



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

www.organicconsultants.org
michael.jack@organicconsultants.org
October 2006

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

October 2006

Contents

Page

INTRODUCTION AND SUMMARY	2
Background	2
What is organic agriculture?	3
General marketing advice	3
Market opportunities for organic spices, herbs and essential oils from developing countries	3
Spices and herbs markets	4
WORLD ORGANIC TRADE - AN OVERVIEW	5
Market size	5
Organic production of spices, herbs and essential oils	5
Prices	6
Organic certification	7
ORGANIC SPICES AND HERBS	8
Market structure	8
Certification and branding of organic spices and herbs	8
Fair trade	8
Adding value in the producer country	9
Quality control aspects	9
Major markets and principal importers (spices and herbs)	11
European Union	11
France	11
Germany	11
The Netherlands	12
United Kingdom	12
Spain	13
Canada	13
Japan	14
United States	14
ORGANIC ESSENTIAL OILS AND OLEORESINS	15
Market size and structure	15
Quality aspects	16
Distillation process	17
Variety and species	18
Transport regulations	18
Packaging	18
Major end-users of essential oils and oleoresins	18
Flavour industry	18

Fragrance and cosmetic industry	19
Aromatherapy	19
Traders in organic essential oils and extracts	20
France	20
Germany	20
United Kingdom	20
United States	21
Other countries	21
Annexes	
I. Producer country suppliers and main products	22
II. Quality standards guidelines	31
III. Equipment manufacturers and consultants	35
IV. Information sources (market surveys and other publications)	37
V. Business information services and trade associations	44
VI. Trade press	45
VII. Organic trade	46

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

The aim of the manual is to provide a concise guide to the marketing of these commodities, and to provide a convenient source for web links for both producers and buyers.

Summarised quality control and production information is included, with web links to sites where more detailed information can be found on topics relevant to the production of high quality, marketable goods. Hyperlinks to web sites or PDF files in the text can be followed to view further information.

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

Supply and demand is evolving rapidly for organic spices herbs and essential oils, and the listings and links provided are inevitably incomplete. Readers are invited to comment on this manual, updated in July 2006, request listings for their companies in future updates, ask questions, provide missing information or suggest improvements - email updates@organicconsultants.org

The current update adds a number of producers and importers to the database. Contamination problems with food products - organic and conventional - in target markets are increasingly reported, and the costs and penalties involved becoming increasingly severe. New links to sites dealing with quality management including the use of sterilisation methods for finished products and mycotoxin prevention advances are in annex IV.

Recent increases in energy prices will tend to raise the cost of energy intensive chemical fertilisers, and, in the absence of a corresponding increase in agricultural commodities, shift the economic balance in favour of organic production - which uses low energy cost fertiliser inputs.

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of the International Trade Centre UNCTAD/WTO (ITC) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The mention of names and commercial products does not imply the endorsement of ITC.

The opinions expressed in this study are those of the authors and their contacts in the trade and do not necessarily reflect the view of ITC.

ITC encourages the reprinting and translation of its publications to achieve wider dissemination. Short extracts may be freely reproduced, with due acknowledgement of the source. Permission should be requested for more extensive reproduction or translation. A copy of the reprinted or translated material should be sent to ITC.

This document has not been formally edited by the International Trade Centre UNCTAD/WTO (ITC)

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.

Overview of World Production and Marketing of Organic Wild Products (2006) describes the market for food and natural ingredients products that are collected in the wild and certified organically.

Demand for organic products from East Africa (2006)

Overview of World Production and Marketing of Organic Wild Products (2006)

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/dbms/Organics/Library.asp?DS=96> ITC also 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 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."

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

General marketing advice

Mistakes to be avoided include over-optimistic estimates of supply quantities and delivery dates, not providing samples which are representative of the crop, not answering enquiries immediately and being difficult to contact. Publicity material including websites should be checked by a native speaker of the language concerned to make sure the detail is correct. Issues of traceability and quality are covered separately.

Every exporter should have at least a simple website, and avoid changing web or email addresses if possible – if an exporter's web address is registered in a trade database, but does not connect and there is no redirect in place, potential buyers are likely to assume the company is no longer trading. Websites should be simple and quick to load, and include contact details with an email address telephone details – not just a "contact us" form. Exporters should take professional advice in website design to ensure search engines return their sites on the first page or two in response to a specific query.

In 2006-07 ITC is providing technical assistance to SMEs in [Ghana, Uganda and Kenya on developing their skills in webmarketing](#).

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.

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 by offering their customers additional (and increasingly-mandatory) quality certifications such as HACCP, EurepGAP and ISO.

