

## MEDICINAL PLANTS & NATURAL INGREDIENTS MARKET INSIDER

March 2015



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### Cover Picture:

Rosemary (*Rosmarinus officinalis* L.; Fam. Lamiaceae), Sebastopol, California. Photo by Josef A. Brinckmann, 2015.

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## About the Market Insider for Medicinal Plants & Natural Ingredients

The Market Insider for medicinal plants & natural ingredients provides market intelligence on the production and international trade of selected botanical raw materials and value-added forms such as extracts and oils.

Market insights are presented for key developments on medicinal plants and botanical nutritional ingredients including analysis of international trade data, market trends, indicative market prices for selected botanical ingredients, trade specifications, market size and growth, target markets, business opportunities, legislation affecting the sector, technology, trade events, producer and product profiles.

New sources of information, news that subscribers and readers might have on their specific products or areas are welcome. See more at: <http://www.intracen.org/itc/market-insider/medicinal-plants/>

## Some Useful Terminology

API:	Ayurvedic Pharmacopoeia of India
AYUSH:	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy
CBD:	Convention on Biodiversity
CCC:	Standard Classification of Commodities of Taiwan
CCCS:	Commodity Classification for China Customs Statistics
cfu/g:	Colony-forming units per gram
C&F:	Cost & Freight; means the price includes cost and freight charges
CFR:	Seller has the same responsibilities as when shipping FOB, but shipping costs are prepaid by the seller
CIF:	Cost Insurance Freight; means the price includes cost, freight and insurance
CITES:	Convention on International Trade in Endangered Species of Wild Flora & Fauna
CL:	Container load
C/S:	Cut and sifted
COMTRADE:	Commodity Trade Statistics Database
EDQM:	European Directorate for the Quality of Medicines
EMA:	European Medicines Agency
Essential Oils:	Odorous product, usually of complex composition, obtained from a botanically defined plant raw material by steam distillation, dry distillation, or a suitable mechanical process without heating
Extracts:	Preparations of liquid (liquid extracts and tinctures), semi-solid (soft extracts and oleoresins) or solid (dry extracts) consistency obtained from Herbal Drugs or animal matter prepared by suitable methods using ethanol or other suitable solvents
EXW:	Ex works - Buyer arranges for pick-up of goods at the seller's location. Seller is responsible for packing, labelling, and preparing goods for shipment on a specified date or time frame
Farm Gate Price:	Refers to the dollar value of agricultural products that you receive from direct farm sales or the value of primary products used for processing
FAS:	Free alongside ship - Buyer arranges for ocean transport. Seller is responsible for packing, labelling, preparing goods for shipment and delivering the goods to the dock
FAS Value:	Value of exports at the seaport, airport, or border port of exportation, based on the transaction price including inland freight, insurance, and other

	charges incurred in placing the merchandise alongside the carrier at the port of export
FCA:	Free carrier: seller is responsible for costs until the buyer's named freight carrier takes charge
FCL:	Full container load
FLO:	Fairtrade International
FOB:	Free On Board - means that the price only includes the cost of the item. Seller arranges for transport of the goods, preparing goods for shipment, and loading the goods onto the vessel
FOR & FOT:	Free On Rail or Free on Truck; both refer to goods being carried by rail and should only be used when the goods are carried by rail. The risk of loss or damage is transferred when the goods are loaded onto the rail
FTA:	Free Trade Agreement
GACP:	Good Agricultural and Collection Practice
GMP:	Good Manufacturing Practice
ha:	Hectare
Herbal Drug Preparations:	Obtained by subjecting Herbal Drugs to treatments such as: extraction, distillation, expression, fractionation, purification, concentration or fermentation. These include comminuted or powdered herbal drugs, tinctures, extracts, essential oils, expressed juices and processed exudates
Herbal Drugs:	Whole, fragmented, or cut plants, parts of plants, algae, fungi or lichen, in an unprocessed state, usually in dried form but sometimes fresh. Certain exudates that have not been subjected to a specific treatment are also considered to be herbal drugs
Herbal Teas:	Consist exclusive of one or more Herbal Drugs intended for oral aqueous preparations by means of decoction, infusion or maceration; usually supplied in bulk form or in sachets
HPLC:	High Performance Liquid Chromatography
HPTLC:	High Performance Thin Layer Chromatography
HS Code:	Harmonized System Tariff Code
ITC (HS)	Indian Trade Classification Harmonized System
ITC	International Trade Centre / UNCTAD / WTO
MAP:	Medicinal and Aromatic Plants
NLT:	Not less than
NESOI:	Not Elsewhere Specified or Included
NMT:	Not more than
NOP:	National Organic Program (USDA)
NTFP:	Non Timber Forest Products
OTC:	Over the Counter medicines: Medicines sold without a prescription
PE:	Powdered Extract
PhEur:	European Pharmacopoeia
SE:	Soft Extract
TBC:	Tea bag cut
TCM:	Traditional Chinese Medicine
THMP:	Traditional Herbal Medicinal Product
TLC:	Thin Layer Chromatography
UPI:	Unani Pharmacopoeia of India
USD:	United States Dollar
USP:	United States Pharmacopoeia
VAT:	Value Added Tax

# 1. Industry News and Trends

## 1.1. Herb quality and economic adulteration on the agenda at ICSB 2015



by Market Insider  
19 March 2015

The focus of the 15th Oxford International Conference on the Science of Botanicals (ICSB 2015), taking place 13-16 April 2015 at University of Mississippi, is to discuss approaches for post-market surveillance, risk and safety assessment, quality control and adverse event reporting for botanical dietary supplements and natural health products, as well as regulatory aspects with perspectives from government, manufacturers and trade associations.

Mark Blumenthal, Founder & Executive Director of the American Botanical Council, is presenting the topic '*Laboratory Guidance On Analytical Methods To Detect Adulterants In Commercial Botanical Materials: The Next Phase Of The ABC-AHP-NCNPR Botanical Adulterants Program*'.

The Botanical Adulterants Program has been initiated by three leading nonprofit organizations, the American Botanical Council (ABC), the American Herbal Pharmacopoeia (AHP), and the University of Mississippi's National Center for Natural Products Research (NCNPR).

According to ABC "Responsible parties in the herbal and dietary supplement community have become increasingly concerned about the suspected and confirmed practice of adulteration of numerous ingredients. The existence of adulteration raises questions about the identity and quality of some popular herbal ingredients sold in dietary supplements in the United States and in other botanical products (e.g., medicines, cosmetics, etc.) in global markets".

ICSB 2015 also features presentations by many international experts offering perspectives on quality and regulation of medicinal plants and herbal medicinal products including:

- De-An Guo, Director of National Engineering Lab for Traditional Chinese Medicine (TCM) Standardization, Director of Shanghai Research Center for TCM Modernization, and Editor-in-Chief of World Journal of Traditional Chinese Medicine (WJTCM);
- Werner Knöss, Department Head for the licensing of Traditional Herbal Medicinal Products (THMPs) at the German Federal Institute for Drugs and Medical Devices (BfArM), and also Chairman of the Committee on Herbal Medicinal Products (HMPC) of the European Medicines Agency (EMA);
- Ranjit Puranik, Vice President of the Ayurvedic Drug Manufacturers Association (ADMA) (Mumbai, Republic of India) and CEO of Shree Dhootapapeshwar Limited (Mumbai);
- Bruce Randall, Acting Director, Health Products Acting Director, Health Products & Food Branch, Health Canada.

### Sources:

1. American Botanical Council. Botanical Adulterants Program:  
<http://cms.herbalgram.org/BAP/index.html>
2. 15th Annual Oxford International Conference on the Science of Botanicals • April 13th - 16th, 2015 • Oxford, Mississippi: <http://www.oxfordicsb.org/index.php/agend>

## 1.2. Back-to-back April MAP events in Republic of Turkey



by Market Insider  
13 March 2015

Those involved in the production, processing and trade of Eastern European or Mediterranean region medicinal and aromatic plants (MAPs) may want to consider spending part of April in the Republic of Turkey for back-to-back MAP events 16-19 April in Izmir, on the Aegean coast and 22-25 April in Antalya on the Mediterranean coast.

Co-located with the Izmir Organic Products Fair (16-19 April), Republic of Turkey's leading trade event for organic products, will be the 'International Turkish Quality Symposium for Organic Medicinal and Aromatic Plants' (17-18-April). The two-day congress, organized by the Association of Organic Agriculture (ETO) in collaboration with the German-Turkish Bilateral Project, the FairWild Foundation (FWF) and EKOLOJİ Fair Izmir, will highlight Turkey's importance for the production of organic medicinal and aromatic plants (MAPs) for the international markets. The symposium will focus on international value chains for organic MAPs, MAP production situation in Turkey, specific quality challenges of MAPs, sustainable wild collection of MAPs, and MAP marketing issues.

Then in Antalya, the '2nd Mediterranean Symposium on Medicinal and Aromatic Plants' (22-25 April) will cover topics including good agricultural and collection practices (GACPs) for MAPs, biodiversity conservation, management and sustainable uses of MAPs and non-wood-forest products (NWFPs), industrial processing technologies of MAPs, herbal and traditional medicines, legislation on MAPs and NWFPs, botany, ethnobotany & ethnopharmacology, standardization and quality of MAP products, and marketing of MAPs and MAP products.

### Sources:

1. International Turkish Quality Symposium for Organic Medicinal and Aromatic Plants: <http://ekolojizmir.izfas.com.tr/en/etkinlik-programlari/activity-programme/>
2. 2nd Mediterranean Symposium on Medicinal and Aromatic Plants: <http://www.mesmap.org/>

## 1.3. Unlicensed St. John's Wort herbal medicinal products removed from Amazon UK internet sales



by Market Insider  
06 March 2015

St. John's wort (*Hypericum perforatum*) is a native plant of European, northern African and western Asian biodiversity. The flowering tops are harvested (from both wild-collection and controlled cultivation) during the flowering period for use in European herbal medicinal products but are also exported for use in medicinal products worldwide.

In Europe, the commercial supply of St. John's wort (flowering aerial parts) is for the most part obtained from producers and suppliers in the Republic of Albania, Republic of Austria, Bosnia & Herzegovina, Republic of Bulgaria, Republic of Croatia, Federal Republic of Germany, Hungary, Republic of Italy, Kosovo, Republic of Poland, Romania, Republic of Serbia, and the former Yugoslav Republic of Macedonia.

In the European Union, St. John's wort (and extracts made from it) is regulated as an active ingredient of medicinal products that require pre-marketing authorization by national authorities before a finished product can be sold. The European Directorate for the Quality of Medicines (EDQM) establishes official pharmacopoeial standards for the composition, identity, quality, purity, and strength of St. John's wort raw materials and extracts whilst the European Medicines Agency (EMA) establishes the labelling standards for what can or must be stated on the herbal product labels and on the patient information leaflet (PIL).

In the European Union, certain St. John's wort preparations can be registered as 'Traditional Herbal Medicinal Products' (THMPs) indicated for (a) relief of temporary mental exhaustion; (b) symptomatic treatment of minor inflammations of the skin (such as sunburn) and as an aid in healing of minor wounds; or (c) symptomatic relief of mild gastrointestinal discomfort. Certain other defined St. John's wort preparations can be licensed as 'Well-Established-Use Herbal Medicinal Products' (WEU-HMP) indicated for (a) treatment of mild to moderate depressive episodes (according to ICD-10); or (b) short term treatment of symptoms in mild depressive disorders.

For example, in the United Kingdom of Great Britain and Northern Ireland, there are 28 St. John's wort products currently holding a traditional herbal registration (THR) granted by the Medicines and Healthcare products Regulatory Agency (MHRA).

According to an article published on 05 March 2015 by NutraIngredients.com, '107 unlicensed St John's Wort products were removed from the UK Amazon website this week following a joint investigation by the MHRA and HFMA (Health Food Manufacturers' Association)'.

The article goes on to quote MHRA Senior press officer Jennifer Kyne warning that herbal medicines without a 'THR' (Traditional Herbal Registration) logo and purchased from internet retailers cannot be guaranteed to meet European standards of quality and safety. MHRA is working Internet Service Providers (ISPS), law enforcement agencies, payment providers and distributors to tackle the problem of illegal unlicensed herbal medicinal products in the UK market.

**Sources:**

1. European Directorate for the Quality of Medicines (EDQM). St. John's Wort (Hyperici Herba). In: *European Pharmacopoeia*, Eighth Edition (PhEur 8.0). Strasbourg, France: EDQM. 2014.
2. European Medicines Agency (EMA) Committee on Herbal Medicinal Products (HMPC). Final Community Herbal Monograph on *Hypericum perforatum* L., Herba (Traditional Use). London, UK: EMA. 12 November 2009.
3. European Medicines Agency (EMA) Committee on Herbal Medicinal Products (HMPC). Final Community Herbal Monograph on *Hypericum perforatum* L., Herba (Well-Established Medicinal Use). London, UK: EMA. 12 November 2009.



4. Medicines and Healthcare products Regulatory Agency (MHRA). Herbal medicines granted a traditional herbal registration. London, UK: MHRA. 31 December 2014.
  5. Michail N. 107 St John's Wort products pulled from Amazon UK. *NUTRAingredients.com*. 05 March 2015. Available at: <http://www.nutraingredients.com/Regulation-Policy/St-John-s-Wort-products-removed-from-Amazon-UK>
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#### 1.4. Albanian MAP exports increased significantly in 2014

by Market Insider  
04 March 2015

According to the Ministry of Agriculture, Republic of Albania exports of medicinal and aromatic plants (MAPs) reached 11,600 metric tonnes (MT) in 2014, up from 11,200 MT in 2013. The reported value of exported MAPs in 2014 was about 3.5 billion Albanian Lek (ALL), 2 billion more than in 2013. At end of 2014, US\$1 equalled 115.68 LEK (now 125.20 LEK).

Albania's most important MAP exports include:

- Dalmatian sage (*Salvia officinalis*) leaf
- Balkan oregano (*Origanum vulgare* subsp. *viridulum*) herb
- Thyme (*Thymus vulgaris*) flowering aerial parts
- Cade juniper (*Juniper oxycedrus*) berry cone
- Common juniper (*Juniper communis*) berry cone
- Laurel (*Laurus nobilis*) leaf
- Wild thyme (*Thymus serpyllum*) flowering aerial parts
- Coltsfoot (*Tussilago farfara*) leaf and flower
- St. John's wort (*Hypericum perforatum*) flowering tops
- Rosemary (*Rosmarinus officinalis*) flowering aerial parts
- Shepherd's purse (*Capsella bursa-pastoris*) herb
- European mistletoe (*Viscum album*) herb
- Stinging nettle (*Urtica* spp.) herb
- Winter savory (*Satureja montana*) leaf

The main destination markets for Albanian MAPs in 2014 were the United States of America and some Member States of the European Union. The majority of Albania's MAP businesses are situated in the country's north, in particular the Shkodra Region where thousands of local people are employed in the wild collection and processing of MAPs. MAP exports continue to show a positive trend for Albania and play an important role in the country's economy.

