



*Marketing Manual and Web Directory
for Organic Spices, Herbs
and Essential Oils*



October 2004



MARKETING MANUAL AND WEB DIRECTORY FOR ORGANIC SPICES, HERBS AND ESSENTIAL OILS

Though the target audience for this manual is producers and exporters in developing countries and transition economies, it is our hope that it will also prove useful for other companies, organizations and individuals interested in developing export trade in organic spices, herbs and essential oils.

All readers are invited to comment on this first version, ask questions, provide missing information or suggest improvements. The manual is planned to be updated and revised regularly, as appropriate. Please contact sandana@intracen.org or organicconsultants@fourseasonsfoods.fsnet.co.uk

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A selection of logos used in different countries to guarantee consumers that the particular product is produced according to the relevant standards for organic production.

		
United Kingdom	Belgium	Austria
		
The Netherlands	Switzerland	Norway
		
Sweden	Denmark	Italy
		
Germany	Finland	France
		
Argentina	USA	Costa Rica

INTRODUCTION AND SUMMARY

Background

In recent years the world has seen a growing awareness of health and environmental issues, and sustainability has become a keyword in discussions on economic development - in particular in relation to developing countries. A constantly growing number of concerned consumers, mainly in the industrialized countries, have generated this awareness. The international community is more conscious of these issues, and Government policies in industrialized as well as developing countries are increasingly formulated to encourage organic and other forms of sustainable agriculture.

Since 1997 the International Trade Centre UNCTAD/WTO (ITC) has been strongly involved in export development of organic products from developing countries and has published a number of market surveys, including the following:

Organic food and beverages: world supply and major European markets (1999) which covers seven European markets, and provides an overview of world supply of organic products and deals with certification procedures.

World markets for organic fruit and vegetables (2001) was published jointly by FAO/ITC/CTA, covers organic fresh produce markets in Europe, Japan and the United States and gives case studies of successful developing countries in this sector.

The United States market for organic food and beverages (2002) provides information on the U.S. market for organic products, describes distribution channels, market access, etc. and gives advice on how to enter this market.

The Canadian market for organic food products (2004) gives information on market characteristics, distribution channels and identifies major importers and other organic companies.

These studies are designed to fill an information gap amongst decision makers at government and non-government levels in developing countries, in particular producers and exporters, by providing comprehensive information on the supply situation and world markets for organic products. These publications can be downloaded from <http://www.intracen.org/mds> - click *Organic Products* then *Studies*.

ITC also recently carried out a project on export development of organic spices, herbs and essential oils in Africa. While it became clear that these products offer developing countries great export potential, the project also showed that producers and exporters are faced with a number of serious obstacles related *inter alia* to organic farming, production and product development, finance and marketing.

This manual builds on information compiled through consultancy and mission seminars in Africa and South America, as well as other activities carried out under this project. It is designed to address the needs of producers and exporters in developing countries for specific technical and market information in order to develop their organic enterprises and to export the products covered to target markets.

What is organic agriculture

"Organic agriculture uses holistic production management systems which promote and enhance agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity ... Organic production systems are based on specific and precise standards of production which aim at achieving optimal agro-ecosystems which are socially, ecologically and economically sustainable. Terms such as "biological" and "ecological" are also used in an effort to describe the organic system more clearly. Requirements for organically produced foods differ from those for other agricultural products in that production procedures are an intrinsic part of the identification and labelling of, and claim for, such products."

From the *FAO/WHO Codex Alimentarius Commission Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods, 1999*. Visit <http://www.fao.org/organicag>

Market opportunities for organic spices, herbs and essential oils from developing countries

Most spices, herbs and essential oil crops are labour intensive and are produced mainly in the tropics, and so provide export opportunities for developing countries. Interest in organic spices, herbs and essential oils continues to grow along with the overall market for organic food and beverages.

Increasing labour cost differentials between developing countries and target markets, and the rising regulatory costs and other obstacles to manufacturing in these markets provide value adding opportunities for developing countries in exporting finished products. Generally these products will need to be marketed in co-operation with marketing companies and under brands recognised in the importing markets – just as for other processed or packaged products.

As value adding requires investments of money, skills and time, the immediate marketing opportunities currently are in increasing the supply of bulk spices, herbs and essential oils for re-packing or as ingredients for caterers and food manufacturers.

While there are excellent opportunities for producers of organic spices, herbs and essential oils, recommendations for production of specific crops are not given in this manual. Markets are often niche rather than broad-based and can be flooded by produce from newly certified large producers changing the balance of supply and demand for specific crops in these dynamic markets. It is therefore important that producers keep themselves well informed of market developments, through information sharing, reading trade journals, visiting the target markets, etc., in order to determine what crops to grow, and for which markets.

Producers should not only offer buyers organic (and when feasible also fair trade) certification of high quality products and reliable supplies, but should also endeavour to improve their marketing edge and overall company/product profile, for example, offering their customers HACCP/EurGap/ISO qualifications.

Spices and herbs

The mainstream retail market for organic spices and herbs is likely to remain relatively small until supermarket chains offer a full range of organic spices and herbs. However, increased availability of and reduced premiums for organic supply will lead to greater use of organic produce, and to good growth rates as market share for organic spices approach the norm for other organic foods.

The foodservice/catering sector offers good potential for increased demand for organic spices and herbs, although sales are still very small. Fast food chains are likely to continue to position themselves as healthy alternatives to home-cooked meals and to distance themselves from the image of fat filled, unhealthy cooking, and offering organic options would help convey this message.

Food and drink manufacturers demand consistently high quality and so tend to stay with suppliers who have proved reliable. As the ingredient percentages of spices and herbs in food products are usually low, price has mostly been of secondary importance compared with quality, but will become more important in the future.

In some target markets there are opportunities for value-added processing, including the packing of private brands, but in general, market penetration can best be achieved in the industrial sector, which is still the main outlet for spices and herbs exporters in developing countries.

Essential oils and extracts

The flavourings market is expected to grow fairly slowly, mainly due to the following constraints: lack of reliability of suppliers, high price premiums, and legislation allowing non-organic flavourings in organic products.

Cosmetics are probably the most promising sector for the development of the organic essential oils and extracts business. However EU labelling regulations and the lack of mandatory standards for organic cosmetics is holding back rapid development of this market.

In spite of these and other problems, the market for organic essential oils extracts is increasing from a small base, and a high premium is often available for many oils.

WORLD ORGANIC TRADE – AN OVERVIEW

Market size

International customs classifications do not currently distinguish between organic and conventional produce so no detailed official statistics exist as yet for foreign trade in organic products. Some of the basic data needed for such statistics is now being generated as the major markets increasingly adopt mandatory organic standards which require permits and the recording of organic imports and exports.

Various working groups, including government representatives and international organizations, are considering ways of obtaining statistics on organic agriculture and trade.

Detailed estimates of trade in specific organic product categories would currently need to be based on a world survey of certification agencies' records and information given by exporters and importers. Such surveys have not yet been made available. However, ITC has estimated the world retail market for organic food and beverages at around US 25 billion in 2003, with Europe and North America (USA and Canada) together accounting for about 95% of the total. Smaller but important markets include Japan, Australia, New Zealand and Singapore. It should also be noted that some developing countries, including Argentina, Brazil, Chile, China, Egypt, India, Malaysia, the Philippines and South Africa, have developed significant domestic markets.

World trade in organic products has grown rapidly during the last decade and is expected to do so also in the future, although growth rates will differ greatly between various markets and specific products. Organic spices, herbs and essential oils have so far probably accounted for less than 1% of the total market for these products (conventional and organic). Applying this factor to published statistics on total trade by individual tariff categories would give a very approximate basis for the estimation of organic trade volumes.

A good statistical source is the ITC publication *Global Spice Markets – Imports 1998-2002*, which can be downloaded from <http://www.intracen.org/mds> - click *Spices and Herbs*. Figures for overall trade in essential oils can be found in publications such as *Essential Oils and Oleoresins - a study of selected producers and major markets*, ITC. More references for publications on market information and trade statistics are given in annex IV.

Production of spices, herbs and essential oils

Spice and herb crops use modest amounts of plant nutrients (particularly N) compared to grain crops, and yield differentials between organic and conventional crops are usually small. Essential oil crops in particular extract little from the plant nutrient cycle, as the oils are generally only composed of hydrocarbons, and the still residues with most of the crop nutrients can be composted and returned to the land. Costs for organic production are thus often lower than in conventional production of spices, herbs and essential oils. Plant pests and diseases are not generally a major problem. Consequently, it often makes economic sense to produce spices, herbs and essential oils using organic farming methods even if some or all of the produce has to be marketed initially as conventional without premium even if certified. This makes expansion of the supply of organic spices, herbs and essential oils relatively easy.