Spices and herbs markets

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 helps 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 markets

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. The major certification standards (EU, NOP, JAS) currently cover only food items. Some EU organic certification agencies certify cosmetics against their private standards - e.g. Ecocert's BIO standard and the UK Soil Association's standards.

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. See for example, www.eisfom.org

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 approximately US\$ 30 billion in 2006, 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. 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 for the overall spice trade is the ITC publication [*World Markets in the Spice Trade 2000 - 2004*](#) More references for publications on market information and trade statistics are given in annex IV.

Organic production of spices, herbs and essential oils

Quality of produce, and the achievement of viable and sustainable yields depend on achievement and maintenance of appropriate soil fertility. Use of inadequate (often limited to the application of any available compost from the holding) or zero soil fertility inputs is widespread - particularly in, but not limited to, small scale producers in developing countries. The results are the "mining" of soils, soil erosion and poor yields. Herb, spice and essential oils crops are not heavy users of plant nutrients when compared to starch crops (see below). However, the use of low cost, preferably locally mined, rock phosphate, lime and sulphur together with legume rotations or interplants (using appropriate rhizobial inoculants to improve nitrogen fixation) will generally improve yields and production economics greatly, and reduce erosion. A [guide to organic production of a selection of](#)

[spice and herb crops can be downloaded here](#). References to other production guides can be found in annex IV.

Spice and herb crops use modest amounts of plant nutrients (particularly N) compared to grain crops, and yield differentials between organic and conventional crops should be small. Essential oil crops in particular extract little from the plant nutrient cycle, as the oils are generally only composed of hydrocarbons, and distillation residues containing of the crop's agronutrients can be composted and returned to the land. Fertility and plant protection input costs for organic production are thus often lower than in conventional production of spices, herbs and essential oils, especially with the trend to higher energy costs. 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.

Organic production methods rely on low cost fertility inputs- rather than the high cost water soluble chemical fertilisers such as ammonium nitrate and superphosphate. Yields equivalent to those attained by conventional chemical farming can be achieved by organic methods, with lower external input costs but sometimes with higher labour requirements for weed control without the herbicide option.

Low input cost methods are suitable for small scale farmers - certified organic or not - who can not generally afford or justify adequate investment in high cost conventional inputs - where high yields are required for viability. More ideas on the need for, and ways, of developing viable [small scale farming production using low cost inputs can be found on this link](#). More references can be found at annex IV

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. Some of the buyers sites listed in the annexes give selling prices of both organic and conventional product- a good indication of the organic premium that may be negotiated.

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 the labelling 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 several developing countries including Costa Rica and Argentina. 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.organiets.com/organic_info/certification/links/index.html, and a general EU guide is at http://ec.europa.eu/agriculture/qual/organic/brochure/abio_en.pdf.

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 http://www.maff.go.jp/soshiki/syokuhin/hinshitu/organic/eng_yuki_59.pdf.

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 a codified federal regulation in late 2006. The province of Quebec applies its own mandatory programme to all organic products coming into Quebec, whether Canadian or foreign. See <http://www.caaq.org/en/home.asp>. 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). www.biosuisse.ch provides information on requirements for using its organic logo.

Some EU and US certification agencies are accredited under the relevant legislation to inspect and certify to the main world standards- EU, NOP and JAS, and carry out one inspection visit covering certification to these standards.

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/dbms/Organics/Library.asp?DS=103>.

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 being 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 bottled baby food is mostly organic. In contrast, the percentage of organic retail packed spices and herbs to conventional is probably less than 5% - 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 their 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 well-known Fair Trade labels, provide many producers with a marketing advantage, in conjunction with 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 also exist. Fairtrade standards have now been developed for bulk production of spices and herbs by producer groups, and generic fairtrade standards have also been published. Web addresses for further information are listed in annex IV.

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

Sourcing food products packed in the country of origin of the raw materials provides additional income to producers, generates employment, and has downstream benefits to local industries such as packaging companies. The quality requirements of the importing markets act as a stimulus to development of export industries in the developing world.

From the producer's perspective, given 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 and 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, EurepGAP and other legislative and GMP (Good Manufacturing Practice). These requirements are designed to reduce the incidence of poor quality or contaminated product, to ensure producers meet standards with regard to employee protection, 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 post harvest treatments – permitted 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 Bag Stacks for Better Grain Storage*- now available from Practical Action (www.itdg.org).

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 4 parts per billion aggregate aflatoxins in the EU). Aflatoxin management must be maintained all through the growing and storage processes. Promising work has been done on the use of competitor and predator fungi. Once a crop is contaminated there is little beyond sorting for suspect product visually that can be done to reduce mycotoxin contamination organically. Ammonia treatment is used to reduce aflatoxin in some conventionally grown crops like groundnuts, but cannot be used under organic rules.