##### Sources:

1. Agjencia Telegrafike Shqiptare. Rritet në 11.600 ton eksporti i bimëve medicinale. 16 February 2015: <http://www.ata.gov.al/rritet-ne-11-600-ton-eksporti-i-bimeve-medicinale-224383.html>
  2. Invest in Albania. The export of medicinal plants increased significantly during 2014. 17 February 2015: <http://invest-in-albania.org/export-medicinal-plants-increased-significantly-2014/>
  3. Kathe W, Honnef S, Heym A. *Medicinal and Aromatic Plants in Albania, Bosnia-Herzegovina, Bulgaria, Croatia and Romania*. Bonn: Bundesamt für Naturschutz (BfN). 2003: <http://www.bfn.de/fileadmin/MDB/documents/skript91.pdf>
  4. USAID. *The Medicinal and Aromatic Plants Value Chain in Albania*. 2009: [http://pdf.usaid.gov/pdf\\_docs/pa00jn4f.pdf](http://pdf.usaid.gov/pdf_docs/pa00jn4f.pdf)
-

## 1.5. European Medicines Agency requests information on wild strawberry leaf



12 December 2014  
EMA/HMPC/776619/2014  
Committee on Herbal Medicinal Products (HMPC)

Call for scientific data for use in HMPC assessment work  
on *Fragaria vesca* L., folium

Submission period: 12 December 2014 - 15 March 2015

by Market Insider  
03 March 2015

Wild Strawberry (*Fragaria vesca*) is a native plant of European and Asian biodiversity. The foliage leaves are wild-collected during the flowering period for use in European folk and traditional medicine, for example prepared as an astringent herbal tea to treat diarrhea. Wild Strawberry Leaf is also exported to North America where it is used as a component of notified Herbal Dietary Supplement products in the United States of America and as a medicinal ingredient of licensed Natural and Non-prescription Health Products in Canada.

The commercial supply of wild strawberry leaf is for the most part wild harvested by rural populations in the Republic of Albania, Republic of Bulgaria, Republic of Croatia, Kosovo, Republic of Serbia, the former Yugoslav Republic of Macedonia, and Ukraine.

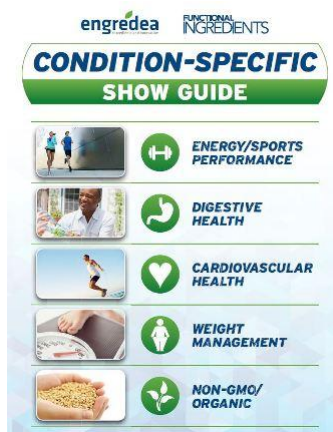
On 15 December 2014, the European Medicines Agency (EMA) put out a call for scientific data which may be used in the assessment of Wild Strawberry Leaf as part of the establishment of a European Union herbal monograph. Such monographs provide labelling standards for registered herbal medicinal products to be marketed in the European Union (EU). A quality standards monograph for testing of Wild Strawberry Leaf already exists in the German Drug Codex (Fragariae folium DAC).

The Committee on Herbal Medicinal Products (HMPC) invites all interested parties such as pharmaceutical industry associations, health care professional groups, learned societies, consumers and patients' associations, governmental institutions as well as EU and European Economic Area (EEA)-European Free Trade Association (EFTA) Member States to submit any scientific data on Wild Strawberry Leaf up until 15 March 2015 by email to: [hmpc.secretariat@ema.europa.eu](mailto:hmpc.secretariat@ema.europa.eu)

### Sources:

1. EMA Committee on HMPC. Call for scientific data for the systematic review of the monograph on *Fragaria vesca* L., folium. London, United Kingdom and Northern Ireland: EMA. [http://www.ema.europa.eu/ema/doc\\_index.jsp?curl=pages/includes/document/document\\_detail.jsp?webContentId=WC500179040&url=menus/document\\_library/document\\_library.jsp&mid=0b01ac058009a3dc](http://www.ema.europa.eu/ema/doc_index.jsp?curl=pages/includes/document/document_detail.jsp?webContentId=WC500179040&url=menus/document_library/document_library.jsp&mid=0b01ac058009a3dc)
2. Wichtl M (ed.). *Fragariae folium*. In: *Herbal Drugs and Phytopharmaceuticals: A Handbook for Practice on a Scientific Basis*, Third Edition. Stuttgart, Germany: Medpharm Scientific Publishers.

## 1.6. Condition-specific ingredient show guide launched for buyers visiting Engredea 2015



by Market Insider  
25 February 2015

The 2015 Engredea trade show, taking place 5-7 March 2015 in Anaheim, California, has launched a 'condition-specific' ingredient show guide. The Engredea exhibitor profile includes producers and suppliers of botanical and other natural ingredients, including certified organic and non-GMO verified herbal raw materials and extracts.

Because innovation and product development professionals may be focused first on function, i.e. what health conditions can the ingredient be used for, identifying suppliers based on the conditions may save prospective buyers R&D time and expense. This may be especially true in cases where an ingredient supplier has already invested in safety and efficacy studies for their branded ingredient.

Examples of the condition-specific categories include Energy/Sports Performance, Digestive Health, Cardiovascular Health, Weight Management, and Non-GMO/Organic (although the last example is not really a condition!).

Selected medicinal plant and extract suppliers exhibiting at Engredea 2015 include, among many others (these are not endorsements):

- AYUSH Herbs, Inc., Redmond, WA, United States of America; manufacturer and distributor of standardized Ayurvedic herbs and extracts;
- Blue California, Rancho Santa Margarita, CA, United States of America; manufacturer of botanical extracts;
- Botanicalink Co. Ltd., Beijing, People's Republic of China; supplier of organic botanical / herbal raw materials;
- Cultivator Natural Products, Jodhpur, Rajasthan, Republic of India; producer, processor and exporter of certified organic herbs and botanicals from India;
- Ecuadorian Rainforest, LLC, Belleville, NJ, United States of America; wholesale supplier of fruit, herb, spice and vegetable ingredients from South America;
- Euromed USA, Inc., Presto, PA, United States of America; headquartered in Barcelona, Euromed is one of the world's largest manufacturers of standardized herbal extracts;
- FLAVEX Naturextrakte GmbH, Rehlingen, Federal Republic of Germany; specialized in supercritical herb & spice extracts;
- GENCOR, Irvine, CA, United States of America; Rooted in Ayurvedic tradition, Gencor specializes in proprietary herbal extracts;
- Herbkraft, Inc., Piscataway, NJ, United States of America; supplier of botanical raw materials and extracts;

- Jiaherb, Inc., Parsippany, NY, United States of America; supplier of botanical extracts based in People's Republic of China;
- NATUREX, Inc., South Hackensack, NJ, United States of America; manufacturer of botanical extracts;
- NEXIRA, Rouen, French Republic; producer and supplier of botanical raw materials and extracts;
- NP Nutra, Gardena, CA, United States of America; manufacturer and supplier of botanical extracts;
- Nutraceuticals International Group, Bloomingdale, NJ, United States of America; supplier of botanical raw materials and herbal extracts;
- Orgenetics, Inc., Brea, CA, United States of America; supplier of organic botanical raw materials and extracts;
- Sabinsa Corporation, Payson, UT, United States of America; manufacturer and supplier of herbal extracts;
- Skyherb, Hangzhou, Zhejiang, People's Republic of China; manufacturer and supplier of herbal extracts;
- Whole Herb Company, Sonoma, CA, United States of America; importer and distributor of conventional and organic herbs and spices;
- Zhejiang Medicines & Health Products I/E CO., Ltd. (Botanicals & Health Products Branch), Hangzhou, Zhejiang, People's Republic of China.

**Sources:**

1. Engredea 2015 Exhibitors List:  
<http://www.engredea.com/eng15/public/Exhibitors.aspx?ID=1054509&MainMenuID=1058143>
2. Engredea 2015 Knowledge Center: Condition-Specific Ingredient Show Guide - Functional Ingredients.

## 1.7. New North American standards for TCM medicinal mushroom

by Market Insider  
02 February 2015

Ganoderma, the 'sporophore' (fruiting body) and/or 'carpophore' (the stem of the fruiting body) of species of fungus of the *Ganoderma* genus, has been used in Asian systems of medicine since ancient times.

In China, known as 'ling zhi', the '*Pharmacopoeia of the People's Republic of China*' defines Ganoderma as the dried 'sporophore' of *Ganoderma lucidum* or *G. sinensis* (Fam. Polyporaceae). It is collected year round (from the stumps of dead oaks and other hardwood trees), removed from foreign matter and any attached rotten wood, and dried in the shade or stove. The '*Korean Herbal Pharmacopoeia*' however defines it as the 'carpophore' of *G. lucidum* and any other species of the same genus.

On 30 January 2015, the United States Pharmacopeial Convention, published Interim Revision Announcements (IRAs) in its '*Pharmacopeial Forum*' (PF) for two Ganoderma quality standards monographs: 'Ganoderma Lucidum Fruiting Body' and 'Ganoderma Lucidum Fruiting Body Powder.' These two revised monographs have already gone through a 90-day public comment period, have been approved and will become official in the '*United States Pharmacopoeia*' (USP) on 01 March 2015.

On 20 January 2015, the '*Natural and Non-prescription Health Products Directorate*' (NNHPD) of Health Canada published new draft labeling standards monographs titled 'Mushrooms' and 'Reishi', respectively, which are both open for public comment until 18 February 2015.

The new Mushrooms NNHPD monograph, intended to serve as a guide to industry for the preparation of Product License Applications (PLAs) and labels for natural health product market authorization, includes *Ganoderma lucidum* among many other medicinal mushrooms. The 'general' Mushrooms monograph then refers to a new draft monograph specifically for *G. lucidum* (titled by its Japanese name 'Reishi'). The draft monograph proposes the following therapeutic use statements for preparations of *G. lucidum*:

- Used in Traditional Chinese Medicine (TCM) to dispel phlegm, stop cough and arrest wheezing;
- Used in Traditional Chinese Medicine (TCM) to nourish the Heart and *strengthen qi* and blood to treat Heart and Spleen deficiencies that manifest in insomnia, forgetfulness, fatigue, listlessness and poor appetite;
- Used in Traditional Chinese Medicine (TCM) to strengthen the body and *tonify qi*.

NNHPD requests that any submitted comments include references to applicable scientific literature for verification purposes. Comments can be submitted via email, fax or by mail to:

Email: [nnhpd\\_consultation\\_dpsnso@hc-sc.gc.ca](mailto:nnhpd_consultation_dpsnso@hc-sc.gc.ca)  
Fax: 613-954-4092  
Mail: Natural and Non-prescription Health Products Directorate, Health Canada, Qualicum Tower A, New Pre-Cleared Information, Address Locator 3303B, 2936 Baseline Road, Ottawa, Ontario K1A 0K9 – Canada

**Sources:**

1. Chinese Pharmacopoeia Commission. Ganoderma. In: *Pharmacopoeia of the People's Republic of China*. Beijing, China: China Medical Science Press. 2010.
2. Korean Food and Drug Administration. Ganoderma. In: *Korean Herbal Pharmacopoeia*. Seoul, Republic of Korea: SFDA. 2002.
3. Natural and Non-prescription Health Products Directorate (NNHPD). Mushrooms. Ottawa, ON: Health Canada. 20 January 2015: <http://webprod.hc-sc.gc.ca/nhpid-bdipsn/atReq.do?atid=mushrooms.champignons&lang>
4. Natural and Non-prescription Health Products Directorate (NNHPD). Reishi – Ganoderma lucidum. Ottawa, ON: Health Canada. 20 January 2015: <http://webprod.hc-sc.gc.ca/nhpid-bdipsn/atReq.do?atid=reishi&lang=eng>
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## 1.8. New certification scheme for sustainable herbal tea

by Market Insider  
28 January 2015

UTZ Certified, a standards setting organization for sustainable cocoa, coffee, tea and herbal tea, in collaboration with the Union for Ethical BioTrade (UEBT), a non-profit association that promotes sustainable sourcing of ingredients that come from biodiversity, have announced the launch of a new joint program for certification of sustainable herbal teas.

Both organizations are based in Amsterdam, The Netherlands, and both organizations are full members of ISEAL (International Social and Environmental Accreditation and Labelling) Alliance, a global membership association for sustainability standards based in London, United Kingdom of Great Britain and Northern Ireland (UK).

According to Karin Kreider, ISEAL Executive Director, *'The innovative Herbal work of UEBT and UTZ Certified, both full ISEAL members, is a living proof of how ISEAL's strategic goal to increase efficiency through collaboration is put into practice.'*

According to a joint UEBT-UTZ announcement made today *'The program is innovative in that it combines the requirements from the programs and standards of both UTZ Certified and UEBT and shares responsibilities; UEBT being responsible for the certification and UTZ Certified for the traceability and the labeling.'*

The new program enables UTZ Certified to expand its current scope of tea standards, which up until now covered only tea leaf (*Camellia sinensis*) and rooibos herb (*Aspalathus linearis*), to the entire herbal tea category, which encompasses hundreds of herbs of commerce that are used in herbal tea products. Furthermore, UEBT member companies that comply with the additional set of UTZ criteria may be eligible to market their products with the UTZ Certified logo.

While the existing UTZ standards primarily covered cultivated crops like cocoa, coffee and tea, the new standard expressly includes sustainable wild collection of medicinal and aromatic plants, promotes of long-term equitable trade relationships between producers and buyers, and supports biodiversity conservation practices.

**Source:**

1. ISEAL Alliance website: <http://www.isealalliance.org/>
2. Union for Ethical BioTrade (UEBT) website: <http://ethicalbiotrade.org/>
3. UTZ Certified website: <https://www.utzcertified.org/en>
4. Wyss-Bisang B, Kutsch Lojenga R. Blog: A new program for sustainable herbal tea. *UTZ Certified® News*. 27 January 2015. Available at: <https://www.utzcertified.org/newsroom/utz-in-the-news>

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## 1.9. USPTO new guidance on patenting products derived from nature



by Market Insider  
16 January 2015

Just ten months after the United States Patent and Trademark Office (USPTO) issued new guidance on how it evaluates 'inventions' derived from nature (04 March 2014), the agency published revised guidelines on 16 December 2014, reportedly under pressure from the biotech industry and university research groups.

