

# MEDICINAL PLANTS AND EXTRACTS

MARKET NEWS SERVICE (MNS)  
QUARTERLY EDITION



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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.

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**Coverage:** Issue No. 41 includes six regional reviews:

1. **AFRICA:** Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sahrawi Arab Democratic Republic, São Tomé and Príncipe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Swaziland, Tanzania, Togo, Tunisia, Uganda, Zambia, and Zimbabwe.
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5. **NORTH AMERICA:** Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Canada, Costa Rica, Cuba, Dominica, Dominican Republic, El Salvador, Grenada, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, and the United States of America.
6. **SOUTH AMERICA:** Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, and Venezuela.

The regional reviews cover the six main producing regions of the world. Information on Oceanic countries will be covered from time to time in a special features section of the bulletin.

**Scope:** Each regional section includes news on

- Demand and supply trends including industry news from the major producers in each region
- 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 grade or quality from the specified origin. The level of marker compounds (for chemical standardization of extracts) referred to in quotes is those commonly found in the industry. They do not imply any sort of "trading standard".

In the pricing tables, if a botanical comes to market from both cultivation and wild collection, the order used (Cult/Wild or Wild/Cult) is based on the predominant method of harvest.

*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 or specified quality grades (e.g. PhEur-grade or USP-grade) 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

**Issue No. 41** includes six regional reviews each with a special focus on the 2010 export trade value and volume of botanical ingredients from entire region followed by more detailed trade data for each region's leading exporting country. The Introduction section provides the estimated 2010 total world export figures and an explanation of the inclusion criteria used for selected botanical ingredients that are used as components of herbal medicinal products, herbal dietary supplement products, functional and health food products, natural cosmetic products, and other natural health products.

**Trade Specifications:** Each edition contains trade specifications for medicinal plants and/or their extractives from each of six covered regions. In this issue you will find specifications from each of the six regions for botanical ingredients that are used as components of herbal medicinal products and/or natural health products: **Moringa seed oil** (Africa; Kenya), **Lotus seed** (China), **Wild pansy herb** (Europe; Netherlands, France, Poland), **Curry leaf** (India), **Saw palmetto fruit extract** (North America; USA), and **Stevia leaf** (South America; Brazil and Paraguay).

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

**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.

**Links to Sustainability Standards and Guidance Documents Relevant to the Global Trade of Medicinal and Aromatic Plants and Extracts:** Each edition includes a regularly updated section providing links to further information on the various sustainability standards being implemented at medicinal, culinary and aromatic plant harvest sites, the standards setting organizations and certification or verification organizations.

Rates of Exchange: 08 November 2011

CURRENCY	CODE	UNITS 1 / USD	UNITS 1 / EUR
British Pound	GBP	0.6213	0.8594
Canadian Dollar	CAD	1.0091	1.3958
Chinese Yuan Renminbi	CNY	6.3478	8.7809
Egyptian Pound	EGP	5.9735	8.2631
EURO	EUR	0.7229	1.0000
Hong Kong Dollar	HKD	7.7688	10.7466
Indian Rupee	INR	49.48	68.4457
Japanese Yen	JPY	77.725	107.517
Malaysian Ringgit	MYR	3.1275	4.3263
Mexican Peso	MXN	13.3425	18.4566
Moroccan Dirham	MAD	8.1295	11.2455
Nepalese Rupee	NPR	78.2	108.1741
Peruvian Nuevo Sol	PEN	2.704	3.7404
Russian Ruble	RUB	30.2273	41.8134
South African Rand	ZAR	7.8321	10.8341
Swiss Franc	CHF	0.8951	1.2381
Taiwan Dollar	TWD	30.094	41.629
United States Dollar	USD	1.0000	1.3833

Source: Yahoo!® Finance Currency Converter

## **Some Useful Terminology**

AEZ:	Agri Export Zones
API:	Ayurvedic Pharmacopoeia of India
AYUSH:	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy
BP:	British Pharmacopoeia
CBD:	Convention on Biodiversity
CCC:	Standard Classification of Commodities of the Republic of China
CCCCS:	Commodity Classification for China Customs Statistics
cfu/g:	Colony-forming units per gram
C&F:	Cost & Freight; means the price includes cost and freight charges
CFR:	Seller has the same responsibilities as when shipping FOB, but shipping costs are prepaid by the seller
CIF:	Cost Insurance Freight; means the price includes cost, freight and insurance
CITES:	Convention on International Trade in Endangered Species of Wild Flora & Fauna
CL:	Container load
C/S:	Cut and sifted
COMTRADE:	Commodity Trade Statistics Database
COSEWIC:	Committee on the Status of Endangered Wildlife in Canada
EDQM:	European Directorate for the Quality of Medicines
EMEA:	European Medicines Agency
Essential Oils:	Odorous product, usually of complex composition, obtained from a botanically defined plant raw material by steam distillation, dry distillation, or a suitable mechanical process without heating
Extracts:	Preparations of liquid (liquid extracts and tinctures), semi-solid (soft extracts and oleoresins) or solid (dry extracts) consistency obtained from Herbal Drugs or animal matter prepared by suitable methods using ethanol or other suitable solvents
EXW:	Ex works - Buyer arranges for pick up of goods at the seller's location. Seller is responsible for packing, 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
FCL:	Full container load
FLO:	Fairtrade Labelling Organizations International
FOB:	Free On Board - means that the price only includes the cost of the item. Seller arranges for transport of the goods, preparing goods for shipment, and loading the goods onto the vessel
FOR & FOT:	Free On Rail or Free on Truck; both refer to goods being carried by rail and should only be used when the goods are carried by rail. The risk of loss or damage is transferred when the goods are loaded onto the rail.
FSC:	Forest Stewardship Council
FTA:	Free Trade Agreement
FTC:	Fair Trade Certified
FWC:	FairWild Certified
FWF:	FairWild Foundation
GACP:	Good Agricultural and Collection Practice

GAP:	Good Agricultural Practice
GMP:	Good Manufacturing Practice
ha:	Hectare
Herbal Drug Preparations:	Obtained by subjecting Herbal Drugs to treatments such as extraction, distillation, expression, fractionation, purification, concentration or fermentation. These include comminuted or powdered herbal drugs, tinctures, extracts, essential oils, expressed juices and processed exudates
Herbal Drugs:	Whole, fragmented, or cut plants, parts of plants, algae, fungi or lichen, in an unprocessed state, usually in dried form but sometimes fresh. Certain exudates that have not been subjected to a specific treatment are also considered to be herbal drugs
Herbal Teas:	Consist exclusive of one or more Herbal Drugs intended for oral aqueous preparations by means of decoction, infusion or maceration; usually supplied in bulk form or in sachets
HPLC:	High Performance Liquid Chromatography
HPTLC:	High Performance Thin Layer Chromatography
HS Code:	Harmonized System Code
I/S:	In-store meaning the herb (e.g. flaxseed) is in the grain elevator
ITC (HS)	Indian Trade Classification Harmonized System
ITC	International Trade Centre / UNCTAD / WTO
MAP:	Medicinal and Aromatic Plants
NLT:	Not less than
NHP:	Natural Health Product (Canada)
NAICS:	North American Industry Classification System
NESOI:	Not Elsewhere Specified Or Included
NMT:	Not more than
NOP:	National Organic Program (USDA)
NTFP:	Non Timber Forest Products
OTC:	Over the Counter medicines: Medicines sold without a prescription
PE:	Powdered Extract
PhEur:	European Pharmacopoeia
PhFr:	Pharmacopée Française
SE:	Soft Extract
TBC:	Tea bag cut
TCM:	Traditional Chinese Medicine
THM:	Traditional Herbal Medicine
THMP:	Traditional Herbal Medicinal Product
TLC:	Thin Layer Chromatography
UPI:	Unani Pharmacopoeia of India
USD:	United States Dollar
USDA:	United States Department of Agriculture
USP:	United States Pharmacopeia
VAT:	Value Added Tax

## INTRODUCTION

### **2010 GLOBAL EXPORT TRADE VALUE OF BOTANICAL AND NATURAL INGREDIENTS ESTIMATED AT OVER USD \$32.7 BILLION CHINA AND INDIA COMBINED ACCOUNT FOR ABOUT 20% OF TOTAL EXPORT TRADE**

The reported size of the global market depends on the inclusion and exclusion criteria selected by the market analyst. Export trade analysis is carried out using Harmonized System Tariff Codes (HS Codes) as entered in various national or international trade databases.

**Table 1** provides the inclusion criterion that was used for this analysis of the 2010 export trade value (FOB Customs Value in USD) and volume (kg) of botanical raw materials (medicinal, colorant, culinary and aromatic plants), herbal extracts, essential oils and extracted oleoresins, exudates (balsams, natural gums, resins, saps), and selected fatty oils, fungi, seaweeds and algae.

**Table 2** provides the estimated total 2010 botanical export value and volume with some important limitations to be aware of:

- Some countries do not report their trade statistics for each and every year. While we have 2010 trade data for most countries (including all of the major exporters) there are a number of botanical exporters that have not reported in 2010. Most notably missing from our 2010 total are botanical exports from the Republic of Namibia (exporter of devil's claw and hoodia), Republic of the Sudan (exporter of gum arabic, hibiscus flower, and senna leaf and pod), Republic of Uzbekistan (exporter of liquorice root), and Socialist Republic of Viet Nam (exporter of cassia bark, cinnamon bark, green tea leaf, and star anise fruit), among others. Thus, the estimated world total in this report is an "at least" number due to the absence of data from a number of relatively minor exporters.
- Imports reported by one country do not necessarily coincide with exports reported by its trading partner. Differences are due to various factors including valuation (imports CIF, exports FOB), differences in inclusions/ exclusions of particular commodities, timing etc.
- It is clear to this analyst that incorrect HS Codes are frequently used. This is evidenced, for example, in cases where a developing country shows significant exports of a botanical that is not produced in that country and/or is clearly not a re-export. One solution to this confounding factor is to include the widest range of general HS Codes relevant to the natural products trade. Thus, even if the wrong code has been assigned in some cases, the analysis should still capture the overall trade value and volume of botanical ingredients.
- Export trade data includes re-export trade data. For example, some European countries are major importers that value-add (cleaning, cutting, sifting, testing) and then re-export.
- In cases where the United Nations Commodity Trade Statistics Database (COMTRADE) provided an export trade value but no corresponding volume, estimates were arrived at by referring to national trade databases for the specific country (where possible). In 2010, some countries did not report trade volumes for several botanicals, namely the State of Israel and United Arab Emirates. Furthermore, the trade databases of some countries corresponds to an agricultural year (for example India's TRADESTAT uses April through March) while COMTRADE follows the calendar year (January through December).
- Non-exhaustive: Due to insufficient specificity of some general code groupings, we did not include some important botanical ingredients that would appear within HS Code Chapters 07, 08 or 11, respectively, for example bilberry fruit dried (0813.40), fresh (0810.40) or frozen (0811.90), Chinese jujube date dried (0813.40) or fresh (0810.90), garlic bulb powder (0712.90), maca root (0714.90) and maca flour or powder (1106.20), mangosteen fruit (0804.50), and bitter or sweet orange peel (0814.00), among others.

The trade statistics databases that were consulted for this analysis included the trade statistics compiled by:

- United Nations Commodity Trade Statistics Database (COMTRADE);
- China Trade Data;
- Government of India, Ministry of Commerce & Industry, Export Import Data Bank Version 6.0 – TRADESTAT;
- United States Department of Agriculture (USDA) Foreign Agricultural Service (FAS) Global Agricultural Trade System (GATS);
- Canadian International Merchandise Trade Database (Statistics Canada)

Using these trade databases and the inclusion criteria of **Table 1**, the estimated 2010 botanicals export trade value amounted to over USD \$32.7 billion. This estimate is fairly consistent with the 2008 total that was provided in MNS #35 (June 2010) of \$31.2 billion. The world's two leading exporters in 2010 were the People's Republic of China with total export value of \$3,753,822,663 (about 11.5% of world total) and volume of 1,244,347,034 kg (about 10% of world total export volume). Using same criteria, the Republic of India ranking at #2 exported \$2,861,035,530 (about 8.7% of world total) with a corresponding volume of 1,161,141,948 kg (about 9.3% of world total export volume).

Other Asian countries ranking among the world's top-ten exporters in 2010 included Republic of Indonesia at #5 with an export value of \$1,785,864,921 (about 5.5% of world total) and export volume of 1,108,870,787 kg (about 8.9% of world total volume). The Democratic Socialist Republic of Sri Lanka ranked at #7 with \$1,607,099,637 export value and 377,925,301 kg export volume and the Republic of the Philippines ranked at #8 with \$1,431,599,269 export value and 1,395,896,572 kg export volume.

In MNS #41, in addition to the total global exports summarized in the following pages of this Introduction section, we provide additional export trade data for the largest producer and exporter of botanical ingredients in each of the six featured regions of world; **Africa** (Republic of Kenya), **eastern Asia** (People's Republic of China), **southern-, central- and western Asia** (Republic of India), **Europe** (Kingdom of the Netherlands), **North America** (United States of America), and **South America** (Federative Republic of Brazil).

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**Table 1:** Inclusion Criteria for Analysis of 2010 Botanical Ingredients Export Trade

HS Code Chapter	HS Codes included in the analysis	“Selected” examples of botanical and natural ingredients included within each general 4- or 6- digit HS Code group
09	0902	Tea leaf, black, green, or white ( <i>Camellia sinensis</i> )
	0903	Maté leaf ( <i>Ilex paraguariensis</i> )
	0904	Allspice fruit ( <i>Pimenta dioica</i> ), Capsicum fruit ( <i>Capsicum annuum</i> ; <i>C. frutescens</i> ), Long pepper fruit ( <i>Piper longum</i> ), Pepper fruit, black or white ( <i>Piper nigrum</i> )
	0905	Vanilla fruit ( <i>Vanilla planifolia</i> ; <i>V. tahitensis</i> )
	0906	Cassia bark and/or Cinnamon bark or flower ( <i>Cinnamomum burmannii</i> ; <i>C. cassia</i> ; <i>C. loureiroi</i> ; <i>C. tamala</i> ; <i>C. zeylanicum</i> )
	0907	Clove flower bud and stems ( <i>Syzygium aromaticum</i> )
	0908	Cardamom seed ( <i>Elettaria cardamomum</i> ), Grains of paradise seed ( <i>Aframomum melegueta</i> ), Indian cardamom seed ( <i>Amomum subulatum</i> ), Mace aril and Nutmeg kernel ( <i>Myristica fragrans</i> )
	0909	Anise fruit ( <i>Pimpinella anisum</i> ), Caraway fruit ( <i>Carum carvi</i> ), Coriander fruit ( <i>Coriandrum sativum</i> ), Cumin fruit ( <i>Cuminum cyminum</i> ), Fennel fruit ( <i>Foeniculum vulgare</i> ), Juniper fruit ( <i>Juniperus communis</i> ), Star anise fruit ( <i>Illicium verum</i> )
	0910	Ajowan fruit ( <i>Trachyspermum ammi</i> ), Bay leaf ( <i>Laurus nobilis</i> ), Cardamom husk ( <i>Elettaria cardamomum</i> ), Celery seed ( <i>Apium graveolens</i> ), Curry leaf ( <i>Murraya koenigii</i> ), Dill fruit ( <i>Anethum graveolens</i> ), Ethiopian pepper fruit ( <i>Xylopia aethiopica</i> ), Fenugreek seed ( <i>Trigonella foenum-graecum</i> ), Ginger rhizome ( <i>Zingiber officinale</i> ), Javanese turmeric rhizome ( <i>Curcuma xanthorrhiza</i> ), Mexican oregano leaf ( <i>Lippia graveolens</i> ), Peruvian pink pepper fruit ( <i>Schinus molle</i> ), Saffron style and stigma ( <i>Crocus sativus</i> ), Sumac fruit ( <i>Rhus spp.</i> ), Thyme herb ( <i>Thymus spp.</i> ), Turmeric rhizome ( <i>Curcuma longa</i> )
	1204	Flax seed, a.k.a. Linseed ( <i>Linum usitatissimum</i> )
12	1210	Hop strobile ( <i>Humulus lupulus</i> )
	1211	Astragalus root ( <i>Astragalus membranaceus</i> ), Basil leaf ( <i>Ocimum spp.</i> ), Belladonna leaf or root ( <i>Atropa belladonna</i> ), Cannabis flower ( <i>Cannabis sativa</i> ), Cat's claw bark ( <i>Uncaria tomentosa</i> ), Chamomile flower ( <i>Matricaria recutita</i> ), Coca leaf ( <i>Erythroxylum coca</i> ), Cordyceps fungus ( <i>Cordyceps sinensis</i> ), Cubeb fruit ( <i>Piper cubeba</i> ), Dandelion herb or root ( <i>Taraxacum officinale</i> ), Digitalis leaf ( <i>Digitalis purpurea</i> ), Dong quai root ( <i>Angelica sinensis</i> ), Echinacea herb and root ( <i>Echinacea spp.</i> ), Ephedra herb ( <i>Ephedra spp.</i> ), Galangal rhizome ( <i>Alpinia spp.</i> ), Gentian root ( <i>Gentiana spp.</i> ), Ginkgo leaf ( <i>Ginkgo biloba</i> ), Ginseng root ( <i>Panax spp.</i> ), Goldenseal root ( <i>Hydrastis canadensis</i> ), Guarana seed ( <i>Paullinia cupana</i> ), Hawthorn berry, flower and leaf ( <i>Crataegus spp.</i> ), Hibiscus flower ( <i>Hibiscus sabdariffa</i> ), Lavender flower ( <i>Lavandula spp.</i> ), Licorice root ( <i>Glycyrrhiza spp.</i> ), Lycium fruit ( <i>Lycium spp.</i> ), Marshmallow leaf or root ( <i>Althaea officinalis</i> ), Mint leaf ( <i>Mentha spp.</i> ), Nettle leaf or root ( <i>Urtica dioica</i> ), Opium poppy heads or straw ( <i>Papaver somniferum</i> ), Oregano leaf and flower ( <i>Origanum vulgare</i> ), Psyllium husk or seed ( <i>Plantago ovata</i> ), Pyrethrum flower ( <i>Chrysanthemum cinerariaefolium</i> ), Reishi mushroom ( <i>Ganoderma lucidum</i> ), Rhatany root ( <i>Krameria triandra</i> ), Rhubarb root ( <i>Rheum spp.</i> ), Rose hips ( <i>Rosa canina</i> ), Rosemary leaf ( <i>Rosmarinus officinalis</i> ), Sage leaf or root ( <i>Salvia spp.</i> ), St. John's wort herb ( <i>Hypericum perforatum</i> ), Sandalwood ( <i>Santalum album</i> ), Senna leaf or pod ( <i>Cassia spp.</i> ), Tonka seed ( <i>Dipteryx odorata</i> ), Valerian root ( <i>Valeriana officinalis</i> ), Witch hazel leaf or twigs ( <i>Hamamelis virginiana</i> ), Wormwood herb ( <i>Artemisia spp.</i> ), Yew bark or leaf ( <i>Taxus spp.</i> ), Yohimbe bark ( <i>Pausinystalia johimbe</i> ); and hundreds of other medicinal plants...
	121210	Locust (carob) bean or seed ( <i>Ceratonia siliqua</i> )
	121220	Black moss ( <i>Nostoc flagelliforme</i> ), Bladderwrack ( <i>Fucus vesiculosus</i> ), Dulse