Prices

Information on organic prices is difficult to obtain from published sources, and in an evolving market, such as for organic produce, prices can move rapidly to reflect the changing balance between supply and demand. Importers and potential partners in the importing countries can be useful sources of price data, and may be able to

provide quotes for competing products. Indications of buying prices can sometimes be obtained from traders' selling prices or competitors' quotes.

Organic premiums for many essential oils have been higher in percentage terms than those realised for most other organic crops – an indication that demand has exceeded supply. However, for organic herb and spice markets, supply and demand have been roughly in balance and buyers report that they have a good set of purchasing choices.

Over the medium term, opportunities for achieving premium prices exist as markets for organic spices, herbs and essential oils evolve. Over the longer term, since organic spices, herbs and essential oils can often be produced as cheaply as conventional produce, organic prices may be expected to settle closer to the level of conventional produce.

Organic certification

Certification is a procedure for verifying that a product conforms to certain standards. In the case of organics, certification gives consumers a formal assurance that organic production standards have been met. These standards may be those of private associations or companies, or of certification bodies, or of the state. However, a producer/exporter must have certification that meets the requirements of the target market, including legal regulations and standards in the importing country.

In most importing countries description of goods as organic requires formal certification in accordance with legislation. Import regulations for organic produce apply in most markets as well - for example, an EU importer must be both certified by an accredited certification body and also registered with the national organisation responsible for organic legislation. The importer must then obtain a permit covering each product to be imported from each source, unless the country of origin and the relevant certification has been accepted by the EU as equivalent - achieved by few developing countries. Exporters should confirm with their customers that the necessary registrations are in place before shipment takes place. Details of specific regulations affecting organic imports into target markets can generally be obtained from the importer's organic certification body.

In the **European Union** the basic regulations on organic food products are set out in Council Regulation (EEC) No. 2092/91. The administration and enforcement of organic standards are carried out by national authorities. A consolidated version of the 1991 Regulation and its amendments is available at http://www.organicts.com/organic_info/certification/links/index.html.

In the **United States**, the National Organic Program (NOP) came into effect in October 2002, and is administered by the US Department of Agriculture. More detailed information on the NOP is available at the USDA NOP web site <http://www.ams.usda.gov/nop>

Organic regulations for plant-based products took effect in **Japan** in 2001. Organic products must carry the mark of the Japanese Agricultural Standard (JAS). In general, the regulations require the registration of certification bodies, as well as the

certification of operators by registered certification bodies based on the technical criteria for certification. For details see <http://www.maff.go.jp>

In the case of **Canada**, the National Standard for Organic Agriculture was introduced in 1999. However, the standard is voluntary and so does not fully serve its purpose. A proposal for a mandatory national organic regulation was presented to the Canadian Food Inspection Agency in April 2004 by the organic community, and is expected to become codified federal regulation soon. The province of Quebec applies its own mandatory programme (equivalent to the national standard) to all organic products coming into Quebec, whether Canadian or foreign. See <http://www.caqbio.org>. Other provincial authorities also accredit certifying bodies. In British Columbia, for example, this will be done by the Certified Organic Associations of British Columbia (COABC). See <http://www.certifiedorganic.bc.ca>

In **Switzerland**, the production, processing and marketing of organic products are regulated by the Swiss regulation on Organic farming (Schweizer Bio-Verordnung).

An ITC paper *Organic farming and certification*, providing further detailed information on certification, including certification in exporting countries, can be downloaded from <http://www.intracen.org/mds> - click *Organic Products* then *Certification*. A database of organic legislation and other useful information useful is available at <http://www.organic-research.com/LawsRegs/legislation.asp>

ORGANIC SPICES AND HERBS

Market structure

In the major markets, dried spices and herbs (conventional and organic) are sold in three main sectors: retail, catering/foodservice and food manufacturing. The latter category is the most important, accounting for 50-60% of trade in both conventional and organic spices and herbs in the EU.

Certification and branding of organic spices and herbs

For retail packed spices, herbs and related products such as condiments and sauces, organic certification is perhaps becoming more of an adjunct to a brand's quality image than the main reason for a purchasing decision. Dried organic spices and herbs in bulk are used as ingredients in a wide range of products (only a few non-organic spices can still be used in organic food and beverages). This is the market where most developing country suppliers will need to concentrate. Options for value-adding are generally limited to grinding (as long as buyers are confident that product quality and integrity is properly monitored) and leaf processing, e.g. tea bag sizing for herbal teas.

Certification is more important in consumer purchasing decisions for the main organic sellers - baby food, fresh fruit and vegetables, dairy products and grains, where consumption per person is higher and pesticide use on conventional crops is

perceived to be more widespread. In much of the EU market, most bottled baby food is organic. In contrast, the percentage of organic retail packed spices and herbs to conventional is probably less than 1% overall- giving plenty of scope for expansion of the organic market.

Most supermarket chains are reluctant to stock a complete range of organic spices as they already carry the market leaders (manufacturers' brands) and own brands. If shelf space is given to organic spices in the major chains, generally the top selling half dozen lines only are listed because of the relatively low sales value to space ratio for spices.

Natural food stores are more likely to stock a complete range of organic spices, and individual outlets are mainly supplied by whole food/organics wholesalers. These are relatively more important for spice products than for organic lines such as baby foods, where supermarkets tend to purchase direct from manufacturers.

Fair trade

The fair trade movement, particularly under the respected and well-known Fair Trade labels, provide many producers with a marketing advantage in addition to organic certification. The success of the fair trade initiatives in commodities such as bananas tea, coffee and cocoa indicates that marketing opportunities for fair trade branded retail packed spice and herb crops may also exist.

It must be emphasized that not all products are equally well suited for fair trade branding: it is more likely to make sense for packaged (consumer packs) food products than for commodities used as food ingredients.

Some certification agencies have arrangements for fair trade and organic inspections to be carried out together. An example of this concept is BioEquitable in France (with fair trade inspections combined with Ecocert organic certification).

Adding value in the producer country

Bearing in mind the high retail price per kilo of consumer packs, producers of dried spices and herbs often consider whether packing at source in consumer packs to add value would be feasible. Niche marketing of organic spices packed ready for retail sale at source has been achieved on a small scale - e.g. in the UK, spice jars with an integral grinder packed in South Africa, and organic spices, herbs into the specialist organic trade from Zimbabwe. Opportunities also exist for export of packaged food from developing countries, such as condiments (garlic paste, basil pesto, mustards, pasta sauce, etc.), which incorporate organic spices and herbs.

The economics of value added organic spices and herbs packed at source vs. packing in the target market are similar to those of conventional products, and a thorough analysis of prospects for these was conducted by the UK's Natural Resources Institute: *Ground and Packaged Spices: Options and Difficulties in Processing at Origin*. (See annex IV).

Constraints on opportunities include the need to offer a full range of spices and herbs - normally requiring imports into the producing country - and a high working capital requirement to finance stock of crops harvested annually, shipment transit times, the holding of buffer stock to avoid shortages, and credit to customers. Products aimed at niche markets may have economic advantages where production in these markets involves a significant labour input, but transport costs will be higher for retail packs. Marketing costs are high for new brands, and products will normally be marketed under brand names already recognised in the developed country market. Some buyers recognise the marketing opportunities that exist in importing fair trade and “packed at source” food products from developing countries - rather than importing commodities for value adding in the target markets.

Quality control aspects

Quality standards required by buyers of organic dried spices and herbs are usually the same as for conventional. For the more important spices the International Organisation for Standardisation (ISO) has standards covering constituents and infestation parameters (<http://www.iso.org>). American Spice Trade Association (ASTA) standards are also widely used (<http://www.astaspice.org>). Examples of quality standards are given in annex II.

Individual companies generally have their own quality compliance requirements - including HACCP (Hazard Analysis Critical Control Point) systems, ISO accreditation, EURGap and other legislative and GMP (Good Manufacturing Practice). All of these are designed to reduce the incidence of poor quality or contaminated product, and to give the purchaser a “due diligence” defence if faced with prosecution or private legal challenges.

Prevention of insect infestation of organic crops post harvest may require the use of some combination of heat, cold and carbon dioxide gas treatment – which are permitted treatments under organic regulations in the major markets. Some spices (e.g. coriander, paprika, chillies) - though few aromatic herbs - are highly susceptible to storage pest infestation.