It is not entirely clear from the newly revised guideline, if implemented in its present form, whether new patent eligibility might ever be at odds with Intellectual Property Rights in terms of Traditional Ecological Knowledge and Traditional Medical Knowledge, for example in the context of drug discovery processes based on naturally occurring compounds of a wild growing medicinal plant (that may be in use as part of an indigenous system of traditional medicine).

The public comment period is open until 16 March 2015 and more information about the proposed guidelines and how to comment can be accessed at USPTO's website at: [http://www.uspto.gov/patents/law/exam/interim\\_guidance\\_subject\\_matter\\_eligibility.jsp](http://www.uspto.gov/patents/law/exam/interim_guidance_subject_matter_eligibility.jsp)

In the meantime, on 21 January 2015, USPTO is hosting a public forum to receive feedback from any interested member of the public. The forum will take place at USPTO's campus in the Madison Auditorium North (Concourse Level), Madison Building, 600 Dulany Street, Alexandria, VA 22314 USA. The meeting will also be accessible via WebEx.

**Sources:**

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3. United States Patent and Trademark Office (USPTO). *Procedure For Subject Matter Eligibility Analysis Of Claims Reciting Or Involving Laws Of Nature/Natural Principles, Natural Phenomena, And/Or Natural Products*. Alexandria, VA: USPTO. 04 March 2014. Available at:  
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4. United States Patent and Trademark Office (USPTO). *2014 Interim Guidance on Subject Matter Eligibility*. Available at:  
[http://www.uspto.gov/patents/law/exam/interim\\_guidance\\_subject\\_matter\\_eligibility.jsp](http://www.uspto.gov/patents/law/exam/interim_guidance_subject_matter_eligibility.jsp)

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## 1.10. USDA biodiversity conservation guidance and organic wild collected medicinal plants



United States Department of Agriculture  
Agricultural Marketing Service  
National Organic Program

1400 Independence Avenue S.W.  
Room 2648 South Building  
Washington, DC 20250

NOP 5020  
Effective Date: Draft  
Page 1 of 9

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**Draft Guidance  
Natural Resources and Biodiversity Conservation  
for Certified Organic Operations**

by Market Insider  
15 January 2015

On 29 December 2014, the United States Department of Agriculture (USDA) published a draft guidance document for public comment concerning the biodiversity conservation requirements of certified organic operations. The public comment period is open until 27 February 2015.

This new guidance is aimed at accredited organic inspection and certification organizations and certified organic operations, and in particular certified organic wild collection operations.

In 2011, USDA published its first guidance documents specifically relevant to its '**Organic Wild crop Harvesting Practice Standard**' which mandates that certified organic 'wild crops' must be harvested in a manner that ensures that such harvesting or gathering will not be destructive to the environment and will sustain the growth and production of the wild crop.

Now USDA is following up with this new biodiversity conservation guidance, which is particularly relevant to the certified organic medicinal and aromatic plant (MAP) sector because the majority of MAP species in global commerce are wild collected and not grown on farms.

Listed here below are just a few examples of top-selling MAPs that are wild collected (and commercially available with organic wild certification):

- Açai berry (*Euterpe oleracea*)
- Bilberry fruit and leaf (*Vaccinium myrtillus*)
- Black cohosh rhizome (*Actaea racemosa*)
- Boldo leaf (*Peumus boldus*)
- Cat's claw bark (*Uncaria tomentosa*)
- Dandelion leaf and root (*Taraxacum officinale*)
- Devil's claw root tuber (*Harpagophytum procumbens* or *H. zeyheri*)
- Eleuthero root (*Eleutherococcus senticosus*)
- European elder berry and flower (*Sambucus nigra*)
- Licorice root (*Glycyrrhiza uralensis*)
- Hoodia stem (*Hoodia gordonii*)
- Shea nut and butter (*Vitellaria paradoxa*)
- Raspberry leaf (*Rubus idaeus*)
- Rose hip (*Rosa canina*)
- Saw palmetto berry (*Serenoa repens*)
- Schisandra berry (*Schisandra chinensis* or *S. sphenanthera*)
- Seabuckthorn berry (*Hippophaë rhamnoides*)
- Slippery elm bark (*Ulmus rubra*)
- Stinging nettle leaf and root (*Urtica dioica*).

While there are other existing international standards that provide far more rigorous biodiversity conservation criteria than what is required for organic certification, for example the '**Ethical BioTrade Standard**' (of the Union for Ethical BioTrade) and the '**FairWild Standard**' (of the FairWild Foundation), it is welcome a step in the right direction for governmental agencies like the USDA to begin to provide a bit more guidance for producers and certifiers for organic wild crops, especially high volume and value wild collected medicinal plants that are products of biodiversity sourced from sensitive ecosystems.

- The **Ethical BioTrade Standard** is available in five languages (English, French, German, Portuguese and Spanish) at: <http://ethicalbiotrade.org/resources/#2>
- The **FairWild Standard** is available in fourteen languages (Armenian, Azeri, Bosnian, Chinese, English, French, Georgian, German, Hungarian, Japanese, Polish, Portuguese, Russian and Spanish) at: <http://www.fairwild.org/documents/>

#### Sources:

1. United States Department of Agriculture (USDA) Agricultural Marketing Service (AMS) National Organic Program (NOP). *National Organic Program: Notice of Draft Guidance for Accredited Certifying Agents, Certified Operations and Applicants for Organic Certification*. Federal Register. 29 December 2014;79(248):78025-78026. Available at: <http://www.gpo.gov/fdsys/pkg/FR-2014-12-29/pdf/2014-30303.pdf>
  2. United States Department of Agriculture (USDA) Agricultural Marketing Service (AMS) National Organic Program (NOP). *Draft Guidance Natural Resources and Biodiversity Conservation for Certified Organic Operations*. Washington, DC: USDA. 29 December 2014. Available at: <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5110083>
  3. United States Department of Agriculture (USDA) Agricultural Marketing Service (AMS) National Organic Program (NOP). *Guidance: Wild Crop Harvesting*. Washington, DC: USDA. 22 July 2011. Available at: <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5090757>
  4. FairWild Foundation (FWF). 2010. *FairWild Standard: Version 2.0*. FairWild Foundation, Weinfelden, Switzerland. Available at: <http://www.fairwild.org/documents/>
  5. Union for Ethical BioTrade (UEBT). 2012. STD01 - *Ethical BioTrade Standard* – 2012-04-11. Amsterdam, Netherlands: UEBT. Available at: <http://ethicalbiotrade.org/resources/#2>
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## 1.11. USDA census of organic operations including organic herbs



by Market Insider  
15 January 2015

The National Agricultural Statistics Service (NASS) of the United States Department of Agriculture (USDA) is presently carrying out an Organic Survey: 'a complete inventory of all known organic producers that are certified, exempt from certification in the United States (those grossing less than US\$5,000 annually from organic sales), and those producers transitioning to organic production. This study serves as a census of all organic operations, as directed under the FY2014 Farm Appropriations Bill'.

NASS is mailing the Organic Survey forms in early January 2015 to approximately 17,000 producers nationwide. Responses are due by mail by 13 February or online by 03 April 2015.

While some medicinal and aromatic plant (MAP) crops are specifically listed in the survey form, most will be classified and quantified under the generic heading of other 'Herbs, dried' or 'Herbs, fresh'.

The following MAPs are specifically listed in the organic survey form which will enable quantification of total acres harvested per crop as well as total quantity sold of these in 2014:

- Cranberry fruit - *Macrocarponii Fructus*: Fresh or dried whole, crushed, or powdered mature fruits of *Vaccinium macrocarpon* Aiton;
- Flaxseed – *Lini Semen*: Dried, ripe seeds of *Linum usitatissimum* L.;
- Garlic - *Allii Sativi Bulbi*: Fresh or dried compound bulbs of *Allium sativum* L.;
- Hop strobile – *Lupuli Flos*: Dried female inflorescence of *Humulus lupulus* L.;
- Peppermint oil – *Menthae piperitae aetheroleum*: Essential oil obtained by steam distillation from the fresh aerial parts of the flowering plant of *Mentha x piperita* L.;
- Spearmint oil – *Menthae spicatae aetheroleum*: Essential oil obtained by steam distillation from the fresh aerial parts of the flowering plant of *Mentha spicata* L.

Unfortunately the survey does not specifically request data for some of the highest value MAPs of the United States (that are also commercially available with organic certification) such as, for example, American ginseng root (*Panax quinquefolius* L.), Black cohosh rhizome and root (*Actaea racemosa* L.), Purple coneflower aerial and subterranean parts (*Echinacea purpurea* (L.) Moench), Saw palmetto fruit (*Serenoa repens* (W. Bartram) Small), and Slippery elm inner bark (*Ulmus rubra* Muhl.), among others, however the survey does request that respondents provide information on any other organic crops (cultivated or wild collected) not listed in the form.

Hopefully respondents will provide details on the certified organic quantities of these and other economically important North American MAPs and that USDA will add in the additional data in their final report.

**Sources:**

1. United States Department of Agriculture (USDA) National Agricultural Statistics Service. 2014 *Organic Survey: Census of Agriculture Special Study*. Washington, DC: USDA. 2015. Available at: [http://www.agcensus.usda.gov/Publications/Organic\\_Survey/](http://www.agcensus.usda.gov/Publications/Organic_Survey/)

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## 2. Markets for African Medicinal Plants and Extracts

### 2.1. Economic importance of Moroccan medicinal plant exports



by Market Insider  
30 March 2015

According to a report published by the High Commission for Waters, Forests and Combating Desertification (HCEFLCD), Kingdom of Morocco, the medicinal and aromatic plant (MAP) sector plays a very important socio-economic role, with annual revenues generated from MAP export of about 550 million Moroccan dirhams (= about US\$ 55.9 million).

The Moroccan MAP sector provides employment to local and rural communities generating an estimated 500,000 work days per year. The main export markets for Moroccan MAPs are the French Republic and the United States of America but export quantities are increasing due to opening of other markets including, namely Japan, Canada, Swiss Confederation, Kingdom of Spain, and Federal Republic of Germany.

Some of Morocco's more important MAP products are:

- Argan kernel (*Argania spinosa*) fatty oil
- Atlas cedar wood (*Cedrus atlantica*) essential oil
- Bitter orange (Neroli) flower (*Citrus aurantium* spp. *aurantium*) flower and essential oil
- Carob fruit (*Ceratonia siliqua*)
- Chaste tree fruit (*Vitex agnus-castus*) and extracts
- Clary sage herb (*Salvia sclarea*) and essential oil
- Damask rose flower bud (*Rosa damascena*) and absolute
- Khella fruit (*Ammi visnaga*) and essential oil
- Lavender flower (*Lavandula* spp.) and essential oil
- Mastic resin (*Pistacia lentiscus*) essential oil
- Moroccan wild chamomile aerial parts (*Cladanthus mixtus*) and essential oil
- Moroccan wild oregano herb (*Origanum compactum*) and essential oil
- Moroccan wild thyme herb (*Thymus satureioides*) and essential oil
- Olive leaf (*Olea europaea*)
- Orris root (*Iris germanica*) and essential oil
- Pennyroyal flowering herb (*Mentha pulegium*) essential oil
- Peppermint leaf (*Mentha x piperita*) and essential oil
- Pomegranate fruit (*Punica granatum*) extract

- Rosemary leaf (*Rosmarinus officinalis*), essential oil, and extract
- Saffron style & stigma (*Crocus sativus*)
- Spanish pellitory root (*Anacyclus pyrethrum*)
- Thyme herb (*Thymus vulgaris*) and essential oil
- White wormwood herb (*Artemisia herba-alba*) and essential oil

**Sources:**

1. Exportations: Les plantes aromatiques et médicinales rapportent 550 MDH au Maroc. *Infomédiaire*. 27 mars 2015. URL source: <http://www.infomediaire.net/news/maroc/exportations-les-plantes-aromatiques-et-medicinales-rapportent-550-mdh-au-maroc>
2. Plantes aromatiques et médicinales, 550 millions de dirhams à l'export. *L'economiste.com*. 27 mars 2015. URL source: <http://www.leconomiste.com/flash-infos/plantes-aromatiques-et-medicinales-550-millions-de-dirhams-l-export>

## 2.2. Egyptian Medicinal and Aromatic Plants (EMAP) Project support for producers and exporters



Upgrading the Medicinal & Aromatic Plants Value Chain  
Access to Export Markets

by Market Insider  
27 January 2015

The Egyptian Medicinal and Aromatic Plants (EMAP) project has published brief articles on activities carried out during September through December 2014 including the following topics:

- EMAP organized a two days' workshop to discuss the establishment of a National Quality Scheme (NQS)
- Collaborating with International Trade Promotion Organizations to Support Egypt's MAP Sector
- Promoting International Trade Opportunities in Russia
- EMAP expanding its support to Key Essential Oils Exporters.

All EMAP Project newsletters are available at: [http://www.emap-eg.org/emap/?page\\_id=155](http://www.emap-eg.org/emap/?page_id=155)

Begun in 2011, the Egyptian Medicinal and Aromatic Plants (EMAP) project is an agro-industrial development initiative aiming at upgrading the Medicinal and Aromatic Plants (MAP) sector in Egypt by establishing an integrated quality and safety scheme, improving varieties, increasing productivity, reducing losses, and upgrading production and processing technologies.

**Sources:**

1. EMAP Newsletter. December 2014: <http://www.emap-eg.org/emap/wp-content/uploads/2014/12/Emap-Dec-2014-EN-Newsletter.pdf>

### 3. Markets for Asian Medicinal Plants and Extracts

#### 3.1. Minister of State reports short supply of certain endangered medicinal plants



by Market Insider  
31 March 2015

On 20 March 2015, in response to a question in the 'Rajya Sabha' (the 'Council of States', upper house of the Parliament of Republic of India), the Minister of State, Ministry of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy), Shri Shripad Yesso Nalk made statements about the availability of medicinal plants including certain endangered medicinal plants that are important for use in the Indian Systems of Medicine.

According to Minister Shripad Naik, there are 7,835 licensed manufacturers of Ayurvedic medicines and 1,209 manufacturers of Unani, Siddha and/or Homoeopathic medicines in the Republic of India as of last count in 2014.