<b>HS Code Chapter</b>	<b>HS Codes included in the analysis</b>	<b>“Selected” examples of botanical and natural ingredients included within each general 4- or 6- digit HS Code group</b>
		( <i>Palmaria palmata</i> ), Eucheuma whole plant ( <i>Eucheuma</i> spp.), Green laver ( <i>Enteromorpha</i> spp.), Hiziki ( <i>Hizikia fusiforme</i> ), Irish moss ( <i>Chondrus crispus</i> or <i>Mastocarpus stellatus</i> ), Kelp ( <i>Ascophyllum nodosum</i> , <i>Laminaria</i> spp. or <i>Macrocystis pyrifera</i> ), Kombu ( <i>Kjellmaniella gyrate</i> ), Red algae ( <i>Porphyra</i> spp.), Sargassum seaweed ( <i>Sargassum</i> spp.), Spirulina ( <i>Arthrospira</i> spp.), Wakame ( <i>Undaria pinnatifida</i> )
	121299	Apricot kernel ( <i>Prunus armeniaca</i> ), Carob (locust) bean flour, meal or powder or waste husk ( <i>Ceratonia siliqua</i> ), Chicory root unroasted ( <i>Cichorium intybus</i> ), Halawa root ( <i>Saponaria officinalis</i> ), Kokum flower ( <i>Garcinia indica</i> ), Konnyaku tuber ( <i>Amorphophallus konjac</i> ), Mahua flower ( <i>Madhuca indica</i> ), Rooibos herb ( <i>Aspalathus linearis</i> ), Sweet sorghum leaf ( <i>Sorghum vulgare</i> ), Sugar cane stem ( <i>Saccharum officinarum</i> ), Watermelon seed ( <i>Citrullus lanatus</i> )
13	130120	Gum arabic ( <i>Acacia senegal</i> ), Gum talha ( <i>Acacia seyal</i> )
	130190	Asafoetida oleo-gum-resin ( <i>Ferula foetida</i> ), Benzoin gum ( <i>Styrax</i> spp.), Brazilian copal gum ( <i>Hymenaea courbaril</i> ), Burgundy pitch resin ( <i>Picea abies</i> ), Canada balsam ( <i>Abies balsamea</i> ), Dammar gum ( <i>Agathis</i> spp., <i>Hopea</i> spp., or <i>Shorea</i> spp.), Cannabis resin ( <i>Cannabis sativa</i> ), Cashew gum ( <i>Anacardium occidentale</i> ), Copaiba balsam ( <i>Copaiba</i> spp.), Dragon’s blood resin ( <i>Croton</i> spp. or <i>Daemonorops</i> spp.), East African copal resin ( <i>Trachylobium verrucosum</i> ), Elemi gum ( <i>Canarium</i> spp.), Frankincense gum resin ( <i>Boswellia</i> spp.), Gamboge gum resin ( <i>Garcinia hanburyi</i> ), Guaiacum gum resin ( <i>Guaiacum</i> spp.), Gum ghatti ( <i>Anogeissus latifolia</i> ), Gum tragacanth ( <i>Astragalus gummifer</i> ), Indian gum arabic ( <i>Acacia nilotica</i> ), Karaya gum ( <i>Cochlospermum gossypium</i> , <i>Sterculia urens</i> or <i>S. villosa</i> ), Kauri gum ( <i>Agathis australis</i> ), Manila copal gum ( <i>Agathis dammara</i> ), Mastic gum ( <i>Pistacia lentiscus</i> var. <i>latifolius</i> ), Mesquite gum ( <i>Prosopis</i> spp.), Mexican scammony gum resin ( <i>Ipomoea orizabensis</i> ), Myrrh gum resin ( <i>Commiphora</i> spp.), Opopanax oleo-gum-resin ( <i>Opopanax chironium</i> ), Peru balsam and Tolu balsam ( <i>Myroxylon balsamum</i> ), Resin spurge latex ( <i>Euphorbia resinifera</i> ), Scammony resin ( <i>Convolvulus scammonia</i> ), Sweet gum ( <i>Liquidambar</i> spp.), Turpentine resin ( <i>Pinus palustris</i> )
	1302	Extracts of most all species of medicinal, culinary and aromatic plants (dried powdered, liquid, semi-solid, soft) and dried concentrated juices of medicinal plants (e.g. dried concentrate obtained from juice of Aloe leaf; Hibiscus flower juice concentrate; Indian kino bark inspissated juice), as well as plant mucilages and thickeners, pectic substances and vegetable saps including Agar-agar ( <i>Gelidium</i> spp. or <i>Gracilaria</i> spp.), Algal meal pure extract ( <i>Haematococcus pluvialis</i> ), Carrageenan refined hydrocolloid aqueous extract ( <i>Chondrus crispus</i> , <i>Eucheuma cottonii</i> or <i>E. spinosum</i> , <i>Gigartina</i> spp.), Furcellaria refined hydrocolloid ( <i>Furcellaria fastigiata</i> ), Guar gum refined ( <i>Cyamopsis tetragonoloba</i> ), Locust bean gum ( <i>Ceratonia siliqua</i> ), Pectin purified carbohydrate ( <i>Citrus</i> spp. or <i>Malus domestica</i> ), Podophyllum resin ( <i>Podophyllum peltatum</i> ), Quince seed mucilage ( <i>Cydonia oblonga</i> ), Urushi (Japan lacquer) resinous sap ( <i>Toxicodendron vernicifluum</i> )
14	140410	Raw vegetable materials of a kind used primarily in dyeing; Note: Many botanicals in this category have been moved to HS 1404.90.
	140490	Açaí pit ( <i>Euterpe oleracea</i> ), Alkanet root ( <i>Alkanna tinctoria</i> ), Amla fruit ( <i>Phyllanthus emblica</i> ), Annatto seed ( <i>Bixa orellana</i> ), Betel leaf ( <i>Piper betle</i> ), Canaigre root ( <i>Rumex hymenosepalus</i> ), Chebulic myrobalan fruit ( <i>Terminalia chebula</i> ), Coconut shell ( <i>Cocos nucifera</i> ), Dyer’s broom ( <i>Genista tinctoria</i> ), Eel grass ( <i>Zostera marina</i> ), Henna leaf ( <i>Lawsonia inermis</i> ), Indian katha heartwood extractive ( <i>Acacia catechu</i> ), Indian shot seed ( <i>Canna indica</i> ), Kashiwa oak leaf ( <i>Quercus dentata</i> ), Luffa cellular tissue of gourd ( <i>Luffa aegyptiaca</i> ), Madder root ( <i>Rubia tinctoria</i> ), Mediterranean fan palm ( <i>Chamaerops humilis</i> ), Mizugoke moss ( <i>Sphagnum</i> spp.), Precatory seed

<b>HS Code Chapter</b>	<b>HS Codes included in the analysis</b>	<b>“Selected” examples of botanical and natural ingredients included within each general 4- or 6- digit HS Code group</b>
		( <i>Abrus precatorius</i> ), Quebracho wood ( <i>Aspidosperma quebracho-blanco</i> ), Quillaja bark ( <i>Quillaja saponaria</i> ), Red sandalwood ( <i>Pterocarpus santalinus</i> ), Rock tripe lichen ( <i>Umbilicaria pustulata</i> ), Rudraksha seed ( <i>Elaeocarpus sphaericus</i> ), Safflower flower ( <i>Carthamus tinctorius</i> ), Soapberry seed ( <i>Sapindus</i> spp.), Soaproot bulb ( <i>Chlorogalum pomeridianum</i> ), Tendu leaf ( <i>Diospyros melanoxylon</i> ), Teri pod ( <i>Caesalpinia digyna</i> ), Wattle bark ( <i>Acacia mearnsii</i> )
<b>15</b>	151311	Coconut endosperm ( <i>Cocos nucifera</i> ) fatty oil - crude
	151319	Coconut endosperm ( <i>Cocos nucifera</i> ) fatty oil - refined
	151590	Allanblackia seed crude oil ( <i>Allanblackia</i> spp.), Arachis seed fatty oil ( <i>Arachis hypogaea</i> ), Argan seed fatty oil ( <i>Argania spinosa</i> ), Bayberry fruit wax ( <i>Morella cerifera</i> ), Borneo tallow nut oil ( <i>Shorea stenoptera</i> ), Brazil nut oil ( <i>Bertholletia excelsa</i> ), Carapa seed oil ( <i>Carapa guianensis</i> ), Cardamom seed fixed oil ( <i>Elettaria cardamomum</i> ), Chaulmoogra seed oil ( <i>Taraktogenos kurzli</i> ), Evening primrose oil ( <i>Oenothera biennis</i> ), Garlic bulb fixed oil ( <i>Allium sativum</i> ), Grapeseed oil ( <i>Vitis vinifera</i> ), Hemp seed fatty oil ( <i>Cannabis sativa</i> ), Inca peanut fatty oil ( <i>Plukenetia volubilis</i> ), Japan wax ( <i>Rhus succedanea</i> and <i>R. vernicifera</i> ), Jojoba seed fatty oil ( <i>Simmondsia chinensis</i> ), Kokum seed fixed oil ( <i>Garcinia indica</i> ), Korean pine seed oil ( <i>Pinus koraiensis</i> ), Macadamia nut fatty oil ( <i>Macadamia ternifolia</i> ), Mahua seed fixed oil ( <i>Madhuca longifolia</i> ), Neem seed fixed oil ( <i>Azadirachta indica</i> ), Niger seed fixed oil ( <i>Guizotia abyssinica</i> ), Nutmeg seed fatty oil ( <i>Myristica fragrans</i> ), Perilla seed oil ( <i>Perilla frutescens</i> ), Poppy seed oil ( <i>Papaver somniferum</i> ), Pumpkin seed oil ( <i>Cucurbita pepo</i> ), Purging nut fatty oil ( <i>Jatropha curcas</i> ), Shea nut butter ( <i>Butyrospermum parkii</i> ), Tamanu kernel oil ( <i>Calophyllum inophyllum</i> ), Tonka bean fatty oil ( <i>Dipteryx odorata</i> ), Tung seed fixed oil ( <i>Aleurites fordii</i> ), Turmeric rhizome fixed oil ( <i>Curcuma longa</i> )
<b>18</b>	1804	Cocoa seed ( <i>Theobroma cacao</i> ) butter, fat and oil
<b>21</b>	210120	Extracts, essences and concentrates of tea leaf ( <i>Camellia sinensis</i> ), jasmine flower ( <i>Jasminum officinale</i> ), or maté leaf ( <i>Ilex paraguariensis</i> )
<b>32</b>	3201	Chebulic myrobalan fruit extract ( <i>Terminalia chebula</i> ), Gambier leaf or twig extract ( <i>Uncaria gambir</i> ), Quebracho wood extract ( <i>Aspidosperma quebracho-blanco</i> ), Wattle bark extract ( <i>Acacia mearnsii</i> )
<b>33</b>	3301	Essential oils of medicinal and aromatic plants (terpeneless or not), including concretes and absolutes; resinoids; extracted oleoresins; concentrates of essential oils in fats, in fixed oils, in waxes or the like, obtained by enfleurage or maceration
<b>40</b>	400130	Balata gum ( <i>Manilkara bidentata</i> ), Chicle gum ( <i>Manilkara chicle</i> or <i>M. zapotilla</i> ), Chilte gum ( <i>Cnidoscolus elasticus</i> or <i>C. tepiquensis</i> ), Guayule gum ( <i>Parthenium argentatum</i> ), Gutta hang kang ( <i>Palaquium leiocarpum</i> or <i>P. oblongifolium</i> ), Gutta katiau ( <i>Palaquium ganua moteleyana</i> , or <i>Sideroxylon glabrescens</i> ), Gutta percha gum ( <i>Palaquium gutta</i> or <i>Payena</i> spp.), Jelutong gum ( <i>Dyera costulata</i> or <i>D. lowii</i> ), Leche caspi gum ( <i>Couma macrocarpa</i> or <i>C. utilis</i> ), Leche de vaca sap ( <i>Brosimum utile</i> , <i>Lacistema standleyi</i> , or <i>Poulsenia</i> spp.), Massaranduba balata gum ( <i>Manilkara huberi</i> ), Massaranduba chocolate gum ( <i>Manilkara solimoesensis</i> ), Niger gutta gum ( <i>Ficus platyphylla</i> ), Rosidinha gum ( <i>Micropholis</i> spp.), Tunu gum ( <i>Castilla fallax</i> ), Venezuelan chicle gum ( <i>Manilkara williamsii</i> )

**Table 2:** Value and Volume of 2010 Exports of Selected Botanical and Natural Ingredients (see Table 1) in order of predominance by reported FOB Customs Value (USD)

	Exporter	Total Value (USD)	Total Volume (kg)
	Estimated World Total	\$32,702,904,493.00	12,486,447,404
1.	People's Republic of China	\$3,753,822,663.00	1,244,347,034
2.	Republic of India	\$2,861,035,530.00	1,161,141,948
3.	Kingdom of the Netherlands	\$2,301,039,507.00	571,943,435
4.	United States of America	\$1,927,897,355.00	413,089,719
5.	Republic of Indonesia	\$1,785,864,921.00	1,108,870,787
6.	Federal Republic of Germany	\$1,745,378,147.00	235,768,931
7.	Democratic Socialist Republic of Sri Lanka	\$1,607,099,637.00	377,925,301
8.	Republic of the Philippines	\$1,431,599,269.00	1,395,896,572
9.	Republic of Kenya	\$1,241,665,730.00	433,789,976
10.	French Republic	\$1,213,815,960.00	218,469,055
11.	Malaysia	\$919,146,657.00	631,329,866
12.	United Kingdom of Great Britain and Northern Ireland	\$847,426,043.00	132,713,132
13.	Kingdom of Spain	\$730,253,742.00	328,552,614
14.	Canada	\$701,833,916.00	802,797,321
15.	Federative Republic of Brazil	\$655,554,215.00	256,763,243
16.	Federal Republic of Nigeria	\$468,652,766.00	74,921,112
17.	Republic of Singapore	\$456,282,763.00	71,408,901
18.	Italian Republic	\$451,974,841.00	97,021,534
19.	Islamic Republic of Iran	\$434,547,061.00	76,215,367
20.	Kingdom of Belgium	\$418,998,898.00	247,238,033
21.	Arab Republic of Egypt	\$418,929,512.00	95,255,334
22.	Argentine Republic	\$366,860,006.00	214,457,905
23.	Republic of Guatemala	\$325,477,038.00	27,303,580
24.	Republic of Côte d'Ivoire	\$314,085,890.00	76,377,889
25.	United Mexican States	\$312,651,664.00	96,882,558
26.	Republic of Korea	\$264,874,559.00	29,951,391
27.	Republic of Chile	\$260,178,816.00	96,614,726
28.	Republic of Peru	\$223,160,725.00	107,408,458
29.	Swiss Confederation	\$221,342,985.00	16,478,282
30.	Republic of Poland	\$214,797,833.00	51,740,987
31.	Kingdom of Thailand	\$213,906,839.00	119,854,125
32.	Ireland	\$200,682,708.00	35,814,728
33.	Republic of Turkey	\$183,881,095.00	62,408,204
34.	Kingdom of Morocco	\$170,590,591.00	46,040,868
35.	United Arab Emirates	\$167,042,210.00	65,506,275

	<b>Exporter</b>	<b>Total Value (USD)</b>	<b>Total Volume (kg)</b>
36.	Japan	\$162,052,191.00	8,612,255
37.	Republic of South Africa	\$148,065,240.00	71,299,552
38.	Republic of Austria	\$146,733,295.00	22,394,227
39.	Hong Kong Special Administrative Region, PRC	\$141,634,660.00	21,409,384
40.	Czech Republic	\$128,215,125.00	25,563,055
41.	Russian Federation	\$122,427,811.00	209,486,817
42.	Kingdom of Denmark	\$119,668,262.00	84,907,346
43.	Commonwealth of Australia	\$96,389,554.00	9,208,421
44.	Republic of Madagascar	\$94,718,203.00	20,802,606
45.	Republic of Ghana	\$94,590,401.00	37,623,378
46.	Islamic Republic of Pakistan	\$92,558,194.00	53,412,898
47.	Republic of Bulgaria	\$85,486,141.00	49,820,501
48.	Republic of Malawi	\$83,062,466.00	50,804,595
49.	Republic of Uganda	\$76,103,679.00	56,592,362
50.	Kingdom of Sweden	\$75,044,768.00	22,024,768
51.	United Republic of Tanzania	\$73,391,984.00	52,063,509
52.	Federal Democratic Republic of Nepal	\$70,054,572.00	70,405,203
53.	State of Israel	\$57,230,000.00	3,942,866
54.	Islamic Republic of Afghanistan	\$56,789,406.00	13,811,864
55.	Republic of Hungary	\$51,810,000.00	8,818,053
56.	Portuguese Republic	\$47,385,788.00	29,247,148
57.	Republic of Ecuador	\$44,545,082.00	32,379,234
58.	Federal Democratic Republic of Ethiopia	\$44,524,007.00	22,332,172
59.	Republic of Slovenia	\$44,363,135.00	9,994,748
60.	Tunisian Republic	\$43,598,492.00	25,615,508
61.	Kingdom of Saudi Arabia	\$43,319,789.00	14,625,833
62.	Republic of Cameroon	\$41,746,854.00	10,527,491
63.	Ukraine	\$40,732,383.00	36,499,832
64.	Republic of Rwanda	\$35,839,999.00	22,164,217
65.	Republic of Azerbaijan	\$34,214,628.00	10,970,764
66.	Republic of Estonia	\$34,019,921.00	13,338,562
67.	Republic of Colombia	\$32,705,986.00	8,360,990
68.	Republic of Paraguay	\$30,900,441.00	11,040,571
69.	Hellenic Republic	\$30,005,569.00	9,561,713
70.	Republic of Burundi	\$23,998,027.00	7,955,955
71.	Republic of Serbia	\$22,258,890.00	6,525,208
72.	Dominican Republic	\$21,869,015.00	22,634,325
73.	New Zealand	\$20,436,076.00	3,796,471

