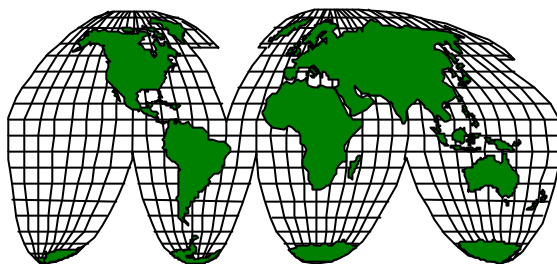




International Trade Centre UNCTAD/WTO
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MARKET NEWS SERVICE

MINS



Medicinal Plants & Extracts

North America	Western Europe	Eastern Europe
Africa	India	China

No. 21
December 2006

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EDITORS NOTE

MNS Medicinal Plant and Extracts report is a formatted version of a news and information bulletin prepared by **the International Trade Centre** to promote international trade in medicinal plants and botanical extracts. The revised version of the report includes substantially more information on the structure and function of the market. These additional features have been included after extensive consultation with existing subscribers and trade experts.

For subscription details please contact MNS in Geneva at the address given below.

Coverage: Issue No. 21 includes six regional reviews and a special features section.

1. North America
2. Western Europe
3. Eastern Europe
4. China
5. India
6. Africa

The regional reviews cover the six main producing regions of the world. Information on Latin America, Caribbean and Pacific countries will be covered from time to time in the special features section of the bulletin (see below)

Scope: Each regional section includes news on

- Demand and supply trends including industry news
- Indicative prices of raw materials
- Indicative prices of herbal extracts
- Trade specifications commonly used in each region.
- Trade fairs and conferences

Prices: Prices and quotations are in US dollars per kilo unless otherwise stated. They should be considered indicative only and reflect the price of a product of a specific phytochemical characteristic from a specified origin. The level of marker compounds (for chemical standardization of extracts) referred to in quotes are those commonly found in the industry. They do not imply any sort of "trading standard".

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

Specifications: The selected specification sheets given are actual industry specifications commonly used by exporters and importers. We do not guarantee their content or accuracy nor wish to imply that they have any legal status in trade.

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SPECIAL FEATURES

Global Herb Trade Association Directory: Each edition includes a regularly updated directory with contact information for herb trade associations, councils and export promotion organizations that represent the growers, wild collectors, processors, and traders of medicinal herbs and extracts.

Organization Feature: This edition includes a feature article on the activities of the *Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual (INDECOPI)* with an update on their ongoing struggle against biopiracy involving Traditional Knowledge and medicinal plants of Peruvian origin, in particular the case of maca (*Lepidium meyenii*).

Trade Specifications: Each edition contains trade specifications for medicinal herbs or extracts from each of six covered regions. In this issue you will find specifications for herbal extracts used as ingredients in weight control products, **Hoodia gordonii extract (Africa)**, **Bitter orange extract (China)**, **Caralluma powder (India)**, **Birch leaf (Eastern Europe)**, **Kola extract (Western Europe)**; **raw material from Africa**, and **Chá de bugre extract (South America)**.

Back Issues: Each edition also includes an alphabetical reference list of trade specifications that are available in back issues of the MNS since 2001.

Rates of Exchange: 10 December 2006

CURRENCY	CODE	UNITS 1 / USD
Canadian Dollar	CAD	1.1501
Chinese Yuan Renminbi	CNY	7.8245
Egyptian Pound	EGP	5.71625
EURO	EUR	0.75726
Indian Rupee	INR	44.69
Japanese Yen	JPY	116.313
Mexican Peso	MXN	10.8606
Moroccan Dirham	MAD	8.46175
Peruvian Nuevo Sol	PEN	3.22835
Russian Rouble	RUB	26.2871
Swiss Franc	CHF	1.20445

Some Useful Terminology

ABC:	American Botanical Council
AEZ:	Agri Export Zones
AHP:	American Herbal Pharmacopoeia
AHPA:	American Herbal Products Association
API:	Ayurvedic Pharmacopoeia of India
BfArM:	Federal Institute for Drugs and Medical Devices (Germany)
BMVEL:	Federal Ministry of Consumer Protection, Food and Agriculture (Germany)
BTFP:	BioTrade Facilitation Programme
CBD:	Convention on Biodiversity
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
C/S:	Cut and sifted
COMTRADE:	Commodity Trade Statistics Database
COSEWIC:	Committee on the Status of Endangered Wildlife in Canada
Dept of AYUSH:	Dept. of Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homoeopathy (India)
EMA:	European Medicines Agency (EU)
EU:	European Union
Extract:	Concentrated preparations of liquid, dry or semi-solid consistency obtained from botanical raw materials, prepared by maceration, percolation or other methods using solvents (e.g. water, ethanol) or by supercritical fluid (CO ₂) technology
EXW:	Ex works - Buyer arranges for pick up of goods at the seller's location. Seller is responsible for packing, labeling, 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, labeling, 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
FDA:	Food and Drug Administration (USA)
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
GAP:	Good Agricultural Practice
GMP:	Good Manufacturing Practice
GTZ:	Gesellschaft für Technische Zusammenarbeit (German Technical Cooperation)
ha:	Hectare
HPLC:	High Performance Liquid Chromatography
HS Code:	Harmonized System Code
I/S:	In-store meaning the herb (e.g. flaxseed) is in the grain elevator
ISSC-MAP:	International Standard for Sustainable Wild Collection of Medicinal and Aromatic Plants
ITC:	International Trade Centre
MAP:	Medicinal and Aromatic Plants

MHRA:	Medicines and Healthcare products Regulatory Agency (UK)
NLT:	Not less than
NHP:	Natural Health Product (Canada)
NHPD:	Natural Health Products Directorate (Canada)
NMPD:	National Medicinal Plants Board (India)
NAICS:	North American Industry Classification System
NESOI:	Not Elsewhere Specified Or Included
NMT:	Not more than
NOP:	National Organic Program of the United States Department of Agriculture
PhEur:	European Pharmacopoeia
PPRC:	Pharmacopoeia of the People's Republic of China
OTC:	Over the Counter medicines: Medicines sold without a prescription
SDA:	State Drug Administration (People's Republic of China)
SIPPO:	Swiss Import Promotion Programme
TBC:	Tea bag cut
TCM:	Traditional Chinese Medicine
THM:	Traditional Herbal Medicine
THMP:	Traditional Herbal Medicinal Products
THMPD:	Traditional Herbal Medicinal Products Directive (EU)
THMRS:	Traditional Herbal Medicine Registration Scheme (UK)
TLC:	Thin Layer Chromatography
UNCTAD:	United Nations Conference on Trade and Development
UpS:	United Plant Savers
USAID:	United States Agency for International Development
USD:	United States Dollar
USDA:	United States Department of Agriculture
USP:	United States Pharmacopoeia
VAT:	Value Added Tax
WHO:	World Health Organization

NORTH AMERICA

CARRIBEAN NATIONS

CARRIBEAN HERBAL TRADE MEETS IN JAMAICA

November was the month for medicinal plants and natural products in Jamaica with two major international events taking place in the capital Kingston. The first hosted by the Scientific Research Council (<http://www.src-jamaica.org>) was geared towards bringing together Jamaican stakeholders (industry, academia, research institutions etc.) as well as regional counterparts to share with them the work that is being done towards developing a Nutraceutical Industry in Jamaica. The meeting was part of the Organization of American States (OAS) / Government of Jamaica (GOJ) sponsored project "Supporting the Development of a Nutraceutical Industry in Jamaica." The second event, a workshop on Quality Assurance and Quality Control for Herbals, took place 16-18 November 2006, sponsored by the EU-ACP Centre for Development of Enterprise (<http://www.cde.int>) and organised by the Jamaica Herb Business Association (JHBA), a local chapter of the Caribbean Herb Business Association (CHBA) (<http://www.caribbeanherbs.org>). More than twenty herbal companies from around the Caribbean attended the workshop and private clinics to learn more about the concepts of Good Agricultural Practices (GAPs) for herbal products, GMPs, HACCP and other quality assurance systems. A follow up meeting with support from UNIDO/ICS and CDE is envisaged around June 2007 in Trinidad.

SOURCE: Denzil Phillips International: <http://www.denzil.com>

JAMAICA HERBAL BUSINESS ASSOCIATION LAUNCHED

The Jamaica Herbal Business Association (JHBA), the Jamaican Chapter of the Caribbean Herbal Business Association (CHBA), held its official launch on 16 November 2006 at the Hotel Four Seasons, Kingston, Jamaica. Dr. Diane Robertson, Phytotherapist and President of the JHBA, convened the formal programme. The JHBA plans to hold an annual herbal festival for suppliers and purchasers to meet, co-located with Wellfest, the annual Jamaican wellness festival held in April.

SOURCE: Anon. Caribbean Herbal Business Association launches Jamaican. *eTurboNews*. 20 November 2006.

HANDBOOK FOR CARIBBEAN HERB FARMERS PUBLISHED

The Caribbean's first ever "*Handbook of Selected Caribbean Herbs for Industry-Phase I*" commissioned by the Caribbean Herb Business Association (CHBA) has been completed. The intention of the handbook is to provide herb growers, extension workers, and other partners in the trade with up-to-date information on 20 Caribbean herbs selected for their economic potential. The handbook will also be made available as a reference material to research institutions and herbal organizations. The Handbook contains plant profiles on the following 20 species: *Aloe vera*, *Andrographis paniculata*, *Carapa guianensis*, *Colubrina arborescens*, *Croton eluteria*, *Curcuma longa*, *Cymbopogon citratus*, *Eryngium foetidum*, *Hibiscus sabdariffa*, *Lippia alba*, *Maranta arundinacea*, *Momordica charantia*, *Myristica fragrans*, *Pimenta dioica*, *Pimenta racemosa*, *Quassia amara*, *Senna alata*, *Smilax regelii*, *Vetiveria zizanioides*, and *Zingiber officinale*.

SOURCES: (1) Caribbean Herb Business Association (CHBA) Secretariat: kleelum@icacarc.org (2) Seaforth C, Tikasingh T. Report: *A Study for the Development of a Handbook of Selected Caribbean Herbs for Industry - Phase I*. Caribbean Herb Business Association. November 2006.

SOUTHEASTERN UNITED STATES OF AMERICA

ALTERNATIVE BOTANICAL CROPS FOR CAROLINA TOBACCO FARMERS

Farmers in the State of South Carolina have formed a new co-operative called the "Carolina Agri-Solutions Growers Association" (CASGA), designed to bring together efforts in the areas of purchasing and marketing for traditional and non-traditional botanicals for South Carolina Agriculture. The initial thrust for CASGA will come from tobacco farmers who are in transition to other crops, either to supplement or to supplant tobacco. The co-operative is looking at not only non-traditional plants but non-traditional uses of traditional plants. For more information, contact CASGA President Greg Hyman, TEL: 843.397.1502, E-MAIL: ghyman@sccoast.net. In the neighboring State of North Carolina, trade associations have already been established representing the herbal

sector, the North Carolina Herb Association (NCHA): <http://www.ncherbs.net/ncha> and the North Carolina Natural Products Association (NCNPA): <http://www.ncnaturalproducts.org>.

SOURCE: Lollis T. New grower association aimed at 21st century S.C. agriculture. *Clemson University PSA Media*. 17 November 2006: <http://www.clemson.edu/psamedia/2006/CASGA.htm>

ALTERNATIVE MEDICINAL PLANT CROPS FOR MISSISSIPPI FARMERS

A USDA-funded project to develop medicinal and aromatic plants as alternative crops for Mississippi growers is being carried out at Mississippi State University (MSU). The project involves the study of American mayapple (*Podophyllum peltatum*), lemongrass (*Cymbopogon* spp.) and basil (*Ocimum basilicum*) with a goal to develop steps that farmers can follow in order to obtain higher pharmaceutical quality herb crops. U.S. pharmaceutical companies mainly import Himalayan mayapple (*Podophyllum hexandrum*) from India. MSU researchers and colleagues from the University of Mississippi have demonstrated that American mayapple contains the same bioactives as the Himalayan mayapple and could be developed as a new cash crop for Mississippi farmers. The researchers hope to introduce American mayapple as an alternative to Himalayan mayapple by providing a more consistent supply for the pharmaceutical industry.

SOURCE: Brackett S. Plant research focuses on medicinal compounds. *Mississippi State University Agricultural News*. 31 August 2006: <http://msucares.com/news/print/agnews/an06/060831.html>

NORTHWESTERN UNITED STATES OF AMERICA

MIDDLE-EASTERN MEDICINAL PLANT NOW GENETICALLY ENGINEERED IN WASHINGTON

Safflower (*Carthamus tinctorius*), a medicinal plant native to the Middle East and parts of Asia, and used in systems of Traditional Herbal Medicine (THM) from Egypt to India to China, has been genetically engineered, now being cultivated in the State of Washington. The genetically engineered safflower is growing on 14 acres, but there are plans to increase to thousands of acres within a few years. The Animal and Plant Health Inspection Service (APHIS) of the USDA issued permits for the test plots to a Canadian biotechnology company, SemBioSys Genetics Inc. APHIS states that it has determined that the field trials will not "significantly" affect the physical environment and there are no applicable, extraordinary, or other reasonably foreseeable circumstances under which significant environmental effects could occur given the protective and ameliorative measures specified in the permit. SemBioSys Genetics is using safflower to produce human insulin. A patent application was published last year on methods for the production of insulin in plants. Through proprietary technology, recombinant proteins, like insulin, will be accumulated in safflower. As the plant grows and the seed develops, the insulin protein is produced in the seed. The harvested seed is then processed using a proprietary extraction process and techniques to produce purified insulin. On 22 Nov 2006, SemBioSys announced the completion of a Technology Transfer and Manufacturing Agreement with Cangene Corporation, a biopharmaceutical company and contract manufacturing organization, for the processing and purification of SemBioSys' safflower-produced insulin.

SOURCES: (1) SemBioSys. Insulin: <http://www.sembiosys.ca/Main.aspx?id=14>; (2) SemBioSys. SemBioSys signs contract manufacturing agreement for plant-produced insulin with Cangene. 22 Nov 2006: <http://www.sembiosys.ca/news2.aspx?id=5274&secId=7>; (3) USDA. NEPA Decision Summary of Permit 05-320-01r. 30 March 2006: http://www.aphis.usda.gov/brs/aphisdocs/05_32001r_ndd.pdf; (4) USDA. Supplemental Permit Conditions for release of transgenic Safflower Permit 05-320-01r. 12 Jan 2006: http://www.aphis.usda.gov/brs/aphisdocs/05_32001r_sc.pdf; (5) Moloney MM et al. Methods for the production of insulin in plants. United States Patent Application Publication. 17 Feb 2005: <http://www.sembiosys.ca/Docs/US20050039235.pdf>

DRAFT GOOD AGRICULTURAL AND COLLECTION PRACTICE FOR HERBAL RAW MATERIALS (GACP)

The American Herbal Products Association (AHPA) and American Herbal Pharmacopoeia (AHP) have completed a draft document titled *Good Agricultural and Collection Practice for Herbal Raw Materials* (GACP). The GACP has relevance to herbal raw materials in all herbal products, including foods, dietary supplements, drugs, cosmetics, etc. It is intended to have applications to all herbal raw material producers, both large and small and whether producing herbs by cultivation or by harvesting from the wild. The draft AHPA-AHP GACP can be found online at http://www.ahpa.org/portals/0/pdfs/06_1208_AHPA-AHP_GACP.pdf. It is presented as a draft for

discussion and review, so comments are welcome, especially by farmers and collectors who use the draft in their facilities and operations. Revisions may be made to this GACP as additional insights are gained through this review process. If your company is in the business of growing or collecting herbal raw materials, you are invited to review this draft and submit comments and ideas about its application in your operations to the AHPA.

SOURCE: American Herbal Products Association (AHPA). Good agricultural and collection practice draft now available for comment. *AHPA Update*. 8 December 2006: <http://www.ahpa.org>

SUPPLY SIDE WEST ATTENDANCE UP 17%

Attendance at the 10th Annual SupplySide West International Trade Show and Conference, which took place 18-20 October 2006 in Las Vegas, Nevada, USA, was up 17% with more than 7,200 natural product industry executive attendees. SupplySide West is the world's largest executive conference on natural health ingredients, including medicinal herbs and extracts. The exhibit hall also grew by 17%, showcasing 566 companies occupying more than 850 booths. Most of the main suppliers of medicinal herbs and extracts for the North American market exhibited this year at Supply Side West, including, among others:

- ❑ A.M. Todd Botanical Therapeutics (Oregon): <http://www.amtodd.com/botanicals.php>
- ❑ Alchem International (India): <http://www.alcheminternational.com/aboutus.htm>
- ❑ Amax NutraSource (Oregon): <http://www.amaxnutrasource.co>
- ❑ American Ingredients (California): <http://www.amer-ing.com/about/about.html>
- ❑ Arjuna Natural Extracts (India): <http://www.arjunanatural.com>
- ❑ Ayush Herbs (Washington): <http://www.ayush.com>
- ❑ B&D Nutritional Ingredients (California): <http://www.bndni.com>
- ❑ B.I. Nutraceuticals (California): <http://www.botanicals.com>
- ❑ BDS Natural Products (California): <http://www.bdsnatural.com>
- ❑ Coach Industries (Japan): <http://www.coachindustries.com>
- ❑ Draco Natural Products (California): <http://www.dracoherbs.com>
- ❑ Ethical Naturals (California): <http://www.ethicalnaturals.com>
- ❑ Euromed USA (Pennsylvania): <http://www.euromed.es>
- ❑ GCI Nutrients (California): <http://www.gcinutrients.com>
- ❑ Geni Herbs (Indiana): <http://www.geniherbs.com>
- ❑ Indena USA (Washington): <http://www.indena.com>
- ❑ JoryHerb Ltd (China): <http://www.joryherb.com>
- ❑ Kaden Biochemicals (Germany): <http://www.kaden.de>
- ❑ Linnea (Pennsylvania): <http://www.linnea-worldwide.com>
- ❑ MB North America (California): <http://www.mbnorthamerica.com>
- ❑ Naturex (New Jersey): <http://www.naturex.com>
- ❑ OptiPure Brand Chemco Industries (California): <http://www.optipure.com>
- ❑ Orcas International (New Jersey): <http://www.orcas-intl.com>
- ❑ Pharmachem Laboratories (New Jersey): <http://www.pharmachemlabs.com>
- ❑ P.L. Thomas & Co. (New Jersey): <http://www.plthomas.com>
- ❑ Renaissance Herbs (California): <http://www.renaissanceherbs.com>
- ❑ RFI Ingredients (New York): <http://www.rfiingredients.com>
- ❑ Sabinsa Corporation (New Jersey): <http://www.sabinsa.com>
- ❑ Starwest Botanicals (California): <http://www.starwestherb.com>
- ❑ Stryka Botanics (New Jersey): <http://www.stryka.com>
- ❑ Valensa International (Florida): <http://www.valensa.com>
- ❑ Whole Herb Co (California): <http://www.wholeherbcompany.com>

For more information on future Supply Side exhibitions, visit: <http://www.supplysideshow.com>.

SOURCE: Anon. Record-setting Supply Side West goes to the next level. *Natural Products Insider*. 13 November 2006;11(12):56-57.

BOTANICAL RAW MATERIALS (Indicative prices: USD \$ / kg)

Product	Source	Price	Destination
American ginseng root (<i>Panax quinquefolius</i>):			
— conventional, whole root	USA	88	FOB West Coast
— organic, whole root **	USA	99-119	Pacific NW
Black cohosh rhizome (<i>Actaea racemosa</i>) *	USA	14-20.2	exw Hamburg
"	"	15.8	Pacific NW
Boldo leaf (<i>Peumus boldus</i>)	CHILE	2	exw Hamburg
Chá-de-bugre (<i>Cordia ecalyculata</i>)	BRAZIL	13	Eastern USA
Coriander fruit (<i>Coriandrum sativum</i>)	CANADA	0.838	SPOT New York
Damiana leaf (<i>Turnera diffusa</i>)	MEXICO	6.5-9.5	Eastern USA
Echinacea angustifolia root (<i>E. angustifolia</i>) **	USA	34.4-42	Pacific NW
Echinacea purpurea herb (<i>E. purpurea</i>)**	USA	5.5-7.9	Pacific NW
Echinacea purpurea root (<i>E. purpurea</i>)**	USA	12.6-13.2	Pacific NW
Goldenseal root (<i>Hydrastis canadensis</i>) *	USA	103-110	USA
Maca root (<i>Lepidium meyenii</i>) **	PERU	17.2- 23.5	Pacific NW
Maté leaf (<i>Ilex paraguariensis</i>)	SOUTH AMERICA	4.4-4.6	USA
Mayapple root (<i>Podophyllum peltatum</i>)*	USA	12.6-15.4	USA
Milk thistle fruit (<i>Silybum marianum</i>)**	Various	12.5-16.3	Pacific NW
Noni fruit powder (<i>Morinda citrifolia</i>)	Hawaii	15-16	USA
Pau d'arco bark (<i>Tabebuia impetiginosa</i>)	Argentina/Brazil	3-3.8	exw Hamburg
Peppermint leaf (<i>Mentha × piperita</i>)**	USA	6.2-8.7	FOB Pacific NW
Saw palmetto fruit (<i>Serenoa repens</i>) *	USA	7-9	exw Hamburg
Slippery elm bark (<i>Ulmus rubra</i>)	USA:		
— cotton cut, wild collected *		17.8-20.9	FOB West Coast
— powder, wild * and organic **		23.5-26.5	Pacific NW
Turkey tails powder (<i>Trametes versicolor</i>)	USA	27-29	FOB California
Witch hazel leaf (<i>Hamamelis virginiana</i>) *	USA	7.6-15.2	USA

* Wild collected — **Certified organic

Quality Standards: Standards for most of the above listed medicinal herbs are published in the United States Pharmacopeia and National Formulary (USP-NF) and/or in the European Pharmacopoeia (PhEur).