Problems arising from detection in importing markets of contamination of goods are a continuing feature of trading. Contamination of capsicums with Sudan Red and other non-permitted colourants have caused substantial losses following detection, and the resultant costs of testing and delays at ports need to be minimised by pre-shipment testing and documentation.

To achieve high quality standards in herbs at an economic 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.

Compliance with increasingly stringent microbiological standards set by buyers and importing country legislation needs constant attention by producers. Herbs produced in target markets are likely to be processed under factory conditions, rather than dried on farm as is normally the case in developing countries, and to have lower microbiological contamination as a result. Attention to hygiene at every stage is needed for dried and fresh herbs to be acceptable when in competition with local production. Spice production is less common in importing countries, but good microbiological standards are still increasingly important. Some spices are used without cooking – pepper and paprika are examples - and contamination with pathogenic bacteria like salmonella can lead more easily to food poisoning than it would for herbs and spices used in cooking. For both spices and herbs, tests are routinely done by food safety authorities at port of entry and locally, and detection of pathogens can quickly lead to loss of markets and possible prosecution. Good hygiene through the production and storage process is the ideal but hard to guarantee when much of organic production is done by small scale outgrowers. Steam sterilisation can produce excellent (99% plus) post production decontamination results, and is increasingly being used in the country of origin as well as in the importing markets. 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.

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, chillies, 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>.

Sanoflore <http://www.sanoflore.net> - Buyers and suppliers of organic culinary and 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> - Distributors.

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 www.inproplant.de - Organic spices broker.

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

Hamburger Gewuerzemuehle <http://www.gewuerzmuehle.de>

Importer/distributors

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

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

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

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. 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.

Ussellerriet BV <http://www.ussellerriet.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 <http://wholefoodsmarket.com/stores/freshandwild/index.html> and Planet Organic <http://www.planetorganic.com/>, 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 including organic and fairtrade.

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>

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> - Organic spices, herbs, herb and spice pastes, organic essential oils.

Steenbergs. Market organic and fairtrade spices. <http://www.steenbergs.co.uk>
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).

Norgrow. www.norgrow.com - Organic and conventional spices, herbs and other commodities

Steng Ingredients www.steng.co.uk - Processor and importer of organic and conventional fresh and frozen herbs.

Queenswood Natural Foods <http://www.queenswoodfoods.co.uk/trading1.htm> - Organic foods wholesaler.

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

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

Espicias del Sol <http://www.especiassolsol.com>

Canada

Canada is the sixth largest market in the world for organic food and beverages. The market appears to be growing rapidly. 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> - Agents for importers of organic produce.

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.

Sunopta. Distribution of organic and natural foods - <http://www.sunopta.com/consumer.html>

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 growing rapidly following the introduction of the JAS, and 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 major markets in the EU and USA.

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.

Alishan <http://www.alishan-organic-center.com> - Organic and natural foods distributors.

CGC Japan. <http://www.cgcjapan.co.jp/english/index.html> - Buying group for Japanese retail outlets.

United States

This is the world's largest organic market. 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> still are the largest sellers of organic food sales, but mainstream supermarkets and grocery stores stock and increasing

range of organic foods. Farmers' markets, food service and other non-retail outlets are also increasingly important outlets. The USA is a substantial producer of some organic herbs and a large importer of organic spices and herbs.

In 2006, Walmart (www.walmart.com) announced they would be including a wide range of organic food products in the US. As the world's largest retailer, it purchases very high volumes and competes on cost.

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.global-organics.com/index.shtml> - Organic spices.

Herb Trade, Inc. <http://www.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, organic premium and structure

As for organic spices and herbs, no official foreign trade statistics have yet been published for trade in organic essential oils.

Premiums paid for organic oils vary, and prices are not easy to establish. A rough check can be done by comparing selling prices of suppliers/buyers who carry both organic and conventional oils—some of which are listed in this report.