Considerable work has been done worldwide on the use of carbon dioxide as a fumigant. Large scale fumigation techniques are well demonstrated by the UK’s Natural Resources Institute (<http://www.nri.org>) video *Sealed Bagstacks for Better Grain Storage*. Steam treatment followed by re-drying reduces bacterial counts and also the risk of infestation, as does dry roasting. These techniques can be used on crops like paprika where the risk of losing volatile oils is not a major consideration, and with more difficulty on aromatic seed crops such as coriander or caraway. Freeze treatments can be used on most produce to reduce infestation.

A major quality problem in trading spices (organic and conventional) is mycotoxin contamination. In particular, pepper, nutmeg, paprika and chillies are regularly spot tested for aflatoxin at the port of entry, and often found to be over the permitted maxima (less than 5 parts per million of aflatoxins in most markets). Once the crop is contaminated there is little that can be done to remove mycotoxins organically. Ammonia treatment is used to reduce aflatoxin in some conventionally grown crops like groundnuts, but cannot be used under organic rules.

To achieve high quality standards in herbs at an economical cost, properly controlled artificial drying is generally necessary - indirect solar or fuel fired. Herbs mostly require some form of more specialised cleaning equipment to separate leaf from the undesirable stalk after the herb has been dried. Spices (seeds and fruits) can usually be cleaned in standard seed processing equipment, and direct solar drying is feasible with most spices.

Major markets and principal importers (spices and herbs)

European Union (EU)

The EU organic market received an early boost by the introduction of mandatory organic standards and regulations, which have been in place since 1991, much longer than those in other major markets, and mandatory standards for the USA and Japan were introduced in 2001-2002.

The main importers of spices, herbs and essential oils increasingly trade throughout the EU, gradually reducing differences between individual markets within the Union.

France

France is amongst the five largest markets in the world for organic food and beverages and is a very important market for spices and herbs. It is not only a significant importer from developing countries, but also a large producer and exporter of culinary herbs. French consumption of peppers (white, black, red and green peppercorns, chilies, cayenne pepper) is relatively high. Herbal tea is widely consumed.

Organic importers and traders

Arcadie SA <http://www.arcadie-sa.fr> Retailers and wholesalers of organic spices, herbs, dehydrated vegetables and extracts.

Herbier du Diois <http://www.herbier-du-diois.com>.

Pimpexport Organic herb importers. pimpexport@aol.com.

Sanoflore <http://www.sanoflore.net> Buyers and suppliers of organic culinary medicinal herbs and herb teas, and major traders in organic essential oils.

Weleda (Germany, France, Switzerland) <http://www.weleda.de>.

Organic distributors of retail packed products

Distriborg <http://www.distriborg.com>.

Germany

Germany is the world's second largest market for organic food and beverages and the largest spice and herb market in Europe, although it is currently growing at a slower pace than some of the neighbouring markets. There is a growing base of organic specialist shops and supermarkets, as well as the long established natural food shops (Naturkostläden) and traditional health food shops (Reformhäuser), which also carry some organic products. The demand for herbal plant materials used in organic health care remedies and cosmetic and body care is growing rapidly.

Organic importers and traders

Golden Temple <http://www.goldentemple.de> Importer/distributor.

Improplant leikert@inproplant.de Organic spices broker.

Lebensbaum U. Walter GmbH <http://www.lebensbaum.de>
Importer/distributor.

Rapunzel Naturkost AG <http://www.rapunzel.de> Importer/distributor.

Weleda <http://www.weleda.de> Natural and organic medicinal and cosmetics products. Medicinal herb buyer.

Worlee <http://www.worlee.de> Importer/distributor.

The Netherlands

The country is a traditional importer and trader in produce for the EU market, and this applies particularly to organic spices and herbs, where Dutch trading companies are among the largest EU importers. The Dutch market for organic spices and herbs has increased both in the domestic market and for re-export to the EU. Demand for organic non-food herbal plants for nutraceutical/herbal medicines and cosmetic/body care products has also increased significantly over recent years.

Organic importers and traders

Doens Food Ingredients BV <http://www.doensfood.com> Organic food ingredients importer and supplier, including spices.

Forestrade <http://www.forestrade.com> Spices and spice oils, largely from Indonesia. US company with office in Europe ForesTrade-Europa@planet.nl.

Organic Flavour Company (formerly Euroherb) <http://www.ofc.nl>
Importers and suppliers of a wide range of organic herbs spices and other organic foods.

Usselerriet BV <http://www.usselerriet.com> Organic dried vegetable, herb and spice suppliers.

United Kingdom

The United Kingdom is the third largest market in the world for organic food and beverages and is a major market for spices and herbs. Supermarket chains account for the majority of organic retail sales, as they do for conventional food and beverages, but they currently carry only a limited range of organic spices and herbs (dried or in paste form). Some specialist shops, e.g. Fresh'n Wild and Planet Organic, stock a wide range of organic goods.

Organic importers and traders

Barts Spices <http://www.bartspices.com> Buyers and packers of fresh/frozen and dried herbs and spices.

Beacon Foods <http://www.beaconfoods.co.uk> Fresh/frozen suppliers (garlic, herbs, chillies- some organic).

Community Foods Ltd. Major wholesaler and importer
<http://www.communityfoods.co.uk>.

East Anglian Food Ingredients <http://www.eafi.com> Spices and herbs.

Infinity Foods Ltd. Major whole foods/organic wholesaler and bulk importer
<http://www.infinityfoods.co.uk>.

Kitchen Garden Organics <http://www.kitchen-garden.co.uk> Spices and herbs.

Organic Farm Foods <http://www.organicfarmfoods.co.uk> Perishables, including some organic fresh herbs and spices.

Organic Herb Trading Co. Traders in organic culinary and medicinal herbs, and organic essential oils. <http://www.organicherbtrading.com>.

Rasanco Ltd. <http://www.rasanco.com> Importer of organic ingredients (essential oils, dried and frozen spices and herbs).

Twin Trade <http://www.twin.org.uk> Organic/Fair trade importers and distributors

UrenBio Bulk organic ingredients importer for the food manufacturing industry <http://www.uren.com>.

Spain

Spain is a relatively large market for conventional spices and herbs and is a major producer and trader of paprika powder and saffron - with some organic exports. As with conventional spices such as paprika, where domestic production has largely been supplanted by imports, Spain's increasing labour costs will make organic spice and herb imports more important in the future.

Organic importers and traders

Aromaplant aromaplantt@negopolis.com.

Serpentie Verde <http://www.serpienteverde.com>.

Canada

Canada is the sixth largest market in the world for organic food and beverages. The market appears to be growing rapidly, probably by 20-25% annually. Sales of organic spices and herbs are small, but the market is growing. Most imports are currently from the United States, but there is a keen interest in diversifying sources of supply.

Organic importers and traders

Bianca International Organic Inc. <http://www.biorganic.ca> Importer of spices, herbs, herbal teas, etc.

H & S Organics Inc. Absolute Organics <http://www.absoluteorganics.ca> Distributor of spices and herbs.

Westpoint Distributors Ltd. <http://www.westpointonline.com> Distributor of dry food products, including spices and herbs.

Organic distributors/wholesalers/brokers (finished products)

Horizon Distributors <http://www.horizondistributors.com> Importer and distributor of organic retail packed foods.

Ontario Natural Food Co-Op <http://www.onfc.ca> Organic and natural foods distributor for Ontario and Eastern Canada.

Japan

Japan is a large market for "specially cultivated crops" or "green products" (grown with reduced use of chemical pesticides and fertilizers), which were long considered as organic products. However, with the introduction of new standards (JAS), introduced by the Japanese Ministry of Agriculture in 2001, organic products are now defined similarly to those in other major markets.

The market is reported to be growing rapidly, as consumers are becoming increasingly concerned not only with their health but also with the environment, but it is fairly small compared with the other markets covered by this manual.

Organic importers and traders

Altertrade <http://www.altertrade.co.jp> Fair trade and organic importers and distributors.

The Fair Trade Company imports@globalvillage.or.jp Fair trade and organic importers and distributors.

United States

This is the world's largest organic market, where sales at retail level went from about \$1 billion in 1990 to about \$11 billion in 2003. The introduction of a national standard, the National Organic Program (NOP), implemented in October 2002, has made a significant impact on the development of the US organic industry. Throughout the value chain, from the domestic or foreign farmer to the final consumer, the NOP standards will increase the focus on organic products and help to regulate and promote trade.