The Minister went on to state: 'Certain medicinal plants are threatened and endangered causing their short supply, due to which the industry perceives difficulties in the procurement of medicinal plant materials' such as:

- **Guggul:** the oleoresin exudation from *Commiphora wightii* also known as *Commiphora mukul* (Fam. Burseraceae); a small perennial tree or shrub up to 1.2-1.8 m high growing wild in rocky tracts of the northwestern states of Rajasthan and Gujarat, Guggul exudate is collected during winter season by making incisions in the bark or in summer when the exudate is falling from the bark itself.
- **Katuki:** the dried rhizome with root of *Picrorhiza kurroa* (Fam. Scrophulariaceae); a perennial that grows wild on the northwestern Himalayas from Kashmir to Sikkim.
- **Kuth:** the dried roots of *Saussurea lappa* also known as *Saussurea costus* (Fam. Asteraceae); a tall, robust, perennial herb with thick roots, found growing wild in Kashmir at an altitude of 2,500-3,600 m, the roots are collected in September-October.
- **Jatamansi:** the dried rhizome of *Nardostachys jatamansi* (Fam. Valerianaceae); an erect perennial herb, 10-60 cm high growing wild at an altitude of 3,000-5,000 m on the sub-alpine Himalayan tracts.

The Minister also summarized some main points concerning what the Government of India is proactively doing to support the availability and supply of important medicinal plants for use in the Indian Systems of Medicine by stating the following:

'Government of India has set up National Medicinal Plants Board under the Ministry of AYUSH for overall development of the medicinal plants sector including conservation, cultivation, processing and storage of medicinal and aromatic plants for promoting the availability of herbal raw materials. The National Medicinal Plants Board has implemented a Central Sector Scheme for supporting conservation, development and sustainable management of medicinal plants and a Centrally Sponsored Scheme of National Mission on Medicinal Plants, which is now merged in the National AYUSH Mission notified on 29th September 2014. Through such schemes, grant-in-aid is provided to support for survey, inventorization, in-situ conservation and ex-situ conservation of medicinal plants, development of herbal gardens, linkage with Joint Forest Management Committees,

research and development etc. Through National Mission on Medicinal Plants, Government has supported cultivation of medicinal plants with backward linkages for establishment of nurseries for supply of planting material etc. There is also provision for forward linkages for post-harvest management, marketing infrastructure, certification etc.'

**Sources:**

1. Ayurvedic Pharmacopoeia Committee. *The Ayurvedic Pharmacopoeia of India*. New Delhi: Government of India, Ministry of Health and Family Welfare, Department of Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homoeopathy (AYUSH).
2. Press Information Bureau (PIB), Availability of Medicinal and Aromatic Plants/Herbs. 23-March-2015.

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### 3.2. Ministry of AYUSH scaling up investment in medicinal plant production areas



by Market Insider  
04 March 2015

In response to a question today in the 'Rajya Sabha' (the 'Council of States', upper house of the Parliament of Republic of India), the Minister of State, Ministry of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy), Shri Shripad Yesso Nalk stated that the demand for Indian medicinal plants is increasing.

According to Minister Shripad Naik, the 'National Medicinal Plants Board (NMPB) of Ministry of AYUSH has been implementing the Central Sector Scheme for Conservation, Development and Sustainable Management of Medicinal Plants under which a grant of Rs.144.28 crores (= US\$ 23,285,371) has been released over the last three years to various organizations including State Forest Departments, R&D institutions for taking up activities relating to overall development of medicinal plant sector. An area of about 30929 hectare has been covered for resource augmentation, in-situ conservation and setting up Medicinal Plants Conservation Areas (MPCAs) for these plants, in addition to other related activities.

Besides, under the Centrally Sponsored Scheme of 'National Mission on Medicinal Plants', the NMPB has released Rs.140.43 crores (= US\$ 22,664,019) to different State Governments over the last three years for cultivation of medicinal plants on farmers land, along with backward and forward linkages.

In addition to the above, a network of 670 protected areas (102 National Parks, 517 Wild Life Sanctuaries, four Community Reserves and 47 Conservations Reserves) in different bio-geographic regions of the country have been setup under the programs of Ministry of Environment, Forest and Climate Change, for conservation and management of flora and fauna of the country, including medicinal plants.'

**Sources:**

1. Press Information Bureau (PIB), Government of India. AYUSH: Increase in Demand for Medicinal Plants. 03-March-2015.

### 3.3. Ayurvedic herb buyer's guidebook from Natural Products Insider



by Market Insider  
03 March 2015

In January 2015, 'Natural Products Insider', a print, online and e-mail resource for marketers, manufacturers and formulators of dietary supplements, healthy foods and cosmeceuticals in the United States of America, published a special report titled '*Ayurvedic Herb Supply Guidebook*'.

The 45-page book is available to download at the Natural Product Insider 'Ingredient Buying Center' at: <http://www.naturalproductsinsider.com/buying-center/i.aspx>

The book is divided into three sections:

- **Section I** is written by Sandy Almendarez, Editor in Chief of Natural Products Insider, providing a brief overview of some of the more famous medicinal plant materials used in the Ayurvedic system of medicine and exported from the Republic of India; in particular, Ashwagandha (*Withania somnifera*) root, Bacopa (*Bacopa monnieri*) whole plant, also known as 'Brahmi', Coleus (*Coleus forskohlii*) root, Indian Frankincense (*Boswellia serrata*) oleo-gum-resin, also known as 'Kundururu'.
- **Section II** is called the 'Ayurvedic Herbs Guidebook', an 18 page listing of about 325 companies (with contact details) worldwide that sell Ayurvedic herbal ingredients.
- **Section III** is called the 'Ayurvedic Herb Buyer's Guidebook' a 17 page alphabetical listing of Ayurvedic herbs with the names of companies that sell each herb.

**Source:**

1. Natural Products Insider. Special Report: Ayurvedic Herb Supply Guidebook. Available at: <http://www.naturalproductsinsider.com/buying-center/i/2015/01/ayurvedic-herbs-buyers-guidebook.aspx>
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## 4. Markets for Latin American Medicinal Plants and Extracts

### 4.1. Mexico's new rules for stability testing of herbal medicinal products



#### DIARIO OFICIAL DE LA FEDERACION

ORGANO DEL GOBIERNO CONSTITUCIONAL DE LOS ESTADOS UNIDOS MEXICANOS

Tomo DCCXXXVII No. 21 México, D.F., jueves 26 de febrero de 2015

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Activo  
Índice en página 94

53100 EEMPLAR

by Market Insider  
03 March 2015

On 26 February 2015, the Ministry of Health published new proposed rules (for public comment) regarding stability specifications and stability trial requirements for herbal medicinal products marketed in the United Mexican States. The new rules are to be applied in the context of existing standards such as the Official Mexican Standard NOM-248-SSA1-2011, Good Manufacturing Practices (GMPs) for establishments that manufacture herbal remedies, among other related regulations.

The public comment period is open for 60 days from the date of publication (until 27 April 2015). Comments (in Spanish language only) may be submitted to: 'Comité Consultivo Nacional de Normalización de Regulación y Fomento Sanitario', email: [rfs@cofepris.gob.mx](mailto:rfs@cofepris.gob.mx).

There are two categories of herbal medicinal products, both requiring pre-marketing authorization and issuance of a product registration, namely '*Medicamento Herbolario*' (herbal medicinal products with safety and efficacy supported by clinical and scientific data) and '*Remedio Herbolario*' (traditional herbal medicinal products). Specifications for the herbs used in registered herbal medicinal products also need to conform with the quality standards established in the '*Farmacopea Herbolaria de los Estados Unidos Mexicanos*' (FHEUM Segundo edición 2013).

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1. Comisión Federal para la Protección contra Riesgos Sanitarios (COFEPRIS). Registro Sanitario de Medicamentos. Available at: <http://www.cofepris.gob.mx/AS/Paginas/Registros%20Sanitarios/RegistroSanitarioMedicamentos.aspx>
2. Comisión Permanente de la Farmacopea de los Estados Unidos Mexicanos. *Farmacopea Herbolaria de los Estados Unidos Mexicanos (FHEUM)*, Segundo edición. México: Secretaría de Salud. 2013; 372 p.
3. Estados Unidos Mexicanos.- Secretaría de Salud. Proyecto de Norma Oficial Mexicana PROY-NOM-073-SSA1, Estabilidad de fármacos y medicamentos, así como de remedios herbolarios. *Diario Oficial de la Federación*; No. 21:39-59. Available at: <http://dof.gob.mx/index.php?year=2015&month=02&day=26>

## 4.2. Naturex scales up production of extract from bark of an endemic Chilean tree species

by Market Insider  
20 January 2015

Quillaja (*Quillaja saponaria*, Rosaceae) is an endemic tree of Chilean biodiversity occurring in forests between about 32° and 40° south latitude. The Brazilian Pharmacopoeia describes it (*Quillaiae cortex*) as an herbal drug consisting of the dried inner bark of the branches of *Quillaja saponaria*, devoid of the periderm.

On 07 January 2014, Naturex SA (Avignon, France), a global leader in specialty plant based natural ingredients, announced acquisition of a majority stakes in Chile Botanics S.A. (Linares, Chile), a young Chilean company specialized in the production and marketing of Quillaja bark extracts. Now, one year on since acquiring Chile Botanics, the operation has been significantly expanded with production capabilities increased by 10-fold, enabling Naturex to go after a bigger share of the global quillaja bark extract market.

Located in close proximity to Chile's natural quillaja forests, the company reportedly has a sustainable resource management and harvesting plan, implemented in accordance with environmental standards of the Chilean government forest agency CONAF (Corporación Nacional Forestal). According to the plan, only certain parts of the wood are pruned from the standing trees.

In cosmetic products, according to the European Commission cosmetic ingredients and substances (CosIng) database, quillaja bark extract is used for functions including antidandruff, cleansing, emulsifying, foaming, masking, moisturizing, skin-conditioning, and surfactant.

Some registered Herbal Medicinal Products (HMPs) in the EU also contain extracts of quillaja bark. For example, Ginsana® Tonikum contains an extract of Asian ginseng root (*Panax ginseng*) as the active ingredient but also contains a tincture of quillaja bark (*Quillaiae tinctura normata*) as one of the 'other ingredients'. Dilutions of quillaja bark tincture are also used as active ingredients of some registered homoeopathic medicinal products.

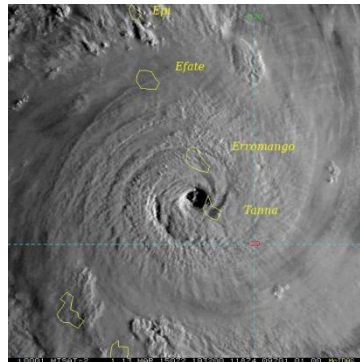
### Sources:

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  2. Agência Nacional de Vigilância Sanitária (ANVISA). *Quillaiae cortex*. In: *Farmacopeia Brasileira*, Volume 2, 5ª edição. Brasil: ANVISA. 2010;1241-1243.
  3. European Commission Directorate General Health & Consumers. Cosmetic Ingredients and Substances (CosIng) Database. Brussels, Belgium: European Commission.
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## 5. Markets for Oceanian Medicinal Plants and Extracts

### 5.1. Rebuilding livelihoods of sandalwood farmers on Erromango after Vanuatu Cyclone PAM 2015



by Market Insider  
16 March 2015

In December 2014, ITC's Market Insider reported that for the first time ever essential oil distilled from heartwood of Vanuatu sandalwood (*Santalum austrocaledonicum*) was being produced on the sandalwood rich island of Erromango, Republic of Vanuatu. Up to that point (and since the 1800's) people had been buying, trading and stealing sandalwood from Erromango to take to other countries for processing to essential oil.

Now three months on, a real setback for Erromango as the result of a direct hit of the category 5 Cyclone Pam on Saturday 14th March 2015. With the entire population of 2000 living in thatched housing, subsistence farming and relying on transport by boat to neighboring villages they have lost it all - homes, food gardens, food security and boats.

Pacific Provender Ltd., a small family business, based at the isolated village of Port Narvin on Erromango, had established the first ever sandalwood distillery on Erromango working in close consultation with the 'Erromangan Sandalwood and Essential Oil Association' representing 42 farmers and the 'Department of Forests of the Republic of Vanuatu' to train and employ Ni-Vanuatuan sandalwood growers to process, produce and value add sandalwood oil products.

Now Pacific Provender Ltd. is organizing a crowdfunding campaign to support the recovery and rebuilding of long term and resilient livelihoods of sandalwood growers in the face of the devastating destruction caused by cyclone.

Over the next 30 days, they aim to raise \$160,000 AUD to aid the recovery and reconstruction of the sandalwood farmers' agricultural livelihoods. Contributions will go directly to the 'Erromango Sandalwood and Essential Oil Farmers' Association' and their families. For more information visit: <https://www.indiegogo.com/projects/vanuatu-erromango-sandalwood-farmers-association>

#### Sources:

1. Allen J, Allen S. Rebuilding livelihoods of sandalwood farmers on island of Erromango after Vanuatu Cyclone PAM 2015. 16 March 2015: <https://www.indiegogo.com/projects/vanuatu-erromango-sandalwood-farmers-association>
2. Market Insider. Sandalwood value-adding in Erromango, Vanuatu for the first time. 08 December 2014: <http://www.intracen.org/blog/Sandalwood-value-adding-in-Erromango-Vanuatu-for-the-first-time/>

## 6. Sustainable use of Biodiversity News

### 6.1. Smuggling of wild red saunders continues

70. Raktachandana (Ht. Wd.)

#### RAKTACANDANA (Heart Wood)

Raktacandana consists of heart wood of *Pterocarpus santalinus* Linn. f. (Fam. Fabaceae); a medium sized, deciduous tree upto 10-11 m high and 1.5 m in girth, mostly found in Andhra Pradesh and neighbouring area of Chennai and Karnataka at an altitude of 150-900 m.

by Market Insider  
23 March 2015

In June 2014, ITC's Market Insider reported that, in one of its largest seizures ever, the Directorate of Revenue Intelligence (DRI) (of the Central Board of Excise and Customs, Government of India) had confiscated 60 tonnes of wild 'red saunders' from Chennai Port (Tamil Nadu State). Red saunders, also known as 'raktacandana' (*Pterocarpus santalinus*), is an endemic and endangered tree species of Indian biodiversity with a narrow range in the wild.