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 under discussion 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 ingredient 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 conventional 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) are not permitted for use in organic processing. Organic alcohol based oleoresins are available and some producers of these are listed in the Annexes. 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:

- o Material safety data sheet (examples can be found on some buyers' websites listed in the Annexes)
- o Technical data sheet
- o Pesticide residue analysis
- o GMO free declaration
- o Declaration of non animal product derivatives
- o For flavour raw materials in the US and European markets, 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, and some also trade in perfumes and cosmetics:

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 these sectors. All the mainstream industry firms 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 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 with a common Bio cosmetic standard) <http://www.cosmebio.org>

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
(most of these are also organic importers/buyers)

Austria

Bruder Unterweger bu-oils@tirol.com

Canada

Aliksir www.aliksir.com Organic oils. Quebec

France

[Golgemma](#) Importer of organic oils and extracts and promotion of organic essential oils from a number of North African, Indian Ocean and European countries

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.emilenoel.com>

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

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

Produits Aromatiques du Diois www.herbier-du-diois.com

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

Sirius Trading <http://www.sirius-trade.com>

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

Sirius www.sirius-trade.com Large range of essential oils.

Germany

[Sonntag Natur Pur](#)

[Paul Kaders GmbH](#)

Hungary

Silvestris <http://www.silvestris.hu/>

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 and spice seeds 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.

Meadows of Canterbury <http://www.meadowsaroma.com> Some organic oils.

United States

Adrian US <http://www.adrianusa.com/index.html>

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>

Lebermuth <http://www.lebermuth.com> Some organic oils. Prices for small quantities and Material Data Sheets on website.

Mastertaste <http://www.mastertaste.com/natural/Organics.asp>

Annex I

Developing/Transition Economies: Producers, suppliers and main products

The lists below are not complete and contact details of additional producers will be added as the manual is updated. Producers who would like to be listed in future editions are requested to contact updates@organicconsultants.org

For general guides to organic exporters:

IFOAM http://www.ifoam.org/organic_world/directory/index.html

ITC www.intracen.org

Organic essential oils

Summary Table

Organic essential oils used in flavour, fragrances and cosmetic industries

Name	Botanical name	Parts distilled	Major 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	Nepeta 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 globulus		Branches	Portugal
Eucalyptus radiata		Branches	Australia
Eucalyptus smithii		Branches	Zimbabwe
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, Zambia
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, Zimbabwe
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

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.

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.

EOAS Organics Pvt Limited, eoas@itmin.com

D.D da Silva hddes@panlanka.net

Australia and New Zealand

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

Bronson and Jacobs (producer and trader) <http://www.bronsonandjacobs.com.au> sales@bjnz.co.nz

Australian Essential Oils <http://www.australescence.com>

AFRICA

Comores

Tropical SA (owned by Orgasynt, a French group) <http://www.orgasynt.com> Ylang ylang, neroli, clove bud, basil - Reunion type.

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

Hashem Brothers sales@hashembrothers.com

Kenya

Earthoils <http://www.earthoils.com> Essential and fixed (expressed) oils

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

Africa Botanicals africabotanica@gallmannkenya.co.ke Organic indigenous essential oils
Lelechwa, Lippia javanica etc.

Arbor Oils of Africa malte@wananchi.com Frankincense

Madagascar

Arco Ocean Indien, Antananarivo Fax : +33 4 93 40 47 79 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

Parapharma www.parapharma-madagascar.com Wide range of essential oils and organic oleoresins
UK representative johngriffin@bigfoot.com

Malawi

Geranium, lemongrass, rosemary:

Chikunda Farm, Blantyre pancho@africa-online.net

Satemwa Tea Estate Ltd 100667.1740@compuserve.com

Morocco

Biolandes. A French company, 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>

Seychelles

<http://www.islandscent.com> Cinnamon oils

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 www.teubes.com

United Republic of Tanzania

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

Zambia

AOFI Lusaka aofi@zamnet.zm Lemongrass, geranium, rosemary and other culinary herb oils.

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

A Stucki stucki@zamnet.zm Lemongrass, geranium, rosemary oils

Zimbabwe

Four Seasons Foods fsfoods@zol.co.zw Organic tagette, eucalyptus smithii, citronella, lavender and culinary herb oils.

EUROPE

France

Plantes Aromatiques du Diois <http://www.herbier-du-diois.com> and <http://www.orgasynth.com> Producer and trader in organic essential oils. 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 - yme, oregano, rosemary oils.

Sanoflor <http://www.sanoflore.net> - Il the French typical essential oils: lavender tarragon, sage, clary sage etc. Organic cosmetics.

Hungary

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

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> Co-op with wide range of organic products including essential oils

Spain

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

SOUTH AMERICA

Argentina

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

Lavendas de las Sierras lavandas@ba.net

Brazil

Citrovita <http://www.citrovita.com.br> Organic citrus including essential oils

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

Chile

Natural Response <http://www.naturalresponse.cl> - nfirmation awaited on organic products.

Twilta <http://www.nobeltec.com> - se hip and other fixed and essential oils

San Salvador

Uprex uprexsa@telemovil.net - regano, lemongrass.