Natural foods stores, dominated by the two chains Whole Foods Market Inc. <http://www.wholefoodsmarket.com> and Wild Oats <http://www.wildoats.com>, accounted for about 47% of all organic food sales in 2003, followed by conventional or mainstream supermarkets and grocery stores with about 44% of total organic retail sales. The balance (9%) was handled by farmers' markets, food service and other non-retail outlets. The USA is a substantial producer of some organic herbs and a large importer of organic spices and herbs.

Organic importers and traders

Forestrade, Inc. <http://www.forestrade.com> Importer, processor and distributor of spices, herbs and essential oils.

Frontier Coop <http://www.frontiercoop.com> Organic spices, herbs and essential oils supplier and importer. Large range of organic spices, herbs and essential oils in retail packs.

Global Organics, Ltd. <http://www.globalorganicsusa.com> Organic spices.

Herb Trade, Inc. kevin@organicherbtrade.com Specialist importer of organic herbs and spices.

Marroquin International <http://www.marroquin-organics.com> Trader in organic spices, herbs and essential oils.

Mountain Rose Herbs <http://www.mountainroseherbs.com> Organic herbs spices and essential oils.

Organic Planet <http://www.organic-planet.com> Importer of organic spices.

Tree of Life <http://www.treeoflife.com> Major distributor of natural and organic food.

United Natural Foods <http://www.unfi.com> Major distributor of organic and natural food.

Manufacturers/packers

Hain Celestial <http://www.hain-celestial.com> Large natural food conglomerate. Celestial Seasonings has a limited range of organic herb teas, and Earth's Best baby foods is part of the group.

McCormick <http://www.mccormick.com> Owner of major spice brands like Schwartz (UK), Ducros (France). Buyers of a range of organic herbs and spices.

ORGANIC ESSENTIAL OILS AND OLEORESINS

Market size and structure

As for organic spices and herbs, no official foreign trade statistics have yet been published. An estimate of volumes for selected (conventional) oils is given below, together with some conventional and organic price examples to give an indication of premiums for some essential oils. Prices are approximate, and depend on quality, lot size and many other factors.

Estimated Market and Production Statistics for Selected Essential Oils 2004								
	Approx Market Size (Tons)		Average Prices (US\$/kg)		Average Yield			Normal Non Organic minimum qty
	Non Organic Import US	Non Organic Import EU	Organic	Non Organic	Material per ha (T)	Oil Yield (%)	Oil per ha (kg)	
Eucalyptus (Cineole type)	733		12	4-6	20-30	1-5	200-400	Container
Geranium	50	200 +	80-120	45-55	20-40	0.1-0.2	20-30	Drum 210 litres
Citronella	500		25	7-8	10-40	0.5-1.5	50-400	Container
Lemongrass	1000		30	10-13	10-30	0.2-0.5	40-60	Container
Tagette	15 (world)		70 -100		Wild Collection	0.1-0.4		Drum 210 litres
Vetiver	15	100	90-120	30	1-2 (dried roots)	0.3-3	3-30	Drum 210 litres

The main outlets for organic essential oils include the following: aromatherapy/natural medicine, cosmetics, perfumery and flavourings/food ingredient markets. The aromatherapy and cosmetics categories overlap, with many suppliers

offering both types of product. Legislation on the use of the word “organic” applied to compounded products in the cosmetics and perfumery markets was not introduced with the detailed mandatory EU standards for foodstuffs.

Traditionally, essential oils used in aromatherapy were seen as “natural” and more or less organic anyway, and this perception limited the uptake of organic certified oils for this market. However, many aromatherapy companies now offer full organic essential oil ranges, in all major markets. Organic oils, with an audit trail required to be in place under certification rules, are often perceived by company buyers as having a reduced risk of adulteration. Furthermore, it is easier for larger aromatherapy companies to have direct links to producers, and thus have more influence on quality.

Perfumery and cosmetics form the largest market for organic essential oils and extracts. Regulations covering organic cosmetics are being elaborated in the EU. When questions such as whether synthetic chemical preservatives may be used in organic cosmetics are resolved, demand for organic oils should increase. Some individual certification agencies have developed their own health and beauty product standards, e.g. the Soil Association in the UK. However, more stringent labelling regulations in the EU might lead to reduced use of natural essential oils with their multiple constituents and favour synthetic single chemical alternatives.

In **flavourings**, the market for organic essential oils and oleoresins has grown slowly and is limited by current regulations (e.g. for the EU) which allow organic foods to contain natural (but not necessarily organic) flavours as long as less than 5% is used. For example, non-organic essential oils like bergamot can currently be used with organic tea to make an Earl Grey mix that qualifies as organic. The essential oils in demand for the flavour industry are mainly spice oils, produced largely in Sri Lanka and Madagascar, and the herb oils from the Mediterranean countries. Most spice and herb oleoresins are extracted using a solvent (generally hexane) which is then largely evaporated out of the mix. Hydrocarbon solvents (except organic alcohol which is more expensive, and hydroscopic) are not permitted for use in organic processing. Liquid carbon dioxide gas is acceptable as a solvent under organic regulations, but the process requires a high capital investment compared to standard solvent extraction.

Quality aspects

Storage

Oils should be dried by filtration or the use of anhydrous calcium sulphate. Containers should be opaque, made from materials detailed below. Headspace should be filled with nitrogen gas. Carbon dioxide works well and is cheaper and easier to obtain in many developing countries, but there is a risk of reaction with residual moisture to form carbonic acid, which may in turn react with essential oil constituents.

Sampling

Generally buyers will order subject to a pre-shipment sample approval. The sample should be fully representative of the shipment, and should show the producer name, date, sample contents, batch number and quantity represented. Sample bottles should not leak or be able to contaminate the sample. Plastic bottles are generally not

suitable. Packing information on the container sizes and quantities of the shipment should also be sent. The sample should be couriered with individual bottles in plastic bags to avoid or isolate any leakage, and bubble-wrapped. Buyers' requirements may include the following:

- Material safety data sheet
- Technical data sheet
- Pesticide residue analysis
- GMO free declaration
- Declaration of non animal product derivatives
- For flavour raw materials in the US and European market, Kosher certificate and Halal certificates.

If all these steps have been carried out properly the sample is more likely to be accepted; however, rejection of a high quality oil can occur, for example, if it does not fit the individual requirements of the company's existing lines or product development criteria.

Analysis

Buyers are more likely to look at representative samples from potential new producers if they are provided with a detailed analysis of the oil showing the main constituents rather than an ISO standard analysis showing optical rotation, density etc. The required GS-MS equipment exists in many producer countries (often unknown to producers, located at local universities). Often it is only necessary to have a single detailed analysis done, supplemented by a standard GC trace for individual samples.

Distillation process

If the time of distillation is too short, higher boiling point aromatic molecules may be lacking and if distillation is too long, the oil may develop a burnt odour which is difficult to remove.

Some examples of typical times of distillation are:

Lavender oil	45 minutes
Geranium oil	2 hours
Pepper oil	3 hours
Ylang Ylang	20 hours
Clove bud	48 hours

For some products (vetiver, cinnamon bark) the oil is the mixture of light and heavy fractions. These must be well mixed before sampling, or some aromatic parts of the oil will be missing and the sample may be rejected.

Variety and species

In the experience of the industry, a surprising number of producers start production without having confirmed that the oil produced from the planting material they have obtained is acceptable to the target market. This illustrates well the importance of having up-to-date market information, maintaining regular contact with major importers and end-users, and paying visits to customers and relevant trade fairs.

This way a producer will have a higher degree of certainty that his production accurately reflects the needs of the market place.

Transport regulations

Essential oils can be flammable and/or irritant liquids, and the hazard classification is related to the flash point, listed in ISO and AFNOR standards. Most carriers require a completed hazardous goods declaration, obtainable from shipping/forwarding agents.

Packaging

Glass bottles: the most used container for samples.

Aluminium bottles and drums: were widely used in the past for essential oils, concretes and absolutes but are now used only for expensive products.

Lacquered and lined steel drums: widely used all over the world for essential oils.

Plastic drums in HDPE: drums made from high density polyethylene are accepted by some buyers for some oils, and are less expensive than lined steel drums.

Only drums approved for the transport of hazardous products should be used.

For names and addresses of manufacturers of packaging and equipment see annex III.