The heartwood of the tree is used as a medicinal ingredient in the Indian Systems of Medicine (Ayurvedic, Siddha and Unani) whilst essential oils, extracts and powders of the heartwood (or of the stems) are also used as components of cosmetic and perfumery products, dietary supplement products and herbal medicinal products globally.

Red saunders (logs, wood-chips, powder and extracts) is listed on Appendix II of the Convention on International Trade in Endangered Species (CITES). Authorities in Republic of India can authorize the export of up to 310 metric tons per year if obtained from artificially propagated sources and up to 11,507 metric tons from confiscated or seized sources.

On 18 March 2015, police in Kadugodi, Karnataka arrested four smugglers hailing from the neighboring state of Andhra Pradesh and recovered red saunders worth Rs 7.5 lakh (= about US\$ 12,000) as well as their car. The following day, 19 March, in the port city of Cochin, Kerala, DRI arrested three more persons for their alleged involvement in the smuggling of red saunders that was destined for the Emirate of Sharjah, United Arab Emirates, being transported through the Vallarpadam Container Transshipment Terminal, Cochin. During interrogation, one of the arrested men said that the red saunders was being transported for a Dubai-based businessman who allegedly had helped in procuring and exporting the contraband.

#### Sources:

1. Angadi J. Police arrests four for transporting red sanders illegally. *Deccan Herald*. 18 March 2015.
2. Ayurvedic Pharmacopoeia Committee. Raktacandana (Heart Wood). In: The Ayurvedic Pharmacopoeia of India, Part I, Volume III, First Edition, New Delhi, Government of India, Ministry of Health and Family Welfare, Department of Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homoeopathy (AYUSH). 2007.
3. Express News Service. 3 More Held for Red Sanders Smuggling. *The New Indian Express*. 20 March 2015.
4. Market Insider. 60 Tonnes of Red Saunders Seized at Chennai Port. 23 June 2014: <http://www.intracen.org/itc/blogs/market-insider/60-Tonnes-of-Red-Saunders-Seized-at-Chennai-Port/>
5. UNEP (2015). *Pterocarpus santalinus*. In: The Species+ Website. Nairobi, Kenya. Compiled by UNEP-WCMC, Cambridge, UK. Available at: [www.speciesplus.net](http://www.speciesplus.net). Accessed 20 March 2015.

## 7. Currency Rates of Exchange

Rates of Exchange: 15 March 2015

CURRENCY	CODE	UNITS 1 / USD	UNITS 1 / EUR
Chinese Yuan Renminbi	CNY	6.25725	6.56826
EURO	EUR	0.952650	1.0000
Indian Rupee	INR	63.0935	66.2295
Nepalese Rupee	NPR	100.768	105.776
Russian Ruble	RUB	62.1100	65.1971
United States Dollar	USD	1.0000	1.04970

Source: XE Currency Converter: <http://www.xe.com/currencyconverter/>

## 8. Indicative Prices for Selected Medicinal Botanical Ingredients

**Note:** Prices should be considered indicative only and reflect the price of a product of a specific grade or quality from the specified origin. Great care should be taken when comparing prices of medicinal herbs of different origins, grades, qualities and quantities.

AJOWAN FRUIT			
<b>Botanical name: <i>Trachyspermum ammi</i> / Hindi name: Ajwain / Sanskrit name: Yavani</b> <b>Pharmacopoeial name: Trachyspermi Ammi Fructus</b>			
<b>Medicinal uses:</b>	<b>Traditional Ayurvedic Medicine:</b> a) flatulence with a gurgling sound; b) distension of abdomen due to obstruction to passage of urine and stools; c) diseases of abdomen; d) abdominal lump; e) intestinal parasites; f) sharp piercing pain.		
	<b>Traditional Unani Medicine:</b> a) flatulence in the stomach; b) gastric pain; c) anorexia; d) colic; e) pertussis; f) diarrhoea; g) hysteria; h) cholera.		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
Amreli Gujarat	10850 INR / quintal (= 100 kg)	\$1.71967 / kg	14.03.2015
AMLA FRUIT			
<b>Botanical name: <i>Phyllanthus emblica</i> / Chinese name: Yuganzi (餘甘子)</b> <b>Hindi name: Amla / Nepalese name: Amala / Sanskrit name: Amalaki</b> <b>Pharmacopoeial name: Phyllanthi Fructus</b>			
<b>Medicinal uses:</b>	<b>Traditional Ayurvedic Medicine:</b> a) bleeding disorders; b) hyperacidity; c) increased frequency and turbidity of urine; d) burning sensation.		
	<b>Traditional Chinese Medicine:</b> a) to remove <i>heat</i> in the blood and <i>blood stasis</i> ; b) maldigestion; c) dyspepsia, abdominal pain; e) cough; sore throat, and dryness of the mouth.		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
Nepalgunj Nepal	60.00 NPR / kg	\$0.595427 / kg	28.02.2015
Shahdol Madhya Pradesh	35.00~40.00 INR / kg	\$0.55473~\$ 0.63398/ kg	09.03.2015
Yulin Guangxi Zhuang Autonomous Region	11.00 CNY / kg (≥10,000 kg)	\$1.75621 / kg	15.03.2015

<b>BARBARY WOLFBERRY FRUIT</b>			
<b>Botanical name: <i>Lycium barbarum</i> / Chinese name: gou qi zi (枸杞子)</b>			
<b>Pharmacopoeial name: Lycii Fructus</b>			
<b>Medicinal uses:</b>	<b>Traditional Chinese Medicine:</b> a) general debility with deficiency of <i>vital essence</i> manifested by aching of the loins and knees, dizziness and tinnitus; b) diabetes caused by <i>internal heat</i> ; c) anaemia; d) impaired vision.		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
Anguo Hebei	65.00 CNY / kg (380 Grade; Ningxia origin)	\$10.3771 / kg	15.03.2015
Anguo Hebei	58.00 CNY / kg (380 Grade; Xinjiang origin)	\$9.25955 / kg	15.03.2015
<b>CALAMUS RHIZOME</b>			
<b>Botanical name: <i>Acorus calamus</i></b>			
<b>Chinese name: zang chang pu (藏菖蒲) / Nepalese name: Bojho / Sanskrit name: Vaca</b>			
<b>Pharmacopoeial name: Acori Calami Rhizoma</b>			
<b>Medicinal uses:</b>	<b>Traditional Ayurvedic Medicine:</b> a) colic pain; b) epilepsy; c) asthma; d) constipation; e) mania; f) flatulence; g) otorrhoea; and h) weak memory		
	<b>Traditional Chinese Medicine:</b> a) tonify stomach <i>yang</i> ; b) treat maldigestion and food stagnation; c) diphtheria.		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
Nepalgunj Nepal	95 NPR / kg (Origin: Nepal)	\$0.942760 / kg	28.02.2015
Anguo Hebei	148 CNY / kg (Origin: Tibet Autonomous Region)	\$23.6526 / kg	15.02.2015
<b>CHIRATA HERB</b>			
<b>Botanical name: <i>Swertia chirayita</i> / Nepalese name: Chiraito (चिराइतो, तितो) / Sanskrit name: Kiratatikta / Pharmacopoeial name: Swertiae Herba</b>			
<b>Medicinal uses:</b>	<b>Traditional Ayurvedic Medicine:</b> a) fever; b) thirst; c) burning sensation; d) inflammation; e) skin diseases; f) ulcer; g) intestinal worms; h) itching; and i) excessive flow of urine.		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
Kathmandu Nepal	450 NPR / kg	\$ 4.46571 / kg	28.02.2015
<b>CRANBERRY FRUIT</b>			
<b>Botanical name: <i>Vaccinium macrocarpon</i> / French name: canneberge / Spanish name: arándano agrio / Pharmacopoeial name: Macrocarponii Fructus</b>			
<b>Medicinal uses:</b>	<b>Traditional Western Herbal Medicine:</b> a) to help prevent recurrent urinary tract infections		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
Ex-warehouse New Jersey, USA	US\$ 2.25 / lb (Min. qty: 1,000 lbs)	\$4.96 / kg (Min. qty: 454 kg)	11.03.2015
<b>FENNEL FRUIT</b>			
<b>Botanical name: <i>Foeniculum vulgare</i> / Arabic: شمر; Chinese: xiao hui xiang (小茴香) / Hindi: Saunf / Sanskrit: Misreya / Pharmacopoeial name: Foeniculi Fructus</b>			
<b>Medicinal</b>	<b>Traditional Ayurvedic Medicine:</b> a) digestive impairment; b) colic pain; c)		

<b>uses:</b>	cough; d) vitiated blood; e) dysentery; and f) piles.		
	<b>Traditional Chinese Medicine:</b> a) treatment of scrotal hernia with pain and cold extremities; b) dysmenorrhoea with lower abdominal pain and cold sensation; and c) distending pain in the epigastrium with anorexia.		
	<b>Traditional European Medicine:</b> a) symptomatic treatment of mild, spasmodic gastrointestinal complaints including bloating, and flatulence; b) symptomatic treatment of minor spasm associated with menstrual periods; and c) as an expectorant in cough associated with cold.		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
Chennai Tamil Nadu	115.00 INR / kg	\$1.82269 / kg	07.03.2015
FOB Mumbai Port Maharashtra	US\$ 1990~2280 / MT (98%~99% Clean; Qty 14 MT / 20' FCL)	\$1.99~\$2.28 / kg	11.03.2015
Chengdu Sichuan	12.00 CNY / kg (Northwest origin)	\$1.91605 / kg	15.03.2015
<b>FENUGREEK SEED</b>			
<b>Botanical name: <i>Trigonella foenum-graecum</i></b>			
<b>Arabic name: حلبة حصى; Chinese name: hu lu ba (胡蘆巴) / Sanskrit name: Methi</b>			
<b>Pharmacopoeial name: Trigonellae Foenugraeci Semen</b>			
<b>Medicinal uses:</b>	<b>Traditional Ayurvedic Medicine:</b> a) malabsorption syndrome; b) fever; c) increased frequency and turbidity of urine; and d) loss of taste sensation.		
	<b>Traditional Chinese Medicine:</b> a) cold syndrome of the <i>kidney</i> due to <i>yang deficiency</i> marked by pain and coldness in the lower abdomen; b) hernia; and c) weakness and oedema of the legs caused by <i>cold-damp</i> .		
	<b>Traditional European Medicine:</b> a) (oral) temporary loss of appetite; b) (cutaneous) symptomatic treatment of minor inflammations of the skin.		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
Chennai Tamil Nadu	75.00 INR / kg	\$1.18871 / kg	07.03.2015
FOB Mumbai Port Maharashtra	US\$ 940 / MT (Grade: Sortex; Qty: 21 MT / 20' FCL)	\$0.94 / kg	11.03.2015
<b>GINGER RHIZOME</b>			
<b>Botanical name: <i>Zingiber officinale</i> / Chinese name: gan jiang (干姜) / Nepalese name: Sutho / Sanskrit name: Sunthi / Pharmacopoeial name: Zingiberis Rhizoma</b>			
<b>Medicinal uses:</b>	<b>Traditional Ayurvedic Medicine:</b> a) digestive impairment; b) flatulence; c) anaemia; d) asthma; e) abdominal diseases; and f) rheumatism.		
	<b>Traditional Chinese Medicine:</b> a) epigastric pain with cold feeling, vomiting and diarrhoea accompanied with cold extremities and faint pulse; and b) dyspnoea and cough with copious expectoration.		
	<b>Traditional European Medicine:</b> a) symptomatic relief of motion sickness; and b) symptomatic treatment of mild, spasmodic gastrointestinal complaints including bloating and flatulence.		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
Luopong County Yunnan	22.00 CNY / kg	\$3.51522 / kg	15.03.2015
Cochin Kerala	237.50 INR /kg (Grade: old)	\$3.76426 / kg	07.03.2015
FOB	US\$ 3820 / MT	\$3.82 / kg	09.03.2015

Mumbai Port Maharashtra	(Grade: Good; Qty 14 MT / 20' FCL)		
Nepalgunj Nepal	190 NPR / kg	\$1.88552 / kg	28.02.2015
<b>GOTU KOLA HERB</b>			
<b>Botanical name: <i>Centella asiatica</i> / Chinese name: ji xue cao (积雪草) / Sanskrit name: Mandukaparni / Pharmacopoeial name: Centellae Asiaticae Herba</b>			
<b>Medicinal uses:</b>	<b>Traditional Ayurvedic Medicine:</b> a) inflammation; b) tastelessness; c) fever; d) cough; e) itching; f) skin diseases; g) excessive bleeding disorder; h) excessive flow of urine; i) asthma; j) anaemia; k) blood disorders.		
	<b>Traditional Chinese Medicine:</b> a) jaundice caused by <i>damp-heat</i> ; b) heat stroke with diarrhoea; c) urolithiasis and haematuria; d) carbuncles and boils; e) traumatic injuries.		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
Anguo Hebei	18.00 CNY / kg (Yunnan origin)	\$2.87294 / kg	15.03.2015
FOB Mumbai Port Maharashtra	US\$ 2990 / per MT (Qty: 1-20' FCL)	\$2.99 / kg	07.02.2015
<b>HENNA LEAF</b>			
<b>Botanical name: <i>Lawsonia inermis</i> / Arabic name: Hina (حناء) / Sanskrit name: Madyanti / Pharmacopoeial name: Lawsoniae folium</b>			
<b>Medicinal uses:</b>	<b>Traditional Ayurvedic Medicine:</b> a) vertigo; b) fever; c) itching; d) diseases of skin; e) bleeding disorder; f) jaundice; g) blood disorder; h) dysuria (painful urination); i) ulcer.		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
Ex-works Giza, Egypt	US\$ 2000 / MT (certified organic)	\$2.00 / kg	27.02.2015
<b>INDIAN FRANKINCENSE EXUDATE</b>			
<b>Botanical name: <i>Boswellia serrata</i> / Sanskrit names: Kunduru, Sallaki Pharmacopoeial names: Gummi-resina <i>Boswelliae Serratae</i>; <i>Olibanum</i></b>			
<b>Medicinal uses:</b>	<b>Traditional Ayurvedic Medicine:</b> a) fever; b) excessive vaginal discharge; c) asthma; d) conjunctivitis; e) discharging of gravelly or sandy urine; f) pain due to ulcer; g) disease of mouth.		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
FOB Mumbai Port Maharashtra	US\$ 6995 / MT (Grade A)	\$6.995 / kg	07.02.2015
	US\$ 6495 / MT (Grade B)	\$6.495 / kg	07.02.2015
<b>ISPAGHULA SEED</b>			
<b>Botanical name: <i>Plantago ovata</i> Pharmacopoeial name: Plantaginis Ovatae Semen</b>			
<b>Medicinal uses:</b>	<b>Well-established uses:</b> a) for the treatment of habitual constipation; and b) for conditions in which easy defecation with soft stool is desirable, e.g. in cases of painful defecation after rectal or anal surgery, anal fissures and haemorrhoids.		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
NMCE	7785 INR / quintal	\$1.23388 / kg	13.03.2015