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

Egyptian Herbarium egyherb@access.com.eg

Egyptian Organic Agriculture eo-sales@hotmail.com

Herbal Family ahaddad@herbal-family.com

Kenya

Cinnabar Green horsey@africaonline.co.ke Culinary herbs

Kisima Farm pinguone@kisima.co.ke Paprika, chillies and other spices and herbs

Meru Herbs meruherbsho@swiftkenya.com Herbs and herb teas Karkade, Lemongrass etc

Three Palm Gardens organic@3palmgarden.co.ke Chillies

Mt Kenya Herb Co suzanne@africaonline.co.ke - icinal herbs

Africa Bio-Medica. bgasston@yahoo.com - Medicinal herbs

Mace Foods Ltd macefoods@multitechweb.com - Birds Eye, Cayenne

Madagascar

Promabio phaeflor@dts.mg - Vanilla and other spices

Pabiom pabiom@les-raisting.de - Vanilla

Parapharma www.parapharma-madagascar.com -Wide range of essential oils and organic oleoresins UK representative johngriffin@bigfoot.com

Malawi

Pirimiti Ltd., Blantyre pirimiti@malawi.net

Hortiflora, Blanyre shoga@malawi.net

South Africa

Meadowsweet Herbs www.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>
<http://www.organicsouthafrica.co.za/> – links to producers.

United Republic of Tanzania

Kimango kimone@africaonline.co.tz - Paprika, chillies, lemongrass, hibiscus. Dry and fresh.

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

Mufindi. noells@intafrika.com - Lemongrass, camomile.

Uganda

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

AMFRI amfri@infocom.co.ug - Vanilla.

Zambia

AOFI Lusaka aofi@zamnet.zm - Lemongrass, rosemary and other herbs.

SOUTH AMERICA

Guatemala

Agromec Organic Cardamom agromec1@yahoo.com

Peru

Greenworks llopez.greenworks@gmail.com

ASIA AND AUSTRALASIA

Australia

Lexus Foods www.lexusfood.com - Australian based trader in organic and conventional Indian spices

India

Aryan International <http://www.aryanint.com>

VASuDHA Kerala vasudhaorg@yahoo.com

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

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

Peermade Development Society, Kerala <http://www.pdsorganicspice.com> - Steam sterilised organic Spices.

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

Galore Enterprises galore@vsnl.com

Kashmir Kessar Mart. Organic saffron, kkmartsgr@hotmail.com

International Resources for Fairer Trade, Mumbai, India, amol@irft.org

Organic India <http://www.organicindia.com> <http://www.indianindustry.com/spices/7949.html> - organic spices listing

Phalada Agro Research Foundation www.phaladaagro.com - Organic spices and Ayurvedic herbs

Kirpal Trade Development A. S. Virk be_sunny_ena@yahoo.co.in - Himalayan organic herbs, fixed oils

Sri Lanka

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

Vanuatu

Venui Vanilla and other spices, <http://gippsnet.com.au/venui/index.htm>

Annex II
Quality Control – standards and methods

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>	1.0×10^2	1.0×10^3
	<i>Staphylococcus aureus</i>	1.0×10^2	1.0×10^3
	<i>Bacillus cereus</i>	1.0×10^2	1.0×10^3
	<i>Clostridium</i>	1.0×10^2	1.0×10^3
	<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

**EUROPEAN SPICE ASSOCIATION SPECIFICATIONS OF
QUALITY MINIMA FOR HERBS AND SPICES**

Abbreviations: weight by weight (W/W), acid insoluble ash (AIA), volatile oil (V/O), volume by weight (V/W)

Subject	
Extraneous matter	Herbs 2%, Spices 1%
Sampling	(For routine sampling) Square root of units/lots to a maximum of 10 samples. (For arbitration purposes) Square root of all containers. e.g. 1 lot of pepper may = 400 bags, therefore square root = 20 samples.
Foreign Matter	Maximum 2%
Ash	Refer to List
Acid Insoluble Ash	Refer to List
H ₂ O	Refer to List
Packaging	Should be agreed between buyer and seller. If made of jute and sisal, they should conform to the standards set by CAGBISCO Ref C502-51. However, these materials are not favoured by the industry, as they are a source of product contamination, with loose fibres from the sacking entering the product.
Heavy Metals	Shall comply with national / EU legislation.
Pesticides	Shall be utilized in accordance with manufacturers recommendations and good agricultural practice and comply with existing national and /or EU legislation.
Treatments	Use of any EC approved fumigants in accordance with manufacturers' instructions, to be indicated on accompanying documents. (Irradiation should both be used unless agreed between buyer and seller.
Microbiology	Salmonella absent in (at least) 25 g. Yeast & Moulds 10 ⁶ /g target, 10 ⁸ /g absolute maximum E Coli. 10 ² /g target, 10 ³ /g absolute maximum Other requirements to be agreed between buyer and seller.
Infestation	Should be free in practical terms from live and / or dead insects, insect fragments and rodent contamination visible to the naked eye (corrected in necessary for abnormal vision).
Aflatoxins	Should be grown, harvested, handled and stored in such a manner as to prevent the occurrence of aflatoxins or minimise the risk of occurrence. If found, levels should comply with existing national and / or EU legislation.
Volatile Oil	Refer to List
Adulteration	Shall be free from.
Bulk Density	To be agreed between buyer and seller.
Species	To be agreed between buyer and seller.
Documents	Should provide details of any treatments the product has undergone; name of product; weight; country of origin; lot identification/batch number; year of harvest.