	<b>Exporter</b>	<b>Total Value (USD)</b>	<b>Total Volume (kg)</b>
74.	Republic of Lithuania	\$19,849,784.00	4,320,687
75.	Republic of Kazakhstan	\$16,985,710.00	27,677,401
76.	Republic of Zimbabwe	\$16,749,147.00	13,602,578
77.	Republic of Latvia	\$15,537,836.00	2,619,212
78.	Republic of Finland	\$14,981,096.00	3,060,895
79.	Jamaica	\$14,753,762.00	2,026,909
80.	Romania	\$12,087,821.00	7,693,972
81.	Republic of Croatia	\$11,888,859.00	2,350,227
82.	Lebanese Republic	\$10,921,555.00	3,912,256
83.	Republic of Costa Rica	\$10,248,630.00	6,584,411
84.	Slovak Republic	\$10,037,515.00	1,208,046
85.	Plurinational State of Bolivia	\$9,920,723.00	117,523,504
86.	People's Democratic Republic of Algeria	\$8,254,620.00	9,172,575
87.	Republic of Mozambique	\$8,068,397.00	5,107,593
88.	Overseas Lands of French Polynesia	\$7,346,250.00	6,525,500
89.	Sultanate of Oman	\$7,054,785.00	2,231,476
90.	Hashemite Kingdom of Jordan	\$6,007,224.00	3,770,451
91.	Kingdom of Bhutan	\$5,378,156.00	1,593,704
92.	Republic of Moldova	\$5,151,530.00	3,271,838
93.	Georgia	\$4,882,261.00	4,773,507
94.	Bosnia Herzegovina	\$4,187,917.00	1,040,791
95.	Republic of Cyprus	\$4,081,843.00	3,080,679
96.	Republic of Mauritius	\$3,897,038.00	258,222
97.	Kingdom of Norway	\$3,508,466.00	1,036,847
98.	Republic of El Salvador	\$3,149,750.00	426,938
99.	Republic of Niger	\$2,766,199.00	8,623,148
100.	Republic of Iceland	\$2,763,769.00	3,299,994
101.	Bolivarian Republic of Venezuela	\$2,740,060.00	308,481
102.	Republic of Senegal	\$2,613,799.00	1,344,417
103.	Grand Duchy of Luxembourg	\$2,565,637.00	287,719
104.	Republic of Belarus	\$2,516,800.00	4,149,546
105.	Independent State of Samoa	\$2,317,806.00	2,405,713
106.	Burkina Faso	\$2,312,894.00	1,468,571
107.	Republic of Botswana	\$2,261,699.00	96,181
108.	Belize	\$2,205,740.00	1,140,591
109.	Republic of Panama	\$2,005,366.00	624,188
110.	Territory of New Caledonia and Dependencies	\$1,954,962.00	8,814
111.	Kingdom of Bahrain	\$1,597,409.00	524,182

	<b>Exporter</b>	<b>Total Value (USD)</b>	<b>Total Volume (kg)</b>
112.	Republic of Albania	\$1,487,548.00	7,143,809
113.	Cooperative Republic of Guyana	\$1,349,744.00	947,035
114.	Kyrgyz Republic	\$1,219,547.00	1,879,616
115.	Montenegro	\$1,197,758.00	273,490
116.	Republic of Malta	\$955,154.00	6,830
117.	Macau Special Administrative Region, PRC	\$864,921.00	327,229
118.	Republic of Mali	\$783,625.00	1,627,485
119.	Commonwealth of Dominica	\$754,253.00	51,827
120.	Commonwealth of the Bahamas	\$706,774.00	50,345
121.	Kingdom of Tonga	\$660,961.00	89,875
122.	Republic of Armenia	\$526,241.00	78,609
123.	Republic of Zambia	\$521,385.00	257,056
124.	Saint Vincent and the Grenadines	\$432,521.00	785,848
125.	Republic of Nicaragua	\$366,500.00	202,280
126.	Togolese Republic	\$181,964.00	434,850
127.	Aruba	\$167,192.00	25,895
128.	Kingdom of Cambodia	\$130,642.00	96,158
129.	Republic of Suriname	\$62,777.00	30,431
130.	Barbados	\$56,215.00	8,590
131.	Democratic Republic of Sao Tome and Principe	\$42,854.00	68,708
132.	Islamic Republic of Mauritania	\$40,465.00	36,000
133.	Antigua and Barbuda	\$511.00	81

## AFRICA

### AFRICA'S TOP-THREE EXPORTERS IN 2010: KENYA, NIGERIA and EGYPT

Using the inclusion criteria outlined in **Table 1** (see Introduction), **Table 3** shows the 2010 export value (USD) and volume (kg) for 29 African countries. The top-three African exporters in terms of reported Customs Value were Republic of Kenya, Federal Republic of Nigeria, and the Arab Republic of Egypt.

Although there are many other African countries whose 2010 trade data is not available, **Table 3** includes the countries that indeed represent most of Africa's botanical export value and volume. African countries whose 2010 data is not available (and thus not represented in Table 3) include: Central African Republic, Democratic Republic of the Congo, Eritrea, Gabonese Republic, Kingdom of Lesotho, Kingdom of Swaziland, Libya, Republic of Angola, Republic of Benin, Republic of Cape Verde, Republic of Chad, Republic of the Congo, Republic of Djibouti, Republic of Equatorial Guinea, Republic of the Gambia, Republic of Guinea, Republic of Guinea-Bissau, Republic of Liberia, Republic of Namibia, Republic of Seychelles, Republic of Sierra Leone, Republic of the Sudan, Sahrawi Arab Democratic Republic, Somalia, and Union of the Comoros.

**Table 4** provides export trade data for Africa's leading exporter in 2010, **Republic of Kenya**. Using the inclusion criteria of **Table 1**, Kenya exported 433,789,976 kg of botanical and natural ingredients with a reported FOB Customs Value of \$1,241,665,730 (about 3.8% of world total export value).

Kenya's main botanical products (for domestic consumption and/or export trade) include:

- Tea leaf (*Camellia sinensis*)
- Pyrethrum flower extract (*Chrysanthemum cinerariaefolium*)
- Wattle bark extract (*Acacia mearnsii*)
- Aloes (*Aloe* spp.)
- Myrrh oleo-gum-resin (*Commiphora* spp.)
- Frankincense oleo-gum-resin (*Boswellia* spp.)
- Gum arabic (*Acacia senegal*)
- Pygeum bark (*Prunus africana*)
- Kenya greenheart bark and fruit (*Warburgia ugandensis*)
- Henna leaf (*Lawsonia inermis*)
- Basil leaf (*Ocimum* spp.)
- Capsicum fruit (*Capsicum frutescens*)
- Clove flower bud and stem (*Syzygium aromaticum*)
- Clary sage leaf (*Salvia sclarea*)
- Moringa seed and seed oil (*Moringa oleifera*)
- West Indian lemongrass leaf and essential oil (*Cymbopogon citratus*)

**Table 3:** 2010 Exports of Selected Botanical and Natural Ingredients from AFRICAN countries in order predominance by reported FOB Customs Value (USD per kg)

	African Exporter	Total Value (USD)	Total Volume (kg)
	Estimated World Total	\$32,702,904,493.00	12,486,447,404
1.	Republic of Kenya	\$1,241,665,730.00	433,789,976
2.	Federal Republic of Nigeria	\$468,652,766.00	74,921,112
3.	Arab Republic of Egypt	\$418,929,512.00	95,255,334
4.	Republic of Côte d'Ivoire	\$314,085,890.00	76,377,889
5.	Kingdom of Morocco	\$170,590,591.00	46,040,868
6.	Republic of South Africa	\$148,065,240.00	71,299,552
7.	Republic of Madagascar	\$94,718,203.00	20,802,606
8.	Republic of Ghana	\$94,590,401.00	37,623,378
9.	Republic of Malawi	\$83,062,466.00	50,804,595
10.	Republic of Uganda	\$76,103,679.00	56,592,362
11.	United Republic of Tanzania	\$73,391,984.00	52,063,509
12.	Federal Democratic Republic of Ethiopia	\$44,524,007.00	22,332,172
13.	Tunisian Republic	\$43,598,492.00	25,615,508
14.	Republic of Cameroon	\$41,746,854.00	10,527,491
15.	Republic of Rwanda	\$35,839,999.00	22,164,217
16.	Republic of Burundi	\$23,998,027.00	7,955,955
17.	Republic of Zimbabwe	\$16,749,147.00	13,602,578
18.	People's Democratic Republic of Algeria	\$8,254,620.00	9,172,575
19.	Republic of Mozambique	\$8,068,397.00	5,107,593
20.	Republic of Mauritius	\$3,897,038.00	258,222
21.	Republic of Niger	\$2,766,199.00	8,623,148
22.	Republic of Senegal	\$2,613,799.00	1,344,417
23.	Burkina Faso	\$2,312,894.00	1,468,571
24.	Republic of Botswana	\$2,261,699.00	96,181
25.	Republic of Mali	\$783,625.00	1,627,485
26.	Republic of Zambia	\$521,385.00	257,056
27.	Togolese Republic	\$181,964.00	434,850
28.	Democratic Republic of São Tomé and Príncipe	\$42,854.00	68,708
29.	Islamic Republic of Mauritania	\$40,465.00	36,000

**Table 4:** 2010 Exports of Selected Botanical and Natural Ingredients from KENYA  
in order predominance by reported FOB Customs Value (USD per kg)

KENYA 2010 EXPORTS OF BOTANICAL AND NATURAL INGREDIENTS			
HS Code	Commodity	Trade Value	Trade Quantity
	Kenya Total 2010 Exports:	\$1,241,665,729.00	433,789,976
0902	Tea leaf, black, green, or white ( <i>Camellia sinensis</i> )	\$1,163,629,791	417,661,293
140490	Vegetable products NESOI	\$60,130,482	6,305,559
0907	Clove flower bud and stem ( <i>Syzygium aromaticum</i> )	\$4,767,736	2,587,840
091099	Spices NESOI in Chapter 09	\$3,055,473	972,199
151590	Fixed vegetable fats & oils & their fractions including Moringa seed oil ( <i>Moringa oleifera</i> )	\$2,694,861	1,265,116
130190	Natural gums (excl. of 1301.20), resins, gum-resins & oleoresins (e.g., balsams) including myrrh oleo-gum-resin ( <i>Commiphora</i> spp.)	\$1,306,157	1,678,872
130219	Vegetable saps & herbal extracts (excl. of 1302.11-1302.13) including pyrethrum flower extract ( <i>Chrysanthemum cinerariaefolium</i> ) and aloes ( <i>Aloe</i> spp.)	\$941,395	109,576
320120	Wattle bark extract ( <i>Acacia mearnsii</i> )	\$915,975	866,764
121190	Plants & parts of plants, incl. seeds & fruits, of a kind used primarily in perfumery / pharmacy / for insecticidal / fungicidal / similar purposes, fresh / dried, whether / not cut / crushed / powdered	\$778,810	569,371
090411	Pepper fruit ( <i>Piper nigrum</i> ), whole	\$724,014	302,043
091091	Mixtures of 2 or more products of different headings of HS 0904-0910	\$611,447	159,877
151319	Coconut endosperm ( <i>Cocos nucifera</i> ) fatty oil - refined	\$527,308	531,328
330130	Resinoids	\$350,931	2,430
320190	Tanning extracts of vegetable origin other than quebracho extract / wattle extract; tannins & their salts, ethers, esters & other derivatives	\$345,005	313,000
090412	Pepper fruit ( <i>Piper nigrum</i> ), crushed or ground	\$163,959	31,078
151311	Coconut endosperm ( <i>Cocos nucifera</i> ) fatty oil - crude	\$136,812	53,555
330190	Essential oils (terpeneless / not), including concretes & absolutes (excl. of 3301.12-3301.29); extracted oleoresins; concentrates of essential oils in fats, in fixed oils, in waxes / the like, obtained by enfleurage / maceration; terpenic by-products of the deterpenation of essential oils; aqueous distillates & aqueous solutions of essential oils	\$124,717	6,417
210120	Extracts, essences and concentrates of tea leaf ( <i>Camellia sinensis</i> ), jasmine flower ( <i>Jasminum</i> )	\$124,208	35,338

	<i>officinale</i> ), or maté leaf ( <i>Ilex paraguariensis</i> )		
090420	Capsicum fruit ( <i>Capsicum annuum</i> ; <i>C. frutescens</i> ), crushed or ground, or Allspice fruit ( <i>Pimenta dioica</i> )	\$86,162	26,994
130120	Gum arabic ( <i>Acacia senegal</i> ) or Gum talha ( <i>Acacia seyal</i> )	\$43,737	74,606
130239	Mucilages & thickeners (excl. of 1302.31 & 1301.32), whether/not modified, derived from vegetable products	\$41,022	42,150
091010	Ginger rhizome ( <i>Zingiber officinale</i> ),	\$38,955	112,916
330119	Essential oils of citrus fruit, other than of orange or lemon peel	\$35,861	19,256
130213	Saps & extracts of Hop strobile ( <i>Humulus lupulus</i> )	\$13,362	300
0903	Maté leaf ( <i>Ilex paraguariensis</i> )	\$11,742	7,680
130220	Pectic substance, pectinates & pectates	\$11,225	500
090830	Cardamom seed	\$10,438	3,940
1804	Cocoa seed ( <i>Theobroma cacao</i> ) butter, fat and oil	\$8,360	1,156
330129	Essential oils other than those of citrus fruit (excl. of 3301.24 & 3301.25)	\$7,168	945
090940	Caraway fruit ( <i>Carum carvi</i> )	\$6,575	4,024
090910	Anise fruit ( <i>Pimpinella anisum</i> )	\$4,214	600
091030	Turmeric rhizome ( <i>Curcuma longa</i> )	\$3,934	35,510
121299	Locust beans & sugar cane(excl. of 1212.91), fresh / chilled / frozen / dried, whether / not ground; fruit stones & kernels & other vegetable products (including unroasted chicory roots of the variety <i>Cichorium intybus sativum</i> )	\$3,678	1,512
400130	Balata, gutta-percha, guayule, chicle & similar natural gums	\$3,262	1,190
1210	Hop strobile ( <i>Humulus lupulus</i> )	\$3,186	1,604
130211	Opium ( <i>Papaver somniferum</i> )	\$1,042	75
130232	Mucilages & thickeners, whether / not modified, derived from locust beans / locust bean seeds / guar seeds	\$883	299
090920	Coriander fruit ( <i>Coriandrum sativum</i> )	\$667	222
330113	Essential oils of lemon ( <i>Citrus × limon</i> )	\$623	2,574
090950	Fennel fruit ( <i>Foeniculum vulgare</i> )	\$193	58
330125	Essential oils of mints other than peppermint	\$151	120
090930	Cumin fruit ( <i>Cuminum cyminum</i> ),	\$119	57
090611	Cinnamon bark ( <i>Cinnamomum zeylanicum</i> )	\$33	20
090810	Nutmeg kernel ( <i>Myristica fragrans</i> )	\$31	6
0905	Vanilla fruit ( <i>Vanilla planifolia</i> or <i>V. tahitensis</i> )	\$25	6

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UN Comtrade Database

**BOTANICAL PRODUCT SPECIFICATIONS**  
**Moringa Seed Oil**  
**a product of Kenya**

PRODUCT	Moringa Oil <sup>1</sup>
Botanical name	<i>Moringa oleifera</i> Lam. (Fam. Moringaceae)
Pharmacopoeial name	Oleum Moringae
Part used	Dried seed (kernel)
Production	Mechanical cold pressing of the dried Moringa seed
Preservatives	None
Cultivated or wild	Cultivated
Packing	High Density Polyethylene (HDPE) & Epoxy Steel Drums (ESD) - 25kgs, 190kg drums & 900kg tote lots
CAS Number EU	93165-54-9
EINECS Number	296-941-1
IDENTIFICATION	
Characters	Colour: Pale yellow / clear Odour: Odourless Taste: mild characteristic nutty flavour
TESTS	
Viscosity	Semi mobile at room temp 20°C
Specific Gravity	0.90 @ 25°C
Melting Point	24°C
Flash Point	290 °C
TYPICAL FATTY ACID PROFILE	
Palmitic acid	6.3%
Palmitoleic acid	1.8%
Stearic acid	5.2%
Oleic acid (9c)	80.1%
Linoleic acid (9c, 12c)	0.7%
Arachidic acid	2.2%
Gadoleic acid (11c)	1.%
Behenic acid	2.2%

**BOTANICAL RAW MATERIALS (indicative bulk prices)**

Product	Botanical Name	Cultivated or Wild	Origin	Price USD / kg	Basis
Chamomile flower**	<i>Matricaria recutita</i>	C	Egypt	12	FOB USA
Clove flower bud	<i>Syzygium aromaticum</i>	C	Madagascar/Zanzibar	21.61	Spot NY
Fennel fruit	<i>Foeniculum vulgare</i>	C	Egypt	2.76	Spot NY
Hibiscus flower, dried deep red (2)	<i>Hibiscus sabdariffa</i>	C	Senegal	2.1	FOB Senegal (160 MT available)
Hibiscus flower, dried light red (2)	<i>Hibiscus sabdariffa</i>	C	Senegal	1.95	FOB Senegal (125 MT available)
Yohimbe powder	<i>Pausinystalia johimbe</i>	W	Africa	17	FOB origin

\* Certified organic / \*\*Certified organic & Fair Trade / NK = not known

**Notes:**

- (1) **Quality Standards:** Official quality standards monographs for most the above listed botanical raw materials can be found in either the Egyptian Pharmacopoeia (4<sup>th</sup> edition 2005; Arabic and English editions), the Ghana Herbal Pharmacopoeia (1<sup>st</sup> Edition 1992; 2<sup>nd</sup> Edition 2007), and/or the European Pharmacopoeia (PhEur 7<sup>th</sup> edition 2011) or French Pharmacopoeia (PhFr X).
- (2) For information on the Senegalese hibiscus flower available at this price from the November 2011 harvest contact Mr. Cheikh Gaye or Ms. Fatou Gaye, Africaine de Production Agricole, Senegal. TEL: +221 77 641 32 40, EMAIL: [cheikhgaye@ yahoo.fr](mailto:cheikhgaye@ yahoo.fr)

<sup>1</sup> Earthoil Plantations. Moringa Seed Oil - African Oil - Oil of *Moringa oleifera* specifications: <http://www.earthoil.com/Moringa-Seed-Oil---African-Oil-3351>

### BOTANICAL EXTRACTS (indicative bulk prices)

Product	Standard	Origin	Price USD/kg	Basis
Devil's claw root dry extract <i>(Harpagophytum procumbens)</i>	6:1 (w/w)	Africa	35	FOB Origin
Kola nut dry extract <i>(Cola nitida)</i>	10% caffeine	Africa	13	FOB Origin

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### MEETINGS AND TRADE SHOWS AFRICA

**December 6-8, 2011**

#### **THE 1<sup>ST</sup> ANNUAL MEETING ON TOTAL QUALITY MANAGEMENT OF HERBS & MEDICINAL PLANTS & THEIR PRODUCTS: Packaging Technologies System for Enhancing the Exploration**

Venue: Egyptian International Center for Agriculture Conference Hall, Giza, Egypt  
Organizers: Agricultural Research Center, Food Technology Research Institute (FTRI), Horticultural Research Institute (HRI), Central Lab. For Organic Farming, Egyptian Society for producers, manufacturers and exporters of herbs and medicinal plants (ESMAP)  
Contact: Conference General Secretariat & Exhibition Prof. Dr. Samah Allam,  
TEL: +20101160141  
E-MAIL: [samahallam@yahoo.com](mailto:samahallam@yahoo.com)  
WEB: <http://www.tqm-herbs.com/index-eng.html>

**Main Topics:** Herbs and medicinal plants feasibility studies and marketing strategies, international regulations and exportation obstacles, quality control and extracts standards, planting and manufacturing, modern system in packaging technologies, the role of herbs and medicinal plants in complementary medicine, functional foods, food processing, flavor and aroma enhancers and pharmaceutical and cosmetics.

