.fachzeitung.com/content/detailinfo.php?id_fz=13563&id_verlag=61025060

Zeitschrift für Arznei- und Gewürzpflanzen
E-mail: order@agrimedia.com
Internet: www.agrimedia.com

ITALY

Agro Food
E-mail: info@teknoscienze.com
Internet: www.teknoscienze.com

Fitoterapia
Internet: www.elsevier.nl/locate/fitote

UNITED KINGDOM

European Journal Of Herbal Medicine
National Institute of Medical Herbalists
E-mail: editor@ejhm.co.uk
Internet: www.ejhm.co.uk

Nutraceuticals International
Telephone: +44 (0)20 7828 7272
Fax: +44 (0)20 7828 0415
E-mail: editorial@marketletter.com

Review of Aromatic and Medicinal Plants
E-mail: cabi@cabi.org
Internet: http://hort.cabweb.org/Aromatic/ramphome.htm

INTERNATIONAL

Herbalgram American Botanical Council
Internet: www.herbalgram.org

Journal of Herbs, Spices & Medicinal Plants
E-mail: getinfo@haworthpressinc.com
Internet: www.haworthpressinc.com

Nutrition Business Journal
E-mail: info@nutritionbusiness.com
Internet: www.nutritionbusiness.com

An interesting source of magazines in the field of medicinal herbs is www.herbnet.com/press_p5.htm

2.6 Other useful addresses

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
E-mail: cites@unep.ch
Internet: www.cites.org

FI Data Services
Internet: www.ingridnet.com

CBI/Accesguide
(CBI's database on European non-tariff trade barriers
Email: cbi@accessguide.nl
Internet: www.cbi.nl/accessguide

GTZ Deutsche Gesellschaft für Technische Zusammenarbeit GmbH
Internet: www.gtz.de

International Chamber of Commerce
E-mail: webmster@iccwbo.org
Internet: www.iccwbo.org

Netherlands Association for Phytotherapy
E-mail: nvf@fyto.nl
Internet: www.fyto.nl

Skal
(Internationally operating organisation, inspecting and certifying sustainable agricultural production methods and products)
E-mail: info@skal.com
Internet: www.skal.nl

Traffic Europe
(Joint wildlife trade monitoring programme of WWF and IUCN)
E-mail: traffic@trafficint.org
Internet: www.traffic.org

International Council for Medicinal And Aromatic Plants
E-mail: info@icmap.org
Internet: www.icmap.org

European Advisory Services (EAS)
Avisory company specialising in European and international food and nutrition policy (incl. herbal supplements).
E-mail: info@eas.be
Internet: www.eas.be

Earthscan Publication Ltd.
E-mail: earthinfo@earthscan.co.uk
Internet: www.earthscan.co.uk

APPENDIX 3 LIST OF DEVELOPING COUNTRIES

The list of developing countries as applied in this market survey, is the OECD DAC list of countries receiving Official Development Assistance (Part I). The list used is the one as at 1/1/2003.

Afghanistan
Albania
Algeria
Angola
Anguilla
Antigua and Barbuda
Argentina
Armenia
Azerbaijan
Bahrain
Bangladesh
Barbados
Belize
Benin
Bhutan
Bolivia
Bosnia and Herzegovina
Botswana
Brazil
Burkina Faso
Burundi
Cambodia
Cameroon
Cape Verde
Central African Republic
Chad
Chile
China
Colombia
Comoros
Congo, Democratic Republic
Congo, Republic
Cook Islands
Costa Rica
Côte d'Ivoire
Croatia
Cuba
Djibouti
Dominica
Dominican Republic
Ecuador
Egypt
El Salvador
Equatorial Guinea
Eritrea
Ethiopia
Fiji
Gabon
Gambia
Georgia
Ghana
Grenada
Guatemala
Guinea
Guinea-Bissau
Guyana
Haiti
Honduras
India
Indonesia
Iran
Iraq
Jamaica
Jordan
Kazakstan
Kenya
Kiribati
Korea, Democratic People's Republic
Kyrgiz, Republic
Laos
Lebanon
Lesotho
Liberia
Macedonia
Madagascar
Malawi
Malaysia
Maldives
Mali
Marshall Islands
Mauritania
Mauritius
Mayotte
Mexico
Micronesia, Federal States
Moldova
Mongolia
Montserrat
Morocco
Mozambique
Myanmar
Namibia
Nauru
Nepal
Nicaragua
Niger
Nigeria
Niue
Oman
Pakistan
Palau Islands
Palestinian Administrated Areas
Panama
Papua New Guinea
Paraguay
Peru
Philippines
Rwanda
Samoa
Sao Tome & Principe
Saudi Arabia
Senegal
Seychelles
Sierra Leone
Solomon Islands
Somalia
South Africa
Sri Lanka
St. Helena
St. Kitts-Nevis
St. Lucia
St. Vincent And Grenadines
Sudan
Suriname
Swaziland
Syria
Tajikistan
Tanzania
Thailand
Timor, East
Togo
Tokelau
Tonga
Trinidad & Tobago
Tunisia
Turkey
Turkmenistan
Turks & Caicos Islands
Tuvalu
Uganda
Uruguay
Uzbekistan
Vanuatu
Venezuela
Vietnam
Wallis & Futuna
Yemen
Yugoslavia, Fed. Republic
Zambia
Zimbabwe