Notes on status of wild-collected herbs: (1) Wild American ginseng is a protected species under Appendix II of the *Convention on International Trade in Endangered Species* (CITES). Additionally, the U.S. Fish and Wildlife Service (USFWS) has certain export restrictions in place and in Canada, it is listed as an 'endangered species' by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC); (2) Wild goldenseal is listed as a 'threatened species' by the COSEWIC.

EXTRACTS AND ESSENTIAL OILS (Indicative prices: US \$ / kg)

Product	Standardization	%	Price
Açaí fruit (<i>Euterpe oleracea</i>)	4 : 1 (w/w)	N/A	29-45
Açaí fruit (<i>Euterpe oleracea</i>)	Orac units per gram	166	73
Acerola fruit (<i>Malpighia emarginata</i>)	Vitamin C and bioflavonoids	17	19-20
Black cohosh rhizome (<i>Actaea racemosa</i>)	Triterpene glycosides	2.5	67-75
Bladderwrack thallus (<i>Fucus vesiculosus</i>)	Glycerite 1 : 2 (w/v)	N/A	97 / gallon
Chá-de-bugre (<i>Cordia ecalyculata</i>)	10 : 1 (w/w)	N/A	85
Echinacea purpurea herb	Total phenolic compounds	4.0	28-39
Echinacea purpurea root	Total phenolic compounds	4.0	29-32
Guaraná seed (<i>Paullinia cupana</i>)	Caffeine	22	10
Maca hypocotyle (<i>Lepidium meyenii</i>)	4 : 1 (w/w)	N/A	16
Maca hypocotyle (<i>Lepidium meyenii</i>)	Glucosinolates	6	21-26
Maca hypocotyle (<i>Lepidium meyenii</i>)	Liquid extract	N/A	34
Maté leaf (<i>Ilex paraguariensis</i>)	None	N/A	12-15
Mexican wild yam root (<i>Dioscorea composita</i>)	Total saponins	6.0	28

Muirá puama bark (<i>Ptychopetalum olacoides</i>)	10 : 1 (w/w)	N/A	18
Saw palmetto fruit (<i>Serenoa repens</i>)	Total fatty acids	35	35-48
Saw palmetto fruit (<i>Serenoa repens</i>)	Total fatty acids	45	45
Saw palmetto fruit (<i>Serenoa repens</i>)	Total fatty acids	85-95	90
Pau d'Arco bark (<i>Tabebuia impetiginosa</i>)	4 : 1 (w/w)	N/A	25
Tomato fruit (<i>Lycopersicon esculentum</i>)	Lycopene	5	195
Usnea lichen (<i>Usnea barbata</i>)	Tincture	N/A	110 / gallon

PRODUCT SPECIFICATIONS

CHÁ DE BUGRE DRY EXTRACT – a product of Brazil

Product:	Chá-de-bugre Dry Extract 4 : 1
Botanical name:	<i>Cordia salicifolia</i> CHAM. [Boraginaceae]
Pharmacopoeial name:	Cordiae salicifoliae extractum siccum
Plant part used:	Leaf
Extraction solvent:	Ethanol : Water
Drug-to-extract ratio:	4 : 1 (w/w)
Dry residue:	Not less than 14%
Excipients:	Maltodextrin
Colorants:	None
Preservatives:	None
Storage:	Store in a cool and dry place, away from strong and direct light.
Shelf life:	Three years from date of manufacture, when properly stored.

Physical Analysis

Appearance:	Brown powder
Color:	Brownish
Odor:	Characteristic
Taste:	Characteristic
Particle size:	Min 90% through 60 mesh
Bulk density:	Min. 0.300 g/ml

Chemical Analysis

Loss on drying:	Not more than 5.0%
Total ash:	Not more than 5.0%
pH (25°C):	6.0 ± 0.50
Solubility in water:	Partially soluble in water
Caffeine:	Present

Contaminants Analysis

GMOs:	Does not contain genetically engineered components
Heavy Metals:	Not more than 20 ppm
Irradiation:	Not irradiated
Pesticide Residues:	Testing upon request
Solvent Residues:	Not more than 0.50%

Microbiological Load (According to Ph. Eur. 3rd ed., 5.1.4, cat. 3B):

Total Viable Aerobic Count:	Not more than 10 ⁴ (2.6.12)
Fungi:	Not more than 10 ² per gram (2.6.12)
Enterobacteria:	Not more than 10 ² per gram (2.6.13)
Escherichia coli (in 1 g):	Absent (2.6.13)
Salmonella (in 10 g):	Absent (2.6.13)
Staphylococcus aureus (in 1 g):	Absent (2.6.13)

SOURCE: This specification is the property of YERBALATINA PHYTOACTIVES and should not be copied, available at: http://www.yerbalatina.com/especificacao_modelo_novo/COR4XDES_2621.doc

MEETINGS AND TRADE SHOWS (North-, Central- and South America)

January 11, 2007

UPPING YOUR VALUE PROPOSITION: A JOINT CONFERENCE OF THE SASKATCHEWAN HERB AND SPICE ASSOCIATION & SASKATCHEWAN TRADE AND EXPORT PARTNERSHIP

Venue: Heritage Inn, 102 Cardinal Crescent, Saskatoon, Saskatchewan, Canada
Contact: Saskatchewon Herb and Spice Association, Box 18, Phippen, Saskatchewan SOK 3E0
TEL: 306.694.4622
FAX: 306.694.2182
E-MAIL: shsa@imagewireless.ca
Register: <https://www.picatic.com/ticket/shsa/index.php>
WEB: <http://www.saskherbspice.org>

March 8-11, 2007

SUPPLY EXPO 2007

Venue: Anaheim Convention Center, Anaheim, California USA
Producer: New Hope Natural Media, Boulder, Colorado USA
WEB: <http://www.supplyexpo.com/>

Supply Expo is co-located with two other industry-related trade events, Natural Products Expo West (natural and organic consumer products) and Nutracon (educational conference). Exhibitors include botanical raw material & extract ingredient suppliers and contract manufacturers.

March 20-23, 2007

2007 INTERNATIONAL SYMPOSIUM ON MEDICINAL AND NUTRACEUTICAL PLANTS (MANP)

Venue: Crowne Plaza Hotel 108 First Street, Macon, Georgia, 31211 USA
Sponsor: College of Agriculture, Home Economics & Allied Programs, Fort Valley State University
TEL: 478.825.6344 / FAX: 478.825-6376
E-MAIL: nelsonm@fvsu.edu
Contact: Dr. A. K. Yadav, TEL: 478.825.6830
E-MAIL: yadava@fvsu.edu
Nirmal Joshee, TEL: 478.825.6373
E-MAIL: josheen@fvsu.edu
WEB: <http://www.ag.fvsu.edu/ishsmannp.html>

Attendee profile: Medicinal and nutraceutical plants workers and researchers/scientists representing university/academic, government, and private sector laboratories working with various aspects of medicinal / nutraceutical (medicinal and aromatics, herbs, spices, and fruits and vegetables with health benefits) plants research in temperate, subtropical and tropical climates, representatives from public interest groups, associated industries, government policy making and regulatory agencies and other entities.

April 16-19, 2007

2007 ASTA ANNUAL MEETING - ASTA'S 100th ANNIVERSARY

Venue: The Ritz-Carlton, Laguna Niguel, Dana Point, California
Sponsor: American Spice Trade Association (ASTA)
WEB: <http://www.astaspice.org/Events>

April 30-May 2, 2007

SUPPLY SIDE EAST INTERNATIONAL TRADE SHOW AND CONFERENCE

Venue: Meadowlands Exhibition Center, Secaucus, New Jersey USA
Organizer: Virgo Publishing, Phoenix, Arizona USA
Attendee info: Marsha-Gail Henderson at 1-800-454-5760
Exhibitor info: Todd Willis at 480-990-1101, ext. 1171
WEB: <http://www.supplysideshow.com/east>

Attendee Profile: Decision makers from natural products companies including managers of Purchasing, R&D, Marketing, Sales and Corporate Management. 86% of attendees have buying influence on ingredients and 89% of attendees have final say, recommend or specify purchasing
Exhibitor Profile: Over 400 exhibitors of natural health ingredients, including suppliers of medicinal herbs & extracts, and manufacturing service providers.

April 30-May 3, 2007

6th OXFORD INTERNATIONAL CONFERENCE ON SCIENCE OF BOTANICALS

Venue: National Center for Natural Products Research (NCNPR), University, Mississippi USA
Supporters: National Center for Natural Products Research (NCNPR), Center for Food Safety and Applied Nutrition (CFSAN) of the U.S. Food and Drug Administration (FDA)
Contact: Ikhlas Khan, Ph.D., Assistant Director National Center for Natural Products Research School of Pharmacy, Thad Cochran Research Center, The University of Mississippi University, MS 38677
TEL: (662) 915-7821
FAX: (662) 915-7989
E-MAIL: ikhlan@olemiss.edu
WEB: <http://www.outreach.olemiss.edu/depts/pharmacy/botanical>

May 10-13, 2007

NATURAL HEALTH PRODUCTS RESEARCH SOCIETY OF CANADA AND THE CANADIAN HERB, SPICE AND NATURAL HEALTH PRODUCTS COALITION JOINT INTERNATIONAL CONFERENCE: TRADITION TO TECHNOLOGY

Venue: Saskatoon, Saskatchewan, Canada
Contact: Conference Chairs: Alister Muir: muira@agr.qc.ca
or Connie Kehler: shsa@imagewireless.ca
WEB: http://www.saskherbspice.org/tradition_to_technology

June 7-8, 2007

TEA ASSOCIATION INTERNATIONAL GATHERING - IN CONJUNCTION WITH WORLD TEA EXPO

Venue: Atlanta, Georgia
WEB: http://www.teausa.com/general/int_gathering.cfm

July 31 - August 3, 2007

51st INTERNATIONAL HOP GROWERS CONVENTION

Venue: Yakima, Washington
Host: Hop Growers of America (HGA), PO Box 928, Yakima, Washington 98909 USA
TEL: 509.248.7043
FAX: 509.248.7044
E-MAIL: tammy@usahops.org
WEB: <http://www.hmelj-giz.si/ihgc/doc/4-2007%20Congress%20Preliminary%20Schedule.pdf>

August 12-16, 2007

3rd INTERNATIONAL SEABUCKTHORN ASSOCIATION CONFERENCE (ISA2007): PROMOTING SEABUCKTHORN INDUSTRY WORLDWIDE - OPPORTUNITIES AND CHALLENGES

Venue: Loews Le Concorde Hotel, Quebec City, Province of Quebec, Canada
Organizers: Laval University Institute of Nutraceuticals and Functional Foods and the Quebec Seabuckthorn Growers' Association
Sponsor: International Seabuckthorn Association
E-MAIL: information@inaf.ulaval.ca
WEB: http://www.icrts.org/2006/ISA2007Call_for_Abstracts.pdf

Conference Themes: Cultivation and harvesting practices, breeding, processing technologies, chemistry (nutritional, medicinal and cosmetic), product development and marketing (uses of seabuckthorn and its products). There will also be tours to seabuckthorn orchards within 30-minutes drive of the conference site.

WESTERN EUROPE

SUPPLY AND DEMAND

2006 CROP FAILURES & INCREASED COSTS: A VERY BAD YEAR FOR EUROPEAN HERB FARMERS

According to a press release by the Herbal- and Fruit Tea Trade Association (WKF) of Hamburg, Germany (<http://www.wkf.de>), the consumption of herbal teas will become quite expensive in the coming year. For the 2006 agricultural year, crop failures of up to 80% in some cases made 2006 difficult for herb farmers and wild collectors to say the least. The long severe winter, following by the very hot summer led to major shortages of linden flower (*Tilia* spp.) and European elder flower (*Sambucus nigra*), as well as chamomile flower (*Matricaria recutita*), fennel fruit (*Foeniculum vulgare*), and peppermint leaf (*Mentha × piperita*). Together with the worldwide increasing energy costs for transportation and for the drying of herbs in the countries of origin, some botanical raw material costs have increased up to 100%. To begin with, the very long winter 2005/06 and the damp and cool spring prevented good vegetation. Blossom development was quite delayed, so for example the linden flower harvest did not even begin until the end of June. The summer, which brought abrupt temperatures of up to 35°C, caused premature blossoming. Then already after only a few days the flowers began to drop off and thus could not be harvested. The harvests of European elder flower, hawthorn leaf with flower, as well as chamomile flower and peppermint leaf were modest. For many of the herb crops only 20 to 30% of the normal yield could be realized. Additionally there was the problem of flooding, particularly along the Danube River, that caused a significantly reduced harvest of fennel fruit in all agricultural areas of Europe. Harvestable crop acreage was about 1/3 that of an average harvest year. With regard to price impacts, in order to guarantee delivery, the herbal tea manufacturers will have to accept price increases on the raw materials because it will not be possible to purchase replacement inventories until after the next harvests in autumn 2007. The herb sector is suffering furthermore under the ever-increasing costs of energy for the requisite hygienic drying of raw materials and transportation from the countries of origin to Central Europe. Furthermore, there are significantly increasing expenditures, paid by suppliers, for stricter quality assurance measures due to the increasing legal requirements for quality and product safety in the European Union.

SOURCE: Beutgen M. Pressemitteilung: Kräutertee knapper und kostspieliger Ernteausfälle bei wichtigen Rohstoffen führen zu Preiserhöhungen. Hamburg, Germany: Wirtschaftsvereinigung Kräuter- und Fruchtee e.V. 31 October 2006.

CULTIVATION OF MEDICINAL FENNEL, PARSLEY, AND ST. JOHN'S WORT IN EUROPE

Main topics at the "17th Annual Bernburg Winter Seminar for Medicinal and Aromatic Plants," 20-21 February 2007, will include cultivation of fennel fruit (*Foeniculum vulgare*), parsley (*Petroselinum crispum*), and St. John's wort (*Hypericum perforatum*). Prof. Dr. Wolf Dieter Blüthner (N.L. Chrestensen Erf) will make a presentation on breeding improvements for essential oil content and estragole content of medicinal fennel fruit. Dipl.-Ing. Margit Dehe (DLR Rheinpfalz, Bad Neuenahr-Ahrweiler) will present on the mechanical regulation of weeds in organic cultivation of fennel. On the topic of parsley, Dr. Edelgard Hoberg (BAZ, Quedlinburg) will discuss the sensory evaluation of parsley grown with different levels of resistance against leaf-spotting (*Septoria petroselini*). And Dr. Hans-Jürgen Hannig (Martin Bauer, Vestenbergsgreuth) will speak on production of tailor-made raw materials for phytopharmaceuticals - selected performance characteristics of different varieties of St. John's wort. For seminar details, see Meetings and Trade Shows section.

SOURCE: SALUPLANTA e.V., Prof.-Oberdorf-Siedlung 16, 06406 Bernburg, Germany: <http://www.saluplanta.de>

ROUND TABLE DISCUSSION AT HI EUROPE: Fair Wild - How to Define a Socially and Ecologically Sustainable Wild Collection

The Swiss Import Promotion Organization (SIPPO) presented a Round Table Discussion at the Health Ingredients Europe trade show in Frankfurt, Germany on 15 November 2006 titled "Fair Wild - How to define a Socially and Ecologically Sustainable Wild Collection?" Dr. Franziska Staubli, Senior Project Manager at SIPPO (<http://www.sippo.ch>), made a presentation on SIPPO and its connection to Fair Trade in the Medicinal and Aromatic Plants (MAP) Sector. Another presentation discussed SIPPO's draft FairWild Standards (Version I, November 2006). Britta Pätzold, of WWF-Germany /

TRAFFIC, made a presentation on the "International Standard for Sustainable Wild Collection of Medicinal and Aromatic Plants (ISCC-MAP)." For more information on the ISCC-MAP, see: <http://www.floraweb.de/proxy/floraweb/map-pro>. Pierre Hauselmann made a presentation on "BioTrade Verification and Fair Trade." For more information on the BioTrade Facilitation Programme, see: <http://www.biotrade.org>. Other presentations included "Towards an Organic Standard for 'Fair' and 'Wild'" by Mike Brook for the Soil Association (UK), and Viktor Kolovski, of the "Macedonian Association of Collectors, Producers and Processors of Medicinal and Aromatic Plants, Forest Fruits and Mushrooms," gave a presentation on issues to be considered from the suppliers point of view titled: "Sustainable Wild Collection."

SOURCE: Dr. Franziska Staubli, Senior Project Manager, SIPPO - Swiss Import Promotion Programme (SIPPO).

ITC PLANNING ORGANIC WILD COLLECTION FORUM AT BIOFACH 2007

The International Trade Centre (ITC) is organizing an Organic Wild Collection Forum to take place at BioFach 2007 in Nürnberg, Germany. The event title is "Organic Wild Collection: production, markets and social impact." Scheduled speakers include Udo Censkowsky (Organic Services) and Uli Helberg (Helberg Consult) on the topic "Update on Global Production and Markets for Organic Wild Products (ITC-Study)," and Mike Brook (Organic Partners, UK) on the topic "Sourcing of Organic Wild Products," among others.

SOURCE: Alexander Kasterine, Organic Products Senior Market Development Advisor, International Trade Centre: <http://www.intracen.org/dbms/organics/index.asp>

EDQM TO OFFER WORKSHOP AND ONE-TO-ONE SESSION ON HERBALS

The European Directorate for the Quality of Medicines (EDQM) will offer a One-to-One Session on Herbs and two Workshops on Herbs on 14 June 2007 as part of the programme: "New Frontiers in the Quality of Medicines." The Herbs workshops will be on the topics of implementation of the new legislative framework and on Traditional Chinese Medicines. The event will bring you up to date with the latest advances in the field of quality and is timed to coincide with the launch of 6th Edition of the European Pharmacopoeia. This conference should be attended by professionals from industry, in particular persons involved in the manufacture and control of herbal drug substances/products, including laboratory technicians, laboratory consultants and those involved in the preparation of registration dossiers; from inspectorates, regulatory agencies, official medicines control laboratories (OMCLs), and academic institutions.

SOURCE: EDQM. New Frontiers in the Quality of Medicines. *Pharmeuropa*. October 2006 ;18(4):569-572.

HMPC RELEASES FIVE EUROPEAN COMMUNITY HERBAL MONOGRAPHS FOR PUBLIC COMMENT

The Committee on Herbal Medicinal Products (HMPC) is responsible for establishing Community herbal monographs, which have relevance for the registration and authorization of herbal medicinal products. The monographs are based on the available scientific data (well-established use) or on historic use in the European Community (traditional use). The HMPC released five medicinal herb monographs in October 2006 with comment deadlines in February 2007:

- ❑ Anise fruit: <http://www.emea.europa.eu/pdfs/human/hmpc/13742306en.pdf>
- ❑ Anise essential oil: <http://www.emea.europa.eu/pdfs/human/hmpc/26327306en.pdf>
- ❑ Bitter fennel fruit: <http://www.emea.europa.eu/pdfs/human/hmpc/13742806en.pdf>
- ❑ Bitter fennel essential oil: <http://www.emea.europa.eu/pdfs/human/hmpc/26329206en.pdf>
- ❑ Sweet fennel fruit: <http://www.emea.europa.eu/pdfs/human/hmpc/26329306en.pdf>

SOURCE: European Medicines Agency (EMA). Publication and consultation of Community monographs. October 2006: <http://www.emea.europa.eu/htms/human/hmpc/hmpcmonographsdraft.htm>

BOTANICAL EXTRACTS & OILS (Indicative prices: USD \$ / kg)

Product	Standardization	%	Price
Bilberry fruit	Anthocyanins	25	500-700
Devil's claw secondary tuber	Harpagoside	1.5	50-70
Ginkgo leaf	Flavonglycosides/Lactones	24/6	200-300
Milk thistle fruit	Silymarin	80.0	75-125
Pygeum bark	Sterols	20	104
Saw palmetto fruit CO2	Total Fatty Acids	85-95	90
St John's wort herb	Hypericins/Hyperforin	0.3/3.0	25-46
Valerian root dry extract	Valerenic acids	0.25-0.35	60-7

PRODUCT SPECIFICATIONS**KOLA DRY EXTRACT – a product of France
[raw material is a product of Africa]**

Product:	Kola Dry Extract
Botanical name:	<i>Cola nitida</i> (VENT.) SCHOTT et ENDL. or <i>Cola acuminata</i> (P. BEAUV.) SCHOTT et ENDL. [Sterculaceae]
Pharmacopoeial name:	Colae semen extractum siccum
Plant part used:	Dried seeds freed from the testa
Extraction solvent(s):	Not reported
Drug-to-extract ratio:	Not reported
Excipients:	Not reported
Storage:	In closed container, in a dry place at a temperature > 25°C.
Packaging:	20 kg in heat-sealed Kraft /Pe/Alu/Pe, inside a carton box.
Shelf life:	24 months in original packaging.