Major end-users of essential oils and oleoresins

As shown above, most essential oils traded are used by the manufacturing industry as raw materials or ingredients. The following industries and companies are amongst the most important ones:

Flavour industry

Companies likely to use organic essential oils in flavours are mainly multinational manufacturers with subsidiaries in major markets. Some of the main flavour manufacturers are listed below:

Danisco (Denmark) <http://www.danisco.com>
Degussa (Germany) <http://www.flavors-fruit-systems.com>
Firmenich (Switzerland) <http://www.firmenich.com>
Givaudan (Switzerland) <http://www.givaudan.com>
Mane (France) <http://www.mane.com>
McCormick (USA) <http://www.mccormickflavor.com>
Robertet (France) <http://www.robertet.com>
Symrise (Germany) <http://www.symrise.com>
Quest (USA) <http://www.questintl.com>

Fragrance and cosmetic industry

The main demand for organic essential oils is from this sector. All the mainstream industry fairs now have a growing section set aside for organic

manufacturers – raw material and finished products. Laboratories of various sizes have been approved for organic cosmetic and fragrance production ranging from small structures such as **Les Douces Angevines** in France to international companies such as **Weleda**'s German operation with many hundreds of employees.

Buyers purchase in quantities ranging from kilograms to tons. Most types of essential oils are likely to be used in the cosmetic and fragrance industries, not only the well known perfumery oils like neroli, ylang ylang and lavender but also spices and herbs oils. There are too many companies involved in this industry to list all of them. However, further names of relevant companies can, *inter alia*, be found at the Biofach Web site <http://www.biofach.de> Major leaders in the industry include:

Anika Aroma Kosmetik (Germany) <http://www.anika-cosmetics.de>

Aveda (USA) <http://www.aveda.com>

Decléor (France) <http://www.decleor.com>

Organic Blue Health Ltd (United Kingdom) <http://www.organicblue.com>

Primavera Life (Germany) <http://www.primavera-life.de>

Sanoflore (France) <http://www.sanoflore.net>

WalaVita Dr Hauschka Kosmetik (Germany) <http://www.wala.de>

Weleda (Germany, France, Switzerland) <http://www.weleda.de>

Cosmebio (an association of around 70 manufacturers)

<http://www.cosmebio.com>

Aromatherapy

Aromatherapy as a market for organic oils is relatively small in terms of volume but has a large number of participating businesses. For example, in the USA some 25,000 aromatherapy companies are estimated to be operating, largely by mail order via the Internet. Aromatherapy companies buy many different types of essential oils, but in small quantities. Conventional oils are generally purchased through brokers. However, since organic production volumes are smaller and organic price premiums can cover higher unit transport costs, some organic aromatherapy companies do purchase direct from producers.

Given the large number of aromatherapy companies dealing in organic oils, contact details for important companies are best found from exhibitor lists published by the major organic fairs such as Biofach (see annex VII).

Traders in organic essential oils and extracts

France

Adrian France <http://www.orgasynth.com>.

René Devalance Tel : +33 3 26 80 53 85 Fax : +33 3 26 81 35 02.

Emile Noel Aromatherapy carrier oils, culinary oils- organic and conventional
<http://www.emile-noel.fr>.

Fytosan <http://www.fytosan.com> Organic essential oils and plant extracts.

IES Labo <http://www.ieslabo.com>.

Produits aromatiques du Diois memeuvrier@wanadoo.fr.

Sanoflore <http://www.sanoflore.net>.

Sirius trading@sirius-trade.com.

Terra Provence Tel + 33 4 93 75 28 62 13 Fax : + 33 4 75 28 60 07.

Germany

Sonntag Natur Pur <http://www.sonntag-online.de>.

United Kingdom

Adrian Essential Oils Ltd UK Tel: 01784 485600.

Aroma Trading <http://www.aromatrading.co.uk> Organic and conventional oils.

Earthoil Plantations <http://www.earthoil.com> Tea tree, other essential and fixed organic oils.

Fuerst Day Lawson <http://www.fdl.co.uk> Major trader of essential oils, with some organic oils offered.

New Seasons Essential Oils <http://www.newseasons.co.uk> Organic and conventional aromatherapy oils and cosmetics.

Organic Herbs Trading Company <http://www.organicherbtrading.com>.

Omega Ingredients <http://www.omegaingredients.com> Organic ingredients including oils.

Quinessence <http://www.quinessence.com> Organic essential oils.

United States

Adrian US <http://www.orgasynth.com>.

Amrita <http://www.amrita.com>.

A Woman of Uncommon Scents
<http://www.awomanofuncommonscent.com>

EO Products/Small World Trading Essential Oils

<http://www.eoproducts.com>.

Frontier Coop <http://www.frontiercoop.com>.

Manheimer <http://www.manheimer.com>.

Other countries

Exporganica SA (Argentina) <http://www.exporganica.com.ar>.

Devexco International Pty Ltd (Australia) tslattery@ozemail.com.au.

Fakhry Essential Oils (Egypt) a.fakhry@lycos.com.

Montecitrus Trading SA (Brazil) <http://www.montecitrus.com.br>.

Uprex (San Salvador) uprexa@telemovil.net

Annex I

Producer country suppliers and main products

The lists below are not complete and contact details of additional producers will be added as the manual is updated.

1. Organic essential oils

Summary Table

Organic essential oils used in flavour, fragrances and cosmetic industries

Name	Botanical name	Parts distilled	Producer countries
Angelica	Angelica archangelica	Seeds, roots	Hungary
Anise	Pimpinella anisum	Seeds	France
Basil	Ocimum basilicum	Leaf	Madagascar
Bergamot	Citrus aurantium bergamia	Zest	Italy
Camphor	Cinnamomum camphora	Leaf	Madagascar
Caraway	Carum carvi	Seeds	Egypt
Catnip	Nepata cataria	Leaf	France
Cedar	Cedrus atlantica	Wood	Morocco
Chamomile blue	Tanacetum annuum	Flowers	Morocco
Chamomile roman	Anthemis nobilis	Flowers	France
Cinnamon bark	Cinnamomum zeylanicum	Bark	Sri Lanka, Madagascar
Cinnamon leaves	Cinnamomum zeylanicum	Leaf	Sri Lanka, Madagascar
Citronella	Cymbopogon nardus	Leaf	Sri Lanka, Brazil, Zimbabwe
Clary sage	Salvia sclarea	Leaf	France
Clove buds	Eugenia caryophyllus	Bud	Madagascar
Coriander	Coriandrum sativum	Seeds	France, Egypt
Cypress	Cupressus sempervirens	Branches	France
Dill	Anethum graveolens	Leaf	France
Eucalyptus	Eucalyptus globulus	Branches	Portugal
Eucalyptus radiata	Eucalyptus radiata	Branches	Australia
Fennel	Foeniculum vulgare	Leaf	France
Geranium	Pelargonium graveolens	Leaf	South Africa, Malawi, Egypt
Grapefruit	Citrus paradisi	Zest	Argentina
Hyssop	Hyssopus officinalis	Leaf	France
Juniper	Juniperus communis	Branches	France
Lavender	Lavandula angustifolia	Flowers	France
Lavender spike	Lavandula spicata	Flowers	Spain
Lavandin abrialis	Lavandula sp	Flowers	France
Lavandin super	Lavandula sp	Flowers	France
Lemon	Citrus limon	Zest	Italy, Argentina
Lemon balm	Melissa officinalis	Leaf	France

Lemongrass	Cymbopogon citratus	Leaf	Sri Lanka, Madagascar
Lovage	Levisticum officinalis	Roots	France
Mandarin	Citrus reticulata	Zest	Italy
Marjoram	Origanum marjorana	Leaf	France
Mint bergamot	Mentha citrata	Leaf	France
Monarda	Monarda sp	Leaf	France
Myrtle	Myrtus communis	Leaf	Morocco
Neroli	Citrus aurentium	Flowers	Comoros, Egypt
Niaouli	Melaleuca viridiflora	Branches	Madagascar
Orange	Citrus sinensis	Zest	Italy
Oregano	Origanum sp	Leaf	France
Palmarosa	Andropogon martini	Leaf	Madagascar, Sri Lanka
Parsley	Petroselinum sativum	Leaf	France
Patchouli	Pogostemon cablin	Leaf	Madagascar
Pepper black	Piper nigrum	Fruits	Sri Lanka, Madagascar
Peppermint	Mentha piperita	Leaf	France
Petitgrain	Citrus aurentium	Leaf	Egypt
Pine	Pinus sylvestris	Branches	France
Rose	Rosa damascena	Flowers	Iran
Rosemary	Rosmarinus officinalis	Leaf	France, Spain, Morocco
Sage	Salvia officinalis	Leaf	France
Sage	Salvia lavandulifolia	Leaf	Spain
Spearmint	Mentha spicata	Leaf	Egypt
Tagette	Tagetes minuta	Leaf	Egypt
Tea tree	Melaleuca alternifolia	Branches	Australia, Zimbabwe, Zambia
Thyme	Thymus vulgaris	Leaves	France
Turpentine	Pinus pinaster	Gum	Portugal
Verbena	Lippia citriodora	Leaf	France
Vetiver	Vetiveria zizanioides	Roots	Madagascar
Winter savory	Saturela montana	Leaf	France
Ylang ylang	Canaga odorata	Flowers	Comores, Madagascar

Producers/exporters (organic essential oils)

Some of the producers listed in importing countries, e.g. France, are also importers.