Note: Eurostat figures do not include figures for St. Kitts-Nevis

APPENDIX 4 USEFUL INTERNET SITES

www.cites.org
CITES has a membership of 163 countries. These countries act by banning commercial international trade in an agreed list (Appendix I) of endangered species (including plants) and by regulating and monitoring trade in others (Appendix II) which might become endangered. Around 200 medicinal plants species have been added to CITES appendices. At this site, one can find an up-to-date overview of the Appendices I and II.

www.wisia.de
WISIA-online helps identify the protection status of a given plant or animal species. The site presents a general view of the diverse field of species conservation legislation.

http://dg3.eudra.org
This site is operated by the European Commission -DG III-E-3 on Pharmaceuticals and Cosmetics. The site includes information on the rules governing pharmaceuticals in the European Union, addresses of those involved in the EU pharmaceutical sectors and documents released for consultation or for information.

www.europages.com
This site includes contact details of companies in the sector Chemicals and Pharmaceuticals. Interesting subcategories include: Herbs for medicines and cosmetics, and Import-export – chemicals and pharmaceuticals.

www.naturalfoodsmerchandiser.com/nfm_backs/aug_03/index.cfm
Provides access to a broad range of information on the natural product industry.

www.herbalgram.org
This site contains information about herbal education research, literature (e.g. The Herbal Education Catalog containing some 400 items available with additional titles added on a regular basis), and German Commission E Monographs.

www.herbs.org
A comprehensive site for herb information, featuring the latest scientific, political, business and international news from the world of herbs. You can browse to recommended links, view herbs in the photo gallery, speak out on herbal topics and ask herb questions online. Herb "Greenpapers" highlight specific herbs and their medicinal uses.

www.herbnet.com
The home page of the Herb Growing and Marketing Network. The site includes a herb crop shop, which is a message board where growers and buyers of botanicals can come together (www.herbworld.com/cropshop/).

www.escop.com
The site provides an information resource (e.g. legislative issues and useful contacts) for those involved in the development, manufacture, regulation and surveillance of phytomedicines and herbal drugs.

www.fao.org/forestry/fop/fopw/nwfp/nwfp-e.stm
This site is operated by FAO's Forest Products Division and includes information about Non-wood Forest Products (NWFP), a database with organisations active in the field of NWFPs, information about relevant publications and projects. At the site, one can read the Non-wood News, which is an annual newsletter.

www.inaro.de
This site contains information in German and French on raw materials, including Medicinal and aromatic plants. It includes a detailed overview of 'Good Agricultural Practice of Medicinal and Aromatic Plants' and a marketplace where buyers and sellers of raw material can meet.

www.open.gov.uk/mca
The site of the UK Medicine Control Agency includes information on the policy on herbal medicine. A version of a preliminary version by The European Commission of a possible directive on traditional medicinal products of April 2001 is available.

APPENDIX 5 REFERENCES

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- ITC-UNCTAD, 1982, Markets for selected medicinal plants and their derivatives.
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- Nutrition Business Journal, Volume V, Nos. 10/11, Global Nutrition Industry 2000.
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- Ten Kate & Laird, 1999, The commercial use of biodiversity.
- World Bank, 1996, Medicinal Plants: An expanding role in development.

CBI: YOUR EUROPEAN PARTNER FOR THE EUROPEAN MARKET

The CBI (Centre for the Promotion of Imports from developing countries) is an agency of the Dutch Ministry of Foreign Affairs. The CBI was established in 1971. The CBI's mission is to contribute to the economic development of developing countries by strengthening the competitiveness of companies from these countries on the EU market. The CBI considers social values and compliance with the most relevant environmental requirements to be an integral part of its policy and activities.

CBI offers various programmes and services to its target groups:

Market information
A wide variety of tools to keep exporters and Business Support Organisations (BSOs) in developing countries in step with the very latest development on the EU market.
These include market surveys and strategic marketing guides for more than 40 product groups, manuals on export planning and other topics, fashion and interior forecasts and the CBI News Bulletin, a bi-monthly magazine. This information can also be obtained from our website at www.cbi.nl For all information on non-tariff trade barriers in the EU CBI has a special database, AccessGuide, at www.cbi.nl/accessguide
And finally CBI's Business Centre is offering free office facilities, including telephones, computers, internet and copiers for eligible exporters and BSOs. Market reports, international trade magazines, cd-roms and much more can be consulted in the information section of the business centre.

Company matching
The company matching programme links well-versed suppliers in developing countries to reliable importing companies in the EU and vice versa. The online matching database contains profiles of hundreds of CBI-audited and assisted exporters in developing countries that are ready to enter into various forms of business relationships with companies in the EU, as well as many EU companies interested in importing or other forms of partnerships such as subcontracting or private labelling.

Export development programmes (EDPs)
EDPs are designed to assist entrepreneurs in developing countries in entering and succeeding on the EU market and/or in consolidating or expanding their existing market share. Selected participants receive individual support over a number of years by means of on site consultancy, training schemes, trade fair participation, business-to-business activities and general export market entry support. Key elements usually include technical assistance in fields such as product adaptation, improving production, implementing regulations and standards and export marketing and management assistance.

Training programmes
Training programmes for exporters and BSOs on, among others, general export marketing and management; trade promotion; management of international trade fair participations and developing client-oriented market information systems. The duration of the training programmes vary between two days and two weeks and are organized in Rotterdam or on location in developing countries.

BSO development programme
Institutional support for capacity building for selected business support organisations.
The programme is tailored to the specific needs of participating BSOs and can include train-the-trainer assistance, market information systems support and staff training. CBI's role is advisory and facilitative.

Please write to us in English, the working language of the CBI.

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