**December 9-12, 2011**

#### **FOOD GATE & FRESH GATE EGYPT 2011**

Venue: Congress Center, Sharm El Sheikh, Egypt  
Organized by: Agricultural Export Council (AEC): [www.aecegypt.com](http://www.aecegypt.com) and Food Export Council (FEC): <http://www.feceg.com>

**Exhibitor profile:** Egypt's top producers and exporters of herbs, spices and essential oils, as well as food ingredients, fresh fruits and vegetables.

**December 11-13, 2011**

#### **BIO NAT II, THE SECOND EURO-MED CONFERENCE PLANT NATURAL PRODUCTS FROM BIODIVERSITY TO BIOINDUSTRY**

Venue: Conference Center, Alexandria University, Alexandria, Egypt  
Contact: Ashraf A Khalil, PhD  
E-MAIL: [bionat02@gmail.com](mailto:bionat02@gmail.com), [info@bionats.org](mailto:info@bionats.org)  
WEB: <http://www.bionats.org>

The conference will be accompanied by an exhibition open to academic institutions, scientific associations, non-profit foundations, banks, international organizations, pharmaceutical, cosmetic, agriculture and chemical industries, raw materials, and others who share a concern with medicinal plants, pharmaceuticals, cosmetics and natural products.

**March 22-24, 2012**

**FOURTH INTERNATIONAL SYMPOSIUM ON MEDICINAL AND AROMATIC PLANTS (SIPAM 2012)**

Venue: Djerba, Tunisia  
Organizers: The Institut des Régions Arides (IRA), Institution de la Recherché et de l'Enseignement Supérieur Agricoles (IRESA), the Ecole doctorale Sciences, Ingénierie et Société, the International Center of Agricultural Research in the Dry Areas (ICARDA), and the International Society of Horticultural Science (ISHS).  
Contact: Dr. Neffati Mohamed  
TEL +216 75 633 839  
FAX +216 75 633 006  
WEB: <http://www.sipamира.rnrt.tn>

**Topics:** Agro-Ecophysiology, Genetics and Biotechnology of MAP, Extraction process, analysis and chemistry of natural compounds, Valorisation of natural compounds in different industries (food, pharmacy, cosmetic...), Phytotherapy between traditional use and alternative medicine, MAPs and animal health and MAP chain value: Socio-economical aspects, regulatory and normative requirements.

## CHINA and other East Asian Countries

### CHINA - WORLD'S LEADING BOTANICAL EXPORTER IN 2010

Using the inclusion criteria outlined in **Table 1** (see Introduction), **Table 5** shows the 2010 export value (USD) and volume (kg) for 11 East and Southeast Asian countries. The top-three East Asian exporters in terms of reported Customs Value were People's Republic of China, Republic of Indonesia, and Republic of the Philippines. China was also the world's leading exporter in terms of reported value but was not number one in total volume of exports. The world's leading exporter in terms of volume was another East Asian country, Republic of the Philippines.

Using the inclusion criteria of **Table 1**, China exported 1,244,347,034 kg of botanical and natural ingredients (about 10% of world total export volume) with a reported FOB Customs Value of \$3,753,822,663 (about 11.5% of world total)

Other East Asian countries ranking among the world's top-ten exporters in 2010 included Republic of Indonesia at #5 with an export value of \$1,785,864,921 (about 5.5% of world total) and export volume of 1,108,870,787 kg (about 8.9% of world total volume). The Republic of the Philippines ranked at #8 with \$1,431,599,269 export value and 1,395,896,572 kg export volume.

Although there are other East and Southeast Asian countries whose 2010 trade data is not available, **Table 5** includes the countries that indeed represent most of East Asia's botanical export value and volume. East Asian countries whose 2010 data is not available (and thus not represented in **Table 5**) include: Brunei Darussalam, Democratic People's Republic of Korea (North Korea), Democratic Republic of Timor-Leste, Lao People's Democratic Republic (Laos), Mongolia, Republic of China (Taiwan), Union of Burma (Myanmar), and Socialist Republic of Viet Nam.

**Table 6** provides export trade data for East Asia's leading exporter in 2010, **People's Republic of China**. Please note that the totals for China in Table 5 do not precisely match those shown in Table 6. This is because Table 5 is based on general HS codes from the COMTRADE database whilst Table 6 is based on more specific HS Codes extracted from the China Trade Data database.

**Table 5:** 2010 Exports of Selected Botanical and Natural Ingredients from **EAST ASIAN** countries in order predominance by reported FOB Customs Value (USD per kg)

	East Asian Exporter	Total Value (USD)	Total Volume (kg)
	Estimated World Total	\$32,702,904,493.00	12,486,447,404
1.	People's Republic of China	\$3,753,822,663.00	1,244,347,034
2.	Republic of Indonesia	\$1,785,864,921.00	1,108,870,787
3.	Republic of the Philippines	\$1,431,599,269.00	1,395,896,572
4.	Malaysia	\$919,146,657.00	631,329,866
5.	Republic of Singapore	\$456,282,763.00	71,408,901
6.	Republic of Korea	\$264,874,559.00	29,951,391
7.	Kingdom of Thailand	\$213,906,839.00	119,854,125
8.	Japan	\$162,052,191.00	8,612,255
9.	Hong Kong Special Administrative Region, PRC	\$141,634,660.00	21,409,384
10.	Macau Special Administrative Region, PRC	\$864,921.00	327,229
11.	Kingdom of Cambodia	\$130,642.00	96,158

**Table 6:** 2010 Exports of Selected Botanical and Natural Ingredients from CHINA  
in order predominance by reported FOB Customs Value (USD per kg)

HS Code	Commodity Description	Latin Name	Total Value (USD)	Total Volume (kg)
	<b>TOTAL EXPORTS</b>		<b>\$3,651,789,913.00</b>	<b>1,212,437,733</b>
0902	Tea leaf	<i>Camellia sinensis</i>	\$784,144,640	302,525,066
09101000	Ginger rhizome	<i>Zingiber officinale</i>	\$434,604,722	299,854,319
13021990	Vegetable saps and extracts used in pesticides NESOI	<i>Various species</i>	\$345,723,440	12,150,714
12119039	"Other" medicinal (pharmacy) plants NESOI	<i>Various species</i>	\$299,476,478	140,943,858
12129993	Pumpkin seed	<i>Cucurbita pepo</i>	\$256,125,897	74,744,915
090420	Capsicum fruit or Allspice fruit	<i>Capsicum annuum</i> or <i>Pimenta dioica</i>	\$191,370,976	74,158,095
13023912	Algin	<i>Laminaria japonica</i>	\$106,351,420	20,067,857
33012960	Eucalyptus leaf & branchlet essential oil	<i>Eucalyptus globulus</i>	\$90,273,866	8,912,419
13023911	Carageenan	<i>Eucheuma, Gigartina and Hypnea species</i>	\$56,666,637	6,751,001
12122031	Wakame seaweed, dried	<i>Undaria pinnatifida</i>	\$52,114,788	9,299,252
12112099	Asian ginseng root, dried	<i>Panax ginseng</i>	\$51,351,460	2,570,031
0906	Cassia bark or Cinnamon bark	<i>Cinnamomum aromaticum</i> or <i>C. verum</i>	\$46,785,242	34,160,870
1804	Cocoa seed butter	<i>Theobroma cacao</i>	\$45,545,826	9,905,450
13023100	Agar agar	<i>Gelidium amansii, G. cartilagineum, Gracilaria confervoides</i>	\$43,016,669	3,979,670
21012000	Tea leaf extracts, concentrates and essences	<i>Camellia sinensis</i>	\$41,099,551	6,323,001
12119031	Lycium fruit (goji berries)	<i>Lycium barbarum, L. chinense</i>	\$40,720,848	6,190,719
12119016	Cordyceps fungus	<i>Cordyceps sinensis</i>	\$39,232,944	2,247
12122041	Laver seaweed, dried	<i>Various species</i>	\$37,008,948	3,398,632
13023990	"Other" mucilages and thickeners from vegetable products NESOI	<i>Various species</i>	\$34,705,915	3,531,238
12122010	Sea tangle	<i>Laminaria japonica</i> or <i>Echlonia kurome</i>	\$28,339,785	12,901,941
15159030	Tung seed oil	<i>Aleurites fordii</i>	\$26,008,917	7,174,051
12129991	Black watermelon seed	<i>Citrullus lanatus</i>	\$24,141,832	8,808,249
12129994	Lotus seed	<i>Nelumbo nucifera</i>	\$23,395,281	3,248,432
33012999	"Other" essential oils other than those of citrus	<i>Various species</i>	\$23,142,781	1,008,463
12119015	Chrysanthemum flower	<i>Chrysanthemum indicum</i> or <i>C. morifolium</i>	\$22,477,542	11,655,963
13022000	Pectic substances, pectinates	<i>Various species</i>	\$22,302,010	2,558,794
12119029	Poria sclerotium	<i>Poria cocos</i>	\$20,072,259	14,711,349
13021200	Licorice root extract	<i>Glycyrrhiza glabra, G. inflata, G. uralensis</i>	\$19,742,565	4,200,721
09091010	Star anise fruit	<i>Illicium verum</i>	\$19,531,306	5,215,970
12122090	"Other" edible seaweeds and algae	<i>Various species</i>	\$19,456,451	3,677,843
09109900	"Other" spices NESOI	<i>Various species</i>	\$19,119,694	5,437,787
09041100	Pepper fruit, whole, dried	<i>Piper spp.</i>	\$18,879,444	3,734,209
09093000	Cumin seed	<i>Cuminum cyminum</i>	\$18,087,304	7,120,200
33012500	Mint leaf essential oil	<i>Mentha spp.</i>	\$17,380,970	831,003
15159090	"Other" fixed plant oils and fats NESOI	<i>Various species</i>	\$15,549,891	7,014,652
14049090	"Other" vegetable products NESOI used primarily for dyeing	<i>Various species</i>	\$15,443,730	8,420,187
12119025	Bai-zhu attractylodes rhizome	<i>Atractylodes macrocephala</i>	\$14,679,712	4,404,537
12129911	Apricot kernel, bitter	<i>Prunus armeniaca</i>	\$14,153,620	3,897,355
12119026	Rehmannia root tuber	<i>Rehmannia glutinosa</i>	\$14,102,835	10,661,946

HS Code	Commodity Description	Latin Name	Total Value (USD)	Total Volume (kg)
12119036	Licorice root	<i>Glycyrrhiza uralensis</i> , <i>G. glabra</i> , <i>G. inflata</i>	\$14,084,599	3,376,837
12119019	Pinellia rhizome	<i>Pinellia ternata</i>	\$14,050,968	1,423,847
12119011	Danggui root	<i>Angelica sinensis</i>	\$13,330,046	2,736,194
33012991	Geranium leaf essential oil	<i>Pelargonium graveolens</i>	\$13,218,058	75,690
33012920	Citronella herb essential oil	<i>Cymbopogon winterianus</i>	\$12,929,859	1,189,219
12119023	Astragalus root	<i>Astragalus membranaceus</i>	\$12,707,722	5,337,851
12119021	Chinese peony root	<i>Paeonia lactiflora</i>	\$12,394,995	5,560,926
12119013	Codonopsis root	<i>Codonopsis pilosula</i> or <i>C. tangshen</i>	\$12,074,705	4,505,069
33012930	Star anise fruit essential oil	<i>Illicium verum</i>	\$9,666,470	568,963
12129992	Red watermelon seed	<i>Citrullus lanatus</i>	\$8,906,866	4,016,009
14049010	Raw vegetable materials of a kind used primarily in dyeing or tanning	Various species	\$7,478,565	1,852,293
33012950	Litsea fruit essential oil	<i>Litsea cubeba</i>	\$7,077,426	413,689
12119024	Rhubarb root	<i>Rheum officinale</i> , <i>R. palmatum</i> , <i>R. tanguticum</i>	\$6,948,586	2,304,504
12119018	Chinese lovage rhizome	<i>Ligusticum jeholense</i> , <i>L. sinense</i> , <i>L. wallichii</i>	\$6,690,795	3,179,002
09103000	Turmeric rhizome or tuber	<i>Curcuma</i> spp.	\$6,199,794	2,183,930
13023919	Other mucilages and thickeners, whether or not modified, derived from seaweeds and other algae	Various species	\$6,127,133	1,943,410
33012940	Cassia bark essential oil	<i>Cinnamomum aromaticum</i>	\$6,091,434	261,724
12119012	Tienchi ginseng root	<i>Panax pseudoginseng</i>	\$5,441,802	524,656
12129912	Apricot kernel, sweet	<i>Prunus armeniaca</i>	\$5,367,170	1,997,899
12112010	American ginseng root (grown in China)	<i>Panax quinquefolius</i>	\$5,162,746	256,207
12122039	"Other" pinnatifida seaweed	Various species	\$4,892,282	3,758,065
09041200	Pepper fruit, crushed or ground	<i>Piper</i> spp.	\$4,842,589	834,624
33019010	Extracted oleoresins	Various species	\$4,764,696	489,465
1204	Flax seed (linseed)	<i>Linum usitatissimum</i>	\$4,641,109	4,067,059
12119028	Eucommia stem bark	<i>Eucommia ulmoides</i>	\$4,536,468	2,314,653
12119017	Zhejiang fritillaria bulb	<i>Fritillaria thunbergii</i>	\$3,883,017	91,674
090950	Fennel fruit	<i>Foeniculum vulgare</i>	\$3,867,476	2,135,370
09102000	Saffron style and stigma	<i>Crocus sativus</i>	\$3,788,569	243,374
13019090	Other natural gums, resins, gum-resins & balsams NESOI	Various species	\$3,557,273	794,868
12119050	"Other" aromatic (perfumery) plants NESOI	Various species	\$3,449,416	1,543,757
09109100	Mixtures of 2 or more botanicals of HS 0904-0910	Various species	\$3,307,407	896,277
13021930	Pyrethrum or the roots of plants containing rotenone	Various species	\$2,915,983	10,161
13023200	Mucilages and thickeners from locust beans or guar seeds	<i>Ceratonia siliqua</i> <i>Cyamopsis tetragonoloba</i>	\$2,426,806	251,875
12119014	Coptis rhizome	<i>Coptis chinensis</i> , <i>C. deltoidea</i> , <i>C. teeta</i> , <i>C. teetoides</i>	\$2,067,184	147,091
12119099	"Other" insecticidal plants NESOI	Various species	\$1,847,404	721,786
33013090	Extracted resinoids NESOI	Various species	\$1,814,656	310,324
12129919	Apricot, nectarine, peach, and plum kernels	<i>Prunus</i> spp.	\$1,687,107	169,914
13021300	Hop strobile extract	<i>Humulus lupulus</i>	\$1,660,468	92,471
33011990	Essential oils of citrus other than those of orange, lemon and lime	<i>Citrus</i> spp.	\$1,627,892	97,589