ASIA

Organic essential oil production in India, China and Indonesia - the biggest producers of conventional essential oils and extracts in the world - is a very small part of their overall production.

China

Chinese Organic Agrobusiness <http://www.green-food.biz>

India

Earthoil <http://www.earthoil.com> has a base of organic producers in Uttar Pradesh, and produces organic mint oils, and in other regions distilling nutmeg, pepper, cinnamon, clove, citronella and lemongrass.

Sri Lanka

The main organic essential oils produced are cinnamon bark and herb, cardamom, clove bud, stem and herb, nutmeg, mace, black pepper, and lemon grass. Extracts produced include green tea, gotukola, aswaganda, g Garcinia and polpala.

EOAS Organics Pvt Limited, eoas@itmin.com
D.D da Silva hddes@panlanka.net

Pacific Islands

Venui Vanilla, Vanuatu <http://gippsnet.com.au/venui/index.htm>

AUSTRALIA

The main organic oils produced in Australia are, tea tree, fennel, and parsley herb and seed.

Bronson and Jacobs (producer and trader) <http://www.bronsonandjacobs.com.au>
Australian Essential Oils <http://www.australescence.com>

AFRICA

Morocco

The French company, Biolandes, a major producer of essential oils and extracts in France, is starting the production and distillation of organic extracts and essential oils in Morocco, including geranium, artemisia and rosemary. <http://www.biolandes.com>

South Africa

Main essential oils produced are geranium (Bourbon type), lavender, rosemary, and Eucalyptus dives and smithii, but many other oils are also available. The following are producers and traders, and can offer technical support to growers.

Biosys Plant Extracts (Pty) Ltd <http://www.biosys.co.za>
Clive Teubes (Pty) Ltd teubes@global.co.za

Zimbabwe

Four Seasons Foods fsfoods@zol.co.zw Organic tea tree, eucalyptus, lavender and culinary herb oils.

Earthoils <http://www.earthoils.com> Organic tea tree, rosemary, lemongrass.

Kenya

Earthoils <http://www.earthoils.com>

Cinnabar Green horse@africaonline.co.ke Geranium, melissa, and culinary herb oils.

Malawi

Geranium, lemongrass, rosemary:

Chikunda Farm, Blantyre pancho@africa-online.net

Satemwa Tea Estate Ltd 100667.1740@compuserve.com

Zambia

AOFI Lusaka stucki@yahoo.com Lemongrass, geranium, rosemary and other culinary herb oils.

Arulussa paagard@zamnet.zm Herb oils, tea tree and others.

United Republic of Tanzania

ZSTC in Pemba pbadist@africaonline.com.tz Lemongrass and other organic oils, as well as conventional clove oils.

Zanzgerm zanz-germ@cats-net.com

Comoros

Tropical SA (owned by Orgasynt, a French group) <http://www.orgasynt.com>

Ylang ylang, neroli, clove bud, basil - Reunion type.

Madagascar

Arco Ocean Indien, Antananarivo <http://www.arco-ocean-indien.fr> Pink pepper oil, lemongrass, Eucalyptus citriodora, ravensara, petitgrain, Ylang Ylang, palmarosa, basil, pepper, vetiver, vanilla extract.

Société Agricole du Bevoay, Nosy Bé Tel : 00 261 20 86 Ylang Ylang.

Phaeflor, Antananarivo phaeflor@dts.mg Clove, camphor neroli, vanilla extract.

Egypt

Egypt is one of the major producers of organic essential oils. Both companies below offer a wide range of organic essential oils, herbs and spices.

A. Fakhry a.fakhry@starnet.com.eg a.fakhry@lycos.com

Hashem Brothers sales@hashembrothers.com

Seychelles

Island Scents silvana@seychelles.net Cinnamon.

EUROPE

France

Plantes Aromatiques du Diois <http://www.orgasynth.com> Producer and trader in organic essential oils- the largest in France. Own production: and lavender, clary sage, sage officinalis, lovage root, spearmint, cypress, coriander seed, juniper, marjoram, melissa, peppermint, oregano, rosemary.

Essences Naturelles Corses EssNatCorses@aol.com

Thyme, oregano, rosemary oils.

Sanoflor <http://www.sanoflore.net> All the French typical essential oils: lavender tarragon, sage, clary sage etc. Organic cosmetics for health and body care.

L'Herbier du Diois <http://www.herbier-du-diois.com> All the French traditional essential oils.

Italy

The main Italian essential oils are the citrus oils produced in Calabria and Sicily. Bergamot, lemon, orange, grapefruit, mandarin.

Eurofood SAS <http://www.lemonplus.it>

Jardino botanico dei Berici, Arcugnano <http://www.vagheggi.it>

Citrus Vita SPA <http://www.citrusvita.com>

Salamita <http://www.salamita.it>

Spain

Herbes del Moli <http://www.herbesdelmoli.com> Citrus and herb essential oils.

Hungary

Silvestris Essential Oils <http://www.silvestris.hu> Angelica, chamomile, caraway, carrot seed, dill, juniper berry.

SOUTH AMERICA

Argentina

Expoorganica SA <http://www.expoorganica.com.ar>

Lavandas de las Sierras lavandas@ba.net

El Trebol <http://www.eltrebol.com> Garlic.

Brazil

Citrovita <http://www.citrovita.com.br>

Chile

Natural Response info@naturalresponse.cl

Twilta Rose hip and other fixed and essential oils <http://www.novbeltec.com>

2. Organic spices and herbs

Producers/exporters (spices and herbs)

AFRICA

General

Links to producers in several African countries.

EPOPA Export Promotion of Organic Products from Africa

<http://www.grolink.se/epopa>

Egypt

Bio Nile bio_nile@link.net

A. Fakhry a.fakhry@starnet.com.eg a.fakhry@lycos.com

Egyptian Herbarium egyherb@access.com.eg

Malawi

Pirimiti Ltd., Blantyre pirimiti@malawi.net

Hortiflora, Blantyre shoga@malawi.net

United Republic of Tanzania

Zanzgerm zanz_germ@cats-net.com Ginger, turmeric, pepper.

Kimango kimone@africaonline.co.tz Paprika, chillies, lemongrass, Hibiscus.

TAZOP <http://www.tazop.ch> Ginger, turmeric, pepper, other spices

Uganda

Esco Uganda Ltd. Vanilla esco@africaonline.co.ug

AMFRI amfri@infocom.co.ug Vanilla.

ESCO escoshipping@infocom.co.ug Vanilla, Birds Eye Chillies.

South Africa

Meadowsweet Herbs farm@meadowsweet.co.za Organic herbs.

Organic World <http://www.organicworld.co.za> Organic traders.

Organic Agricultural Association of South Africa (OAASA)

<http://www.oaasa.co.za> – links to producers.

Madagascar

Promabio phaeflor@dts.mg Vanilla and other spices

EUROPE

Bulgaria

IRA-EKO <http://www.ira-eko.com> Herbs.

ASIA

India

Indian Spice Board <http://www.indianspices.com>

POABS <http://www.poabsorganic.com> Spices.

Peermade Development Society, Kerala <http://www.pdsorganicspice.com> Spices.

Suminter <http://www.suminterindiaorganics.com> Spices and herbs.

Galore Enterprises galore@vsnl.com

Sri Lanka

Lanka Organics <http://www.lanka-organics.com> Spices, herbs and herbal teas.