Physical Analysis

Appearance:	Microgranulated powder
Color:	Orange
Odor:	Characteristic
Taste:	Not reported on Specification Sheet
Particle size:	Min 70% > 125 µm
Bulk density:	0.30 to 0.60 g/ml

Chemical Analysis

Loss on drying:	Not more than 6.0%
Total ash:	Not more than 10.0%
pH (25°C):	Not reported on Specification Sheet
Solubility in water:	Not reported on Specification Sheet
Caffeine:	Present

Contaminants Analysis

Heavy Metals:	Not reported on Specification Sheet
Pesticide Residues:	Not reported on Specification Sheet
Solvent Residues:	Not reported on Specification Sheet

Microbiological Load (According to Ph. Eur. 3rd ed., 5.1.4, cat. 3B):

Total Viable Aerobic Count:	Not more than 10 ⁴ (2.6.12)
Fungi:	Not more than 10 ² per gram (2.6.12)
Enterobacteria:	Not more than 10 ² per gram (2.6.13)
Escherichia coli (in 1 g):	Absent (2.6.13)
Salmonella (in 10 g):	Absent (2.6.13)
Staphylococcus aureus (in 1 g):	Absent (2.6.13)

SOURCE: This specification is the property of BURGUNDY BOTANICAL EXTRACTS and should not be copied, available at: <http://www.burgundy-extracts.com/produits-EKOL.htm>.

MEETINGS AND TRADE SHOWS WESTERN EUROPEAN COUNTRIES

February 15-18, 2007

BIO-FACH WORLD TRADE FAIR FOR ORGANIC FOOD AND NATURAL PRODUCTS

Venue: Exhibition Centre Nuremberg, Germany
Patron: International Federation of Organic Agriculture Movements (IFOAM)
TEL: +49 (0)9 11.8606-0
FAX: +49 (0)9 11.86.06-82-28
E-MAIL: biofach@nuernbergmesse.de
WEB: <http://www.biofach.de/>

Although the BIO-FACH trade show is primarily for buyers & sellers of certified organic finished products, there will be many exhibitors of bulk botanical raw materials and extracts.

February 20-21, 2007

17. BERNBURGER WINTERSEMINAR FUER ARZNEI- UND GEWUERZPFLANZEN

[17th Annual Bernburg Winter Seminar for Medicinal and Aromatic Plants]

Venue: Mensa der Hochschule (FH) Anhalt Bernburg-Strenzfeld
Contact: SALUPLANTA e.V., Prof.-Oberdorf-Siedlung 16, 06406 Bernburg, Germany
E-MAIL: saluplanta@t-online.de
WEB: <http://www.saluplanta.de/>

The Bernburg Winter Seminar is the largest annual German-language scientific meeting in Europe with 200-300 participants involved in herb cultivation, processing industry, trade, research and authorities from 8-10 countries. The seminar promotes mutual understanding and cooperation between experts from all levels of production of the herb trade. Seminar topics include:

- ❑ Consequences for farming and industry of the new European regulations for production of botanical active ingredients and evaluation of medicinal products - Dr. Barbara Steinhoff, BAH Bonn
- ❑ New European Pharmacopoeia (PhEur) monographs for herbal drugs and preparations with regard to quality and purity - Dr. Bernhard Klier, Member of PhEur Expert Group 13B.
- ❑ Quality and shelf-life stability influencing factors for medicinal and aromatic plants - Dr. Lothar Kabelitz, PhytoLab
- ❑ Perspective of the herb trade in Poland - Dr. Jerzy Jambor, Phytopharm Kleka, Poland
- ❑ Analysis of sustainable medicinal plant cultivation in Lithuania - Dr. Ona Ragazinskiene, Kaunas, Lithuania.

March 30-April 1, 2007

EXPOSALUD 2007: Salón de la Salud y Calidad de Vida. Productos Naturales, Ecológicos y Dietéticos

Venue: Palacio de la Metalurgia, Recinto Ferial de Montjuïc, Fira Barcelona.
Supporters: Asociación Española de Fabricantes de Preparados Alimenticios, Dietéticos y Plantas Medicinales (AFEPADI), Federación Española de Asociaciones de Herbolietética (FENADIHER), Gremio de Herbolarios, Apicultores y Alimentación Dietética y Biológica de Cataluña, y Productores de Agricultura Ecológica (PRODECOL).
Collaborators: Asociación Catalana de Productores de Plantas Aromáticas y Medicinales (ACPPAM), Asociación de Productores, Elaboradores y Comercializadores de Productos Agroalimentarios Ecológicos (APECPAE), y CENTRO TECNOLÓGICO FORESTAL
Contact: INTERALIA, Avda. Diagonal, 474 7^a4^a, 08006 Barcelona
TEL: 93 416.1466 / FAX: 93 415.0095
E-MAIL: ferias@interalia.es
WEB: <http://www.interalia.es/www.exposalud.net/default.htm>

Exhibitor profile: Natural and organic agricultural products, medicinal plants, natural therapies, health products, natural fibers, and more.

May 8-10, 2007

VITAFOODS INTERNATIONAL 2007

Venue: Palexpo Centre, Geneva, Switzerland

Contacts: Nicola Mason, Managing Director, TEL: +44(0)20.7915.5656 / FAX: +44(0)20.7915.5021 /
E-MAIL: nmason@iirx.co.uk / Vicky Coope, Event Director, TEL: +44(0)20.7915.5133 /
FAX: +44(0)20.7915.5021 / E-MAIL: vcoope@iirx.co.uk

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

September 2-6, 2007

55th ANNUAL MEETING AND INTERNATIONAL CONGRESS OF THE SOCIETY FOR MEDICINAL PLANT RESEARCH

Venue: Graz, Austria

Organizer: Scientific and Organizing Committees of the Society for Medicinal Plant Research

Contact: Semaco GmbH, Firmianstraße 3, 5020 Salzburg, Austria

TEL: + 43 662 826 878 / FAX: + 43 662 826 8784 / E-MAIL: congress@semaco.co.at

WEB: <http://www.qa2007.org>

The Meeting will include workshops of the permanent committees on herbal medicinal products:

- Biological and Pharmacological Activity of Natural Products (H. Winterhoff)
- Breeding and Cultivation of Medicinal Plants (C. Franz)
- Manufacturing and Quality Control of Herbal Remedies (B. Meier)
- Regulatory Affairs on Herbal Medicinal Products (A. J. Vlietinck)

October 30-November 1, 2007

NATURAL INGREDIENTS EXHIBITION AND CONFERENCE

Venue: ExCel London, One Western Gateway, Royal Victoria Dock, London, E16 1XL, UK

Organizer: CMP Information, a division of United Business Media

Contact: CMP Information, PO Box 200, 3600 AE Maarssen, The Netherlands

TEL: + 31 346 559 444 / FAX: + 31 346 573 811

WEB: <http://www.ni-events.com>

February 18-21, 2008

18. BERNBURGER WINTERSEMINAR und 5. FACHTAGUNG ARZNEI- UND GEWUERZPFLANZEN: QUALITAET, WIRTSCHAFTLICHKEIT UND NACHHALTIGKEIT [18th Annual Bernburg Winter Seminar and 5th Seminar for Medicinal and Aromatic Plants: Quality, Profitability and Sustainability]

Venue: Landesanstalt für Landwirtschaft, Forsten und Gartenbau Sachsen-Anhalt bzw. Mensa der Fachhochschule Anhalt, Bernburg-Strenzfeld, Sachsen-Anhalt

Organizers: Deutscher Fachausschuss für Arznei-, Gewürz- und Aromapflanzen, Ministerium für Landwirtschaft und Umwelt Sachsen-Anhalt, Landesanstalt für Landwirtschaft, Forsten und Gartenbau Sachsen-Anhalt, SALUPLANTA e.V.

Contact: Frau Sybille Richter, Landesanstalt für Landwirtschaft, Forsten und Gartenbau Sachsen-Anhalt, Strenzfelder Allee 22, 04606 Bernburg-Strenzfeld

TEL: +49 03471 334 140 / FAX: +49 03471 334 105

E-MAIL: Sybille.Richter@llg.mlu.lsa-net.de

WEB: <http://www.llg-lsa.de>

November 11-13, 2008

HEALTH INGREDIENTS EUROPE 2008

Venue: Paris Nord, Villepinte - Hall 1 & 2 BP 60004, 95970 Roissy CDG Cedex

Organizer: CMP Information, a division of United Business Media

Contact: CMP Information, PO Box 200, 3600 AE Maarssen, The Netherlands

TEL: + 31 346 559 444 / FAX: + 31 346 573 811 / E-MAIL: Fi@cmpinformation.com

WEB: <http://www.hi-events.com/>

Exhibitor profile: Suppliers of beneficial algae, fats and oils, flavors and aromas, fruit and vegetable products, ginkgo extract, ginseng, organic ingredients, phytochemicals, plant oestrogens, soy ingredients, spirulina, among other natural and herbal ingredients.

EASTERN EUROPE

GREECE

GREECE COULD EMERGE AS SIGNIFICANT PLAYER IN EUROPEAN NATURAL PRODUCT INDUSTRY

Few people could have predicted the rapid growth of the Greek natural product industry but with the 2004 Olympics in Athens acting as a catalyst for growth a whole host of companies have emerged on the international scene offering Greek natural ingredients and herbal cosmetic products. Finished products companies now exporting worldwide include Korres Natural Products (<http://www.korres.com>), Apivita Natural Products (<http://www.apivita.com>), and Kallio Elixir Cosmetics (<http://www.kallio.com.gr>). Pascal Greece's first herbal extraction company, based in Ioannina, opened in November drawing upon the extremely popular herbals of the Epirus region. Greek companies have many advantages: a clean environment, a rich bio-diversity and an ancient herbal heritage. Both cultivated and wild harvest medicinal plants such as cistus (*Cistus* spp.), chamomile (*Matricaria recutita*), lemon balm (*Melissa officinalis*), olive (*Olea europaea*), rosemary (*Rosmarinus officinalis*), sage (*Salvia officinalis*), and St. John's wort (*Hypericum perforatum*) grow on the mainland and adjacent regions of Albania, Macedonia, Bulgaria and Turkey. The shortly to be opened highway from Thessalonika in the east to Igoumenitsa, the new ferry port to Italy, will further enhance access to the region.

SOURCE: Denzil Phillips International: <http://www.denzil.com>

MACEDONIA

MACEDONIAN HERB TRADE ASSOCIATION PRESENTS AT ROUNDTABLE IN GERMANY

Viktor Kolovski, of the "Macedonian Association of Collectors, Producers and Processors of Medicinal and Aromatic Plants, Forest Fruits and Mushrooms," gave a presentation entitled "Sustainable Wild Collection," on 15 November 2006 in Frankfurt, Germany, at a Round Table Discussion: "Fair Wild – How to Define a Socially and Ecologically Sustainable Wild Collection?" Mr. Kolovski reported on the long tradition in the wild collection of medicinal plants in Macedonia, and on their traditional medicinal uses prepared as herbal teas and other natural medicines. In the last century, large State owned companies were created to operate the wild collection business with a centralized system of management and production on a national level. This new trade association includes member companies with more than 10 years experience in wild crafting. Association activities include training of wild collectors and export development with the Swiss Import Promotion Organization (SIPPO). Main interests of the association are sustainable wild collection of herb and protection of wild populations against extinction. The wild collectors are interested in a stable environment with continuous income enabling their welfare and existence and the member companies are interested in a stable base of high quality botanical raw materials.

SOURCE: Kolovski V. Herba M Macadonian Association of Collectors, Producers and Processors of Medicinal and Aromatic Plants, Forest Products and Mushrooms: vkolovski@konimex.com.mk

MACEDONIAN HERB TRADE EXPORT DIRECTORY PUBLISHED

The Swiss Import Promotion Organization (SIPPO) has published a Macedonian Export Directory which includes, by company, annual production capacity per herb, whether own crop or traded, available technologies, and contact details for the main producers and exporters of medicinal herbs and essential oils. Suppliers (most are certified organic) listed in the directory include:

- **Agromiks:** Email: agromiks@mt.net.mk, Web: <http://www.agromiks.com.mk>. Main products: Peppermint leaf (*Mentha × piperita*) and lemon balm herb (*Melissa officinalis*).
- **Alkaloid-PC Cosmetics Chemicals Botanicals:** Email: zorkazlatanovic@alkaloid.com.mk, Web: <http://www.alkaloid.com.mk>. Main product: Lichen Quercus.
- **Antares DOOEL:** Email: antares_sb@yahoo.com, Web: <http://www.antares.com.mk>: White mulberry fruit (*Morus alba*), chamomile flower (*Matricaria recutita*), wild thyme herb (*Thymus serpyllum*), St. John's wort herb (*Hypericum perforatum*), oregano herb (*Origanum vulgare*), rose hip (*Rosa canina*), Crab apple fruit (*Malus silvestris*), slow fruit (*Prunus spinosa*).
- **Anva Funqi DOOEL:** Email: anvamk@yahoo.co.uk, Web: <http://www.anva.com.mk>: Oak moss (*Evernia prunastri*), St. John's wort herb (*Hypericum perforatum*), juniper fruit (*Juniperus communis*), rose hip (*Rosa canina*).

- **Biofarmako DOO:** Email: sales@ti.com.mk, Web: <http://www.ti.com.mk>: Peppermint leaf (*Mentha × piperita*), juniper fruit (*Juniperus communis*), St. John's wort herb (*Hypericum perforatum*), nettle leaf (*Urtica dioica*), oregano herb (*Origanum vulgare*), high mallow flower (*Malva silvestris*), yarrow flower (*Achillea millefolium*), wild thyme herb (*Thymus serpyllum*).
- **Flores DOO:** Email: flores@flores.com.mk: green-winged orchid tuber (*Orchis morio*), rose hip (*Rosa canina*), cowslip flower + root (*Primula veris*), restharrow root (*Ononis spinosa*), orris root (*Iris germanica*), gentian root (*Gentiana lutea*), burdock root (*Arctium lappa*), marshmallow root (*Althaea officinalis*), tansy herb (*Tanacetum vulgare*), hairy rupturewort herb (*Herniaria hirsuta*) rupturewort herb (*Herniaria glabra*), fumitory herb (*Fumaria officinalis*), horsetail herb (*Equisetum arvense*), juniper fruit (*Juniperus communis*), slow fruit (*Prunus spinosa*), peppermint leaf (*Mentha × piperita*), usnea lichen (*Usnea barbata*), nettle leaf and root (*Urtica dioica*), dandelion leaf and root (*Taraxacum officinale*), plantain leaf (*Plantago major*), English plantain leaf (*Plantago lanceolata*), bilberry fruit and leaf (*Vaccinium myrtillus*), lemon balm leaf (*Melissa officinalis*), high mallow leaf (*Malva silvestris*), English walnut leaf (*Juglans regia*), strawberry leaf (*Fragaria vesca*), coltsfoot leaf (*Tussilago farfara*), birch leaf (*Betula alba*), belladonna leaf and root (*Atropa belladonna*), linden flower (*Tilia* spp.), European elder flower (*Sambucus nigra*), yarrow flower and herb (*Achillea millefolium*), cornflower (*Centaurea cyanus*), hawthorn flower (*Crataegus monogyna*), chamomile flower (*Matricaria recutita*), Iceland moss (*Cetraria islandica*), oak moss (*Evernia prunastri*).
- **Inter-evrogeneks:** Email: varumin@mt.net.mk, Web: <http://www.interevrogeneks.com/>: tribulus (*Tribulus terrestris*), honeylocust fruit (*Gleditsia tricanthos*), mistletoe herb (*Viscum album*), Bermuda grass rhizome (*Cynodon dactylon*), shepherd's purse herb (*Capsella bursa-pastoris*), yarrow herb (*Achillea millefolium*), peppermint herb (*Mentha × piperita*), St. John's wort herb (*Hypericum perforatum*), nettle leaf (*Urtica dioica*).
- **Inter-Mak:** Email: intermakveles@yahoo.com, Web: <http://www.intermak.com.mk>: rose hip (*Rosa canina*), juniper fruit (*Juniperus communis*).
- **Kastel DOO:** Email: dookastel@yahoo.com: horsetail herb (*Equisetum arvense*), winter savory herb (*Satureja montana*), rose hip (*Rosa canina*), basil herb (*Ocimum basilicum*), cowslip flower (*Primula veris*), European elder flower (*Sambucus nigra*), centaury (*Centaureum erythraea*), lemon balm leaf (*Melissa officinalis*), hawthorn flower (*Crataegus monogyna*), coltsfoot leaf (*Tussilago farfara*), St. John's wort herb (*Hypericum perforatum*), nettle leaf (*Urtica dioica*), yarrow flower (*Achillea millefolium*) thyme herb (*Thymus vulgaris*), oregano herb (*Origanum vulgare*), peppermint leaf (*Mentha × piperita*), crab apple fruit (*Malus silvestris*), calendula flower (*Calendula officinalis*).
- **Konimex holding:** Email: info@konimex.com.mk, Web: <http://www.konimex.com.mk>: bilberry fruit (*Vaccinium myrtillus*), nettle leaf (*Urtica dioica*), wild thyme herb (*Thymus serpyllum*), dandelion herb/root (*Taraxacum officinale*), mountain tea herb (*Sideritis scardica*), European elder flw/fruit (*Sambucus nigra*), frangula bark (*Rhamnus frangula*), rose hip (*Rosa canina*), raspberry leaf (*Rubus idaeus*), blackberry leaf (*Rubus fruticosus*), sloe flower (*Prunus spinosa*), English plantain leaf (*Plantago lanceolata*), plantain leaf (*Plantago major*), anise fruit (*Pimpinella anisum*), crab apple fruit (*Pyrus malus*), field restharrow root (*Ononis hircina*), oregano herb (*Origanum vulgare*), high mallow flw (*Malva silvestris*), juniper fruit (*Juniperus communis*), St. John's wort herb (*Hypericum perforatum*), rupturewort herb (*Herniaria glabra*), strawberry leaf (*Fragaria vesca*), gentian root (*Gentiana lutea*), horsetail herb (*Equisetum arvense*), yellow chaste weed flw (*Helichrysum arenarium*), hawthorn fruit/flw (*Crataegus monogyna*), centaury flower (*Centaurea cyanus*), carline thistle root (*Carlina acaulis*), shepherd's purse herb (*Capsella bursa-pastoris*), wild mustard seed (*Sinapis arvensis*), birch bark/leaf (*Betula alba*), uva ursi leaf (*Arctostaphylos uva-ursi*), marshmallow leaf/root (*Althaea officinalis*), yarrow flw/herb (*Achillea millefolium*), nettle root (*Urtica dioica*).
- **Regional Center of Cooperation-Spectar:** Email: spectar@mt.net.mk, Web: <http://www.spectar.org.mk>: bilberry fruit (*Vaccinium myrtillus*), rose hip (*Rosa canina*), elder flower (*Sambucus nigra*), hawthorn fruit (*Crataegus monogyna*), nettle leaf (*Urtica dioica*), St. John's wort herb (*Hypericum perforatum*), wild thyme herb (*Thymus serpyllum*).
- **Roza Kanina:** Email: tomepetkovski@mt.net.mk, Web: <http://www.rozakanina.bizland.com>: agrimony herb (*Agrimonia eupatoria*), wild thyme herb (*Thymus serpyllum*), gentian root (*Gentiana lutea*), nettle herb + seed (*Urtica dioica*), horsetail herb (*Equisetum arvense*), blackberry leaf (*Rubus fruticosus*), centaury herb (*Centaureum erythraea*), strawberry herb (*Fragaria vesca*), celandine herb (*Chelidonium majus*), germander herb (*Teucrium chamaedrys*),

birch leaf (*Betula pendula*), yarrow flower (*Achillea millefolium*), St. John's wort herb (*Hypericum perforatum*), peppermint leaf (*Mentha × piperita*).

SOURCE: SIPPO. Macedonian Export Directory. 2006 Available at: www.macedonianexportdirectory.com

BOTANICAL RAW MATERIALS & OILS (Indicative prices: USD \$ / kg)

Product	Source	Price	Destination
Anise fruit (<i>Pimpinella anisum</i>)	Turkey	3.58	Spot New York
Austrian pine essential oil (<i>Pinus nigra</i>)	Montenegro	43.6	CIF Us Airport
Bilberry fruit (<i>Vaccinium myrtillum</i>)	Eastern Europe	15.9	exw New Jersey
European elder flower (<i>Sambucus nigra</i>)**	BiH	7.5	BiH
Fenugreek seed (<i>Trigonella foenum-graecum</i>)	Turkey	0.99	Spot New York
Gentian root (<i>Gentiana lutea</i>) *	Eastern Europe	11.8	exw Hamburg
Juniper fruit (<i>Juniperus communis</i>) **	BiH / Serbia	3.6-3.9	BiH / Serbia
Juniper fruit essential oil	Montenegro	158	CIF US Airport
Sage leaf essential oil (<i>Salvia officinalis</i>)	Montenegro	85.9-92.5	CIF US Airport

* wild collected – ** certified organic

Note: Monographs containing quality standards and tests for most the above-listed herbs and essential oils are published in either the Farmakopea Polska VI (2002), the Pharmacopoeia Hungarica VII (1986), or in the State Pharmacopoeia of the Union of Soviet Socialist Republics XI (1987-1990). Most also appear in the currently edition of the European Pharmacopoeia (PhEur V).