LIST – ESA QUALITY MINIMA				
Product (whole form)	ASH % W/W MAX	AIA % W/W MAX	H ₂ O % W/W MAX	V/O % V/W MIN
ANISEED	9 (ISO)	2.5 (AFNOR)	12 (ISO)	1 (ISO)
BASIL (BSI)	16	2.0	12	0.5(ESA)
BAY (ISO)	7	2	8	1
CARAWAY (ESA)	8	1.5	13	2.5
CARDAMOM (ESA)	9	2.5	12	4
CASSIA (ESA)	7	2	14	1.0
CELERY SEED (ISO)	12	3	11	1.5
CHERVIL (ESA)	17	2	8	-
CHILLI (ISO)	10	1.8	11	-
CHIVES (ESA)	13	2	8	-
CINNAMON (ESA)	7	2	14	0.4
CLOVES	7 (ISO)	0.5 (ISO)	12 (ISO)	14 (AFNOR)
CORIANDER SEED	7 (ISO)	1.5 (ISO)	12 (ISO)	0.3 (ESA)
CUMIN (ESA)	14	3	13	1.5
DILL TOPS (ESA)	15	2	8	-
DILL SEED (ESA)	10	2.5	12	1
DUTCH CARAWAY (ISO)	8	1.5	13	2.5
FENNEL SEED (ISO)	9	2	12	1.5
FENUGREEK (ISO)	7	2	12	--
GARLIC POWDER	6 (ESA)	0.5 (ISO)	7 (ESA)	- (ISO)
GINGER	8 (ISO)	2 (ESA)	12 (ISO)	1.5 (ISO)
LAUREL LEAVES	7	2	8	1
MACE (ISO)	4	0.5	10	5
MARJORAM (ISO)	10	2	12	1
MINT (ISO)	12	2.5	13	0.5
MUSTARD (BSI)	6.5	1	10	-
NUTMEG	3 (ISO)	0.5 (ISO)	12 (ESA)	6.5 (ESA)
ONION POWDER (ISO)	5	0.5	6	-
OREGANO (BSI)	10	2.5	12	1.5 (ESA)
PAPRIKA POWDER (ESA)	10	2	11	-
PARSLEY (not English) (ESA)	14	1.5	7.5	-
PEPPER BLACK	7 (ISO)	1.5 (ESA)	12 (ESA)	2 (ISO)
PEPPER WHITE	3.5 (ISO)	0.3 (ISO)	12 (ESA)	1.5 (ESA)
PIMENTO – Jamaica	5 (ESA)	5 (ESA)	0.4 (ISO)	1 (ESA)
Other origins	12 (ISO)	12 (ISO)	3.5 (ISO)	2 (ESA)
ROSEMARY	8 (ESA)	1(ESA)	10 (ISO)	1 (ISO)
SAFFRON WHOLE (ISO)	8	1	12	-
SAFFRON GROUND (ISO)	8	1.5	10	-
SAGE (ISO)	12	2	12	1.5
SAVOURY (ESA)	12	1	12	0.5
TARRAGON (ESA)	12	1.5	8	0.5
THYME	14 (ISO)	4 (ESA)	12 (ISO)	1 (ISO)
TURMERIC WHOLE (BSI)	8	9 (ISO)	2	10 (ISO)
GROUND	12	10 (ISO)	2.5	1.5 (ESA)

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>.

EurepGAP http://www.eurepgap.org/Languages/English/index_html - Agricultural standards.

Advice on achievement of required standards:

Steam sterilisation

The use of steam to reduce microbiological contamination of spices well tested, and if used correctly can bring contamination to less than 1% of levels common in farm dried spices. The process needs to be designed for each commodity to minimise loss of colour, volatiles and non volatile constituents. In general, herbs are harder to clean effectively without loss of quality than spices. Providers of turnkey plant are listed below. A steam generator with a suitable vat such as an essential oil still can be effectively used, together with a suitable dryer and good post process hygiene and moisture control.