Annex II

Quality standards guidelines

1. Spices and herbs (example of a quality control specification)

Kitchen Garden Organics, UK - Sample microbiological/mycotoxins/heavy metals standards

Microbiology		Guide value (CFU/g)	Maximum value (CFU/g)
	Anaerobic platecount	1.0×10^6	1.0×10^7
	<i>Escherichia coli</i>	1.0×10^4	1.0×10^5
	<i>Staphylococcus aureus</i>	1.0×10^2	1.0×10^3
	<i>Bacillus cereus</i>	1.0×10^4	1.0×10^5
	Clostridien	1.0×10^4	1.0×10^5
	<i>Yeasts and Fungi</i>	1.0×10^5	1.0×10^6
	<i>Salmonella/25g</i>	negative	negative
Aflatoxin		Detection limit ($\mu\text{g/kg}$)	Maximum value ($\mu\text{g/kg}$)
	B ₁	0.1	
	B ₂	0.1	2.0
	G ₁	0.15	
	G ₂	0.1	
	Σ B ₁ , B ₂ , G ₁ , G ₂		4.0
Heavy metals			*Maximum value (mg/kg)
	Cd		0.10
	Pb		2.00
	Hg		0.05

Information on HACCP (Hazard Analysis Critical Control Point) management for herbs and spices can be purchased from the American Spice Trade Association <http://www.astaspice.org>.

Standards for the main spices and herbs can be obtained from the International Organisation for Standardisation (ISO) <http://www.iso.org>.

2. Essential Oils

Standards for oils can be obtained from the ISO (see above) and from AFNOR <http://www.afnor.fr>

Product data sheets are provided by most large essential oils suppliers. Examples can be found on websites such as <http://www.eramex.de>.

Annex III

Equipment manufacturers and consultants

1. Essential oils

Retail bottles

<http://www.alexander-essentials.com>

<http://www.PontPackaging.com>

<http://www.miron-glass.com>

Glass and aluminium containers

<http://www.tournaire-equipement.com>

Alcancorp@vsn.com

<http://www.hirschfeld-emballages.fr> Packaging supplier (HDPE drums and other containers for hazardous goods use).

Drums

Greif <http://www.greif.com> Metal and plastic drums.

Equipment manufacturers

India

hitekbsb@bomb4vsnl.net.in

Fine Pack Structure <http://www.finepac.com>

Evergreen Technology Pvt Limited info@evergreenindia.com

Africa

Earthoil, Kenya/Zimbabwe Turnkey design using box stills. <http://www.earthoil.com>

C.L. Teubes teubes@global.co.za Distillation equipment sourcing and advice for African producers.

Europe

<http://www.tournaire.fr>

<http://www.perryprocess.co.uk> Used equipment.

Process technicians/consultants

Marius Doually Consultations Techniques caropolge@aol.co.uk

Denny Mackenzie Essential Oil Consultants Timdenny@southcom.co.au

Crop Nutrition Services Ltd, Kenya healthy_soils@cropnuts.com

Recommendations for use of organic inputs e.g. rock phosphate.

2. Spices and herbs

Equipment suppliers and design sources

Manufacturers of tea and tobacco processing machinery, supplying drying and herb sorting equipment – the processes are similar to those required for herb and spice processing.

Innotech, Germany <http://home.t-online.de/home/innotech.de/> [Info@Innotech-de.de](mailto:Info@Innotech.de).

Intermediate Technology Development Group <http://www.itdg.org> Publications on designs for agricultural processing.

American Spice Trade Association <http://www.astaspice.org> Information on spice and herb cleaning equipment and standards of cleanliness. Clean Spices Guidebook 1991, Revised 2000. HACCP Guide to Spices and Seasonings.

NRI – Natural resources Institute, United Kingdom <http://www.nri.org> Publication: *Producing Solar Dried Fruit and Vegetables for Micro- and Small-Scale Rural Enterprise*.

Annex IV

Information sources (market surveys and other publications)

1. Markets

Food Research Institute Leatherhead *The International Market for Organic Food*
GB £410 <http://www.rssl.com>

International Trade Centre (ITC) *Global Spice Markets, Imports, 1996-2000*. 2002.
<http://www.intracen.org/mds>

CBI, Netherlands <http://www.cbi.nl>
Natural Ingredients for Pharmaceuticals. 2000.
Natural Ingredients for Cosmetics. 2001
EU Market Survey- Spices and Herbs- 2002

FiBL Helga Will er and Minou Youssefi (Eds.)
The World of Organic Agriculture Statistics and Emerging Trends 2004
http://www.soel.de/inhalte/publikationen/s/s_74.pdf

Food and Agriculture Organization of the United nations (FAO) Organic
Agriculture, Environment and Food Security, 2003 <http://www.fao.org/organicag/>

SIPPO/FiBL *The Organic Market in Switzerland and the EU*. <http://www.fibl.org>

ITC <http://www.intracen.org> A wide variety of reports on markets, including
organics. <http://www.intracen.org/mds/sectors/organic> See also page 1.
Dry Culinary Herbs. An overview of selected Western European Markets, 1991.

Mintel Market Intelligence <http://www.mintel.com> Trade statistics and market
information. Subscription only service. Studies on organic food markets for most EU
countries.

Organic Monitor <http://www.organicmonitor.com> Market research. Detailed
surveys of individual markets on a fee basis.

<http://www.biobank.it> Publishers of a 272 page survey of organics in Europe, €20.
Title: Bio Europe 2004 - Organic Directory For Europe.

<http://www.organic-europe.net> Organic markets website. Statistics and addresses.

2. Prices

Some indications on prices can be obtained from:

Organic Trade Services <http://www.organiacts.com> Organic market forum with buyer and seller information, news and statistics. Related sites: <http://www.planetaorganico.com> (Brazil)

Greentrade <http://www.greentrade.net>. Organic trade website linked with Organic Trade Services.

ITC Market News Service <http://www.intracen.org/services/mns/mns.htm>. Most information available only on subscription.

Food Ingredients <http://www.foodingredientsonline.com> Market information.

International Food Ingredients <http://www.ifi-online.com>

Public Ledger <http://www.public-ledger.com> Market information on most Commodities (non organic). Subscription service.

Fintrac Inc. <http://www.fintrac.com> Market information (perishables).

Fresh Marketplace <http://www.freshinfo.com> Perishables price information (conventional and some organic).

International Pepper Community *Publisher of 'International Pepper News Bulletin'*
<http://www.ipcnet.org>

Indian Spice Board <http://www.indianspices.com>

3. Organic regulations and standards

Certification bodies' websites often include organic standards applicable, or links to them- e.g. <http://www.ecocert.de> for the EU standards and updates.

USDA National Organic Program <http://www.ams.usda.gov/nop>

Independent Inspectors <http://www.ioia.net>

<http://www.ifoam.org> **International Federation of Organic Agriculture Movements** (organic umbrella organization).

DEFRA <http://www.defra.gov.uk/farm/organic> EU organic standards and import regulations for the UK.

Japanese Agricultural Standards (JAS). Japanese organic regulations.
<http://www.maff.go.jp>

Canadian Organic Standards <http://www.pwgsc.gc.ca/cgsb>

EU Organic Standards <http://europa.eu.int/eur-lex/en>

4. Trade regulations and customs tariffs

Access to the EU markets (general information) <http://www.cbi.nl/accessguide>

EU customs tariffs <http://www.douane.nl>

USITC Tariff and Trade DataWeb <http://dataweb.usitc.gov>

IATA Purchase of IATA dangerous goods regulations on airfreight of essential oils.
<http://www.iata.org>

5. Links and databases

Links Organic <http://www.linksorganic.com/uk/default.htm> Comprehensive world organic database.

Iporex <http://www.iporex.com> Information on organic producers. IFOAM sponsored subscription database.

Foodfirst <http://www.foodfirst.co.uk> Database of UK organic companies.

6. Quality control

International Organisation for Standardisation <http://www.iso.org> Standards for some spices, herbs and essential oil products.

Reading Scientific Services Ltd. <http://www.rssl.com> Info on food safety issues. Analytical services.

7. Information on production

Natural Resources Institute (NRI) UK:

Eucalyptus Oils - A Review of Production and Markets, 1992. ISBN 0-85954-3080-0. A comprehensive survey – required reading for those involved in any new eucalyptus project.

Ground and Packaged Spices: Options and Difficulties in Processing at Origin, 1993. ISBN 0-85954-342-0.

Field Distillation of Herbaceous Oils. T Denny. A detailed technical analysis of distillation science, with useful practical guides to still and condenser design.

Timdenny@southcom.co.au

Clean Spices Handbook. American Spice Trade Association.

<http://www.astaspice.org>

Spices. Vols 1 & 2. J.W. Purseglove et al. Comprehensive information on most major spice crops. Longmans, UK. ISBN 0 582 46811 6.