**BOTANICAL PRODUCT SPECIFICATIONS
BIRCH LEAF - A Product of POLAND**

Product:	Birch leaf
Botanical name:	<i>Betula pendula</i> ROTH and/or <i>Betula pubescens</i> EHRH., as well as hybrids of both species [Betulaceae]
Pharmacopoeial name:	Betulae folium
Plant part used:	Whole or fragmented dried leaves
Cultivation method:	Wild collected
Storage:	Store protected from light.

Identification

Macroscopic:	According to PhEur monograph
Microscopic:	According to PhEur monograph
Thin-layer chromatography:	According to PhEur monograph (2.2.27) using caffeic acid, chlorogenic acid, hyperoside and rutin as the reference solution substances

Organoleptic Characteristics

Color:	Dark green on the adaxial surface and lighter greenish-grey on the abaxial surface
Odor:	Faintly aromatic
Taste:	Somewhat bitter

Physical Analysis

Foreign matter:	Not more than 3% of fragments of female catkins and not more than 3% of other foreign matter (PhEur 2.8.2)
Loss on drying:	Not more than 10.0% (PhEur 2.2.32)
Total ash:	Not more than 5.0% (PhEur 2.4.16)

Chemical Analysis

Flavonoids	Not less than 1.5% of flavonoids, calculated as hyperoside, with reference to the dried drug.
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Microbiological Tests

Total viable aerobic count	Not more than 10 ⁷ per gram
Total molds and yeast	Not more than 10 ⁵ per gram
<i>Escherichia coli</i>	Negative / 25g
<i>Salmonella</i> :	Negative / 25g

MEETINGS AND CONFERENCES EASTERN AND SOUTHEASTERN EUROPE

April 29-May 4, 2007

1st INTERNATIONAL MEDICINAL AND AROMATIC PLANTS CONFERENCE ON CULINARY HERBS

Venue: DIVAN TALYA HOTEL, Antalya, Turkey
Organizers: Akdeniz University, Akdeniz University Faculty of Agriculture, International Society for Horticultural Science
Contact: Prof. Dr. Ibrahim Baktir or Prof. Dr. Kenan Trugut, Department of Horticulture, Faculty of Agriculture, Akdeniz University, 07058 Antalya, Turkey
TEL: (90)2423102469 or (90)2423102414
FAX: (90)2422274564
E-MAIL: ibaktir@akdeniz.edu.tr
WEB: <http://www.mapc2007ant.org/>

Main Topics: Cultivation and propagation, Molecular genetics and breeding, Essential oils, Culinary usage, Fresh herbs, Ethnobotanical usage, Biodiversity and conservation, Biological activities, Analytical studies, Processing and trading (sterilization, drying, standardization).

July or August 2007 (dates To Be Determined)

BILBERRY DAYS

Venue: Plav Lake, Montenegro
Supporters: Ministry of Agriculture, Forestry and Water Supply, Republic of Montenegro
Organizers: Ministry of Tourism, Republic of Montenegro

October 5-7, 2007

ECOLIFE 2006 – 23rd HEALTHY LIFESTYLE AND FOOD FAIR

Venue: "Jaskolka" sport hall, ul. Traugutta 3a, Tarnów, Poland
Contact: POLISH SOCIETY OF HEALTHY LIFE and FOOD PROMOTION, 33-106 Tarnów 8 skr.poczt.
40 ul. Bernardynska 24
TEL / FAX: (48-14) 626-00-40
WEB: <http://www.zdrowa-zywnosc.pl/>

Exhibitor profile: Apicultural and herbal products, tea, fruits and vegetables, ecological fertilizers, natural cosmetics, fitness and rehabilitation equipment, trade literature, natural medicaments. About 65 exhibitors and 8,000 attendees.

2009 (dates To Be Determined)

FOURTH INTERNATIONAL SEABUCKTHORN ASSOCIATION CONFERENCE (ISA 2009)

Venue: Siberian Fair, Novosibirsk, Russia
Sponsor: International Seabuckthorn Association
WEB: <http://www.sanddorn.net>

CHINA

SUPPLY AND DEMAND

WORLD NUTRACEUTICALS REPORT PREDICTS CHINA IN TOP POSITION

According to a new 486-page report titled "World Nutraceuticals," published by the Freedonia Group, Cleveland, Ohio (<http://www.freedoniagroup.com>), "World demand for nutraceutical ingredients will advance 5.8 percent annually to \$15.5 billion in 2010, serving a \$197 billion global nutritional product industry. China and India will emerge as the fastest expanding nutraceutical markets as strong economic growth allows them to upgrade and diversify food, beverage and drug production capabilities. The United States will remain the largest global consumer of nutraceutical ingredients due to the broad, increasing range of nutritional preparations and natural medicines produced domestically. However, because of outsourcing trends, the United States will relinquish its longstanding top position in the global production of nutraceutical ingredients to China within the next few years." The report includes tables and charts on China's "Nutraceutical Supply & Demand by Product Group," "Nutrient & Mineral Demand by Product Group," "Vitamin Demand by Product Group," and "Herbal & Non-Herbal Extract Demand by Product Group."

SOURCE: The Freedonia Group. World Nutraceuticals: Industry Study with Forecasts to 2010 & 2015. Cleveland, Ohio: The Freedonia Group. July 2006: <http://www.freedoniagroup.com/pdf/2083smwe.pdf>

BIOFACH: CHINA TO BE KEY PLAYER IN WORLD MARKET FOR ORGANIC NATURAL PRODUCTS

According to Nürnberg Global Fairs, China will be one of the key players in the world market for certified organic natural products in the future. This prediction is based on the enormous growth rates shown by China during 2006. Of the approximately 31 million hectares of organically farmed land in the world, China accounts for about 3.5 million hectares, which means China has moved up to second place behind Australia in organic agriculture. Nürnberg Global Fairs, recognizing the significant potential for the organic industry in China, organized the first international BioFach China Conference in the Shanghai Worldfield Convention Center on 1-2 December 2006. The conference is the introductory event for the first BioFach China trade show, which will take place in Shanghai 31 May - 2 June 2007. See Meetings and Trade Shows for details.

SOURCES: (1) Heinze K. China: Newcomer as BioFach country. Nürnberg Global Fair GmbH. Nov 2006; (2) BioFach China® International Organic Trade Fair and Conference. Nov 2006: <http://www.biofach-china.com>

ADBC PROVIDES LOANS TO SMALL RURAL HERB FARMERS

The Agricultural Development Bank of China (ADBC) (<http://www.adbc.com.cn>) will provide loans to small agro-firms throughout China in 2007 following the success of its pilot scheme. In a move to modernize China's rural areas, ADBC began to grant loans to small agro-firms in March 2006 in what was described as a "breakthrough" for the policy bank whose loans mostly go to large government-designated agricultural and rural projects. Between March and November of 2006, ADBC branches issued 960 million yuan (\$123 million USD) of loans to 152 projects, covering forestry, fruits, honey, medicinal herbs, poultry, tea, and aquatic products. These projects are estimated to have created 28,000 jobs and an economic output of 2.5 billion yuan (\$156 million USD). The bank forecasts a 30-billion-yuan (\$3.85 billion USD) loan demand from small agro-firms next year.

SOURCE: Yan Liang. ADBC to issue loans to small agro-firms nationwide. *Xinhua News*. 17 December 2006.

EUROPE, PARTICULARLY THE UK, IS A MAJOR EXPORT MARKET FOR TCM

According to Dong Zhilin, director of the European Traditional Chinese Medicine Association (ETCMA), Europe has become the major export market for traditional Chinese medicine (TCM) with more than 300 TCM suppliers. Most of the annual TCM exports to Europe are in the category of herbal extracts, valued at \$63.15 million USD, followed by dried medicinal herbs, valued at \$44.04 million, as well as \$13.96 million worth annually of traditional herbal patent medicine products. More than 60% of Europeans use traditional herbal medicines (including TCM), consuming 44.5% of the global herb output. In Europe there are 120,000 practitioners of TCM and more than 300 TCM institutes. The second largest market for TCM outside of China is in the UK, where there are more than 3,000 TCM clinics, more than 11,000 acupuncturists and 28 TCM suppliers.

SOURCE: Anon. Europe, the major export market for TCM. *Chinanews.cn*. 5 September 2006.

GUANGZHOU AND UK TO COOPERATE ON SUSTAINABLE HARVEST OF MEDICINAL PLANTS

The new Consul General at the British Consulate General Guangzhou, Brian Davidson, has identified sustainable development as a key area for cooperation between the United Kingdom and South China. Under the broad topic of sustainable development, the Consulate General will focus on climate security, conservation, biodiversity, marine environment, urban regeneration and good governance capacity building. The Consulate plans to organize future events focusing on plant conservation and sustainable harvesting of traditional medicinal plants. Davidson said that South China, Guangdong Province in particular, is a dynamic entrepreneurial region, and that the area's manufacturing and logistics, mix of labour- and non labour-intensive industries, efforts to develop information technology and financial services all present "enormous business opportunities to British firms."

SOURCE: Li Wenfang. UK's Guangzhou consul focuses on sustainability. *China Daily*. 15 November 2006.

MEDICINAL HERBS: A MAIN ACTIVITY AT 13TH CHINA YANGLING AGRICULTURAL HI-TECH FAIR

The 13th China Yangling Agricultural Hi-Tech Fair (CAF) took place 5-9 November 2006 in the China Yangling Agricultural Hi-Tech Industries Demonstration Zone with the theme "New countryside, New technology, New market". Main activities included three exhibition halls encompassing nearly 100,000 sqm of exhibition areas. One of the exhibition areas was focused on medicinal herbs and medicinal herbal products, planting technologies, medicinal herb processing and equipment. CAF, one of the four key-national high-tech fairs supported by the Chinese Government, is jointly sponsored by 17 ministries including the Ministry of Science and Technology, Ministry of Commerce, and Ministry of Agriculture, as well as Shaanxi Provincial Government, and co-sponsored by United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Bank, and the Asian and Pacific Centre for Transfer of Technology (APCTT), a regional institution of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). About 1,000 Chinese and international exhibitors participated in the fair, with about 500,000 attendees and 100 news media.

SOURCE: Anon. 13th China Yangling Agricultural Hi-Tech Fair. 5 November 2006.

BOTANICAL RAW MATERIALS (Indicative prices: USD \$ / kg)

<u>Product</u>	<u>Source</u>	<u>Price</u>	<u>Destination</u>
Garlic bulb (<i>Allium sativum</i>)	China:		
— conventional		2.8624	Spot New York
— organic, powdered **		2.33	FOB Qingdao port
Ginger rhizome (<i>Zingiber officinale</i>), powder **	China	2.02	FOB Qingdao port
Ginger rhizome (<i>Zingiber officinale</i>)	China	1.81	Spot New York
Ginkgo leaf (<i>Ginkgo biloba</i>)	China	1.92	exw Hamburg
Licorice root (<i>Glycyrrhiza uralensis</i>)			
— conventional	China	6.6-8.8	FOB San Francisco
— organic **	China	6.0	FOB Hamburg
Lycium fruit (<i>Lycium barbarum</i>)	China	6.6	FOB San Francisco
Schisandra fruit (<i>Schisandra chinensis</i>)**	China	7.75	C&F San Francisco
Star anise fruit (<i>Illicium verum</i>)	China	3.14	Spot New York

** Certified organic

Note: Monographs providing quality standards and tests for most the above listed Chinese herbs are published in the Pharmacopoeia of the Peoples Republic of China (PPRC English Edition 2005). Many are also published in the Japanese Pharmacopoeia (JP XIV, English Edition 2001).

BOTANICAL EXTRACTS & OILS (Indicative prices: USD \$ / kg)

Product	Standardization	%	Price
Asian ginseng root (from bi-product)	Ginsenosides (by UV)	80	34-58
Bitter orange fruit / peel	Synephrine	60	95
Cyanotis vaga	beta-Ecdysterone	95	375
Eleuthero root	Eleutherosides	0.8	28-32
Epimedium herb	Flavonoids (as icariin)	40	48
Gingko leaf	Flavonglycosides/Lactones	24/6	23.5-37
Green tea leaf	EGCG	50	28
Green tea leaf	Polyphenols (by UV)	50	22
Licorice root	Glycyrrhizin	12	33-38
Licorice root, organic*	Glycyrrhizin	12	43-46
Lycium fruit	Polysaccharides	10	45-53
Rhodiola root	Rosavins	3	39-58
Schisandra fruit	Schisandrins	9	47-53
Soybean	Isoflavones	40	58

PRODUCT SPECIFICATIONS**BITTER ORANGE POWDERED EXTRACT – a product of China**

Product:	Bitter Orange Powdered Extract
Botanical name:	<i>Citrus × aurantium</i> L. [Rutaceae]
Pharmacopoeial name:	Aurantii amari fructus extractum siccum
Plant part used:	Fruits
Extraction solvent(s):	Water and Ethanol
Drug-to-extract ratio:	Not reported
Excipients:	Not reported
Storage:	In a cool and dry place. Keep away from direct strong light.
Packaging:	25 kg drum.
Shelf life:	Maximum 24 months when stored unopened, provided proper storage conditions are maintained.

Physical Analysis

Appearance:	Light yellow-brown fine powder
Color:	Yellow-brown
Odor:	Characteristic
Particle size:	100% passes through 80 mesh screen
Bulk density:	45-55 g / 100 ml

Chemical Analysis

Loss on drying:	Not more than 5.0%
Residue on ignition:	Not more than 5.0%
Synephrine:	Not less than 30.0% as determined by HPLC

Contaminants Analysis

Heavy Metals:	Not more than 20 ppm
Arsenic:	Not more than 2 ppm
Pesticide Residues:	Not reported on Specification Sheet
Solvent Residues:	Complies with PhEur limits

Microbiological Load

Total Viable Aerobic Count:	Not more than 10 ⁴ (PhEur 2.6.12)
Yeast and mold:	Not more than 10 ² per gram (PhEur 2.6.12)
Escherichia coli (in 1 g):	Absent (PhEur 2.6.13)
Salmonella (in 10 g):	Absent (PhEur 2.6.13)

SOURCE: This specification is the property of DEYANG HUATAI BIOPHARM RESOURCE CO., LTD. and should not be copied, available at: <http://www.htbpr.com/citrusaurantium.htm>.

MEETINGS AND TRADE SHOWS EASTERN ASIA

December 14-16, 2006

ORGANIC & NATURAL 2006 – 5th SEOUL INTERNATIONAL ORGANIC & NATURAL PRODUCTS SHOW

Venue: Convention & Exhibition Center (COEX) Atlantic Hall + Convention Hall, Seoul, Korea

Organizer: Korea Organic Farming Association (KOFA)

Contact: COEX, World Trade Center Samsung-dong, gangnam-gu, Seoul 135-731, Korea

TEL: 02-557-6776

FAX: 02-557-0870

E-MAIL: office@world-expo.co.kr

WEB: <http://www.organicshow.co.kr/>

Exhibitor profile: Organic botanical raw materials, organic fruits and vegetables, essential oils, spice extracts, ginseng and tea products, herbal medicinal products, honey products, functional foods, health supplement foods, environmentally friendly natural foods, and more.

January 15-18, 2007

INTERNATIONAL WORKSHOP ON MEDICINAL AND AROMATIC PLANTS

Venue: Lotus Pang Suan Kaew Hotel, Chiang, Mai, Thailand

Contact: Adisak Sreesunpagit, Director-General, Department of Agriculture, Chatuchak, Bangkok 10900 Thailand

TEL: 66-2-579 9636

FAX: 66-2-5795528

E-MAIL: adisaks@doa.go.th

WEB: http://www.royalfloraexpo.com/Int_Conference/medicinal_workshop.asp

April 15-20, 2006

101st CHINESE IMPORT AND EXPORT COMMODITIES FAIR

Venue: CECF Lihua Complex, 117 Liu Hua Road, Guangzhou, P.R. China

Contact: TEL: +86-10-84634451, 84634452

FAX: +86-10-84634872

WEB: <http://www.chinacantonfair.com>

Exhibitor categories include: Traditional Chinese Medicines: Dried Medicinal Herbs, Chinese Patent Medicines, Chinese Medicinal Wine, Western Medicines: Pharmaceuticals, Western Patent Medicines, Health-care and Beauty Products.

May 31-June 2 2007

BIO-FACH CHINA: INTERNATIONAL ORGANIC TRADE FAIR AND CONFERENCE

Venue: Shanghai Everbright Convention & Exhibition Center

Patron: International Federation of Organic Agriculture Movements (IFOAM)

Organizers: Nürnberg Messe China, Ministry of Agriculture, China Green Food Development Center

Supporters: DEG - The German Investment and Development Company, China Centre for the Promotion of Agricultural Trade under the Ministry of Agriculture, Shanghai Green Food Development Centre

Contact: Mrs. Jane Jiang, Nürnberg Messe China Co., Ltd., 18F Yunhai Building Unit A-B, 118 Qing Hai Road, 200041 Shanghai, China

TEL: +86.21.5228.3522.604

FAX: +86.21.5228.3523

E-MAIL: jane.jiang@nm-china.com.cn

WEB: <http://www.biofach-china.com>

Although the BIO-FACH CHINA trade show is primarily for buyers & sellers of certified organic finished products, there will be many exhibitors of bulk botanical raw materials and extracts.

August 16-20, 2007

2007 INTERNATIONAL CONFERENCE & EXHIBITION OF THE MODERNIZATION OF CHINESE MEDICINE & HEALTH PRODUCTS

Venue: Hong Kong Convention and Exhibition Centre, Hall 2, 1 Harbour Road, Wanchai, HK
Organizer: Hong Kong Trade Development Council and The Modernized Chinese Medicine International Association Ltd: <http://www.mcmia.org/>
Contact: Exhibitions Department, Hong Kong Trade Development Council, Unit 13, Expo Galleria, Hong Kong Convention & Exhibition Centre, 1 Expo Drive, Wanchai, Hong Kong
FAX: (852) 2824-0026
E-MAIL: exhibitions@tdc.org.hk
WEB: <http://www.icmcm.com/>

Exhibitor profile: Chinese botanical raw materials and extracts, finished medicinal herbal products, certified organic herbal ingredients, health products (herbal supplements, functional foods, nutraceuticals, organic foods), research and development services and trade associations.

September 5-8, 2007

HERBAL AND HEALTH FOOD INDONESIA

Venue: Jakarta International Exhibition Centre, Kemayoran, Jakarta, Jakarta Raya, Indonesia
Organizer: Krista Media Pratama PT., Krista Exhibitions, Jln.Blandongan 28 DG, Jakarta, Indonesia.
TEL: +(62)-(21)-6345861/6345862/6334581
FAX: +(62)-(21)-6340140/6342113
WEB: <http://www.biztradeshows.com/trade-events/herbal-healthfood-indonesia.html>

Exhibitor profile: Suppliers of herbs and spices, antioxidants, fats and oils, aromas and flavors, fruit and vegetable products, organic ingredients, seasonings, soy products, starches, sweeteners, vitamins and minerals, and more.

November 5-9, 2007

14th CHINA YANGLING AGRICULTURAL HI-TECH FAIR (CAF)

Venue: No.1 Western Zhanguan Road, Yangling Demonstration Zone, Shaanxi, 712100 PR China
Host: The People's Government of Shaanxi Province
E-MAIL : exhibit@yangling.gov.cn / melissalihua@yahoo.com.cn
WEB: <http://www.agri-fair.com>

Exhibitor profile: Includes suppliers of medicinal herbs, planting technology, medicinal herb processing and equipment, medicinal herbal products.

INDIA

DEMAND AND SUPPLY

PSYLLIUM AND SENNA EXPORT QUANTITIES, VALUES, AND DESTINATIONS

Psyllium (*Plantago ovata*) and senna (*Cassia angustifolia*) are India's two highest volume medicinal plant export products. During the 2005-2006 agricultural season (See Table 1), India exported 24,959,900 kg of psyllium husk (HS 12119032), 28.7% higher than previous season, valued at USD \$47.22 million (= \$1.89 / kg), and 760,510 kg of psyllium seed (HS 12119013), valued at USD \$1.36 million (= \$1.79 / kg). Main destinations for psyllium husk were USA (14,558,110 kg), Pakistan (2,460,670 kg), Spain (1,103,740 kg), Bangladesh (782,360 kg), Germany (724,110 kg), and Australia (564,770 kg), among others. Main destinations for psyllium seed were USA (413,950 kg), UK (65,760 kg), and Germany (46,500), among others. During the 2005-2006 season, 11,430,180 kg of senna leaf & pod (HS 12119022) were exported, 4.5% more than previous season, valued at USD \$5.4 million (= \$0.472 / kg). Main destinations for senna leaf & pod were People's Republic of China (2,674,840 kg), Japan (1,599,370 kg), Germany (1,517,080 kg), Poland (703,780 kg), Spain (450,330 kg), Vietnam (415,000 kg), and the USA (410,210 kg), among others.