HS Code	Commodity Description	Latin Name	Total Value (USD)	Total Volume (kg)
13021910	Lacquer tree sap	<i>Rhus verniciflua</i>	\$1,433,330	59,327
33019090	Concentrates of essential oils in fats, in fixed oils, in waxes or the like; terpenic by-products of the deterpenation of essential oils (excl. citrus fruits); aqueous distillates & aqueous solutions of essential oils	Various species	\$1,346,877	286,478
1210	Hop strobile	<i>Humulus lupulus</i>	\$1,213,438	415,172
12119091	Derris roots and pyrethrum, used for insecticides	<i>Derris elliptica, D. trifoliata, Anacyclus pyrethrum, Chrysanthemum cinerariaefolium</i>	\$1,027,513	444,424
12119027	Japanese sophora flower bud	<i>Sophora japonica</i>	\$1,000,321	477,883
12119022	Gastrodia rhizome	<i>Gastrodia elata</i>	\$972,179	61,951
12119034	Adenophora root	<i>Adenophora axilliflora</i>	\$952,621	562,164
32012000	Wattle bark extract	<i>Acacia mearnsii</i>	\$545,649	159,490
32011000	Quebracho wood extract	<i>Aspidosperma quebracho-blanco</i>	\$543,782	336,369
33013010	Balsam of iris rhizome	<i>Iris spp.</i>	\$525,171	56,279
12112091	Asian ginseng root, fresh	<i>Panax ginseng</i>	\$453,296	35,595
09081000	Nutmeg kernel	<i>Myristica fragrans</i>	\$361,409	21,814
33011300	Lemon peel essential oil	<i>Citrus x limon</i>	\$340,719	118,569
09092000	Coriander fruit	<i>Coriandrum sativum</i>	\$281,032	213,749
33011200	Orange peel essential oil	<i>Citrus spp.</i>	\$247,841	102,882
33019020	Terpenic by-products of the deterpenation of essential oils of citrus	Various species	\$204,534	46,865
13019020	Olibanum or Myrrh oleo-gum-resin	<i>Boswellia spp</i> or <i>Commiphora spp.</i>	\$111,168	35,011
09070000	Clove flower bud	<i>Syzygium aromaticum</i>	\$88,930	14,356
151319	Coconut endosperm fatty oil - refined	<i>Cocos nucifera</i>	\$71,666	56,430
12119035	Sweet wormwood herb	<i>Artemisia annua</i>	\$64,058	55,698
13012000	Gum arabic	<i>Acacia spp.</i>	\$49,614	7,064
12119032	Bantaroi seed	<i>Sterculia lychnophora</i>	\$43,349	8,510
33011910	Lime peel essential oil	<i>Citrus x aurantifolia</i>	\$23,231	720
151311	Coconut endosperm fatty oil - crude	<i>Cocos nucifera</i>	\$12,550	8,180
09030000	Maté leaf	<i>Ilex paraguariensis</i>	\$11,846	187
12122032	Wakame seaweed, fresh	<i>Undaria pinnatifida</i>	\$4,761	17,001
13019030	Asafoetida oleo-gum-resin	<i>Ferula spp.</i>	\$2,589	4138
40013000	Balata, gutta-percha, guayule, chicle and similar natural gums	Various species	\$598	78
13019040	Pine resin	<i>Pinus spp.</i>	\$104	27

SOURCES: (1) China Trade Data; (2) United Nations Statistics Division COMTRADE Database

**BOTANICAL PRODUCT SPECIFICATIONS**  
**Lotus Seed**  
**a product of China**

<b>PRODUCT</b>	<b>Lotus Seed (Lianzi)<sup>2</sup></b>
<b>Botanical name</b>	<i>Nelumbo nucifera</i> Gaertn. (Fam. Nymphaeaceae)
<b>Pharmacopoeial name</b>	Semen Nelumbinis PPRC
<b>Part used</b>	Dried ripe seed. The drug is collected in autumn when ripe, removed from the pericarp, and dried.
<b>Processing</b>	Soak with water for a moment, soften thoroughly, cut, remove the lotus plumule, and dry
<b>Cultivated or wild</b>	Cultivated
<b>Storage</b>	Preserve in a cool and dry place, protected from moth

**IDENTIFICATION**

<b>Characters</b>	Color: pale yellowish-brown to reddish-brown Odor: slight Taste: sweet, slightly astringent Texture: hard
<b>Macroscopic</b>	As per macroscopic description in PPRC Monograph
<b>Microscopic</b>	As per microscopic description in PPRC Monograph
<b>Thin-layer chromatography</b>	As per thin-layer chromatography (TLC) identification test in PPRC Monograph (PPRC Appendix VI B)

**TESTS**

<b>Water</b>	NMT 14.0% (PPRC Appendix IX H, method 1)
<b>Foreign matter</b>	Free of foreign matter
<b>THERAPEUTICS</b>	
<b>Action</b>	To tonify the spleen, relieve diarrhea, replenish the kidney, arrest seminal emission, nourish the heart, and induce tranquilization.
<b>Indications</b>	Protracted diarrhea due to hypofunction of the spleen, seminal emission, leukorrhagia; palpitation, insomnia.
<b>Dosage</b>	3-9 grams

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<sup>2</sup> Chinese Pharmacopoeia Commission. Semen Nelumbinis. In: *Pharmacopoeia of the People's Republic of China* (2005) Volume I. Beijing, China: People's Medical Publishing House. 2005;296-297.

**BOTANICAL RAW MATERIALS (indicative bulk prices)**  
**CNY = Chinese Yuan Renminbi USD = United States Dollar**

Product	Botanical Name	Cultivated or Wild	Origin	Price / kg	Basis
American ginseng root 西洋参(国产 长条)	<i>Panax quinquefolius</i>	Cultivated	China	336.00 CNY	Chengdu Market
Bitter apricot kernel, north 南苦杏仁(统货)	<i>Prunus armeniaca</i>	Cultivated	Northern China	27.00 CNY	Chengdu Market
Cannabis (hemp) fruit 火麻仁(统货)	<i>Cannabis sativa</i>	Cult.Wild	China	8.60 CNY	Chengdu Market
Cassia bark, powdered steam sterilized	<i>Cinnamomum aromaticum</i>	Cult/Wild	China	7.50 USD	FOB CA
Cherokee rose fruit 金樱子(一等)	<i>Rosa laevigata</i>	Wild/Cult	China	8.00 CNY	Chengdu Market
Chinese hawthorn fruit 山楂(统货)	<i>Crataegus pinnatifida</i>	Cult/Wild	China	5.00 CNY	Chengdu Market
Chrysanthemum flower 亳菊花(一等)	<i>Chrysanthemum morifolium</i>	Cultivated	Bo County, Anhui	35.00 CNY	Chengdu Market
Cordyceps fungus 冬虫夏草(川草 一等)	<i>Cordyceps sinensis</i>	Wild	Sichuan	195,000 CNY	Chengdu Market
Cordyceps fungus 冬虫夏草(藏草 一等)	<i>Cordyceps sinensis</i>	Wild	Tibet	210,000 CNY	Chengdu Market
Cumin fruit	<i>Cuminum cyminum</i>	Cultivated	China	4.08 USD	Spot NY
Danggui root 全归(一等)	<i>Angelica sinensis</i>	Cultivated	China	35.00	Chengdu Market
Eleuthero root 刺五加(统货)	<i>Eleutherococcus senticosus</i>	Wild	Northern China	55.00 CNY	Chengdu Market
Ephedra herb 麻黄(统货)	<i>Ephedra</i> spp.	Wild/Cult	China	7.00 CNY	Chengdu Market
Garlic bulb	<i>Allium sativum</i>	Cultivated	China	3.06 USD	Spot NY
Ginger rhizome, dried 干姜(统货)	<i>Zingiber officinale</i>	Cultivated	China	24.00 CNY	Chengdu Market
Ginger rhizome, dried whole peeled	<i>Zingiber officinale</i>	Cultivated	China	5.73 USD	Spot NY
Gynostemma herb 绞股蓝(统货)	<i>Gynostemma pentaphyllum</i>	Wild	China	7.50 CNY	Chengdu Market
Licorice root, 甘草(西草 统货)	<i>Glycyrrhiza uralensis</i>	Wild	West China	12.25 CNY	Chengdu Market
Lotus seed, white husked 白莲子(统货)	<i>Nelumbo nucifera</i>	Cultivated	China	38.00 CNY	Chengdu Market
Lycium fruit, whole dried 宁夏枸杞(一等)	<i>Lycium barbarum</i>	Cult/Wild	Ningxia	55.00 CNY	Chengdu Market
Lycium fruit, whole dried 新疆枸杞(一等)	<i>Lycium barbarum</i>	Cult/Wild	Xinjiang	55.00 CNY	Chengdu Market
Poria sclerotium 茯苓(个苓 一等)	<i>Poria cocos</i>	Wild/Cult	China	10.00 CNY	Chengdu Market
Rhubarb root 西大黄(统货)	<i>Rheum palmatum</i> , <i>R. tanguticum</i> , or <i>R. officinale</i>	Wild	China	17.00 CNY	Chengdu Market
Schisandra fruit, Northern 北五味子(一等)	<i>Schisandra chinensis</i>	Wild	Northern China	30.00 CNY	Chengdu Market
Schisandra fruit, Southern 南五味子(一等)	<i>Schisandra sphenanthera</i>	Wild	Southern China	18.00 CNY	Chengdu Market
Sea buckthorn fruit 沙棘(统货)	<i>Hippophae rhamnoides</i>	Wild/Cult	China	35.00 CNY	Chengdu Market

Product	Botanical Name	Cultivated or Wild	Origin	Price / kg	Basis
Senna leaf 番泻叶(一等)	<i>Cassia angustifolia</i>	Cultivated	China	9.00 CNY	Chengdu Market
Sickle-pod senna seed 决明子(统货)	<i>Cassia obtusifolia</i> or <i>Cassia tora</i>	Cultivated	China	4.20 CNY	Chengdu Market
Taizishen (prince ginseng root) 贵产太子参(大统)	<i>Pseudostellaria heterophylla</i>	Cultivated	China	270.00 CNY	Chengdu Market
Tienchi ginseng root 春三七(一等)	<i>Panax notoginseng</i>	Cultivated	China	362.50 CNY	Chengdu Market

**Source:** 中国•成都中药材指数编制办公室: <http://www.ysindex.com>

**Notes:**

- (1) Monographs providing quality standards and tests for 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 XV English Edition 2007) and/or the Korean Herbal Pharmacopoeia (KHP 2002 English Edition).

**BOTANICAL EXTRACTS (indicative bulk prices)**  
**CNY = Chinese Yuan Renminbi USD = United States Dollar**

Product	Standard	Origin	Price per kg	Basis
Epimedium herb ( <i>Epimedium sp.</i> )	10% icariin	China	CNY 680-700	Sichuan/Shaanxi
Gynostemma herb purified extract ( <i>Gynostemma pentaphyllum</i> )	98% gypenosides	China	CNY 480	Shaanxi
Honeysuckle flower extract ( <i>Lonicera spp.</i> )	20% chlorogenic acid (by HPLC)	China	CNY 780	Shaanxi
Hop strobile extract ( <i>Humulus lupulus</i> )	NLT 45% alpha acids	China	CNY 450	Shandong
Magnolia bark purified extract ( <i>Magnolia officinalis</i> )	98% magnolol	China	CNY 3000	Shaanxi

**Source:** China Natural Ingredients Express August 2011

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**MEETINGS AND TRADE SHOWS  
CHINA & OTHER EASTERN ASIAN COUNTRIES**

**December 16-18, 2011**

**HERBAL RESOURCES SEMINAR IN YUNNAN**

Venue: Yunnan, China  
E-MAIL: [centraloffice@tcmedicine.org](mailto:centraloffice@tcmedicine.org)  
WEB: [http://www.tcmedicine.org/en/client\\_news\\_detail.asp?recordId=96](http://www.tcmedicine.org/en/client_news_detail.asp?recordId=96)

**May 13-15, 2012**

**ASIAN AROMA INGREDIENTS CONGRESS & EXPO (AAIC) 2012**

Venue: Grand Hyatt, Nusa Dua, Bali  
Organizer: Dewan Atsiri Indonesia, Indonesian Essential Oil Council  
Supporters: Ministry of Agriculture, Ministry of Industry, Ministry of Trade, Essential Oil Association of India, China Essential Oils, Aroma and Spices Trade Association, Fragrance & Flavour Association of India, The Spice Council of Sri Lanka  
WEB: <http://www.aaic2012.com>

**May 24-26, 2012**

**BIO-FACH CHINA 2011, WORLD TRADE FAIR FOR ORGANIC FOOD AND NATURAL PRODUCTS**

Venue: INTEX Shanghai, China  
Patron: International Federation of Organic Agriculture Movements (IFOAM)  
Contact: Nurnberg Global Affairs GmbH; Mrs. Miriam Hempel  
TEL: +49 (0)9 11.8606-86 92  
FAX: +49 (0)9 11.86.06-86 94  
E-MAIL: [biofach@nuernbergmesse.de](mailto:biofach@nuernbergmesse.de)  
WEB: <http://www.biofach-china.com>

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.

**June 25-29, 2012**

**VII INTERNATIONAL POSTHARVEST SYMPOSIUM**

Venue: Kuala Lumpur, Malaysia  
Contact: Mr. Abdullah Bin Hassan, Horticulture Research Centre, MARDI, GPO BOX 12301, 50774, Kuala Lumpur, Malaysia.  
TEL: (60) 389 437810  
FAX: (60) 389422906  
E-MAIL: [abhassan@mardi.gov.my](mailto:abhassan@mardi.gov.my)  
WEB: <http://agromedia.mardi.gov.my/event/postharvest2012/>

**June 26-28, 2012**

**HEALTH INGREDIENTS (Hi) / NATURAL INGREDIENTS (Ni) CHINA 2012**

Venue: Shanghai New International Expo Centre, Shanghai, China  
Organizer: United Business Media (UBM) International  
Contact: Mr. Jonathon Vis, UBM, PO Box 200, 3600 AE Maarssen, The Netherlands.  
TEL: +31 20 40 99 544  
FAX: +31 20 36 32 616  
E-MAIL: [Jonathon.vis@ubm.com](mailto:Jonathon.vis@ubm.com)  
WEB: <http://fiasiachina.ingredientsnetwork.com/home>

**Exhibitor profile:** Companies that cultivate, extract, process or supply health, nutraceutical, organic or functional ingredients, natural ingredients used in food & beverages, medical remedies and nutraceuticals.

**August, 2012 (dates to be determined)**

**INTERNATIONAL CONFERENCE AND EXHIBITION OF THE MODERNIZATION OF CHINESE MEDICINE AND HEALTH PRODUCTS 2010**

**Concurrent Event: Hong Kong International Tea Fair**

**Venue:** Hong Kong Convention and Exhibition Centre, 1 Expo Drive, Wan Chai, Hong Kong (Harbour Road Entrance)

**Organizers:** Hong Kong Trade Development Council, Modernized Chinese Medicine International Association Ltd (MCMIA)

**WEB:** <http://gbcodes.hktdc.com/uniS/icmcm.hktdc.com>

**Exhibitor profile:** Suppliers of medicinal plants & extracts, traditional Chinese medicinal products, health supplements, and trade associations.

**August 23-25, 2012**

**NATURAL PRODUCTS EXPO ASIA 2011**

**Venue:** Hong Kong Convention & Exhibition Centre, Hong Kong

**Supporters:** Hong Kong Health Food Association (HKHFA), Hong Kong Organic Farming Association (HOFA), International Alliance of Dietary/Food Supplement Association (IADSA), KHSA, NASAA Certified Organic, Nippon Pharmacy Association (NphA), Natural Products NZ, Organic Federation of Australia, International Federation of Organic Agriculture Movements (IFOAM).

**Organizer:** New Hope Natural Media, a division of Penton Media Asia Limited

**Contact:** Penton Media Asia Limited, Unit B, 3/F., EIB Centre, 40 Bonham Strand, Sheung Wan, Hong Kong

TEL: + (852) (852) 2975 9052 / + (852) 2857 6144

**E-MAIL:** Sales & Sponsorship – [terry.choi@penton.com](mailto:terry.choi@penton.com), [alina.hew@penton.com](mailto:alina.hew@penton.com), [heather.howser@penton.com](mailto:heather.howser@penton.com). Marketing & PR – [andy.ng@penton.com](mailto:andy.ng@penton.com). Seminar & Conference – [jolly.lau@penton.com](mailto:jolly.lau@penton.com).

**WEB:** <http://www.naturalproductsasia.com>

**Exhibitor Profile:** Herbs and spices, plant extracts, dietary supplements, traditional remedies and medicines, coffee and tea, ecological products, organic foods and beverages

**September 5-7, 2012**

**VITAFoods ASIA 2012, THE GLOBAL NUTRACEUTICAL EVENT**

**Venue:** AsiaWorld-Expo, Hong Kong

**Organizers:** IIR Exhibitions ([www.informa.com](http://www.informa.com))

**Contact:** TEL: +44 (0)20 7017 7036

**EMAIL:** [lynnor.wong@informa.com](mailto:lynnor.wong@informa.com)

**WEB:** <http://vitafoodsasia.com>

**Exhibitor profile:** Suppliers of: Nutraceutical ingredients, Functional foods and drinks, Pharmaceutical ingredients, Botanical extracts, Nutricosmetics, Contract manufacturing services, Consultancy, regulatory and marketing services.

**October 3-5, 2012**

**HEALTH INGREDIENTS (Hi) JAPAN 2012**

**Venue:** Tokyo Big Sight Exhibition Center, West Halls 1.2& Atrium, Japan

**Supported by:** Ministry of Agriculture, Forestry and Fisheries, Ministry of Health, Labour and Welfare, Japan External Trade Organization (JETRO), Tokyo Metropolitan Government, Japan Health & Nutrition Food Association

**Organizer:** United Business Media (UBM) International

**Contact:** Mr. Takuro Azuma, UBM, Kanda 91 bldg, 1-8-3 Kajicho, Chiyodaku, Tokyo 101 0044 Japan.

TEL: +81 3 5296 1017

FAX: +81 3 5296 1018.

**E-MAIL:** [f-expo@cmpjapan.com](mailto:f-expo@cmpjapan.com)

**WEB:** <http://www.hijapan.info/eng/index.php>

**October 3-5, 2012**

**FOOD INGREDIENTS ASIA INDONESIA 2012**

Venue: Jakarta International Expo, Arena PRJ Kemayoran, Jakarta, Indonesia  
Organizer: The Indonesian Food Technologist Association (PATPI), The Department of Food Science and Technology (FST), Southeast Asian Food and Agricultural Science and Technology (SEAFAST) Center IPB.  
Contact: Secretariat of International Seminar 2010, Attn: Gitapratwi & Virna Berliani Putri.  
FAX: (+62) 251 8629901  
E-MAIL: [patpiseminar2010@yahoo.com](mailto:patpiseminar2010@yahoo.com)  
WEB: <http://fiasia.ingredientsnetwork.com/conference>

**Exhibitor profile:** Though mainly a show with suppliers of food ingredients, some of the exhibitors offer natural botanical ingredients made from medicinal and aromatic plants. Exhibitors of botanical ingredients will include Chengdu Root Industry Co., Ltd., Mafco, Naturex among others.