Steamlabs www.steamlab.de.

Group ETIA Safesteril www.etia.fr www.fadiya.com.

2. Essential Oils

Standards for oils can be obtained from the ISO <http://www.iso.org> 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.Pontackaging.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

hitekbs@bomb4vsnl.net.in

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

Evergreen Technology Pvt Limited info@evergreenindia.com

Africa

C L Teubes www.teubes.com - Distillation equipment sourcing and advice for African producers.

Europe

<http://www.tournaire.fr>

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

Process technicians/consultants

Marius DouallyConsultations Techniques caropolge@aol.co.uk

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

2. Spices and herbs

Equipment suppliers and design sources

Manufacturers of tea and tobacco processing machinery, supplying drying and leaf/stalk sorting equipment are useful source of new and used herb processing equipment – the processes are similar.

Innotech, Germany <http://www.innotech-ing.de/Innotech/english/TT-Dryer.html> - Solar dryers

Intermediate Technology Development Group now Practical Acton, <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) **World Markets in the Spice Trade, 2000-2004**
<http://www.intracen.org/mds/sectors/spices/welcome.htm>

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 2005* 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/mds> - A wide variety of reports on markets, including organics. Contact information on organic producers and buyers worldwide.

EPOPA <http://www.grolink.se/epopa/Publications/index.htm> - Selection of market reports, Africa.
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.

Prices

Some indications on prices can be obtained from:

Organic Trade Services <http://www.organiets.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

Commodities (non organic). Subscription service.

ITC Market News Service. Price data on various commodities
<http://langues.p-maps.org/mns/spices.php?si=b6cbc96bf06420123d475da5f1a27894>. 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

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/soshiki/syokuhin/hinshitu/organic/eng_yuki_59.pdf

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.

Organic Research. CABI Publications, <http://www.organic-research.com> - Subscription required.

Green Guide www.greenguide.co.uk

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>

Four Seasons Foods (Pvt) Ltd [Guide to Organic Spice and Herb Crops Production in the Tropics/Subtropics](#)

Soil analysis

Some laboratories with experience with the use of organic inputs such as rock phosphates:

[Crop Nutrition Services Ltd, Kenya](#)

[Glenside Group Ltd UK](#)

Organic Inputs Database- Permitted or Restricted Inputs:

Directory of organic commercially available fertilisers.

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

Rock Phosphate (PR)

Local sources of phosphate, a limiting factor in many developing country soils, is a major economic advantage for organic production. As discussed in the body of this manual, Phosphate rock of sedimentary origin can be used directly on most soils. PR of igneous origin can in the right conditions be applied directly to soils - it can become available over several years, and is cheaper per unit of P than superphosphate.

The subject is complex and controversial, but in summary:

Igneous origin “unreactive” PR can in favourable conditions, become available over a period of several years. These PRs should be used in tropical and subtropical moderately acid soils with as much soil biological activity as possible, and the solubilisation of the RP can be assisted by the addition of phosphate solubilising bacteria, the admixture of sulphur, and the use of crops with high mycorrhizal activity. Inclusion of PRs in composting mixes is also practiced. However, since PRs of igneous origin are almost insoluble when tested under laboratory conditions in a weakly acidic solution - a standard test uses 2% citric acid - some countries will not register igneous origin PR for sale as a fertiliser.

Some high quality **sedimentary** origin PRs like Tanzanian Minjingu or North African are as effective as superphosphates in some soils.

General information on agrominerals can be obtained from:

[FAO Rock Phosphate Resources Database](#) spreadsheet covering locations worldwide of rock phosphate deposits

Phosphate Deposits of the World Vol II. Northolt, Sheldon and Davidson. Cambridge U Press

[Rocks for Crops](#). Van Straaten. Survey of agrominerals in Sub-Saharan Africa.

Partial database of producing PR sources

(Information from correspondents is particularly welcome on contact details and results of direct application of PRs from producing PR mines, and will be included in future updates)

As noted earlier, sedimentary (soft) PR is generally suitable for direct application to acid tropical soils, with good availability of P to plants over several seasons. Igneous origin RP in conventionally termed non reactive- but can break down under favourable conditions (soil PH, moisture, temperature, humus levels and soil biological activity, action of root fungi, addition of phosphate solubilising bacteria, admixture with sulphur or other acidifying agents).