Spot Price			
Unjha Gujarat	5500~9210 INR/quintal (Modal price: 8000 INR/quintal)	\$0.871723~\$1.45974 / kg (Modal price: \$1.26796/ kg)	14.03.2015
<b>JATAMANSI ROOT AND RHIZOME</b>			
<b>Botanical name: <i>Nardostachys jatamansi</i></b> <b>Chinese name: gan song (甘松) / Nepalese name: Jatamansi / Sanskrit name: Jatamansi / Pharmacopoeial name: Nardostachyos Radix et Rhizoma</b>			
<b>Medicinal uses:</b>	<b>Traditional Ayurvedic Medicine:</b> a) diseases of skin; b) erysipelas (bacterial skin infection); c) burning sensation; d) mental disorders; e) insomnia.		
	<b>Traditional Chinese Medicine:</b> a) (oral) epigastric and abdominal distension with anorexia and vomiting; b) (external) for toothache and swelling of the foot.		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
Huilu County Liangshan Yi Autonomous Prefecture	28.00 CNY / kg	\$4.46585 / kg	15.03.2015
Nepalgunj Nepal	650.00 NPR / kg	\$6.45046 / kg	28.02.2015
<b>LIQUORICE ROOT</b>			
<b>Botanical name(s): <i>Glycyrrhiza uralensis, G. inflata, or G. glabra</i></b> <b>Chinese name: gan cao (甘草) / Sanskrit name: Yasti</b> <b>Pharmacopoeial name: Glycyrrhizae Radix et Rhizoma</b>			
<b>Medicinal uses:</b>	<b>Traditional Ayurvedic Medicine:</b> a) cough; b) hoarseness of voice; c) phthisis (any wasting or atrophic disease, weakness, diseases due to <i>vata dosha</i> ); d) ulcer; and e) gout,		
	<b>Traditional Chinese Medicine:</b> a) weakness of the spleen and the stomach marked by lassitude and weakness; b) cardiac palpitation and shortness of breath; c) cough with much phlegm; d) spasmodic pain in the epigastrium, abdomen and limbs; e) carbuncles and sores; and f) often added to formulas to reduce drastic or toxic effects of other drugs.		
	<b>Traditional European Medicine:</b> a) for the relief of digestive symptoms including burning sensation and dyspepsia; and b) used as an expectorant in cough associated with cold.		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
Chengdu Sichuan	15.00~19.00 CNY / kg (Gansu origin)	\$2.39782~\$3.03725 / kg	15.03.2015
Anguo Hebei	8.00 CNY / kg (Inner Mongolia origin)	\$1.27884 / kg	15.03.2015
Chengdu Sichuan	16.00~19.00 CNY / kg (Xinjiang origin)	\$2.55769~\$3.03725 / kg	15.03.2015
<b>MAHUA FLOWER</b>			
<b>Botanical name: <i>Madhuca indica</i> (Syn.: <i>M. latifolia</i>)</b> <b>Hindi name: Mahuwa / Sanskrit name: Gudapushpa</b> <b>Pharmacopoeial name: Madhucae Flos</b>			
<b>Medicinal uses:</b>	<b>Traditional Ayurvedic Medicine:</b> a) asthma; b) burning sensation; c) wound; d) phthisis (wasting disease); e) thirst; f) fatigue, lethargy		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>

Lohardaga, Jharkhand	2800~3000 INR / quintal (Modal price: 3200 INR / quintal)	\$0.443786~\$0.475485 / kg (Modal price: \$0.507184 / kg)	15.03.2015
Shahdol Madhya Pradesh	30.00~35.00 INR / kg	\$0.475485~\$0.554733 / kg	09.03.2015
<b>MOLOKHIA LEAF</b>			
<b>Botanical name: <i>Corchorus olitorius</i> / Arabic name: Mulukhiyah (ملوخية) / Pharmacopoeial name: <i>Corchori Olitorius Folium</i></b>			
<b>Medicinal uses:</b>	<b>Traditional Egyptian Medicine:</b> a) chronic cystitis (inflammation of the urinary bladder); b) dysuria (painful urination); c) gonorrhoea; d) fever		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
Ex-works Giza, Egypt	US\$ 3000 / MT (certified organic)	\$3.00 / kg	27.02.2015
<b>NIGELLA SEED</b>			
<b>Botanical name: <i>Nigella sativa</i> / Hindi name: Kalaunji (कलौंजी) / Sanskrit name: Upakuncika / Pharmacopoeial name: <i>Nigellae Semen</i></b>			
<b>Medicinal uses:</b>	<b>Traditional Ayurvedic Medicine:</b> a) abdominal lump; b) flatulence; c) diarrhoea; d) worm infestation.		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
Ex-works Giza, Egypt	US\$ 3250 / MT (certified organic)	\$3.25 / kg	27.02.2015
FOB Mumbai Port Maharashtra	US\$ 3805 / MT (Qty: 19 MT / 20' FCL / Grade: Sortex)	\$3.805 / kg	09.03.2015
<b>PEPPERMINT LEAF</b>			
<b>Botanical name: <i>Mentha x piperita</i> / Pharmacopoeial name: <i>Menthae Piperitae Folium</i></b>			
<b>Medicinal uses:</b>	<b>Traditional European Medicine:</b> a) for the symptomatic relief of digestive disorders such as dyspepsia and flatulence.		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
Ex-works Giza, Egypt	US\$ 3500 / MT (certified organic)	\$3.50 / kg	27.02.2015
<b>SCHISANDRA FRUIT - NORTHERN</b>			
<b>Botanical name: <i>Schisandra chinensis</i> / Chinese name: Beiwuweizi (北五味子) / Pharmacopoeial name: <i>Schisandrae Chinensis Fructus</i></b>			
<b>Medicinal uses:</b>	<b>Traditional Chinese Medicine:</b> a) chronic cough and dyspnoea of deficiency type; b) dream emission and spermatorrhoea; c) enuresis and frequent urination; d) chronic diarrhoea; e) spontaneous sweating and night sweating; f) thirst caused by fluid consumption; g) interior heat-wasting thirst; h) palpitation and insomnia		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
Anguo Hebei	45.00 CNY / kg (Liaoning origin)	\$7.19350 / kg	15.03.2015
<b>SCHISANDRA FRUIT - SOUTHERN</b>			
<b>Botanical name: <i>Schisandra sphenanthera</i> / Chinese name: Nanwuweizi (南五味子) / Pharmacopoeial name: <i>Schisandrae Sphenantherae Fructus</i></b>			
<b>Medicinal uses:</b>	<b>Traditional Chinese Medicine:</b> a) chronic cough and dyspnoea of deficiency type; b) dream emission and spermatorrhoea; c) enuresis and		



	frequent urination; d) chronic diarrhoea; e) spontaneous sweating and night sweating; f) thirst caused by fluid consumption; g) interior heat-wasting thirst; h) palpitation and insomnia		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
Chengdu, Sichuan	25.00 CNY / kg	\$3.99639 / kg	15.03.2015
<b>SENNA LEAF - TINNEVELLY</b>			
<b>Botanical name: <i>Cassia angustifolia</i></b> <b>Pharmacopoeial name: Sennae Angustifoliae Folium</b>			
<b>Medicinal uses:</b>	<b>Well-established uses:</b> a) for short-term use in cases of occasional constipation		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
FOB Mumbai Port Maharashtra	US\$ 825 / MT (Grade: Prime 3; Qty: 26 MT / 40' FCL)	\$0.825 / kg	09.03.2015
<b>SENNA POD - TINNEVELLY</b>			
<b>Botanical name: <i>Cassia angustifolia</i></b> <b>Pharmacopoeial name: Sennae Angustifoliae Fructus</b>			
<b>Medicinal uses:</b>	<b>Well-established uses:</b> a) for short-term use in cases of occasional constipation.		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
FOB Mumbai Port Maharashtra	US\$ 1965 / MT (Qty: 26 MT / 40' FCL)	\$1.965 / kg	07.02.2015
<b>SHATAVARI ROOT</b>			
<b>Botanical name: <i>Asparagus racemosus</i></b> <b>Nepalese name: Satawari (Kurilo) / Sanskrit name: Satavari</b> <b>Pharmacopoeial name: Asparagi Racemosus Radix</b>			
<b>Medicinal uses:</b>	<b>Traditional Ayurvedic Medicine:</b> a) hyperacidity; b) piles; c) diarrhoea; d) abdominal lump; e) phthisis (any wasting or atrophic disease); f) diarrhoea with blood; g) bleeding disorder; h) disorders of blood i) gout; j) erysipelas (bacterial skin infection); k) inflammation; l) duodenal ulcer; m) urinary disorders; n) hoarseness of voice; o) night blindness; p) puerperal disease; q) vitiation of breast milk; r) insufficient lactation <b>Traditional Unani Medicine:</b> a) diarrhoea; b) spermatorrhoea; c) excessive nocturnal emission; d) leucorrhoea; e) premature ejaculation; f) dysentery		
<b>MARKET</b>	<b>PRICE</b>	<b>CONVERTED TO US\$ / kg</b>	<b>DATE OF PRICE</b>
Nepalgunj, Nepal	200~250 NPR / kg	\$1.98476~\$2.48095 / kg	28.02.2015
Tanakpur, Uttarakhand	440 NPR / kg	\$4.36647 / kg	28.02.2015

## Price Sources

### **China:**

- Alibaba: <http://www.1688.com/>
- Chengdu Traditional Chinese Medicine Price Index: <http://www.ysindex.com>
- Chinese Medicinal Herb E-Commerce Office: <http://www.zyctd.com/> and <http://www.zycst.com/>

### **Egypt:**

- Private companies

### **India:**

- Agmarknet, Directorate of Marketing & Inspection (DMI), Ministry of Agriculture, Government of India: <http://agmarknet.nic.in/arrivals1.htm>
- ICAR (Indian Council of Agricultural Research) - Directorate of Medicinal and Aromatic Plants Research: <http://www.dmapr.org.in/HeadPage/FarmProduct.html>
- Madhya Pradesh State Agricultural Marketing Board (Mandi Board): <http://mpmandiboard.gov.in/>
- National Multi-Commodity Exchange of India Ltd. (NMCE): <http://www.nmce.com/marketdata/SpotPriceInfo.aspx>
- Private companies
- Spices Board India (SBI): [http://www.indianspices.com/php/domestic\\_weekly.php](http://www.indianspices.com/php/domestic_weekly.php)
- Tribal Co-Operative Marketing Development Federation of India Limited (TRIFED): <http://www.trifed.in/trifed/>

### **Nepal:**

- Asia Network for Sustainable Agriculture and Bioresources: <http://www.ansab.org/>

### **USA:**

- Private companies

## 9. Selected Events



Université Mohammed V-Agdal  
Faculté des Sciences  
Rabat



International  
Organization for  
Chemical Sciences in  
Development



**April 7-10, 2015**

### **Symposium "The Plant Kingdom: Source of Drugs, Nutraceuticals and Cosmetics"**

Topics include: Role of R&D in Implementing the Nagoya Protocol in Morocco; Challenges and opportunities of the Nagoya Protocol in cosmetic and health; Traditional knowledge and intellectual property rights

Marrakech, Kingdom of Morocco

<http://www.iocd.ma/>

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**April 7-9, 2015**

### **Ingredients Marketplace 2015**

Over 350 exhibition booths aiming to help buyers and product developers identify new innovative natural ingredients, contract manufacturers and packaging companies to aid in successful launching of new finished products.

Orlando, Florida, United States of America

<http://marketplace.supplysideshow.com/>

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**April 13-16, 2015**

### **15th Annual Oxford International Conference on the Science of Botanicals (ICSB 15)**

Topics include: Cultivation, Collection and Post-Harvest Practices to Assure Production of Quality Raw Botanical Materials; Authentication, Identification and Purity Assessments of Botanical Raw Materials, Ingredients and Products; General and Specific Approaches toward establishing Safety, Efficacy, and Quality of botanicals with modern technologies.

Oxford, Mississippi, United States of America

<http://www.oxfordicsb.org/>

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**April 17-18, 2015**

**International Turkish Quality Symposium for Organic Medicinal and Aromatic Plants  
Co-located with the Izmir Organic Products Fair**

The symposium will highlight Turkey's importance for the production of organic medicinal and aromatic plants (MAPs) for the international organic food and natural cosmetic markets. The focus will be on the following topics: International value chains for organic MAPs, Production situation in Turkey, Specific quality challenges of MAPs, Wild collection of MAPs, Marketing issues

Izmir, Republic of Turkey

<http://ekolojiizmir.izfas.com.tr/en/etkinlik-programlari/activity-programme/>

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4th National Seminar & Exhibition on

## Spices & Herbs

Saturday 18th April, 2015

NDMC Convention Centre, Sansad Marg, New Delhi.

**April 18, 2015**

**4th National Seminar & Exhibition on Spices & Herbs**

Exhibitor profile includes suppliers of spices, spice based products, herbs & herbal products, service providers and machinery and equipment manufacturers.

New Delhi, Republic of India

<http://nnsevents.com/index.php/conference/spices-herbs.html>

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## MESMAP-2

(2<sup>nd</sup> Symposium on Medicinal and Aromatic Plants of Mediterranean)

**April 22-23, 2015**

**2nd Mediterranean Symposium on Medicinal and Aromatic Plants (MESMAP-2)**

The program covers all related aspects of MAPs and NWFPs such as agriculture and forestry, botany, ethnobotany, herbal medicines, plant biotechnology, phytopharmacology, pharmacognosy, plant biology, phytochemistry, and aromatherapy.

Antalya, Republic of Turkey

<http://www.mesmap.org/>

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**May 5-8, 2015**

**The 15<sup>th</sup> International Congress of the International Society for Ethnopharmacology**

Topics include Arab-European intercultural ethnopharmacology, biodiversity and ecological aspects of ethnobotanical sources, ecopharmacognosy and globalization of traditional medicines, quality assurance, and traditional and modern herbal medicinal products.