TABLE 1: INDIA: SELECTED HIGH DEMAND MEDICINAL PLANT EXPORTS

Herb Name / HS 8-Digit Code / Apr-Mar 2002-2007 / Quantities: kilograms (kg)

HERB NAME	HS CODE	Apr-Mar 2002-2003 kg	Apr-Mar 2003-2004 kg	Apr-Mar 2004-2005 kg	Apr-Mar 2005-2006 kg	Apr-Jun 2006-2007 kg
Psyllium husk (<i>Plantago ovata</i>)	12119032*	682,550	7,235,620	19,387,380	24,959,900	4,996,040
Psyllium seed (<i>Plantago ovata</i>)	12119013	1,114,740	3,520,040	1,191,210	760,510	192,620
Senna leaf / pod (<i>Cassia angustifolia</i>)	12119022	9,638,470	10,973,690	10,924,050	11,430,180	3,246.82
Sickle-pod senna seed (<i>Cassia tora</i>)	09109915	2,366,910	1,881,090	1,572,450	2,083,280	1,833,800

* **NOTE:** Imports of Psyllium Husk into the USA employ an HS Code [1211909020] different from the code employed by India [12119032], which may explain some discrepancies. Also, the 2002/2003 export data for this item is obviously inaccurate. Presumably, most of the psyllium in that year was grouped under another HS Code.

SOURCE: Government of India Ministry of Commerce & Industry, Department of Commerce, Export Import Data Bank. Accessed 16 December 2006: <http://commerce.nic.in/eidb/default.asp>.

NEWS FROM STATE OF MADHYA PRADESH

MEDICINAL PLANT CULTIVATION AND PROCESSING TRAINING IN BHOPAL

During 12-15 October 2006, the Indian Society of Agribusiness Professionals (ISAP) gave a Training Program on the Cultivation, Primary Processing and Marketing of Medicinal & Aromatic Plants. The program covered various inputs enabling farmers to start the cultivation of major medicinal plant crops such as amla (*Phyllanthus emblica*), ashwagandha (*Withania somnifera*), forskohlii (*Plectranthus barbatus*), lemongrass (*Cymbopogon* spp.), and rauwolfia (*Rauvolfia serpentina*), among others. Additionally, interaction with successful medicinal herb farmers and farm tours to observe these plants in the field was part of the training program.

SOURCE: India Society for Agribusiness Professionals (ISAP) Regional Office. ISAP to conduct Four Days Training program on Medicinal Plants & Herbs at Bhopal. October 2006: <http://www.isapindia.org>.

NEWS FROM STATE OF MANIPUR

INCREASED DEMAND FOR ORGANIC CULTIVATED CALAMUS AND OTHER MEDICINAL HERBS

The State of Manipur is situated in northeastern India, surrounded by the country of Myanmar on the East, Nagaland on the North, Mizoram on the South, and Assam on the West. 67% of the geographical area of Manipur is hill tract covered forests. In November 2006, Four major companies based at Bangalore, Sami Labs (<http://www.samilabs.com>), Phalada Agro Research Foundation (<http://www.phaladaagro.com>), ALVA Pharmacy Mijar (<http://www.alvaseducation.co>) and Sri Mata Bio Source (<http://www.smbiosource.com>) and another based at New Delhi (Pure Life) put out offers to the project co-ordinator of Manipur Small Farmers Agri Business Consortium (<http://mansfac.nic.in>), Mohendra Singh Khaidem, for supply of calamus (*Acorus calamus*), a medicinal plant that is wild collected in Manipur. The offer was made during the India Organic 2006 Trade Fair at Bangalore. In response, the Consortium has discussed the offer with the Institute of Bio-resources for Sustainable Development (<http://ibsd.gov.in>) at Takyelpat, who will facilitate large scale plantation of calamus in order to meet the demand. An NGO, Green Foundation (<http://www.greenconserve.com>) will also be involved in the cultivation project and in the obtaining of organic certification for the crop. The same companies also expressed an interest for the procurement of other medicinal plants found in the State of Manipur such as Chinese soapberry (*Sapindus mukorossi*), greater galangal (*Alpinia galanga*), velvet bean (*Mucuna pruriens*), and winged prickly ash (*Zanthoxylum armatum*). For more information on the Manipur Small Farmers' Agri-Business Consortium (MSFAB), visit their website at: <http://mansfac.nic.in>.

SOURCES: (1) Anon. Companies eye indigenous medicinal plant. *The Sangai Express*. 13 Nov 2006 (2) Manipur Small Farmers' Agri-Business Consortium, Directorate of Agriculture, Sanjenthong, Imphal-795001: <mailto:mansfac@man.nic.in>

ASSURED MARKET AND SUBSIDIES TO MEDICINAL PLANT FARMERS IN MANIPUR

In December 2006, in the border town of Moreh, neighboring the country of Myanmar, a joint venture was set up during an entrepreneurs meeting between the Manipur Small Farmers' Agri-Business Consortium (MSFAC) (<http://mansfac.nic.in>) and the Young Progressive Planters' Association (E/III-31, Langol Housing Complex, Imphal, Manipur, 795004). Also in attendance were representatives of the Manipur Organic Herbal Consortium, the Manipur State Medicinal Plants Board, and Institute of Bio-resources for Sustainable Development (<http://ibsd.gov.in>). While the villagers in this border area see advantages of Indo-Myanmar border trade, a realization has now been made that self-production in agriculture, particularly medicinal and aromatic plants, is necessary in order to attain self reliance and economic sustainability. The project co-ordinator of MSFAC emphasized the need to explore value-adding with available assistance of the venture capital assistance scheme of the consortium by providing 10% of project costs or 26% of the promoters contribution in setting up agri-business units with support of any nationalized financial institute. There is also a scheme for setting up of agriculture market infrastructure to help farmers sell their herbs after grading and value-adding, in which the agri ministry provides 33.33% as back ended subsidy. Dr. Aribam Guneshwor Sharma, Officer in Charge of the Manipur State Medicinal Plants Board, attended the meeting and stated that all possible support will be extended to the medicinal plant growers in which the National Medicinal Plant Board (<http://nmpb.nic.in>) has been providing 30% subsidy to the growers.

SOURCE: Sukham Nanda. Entrepreneurs meet held at Moreh. *Kangla Online*. 12 December 2006.

NEIGHBORING COUNTRIES – BHUTAN

SUSTAINABLE MANAGEMENT OF MEDICINAL PLANTS FOR POVERTY REDUCTION AND ECONOMIC GROWTH

Non-wood forest products (NWFP), including medicinal plants, contribute significantly to the livelihoods and sustenance of rural communities in the Royal Kingdom of Bhutan. Demand for NWFPs has been growing locally and internationally. At a recent two-day national workshop on development of NWFPs, the agriculture secretary, Dasho Sangay Thinley, said "Development of NWFP is one of government's top priorities during the 10th five year plan. It should benefit the poor." The workshop aimed to come up with a set of recommendations to serve as a foundation for national strategies for sustainable management of NWFPs in Bhutan. The Government of Bhutan has identified NWFP development as a means to reduce poverty and to achieve economic growth. Categorized as NWFPs, the Department of Forest has identified 216 species of medicinal plants, 97

mushroom species, 97 fruits and nuts, 70 ornamental plant species, 50 bamboo species, 25 oil and resin species, 20 spice plants, 14 cane species, 38 fibres, 181 fodder, 36 dyes, 12 food crops and 77 forest vegetables. Between 2003-2006, the revenue generated through NWFP royalties at commercial rate [from bamboo (*Bambusa* spp.), daphne bush (*Daphne* spp.), lemongrass (*Cymbopogon* spp.), and various species of mushrooms and resins] amounted to 900,000 Bhutanese ngultrum (BTN) (= \$20,306.90 USD). And between 2004-2006, royalties collected from wild collected cordyceps (*Cordyceps sinensis*) alone amounted to BTU 5.26 million (= \$118.682.00 USD).

SOURCE: Anon. Non-wood forests products - lifeblood of rural communities. *Bhutan Broadcasting Service*. 6 December 2006.

BOTANICAL RAW MATERIALS (Indicative prices: US \$ / kg)

Product	Source	Price	Destination
Ajowan (seed) fruit (<i>Trachyspermum ammi</i>)	India	0.75-1.02	Rajasthan Market
Amla fruit (<i>Phyllanthus emblica</i>)	India	0.67-0.9	Delhi Market
Ashwaghandha root (<i>Withania somnifera</i>)	India	1.07-1.45	Delhi Market
Betelnut palm seed (<i>Areca catechu</i>)	Shimoga	3.4-3.9	Karnataka Market
Black pepper fruit (<i>Piper nigrum</i>)	Cochin	2.44	Cochin Market
Cardamom (<i>Elettaria cardamomum</i>) (small)	Vandan-Mettu	5.94	Auction price
Cassia bark (<i>Cinnamomum aromaticum</i>)	Chennai	1.62	Chennai Market
Chirata herb (<i>Swertia chirayita</i>)	India	0.49-0.54	Saharanpur
Cinnamon bark (<i>Cinnamomum verum</i>):	India	1.54	Delhi Market
Coriander fruit (<i>Coriandrum sativum</i>)	India	0.67-0.72	Mumbai Market
Fennel fruit (<i>Foeniculum vulgare</i>)	India	2.29	Mumbai Market
Fenugreek seed (<i>Trigonella foenum-graecum</i>)	Mumbai	0.64	Mumbai Market
Garlic bulb (<i>Allium sativum</i>)	Mumbai	1.45	Mumbai Market
Ginger rhizome (<i>Zingiber officinale</i>)	Cochin	1.12-1.34	Cochin Market
Gotu kola herb (<i>Centella asiatica</i>)	India	1.12-1.68	Delhi Market
Guggul gum resin (<i>Commiphora wightii</i>)	India	3.58-6.27	Delhi Market
Gymnema leaf (<i>Gymnema sylvestre</i>)	India	1.5	FOB India
Milk thistle fruit (<i>Sylibum marianum</i>)	Mumbai	2.13	USA
Picrorhiza root (<i>Picrorhiza kurrooa</i>)	India	5.15-6.49	Delhi Market
Psyllium husk (<i>Plantago ovata</i>)	India:		
— Uncleaned, conventional	India	0.52-1.1	Gujarat Market
Rauwolfia root (<i>Rauwolfia serpentina</i>)	India	2.5-2.8	Saharanpur
Safed musli tuber (<i>Chlorophytum borivillianum</i>)	India	17	USA
Senna leaf (<i>Cassia angustifolia</i>)	India:		
— Conventional (Grade No. 1)		0.33-0.4	FOR Gujarat
— Certified organic **		0.50-0.75	FOB India
Senna pod (<i>Cassia angustifolia</i>)	India	1.65	exw Hamburg
Turmeric rhizome (<i>Curcuma longa</i>)	Mumbai	0.55-1.22	Mumbai Market

* Wild Collected — ** Certified Organic

Quality Standards: Monographs providing quality standards and tests for most all of the above listed herbs can be found either in the *Ayurvedic Pharmacopoeia of India*, the *Unani Pharmacopoeia of India*, and/or the *Indian Herbal Pharmacopoeia* Revised Edition 2002.

EXTRACTS (Indicative wholesale prices: USD \$ / kg)

Product	Standardization	%	Price
Amla fruit	Tannins	40	22-32
Ashwagandha root	CO2 P.E.	N/A	68-75
Boswellia gum resin	Boswellic acids	70	32
Guggul gum resin	Guggulsterones	10	29
Gymnema leaf	Gymnemic acids	25	18-19.5
Neem leaf	Liminoids	20	35-40
Picrorhiza root	Kutkin	10	33
Pomegranate fruit	Polyphenols	80	120
Tribulus terrestris	Protodioscin	20	210-220
Tribulus terrestris	Total saponins	40	18
Tribulus terrestris	Total saponins	70	49

PRODUCT SPECIFICATIONS**Caralluma Powder – a product of India**

Product:	Caralluma Powder
Botanical name:	<i>Caralluma fimbriata</i> ROXBURY [Asclepiadaceae]
Plant part:	Chips of dried aerial parts
Packaging:	Double lined (two clear plastic bags)
Shelf life:	24 months
Storage:	In a cool dry environment

Physical Analysis

Appearance:	Green to brownish powder
Color:	Green to brownish
Odor:	Characteristic
Taste:	Characteristic
Particle size:	60 to 80 mesh
Bulk density:	0.350 - 0.450 g/cc
Tapped density:	0.550 - 0.750 g/cc

Chemical Analysis

Loss on drying:	Not more than 7.0%
Total ash:	Not more than 11.0%
pH:	5 to 7
Solubility:	Not reported on Specification Sheet

Contaminants Analysis

Heavy Metals:	
Lead	Not more than 0.01 ppm
Mercury	Not more than 0.01 ppm
Cadmium	Not more than 0.01 ppm
Arsenic	Not more than 0.01 ppm
Pesticide Residues:	Not reported on Specification Sheet

Microbiological Load

Total Viable Aerobic Count:	Not more than 10 ⁴ (PhEur 2.6.12)
Yeast and molds:	Not more than 10 ² per gram (Ph Eur 2.6.12)
Escherichia coli (in 1 g):	Absent (PhEur 2.6.13)
Salmonella (in 10 g):	Absent (PhEur 2.6.13)
Staphylococcus aureus (in 1 g)	Absent (PhEur 2.6.13)

SOURCE: This specification is the property of FEDERAL LABORATORIES CORPORATION and should not be copied, available at: <http://www.federallabs.com/carallumapowder.htm>.

MEETINGS AND TRADE SHOWS INDIA, BHUTAN, NEPAL & SRI LANKA

January 5-7, 2007

AROGYA 2007 COMPREHENSIVE HEALTH FAIR ON AYURVEDA, YOGA & NATUROPATHY, UNANI, SIDDHA AND HOMOEOPATHY

Venue: Science City, Kolkata, India

Organizer: Govt. of India Department of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy), Federation of Indian Chambers of Commerce and Industry (FICCI)

Contact: Praveen Kumar Mittal - Asst. Director, Trade Fairs Secretariat, Federation of Indian Chambers of Commerce and Industry, Federation House, Tansen Marg, New Delhi-110001 - India

E-mail: ficciexhibition@ficci.com, praveenkmittal@ficci.com

WEB: <http://indianmedicine.nic.in/FINAL%20AD.pdf>

Exhibitor Profile: Suppliers of medicinal herbs as well as finished traditional herbal medicinal products (Ayurvedic, Homoeopathic, Naturopathic, Siddha and Unani), and herbal dietary supplement products.

January 31-February 1, 2007

BUYER-SELLER MEET & CONFERENCE ON HERBAL & MEDICINAL PLANTS

Venue: Air Force Auditorium, Subroto Park, New Delhi, India

Organizer: Indian Society of Agribusiness Professionals (ISAP),

Sponsor: National Medicinal Plant Board (NMPB)

Contact: ISAP Herbal & Medicinal Plant Secretariat, R-289A, Greater Kailash-I, New Delhi 110048

TEL: 011-41730573/74/ 41630967

FAX: 011-41731674

MOBILE: 09810931908/ 09312029739

E-MAIL: manoj@isapindia.org / meenakshi@isapindia.org

WEB : <http://www.isapindia.org/Herbal%20brochure.pdf>

Conference Theme: "Opportunities and Challenges in developing National and International Markets for Herbal and Medicinal Plants"

Objectives: (1) Development of sustainable production, harvesting, processing, storage and quality control systems in herbal and medicinal plants; (2) Identify growth opportunities within the herbal and medicinal plant products market; (3) Linking markets for development of sustainable livelihood options and identify ways to make these opportunities work for the poor.

Agenda includes the following, among others subjects:

- ❑ Session I: Development of sustainable production, harvesting, processing, storage and quality control systems in herbal and medicinal plants
 - Promoting cultivation for meeting market demand, practicing Good Agricultural & Field Collection Practices
 - Sustainable harvesting methods and strategies
 - Processing, value addition and packaging
 - Intellectual property rights in herbal and medicinal plants
 - Quality assurance to meet national and international standards
- ❑ Session II: Identify growth opportunities within the herbs and medicinal plant products market
 - Strategies for supply linkages based on market tendencies
 - Reaching local, national, international markets
 - Ayurveda globalization, quality of herbs, GMP system
 - Government policy initiative in promoting herbs and medicinal plant products market.
- ❑ Session III: Linking markets for development of sustainable livelihood options and identify ways to make these opportunities work for the poor
 - Financial / credit support for herb farmers

- Market intelligence and dissemination
- Promoting access to information such as prices and availability
- Economics of supply and marketing of medicinal plants
- Organically grown herbal market
- Export market for medicinal plants.

March 11-15, 2007

**IMPLEMENTING MARKET-DRIVEN INNOVATIONS IN AGRI-FOOD SUPPLY CHAINS:
FOSTERING ECONOMIC GROWTH IN INDIA**

Venue: New Delhi, India

Sponsors: University of Illinois at Urbana-Champaign, USAID, and the India, China and America (ICA) Institute; co-sponsors include International Arid Lands Consortium (IALC) and the World Bank.

Contact: Professor Jagdish Sheth, India, China and America Institute, 1549 Clairmont Road, Suite 202, Decatur, GA 30033 USA

TEL: 404-321-5966

FAX: 404-328-1313

E-MAIL: info@icainstitute.org

WEB: <http://www.globalfoodchainpartnerships.org/india/index.html>

February 21-23, 2008

PANACEA 2008 - NATURAL PRODUCTS EXPO INDIA

Venue: World Trade Centre (WTC) Mumbai, India

Contact: Ms. Tanushree, Head, Corporate Communications. Seishido Communications, -102 Divyastuti Apts, Divyalok Township, Gen. A.K. Vaidya Marg, Film City Rd., Goregaon (E), Mumbai - 400 063, INDIA

TEL: +91.22.28410164, 28403651

FAX: + 91.22 .28496372

E-MAIL: info@seishidocommunications.com

WEB: www.panaceaforall.com

Exhibitor profile: Suppliers of natural raw materials & ingredients (plant extracts, herbs, spices, natural ingredients, functional food ingredients, cosmeceuticals, oilseeds and oilseed extracts, raw and encapsulated herbs, natural essences, etc.), natural medicinal products (Ayurvedic, Chinese, Homoeopathic, Naturopathic, Siddha, Unani), health foods & beverages (natural & organic foods, dietary supplements, nutritional drinks, soya products, etc.).

AFRICA

ISSC-MAP PRESENTED IN EGYPT AND MOROCCO

The International Standard for Sustainable Wild Collection of Medicinal and Aromatic Plants (ISSC-MAP) was presented at two herb trade events in Northern Africa during November and December. The process to elaborate a standard for the sustainable wild collection of MAP is funded by the German Federal Agency for Nature Conservation (BfN) in association with The World Conservation Union (IUCN), WWF Germany, and TRAFFIC. On 21 November 2006, a presentation on the ISSC-MAP was made at the "12th International Conference and Exhibition of the Egyptian Society for the Producers, Manufacturers & Exporters of Medicinal & Aromatic Plants (ESMAP)," which took place at the International Center for Agriculture, Giza, Egypt. And on 19 December 2006, a presentation on the ISSC-MAP was made at the "Valorization of Aromatic and Medicinal Plants: Common National Strategy Workshop" in Rabat, Morocco, an event organized by the USAID-funded Projet Partenariats Agricoles pour la Productivité et la Prospérité (AP3/USAID).

SOURCES: (1) Medicinal Plant Specialist Group (MPSG). 2006. *International standard for sustainable wild collection of medicinal and aromatic plants (ISSC-MAP)*. Working Draft (June 2006). Steering Group for the Development of an International Standard for the Sustainable Wild Collection of Medicinal and Aromatic Plants: http://www.floraweb.de/proxy/floraweb/MAP-pro/draft_3.pdf; (2) ESMAP 12th International Conference and Exhibition 21-23 November 2006. Abstract Book; (3) Patrick Papania, Senior Communications Strategist, Academy for Educational Development.

EGYPT

RECENT TRENDS IN MAP PRODUCTION, MANUFACTURE & MARKETING

This was the theme of the 12th International Conference and Exhibition of the Egyptian Society for the Producers, Manufacturers & Exporters of Medicinal & Aromatic Plants (ESMAP), which took place 21-23 November 2006 at the International Center for Agriculture, Giza, Egypt. About 90% of Egyptian Medicinal and Aromatic Plants (MAPs) are produced for the export market, 85% of which are produced in Upper Egypt. Egypt exports about 50,000 tons of MAPs annually, with the USA as its largest foreign market, followed by the EU. The event sponsors included the Association of Agricultural Research Institutions in the Near East and North Africa (AARINENA), the Food and Agriculture Organization of the United Nations (FAO), and the Desert Research Center. A complete Proceeding Book will be published and distributed by the FAO.