**November 22-24, 2012**

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

Venue: The Tokyo International Exhibition Center (Tokyo Big Sight), West Hall 4, Tokyo  
Patron: International Federation of Organic Agriculture Movements (IFOAM)  
Acknowledged by: Ministry of Agriculture Forestry and Fisheries (MAFF), Ministry of the Environment, Japan External Trade Organization (JETRO), Asean-Japan Centre, Tokyo Metropolitan Gvt., Delegation of the European Commission in Japan, Embassy of the Federal Republic of Germany.  
Supported by: Japan Self-Service Ass., Japan Retailers Association, Japan Chain Stores Ass., Nihon Wellness Movement, Organic Cotton Association.  
Contact: Nürnberg Global Affairs GmbH, Messezentrum 90471 Nurnberg Germany, Mrs. Miriam Stahel  
TEL: +49 (0)9 11.8606-86 92  
FAX: +49 (0)9 11.86.06-86 94  
E-MAIL: [biofach@ngfmail.com](mailto:biofach@ngfmail.com)  
WEB: [www.biofach-japan.com](http://www.biofach-japan.com)

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.

## EUROPE

### EUROPE'S TOP-THREE EXPORTERS IN 2010: NETHERLANDS, GERMANY, and FRANCE

Using the inclusion criteria outlined in **Table 1** (see Introduction), **Table 7** shows the 2010 export value (USD) and volume (kg) for 39 European countries. The top-three European exporters in terms of reported Customs Value were Kingdom of the Netherlands, Federal Republic of Germany, and the French Republic.

Although there are a few European countries whose 2010 trade data is not available, **Table 7** includes the countries that indeed represent most all of Europe's botanical export value and volume. European countries whose 2010 data is not available (and thus not represented in Table 7) include: Principality of Andorra, Principality of Liechtenstein, Principality of Monaco, Republic of Kosovo, Republic of Macedonia, Republic of San Marino, and the State of the Vatican City.

**Table 8** provides export trade data for Europe's leading exporter in 2010, **Kingdom of the Netherlands**. Using the inclusion criteria of **Table 1**, the Netherlands exported 571,943,435 kg of botanical and natural ingredients with a reported FOB Customs Value of \$2,301,039,507.00 (about 7.0% of world total export value).

The Netherlands' main botanical ingredient exports are, for the most part, re-exports. In some cases, botanical raw materials are imported into the Netherlands where they are further processed / value-added and then re-exported. In other cases the Netherlands re-exports same raw materials as imported from country of origin. This is evidenced by the fact that Netherlands' main exports are non-European botanical ingredients mainly of tropical and sub-tropical origin such as:

- cocoa butter (originating from Ghana and Côte d'Ivoire);
- coconut oil (from the Philippines and Indonesia);
- ginger rhizome (from China, Brazil and Nigeria);
- tea leaf (from Sri Lanka, Malawi, and India);
- turmeric rhizome (from India);
- nutmeg kernel (from Indonesia, India, and Grenada);
- black pepper fruit (from Viet Nam and Indonesia).

**Table 7:** 2010 Exports of Selected Botanical and Natural Ingredients from **EUROPEAN** countries in order predominance by reported FOB Customs Value (USD per kg)

	European Exporter	Total Value (USD)	Total Volume (kg)
	Estimated World Total	\$32,702,904,493.00	12,486,447,404
1.	Kingdom of the Netherlands	\$2,301,039,507.00	571,943,435
2.	Federal Republic of Germany	\$1,745,378,147.00	235,768,931
3.	French Republic	\$1,213,815,960.00	218,469,055
4.	United Kingdom of Great Britain and Northern Ireland	\$847,426,043.00	132,713,132
5.	Kingdom of Spain	\$730,253,742.00	328,552,614
6.	Italian Republic	\$451,974,841.00	97,021,534
7.	Kingdom of Belgium	\$418,998,898.00	247,238,033
8.	Swiss Confederation	\$221,342,985.00	16,478,282
9.	Republic of Poland	\$214,797,833.00	51,740,987
10.	Ireland	\$200,682,708.00	35,814,728
11.	Republic of Austria	\$146,733,295.00	22,394,227
12.	Czech Republic	\$128,215,125.00	25,563,055
13.	Russian Federation	\$122,427,811.00	209,486,817

	<b>European Exporter</b>	<b>Total Value (USD)</b>	<b>Total Volume (kg)</b>
14.	Kingdom of Denmark	\$119,668,262.00	84,907,346
15.	Republic of Bulgaria	\$85,486,141.00	49,820,501
16.	Kingdom of Sweden	\$75,044,768.00	22,024,768
17.	Republic of Hungary	\$51,810,000.00	8,818,053
18.	Portuguese Republic	\$47,385,788.00	29,247,148
19.	Republic of Slovenia	\$44,363,135.00	9,994,748
20.	Ukraine	\$40,732,383.00	36,499,832
21.	Republic of Estonia	\$34,019,921.00	13,338,562
22.	Hellenic Republic	\$30,005,569.00	9,561,713
23.	Republic of Serbia	\$22,258,890.00	6,525,208
24.	Republic of Lithuania	\$19,849,784.00	4,320,687
25.	Republic of Latvia	\$15,537,836.00	2,619,212
26.	Republic of Finland	\$14,981,096.00	3,060,895
27.	Romania	\$12,087,821.00	7,693,972
28.	Republic of Croatia	\$11,888,859.00	2,350,227
29.	Slovak Republic	\$10,037,515.00	1,208,046
30.	Republic of Moldova	\$5,151,530.00	3,271,838
31.	Bosnia Herzegovina	\$4,187,917.00	1,040,791
32.	Republic of Cyprus	\$4,081,843.00	3,080,679
33.	Kingdom of Norway	\$3,508,466.00	1,036,847
34.	Republic of Iceland	\$2,763,769.00	3,299,994
35.	Grand Duchy of Luxembourg	\$2,565,637.00	287,719
36.	Republic of Belarus	\$2,516,800.00	4,149,546
37.	Republic of Albania	\$1,487,548.00	7,143,809
38.	Montenegro	\$1,197,758.00	273,490
39.	Republic of Malta	\$955,154.00	6,830

**Table 8:** 2010 Exports of Selected Botanical and Natural Ingredients from the Netherlands  
in order predominance by reported FOB Customs Value (USD per kg)

NETHERLANDS 2010 EXPORTS OF BOTANICAL AND NATURAL INGREDIENTS			
HS Code	Commodity	Trade Value	Trade Quantity
	<b>NETHERLANDS TOTAL 2010 EXPORTS</b>	\$2,301,039,509.00	571,943,435
180400	Cocoa seed ( <i>Theobroma cacao</i> ) butter, fat and oil	\$1,350,228,829	219,411,003
210120	Extracts, essences and concentrates of tea leaf ( <i>Camellia sinensis</i> ), jasmine flower ( <i>Jasminum officinale</i> ), or maté leaf ( <i>Ilex paraguariensis</i> )	\$236,455,271	12,847,374
151319	Coconut endosperm ( <i>Cocos nucifera</i> ) fatty oil - refined	\$171,251,019	153,345,780
091091	Mixtures of 2 or more botanicals of different headings of HS 09.04-09.10	\$67,692,417	14,169,274
151590	Fixed vegetable fats & oils & their fractions, whether/not refined but not chemically modified	\$48,220,800	15,138,880
151311	Coconut endosperm ( <i>Cocos nucifera</i> ) fatty oil - crude	\$44,501,816	39,021,234
0902	Tea leaf, black, green, or white ( <i>Camellia sinensis</i> )	\$40,630,305	11,591,198
091010	Ginger rhizome ( <i>Zingiber officinale</i> ),	\$33,562,377	18,348,890
130219	Vegetable saps & herbal extracts (excl. of 1302.11-1302.13)	\$33,342,209	8,713,114
090411	Pepper fruit ( <i>Piper nigrum</i> ), whole	\$23,274,159	5,192,735
130232	Mucilages & thickeners, derived from locust beans / locust bean seeds ( <i>Ceratonia siliqua</i> ) or guar seeds ( <i>Cyamopsis tetragonoloba</i> )	\$21,572,498	4,689,232
090810	Nutmeg kernel ( <i>Myristica fragrans</i> )	\$17,459,598	1,819,168
1204	Flax seed, a.k.a. Linseed ( <i>Linum usitatissimum</i> )	\$16,738,083	16,437,939
090412	Pepper fruit ( <i>Piper nigrum</i> ), crushed or ground	\$16,287,137	3,188,915
121190	Plants & parts of plants, incl. seeds & fruits, of a kind used primarily in perfumery / pharmacy / for insecticidal / fungicidal / similar purposes	\$15,948,927	2,379,252
090420	Allspice fruit ( <i>Pimenta dioica</i> ) or Capsicum fruit ( <i>Capsicum annuum</i> ; <i>C. frutescens</i> ), crushed or ground	\$15,423,706	4,280,704
140490	Vegetable products NESOI	\$11,558,827	18,950,419
091099	Spices NESOI in Chapter 09	\$11,351,922	2,580,878
091020	Saffron style & stigma ( <i>Crocus sativus</i> )	\$10,512,365	34,219
130239	Mucilages & thickeners (excl. of 1302.31 & 1301.32), derived from vegetable products	\$9,127,693	1,377,229
330129	Essential oils other than those of citrus fruit (excl. of 3301.24 & 3301.25)	\$9,103,820	130,215
121220	Seaweeds & other algae, whether/not ground	\$7,841,169	585,190
130220	Pectic substance, pectinates & pectates	\$7,630,285	770,453
090830	Cardamom seed ( <i>Elettaria cardamomum</i> )	\$7,619,674	394,759

330190	Essential oils (terpeneless/not), including concretes & absolutes (excl. of 3301.12-3301.29); extracted oleoresins; concentrates of essential oils in fats, in fixed oils, in waxes / the like, obtained by enfleurage / maceration; terpenic by-products of the deterpenation of essential oils; aqueous distillates & aqueous solutions of essential oils	\$6,148,792	845,293
130212	Liquorice root extract ( <i>Glycyrrhiza</i> spp.)	\$6,062,582	602,204
090820	Mace aril ( <i>Myristica fragrans</i> )	\$5,415,340	326,868
121299	Locust beans (carob) & sugar cane (excl. of 1212.91); fruit stones & kernels & other vegetable products (including unroasted chicory roots of the variety <i>Cichorium intybus sativum</i> )	\$5,412,688	1,897,527
091030	Turmeric rhizome ( <i>Curcuma longa</i> )	\$4,528,036	1,191,323
090930	Cumin fruit ( <i>Cuminum cyminum</i> ),	\$4,486,920	1,196,422
090940	Caraway fruit ( <i>Carum carvi</i> )	\$4,318,479	1,725,933
130120	Gum arabic ( <i>Acacia senegal</i> ) or Gum talha ( <i>Acacia seyal</i> )	\$3,929,869	1,070,698
090620	Cinnamon bark ( <i>Cinnamomum</i> spp.) & cinnamon-tree flowers, crushed/ground	\$3,905,995	1,330,632
090700	Clove flower bud and stems ( <i>Syzygium aromaticum</i> )	\$3,790,606	678,349
330119	Essential oils of citrus, other than of orange or lemon	\$3,272,017	82,352
090920	Coriander fruit ( <i>Coriandrum sativum</i> )	\$3,173,870	1,915,288
090910	Anise fruit ( <i>Pimpinella anisum</i> ) or Star anise fruit ( <i>Illicium verum</i> )	\$3,054,501	439,999
330112	Essential oils of orange peel ( <i>Citrus</i> spp.)	\$2,933,807	200,180
330113	Essential oils of lemon peel ( <i>Citrus × limon</i> )	\$2,293,197	38,848
090611	Cinnamon bark ( <i>Cinnamomum zeylanicum</i> ) & cinnamon-tree flowers, whole	\$2,206,987	1,185,197
090950	Fennel fruit ( <i>Foeniculum vulgare</i> ) or Juniper fruit ( <i>Juniperus communis</i> )	\$1,546,482	281,416
130231	Agar-agar ( <i>Gelidium amansii</i> , <i>G. cartilagineum</i> , <i>Gracilaria confervoides</i> )	\$1,494,756	101,132
090500	Vanilla fruit ( <i>Vanilla planifolia</i> or <i>V. tahitensis</i> )	\$1,416,503	786,342
330130	Extracted Resinoids	\$1,191,030	49,009
130190	Lac; Natural gums (excl. of 1301.20), resins, gum-resins & oleoresins (e.g., balsams)	\$996,062	89,302
090619	Cinnamon (excl. of 0906.11) & cinnamon-tree flowers, neither crushed/ground	\$713,557	354,673
121120	Ginseng root ( <i>Panax</i> spp.)	\$328,926	28,438
400130	Balata, gutta-percha, guayule, chicle & similar natural gums	\$306,379	6,063
330125	Essential oils of mints other than peppermint	\$213,537	10,680
320190	Tanning extracts of vegetable origin other than quebracho extract / wattle extract; tannins & their salts, ethers, esters & other derivatives	\$201,600	27,112

320110	Quebracho wood extract ( <i>Aspidosperma quebracho-blanco</i> )	\$168,442	68,114
1210	Hop strobile ( <i>Humulus lupulus</i> )	\$78,253	2,698
330124	Essential oils of peppermint leaf ( <i>Mentha x piperita</i> )	\$57,032	5,434
130211	Opium ( <i>Papaver somniferum</i> )	\$23,874	46
0903	Maté leaf ( <i>Ilex paraguariensis</i> )	\$17,242	1,939
320120	Wattle bark extract ( <i>Acacia mearnsii</i> )	\$9,284	5,250
130213	Hop strobile extract ( <i>Humulus lupulus</i> )	\$7,958	620

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**BOTANICAL PRODUCT SPECIFICATION**  
**Wild Pansy Flowering Aerial Parts**  
**a product of the Netherlands, France, Poland, and other European Countries**

PRODUCT	Wild Pansy Flowering Aerial Parts <sup>3</sup>
Botanical name	<i>Viola arvensis</i> Murray and/or <i>Viola tricolor</i> L. (Fam.: Violaceae)
Pharmacopoeial name	Violae herba cum flore PhEur
Part used	Dried flowering aerial parts
Cultivated or wild	Cultivated and Wild Harvested
Storage	Store protected from moisture
<b>IDENTIFICATION</b>	
Macroscopic	PhEur Wild Pansy Monograph ID Test A
Microscopic	PhEur Wild Pansy Monograph ID Test B
Thin-layer chromatography	PhEur Wild Pansy Monograph ID Test C (PhEur 2.2.27)
<b>TESTS</b>	
Content	Minimum 1.5% of flavonoids, expressed as violanthin
Foreign matter	Maximum 3% (PhEur 2.8.2)
Swelling index	Minimum 9 (PhEur 2.9.12)
Loss on drying	Maximum 12.0% (PhEur 2.2.32)
Total ash	Maximum 15.0% (PhEur 2.4.16)
<b>CONTAMINATION</b>	Microbial enumeration limits for herbal drugs and their preparations to which boiling water is added before use
Aerobic bacteria	10 <sup>7</sup> cfu/g
Molds and yeasts	10 <sup>4</sup> cfu/g
<i>Escherichia coli</i>	10 <sup>2</sup> cfu/g
<i>Salmonella</i>	Not detected
Heavy metals	NMT 1.0 ppm cadmium; NMT 5.0 ppm lead; NMT 0.1 ppm mercury
Pesticide residues	Meets the requirements PhEur General Chapter 2.8.13
<b>THERAPEUTICS</b>	
Indications	Traditional herbal medicinal product for symptomatic treatment of mild seborrhoeic skin conditions. <sup>4</sup>
Dosage	<b>Oral:</b> <b>Herbal tea:</b> 3 g of comminuted herbal substance as an infusion 1-3 times daily. <b>Cutaneous:</b> 5-20 g/l of comminuted herbal substance as an infusion. Apply as a wet dressing to the affected areas of the skin 2-3 times daily. <b>Bath additive:</b> 5-10 g/l of comminuted herbal substance as an infusion. 1 litre of infusion to be added to the bath.

<sup>3</sup> European Pharmacopoeial Commission. Wild Pansy (Flowering Aerial Parts). In: *European Pharmacopoeia*, 7<sup>th</sup> edition (PhEur 7.0). Strasbourg, France: European Directorate for the Quality of Medicines (EDQM). 2010;1266-1267.

<sup>4</sup> European Medicines Agency (EMEA) Committee on Herbal Medicinal Products (HMPC). Community herbal monograph on *Viola tricolor* L. and/or subspecies *Viola arvensis* Murray (Gaud) and *Viola vulgaris* Koch (Oborny), herba cum flore. London, UK: EMEA. 25 Nov 2010. Available at: [http://www.ema.europa.eu/docs/en\\_GB/document\\_library/Herbal\\_Community\\_herbal\\_monograph/2011/01/WC500101197.pdf](http://www.ema.europa.eu/docs/en_GB/document_library/Herbal_Community_herbal_monograph/2011/01/WC500101197.pdf)

## MEETINGS AND TRADE SHOWS EUROPEAN COUNTRIES

**February 15-18, 2012**

### **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  
Organizer: NürnbergMesse GmbH, Messezentrum D-90471 Nürnberg  
E-MAIL: [biofach@nuernbergmesse.de](mailto: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 21-22, 2012**

### **22. BERNBURGER WINTERSEMINAR FUER ARZNEI- UND GEWUERZPFLANZEN**

**[22<sup>nd</sup> Annual Bernburg Winter Seminar for Medicinal and Aromatic Plants]**

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: SALUPLANTA e.V., Prof.-Oberdorf-Siedlung 16, D-06406 Bernburg  
FAX: 03471-640 332  
TEL: 03471-35 28 33  
E-MAIL: [saluplanta@t-online.de](mailto:saluplanta@t-online.de)  
WEB: <http://www.saluplanta.de>

The scientific programme will encompass all areas of medicinal and aromatic plant production with main themes including plant breeding, cultivation techniques, mechanization and post-harvest technologies, regulations, quality assurance and applications.

**May 22-24, 2012**

### **VITAFOODS EUROPE 2012**

Venue: Geneva Palexpo, Switzerland  
Organizer: IIR Exhibitions, 5<sup>th</sup> Floor, 29 Bressenden Place, London SW1E 5EW, United Kingdom  
Contacts: Peter Hall, Managing Director, TEL: +44(0)20.701 77795  
FAX: +44(0)20.701 77818  
E-MAIL: [vitafoods@iirx.co.uk](mailto:vitafoods@iirx.co.uk)  
WEB: <http://www.vitafoods.eu.com>

**Exhibitor profile:** Suppliers of botanical raw materials and extracts, essential oils and oleoresins, phytochemicals, algae, nutraceutical and cosmeceutical ingredients, nutritional and functional food ingredients, and OTC pharmaceutical ingredients.