Tropical Monocotyledons/Dicotyledons. J.W. Purseglove. Extensive information on tropical crops. Longmans, UK. ISBN 0 582 46079

The Essential Oils. Guenther. Publishers Robert E. Krieger 1950. 6 Volume definitive work on world production, chemistry etc. Dated but very comprehensive - an indispensable reference work. Krieger Publishing USA, or try Amazon USA and UK. Up to US\$1,000 for the 6 volume set.

Essential Oil Crops, Spice Crops Weiss. E.A. <http://www.cabi.org>

Directory of organic commercially available fertilisers.

<http://www.fao.org/ag/agl/agll/orgfert/orgfert.jsp>

Rocks for Crops Mineral fertiliser availability from deposits in Africa

http://http://www.uoguelph.ca/~geology/rocks_for_crops/

NRI - Natural Resources Institute, UK. <http://www.nri.org> Publications on production, processing and development topics.

Herb Research Foundation <http://www.herbs.org> Herb research site.

<http://www.fibl.org> Research on organic farming and markets from the Swiss Research Institute for Organic Agriculture (FiBL).

CABI Publishing <http://www.cabi-publishing.org> Subsidiary site <http://www.organic-research.com> Links to organic legislation, books and publications, organic crop production database etc. Subscription service with some free information.

<http://www.pyganic.com> Pyrethrum products and use – organic insecticide.

<http://www.cgiar.org> **Consultative Group on International Agricultural Research**. Links to research sites on crop production.

<http://www.asnapp.org> Extensive library on natural products - medicinal and herbal teas. http://www.asnapp.org/links_pages/links_market_research.htm

<http://www.itdg.org> **Intermediate Technology Design Group**. UK. Agro processing equipment design publications.

8. Finance

<http://www.challengefunds.org> **DFID – Department for International Development** (UK Government) Finance.

<http://www.triodos.co.uk> **Triodos Bank**, UK. Loan and equity finance for organic businesses (sustainable banking).

<http://www.shared-interest.com> **Shared Interest**. Trade finance for fair trade importers from developing countries.

9. Fair Trade organisations

bioequitable@hotmail.com **Bio Equitable**

<http://www.fairtrade.net> **Fair Trade Labelling Organisation International**

<http://www.ifat.org> **International Fair Trade Association**

<http://www.traidcraft.co.uk> **Traidcraft**

<http://www.transfair.org> **TransFair International**

Annex V

Business information services and trade associations

International Chamber of Commerce <http://www.iccwbo.org>

European Spice Association mcosta@fdf.org.uk

Finnish Food Industry Federation <http://www.etl.fi/english/about/liitto.asp?akt=1>

COVIB (Syndicat National des Transformateurs de Poivres, Epices, Aromats et Vanille) covib@wanadoo.fr

Fachverband der Gewürzindustrie eV verbaendebuero@t-online.de

AIIPA (Associazione Italiana Industrie Prodotti Alimentari) n.manca@aiipa.it

International Trade Centre UNCTAD/WTO (ITC) <http://www.intracen.org>

DIPO (Danish Import Promotion Office for Products from Developing Countries) <http://www.dipo.dk>

GTZ Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH
<http://www.gtz.de>

ICE Italian National Institute for Foreign Trade <http://www.ice.it>

CBI (Centre for Promotion of Imports from developing countries)
<http://www.cbi.nl>

Norad (Norwegian Agency for Development Co-operation) <http://www.norad.no>

SIDA (Swedish International Development Co-operation Agency - Department for Infrastructure & Economic Co-operation) <http://www.sida.se>

SIPPO (Swiss Import Promotion Programme) <http://www.sippo.ch>

OTA (Organic Trade Association) North America <http://www.ota.com>

Annex VI

Trade press

The Grocer <http://www.william-reed.co.uk> Food press UK.

Hot Spice Newsletter <http://www.hotspice.de> Spice museum.

Lebensmittel Praxis: <http://www.lpvnet.de> Trade press titles (Germany).

LSA - Libre Service Actualite <http://www.lsa.fr> French grocery/distribution publications.

Alimarket Revista <http://www.alimarket.es> Spanish trade press including food distribution.

Natural Foods Merchandiser <http://www.naturalfoodsmerchandiser.com> Natural and organic grocery newsletter and information (USA).

Nuova Distribuzione <http://www.promodis.it> Food trade press (Italy).

Foodmagazine / Distrifood <http://www.zibb.nl/food> Netherlands food titles.

Natural Food Merchandiser: To subscribe: Send a blank e-mail to NFM_e-news_Sub@products.newhope.com

World Organics News <http://www.agra-net.com> (UK & international).

Annex VII

Organic trade fairs ¹

Certified organic only

BioFach – Nürnberg, Germany (annually). <http://www.biofach.de>

[BioFach America - Organic Products Expo](#)

Washington, DC, USA

[BioFach América Latina](#)

International Organic Trade Fair and Conference, Rio de Janeiro, Brazil

[BioFach Japan](#)

International Organic Trade Fair, Tokyo, Japan

Organic Products Europe. Olympia, London <http://www.naturalproducts.co.uk>

ATO - All Things Organic. Chicago <http://www.atoexpo.com> Organised by the Organic Trade Association.

Other fairs with an organic section

Alimentaria. Barcelona, Spain (biennial) <http://www.reedexhibitions.com>

<http://http://www.alimentaria.com>

ANUGA. Cologne, Germany (biennial) <http://www.koelnmesse.de/anuga> alternating with SIAL.

Food Ingredients Europe (biennial) alternating with **Health Ingredients Europe**
<http://www.fi-events.com>

Horecava. Amsterdam, The Netherlands <http://www.rai.nl>

IBA. Düsseldorf, Germany <http://www.messe-duesseldorf.de>

International Food Exhibition. London, United Kingdom <http://www.ife.co.uk>

Interherba. Poznań, Poland <http://www.interherba.pl>

Natural Products Expos <http://www.naturalproductsexpo.com>

Natural Products East, Washington DC <http://www.expoeast.com>

Natural Products West, Anaheim, California <http://www.expowest.com/>

Natural Products Europe, Amsterdam, The Netherlands
<http://www.expoeurope.com/>

Natural Products Asia, Hong Kong SAR, China
<http://www.naturalproductsasia.com>

¹ *Many of the websites listed contain information on buyers and suppliers.*

Natural Trade Show <http://www.naturaltradeshow.com> Trade shows of organic/natural products in Harrogate and Brighton, UK.

World Food Moscow <http://www.ite-exhibitions.com>

SIAL, Paris (biennial) <http://www.sial.fr> alternating with ANUGA.

Fairs and congresses for the aromatic and natural plant product sector

These events generally have an organic section, and are often better places to meet established buyers and suppliers than purely organic fairs, where a larger proportion of visitors tend to be from the general public.

IFEAT Annual conference. A major event for essential oil users and traders. <http://www.ifeat.org>

International Symposium of Aromatherapy and Medicinal Plants, Grasse, France (annually). This congress is mainly directed towards organic essential oils used in aromatherapy and cosmetics. conger@ville-grasse.fr

Centifolia, Grasse, France. (biennial). International congress of perfumery and natural raw materials. Mainly perfumers and producers of natural raw materials intend this congress. conger@ville-grasse.fr

Journées Internationales - Huiles Essentielles et Extraits/ Symposium on Plants Essential Oils & Extracts, Digne, France (annually, early September). This symposium is of special interest for producers, users of natural plant extracts and essential oils for food, flavour, cosmetic, fragrance product development as well as for official organizations (agriculture, quality control, legislation, academic). Congress participants are mainly European producers and buyers. <http://www.appam04.com>

Cosmeeting info@cosmeeting.com

Personal care ingredients Europe <http://www.stepex.com>

Heath Ingredients Europe <http://www.hi-events.com>

Heath Ingredients Japan <http://www.hi-events.com>

World Perfumery Congress. Cannes <http://www@worldperfumerycongress.com>

Symposium International d'Aromatherapie. Grasse congres@ville-grasse.fr

ITC: Your Partner in Trade Development

The International Trade Centre (ITC) is the technical cooperation agency of the United Nations Conference on Trade and Development (UNCTAD) and the World Trade Organization (WTO).

ITC supports developing and transition economies, and particularly their business sectors, in their efforts to realize their full potential for developing exports and improving import operations.

ITC works in six areas:

- ▶ Product and market development
- ▶ Development of trade support services
- ▶ Trade information
- ▶ Human resource development
- ▶ International purchasing and supply management
- ▶ Needs assessment, programme design for trade promotion



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