Australia. Queensland

Brazil ARAXA
Burkina Fasso. Kodjari.
China <http://www.phosphatefertilizer.com/>
Egypt Sedimentary deposits.
India <http://www.rsmm.com/phosphate.htm>
Jordan
Madagascar Hyper Barren. Reactive sedimentary origin from islands in the Barren Archipelago.
Malawi Tundulu Igneous
Mali TILEMSI
Morocco <http://www.ocpgroup.ma> Sedimentary
Niger TAHOUNA
Peru
Senegal www.ics.sn and others. Sedimentary deposits.
South Africa www.foskor.co.za Igneous. Langfos- not currently being mined.
Tanzania. Mijingu Mines & Fertiliser ccilar@bol.co.tz . High quality reactive sedimentary
Togo
Tunisia GAFSA <http://www.gct.com.tn/english/fertil.htm>
U.K. <http://www.carrs-fertiliser.co.uk> Suppliers of GAFSA rock phosphate and sylvinite KCl
Uganda BISUMBU Igneous
Zimbabwe Zimphos www.zimphos.co.zw Igneous

Potash

U.K.
www.clevelandpotash.co.uk Sylvinite (KCl). 16% K₂O minimum. EU certification.
<http://www.carrs-fertiliser.co.uk> Sylvinite

Other Soil Amendments

South Africa

National Plant Food cc. Fishmeal based fertiliser. PO Box 89, Cato Ridge 3680

Gromor gromor@iafrica.com

Neutrog <http://www.neutrog.co.za>

Pesticides Database – Permitted or Restricted Use

Biological Control Products

Copper and Sulphur formulations – not itemised as widely available from conventional agrochemical suppliers

South Africa

www.biocontrol.co.za - Ecocert approved bio-inputs- Trichoderma etc

<http://www.agro-organics.co.za> - Range of approved pesticides and herbicides

Pyrethrum

Pimpexport Pyrethrum suppliers, <http://www.pimpexport.com>

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

Organic Seed Suppliers

Choice of seeds should be done in conjunction with buyers where possible to avoid a common problem of loss of time and money through purchase of varieties unacceptable in the market.

Organic seed databases are maintained for various EU countries under the website <http://www.organicxseeds.com>. Use of non-organic seed of varieties not listed under these databases require a derogation from the inspection agency.

Eco-PB <http://www.eco-pb.org> - Organic Plant Breeding Website

<http://www.organic-growers.com/seeds.htm> - List of USA organic seed sellers

www.tamarorganics.co.uk - Organic herb seeds

Other information

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.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. Now renamed Practical Action.

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 www.bioequitable.typepad.com

<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

Development agencies, 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>
DIPP (Danish Import Promotion Programme) <http://www.dipp.eu>
GTZ Deutsche Gesellschaft für Technische Zusammenarbeit 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>
SIPPO http://www.sippo.ch/files/publications/organic04_c.pdf Database of Organic importers, certification agencies etc.
OTA (Organic Trade Association) North America <http://www.ota.com>
CDE Netherlands www.cde.int

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 Natural Food Merchandiser:
<http://www.naturalfoodsmerchandiser.com/ASP/articleArchive.asp?hidFromPage=ENews>
World Organics News <http://www.agra-net.com> (UK & international).

Annex VII

Organic trade

Many of the websites listed contain information and addresses on buyers and suppliers exhibiting

Organic trade fairs

BioFach – Nürnberg, Germany. <http://www.biofach.de>, Also Organic fairs at Baltimore USA, China, Brazil, 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. www.organicexpo.com

Other fairs with an organic section

Alimentaria. Spain, Portugal and Mexico <http://www.alimentaria.com>

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

Food Ingredients Europe (biennial) <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>

Dubai organic and natural products fair www.globallinksdubai.com .

Natural Trade Show www.naturaltradeshow.com Expos in the UK

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

SANA <http://www.sana.it> Bologna Natural Expo

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

Istanbul Organic and Natural Expo www.exponatura.net

Fairs and congresses for aromatics, natural plant products and cosmetics

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

Vivaness Natural Cosmetics Expo. <http://www.vivaness.de> at Nurenberg Biofach from 2007.

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

International Trade Centre UNCTAD/WTO

ITC: Your partner in trade development

For more information:

Street address: International Trade Centre UNCTAD/WTO (ITC), 54–56, rue de Montbrillant, Geneva, Switzerland.

Postal address: International Trade Centre UNCTAD/WTO (ITC), Palais des Nations, 1211 Geneva 10, Switzerland.

Telephone: +41 22 730 0111 fax: +41 22 733 4439 e-mail: itcreg@intracen.org

Internet: <http://www.intracen.org>