**June 18-20, 2012**

### **BREEDMAP 5: 5<sup>TH</sup> INTERNATIONAL SYMPOSIUM BREEDING RESEARCH ON MEDICINAL AND AROMATIC PLANTS**

Venue: University of Veterinary Medicine, Vienna, Austria  
Sponsors: Vetmedunivienna, GA (Society for Medicinal Plant and Natural Product Research), ICMAP.  
Contact: Mrs. Corinna Schmidlerer, Institute for Applied Botany and Pharmacognosy, University of Veterinary Medicine, Veterinaerplatz 1, A-1210 Wien, Austria.  
E-MAIL: [office@breedmap.org](mailto:office@breedmap.org)  
WEB: <http://www.breedmap.org>

**Topics:** Plant breeding is an integral part of domestication and one of the main factors to establish profitable and sustainable cultivation guaranteeing safety and efficacy of MAPs. Breeding research provides the prerequisites for organizing breeding procedures in an effective way. The symposium will highlight the latest advances in the field of breeding research on medicinal and aromatic plants (MAPs) and will provide a meeting platform for experts involved in breeding research and related fields of science, for specialists of seed companies and industrial establishments and for members of authorities. The topics of the symposium will cover the whole range from genetic resources, classical and molecular breeding approaches to genetically modified organisms and intellectual property rights.

**September 2-6, 2012**

**13<sup>TH</sup> INTERNATIONAL CONGRESS OF THE SOCIETY FOR ETHNOPHARMACOLOGY**

Venue: Auditorium of Karl-Franzens-University of Graz, Austria  
Contact: Secretariat Mag. Claudia Thenius TEL: ++ 43 316 380 5525  
E-MAIL: [ise13@uni-graz.at](mailto:ise13@uni-graz.at)  
WEB: <http://ise13.uni-graz.at/cms/>

**Topics:** Intercultural ethnopharmacology, Ethnomedicine along the Silk Road, Herbal Medicines from Traditional knowledge to global communities, Holistic approach and systems biology in medicinal plant research, Traditional and modern herbal medicinal products in aging related diseases, Traditional and modern medicinal products in infectious diseases.

**September 9-14, 2012**

**III INTERNATIONAL HUMULUS SYMPOSIUM**

Venue: Zatec, Czech Republic  
Hosts: ISHS Section on Medicinal and Aromatic Plants & ISHS Commission on Plant Genetic Resources & ISHS Commission on Fruits and Vegetables and Health  
Contact: Dr. Josef, Patzak, Hop Research Institute, Co. Ltd., Kadanska 2525, Zatec 43846, Czech Republic. TEL: +420 415732109 / FAX: +420 415732150  
E-MAIL: [j.patzak@telecom.cz](mailto:j.patzak@telecom.cz)  
WEB: [http://www.chizatec.cz/ishs\\_uk.htm](http://www.chizatec.cz/ishs_uk.htm)

**September 25-27, 2012**

**THE INTERNATIONAL NUTRACEUTICAL, COSMECEUTICAL, "FUNCTIONAL FOODS & DRINKS" AND "HEALTH" INGREDIENTS TRADE EXHIBITION**

Venue: Milan Exhibition Center, Milan, Italy  
Organizer: Artenergy Publishing Srl  
Contact: TEL: +39 0266 306 866  
FAX: +39 0266 305510  
E-MAIL: [info@nuce.pro](mailto:info@nuce.pro)  
WEB: [www.nuce.pro](http://www.nuce.pro)

**Product Index:** Nutraceutical ingredients, Cosmeceutical ingredients, Functional foods ingredients, Functional drink ingredients, Pharmaceutical ingredients, Botanical extracts, Dietary supplements ingredients, Natural ingredients for foods and drinks, Natural ingredients for cosmetics.

**October 4-5, 2012**

**2<sup>nd</sup> EUROPEAN WORKSHOP ON SEA BUCKTHORN**

Venue: Vilnius, Lithuania  
Organizers: German Society for Seabuckthorn and Wild Fruits; Lithuanian Association of Seabuckthorn growers  
WEB: <http://www.sanddorn.net>

**November 7-8, 2012**

**AESGP CONFERENCE ON HERBAL (MEDICINAL) PRODUCTS AND FOOD SUPPLEMENTS**

Venue: Brussels  
Organizer: Association of the European Self-Medication Industry (AESGP), 7 Avenue de Tervuren, B-1040 Brussels, Belgium  
WEB: <http://www.aesgp.be/meetings/upcoming.asp>

**November 13-15, 2012**

**HEALTH INGREDIENTS EUROPE & NATURAL INGREDIENTS 2012**

Venue: Messe Frankfurt, Germany  
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@cmpi.biz](mailto:Fi@cmpi.biz)  
WEB: <http://hieurope.ingredientsnetwork.com>

**Exhibitor profile:** Companies that cultivate, extract, process or supply health, nutraceuticals, organic and functional ingredients, and natural ingredients that are used in cosmetics, health food products, medicinal herbal products, and nutraceutical products.

**September 1-5, 2013**

**61<sup>ST</sup> INTERNATIONAL CONGRESS AND ANNUAL MEETING OF THE SOCIETY FOR MEDICINAL PLANT AND NATURAL PRODUCT RESEARCH**

Venue: Münster Germany  
WEB: <http://www.ga2013.org>

**Topics:** Natural products against neglected diseases, Skin active natural products, Clinical interactions of natural products and herbal remedies, Ethnopharmacology of Tibetan medicine, Ethnopharmacology of African medicine

**October 5-9, 2013**

**ANUGA**

Venue: Cologne Exhibition Center, Germany  
Organizer: Koelnmesse GmbH, Messeplatz 1, 50679 Köln, Germany & Bundesverband des Deutschen Lebensmittelhandels e.V. (BVL), Am Weidendamm 1A, 10117 Berlin Germany.  
Contact: TEL: +49 180 520 4220  
FAX: +49 221 821 99 1010  
E-MAIL: [d.eiden@koelnmesse.de](mailto:d.eiden@koelnmesse.de) or [bvl@einzelhandel.de](mailto:bvl@einzelhandel.de)  
WEB: <http://www.anuga.com>

Although primarily a food show there will be some exhibitors of natural botanical ingredients at Anuga.

**2013 (dates to be determined)**

**6<sup>TH</sup> INTERNATIONAL SEABUCKTHORN ASSOCIATION CONFERENCE (ISA 2011)**

Venue: Potsdam, Germany  
Organizers: International Seabuckthorn Association (ISA)  
Sponsors: Ministry of Infrastructure and Agriculture of the Government of Brandenburg (MIL)  
E-MAIL: [isa-2013@sanddorn.net](mailto:isa-2013@sanddorn.net)  
WEB: <http://www.isahome.net>

## INDIA and other Asian Countries (Central, Southern & Western)

### INDIA - WORLD'S #2 BOTANICAL EXPORTER IN 2010

Using the inclusion criteria outlined in **Table 1** (see Introduction), **Table 9** shows the 2010 export value (USD) and volume (kg) for 20 Central, Southern and Western Asian countries. The top-three (Central, Southern and/or Western) Asian exporters in terms of reported Customs Value were Republic of India, Democratic Socialist Republic of Sri Lanka, and Islamic Republic of Iran. India was also the world's number two exporter in terms of reported value. Using the inclusion criteria of **Table 1**, India exported 1,161,141,948 kg of botanical and natural ingredients (about 9.3% of world total export volume) with a reported FOB Customs Value of \$2,861,035,530 (about 8.7% of world total).

Although there are other Central, Southern and/or Western Asian countries whose 2010 trade data is not available, **Table 9** includes the countries that indeed represent most of the botanical export value and volume for this region of the world. Central, Southern, and/or Western Asian countries whose 2010 data is not available (and thus not represented in **Table 9**) include: Occupied Palestinian Territory, People's Republic of Bangladesh, Republic of Iraq, Republic of Maldives, State of Kuwait, Republic of Tajikistan, Republic of Uzbekistan, Republic of Yemen, State of Qatar, Syrian Arab Republic, and Turkmenistan.

**Table 10** provides export trade data for the region's leading exporter in 2010, **Republic of India**. Please note that the totals for India in Table 9 do not precisely match those shown in Table 10. This is because Table 9 is based on general HS codes from the COMTRADE database according to the calendar year (Jan-Dec) whilst Table 10 is based on more specific HS Codes extracted from the Government of India TRADESTAT database and according to the agricultural year (Apr-Mar).

**Table 9:** 2010 Exports of Selected Botanical and Natural Ingredients from **INDIA and Other Asian Countries** in order predominance by reported FOB Customs Value (USD per kg)

	Exporter	Total Value (USD)	Total Volume (kg)
	Estimated World Total	\$32,702,904,493.00	12,486,447,404
1.	Republic of India	\$2,861,035,530.00	1,161,141,948
2.	Democratic Socialist Republic of Sri Lanka	\$1,607,099,637.00	377,925,301
3.	Islamic Republic of Iran	\$434,547,061.00	76,215,367
4.	Republic of Turkey	\$183,881,095.00	62,408,204
5.	United Arab Emirates	\$167,042,210.00	65,506,275
6.	Islamic Republic of Pakistan	\$92,558,194.00	53,412,898
7.	Federal Democratic Republic of Nepal	\$70,054,572.00	70,405,203
8.	State of Israel	\$57,230,000.00	3,942,866
9.	Islamic Republic of Afghanistan	\$56,789,406.00	13,811,864
10.	Kingdom of Saudi Arabia	\$43,319,789.00	14,625,833
11.	Republic of Azerbaijan	\$34,214,628.00	10,970,764
12.	Republic of Kazakhstan	\$16,985,710.00	27,677,401
13.	Lebanese Republic	\$10,921,555.00	3,912,256
14.	Sultanate of Oman	\$7,054,785.00	2,231,476
15.	Hashemite Kingdom of Jordan	\$6,007,224.00	3,770,451
16.	Kingdom of Bhutan	\$5,378,156.00	1,593,704
17.	Georgia	\$4,882,261.00	4,773,507
18.	Kingdom of Bahrain	\$1,597,409.00	524,182
19.	Kyrgyz Republic	\$1,219,547.00	1,879,616
20.	Republic of Armenia	\$526,241.00	78,609

**Table 10:** Agricultural year 2010-2011 Exports of Selected Botanical and Natural Ingredients from INDIA in order of predominance by reported FOB Customs Value (USD Millions / kg Thousands)

HS Code	Commodity	Botanical Name	Ag-Year 2010-2011 Value USD Millions	Ag-Year 2010-2011 Volume KG Thousands
<b>TOTAL INDIAN EXPORTS</b>			<b>3080.04</b>	<b>1,392,503.16</b>
13023230	Guar seed gum, treated and pulverized	<i>Cyamopsis tetragonoloba</i>	499.41	286,204.75
09024020	Black tea leaf, in bulk (> 20kg)	<i>Camellia sinensis</i>	382.56	132,319.94
09042010	Capsicum fruit, dried whole	<i>Capsicum annuum</i>	283.05	199,063.64
13023220	Guar seed gum, refined split	<i>Cyamopsis tetragonoloba</i>	104.73	78,477.47
12119032	Psyllium husk	<i>Plantago ovata</i>	93.18	38,632.70
09024040	Black tea leaf, packed in tea bags	<i>Camellia sinensis</i>	81.13	21,676.22
09103020	Turmeric rhizome, dried whole, cut	<i>Curcuma longa</i>	74.82	27,891.05
09042020	Capsicum fruit, dried powdered	<i>Capsicum annuum</i>	68.92	58,494.18
09024090	Black tea leaf, other	<i>Camellia sinensis</i>	66.97	22,860.97
09103030	Turmeric rhizome, dried powdered	<i>Curcuma longa</i>	66.03	30,591.94
09093029	"Other" cumin seeds (other than black seeds)	<i>Cuminum cyminum</i>	62.05	23,011.06
33019029	Spice oleoresins NESOI	<i>Various species</i>	60.84	2,946.31
13021919	"Other" herbal extracts	<i>Various species</i>	57.16	1,250.30
33012590	"Other" essential oils of mint other than peppermint, spearmint, watermint, horsemint, and bergamot mint oil	<i>Mentha</i> spp.	56.14	2,919.97
09041130	Black pepper fruit, garbled	<i>Piper nigrum</i>	49.68	13,873.44
09024030	Black tea dust, in bulk	<i>Camellia sinensis</i>	44.66	18,974.81
33012400	Peppermint leaf essential oil	<i>Mentha × piperita</i>	40.36	1,883.35
33019022	Capsicum fruit extracted oleoresin	<i>Capsicum annuum</i>	37.79	1,764.75
09023020	Black tea leaf, in packs >25 g but <1 kg	<i>Camellia sinensis</i>	29.44	9,523.74
33019013	Black pepper fruit extracted oleoresin	<i>Piper nigrum</i>	29.12	1,361.03
09109100	Mixtures of 2 or more botanicals of different headings of Chapter 09	<i>Various species</i>	28.94	14,175.65
09023090	"Other" black tea leaf in packs <3 kg	<i>Camellia sinensis</i>	28.87	8,711.09
33019014	Turmeric rhizome extracted oleoresin	<i>Curcuma longa</i>	28.77	447.08
13019099	"Other" oleoresins, natural	<i>Various species</i>	28.14	4,320.17
09092090	"Other" coriander fruits	<i>Coriandrum sativum</i>	26.74	33,970.98
9109929	"Other" powders of "Other" spices NESOI	<i>Various species</i>	25.12	14,728.98
15159099	"Other" fixed vegetable fats & oils and their fractions	<i>Various species</i>	24.99	8,520.57
09041200	Pepper fruit, crushed or ground	<i>Piper nigrum</i>	23.7	9,427.83
21012010	Tea leaf extract, instant	<i>Camellia sinensis</i>	23.45	2,980.62
13019045	Oleoresins of flowers, natural	<i>Various species</i>	22.11	548.69
13021990	"Other" vegetable saps and extracts	<i>Various species</i>	21.94	478.64
09083020	Cardamom seed,	<i>Elettaria cardamomum</i>	20.15	943.12

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	Small Alleppey Green			
13023210	Guar endosperm meal	<i>Cyamopsis tetragonoloba</i>	13.89	38,992.80
09109912	Fenugreek seed	<i>Trigonella foenum-graecum</i>	13.38	18,604.70
09021030	Green tea leaf in packs >1 kg but <=3 kg	<i>Camellia sinensis</i>	13.21	4,045.83
09095019	"Other" fennel fruits	<i>Foeniculum vulgare</i>	13.13	7,907.18
09101020	Ginger rhizome, dried, unbleached	<i>Zingiber officinale</i>	12.65	5,136.83
09103010	Turmeric rhizome, fresh	<i>Curcuma longa</i>	11.95	4,619.04
09109915	Sickle-pod senna seed	<i>Cassia tora</i>	11.74	34,245.84
09103090	"Other" turmeric rhizome	<i>Curcuma</i> spp.	11.46	4,782.62
18040000	Cocoa seed butter, fat & oil	<i>Theobroma cacao</i>	11.24	2,210.95
33019031	Attars of all kinds in fixed oil base	<i>Various species</i>	10.99	140.03
09083010	Indian cardamom seed, large	<i>Amomum subulatum</i>	10.83	1,188.96
09081020	Nutmeg kernel, not in shell	<i>Myristica fragrans</i>	10.81	1,256.60
09109990	"Other" spices NESOI	<i>Various species</i>	10.46	7,049.62
09109922	Cumin fruit, powdered	<i>Cuminum cyminum</i>	10.17	4,450.25
33019090	Other concentrates of essential oils in fats/fixed/wax, terpenic by- product, aqueous distillates or solutions of essential oils NESOI	<i>Various species</i>	9.83	541.64
12119022	Senna leaf and/or pod	<i>Cassia angustifolia</i>	9.41	14,435.98
12119099	"Other" plants & plant parts used in perfumery, pharmacy, or insecticidal / fungicidal purposes, fresh / dried	<i>Various species</i>	9.39	6,965.60
09021090	"Other" green tea leaf in packs not exceeding 3 kg	<i>Camellia sinensis</i>	9.2	2,748.67
14049090	"Other" vegetable materials NESOI	<i>Various species</i>	9.01	5,745.23
15131900	Coconut fatty oil, refined	<i>Cocos nucifera</i>	8.69	4,180.90
33012950	"Other" essential oils of spices NESOI	<i>Various species</i>	8.69	136.01
09041190	"Other" pepper fruit, neither crushed nor ground	<i>Piper nigrum</i>	8.1	2,964.75
09024010	Black tea leaf in packs >3 kg but <=20 kg	<i>Camellia sinensis</i>	7.87	2,442.94
21013010	Chicory root, roasted	<i>Cichorium intybus</i>	7.74	9,304.92
09023010	Black tea leaf in packs not exceeding 25 gm	<i>Camellia sinensis</i>	7.69	2,267.26
33019017	Nutmeg kernel extracted oleoresin	<i>Myristica fragrans</i>	7.65	262.92
09101040	Ginger rhizome, powdered	<i>Zingiber officinale</i>	7.61	3,021.96
33019012	Ginger rhizome extracted oleoresin	<i>Zingiber officinale</i>	7.49	197.46
09093019	"Other" black cumin seed	<i>Nigella sativa</i>	7.47	3,376.75
13021918	Cambridge fruit extract	<i>Garcinia cambogia</i>	7.21	577.54
13019016	Karaya gum (Hastab)	<i>Cochlospermum gossypium,</i> <i>Sterculia urens</i> , or <i>S. villosa</i>	7.16	1,025.65
33012935	Pepper fruit essential oil	<i>Piper nigrum</i>	7.14	117.45
13021100	Opium saps and extracts	<i>Papaver somniferum</i>	7.09	118.62
13023900	"Other" mucilages and thickeners from vegetable products	<i>Various species</i>	6.61	3,411.52