After opening remarks by Conference Chairman, Prof. Dr. Ismail Abdel-Galil, Director of the Desert Research Center, and Co-Chairman, Prof. Dr. Farouk El-Shobaki, Chairman of ESMAP, the conference began with the "Development of an International Standard for Sustainable Wild Collection of Medicinal and Aromatic Plants (ISSC-MAP)," presented by Josef Brinckmann, a member of the ISSC-MAP Decision Board. Also presenting in the First Session was Patrick Papania, of the USAID-funded MAP project in Morocco, Agriculture Partnerships for Productivity and Prosperity (AP³), on the topic "Strategic Communication to Catalyze System-Wide Change: 1 Experience and Results from the Medicinal and Aromatic Plant Sector in Morocco."

Prof. Dr. Mohamad Said Ali Safwat, Faculty of Agriculture, Minia University, gave a presentation on the topic "Exporting Herbs, Spices & Essential Oils: Guidelines for Exporters in Developing Countries." Dr. Safwat's presentation covered the current market situation and an overview of herbal products from developing countries available on the German market. He also covered general requirements for import into the EU as well as quality requirements, packaging and labeling and how to find business partners in Germany. In a presentation on "The Role of the Desert Research Center in Protecting Medicinal and Herbal Plants," Dr. Yasser Adel Hanafi stated that there are 342 species of medicinal plants that are wild collected in Egypt. The Desert Research Center is surveying, screening and evaluating propagation methods, and differences between wild and cultivated plants. Dr. Hanafi is developing techniques for the cultivation of important MAPs in the Egyptian desert. Prof. Dr. Wafaa M. Amer, Faculty of Science, Cairo University, presented on the topic "Economic Herbal Relatives in Egyptian Flora," in which he stated that there are 200 species of wild medicinal flora in Egypt, of which only 20 are also under cultivation. His talk focused on threats to wild medicinal plant populations in Egypt, plant diversity and biopharmaceuticals, and the interactions between cultivated MAPs and wild relatives. "The Debate on Genetically Engineered Products, International and National Considerations," by Ossama M. El-Tayeh, Ph.D., Faculty of Pharmacy, Cairo University, included discussion on the World Intellectual

Property Organization (WIPO): process vs. product, disclosure of origin, and Traditional Knowledge; the World Trade Organization (WTO): TRIPs Agreement Article 27; and the UN International Regime on Access and Benefit Sharing. Also discussed were cases of biopiracy reported in Egypt, among other related topics. Other interesting presentations at the ESMAP Conference included "*Collection and Conservation of Medicinal Plants in Oman*," by Eng. Safaa M. Al-Farsi, Ministry of Agriculture, Oman, and "*Species of Medicinal and Aromatic Plants Being Threatened by Extinction in Morocco, and the Strategy of their Protection*," by Dr. Al-Fayez Shawqi, Coordinator of Genetic Resources, Plant Breeding Research Unit, Rabat, Morocco.

SOURCE: ESMAP 12th International Conference and Exhibition 21-23 November 2006. Cairo, Egypt.

KENYA

FIRST AFRICAN ALOE PROCESSING PLANT OPENS IN BARINGO

The first aloe processing factory in Africa was opened in Baringo mid-September. The Koriema Aloe Processing project is funded by the European Commission (EC) through the Biodiversity Conservation Programme (BCP) for about KShs 13 million. The realisation of this project, to support conservation, sustainable utilization and equitable benefit sharing, is through a public-private-partnership between the BCP, government (Kenya Forestry Research Institute, Kenya Wildlife Services), the local community (KOKISA Community Baringo) and a private investor (Land Mawe Ltd.). The aloe plant, which is found in semi-arid areas in Kenya is used for medicinal and cosmetic products; the processed product will be exported as raw material. The region has over 2 million commercial indigenous wild aloes namely *Aloe secundiflora* and *A. turkanensis* which are the main source of commercial aloe bitter gum in Kenya. The factory is earmarked to produce crude aloe gum for export as well as range of aloe-based products like lotions, soaps, shampoos, tablets etc. The Head of Delegation said that EC funding aims at alleviating poverty and promoting gender equality which is in line with the Millennium Development Goals. Apart from fighting poverty the project would also promote bio-diversity conservation in the area.

SOURCES: (1) Anon. Aloe processing plant for Baringo. European Union Delegation of the European Commission to the Republic of Kenya. 15 September 2006; (2) Anon. The Baringo Aloe Bioenterprise factory. Kenya Forestry Research Institute News. 15 September 2006.

MOROCCO

MEDICINAL AND AROMATIC PLANT SECTOR WEBSITE LAUNCHED

MAROC-PAM (Plantes Aromatiques & Medicinales) has launched a website on the medicinal and aromatic plant (MAP) sector of Morocco, at: <http://www.marocpam.ma>, which is posting contributions of stakeholders in the Moroccan MAP sector. The MAROC-PAM Newsletter can also be downloaded at the website. MAROC-PAM Newsletter No 6 (September-October 2006) includes a special on trade associations representing different levels of the MAP sector; such as Association Marocaine pour le Devveloppement des Plantes Aromatiques et Medicinales (ADEPAM), and two newly established associations, Association Marocaine des Plantes Aromatiques et Medicinales (AMAPAM), and Societe Marocaine des Plantes Aromatiques et Medicinales (SOMAPAM). For contact details, see the MNS Global Herb Trade Association Directory at the end of this Bulletin.

SOURCE: Anon. Organisation de la Filiere des Plantes Aromatiques et Medicinales au Maroc. *MAROC-PAM Newsletter No 6*. September-October 2006: http://www.marocpam.ma/IMG/pdf/Newslettre_Maroc-PAM_No_6_Septembre_Octobre_2006.pdf

MAROC EXTRACTION OFFERS NEW RANGE OF MOROCCAN MEDICINAL PLANT EXTRACTS

Maroc Extraction (Cassablanca, Morocco) a division of Naturex s.a. (Avignon, France) is producing a new line of herbal extracts from traditional Moroccan medicinal plants for the global market. The 27,000 sq ft Cassablanca extraction facility is one of the largest extraction houses in the Mediterranean Region, capable of processing up to 20 tons of botanical raw materials daily. New offerings include extracts of Fumitory (*Fumaria officinalis*), used for skin problems and as a detoxifier, Nigella (*Nigella sativa*), used mainly as a stimulant for men, Red sandspur (*Spergularia rubra*), used as a diuretic and sedative, Spanish pellitory (*Anacyclus pyrethrum*), used for rheumatism, and Strapwort (*Corrigiola telephifolia*), used for antiseptic properties. Additionally, Maroc Extraction already produces extracts of Artichoke leaf (*Cynara scolymus*), Chaste tree fruit

(*Vitex agnus-castus*), Olive fruit or leaf (*Olea europaea*), and Pomegranate fruit (*Punica granatum*), among many others.

SOURCES: Naturex. Naturex & Morocco: On the trail of premium botanicals. South Hackensack, New Jersey: Naturex USA. 2006. Available at: http://www.naturex.com/pdf/naturex_morocco.pdf

AMERICAN HERBALISTS TO FACILITATE MEDICINAL PLANT TOUR OF MOROCCO IN 2007

From 28 April to 10 May 2007, American herbalists Rosemary Gladstar, Robert Chartier and Shelly Browning will facilitate "A Plant Lover's Journey: Medicinal and Aromatic Plants of Morocco." As a result of Shelly Browning's work within the MAP sector of Morocco through the Agriculture Partnerships for Productivity and Prosperity (AP3) financed by USAID, she will be conducting an herbal eco-tour to Morocco with renowned herbalist Rosemary Gladstar. The tour will include visits to the colorful spice markets of Marrakech, Nectarome organic herb gardens, herbal apothecaries, argan forests and a women's argan cooperative in Tafraoute, fields of the famed Moroccan roses and Les Aromas du Maroc rose essential oil production facility. The tour will also include a hike through countryside's abundant with wild medicinals and trek across the Sahara by camel with Tuareg guides, the native spice traders of the region.

SOURCE: Shelly Browning, The Nature of Interpreting, 528 Humboldt Street, Santa Rosa, California 95404 USA, TEL: 707-953-6712, FAX: 707-546-7362, E-MAIL: shellybrowning@hotmail.com

BOTANICAL RAW MATERIALS (Indicative prices: US \$ / kg)

Product	Source	Price	Destination
Clove flower bud (<i>Syzygium aromaticum</i>)	Madagascar	4.24-4.41	Spot New York
Devil's claw root (<i>Harpagophytum procumbens</i>)*	South Africa	5.5	exw Hamburg
Fennel fruit (<i>Foeniculum vulgare</i>)	Egypt	1.654	Spot New York
Ginger rhizome (<i>Zingiber officinale</i>)	Nigeria	1.65	Spot New York
Honeybush herb (<i>Cyclopia</i> spp.) **	South Africa	8.6	CIF USA
Pygeum bark (<i>Prunus africana</i>) *	Africa	7.01	exw Hamburg
Rooibos herb (<i>Aspalathus linearis</i>) — certified organic & fair trade certified**	South Africa:	14.6	CIF USA
Spearmint leaf (<i>Mentha spicata</i>) **	Egypt	6.3-6.5	FOB Egypt
Umckaloabo root (<i>Pelargonium sidoides</i>)	South Africa	22.43	exw Hamburg
Yohimbe bark (<i>Pausinystalia johimbe</i>)	Africa	3.6-5.6	exw Hamburg
Vanilla fruit (<i>Vanilla planifolia</i>)	Madagascar	28.72	CIF USA

** Certified Organic — * Wild Collected

Quality Standards: Official monographs providing quality standards and tests for most of the above listed botanical raw materials can be found in either the Egyptian Pharmacopoeia (3rd edition, 1984; available in Arabic and English editions), the Ghana Herbal Pharmacopoeia (1992), and/or the European Pharmacopoeia (PhEur 5th edition 2005).

BOTANICAL EXTRACTS & OILS (Indicative prices: USD \$ / kg)

Product	Standardization	%	Price
Hoodia dry extract extract (<i>Hoodia gordonii</i>)	20 : 1 (w/w)	N/A	255
Pygeum bark extract (<i>Prunus africana</i>)	Total sterols	>10	49
Pygeum bark extract (<i>Prunus africana</i>)	Total sterols	20	104.5
Yohimbe bark extract (<i>Pausinystalia johimbe</i>)	Yohimbine	8	65-75

PRODUCT SPECIFICATIONS
HOODIA GORDONII EXTRACT – a product of South Africa

Product:	Hoodia Gordonii Extract 20 : 1
Botanical name:	<i>Hoodia gordonii</i> (MASSON) SWEET ex DECNE. [Asclepiadaceae]
Plant part used:	Whole plant (aerial parts)
Extraction solvent(s):	Not reported
Drug-to-extract ratio:	20 : 1 (w/w)
Excipients:	Maltodextrin and colloidal anhydrous silica
Packaging:	20 kg drum.
Storage:	In a cool and dry place.
Shelf life:	24 months when properly stored.

Identification

Hoodia gordonii Positive as determined by Thin-layer chromatography (TLC)

Physical Analysis

Appearance:	Light yellow-greenish powder
Color:	Yellow-greenish
Odor:	Characteristic
Taste:	Characteristic, bitter
Particle size:	95% passes through 80 mesh screen
Bulk density:	Not reported

Chemical Analysis

Loss on drying:	Not more than 5.0%
Total ash:	Not more than 5.0%
pH (25°C):	5 to 7
Solubility:	Slightly soluble in methanol, partially soluble in alcohol, soluble in water
Glycosides:	Not less than 10.0%

Contaminants Analysis

GMOs:	Does not contain genetically engineered components
Heavy Metals:	Not more than 10 ppm
Arsenic	Not more than 2 ppm
Lead	Not more than 2 ppm
Irradiation:	Non irradiated
Pesticide Residues:	None detected
Solvent Residues:	Not more than 1%

Microbiological Load

Total Viable Aerobic Count:	Not more than 10 ⁴
Yeast and mold:	Not more than 10 ²
Escherichia coli:	None detected in 1 g
Pseudomonas aeruginosa:	None detected in 1 g
Salmonella:	None detected in 1 g
Staphylococcus aureus:	None detected in 1 g

SOURCE: This specification is the property of GENERAL INGREDIENT INC. (Ontario, Canada) and should not be copied.

MEETINGS AND TRADE SHOWS AFRICA AND MIDDLE EAST

December 10-12, 2006

MIDDLE EAST NATURAL & ORGANIC PRODUCTS EXPO 2005

Venue: Grand Hyatt International Convention Centre, Dubai, United Arab Emirates
Support: The UAE Ministry of Health, UAE Ministry of Agriculture & Fisheries, The Zayed Complex for Herbal Research & Traditional Medicine (UAE Ministry of Health), and Greentrade.net (France), and Mediterranean Agronomic Institute, among others.
Contact: Global Links, PO Box, 86882, Dubai, United Arab Emirates
TEL: 971-4-268-6010
FAX: 971-4-268-6026
E-MAIL: info@globallinksdubai.com
WEB: <http://www.globallinksdubai.com/mnp/index.htm>

Exhibitor profile: Herbs & spices, herbal extracts, herbal teas & coffees, phytopharmaceutical products, traditional medicines (Ayurveda, Homeopathic, Naturopathic), dietary supplements, organic foods, natural juice, aromatherapy products.

December 19, 2006

VALORIZATION OF AROMATIC AND MEDICINAL PLANTS: COMMON NATIONAL STRATEGY WORKSHOP

Venue: Rabat Hilton, Rabat, Morocco
Contact: Maroc-PAM, AP3, 9 Rue Daraa, Apt. 9, Agdal 10000 Rabat, Morocco
TEL: +212 (0) 37 77 68 59
FAX: +212 (0) 37 77 68 78
E-MAIL: marocpam@gmail.com

Up to 100 stakeholders are invited to this event to review and synthesize three proposals for a national strategy on medicinal and aromatic plants.

May 26 - June 1 2007

IFEAT STUDY TOUR OF EGYPT

Organizer: The International Federation of Essential Oils and Aroma Trades (IFEAT) Organizing Committee in Egypt, Chairman Mr. Hussein A. FAKHRY
Contact: IFEAT Secretariat, GAFTA House, 6 Chapel Place, Rivington Street, London EC2A 3SH
Fax: +44 (0)20 7814 8383
E-MAIL: secretariat@ifeat.org / WEB: www.ifeat.org
WEB: <http://www.ifeat.org/004StudyTours.htm>

The timing of the tour has been selected to match observations of cropping of the major aromatic botanicals of Egypt. There will be field visits, for example to Fayoum Region to visit plantations of Basil (*Ocimum basilicum*), Chamomile (*Matricaria recutita*), Parsley (*Petroselinum crispum*), Wild marigold (*Tagetes minuta*), and Sweet marjoram (*Origanum majorana*). Also to Beni Suef Region to visit plantations of Geranium (*Pelargonium graveolens*), Garlic (*Allium sativum*), Jasmine (*Jasminum officinale*), and Onion (*Allium cepa*), as well as tours of essential oil processing facilities.

2008 [dates to be determined]

WORLD CONGRESS ON MEDICINAL AND AROMATIC PLANTS FOR HUMAN WELFARE (WOCMAP IV)

Venue: Cape Town, South Africa
Organizer: International Council for Medicinal and Aromatic Plants (ICMAP)
WEB: <http://www.icmap.org>

ORGANIZATIONAL PROFILE

Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual Dirección (INDECOPI)

Brinckmann J. The fight against bio-piracy: An update on the case of maca (*Lepidium meyenii*) from INDECOPI (Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual Dirección). *Market News Service for Medicinal Plants and Extracts*. December 2006, No. 21.

Lima, Perú: One highlight, of many, of the recent Perú Natura 2006 (forum and exhibition for natural products and ingredients) was a presentation made on 27 September 2006 by Sylvia Bazán Leigh, a representative of INDECOPI (Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual Dirección). Mrs. Bazán discussed cases of biopiracy for several Peruvian natural products and the actions that have been taken in response to challenge them. Specifically the case of the traditional Peruvian food- and medicinal- plant "maca" was used as the primary example, although maca is just one of 32 Peruvian botanicals that have been prioritized for protection against biopiracy. Maca root (fresh or dried hypocotyl of *Lepidium meyenii* Walpers, Fam: Brassicaceae), is an herbaceous, perennial, cultivated crop, found only on the Andean central sierra of Peru (in Junín and Pasco), in the puna agro-ecological zone above 4,000 m.

According to the ETC Group (Action Group on Erosion, Technology and Concentration), "Biopiracy refers to the appropriation of the knowledge and genetic resources of farming and indigenous communities by individuals or institutions who seek exclusive monopoly control (patents or intellectual property) over these resources and knowledge. ETC group believes that intellectual property is predatory on the rights and knowledge of farming communities and indigenous peoples" (ETC Group, 2006). On 1 May 2004, The Peruvian Congress passed Law No. 28216: "The Law Protecting Access to Peruvian Biological Diversity and the Collective Knowledge of Indigenous Peoples." The definition of biopiracy, according to Peruvian Law No. 28216, is "unauthorized and uncompensated access and use of biological resources or traditional knowledge of indigenous peoples by third parties, without corresponding authorization and in violation of the principles established in the Convention on Biological Biodiversity (CDB)..." (Congreso de la Republica del Perú, 2004). Law No. 28216 also established the "National Commission for the Protection of Access to Peruvian Biological Diversity and to the Collective Knowledge of the Indigenous Peoples," hereinafter referred to as the "National Anti-Biopiracy Commission."

The National Anti-Biopiracy Commission has the task of developing actions to identify, prevent and avoid acts of biopiracy with the aim of protecting the interests of the Peruvian State. Its main functions are to establish and maintain a register of biological resources and traditional knowledge, provide protection against acts of biopiracy, identify and follow up patent applications made or patents granted abroad that relate to Peruvian biological resources or collective knowledge of the indigenous peoples of Peru, make technical evaluations of the above-mentioned applications and patent grants, issue reports on the cases studied, lodge objections or institute actions for annulment concerning the above-mentioned patent applications or patent grants, establish information channels with the main intellectual property offices around the world, and to draw up proposals for the defence of Peru's interests in different forums (WTO, 2005a).

In the case of alleged biopiracy involving maca root, the process actually began in mid-2002, two years prior to the establishment of the National Anti-Biopiracy Commission, after discovering that patents had been granted in the United States of America (USA) for "inventions" related to maca root. INDECOPI solicited the participation of several institutions in order to form a Working Group to analyze the granted patents and to determine as to what extent the patents could affect exports of maca products from Perú. The Working Group, coordinated by INDECOPI, was made up of representatives of the (Peruvian) Ministry of Foreign Relations, Ministry of Foreign Trade and Tourism (MINCETUR), National Environmental Council (CONAM), National Institute for Agricultural Research and Extension (INIEA), International Potato Center (CIP), Peruvian Environmental Law Society (SPDA), Pro Biodiversity of the Andes Peru (PROBIOANDES), Peruvian Institute of Medicinal Plants, and the Association for Nature and Sustainable Development (ANDES) (Bazán Leigh, 2006).

The author of this article was first made aware of the controversial maca patents in the USA from a presentation made at the Latin Pharma 2003 by Dr. Beatriz M. Garcia Delgado, department head of the Scientific Activity Organization at the National Center of Scientific Research (CNIC), Havana, Cuba. That presentation, entitled "Importance of Patent Information," provided examples of patents that have been awarded to inventors in developed countries - particularly natural products companies in the United States, Japan, and European Union - that appear to be based on already existing Traditional Knowledge from Latin American sources. One main point of Dr. Delgado's presentation was that producers in developing countries need to become acutely aware of the increasing number of patents that are being issued to corporations in developed countries that may threaten the future ability to produce and market certain value-added forms of native plants, even when they are promoted for traditional uses. In these cases, the patents will need to be challenged (Brinckmann, 2003).

As part of the maca response strategy, the Working Group initially prioritized the investigation of 3 granted maca patents. They collaborated with scientists and maca exporters to compile documents on maca preparation and prior use with verified dates prior to the filing dates of the patent applications (Bazán Leigh, 2006). The first prioritized patent for the Working Group was a World Intellectual Property Organization (WIPO) international application entitled "Compositions and Methods for their Preparation from *Lepidium*," listing 132 countries for registration. This was Application PCT/US00/05607 filed by Pure World Botanicals, Inc. (New Jersey, USA) on 3 March 2000, claiming priority on the basis of application no. US 09/261,806 of 3 March 1999, and published on 8 September 2000 in the *Patent Cooperation Treaty (PCT) Gazette* as WO 00/51548 (Zheng et al., 2000). It contains 54 claims referring to extracts, macamides, an extraction process and therapeutic methods (WIPO, 2003). The second priority was US Patent 6,267,995 (filed on 3 March 1999 and granted on 31 July 2001), also assigned to Pure World Botanicals, entitled "Extract of *Lepidium meyenii* roots for pharmaceutical applications" (Zheng et al., 2001). And the third priority was US Patent 6,428,824 (filed on 19 October 2001 and granted on 6 August 2002), again assigned to Pure World Botanicals, entitled "Treatment of sexual dysfunction with an extract of *Lepidium meyenii* roots" (Zheng et al., 2002).