Petra, Hashemite Kingdom of Jordan

<http://15icse.bau.edu.jo/>

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**May 5-7, 2015**

**Vitafoods Europe: The Global Nutraceutical Event**

Exhibitor profile includes suppliers of Botanical, Plant extracts, Essential Oils, Nutritional and medicinal seaweeds and other algae, Bioactive compounds, Sweeteners, Natural flavors, Natural colors, Fruit and vegetable products, Vitamins and Minerals.

Palexpo, Geneva, Swiss Confederation

<http://www.vitafoods.eu.com/>

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**May 18-22, 2015**

**1st Symposium on Natural Products with Impact on Animal and Human Health  
II INTERNATIONAL SEMINAR ON ANIMAL AND PLANT HEALTH**

**Themes include:** Traditional medicine, discovery and development of drugs from medicinal plants and other natural sources; Processes for obtaining extracts from medicinal plants; Decontamination of raw materials and natural products; Dietary supplements and nutraceuticals; Regulatory Issues for the Commercial register of natural products

Havana, Republic of Cuba

<http://www.sanidadagropecuaria.com/Talleres/Simposio%20Productos%20Naturales.pdf>

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**May 20-22, 2015**

**2ème Salon des Plantes Aromatiques, Médicinales & à Parfums**

Theme: valuation of aromatic and medicinal plants in Algeria and sustainable development. The event will connect the entire Algerian medicinal and aromatic plant (MAP) value chain from production techniques, harvesting and post-harvesting, processing, implementation of standards and certification, regulations, and marketing. There will be presentations on supply, demand, market opportunities, and market structure of Algerian MAP sector.

Jardin d'Essai du Hamma, Algiers, People's Democratic Republic of Algeria

<http://aromed-algerie.com/>

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**June 9-12, 2015**

**6th Annual Conference of American Council for Medicinally Active Plants**

Note: This is a scientific conference and not a medicinal plant trade event.

Spokane, Washington, United States of America

<http://www.acmap.org/conference-registration>

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**SIVARAM  
RESEARCH FOUNDATION**

**June 15-18, 2015**

**6th Global Summit on Medicinal and Aromatic Plants**

The summit is a forum for medicinal and aromatic plant (MAP) conservation biologists, farmers, research scientists, traditional health practitioners, academicians, medical and pharmaceutical representatives, NGOs, policy makers, and government agencies.

Srinagar, Jammu & Kashmir, Republic of India

<http://www.sivaramfoundation.org/events/6th-global-summit-on-medicinal-and-aromatic-plants-june-15-18-2015-srinagar-jammu-kashmir-india/>

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**JUNE 18-21**  
**2015**  
TWTC Exhibition Hall 1

**June 18-21, 2015**

**TaiHerbs 2015 - Taiwan International Herb and Natural Products Expo**

**Exhibitor profile:** Chinese Raw Herbs, Medicinal Herb / Herbal Remedies, Functional Foods / Products, Biomedicine and Beauty Products, Test & Inspection Equipment, Health Care & Therapy, Raw Materials, Equipment & Related Services, Research & Development.

Taipei, Taiwan

[http://www.taiherbs.com.tw/en\\_US/index.html](http://www.taiherbs.com.tw/en_US/index.html)

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## Healthplex & Nutraceutical China 2015



**June 24-26, 2015**

**Healthplex & Nutraceutical China 2015 (HNC 2015), co-located with Food ingredients Asia-China, Health ingredients & Natural ingredients (Fi Asia-China, Hi & Ni)**

Exhibitor profile includes suppliers of natural and botanical ingredients used in health food, nutraceutical, and natural pharmaceutical products, as well as suppliers of traditional Chinese medicinal ingredients such as ganoderma sporophore (*ling zhi*), cordyceps fungus (*dong chong xia cao*), ginseng root (*ren shen*), and edible bird's nest (*yan wo*).

Shanghai, People's Republic of China

<http://www.figlobal.com/asia-china/home/>

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**June 29-July 2, 2015**

**Society for Economic Botany Conference and Indigenous Plant Use Forum**

The main theme of the conference is "Global Vision on Indigenous Plants and Economic Botany". There will also be a field trip to a rooibos farm and factory in Clanwilliam, the center of the rooibos industry. Rooibos is the most important indigenous MAP crop in the region.

Clanwilliam, Western Cape, Republic of South Africa

<http://www.econbot.org/>

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**July 20-22, 2015**

**4th International Conference on Agriculture & Horticulture (Agri-2015)**

The conference theme is “Enhancing Modern and Sustainable Agricultural Practices” wherein “Spices, Herbs and Medicinal Plants” and among the listed conference highlights.

Beijing, People’s Republic of China

<http://agriculture-horticulture.conferenceseries.com/index.php>

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**August 12-14, 2015**

**III CONGRESO LATINOAMERICANO DE PLANTAS MEDICINALES**

Main objectives include: Medicinal plant processing technology, cultivation and marketing of medicinal plants, Identifying the needs of producers for the cultivation of medicinal plants, Public private partnerships for development of medicinal plant crop production projects, State policies to promote local development of medicinal plant production.

Iquitos, Republic of Peru

<http://www.iiaap.org.pe/varionoti317.aspx>

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**August 23-27, 2015**

**63rd International Congress and Annual Meeting of the Society for Medicinal Plant and Natural Product Research (GA)**

Budapest, Hungary

<http://ga2015.hu/>

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## World Ayurvedic Expo

**August 26, 2015**  
**World Ayurveda Expo**

Exhibitor profile includes suppliers of herbal ingredients / medicinal plants used in the Ayurvedic system of medicine as well as manufacturers of finished medicinal products of Ayurvedic system, Ayurvedic clinics, hospitals and spas.

Hyderabad, Republic of India  
<http://www.worldayurvedicexpo.com/>

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**October 5-9, 2015**  
**Supply Side West**

One of largest trade shows with 1,700 of the world's top health ingredient suppliers and equipment companies, as well as lab-testing firms, logistics and packaging experts.

Mandalay Bay, Las Vegas, Nevada, United States of America  
<http://west.supplysideshow.com/>

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**October 14-17, 2015**  
**2<sup>nd</sup> International Conference on Natural Products Utilization: From Plants to Pharmacy Shelf (ICNPU 2015)**

Conference topics include: Conservation and sustainable uses of natural resources, metabolomics, genetic engineering, ethnobotany, ethnopharmacology, herbal medicine and botanical supplements.

Plovdiv, Republic of Bulgaria  
<http://www.icnpu2015.cim.bg/>

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**October 21-22, 2015**

**The International Conference of Medicinal and Aromatic Plants**

Conference topics include good agricultural and collection practice (GACP) for medicinal and aromatic plants (MAPs), organic production of MAPs and impact on environment, producing MAPs according to international standards, sustainable use of wild MAPs, value addition of MAPs, saving germplasm, seedling and tissue culture production, acclimatization of new species, climate change, traditional herbal medicine practice in different societies, and more.

Desert Research Centre (DRC), Ministry of Agriculture and Land Reclamation  
1 Mathaf Al-Mataria-Cairo, Arab Republic of Egypt

<https://www.facebook.com/events/416390035157658/>

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**October 22-23, 2015**

**8<sup>th</sup> Shanghai International Conference on Traditional Chinese Medicine and Natural Medicine**

Hosted by the Modern Biotechnology and Pharmaceutical Industry Office of Shanghai Municipality, the conference theme is technology innovation and industry development.

Shanghai, People's Republic of China

<http://www.s-tcm.com/english.html>

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**November 24-26, 2015**

**The 7<sup>th</sup> Conference of the International Seabuckthorn Association (ISA 2015)**

Main themes include: Seabuckthorn in environmental conservation; Seabuckthorn resources development; Post harvest management of seabuckthorn; Seabuckthorn in health protection; Entrepreneurship development for commercialization of seabuckthorn; International co-operation on seabuckthorn.

New Delhi, Republic of India

[http://www.sanddorn.net/circular\\_1\\_revised.pdf](http://www.sanddorn.net/circular_1_revised.pdf)

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**November 27-29, 2015**

**Natural Health Food, Ingredients, Extracts, Nutraceutical Products & BIO-Pharma Expo 2015 (NFI & NHext, Bio-PhEx 2015)**

Exhibitor profile includes suppliers of botanical extracts, essential oils, nutraceutical & pharmaceutical ingredients, health food Ingredients, herbal preparations, food additives, seasonings.

KINTEX (Korea International Exhibition Center, Hall 7), Gayong City, Republic of Korea

<http://www.nfikorea.co.kr/eng/>

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**December 3-4, 2015**

**ICMAP 2015: 17th International Conference on Medicinal and Aromatic Plants**

Conference topics will include Biodiversity, management and conservation of MAPs, Biotechnology, cultivation and industrial processing of MAPs, Quality control, Economics and Marketing, IPR and Patent Laws, Causes and consequences of over exploitation of MAPs in natural habitats

Penang, Malaysia

<http://www.waset.org/conference/2015/12/penang/ICMAP>

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**June 9-10, 2016**

**XIV International Conference on Medicinal Plants and Natural Products (ICMPNP 2016)**

Conference topics will include: Medicinal Plants and Natural Products, Essential Oil: production and use, Medicinal Plants: identification, cultivation, genetics, taxonomy, biodiversity, Sustainable Practices in Research, Resource Management and Production.

San Francisco, California, United States of America

<http://www.waset.org/conference/2016/06/san-francisco/ICMPNP>

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## 10. Herb Profile: Rosemary leaf

Rosemary leaf (as well as various extracts and the essential oil made from it) is used as an active ingredient in traditional European and northern African medicinal products and formulations. Rosemary-based ingredients are also used as flavoring agents and preservative/antioxidant components of food products, and as functional components of both cosmetic products and dietary supplement products.

### Nomenclature:

Pharmacopoeial name: Rosmarini Folium  
 Botanical name(s): *Rosmarinus officinalis* L. (Fam.: Lamiaceae); also possibly used and traded are *Rosmarinus eriocalyx* Jord. & Fourr. and *Rosmarinus tournefortii* de Noé

### Common names:

Arabic: Klil (en arabe)  
 Maltese: Weraq tal-klil  
 Portuguese: Alecrim  
 Spanish: Romero (hoja de)  
 French: Romarin (feuille de); Romarin officinal  
 English: Rosemary leaf

### Origin, Natural Distribution and Cultivation:

***Rosmarinus officinalis***: This species grows wild throughout the Mediterranean Region from northern Africa (Kingdom of Morocco, Republic of Tunisia, People's Democratic Republic of Algeria, Libya, and Arab Republic of Egypt), southern Europe (Portuguese Republic, Kingdom of Spain, French Republic, Republic of Italy, Republic of Albania, Republic of Malta, Hellenic Republic, Republic of Cyprus), to parts of western Asia (Republic of Turkey).

Outside of its native origin, rosemary is cultivated around the world and there are several named cultivars that have been selectively bred for certain characteristics.

***Rosmarinus eriocalyx***: This species grows wild in Kingdom of Spain (Andalucía) and northwestern Africa (Kingdom of Morocco, People's Democratic Republic of Algeria, and Libya)

***Rosmarinus tournefortii***: This species reportedly grows wild in Kingdom of Morocco and People's Democratic Republic of Algeria.

### Therapeutic uses in Traditional European Medicine:

Rosmarini Folium PhEur <sup>1</sup>	
<b>Medicinal uses:</b>	<p><b>Oral use:</b> Traditional herbal medicinal product for symptomatic relief of dyspepsia and mild spasmodic disorders of the gastrointestinal tract.</p> <p><b>Use as bath additive:</b> Traditional herbal medicinal product as an adjuvant in the relief of minor muscular and articular pain and in minor peripheral circulatory disorders.</p>
Rosmarini Aetheroleum PhEur <sup>2</sup>	
<b>Medicinal uses:</b>	<p><b>Oral use:</b> Traditional herbal medicinal product for symptomatic relief of dyspepsia and mild spasmodic disorders of the gastrointestinal tract.</p> <p><b>Cutaneous use &amp; use as bath additive:</b> Traditional herbal medicinal product as an adjuvant in the relief of minor muscular and articular pain and in minor peripheral circulatory disorders.</p>

<sup>1</sup> European Medicines Agency. Community herbal monograph on *Rosmarinus officinalis* L., folium:

[http://www.ema.europa.eu/docs/en\\_GB/document\\_library/Herbal\\_-\\_Community\\_herbal\\_monograph/2011/01/WC500101494.pdf](http://www.ema.europa.eu/docs/en_GB/document_library/Herbal_-_Community_herbal_monograph/2011/01/WC500101494.pdf)

<sup>2</sup> European Medicines Agency. Community herbal monograph on *Rosmarinus officinalis* L., aetheroleum:

[http://www.ema.europa.eu/docs/en\\_GB/document\\_library/Herbal\\_-\\_Community\\_herbal\\_monograph/2011/01/WC500101493.pdf](http://www.ema.europa.eu/docs/en_GB/document_library/Herbal_-_Community_herbal_monograph/2011/01/WC500101493.pdf)

## HS Codes used for Rosemary

**Note:** The HS codes provided for the essential oil form are the only 'product specific' tariff codes for rosemary ingredients. All others are 'general' tariff code categories (based on customs rulings) where various rosemary ingredients have been classified.

Tariff Code	Ingredient	Source
0910.91.9000	Rosemary Leaf (as a component of Spice Mixtures)	BTI
1209.99.9910	Rosemary Seeds, for growing medicinal plants	BTI
1211.90.8090	Rosemary Spice Rubs (for barbecue)	CROSS
1211.90.9090	Rosemary Leaf, Dried	CROSS
1211.90.9190	Rosemary Leaf, Fresh	CROSS
1302.19.7000	Rosemary Extract	BTI
3003.90.0000.V999	Rosemary Homoeopathic Mother Tincture	BTI
3301.29.1830	Rosemary Essential Oil	MTS
3301.29.4100		BTI
3301.29.5137		HTSUS
3301.90.1050	Rosemary Extracted Oleoresin (dry powdered)	CROSS
3302.10.1000	Rosemary Extracted Oleoresin (soft liquid)	CROSS
3302.10.9000		BTI

### Legend:

BTI: Binding Tariff Information rulings of the European Commission Taxation and Customs Union  
 CROSS: Customs Rulings Online Search System (U.S. Customs & Border Protection)  
 HTSUS: Harmonized Tariff Schedule of the United States  
 MTS: Moroccan Tariff Schedule

### Export Trade:

The main exporters of dried leaf and essential oil include Kingdom of Morocco, Kingdom of Spain, and Republic of Tunisia. Although there is also significant cultivation of rosemary in other countries such as French Republic and United States of America (USA), both are also among the main importers of rosemary leaf and essential oil. As an example, the following table shows 2014 USA imports of rosemary essential oil in terms of quantity (MT) and reported customs value (US\$).