Aside from the three initially prioritized patents for investigation there have been other maca patents assigned in the USA including "Maca and antler for augmenting testosterone levels" (DeLuca et al., 2000), "Dietary supplement" (Hastings et al., 2002), "Herbal composition for enhancing sexual response" (Heleen, 2002), and yet another patent assigned to Pure World Botanicals entitled "Imidazole alkaloids from *Lepidium meyenii* and methods of usage" (Cui et al., 2005).

The Working Group drew up a report entitled "Patents referring to *Lepidium Meyenii* (maca): Responses of Peru", which was submitted by the Peruvian delegation at the fifth session of the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, 9 May 2003 (WIPO, 2003). According to a revision of the communication from Perú, dated 28 February 2005 and circulated by the World Trade Organization (WTO) Council for Trade-Related Aspects of Intellectual Property Rights on 19 May 2005, "The report shows some of the problems that a country like Peru has to face upon identification of a pending patent application or patent grant whose subject-matter concerns an invention obtained or developed from the use of a biological resource or traditional knowledge without securing the prior informed consent of the country of origin of the resource or the indigenous people owning rights in the knowledge, and without providing for any type of compensation to that country or indigenous people" (WTO, 2005a).

Pursuing the case of maca biopiracy has been made possible, in part, by participation from many interested parties including a group of attorneys in the USA who are working on a *pro bono* basis, and those involved with the researching, compiling and shipping of documentation to the attorneys, financial support from the International Potato Center for the analysis of alcoholic extracts of maca, coordination of technical recommendations for new analysis on the extracts, and those responding to the appearance of new problem cases to investigate. For example, obtaining copies of maca patents recently filed with the Japanese Patent Office by applicant Towa Corporation and arranging for the translation of the technical documents to Spanish (Bazán Leigh, 2006). Japanese Patent application number 2003-081157, filed on 24 March 2003 by Towa Corporation (published on 8 January 2004), is entitled "Functional food product containing maca" (Ogawa et al., 2004). Towa Corporation filed a subsequent Japanese Patent, application number 2004-123438, on 19 April 2004

(published on 4 November 2005), entitled "Testosterone-increasing composition, testosterone-increasing food, testosterone-increasing skin care preparation for external use and testosterone-increasing medicine" (Ogawa and Matsuo 2005). But there have been many other Japanese maca invention patent applications in the meantime, none of which mention Perú, including, among others, an application published on 1 November 2005, from applicant Suntory Ltd entitled "Alcoholic drink containing maca extract," (Matsumoto and Kato 2005), an application published on 16 March 2006, from applicant Yukihiro Hirose entitled "Composition for preventing male climacteric disorder and beverage and foods including the same," (Hirose et al., 2006) and another application published on 8 June 2006 from applicant Nippon Menaade Keshohin KK entitled "Improving agent of indefinite complaint accompanying with autonomic imbalance" (Yamada et al., 2006).

Actions taken thus far by Perú's National Anti-Biopiracy Commission against the Japanese patents include the submission of technical documents to the Japanese Patent Office in order for them to evaluate whether the Towa Corporation patent meets the requirements of novelty and inventiveness. Concerning the aforementioned US patents assigned to Pure World Botanicals, the current state of action is the coordination for the opposition of the patents.

Related Documents, Publications and Events

In March 2005, the delegation of Perú presented to the WTO a document entitled "Article 27.e(B). Relationship between the TRIPS Agreement and the CBD and Protection of Traditional Knowledge and Folklore" (WTO, 2005a). In October 2005, the delegation of Perú presented to the WTO the document "Analysis of Potential Cases of Biopiracy: The Case of Camu Camu (*Myrciaria dubia*)" (WTO, 2005c). And in November 2005, a seminar on the topic was held entitled "*Nuevos Retos para el Perú: Biopiratería, ¿cómo enfrentarla?*" Related documents submitted to WIPO include "Patents referring to *Lepidium meyenii* (Maca): Responses of Perú" (WIPO, 2003) and "Patent system and the fight against biopiracy – The Peruvian experience" (WIPO, 2005). Additionally, in August 2005, INDECOPI published a report "Analysis of potential cases of biopiracy in Perú."

Progress to Date

In relation to the validity of the patents related to maca, certain claims in the international patent (PCT/US00/05607) have been determined to not meet the novelty criteria, while other claims are not inventive. Additionally, certain claims found in US patents 6,267,995 and 6,428,824, respectively have been analyzed and determined that they do not meet the inventiveness level (Bazán Leigh, 2006). In a communication filed with WTO in November 2006, the delegation of Perú concludes "Perú's position is clear: despite the existence of useful tools for improving the patent system and verifying compliance with existing patentability obligations, especially as regards the novelty and inventive step criteria – the inclusion of the requirements to disclose the source and/or origin of biological resources, as proposed in document IP/C/W.473, is essential if the patent system is to reflect adequately the obligations arising from the CBD, obligations which Perú and all Member States are required to fulfill" (WTO, 2006).

Challenges Ahead

There are insufficient resources available to challenge inappropriately assigned patents, while there are new requests of maca patent cases to analyze. There are limitations and problems faced by countries like Perú in identifying, monitoring and studying patent applications or granted patents that involved improperly granted rights or weaken regimes for access to and/or protection of Traditional Knowledge (WTO, 2006).

For more information, contact:

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SPECIFICATIONS AVAILABLE FROM MNS BACK ISSUES

HERB OR EXTRACT	REGION	MNS EDITION
American ginseng root PE	North America	MNS 5 - December 2002
Amla fruit PE	India	MNS 16 - September 2005
Andrographis herb PE	India	MNS 3 - June 2002
Arnica flower SE	Western Europe	MNS 1 - September 2001
Artemisia Essential Oil	India / Nepal	MNS 14 - March 2005
Artichoke leaf PE	Western Europe	MNS 6 - March 2003
Ashwaghandha root PE	India	MNS 5 - December 2002
Asian ginseng root PE	Japan	MNS 4 - September 2002
Bacopa herb PE	India	MNS 11 - June 2004
Bilberry fruit	Eastern Europe	MNS 16 - September 2005
Birch leaf	Eastern Europe	MNS 21 - December 2006
Bitter orange fruit PE	China	MNS 21 - December 2006
Black cohosh rhizome PE	North America	MNS 4 - September 2002
Black currant dry extract	Western Europe	MNS 17 - December 2005
Bladderwrack thallus	Canada	MNS 20 - September 2006
Boswellia serrata PE	India	MNS 9 - December 2003
California poppy herb	USA	MNS 18 - March 2006
Caralluma extract	India	MNS 21 - December 2006
Chá-de-bugre dry extract	South America	MNS 21 - December 2006
Chaste tree fruit	Eastern Europe	MNS 9 - December 2003
Chaste tree fruit	Africa	MNS 16 - September 2005
Chaste tree fruit extract	Western Europe	MNS 16 - September 2005
Chinese cinnamon bark	China	MNS 19 - June 2006
Chinese hawthorn fruit PE	China	MNS 1: Sept 2001 / MNS 16: Sept 2005
Cinnamon bark PE	China	MNS 13 - December 2004
Cola nut	Africa	MNS 7 - June 2003
Cola nut dry extract	Western Europe	MNS 21 - December 2006
Coriander fruit Essential Oil	North America	MNS 12 - September 2004
Corydalis Yanhusuo Tuber	China	MNS 18 - March 2006
Cranberry fruit dry conc	North America	MNS 16 - September 2005
Damask Rose Essential Oil	Eastern Europe	MNS 17 - December 2005
Danggui root PE	China	MNS 12 - September 2004
Devil's claw root PE	Western Europe	MNS 3 - June 2002
Echinacea herb & root PE	North America	MNS 8 - September 2003
Echinacea root PE	Western Europe	MNS 12 - September 2004
Eleuthero root PE	China	MNS 11 - June 2004
Epimedium herb PE	China	MNS 15 - June 2005

European vervain	Africa	MNS 15 - June 2005
Fennel fruit	Africa	MNS 9 - December 2003
Fenugreek seed	Africa	MNS 12 - September 2004
Fenugreek seed PE	India	MNS 12 - September 2004
Feverfew leaf PE	Western Europe	MNS 2 - March 2002
Flax seed	North America	MNS 9 - December 2003
Garcinia fruit extract	India	MNS 15 - June 2005
Garlic bulb granules	North America	MNS 15 - June 2005
Garlic bulb PE	China	MNS 9 - December 2003
Ginger rhizome PE	China	MNS 4 - September 2002
Ginkgo leaf PE	Japan	MNS 5 - December 2002
Goldenseal rhizome	North America	MNS 2 - March 2002
Gotu kola herb PE	India	MNS 4 - September 2002
Grape fruit PE	Eastern Europe	MNS 5 - December 2002
Greater celandine herb	Eastern Europe	MNS 18 - March 2006
Green tea leaf PE	China	MNS 2 - March 2002
Griffonia seed	Africa	MNS 8 - September 2003
Guarana seed PE	Western Europe	MNS 9 - December 2003
Guggul resin PE	India	MNS 1: Sept 2001 / MNS 6: March 2003
Gynostemma herb PE	China	MNS 10 - March 2004
Henna leaf	Africa	MNS 13 - December 2004
Hibiscus flower	Africa	MNS 17 - December 2005
Holarrhena bark / root	Africa	MNS 14 - March 2005
Hoodia gordonii extract	Africa	MNS 21 - December 2006
Hop strobile PE	North America	MNS 10 - March 2004
Iceland moss	Eastern Europe	MNS 20 - September 2006
Ivy leaf PE	Western Europe	MNS 13 - December 2004
Juniper fruit Essential Oil	Eastern Europe	MNS 10 - March 2004
Kohki leaf	Japan	MNS 3 - June 2002
Lavender flower Essen Oil	Eastern Europe	MNS 12 - September 2004
Lemon balm leaf PE	Western Europe	MNS 7 - June 2003
Licorice root PE	China	MNS 3 - June 2002
Licorice root PE	Japan	MNS 1 - September 2001
Maca hypocotyl PE	Peru	MNS 17 - December 2005
Maritime pine bark	Western Europe	MNS 19- June 2006
Maté leaf PE	Western Europe	MNS 8 - September 2003
Meadowsweet herb	Eastern Europe	MNS 13 - December 2004
Milk thistle fruit PE	Eastern Europe	MNS 1: September 2001 / MNS 7: June 2003
Neem leaf PE	India	MNS 7 - June 2003
Nettle root PE	Western Europe	MNS 4 - September 2002
Olive leaf PE	Western Europe	MNS 11 - June 2004
Opium poppy latex	India	MNS 18 - March 2006
Parmelia lichen extract	India / Nepal	MNS 20 - September 2006
Peony root	Japan	MNS 2 - March 2002
Pepper fruit PE	India	MNS 13 - December 2004
Peppermint leaf Essent Oil	North America	MNS 11 - June 2004
Pomegranate fruit PE	Western Europe	MNS 14 - March 2005
Psyllium husk	India	MNS 10 - March 2004
Pygeum bark	Africa	MNS 19 - June 2006
Red clover herb PE	North America	MNS 6 - March 2003
Red poppy extract	Western Europe	MNS 18 - March 2006
Red poppy petals	Africa	MNS 18 - March 2006
Reishi mushroom PE	China	MNS 5 - December 2002
Rhatany root FE	North America	MNS 14 - March 2005
Rooibos leaf PE	Western Europe	MNS 15 - June 2005
Rosemary leaf Essent Oil	Africa	MNS 10 - March 2004
Rosemary leaf PE	North America	MNS 1 - September 2001

Safed musli root	India	MNS 17 - December 2005
Sage leaf	Eastern Europe	MNS 8 - September 2003
Sandalwood heart wood	India	MNS 19 - June 2006
Sargassum thallus	China	MNS 20 - September 2006
Saw palmetto fruit SE	North America	MNS 3 - June 2002
Schisandra fruit PE	China	MNS 6 - March 2003
Sea buckthorn fruit PE	China	MNS 7 - June 2003
Senna pod	Africa	MNS 6 - March 2003
Senna pod & leaf PE	India	MNS 8 - September 2003
Slippery elm bark	North America	MNS 19 - June 2006
Spearmint leaf	Africa	MNS 11 - June 2004
St. John's Wort herb PE	Western Europe	MNS 10 - March 2004
Stinging nettle root	Eastern Europe	MNS 15 - June 2005
Sweet wormwood herb EO	Eastern Europe	MNS 14 - March 2005
Sweet wormwood leaf PE	China	MNS 14 - March 2005
Tribulus fruit PE	India / China	MNS 2: March 2002 / MNS 17: December 2005
Tribulus root PE	Eastern Europe	MNS 6 - March 2003
Usnea lichen extract	Western Europe	MNS 20 - September 2006
Uva ursi leaf PE	Eastern Europe	MNS 2 - March 2002
Valerian root	Eastern Europe	MNS 3 - June 2002
Valerian root PE	Eastern Europe	MNS 4 - September 2002
White tea leaf PE	China	MNS 8 - September 2003
Wild cherry bark FE	North America	MNS 13 - December 2004
Wild yam root PE	North America	MNS 7 - June 2003
Willow bark	Eastern Europe	MNS 19 - June 2006
Willow bark PE	Western Europe	MNS 5 - December 2002
Yarrow herb Essent Oil	Eastern Europe	MNS 11 - June 2004

MNS GLOBAL HERB TRADE ASSOCIATION DIRECTORY

MNS provides a global directory of herb trade associations, collectives, councils, and export promotion organizations that represent the growers, wild collectors, producers, and traders of botanical raw materials, extracts and oils, and other herbal products. To add your association contact details, or to update or correct the below-listed details, please contact ITC Consultant, Josef Brinckmann at: brink@sonic.net

AFRICA

Agribusiness in Sustainable Natural African Plant Products (ASNAPP), GHANA - M.B. (18) Kanda, Accra H/NO C 205/29, Mempeasem, East Legon, Accra, Mr. Dan Acquaye, TEL: +233 21 505-617, FAX: +233 21505-617, E-MAIL: asnappwest@yahoo.com / WEB: <http://www.asnapp.org/>

Assila Medicinal and Aromatic Plant – AL AMAL Association, MOROCCO - Mlle. EL BOUAANANI Malika, CELL: 072 69 84 26

Association féminine des herbes médicinales et aromatiques de Beni yider, MOROCCO - Commune rurale beni yider, Ben Kerrich, Tétouan, Morocco, TEL: 061.55.44.92

Association for African Medicinal Plants Standards (AAMPS), SOUTH AFRICA - Prof Kobus Eloff, Phytomedicine Programme, University of Pretoria, E-MAIL: kobus.eloff@up.ac.za or Denzil Phillips, CDE Associate Expert Herbs and Pharmaceuticals. E-MAIL: denzil@denzil.com
WEB: <http://www.aamps.net/>

Association Marocaine des Plantes Aromatiques et Médicinales (AMAPAM), MOROCCO - Mr. Mohamed Marzouk / cell: (+212)63 48 45 40 / E-MAIL: contact@nohafleur.com; Mr. Drissi Hassan / cell: (+212)67637176 E-MAIL: fidanature@menara.ma .

Association Marocaine pour le Développement des Plantes Aromatiques et Médicinales (ADEPAM), MOROCCO - ABOULKACEM Hassan or Mrs. ZRIRA Saadia / TEL: (+212)37.77.1745 / E-MAIL: s.zrira@iav.ac.ma, IAV Hassan II, DIA, BP. 6202, Rabat-Instituts.

Association pour les Plantes Aromatiques et Médicinales de la Reunion (APLAMEDOM), REUNION - 1, rue Emile Hugot, Batiment B, Parc Technologique de Saint-Denis 97490 Sainte Clotilde, TEL: 0262.90.7194 / E-MAIL: contact@aplamedom.com / WEB: <http://www.aplamedom.com>

Association Tunisienne des Plantes Médicinales, TUNISIA, Hammam Sousse, FAX: 71.783.928

Botanical Products Association of Ghana (BOTPAG), GHANA
WEB: <http://www.asnapp.org/partners/ghana.htm>

Devil's Claw Working Group, NAMIBIA - PO Box 23778, Windhoek, TEL: +061-220117, FAX: +061-232293, E-MAIL: criaawhk@iafrica.com.na / WEB: <http://www.criaasadc.org/devilsclaw.htm>

Egyptian Society for the Producers, Manufacturers and Exporters of Medicinal and Aromatic Plants (ESMAP), EGYPT - Dr. Farouk Elshobaki, 1 Elhefnawy St., Fatma Roshdi St., Elharam, Elgiza, TEL: +202 38 69 898, FAX: +202 38 41 120, Mobile: 012 / 3101839, E-MAIL drfarouk@elshobaki.com / WEB: <http://www.esmap.org.eg/>

Egyptian Spices and Herb Export Development Association (ESHEDA), EGYPT -

Herb Sellers Association of Nigeria, NIGERIA - Mrs. Quincy Ayodele

Hoodia Growers Association of Namibia (HOGAN), NAMIBIA, Windhoek - Dougal Basingwaigthe (Chairperson), Charlie Hartung (vice Chairperson),

Phyto Trade Africa - The Southern African Natural Products Trade Association (SANPTA), ZIMBABWE - PO Box BE 385, Belvedere, Harare, TEL: +263-91-264-107, FAX: +263-4-723-037

E-MAIL: info@phytotradeafrica.com / WEB: <http://www.sanprota.com/>

Regional Medicinal & Herbal Plants Network (MHPN) of the Association of Agricultural Research Institutions in the Near East and North Africa (AARINENA), EGYPT - Dr. M.S.A. Safwat, Tel: 02/5250310, Fax: 02/6329253, Mobile: 012/3236751
E-MAIL: Focalpoint_mhpaarinena@yahoo.com

Société Marocaine des Plantes Aromatiques et Médicinales (SOMAPAM) : Pr. Ismaili Alaoui My Mustapha/ TEL: (+212)37776859/ E-MAIL: m.ismaili@jav.ac.ma or Pr. EL Ghafari Houssin/ E-MAIL: elrhaffari@yahoo.fr

Uganda Commercial Aloe Vera Farmers' Association, UGANDA - Mr. Ali Ssesanga, Plot 6 Rashid Khamisi Road, P.O. Box 6179 Kampala, Uganda, TEL: 041 345737 / 077 2 696702, E-MAIL: ssesangaali@yahoo.com

Union of Producers and Exporters of Horticultural Crops (UPEHC), EGYPT - Ministry of Agriculture Building, Dokky, Giza, TEL: +20 (2) 337-2402 760-0986, FAX: +20 (2) 749-3471
E-MAIL: mail@upehc.org.eg / WEB: <http://www.upehc.org.eg/>

AUSTRALIA

Australian Ginseng Growers Association (AGGA), P.O. Box 250, GEMBROOK, VIC 3783 AUSTRALIA, TEL +61 3 5968 1321, FAX +61 3 5968 1119, E-MAIL: info@ginseng.org.au
WEB: <http://www.ginseng.org.au/>

Australian Tea Tree Industry Association (ATTIA), PO Box 20, Tweed Heads NSW 2485, Australia, TEL : +61 (02) 66742925, FAX: +61 (02) 66742475, E-mail: enquiries@teatree.org.au
WEB : <http://www.teatree.org.au/index.html>

The Australian Lavender Growers' Association Inc (TALGA), The Secretary TALGA Inc, PO Box 1296, Richmond North Victoria, 3121 Australia, E-MAIL: secretary@talga.com.au
WEB: <http://www.talga.com/>

BANGLADESH / BHUTAN / INDIA / NEPAL / SRI LANKA

Aromatic-Medicinal Plants Growers Association of India (APGAI), President Thakur Randhir Singh

Asian Medicinal Plants & Health Care Trust (AMPHCT), Sonamukhi Nagar, Sangaria Fanta, Salawas Road, Jodhpur - 342 005 Rajathan, India, TEL: 0091.291.2748488, FAX: 0091.291.5120509
E-MAIL: amptrust@yahoo.com

Business Promotion Council for Herbal Sector of the Bangladesh Export Promotion Bureau, Dhaka, 1215, Bangladesh, TEL: 880-2-9144821-3, FAX: 880-2-9119531
WEB: http://www.epb.gov.bd/herbal_plants.htm

Federation of Indian Herbal Industry (FIHI), New No 41, Circular Road, United India Colony, Kodambakkam, Chennai - 600 024. Tamil Nadu, INDIA, TEL: 91-44-24803291 / 24818877 / FAX: 91-44-24724427 / E-MAIL: fihi@fihionline.com / bkurup@fihionline.com
WEB: <http://www.fihionline.com/aboutus.htm>

Herbal Farmers Association, Guntakal, Hanumesh Nagar, 20/1483, Guntakal, Andhra Pradesh, India, 515 801

Herbs & Herbal Export Promotion Association of India (HHEPAI) of the Indo Overseas Chamber of Commerce & Industry (IOCCI), 609, Chetak Centre, 12/2 RNT, Marg, Indore 452 001 INDIA, TEL: +91-731-2435003-4, 2526840-1, FAX: +91-731-2435003, 2524111 / E-MAIL: info@iocci.org
WEB: <http://www.iocci.org/>

Herbs & NTFP Coordination Committee of the **Asia Network for Sustainable Agriculture and Bioresources (ANSAB)**, Mr. Bishma P. Subedi, P.O. Box 11035, Kathmandu, Nepal, TEL: (977-01)-4497547/4478412, FAX:(977-01)-4476586 / E-MAIL: ansab@ansab.org
WEB: <http://www.ansab.org/index.htm>

Indian Society for Spices, IISR, Kozhikode - 673 012, Kerala, India / WEB: <http://www.spicesociety.org/>

Malabar Herbs & Musli Growers Society (Regd), Abraham Kurian, Treasurer, T.C.4/1082, Kripa Bhavan, R.P.Lane, A-7, Kawadiar.P.O, Trivandrum Dist; Kerala. Pincode: 695003, TEL: +91.471.5538863, +91.471.2437185, MOBILE: +91.989.5187185, FAX: +91.471.2316314
E-MAIL: abr_bincy@hotmail.com / WEB: <http://www.mhmgs.com/>

Medicinal and Aromatic Plants Program in Asia (MAPPA), Madhav Karki, Ph.D., IDRC/SARO, 208 Jor Bagh Rd, New Delhi, 110 003, India, TEL. (91-11) 24619411 ext. 104 / FAX. (91-11) 24622707
E-MAIL: mappa@idrc.org.in / WEB: http://web.idrc.ca/en/ev-19908-201-1-DO_TOPIC.html

National Medicinal Plants Board (NMPB), Government of India Department of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homoeopathy / WEB: <http://nmpb.nic.in/index.htm>

Nepal Herbs and Herbal Products Association (NEHHPA), Contact: Bhaweshwor Das, general secretary, GPO Box No 8941, Dhumbarahi, Kathmandu, Nepal, TEL: 977-1-428773, 4437827, FAX: 977-1-4437827, E-MAIL: info@nepalherbs.org / WEB: <http://www.nepalherbs.org/>

Pharmaceuticals Export Promotion Council (Ministry of Commerce, Govt. of India), H.O.: 101, Aditya Trade Centre, Ameerpret, Hyderabad - 500038, India, TEL: 040-23735462 / 23735466 / FAX: 91.40.23735464 / E-MAIL: info@pharmexcil.com / WEB: <http://www.pharmexcil.com>

Samagra Adivasi Medicinal Plants Development Association (SAMPDA) D.N.K. Colony Kondagaon - 494226, Baster (Chhattisgarh), India, TEL: (07786) 242506, FAX: (07786) 242980
E-MAIL: info@sampda.org / WEB: <http://www.sampda.org/>

Shellac and Forest Products Export Promotion Council (SHEFEXIL), International Trade Facilitation Centre, 1/1 Wood Street, 2nd Floor, Kolkata - 700 016, India, WEB: <http://www.shellacepc.com>

Spice & Food Stuff Exporters Association of India (SFEAI), 106, Swasti House, 1st Floor, 70 Kazi Sayed Street, Mumbai 400 003, India, E-MAIL: sfea@mtnl.net.in or kkcdipak@bom3.vsnl.net.in
WEB: <http://www.sfeaindia.net/>

Spices Board of India (SBI), Government of India Ministry of Commerce
WEB: <http://www.indianspices.com/>

Tuticorin Senna Exporters Association (TSEA), P.S.S. Ramachandran, President. Tuticorin, Tamil Nadu, India.

CANADA

Associated Ginseng Growers of British Columbia (AGGBC), Box 241, Vernon, B.C. V1T 6M2 Canada, TEL: (250) 545-4737, FAX: (250) 545-0479, E-MAIL: info@bcginsenggrowers.com
WEB: <http://www.bcginsenggrowers.com/>

British Columbia Herb Growers Association (BCHGA), C/O 33511 Kinsale Place, Abbotsford, B.C., Canada V2S 8B2, Tel/Fax: 604.504.5990, E-mail: info@bcherbgrowers.com
WEB: <http://www.bcherbgrowers.com/>

British Columbia Sea Buckthorn Growers Association, Box 471, Vernon, British Columbia V1T 6M4 Canada TEL: 250.542.1816, E-MAIL: panaxgas@junction.net
WEB: <http://www.hippophae.com/membership.htm>

Canadian Herb, Spice and Natural Health Products Coalition, c/o Saskatchewan Herb and Spice Association (SHSA), Box 19 Phippen, Saskatchewan, TEL: 306.694.4622, FAX: 306.694.2182
E-MAIL: shsa@imagewireless.ca

Canadian Spice Association (CSA), 885 Don Mills Road, Suite 301, Don Mills, Ontario M3C 1V9, E-MAIL: info@canadianspiceassociation.com / WEB: <http://www.canadianspiceassociation.com/>

Filière des plantes médicinales biologiques du Québec, C.P. 43, Magog (Québec) J1X 3W7 Canada, TEL: 819.847.2676, FAX: 819.847.1862, E-MAIL: fpmq@plantesmedicinales.qc.ca
WEB: <http://www.plantesmedicinales.qc.ca/index.html>

Medicinal & Aromatic Plants Association of Manitoba, PO Box 20024, Selkirk, Manitoba R1A 1S0 Canada, TEL: (204) 766-2669, FAX: (204) 482-8667

National Herb and Spice Coalition (NHSC), c/o SHSA, Box 18 Phippen, Saskatchewan. S0K 3E0 Canada TEL: 306-694-4622, FAX: 306-694-2182, E-MAIL: shsa@imagewireless.ca
WEB: <http://www.nationalherbspice.com/>

Northern Alberta Herb Growers, 8716 - 112 Street, Fort Sask., AB T8L 2S8 Canada TEL: (780) 997-4372 / FAX: (780) 998-0078 / WEB: <http://www.nabherb.com/content/home.shtml>

Ontario Ginseng Growers Association, 191 Queensway West, Unit 2, Simcoe, Ontario N3Y 2MB Canada, TEL: (519) 426-7046 / FAX: (519) 426-9087 / E-MAIL: admin@ginsenggrowers.com
WEB: <http://www.qinsenggrowers.com/>

Ontario Herb Growers and Marketers Initiative E-mail info@OntarioHerbs.com
WEB: <http://www.ontarioherbs.com/>

Saskatchewan Herb and Spice Association (SHSA), Box 19 Phippen, Sask. S0K 3E0 Canada
E-MAIL: lonewolf@sasktel.net / WEB: <http://www.saskherbspice.org/>

Quebec Seabuckthorn Growers' Association

Western Canadian Organic Herb and Spice Association, PO Box 16, Opal, Alberta T0A 2R0 Canada, TEL: (780) 909-1634, FAX: (780) 942-3992 / E-mail: wcdnherb@telusplanet.net

CARIBBEAN ISLAND NATIONS

Caribbean Herbal Business Association (CHBA), 3 Herbert Street, St. Clair, Port of Spain, Trinidad, West Indies, TEL: (868) 628-4403 / FAX: (868) 628-4562 / WEB: <http://www.caribbeanherbs.org/>

Jamaican Herbal Business Association (JHBA), a local chapter of the Caribbean Herbal Business Association, Dr. Diane Robertson, President.

CHINA

China Chamber of Commerce of Medicines & Health Products Importers & Exporters (MHPIE)
WEB: <http://www.mhpie.com/english/index.aspx>

International Seabuckthorn Association, Mr. Lu Shunguang, E-MAIL: henry@icrts.org
WEB: <http://www.icrts.org/index.htm>

Modernized Chinese Medicine International Association, Hong Kong G.P.O. Box 5301, TEL: 2492-2713, FAX: 2906-9330, E-MAIL: mcmia@mcmia.org / WEB: <http://www.mcmia.org/>

EUROPE

Albanian Spice and Herbal Trade Association (ASHTA), ALBANIA - Contact details not available

Asociación Catalana de Productores de Plantas Aromáticas y Medicinales (ACPPAM), SPAIN - Cataluña / E-MAIL: acppam@ctfc.udl.es

Asociación Española de Fabricantes de Preparados Alimenticios Especiales, Dietéticos y Plantas Medicinales (AFEPADI), SPAIN - C/ Aragón, 208-210 Atico 4^a 08011 - Barcelona, TEL: 93.454.87.25, FAX: 93.451.31.55, E-MAIL: afepadi@afepadi.org / WEB: <http://www.afepadi.org/>

Association for Medicinal and Aromatic Plants of Southeast European Countries (AMAPSEEC), SERBIA AND MONTENEGRO - Tadeuša Koščuška 1, 11000 Belgrade TEL: (+38111) 3031-653, FAX: (+38111) 3031-649, E-MAIL: office@amapseec.org / WEB: <http://www.amapseec.org/>

Association of Delegates of the Professional Organizations of Producers and Collectors of Medicinal and Aromatic Plants of the EEC, FRANCE - 6 bd Marechal-Joffre, F-91490 Milly-la-Forêt

Association of Medicinal Plants and Wild Forest Products of Bosnia and Herzegovina, BOSNIA AND HERZEGOVINA - Foreign Trade Chamber of Bosnia and Herzegovina, Department of Branch Associations, Branislava Đurđeva 10, BIH-71000 Sarajevo / TEL: +387.33.202.968, FAX: +387.33.214.292

British Herb Trade Association (BHTA), UNITED KINGDOM - 133 Eastgate, Louth, Lincolnshire, LN11 9QG / TEL: 01507 602427, E-MAIL: tim.mudge@pvqa.co.uk / WEB: <http://www.bhta.org.uk/>

Bulgarian Association of Herb and Mushroom Gatherers, BULGARIA - Dobroslavtzi, Contact: Bioprogamme Ltd: <http://bioprogramme.net/web/>

Bulgarian National Association Essential Oils, Perfumery & Cosmetics (BNAEOPC), BULGARIA - 93 Maritza Blvd., Plovdiv 4003 / TEL/FAX: +359 32 96 78 35; +359 32 96 78 34 / E-MAIL: office@bnaeopc.com / WEB: <http://www.bnaeopc.com/>

Erzeugerring für Heil- & Gewürzpflanzen in Bayern e.V., GERMANY - Tal 35, 80331 München / Contact: Herr Hans Möser, TEL: +49 089-29006316 / FAX: +49 089-29006320 / E-MAIL: hans.mooser@lkip.bayern.de / WEB: <http://www.kraeuteranbau.de/>

European Confederation of Distributors, Producers and Importers of Medicinal Plants, FRANCE - 23 Rue du Peintre Lebrun, F-78000 Versailles

European Herb Growers Association (EHGA), THE NETHERLANDS - Clakenweg 132, 8081 LZ Elburg / FAX: +31 (0)525 680 851 / E-MAIL: ottens.bart@hetnet.nl / WEB: <http://www.europam.net/index.htm>

European Herbal Infusions Association (EHIA), GERMANY - Gotenstr. 21, 20097 Hamburg / TEL: ++49-40-23 60 16 14 / E-MAIL: info@ehia-online.org / WEB: www.ehia-online.org

European Spice Association (ESA), GERMANY - Reuterstrasse 151 53113 Bonn / TEL: +49 228 216 162 / FAX: +49 228 229 460 / E-MAIL: esa@verbaendebuero.de / WEB: <http://www.esa-spices.org/>

Federazione Italiana dei Produttori di Piante Officinali (FIPPO), ITALY - c/o Istituto Sperimentale per l'Assestamento Forestale e per l'Alpicoltura (ISAFSA), Piazza Nicolini, 6 38050 Villazzano di Trento / TEL: 0461.381141 / FAX: 0461.381131 / E-MAIL: fippo@isafa.it / WEB: <http://www.pianteofficinali.org/main/fippo.htm>

Gesellschaft der Freunde und Förderer des Sanddorns, GERMANY - Sanddorn e.V., Hasenheide 56, D - 10967 Berlin / TEL: +49-33438-14724, FAX: +49-33438-14720, E-MAIL: ralf.godeck@berlin.de / WEB : <http://www.sanddorn.net/>

Herba M Macadonian Association of Collectors, Producers and Processors of Medicinal and Aromatic Plants, Forest Products and Mushrooms, MACEDONIA - Mr. Viktor Kolovski, Skopje, Macedonia, E-MAIL: vkolovski@konimex.com.mk

International Council for Medicinal and Aromatic Plants (ICMAP), E-MAIL: info@icmap.org / WEB: <http://www.icmap.org/>

International Federation of Essential oils and Aroma Trades (IFEAT), UNITED KINGDOM - Gafta House, 6 Chapel Place, Rivington Street, London EC2A 3SH / TEL: +44 20 7729 5904, FAX: +44 20 7814 8383, E-MAIL: secretariat@ifeat.org / WEB: <http://www.ifeat.org/>

International Hop Growers Convention (IHGC), SLOVENIA - P.O. Box 51, SI-3310 Zalec / TEL: +386.3712.1618, E-MAIL: martin.pavlovic@quest.arnes.si / WEB: <http://www.hmelj-giz.si/ihgc/>

Italian branch organisation of herbal traders (FEI), ITALY - F.E.I. Federazione Erboristi Italiani 00153 Roma - P.zza G.G. Belli, 2 / TEL: 0655280704 - 065866409, E-mail: mailto:feiroma@tin.it WEB: <http://www.feierboristi.org/associazione.htm>

Italian association of farmers, harvesters, transformers, importers, exporters, wholesalers and agents of medicinal and aromatic plants and spices (Assoerbe), ITALY - Unione del Commercio, del Turismo e dei Servizi della Provincia di Mila, Corso Venezia, 47/49 - 2021 Milano (MM1 - Palestro) / TEL: +39.02.7750575 / FAX: +39.02.76005543 / WEB: <http://www.assoerbe.it/eng/>

Latvian Herb Growers Association, LATVIA - Raina Str.6-49 Kraslava LV-5601 / E-MAIL ivars@kraslava.apollo.lv

MAP Association of "ZLATNICA", Bihac, BOSNIA AND HERZEGOVINA - Pokoj bb, 77101 Bihac / TEL/FAX: +387.37.300.887 / E-MAIL: alma012@bih.net.ba

Medicinal Plant Association and Product Council, HUNGARY - Akos Mathe, Secretary, H-1118 Budapest, Meneši ut 44 / TEL: 361-185-1155; FAX: 361-237-1388

Office National Interprofessionnel de Plantes a Parfum Aromatiques et Medicinales (ONIPPAM), FRANCE - BP 8 - 04130 VOLX / TEL: 04 9279 3446 / FAX: 04 9279 3322 / E-MAIL: onippam@onippam.fr / WEB: <http://www.onippam.fr/>

Polski Komitet Zielarski (Polish Herbal Committee), POLAND - BIURO ZARZADU GLÓWNEGO PKZ 61-707 Poznan, ul. Libelta 27 / TEL. 61/665 95 40 Ext. #55, WEB: <http://www.pkz.pl>

Romanian Association of Medicinal & Aromatic Plants Growers & Manufacturers (RAMAPGM), ROMANIA - 176, Bd. G. Moroianu, Sacele, Brasov 2212 / TEL/FAX: +40 68 273 766 / EMAIL: dlazurca@deltanet.ro

The Association and Product Board for Herbs (GYSZT), HUNGARY - WEB: <http://www.kertnet.hu/HungarianHorticulture/qb/110fr.htm>

The Association For the International Promotion of Gums (AIPG), GERMANY - Secretariat at WGA Hamburg e.V. (HARZVEREIN), Gotenstraße 21 D-20097 Hamburg City Süd, TEL: +49 (0)40 23 60 16 13/15, FAX: +49 (0) 40 23 60 16 10, E-MAIL: aipg@wga-hh.de / WEB: <http://www.treegums.org/>

The Management Association and Product Board for Herbs, HUNGARY - Dr. Miklós GYARMATI (President), H-1118 Budapest, Meneši út 44 / TEL / FAX: (+36-1) 372-6200/6477 / WEB: <http://www.kertnet.hu/HungarianHorticulture/qb/111fr.htm>

Verein für Arznei- und Gewürzpflanzen, GERMANY - SALUPLANTA e.V., Prof.-Oberdorf-Siedlung 16 D-06406 Bernburg / FAX: +49 03471 640 332, E-MAIL: saluplanta@t-online.de / WEB: <http://www.saluplanta.de/>

WKF Wirtschaftsvereinigung Kräuter- und Fruchttetee e.V., GERMANY - Gotenstrasse 21
D-20097 Hamburg City Süd / TEL: +49.40.23.60.1619 / E-MAIL: info@wkf.de / WEB:
<http://www.wkf.de/>

SOUTH AMERICA

Asociación de Agroindustriales de Maca y Productos Andinos del Altiplano de Junín, Perú

Asociación Agroartesanal de Productores de plantas secas medicinales del Ecuador (AAPPSME),
Contact: Ing. Orlando Cadme or Srta. Oliva Chunchu, Ramon Pinto entre Diez de Agosto y Jose
Antonio Eguiguren / TEL/FAX: ++593 7 2 583 173 / E-MAIL: orlandocadme@latinmail.com

Asociación de Productores de Maca Ecológica, Luis Oswaldo Castillo Huerta, Presidente, Jr. San
Martin N° 588, Junín, Perú, TEL: +51-64-34-4060 / E-MAIL: notariope@yahoo.com

Carabotija Association of Producers of Medicinal Plants, Contact: Ms. María Resfa Guatemal, No.
1 Barrio Carabotija, Olmedo, Cayambe-Ecuador, TEL: ++593.2.2115064 / 2362240
E-MAIL: jenchala@yahoo.com

JAMBI KIWA Association of Chimborazo Producers of Medicinal Plants, Km 1.5 Santa Cruz,
Yaruqui parish, Riobamba-Ecuador, FAX: ++593 3 2960678 / 2951026 / E-MAIL: jambikiwa@ch.pro.ec
/ WEB: <http://www.jambikiwa.org/>

Nativa Trade Association for Natural Ingredients, COLUMBIA, Contact:
ingredientesnaturales@gmail.com

Peruvian Institute of Natural Products (Instituto Peruano de Productos Naturales), TEL: (511) 435-
9377 EXT: 281, E-Mail: informes@ippn.org.pe / WEB: <http://www.ippn.org.pe/ingles/main.htm>

UNITED STATES OF AMERICA

American Botanical Council (ABC), PO Box 144345, Austin, Texas 78714-4345 USA, TEL:
512.926.4900 | FAX: 512.926.2345 | E-MAIL: abc@herbalgram.org
WEB: <http://www.herbalgram.org/>

American Herbal Products Association (AHPA), 8484 Georgia Ave., Suite 370, Silver Spring,
Maryland 20910 USA, TEL: 301.588.1171, FAX: 301.588.1174, E-MAIL: ahpa@ahpa.org
WEB: <http://www.ahpa.org/>

American Spice Trade Association (ASTA), 2025 M Street, NW, Suite 800, Washington, DC 20036
USA, TEL: 202-367-1127, E-MAIL: info@astaspice.org / WEB: <http://www.astaspice.org/>

'Awa (Kava) Development Council, PO Box 26344, Honolulu, HI 96825, TEL: 808.256.5605, FAX:
808.395.3772 / WEB: <http://awadevelopment.org/>

Carolina Agri-Solutions Growers Association (CASGA), Conway, South Carolina, USA, President
Greg Hyman, TEL: 843-397-1502; E-MAIL: ghyman@sccoast.net

Great Plains Herb Growers Association (GPHGA), 908 W. 20th Terrace, PO Box 4422, Lawrence,
Kansas 66046 USA, TEL: 785-841-9241, FAX: 785-841-4975, E-MAIL: herbgrowers@sunflower.com
WEB: <http://www.kansaruralcenter.org/greatplains.htm>

Herbalists Without Borders (HWB), 153 South Allen Street, State College, Pennsylvania 16801, E-
MAIL: info@herbalistswithoutborders.org / WEB: <http://www.herbalistswithoutborders.org>

Hop Growers of America (HGA), PO Box 9218 Yakima, Washington 98909: <http://www.usahops.org>

Hop Growers of Washington (HWG), P.O. Box 1207, Moxee, WA 98936 USA, TEL: 609.453-4749 /
FAX: 509.457.8581 / E-MAIL: ann@wahops.org

International Aloe Science Council (IASC), 415 East Airport Freeway Suite 365, Irving, Texas 75062 USA, TEL: (972) 258-8772, E-Mail: iasc@airmail.net / WEB: <http://www.iasc.org/iasc.html>

New Mexico Herb Growers Association (NMHGA), Albuquerque, New Mexico, USA, Contact: Charles Martin, 505.852.4241, E-MAIL cmartin@nmsu.edu

North Carolina Herb Association (NCHA), 455 Research Drive, Fletcher, North Carolina 28732 USA. TEL: 828-684-3562, E-MAIL: jeanine_davis@ncsu.edu / WEB: <http://www.ncherbs.net/ncha/>

Northwest Ginseng Growers Association (NGGA), 4820 NE 306th Circle, La Center, Washington 98629 USA / WEB: <http://www.nwginseng.org/home.html>

Roots of Appalachia Growers Association (RAGA), 33560 Beech Grove Road, Rutland, Ohio 45775, E-MAIL: elise@ruralaction.org / WEB: <http://www.rootsofappalachia.org/index.htm>

Sequim Lavender Growers Association (SLGA), 55 Parrish Road, Sequim, Washington 98382 USA, WEB: <http://www.lavendergrowers.org/>

West Virginia Herb Association (WVHA), 1289 Smoke Camp Road, Weston, West Virginia 26452 USA, TEL: 304.269.6416 WEB: <http://www.wvherb.org/>

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