### United States of America 2014 Imports of Rosemary Essential Oil

**Source:** United States Department of Agriculture (USDA) Foreign Agricultural Service (FAS) Global Agricultural Trade System (GATS) online: <http://apps.fas.usda.gov/gats/>

Area/Partners of Origin		January - December		
And Consumption Commodities Imported		Quantities/Values in Dollars		
Partner	Product	UOM	2014	
			Value	Qty
<b>World Total</b>	<b>3301295137 - ROSEMARY OIL</b>	<b>MT</b>	<b>5,786,885</b>	<b>124.2</b>
Spain	3301295137 - ROSEMARY OIL	MT	2,170,614	40.0
France(*)	3301295137 - ROSEMARY OIL	MT	1,796,057	47.2
Tunisia	3301295137 - ROSEMARY OIL	MT	657,543	14.8
Morocco	3301295137 - ROSEMARY OIL	MT	305,804	6.9
Germany(*)	3301295137 - ROSEMARY OIL	MT	212,657	1.9
India	3301295137 - ROSEMARY OIL	MT	190,573	7.8
Bulgaria	3301295137 - ROSEMARY OIL	MT	184,386	-
Switzerland(*)	3301295137 - ROSEMARY OIL	MT	91,786	1.6
Netherlands	3301295137 - ROSEMARY OIL	MT	57,720	1.0
Hungary	3301295137 - ROSEMARY OIL	MT	45,513	1.5

United Kingdom	3301295137 - ROSEMARY OIL	MT	27,318	0.1
Canada	3301295137 - ROSEMARY OIL	MT	24,828	0.7
China	3301295137 - ROSEMARY OIL	MT	9,814	0.6
Slovenia	3301295137 - ROSEMARY OIL	MT	5,862	-
South Africa	3301295137 - ROSEMARY OIL	MT	4,400	-
Australia(*)	3301295137 - ROSEMARY OIL	MT	2,010	-
<b>Grand Total</b>		<b>MT</b>	<b>5,786,885</b>	<b>124.2</b>

**Notes:**

1. Data Source: U.S. Census Bureau Trade Data
2. FAS Totals include all Agricultural commodities and FAS selected NONAG commodity items.
3. All zeroes for a data item may show that statistics exist in the other import type. Consumption or General.
4. (\*) denotes a country that is a summarization of its component countries.
5. Users should use cautious interpretation on QUANTITY reports using mixed units of measure. QUANTITY line items will only include statistics on the units of measure that are equal to, or are able to be converted to, the assigned unit of measure of the grouped commodities.
6. Product Group: FAS

### Quality Standards

For quality control testing there are different standards available depending on the intended use. For example there is an ISO (International Organization for Standardization) specification for use as a food ingredient, a USP (United States Pharmacopeia) monograph for use as a dietary supplement component, and a PhEur (European Pharmacopoeia) monograph for use as an active ingredient of medicinal products.

#### Comparison of quality standards for Rosmarini Folium; ISO, USP, PhEur

	<b>Food (Spice / Condiment)</b>	<b>Dietary Supplement</b>	<b>Medicine</b>
<b>Standard</b>	<b>Rosemary ISO 11168</b>	<b>Rosemary USP 38</b>	<b>Rosemary Leaf PhEur 8.0</b>
<b>Characters</b>	<b>Odour:</b> typical; slightly smells of camphor and cineol; <b>Taste:</b> very aromatic, pleasant, fresh and slightly bitter, reminiscent of eucalyptol and camphor.	None specified.	<b>Odour:</b> strongly aromatic.
<b>Content</b>	NLT 0.8% (mL/100 g) volatile oil.	NLT 1.2% (v/w) of volatile oil; and NLT 2.0% of phenolic diterpenes, calculated as the sum of carnosic acid and carnosol.	NLT 12 mL/kg of essential oil; and NLT 3 per cent of total hydroxycinnamic derivatives expressed as rosmarinic acid.
<b>Identification tests</b>	Macroscopic evaluation.	Macroscopic examination; Microscopic examination; Thin layer chromatography.	Macroscopic evaluation; Microscopic examination; Thin layer chromatography.
<b>Foreign matter</b>	NMT 1% extraneous matter; NMT 3% broken stems; and NMT 10% brown leaves.	NMT 5% of stems; NMT 2% of other foreign matter.	NMT 5% of stems; NMT 2% of other foreign matter.
<b>Water</b>	NMT 11%	No requirement.	NMT 100 mL/kg
<b>Loss on drying</b>	No requirement.	NMT 10%	No requirement.
<b>Total ash</b>	NMT 8.0%	NMT 9.0%	NMT 9.0%
<b>Acid-insoluble ash</b>	NMT 1.0%	NMT 1.5%	No requirement.
<b>Storage</b>	Pack in clean & sound containers, made of a material which does not affect the product but which protects it from the ingress or loss of moisture and volatile matter.	Preserve in well-closed containers, protected from light and moisture, and store at room temperature.	Store protected from light.
<b>Heavy metals</b>	Limits not specified.	Arsenic: NMT 1.0 mg/g Cadmium: NMT 0.5 mg/g Lead: NMT 5.0 mg/g Mercury: NMT 1.0 mg/g	Cadmium: NMT 1.0 mg/g Lead: NMT 5.0 mg/g Mercury: NMT 0.1 mg/g

## 11. Company Profile: Royal Ottoman Company

Organisation name:	Royal Ottoman Company, also known as Royal for Herbs and Ottoman for Trading & Manufacturing
Related organisation:	Organic Nature Company
Addresses:	Shubramant, El-Marioteia, Haram, Giza, Arab Republic of Egypt 499 Port Said Street, Cairo, Arab Republic of Egypt
Telephone numbers:	(+20-2) 33817702; (+20-2) 33817703; (+20-2) 33811171
Website:	<a href="http://www.royalforherbs.com/">http://www.royalforherbs.com/</a>
Fair Trade Profile:	<a href="http://fairtradeusa.org/producer-profiles/royal-royal-herbs-ottoman-group">http://fairtradeusa.org/producer-profiles/royal-royal-herbs-ottoman-group</a>
<b>SELECTED ORGANIC &amp; FAIR TRADE MEDICINAL PLANTS PRODUCED BY ROYAL OTTOMAN</b>	
<ul style="list-style-type: none"> <li>■ Chamomile flower (<i>Matricaria recutita</i>)</li> <li>■ Hibiscus flower (<i>Hibiscus sabdariffa</i>)</li> <li>■ Lemon balm leaf (<i>Melissa officinalis</i>)</li> <li>■ Lemon verbena leaf (<i>Aloysia citriodora</i>)</li> <li>■ Peppermint leaf (<i>Mentha x piperita</i>)</li> <li>■ Rosemary leaf (<i>Rosmarinus officinalis</i>)</li> <li>■ Spearmint leaf (<i>Mentha spicata</i>)</li> <li>■ Thyme herb (<i>Thymus</i> spp.)</li> <li>■ West Indian lemongrass leaf (<i>Cymbopogon citratus</i>)</li> </ul>	
<b>CERTIFICATIONS</b>	
FAIR TRADE	Certification Agent: FLO-CERT - FLO ID: 4537
ORGANIC:	Certification Agent: Egyptian Center for Organic Agriculture (ECO A)
QUALITY	<ul style="list-style-type: none"> <li>■ ISO 9001: Quality management systems</li> <li>■ ISO 17025: Competence to carry out tests and/or calibrations, including sampling.</li> <li>■ ISO 18001: Information technology -- Radio frequency identification for item management.</li> <li>■ ISO 22000: Food safety management systems.</li> </ul>

## 12. Medicinal Plants & Natural Ingredients Sector Organizations

Name of Organization	Website
<b>Agribusiness in Sustainable Natural African Plant Products (ASNAPP)</b>	<a href="http://www.asnapp.org.za/">http://www.asnapp.org.za/</a>
<b>Agricultural Export Council (AEC) Egypt, Medicinal and Aromatic Plants Committee</b>	<a href="http://www.aecegypt.com/">http://www.aecegypt.com/</a>
<b>Albanian Essence Producers and Cultivators Association (EPCA)</b>	<a href="mailto:epca_mp@yahoo.com">epca_mp@yahoo.com</a>
<b>American Botanical Council (ABC)</b>	<a href="http://abc.herbalgram.org/">http://abc.herbalgram.org/</a>
<b>American Council for Medicinally Active Plants (ACMAP)</b>	<a href="http://www.acmap.org/">http://www.acmap.org/</a>
<b>American Herbal Products Association (AHPA)</b>	<a href="http://www.ahpa.org">http://www.ahpa.org</a>
<b>Arab Federation of Medicinal and Aromatic Plants (FAPAM)</b>	<a href="http://fapam.um5s.ac.ma/">http://fapam.um5s.ac.ma/</a>
<b>Asia Network for Sustainable Agriculture and Bioresources (ANSAB)</b>	<a href="http://www.ansab.org/">http://www.ansab.org/</a>
<b>Association for African Medicinal Plants Standards (AAMPS)</b>	<a href="http://www.aamps.org/en/">http://www.aamps.org/en/</a>
<b>Association for Medicinal and Aromatic Plants of Southeast European Countries (AMAPSEEC)</b>	<a href="http://www.amapseec.org/">http://www.amapseec.org/</a>
<b>Association of Medicinal and Aromatic Plants of Greece (AMAPs of Greece)</b>	<a href="http://eng.eaffe.org/">http://eng.eaffe.org/</a>
<b>Association pour les Plantes Médicinales et Aromatiques de Guadeloupe (APLAMEDOM-Guadeloupe)</b>	<a href="http://aplamedarom.fr/">http://aplamedarom.fr/</a>
<b>Association pour les Plantes Aromatiques et Médicinales de la Réunion (APLAMEDOM-Réunion)</b>	<a href="http://www.aplamedom.org/">http://www.aplamedom.org/</a>
<b>Association Tunisienne des Plantes Aromatiques et Médicinales (ATPM)</b>	<a href="http://atpm.wifeo.com/">http://atpm.wifeo.com/</a>
<b>Associazione Italiana fra Coltivatori, Raccoglitori, Trasformatori, Importatori, Esportatori, Grossisti e Rappresentanti di Case Estere di Piante Medicinali, Aromatiche, Spezie, Estratti Vegetali, Oli Essenziali e loro derivati (ASSOERBE)</b>	<a href="http://www.assoerbe.eu/">http://www.assoerbe.eu/</a>
<b>British Herb Trade Association (BHTA)</b>	<a href="http://www.bhta.org.uk/">http://www.bhta.org.uk/</a>
<b>Canadian Herb, Spice and Natural Health Products Coalition (CHSNC)</b>	<a href="http://www.saskherbspice.org/CHSNC/">http://www.saskherbspice.org/CHSNC/</a>
<b>Central Herbal Agro Marketing Federation of India (CHAMF)</b>	<a href="http://www.chamf.org/">http://www.chamf.org/</a>
<b>Chamber of Herbal Industries of the Philippines, Inc. (CHIP)</b>	<a href="http://chipi.org.ph/">http://chipi.org.ph/</a>
<b>Egyptian Medicinal and Aromatic Plants (EMAP)</b>	<a href="http://www.emap-eg.org/">http://www.emap-eg.org/</a>
<b>European Herb Growers Association (EUROPAM)</b>	<a href="http://www.europam.net/">http://www.europam.net/</a>
<b>European Herbal Infusions Association (EHIA)</b>	<a href="http://www.ehia-online.org/">http://www.ehia-online.org/</a>
<b>Federation of Medicinal and Aromatic Plants Stakeholders (FEDMAPS)</b>	<a href="http://www.fedmaps.org/">http://www.fedmaps.org/</a>
<b>Federazione Italiana dei Produttori di Piante Officinali (FIPPO)</b>	<a href="http://www.fippo.org/">http://www.fippo.org/</a>



Name of Organization	Website
<b>Filière biologique des plantes de santé du Québec</b>	<a href="http://www.plantesmedicinales.qc.ca/">http://www.plantesmedicinales.qc.ca/</a>
<b>Instituto Peruano de Productos Naturales (IPPN)</b>	<a href="http://www.ippn.org.pe/">http://www.ippn.org.pe/</a>
<b>International Council for Medicinal and Aromatic Plants (ICMAP)</b>	<a href="http://www.icmap.org/">http://www.icmap.org/</a>
<b>International Trade Union of Genuine Regional Materia Medica (TUGRMM)</b>	<a href="http://www.tugrmm.com/en/">www.tugrmm.com/en/</a>
<b>Jadi Buti Association of Nepal (JABAN)</b>	<a href="http://www.jaban.com.np/">http://www.jaban.com.np/</a>
<b>Medicinal and Aromatic Plants Association of India (MAPAI)</b>	<a href="http://www.dmapr.org.in/MAPAI/">http://www.dmapr.org.in/MAPAI/</a>
<b>National Medicinal Plants Board (NMPB)</b>	<a href="http://nmpb.nic.in/">http://nmpb.nic.in/</a>
<b>PELERO CZ o.s.</b> (Association of the Producers and Processors of Medicinals and Aromatic Plant and Spices)	<a href="http://www.pelero.cz/">http://www.pelero.cz/</a>
<b>Phytotrade Africa</b>	<a href="http://phytotrade.com/">http://phytotrade.com/</a>
<b>Polski Komitet Zielarski</b> (Polish Herbal Committee)	<a href="http://www.pkz.pl/">http://www.pkz.pl/</a>
<b>Regional Network for Medicinal and Aromatic plants in the Near East and North Africa (AARENINA)</b>	<a href="http://www.aarinena.org/MHPWeb/">http://www.aarinena.org/MHPWeb/</a>
<b>Singapore Chinese Medicines and Health Products Merchant Association</b>	<a href="http://www.tcm.org.sg/">http://www.tcm.org.sg/</a>
<b>Société Marocaine des Plantes Aromatiques et Médicinales (SOMAPAM)</b>	<a href="http://somapam.voila.net/">http://somapam.voila.net/</a>
<b>Verein für Arznei- und Gewürzpflanzen (SALUPLANTA e.V.)</b>	<a href="http://www.saluplanta.de/">http://www.saluplanta.de/</a>