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09101010	Ginger rhizome, fresh	<i>Zingiber officinale</i>	6.45	11,576.56
09093021	Cumin seed, dried whole	<i>Cuminum cyminum</i>	6.11	2,404.43
09109919	"Other" spices NESOI	Various species	5.94	5,756.68
15159010	Fixed oils (e.g. of chaulmoogra seed, kokum seed, tobacco seed	<i>Taraktogenos kurzli</i> , <i>Garcinia indica</i> , <i>Nicotiana tabacum</i>	5.53	3,136.31
09042090	"Other" fruits of the genera <i>Capsicum</i> and/or <i>Pimenta</i>	<i>Capsicum</i> spp., <i>Pimenta</i> spp.	5.41	4,942.81
33012990	"Other" essential oils	Various species	5.4	108.65
14049010	Tendu leaf (bidi wrapper)	<i>Diospyros melanoxylon</i>	5.29	2,118.66
09109911	Celery seed	<i>Apium graveolens</i>	5.26	4,681.31
09101090	"Other" ginger rhizome	<i>Zingiber officinale</i>	5.22	4,095.27
09022020	Green tea leaf, in bulk >20 kg	<i>Camellia sinensis</i>	5.01	1,494.43
09023030	Black tea leaf in packs >1 kg but <=3 kg	<i>Camellia sinensis</i>	4.89	1,542.72
33011990	"Other" essential oils of citrus other than bergamot, lemon, lime or orange	<i>Citrus</i> spp.	4.87	567.46
13021920	Cashew nut shell liquid	<i>Anacardium occidentale</i>	4.85	9,118.88
09093011	Black cumin seed	<i>Nigella sativa</i>	4.68	2,117.00
13019019	"Other" natural gums	Various species	4.68	1,171.14
15159020	Fixed oils (e.g. of neem seed or watermelon seed, among others)	<i>Azadirachta indica</i> , <i>Citrullus lanatus</i>	4.19	1,657.75
13021916	Neem extract	<i>Azadirachta indica</i>	4.17	74.14
13012000	Gum arabic	<i>Acacia senegal</i>	4.15	1,378.97
13019013	Asafoetida root oleo-gum-resin	<i>Ferula foetida</i>	4.05	1,102.69
09092010	Coriander fruit	<i>Coriandrum sativum</i>	3.99	4,736.45
33013099	"Other" extracted resinoids NESOI	Various species	3.93	248
09050010	Vanilla bean (fruit)	<i>Vanilla planifolia</i>	3.92	154.09
15159091	"Other" fixed vegetable oils of edible grade	Various species	3.61	1,188.77
13023290	"Other" mucilages/thickeners from locust (carob) bean or locust bean seed	<i>Ceratonia siliqua</i>	3.58	2,883.75
09109921	Cassia bark powder	<i>Cinnamomum</i> spp.	3.53	2,855.82
09041150	Pepper fruit, green dehydrated	<i>Piper nigrum</i>	3.39	551.53
09083090	"Other" Indian cardamom seed	<i>Amomum subulatum</i>	3.39	460.39
21012090	"Other" extracts, essences & concentrates of tea leaf	<i>Camellia sinensis</i>	3.36	555.04
13019029	"Other" resins, natural	Various species	3.35	513.21
33012932	Nutmeg kernel essential oil	<i>Myristica fragrans</i>	3.34	67.73
12119029	"Other" leaves, flowers, or pods used in pharmacy or perfumery	Various species	3.25	1,996.75
33012926	Ginger rhizome essential oil	<i>Zingiber officinale</i>	3.15	19.58
09081010	Nutmeg, in shell	<i>Myristica fragrans</i>	2.97	510.19
33019015	Cardamom seed extracted oleoresin	<i>Elettaria cardamomum</i>	2.89	13.55
32030010	Cutch (Catechu) branch extract	<i>Acacia catechu</i>	2.88	5,034.42

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12119019	"Other" seeds used in pharmacy or perfumery	<i>Various species</i>	2.75	1,542.77
33012510	Spearmint herb essential oil	<i>Mentha spicata</i>	2.65	105.25
12122090	"Other" algae	<i>Various species</i>	2.6	144.27
09109914	Ajowan fruit	<i>Trachyspermum ammi</i>	2.44	1,289.18
33019032	Mustard seed oil aroma	<i>Brassica juncea</i>	2.39	25.12
09109913	Dill fruit, whole	<i>Anethum graveolens</i>	2.32	1,907.25
33013091	Resinoid flavoring essences, all types, including those for liquors	<i>Various species</i>	2.28	410.23
09109927	Mustard seed, powdered	<i>Brassica juncea</i>	2.23	3,237.05
13019011	Indian gum arabic	<i>Acacia nilotica</i>	2.23	543.16
12119042	Galangal rhizomes & roots including greater galanga	<i>Alpinia galanga</i>	2.19	1,133.67
09095011	Fennel fruit	<i>Foeniculum vulgare</i>	2.18	1,445.32
13021930	Cardanol from cashew nut shell liquid, purified & distilled	<i>Anacardium occidentale</i>	2.13	2,089.95
12119049	"Other" roots & rhizomes used in pharmacy or perfumery	<i>Various species</i>	2.1	1,215.43
12119050	Sandalwood chips and dust	<i>Santalum album</i>	2.05	167.98
33019016	Celery seed extracted oleoresin	<i>Apium graveolens</i>	1.98	215.38
14049029	"Other" soap nuts	<i>Sapindus mukorossi</i>	1.91	1,119.26
33019011	Fenugreek seed extracted oleoresin	<i>Trigonella foenum-graecum</i>	1.81	45.8
13019042	Oleoresins of fruits, natural	<i>Various species</i>	1.71	21.44
14049040	Betel leaf	<i>Piper betle</i>	1.7	2,439.81
33012942	Lemongrass leaf essential oil	<i>Cymbopogon citratus;</i> <i>Cymbopogon flexuosus</i>	1.7	124.25
09101030	Ginger rhizome, dried bleached	<i>Zingiber officinale</i>	1.69	750.61
33012946	Celery seed essential oil	<i>Apium graveolens</i>	1.48	23.3
09094090	"Other" caraway fruits	<i>Carum carvi</i>	1.38	635.71
33012200	Jasmine leaf concrete	<i>Jasminum officinale</i>	1.35	3.54
33012947	Garlic bulb essential oil	<i>Allium sativum</i>	1.34	60.9
33012933	Palmarosa leaf essential oil	<i>Cymbopogon martini</i> var. <i>motia</i>	1.33	34.33
12119039	"Other" barks, husks, and rinds used in pharmacy or perfumery	<i>Various species</i>	1.32	736.98
09083050	Cardamom seed, small, whole	<i>Elettaria cardamomum</i>	1.32	111.93
09109923	Celery seed, powdered	<i>Apium graveolens</i>	1.28	933.5
09083070	Cardamom seed, powdered	<i>Elettaria cardamomum</i>	1.28	130.22
33012944	Davana herb essential oil	<i>Artemisia pallens</i>	1.28	3.77
12119013	Psyllium seed	<i>Plantago ovata</i>	1.27	765.29
13019032	Olibanum or frankincense oleo-gum-resin	<i>Boswellia</i> spp.	1.27	229.86
13019044	Spice oleoresins, natural	<i>Various species</i>	1.2	98.94
13023100	Agar-agar	<i>Gelidium amansii</i> , <i>G. cartilagineum</i> ; <i>Gracilaria confervoides</i>	1.2	86.22
09041170	Pepper fruit, green freeze-dried	<i>Piper nigrum</i>	1.19	85.19

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14049021	Soap nut, powdered	<i>Sapindus mukorossi</i>	1.16	541.3
09109924	Fenugreek seed, powdered	<i>Trigonella foenum-graecum</i>	1.15	1,092.11
33019033	Ambrette seed oil essence	<i>Hibiscus abelmoschus</i>	1.14	12.51
33019024	Cumin fruit extracted oleoresin	<i>Cuminum cyminum</i>	1.07	28.32
33012949	Turmeric rhizome essential oil	<i>Curcuma longa</i>	1.06	8.67
09070090	“Other” cloves	<i>Syzygium aromaticum</i>	1.04	203.98
09024050	Black tea leaf, in balls or bricks	<i>Camellia sinensis</i>	1.03	145.19
12122010	Seaweeds	Various species	0.94	663.12
12119092	Tukmaria (Tulsi)	<i>Ocimum tenuiflorum</i>	0.89	574.75
12119045	Zedoary rhizome	<i>Curcuma zedoaria</i>	0.89	369.68
13021917	Gymnema leaf extract	<i>Gymnema sylvestre</i>	0.89	55.26
13019049	“Other” oleoresins, natural	Various species	0.88	72.92
09022090	“Other” green tea leaf NESOI	<i>Camellia sinensis</i>	0.87	200.07
09070010	Clove flower bud, extracted (spent)	<i>Syzygium aromaticum</i>	0.82	162.48
09021020	Green tea leaf in packs >25 gm but <=1 kg	<i>Camellia sinensis</i>	0.78	251.42
09091019	“Other” aniseed	<i>Pimpinella anisum</i>	0.76	433.24
09041140	Black pepper fruit, ungarbled	<i>Piper nigrum</i>	0.76	188.36
33019049	Other concentrates of essential oils in fats/fixed/wax obtained by cold absorption or maceration	Various species	0.76	22.69
09102010	Saffron style & stigma	<i>Crocus sativus</i>	0.75	1.8
33012921	Clove leaf & stem essential oil	<i>Syzygium aromaticum</i>	0.73	51.94
12119094	Basil leaf, hyssop leaf, rosemary leaf, sage leaf, and savory leaf	<i>Ocimum basilicum;</i> <i>Hyssopus officinalis;</i> <i>Rosmarinus officinalis;</i> <i>Salvia officinalis;</i> <i>Satureja hortensis;</i> <i>Satureja montana</i>	0.72	343.56
12119070	Mint leaf (all species)	<i>Mentha</i> spp.	0.72	47.03
33012931	Tuberose flower concrete	<i>Polianthes tuberosa</i>	0.71	0.65
09050090	“Other” vanilla excluding vanilla bean & powder	<i>Vanilla planifolia</i>	0.7	20.65
32019020	Chebulic myrobalan fruit extract	<i>Terminalia chebula</i>	0.68	531.21
12040090	“Other” linseed (flaxseed) whether/not broken	<i>Linum usitatissimum</i>	0.66	755.97
09022010	Green tea leaf in packs >3 kg but <= 20 kg	<i>Camellia sinensis</i>	0.66	275.47
33019023	Coriander fruit extracted oleoresin	<i>Coriandrum sativum</i>	0.66	33.24
33030020	Rose flower water	<i>Rosa centifolia</i>	0.61	358.47
09109931	Cardamom husk	<i>Elettaria cardamomum</i>	0.6	289.42
33012924	Eucalyptus leaf/branch essential oil	<i>Eucalyptus</i> spp.	0.6	49.62
12129990	“Other” vegetable products NESOI	Various species	0.58	494.43
09083040	Cardamom, small, whole capsule, bleached or half-bleached	<i>Elettaria cardamomum</i>	0.58	45.66
12119043	Ipecac rhizome & root, dried	<i>Cephaelis acuminata</i>	0.58	11.37
33019059	“Other” terpenic by-product	Various species	0.58	4.61
09062000	Cinnamon bark & tree flowers, crushed or ground	<i>Cinnamomum verum</i>	0.57	255.13

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09109939	Spent spice husks NESOI	Various species	0.53	738.67
09021010	Green tea leaf in packs not exceeding 25 gm	<i>Camellia sinensis</i>	0.52	181.5
09050020	Vanilla fruit, powdered	<i>Vanilla planifolia</i>	0.52	25.77
32012000	Wattle bark extract	<i>Acacia mearnsii</i>	0.47	399.18
15159040	Fixed vegetable oils, edible grade, e.g. of mahua seed or mango seed	<i>Madhuca longifolia,</i> <i>Mangifera indica</i>	0.47	255.64
09042040	Capsicum seed	<i>Capsicum annuum</i>	0.45	461.34
33011910	Ceylon citronella essential oil	<i>Cymbopogon nardus</i>	0.45	70.53
09042030	Capsicum fruit	<i>Capsicum spp.</i>	0.44	264.71
09083060	Cardamom seed, small (mixed)	<i>Elettaria cardamomum</i>	0.44	27.52
33011200	Orange peel essential oil	<i>Citrus aurantium, C. sinensis</i>	0.43	76.65
09061190	"Other" cinnamon	<i>Cinnamomum spp.</i>	0.42	46.92
09083030	Cardamom seed, small Coorg Green	<i>Elettaria cardamomum</i>	0.41	18.58
09041120	Black pepper fruit, light	<i>Piper nigrum</i>	0.4	94.68
12119060	Madagascar periwinkle leaf/flower	<i>Catharanthus roseus</i>	0.39	384.07
33012928	Clove flower bud essential oil	<i>Syzygium aromaticum</i>	0.39	10.48
15159030	Fixed vegetable oils, e.g. of ajowan, capsicum, cardamom, garlic, niger seed, and turmeric	<i>Trachyspermum ammi;</i> <i>Capiscum annuum, Elettaria</i> <i>cardamomum; Allium</i> <i>sativum; Guizotia</i> <i>abyssinica; Curcuma longa</i>	0.39	5.87
14049060	Coconut shell, unworked	<i>Cocos nucifera</i>	0.38	466.05
12119026	Pyrethrum root	<i>Anacyclus pyrethrum</i>	0.38	222.71
13019039	"Other" gum resins, natural	Various species	0.36	142.48
33011300	Lemon peel essential oil	<i>Citrus × limon</i>	0.35	19.12
32019010	Gambier leaf and twig extract	<i>Uncaria gambir</i>	0.34	699.99
32011000	Quebracho bark extract	<i>Aspidosperma quebracho-</i> <i>blanco</i>	0.33	264.09
09041110	Long pepper fruit	<i>Piper longum</i>	0.31	84.71
33012918	Cinnamon leaf essential oil	<i>Cinnamomum verum</i>	0.31	14.73
12119047	Sarsaparilla root	<i>Smilax spp.</i>	0.3	56.02
33019021	Clove flower extracted oleoresin	<i>Syzygium aromaticum</i>	0.29	8.55
33012948	Paprika fruit essential oil	<i>Capiscum annuum</i>	0.26	8.87
33019051	Terpenic by-product flavoring essences, all types, including those for liquors	Various species	0.25	3.58
09102090	"Other" saffron	<i>Crocus sativus</i>	0.25	2.63
33012945	Cumin whole plant essential oil	<i>Cuminum cyminum</i>	0.24	3.32
33012938	Rose flower essential oil	<i>Rosa spp.</i>	0.24	1.8
09070030	Clove stems	<i>Syzygium aromaticum</i>	0.23	99.04
09091029	"Other" star anise fruits	<i>Illicium verum</i>	0.22	270.15
09042050	Allspice fruit	<i>Pimenta dioica</i>	0.22	120.87
33012941	Camphor branch/ leaf essential oil	<i>Cinnamomum camphora</i>	0.22	11.85
09109925	Dill fruit, powdered	<i>Anethum graveolens</i>	0.21	188.89
33019079	"Other" aqueous solutions of essential oils	Various species	0.21	8.69

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12119080	Agarwood (including chips & dust)	<i>Aquilaria</i> spp.	0.2	7.59
09082000	Mace aril	<i>Myristica fragrans</i>	0.19	66.79
33019025	Fennel fruit extracted oleoresin	<i>Foeniculum vulgare</i>	0.19	9.59
09091011	Aniseed fruit	<i>Pimpinella anisum</i>	0.17	97.2
40013000	Balata, gutta-percha, guayule, chicle & similar natural gums	Various species	0.17	80.99
21012030	Tea leaf aroma	<i>Camellia sinensis</i>	0.17	26.44
33012922	Coriander fruit essential oil	<i>Coriandrum sativum</i>	0.17	2.58
09041160	Pepper fruit pinheads	<i>Piper nigrum</i>	0.16	93.58
33012915	Cassia bark essential oil	<i>Cinnamomum</i> spp.	0.15	2.92
13021911	Belladonna herb or root extract	<i>Atropa belladonna</i>	0.15	2.26
09061910	Cassia bark [unspecified species]	<i>Cinnamomum</i> spp.	0.13	111.26
09070020	Clove (other than stem), not extracted	<i>Syzygium aromaticum</i>	0.13	35.37
12040010	Linseed (flax) whether/not broken	<i>Linum usitatissimum</i>	0.12	156.21
12119023	Neem leaf, powdered	<i>Azadirachta indica</i>	0.11	152.46
32030040	Natural indigo whole plant extract	<i>Indigofera tinctoria</i>	0.11	28.58
09022040	Green tea leaf, waste	<i>Camellia sinensis</i>	0.11	26.2
12119096	Garcinia fruit	<i>Garcinia cambogia</i>	0.11	10.91
09095029	"Other" juniper fruits	<i>Juniperus communis</i>	0.1	51.27
12119024	Gymnema leaf, powdered	<i>Gymnema sylvestre</i>	0.1	49.14
09061990	"Other" cassia bark	<i>Cinnamomum</i> spp.	0.1	38.71
33019071	Flavoring essences, all types, including those for liquors (aqueous solutions)	Various species	0.1	8.51
33030030	Keora water (aqueous distillate)	<i>Pandanus odoratissimus</i>	0.09	84.22
15131100	Coconut fatty oil, crude	<i>Cocos nucifera</i>	0.09	70.18
21012020	Black tea extract, quick brewing	<i>Camellia sinensis</i>	0.09	13.09
33012911	Aniseed fruit essential oils	<i>Pimpinella anisum</i>	0.09	3.86
33012917	Cinnamon bark essential oil	<i>Cinnamomum verum</i>	0.09	2.58
33012914	Caraway fruit essential oil	<i>Carum carvi</i>	0.09	2.2
9022030	Green tea leaf (ball, brick, tablet)	<i>Camellia sinensis</i>	0.08	23.4
33012520	Water mint herb essential oil	<i>Mentha aquatica</i>	0.08	7.08
33019041	Flavoring essences, all types, including those for liquors, obtained by cold absorption or maceration	Various species	0.08	5.03
33012936	Petitgrain leaf & stem essential oil	<i>Citrus aurantium</i> subsp. <i>amara</i>	0.08	2.76
33012925	Fennel fruit essential oil	<i>Foeniculum vulgare</i>	0.08	2.18
13019043	Oleoresins of leaves, natural	Various species	0.07	67.9
09095021	Juniper fruit	<i>Juniperus communis</i>	0.07	46.17
14049050	Indian katha heartwood crystallized aqueous extractive	<i>Acacia catechu</i>	0.07	42.96
33012934	Patchouli herb essential oil	<i>Pogostemon cablin</i>	0.07	1.65
33012540	Bergamot mint herb essential oil	<i>Mentha citrata</i>	0.07	1.09
12119048	Sweet flag rhizome	<i>Acorus calamus</i>	0.06	53.58

HS Code	Commodity	Botanical Name	Ag-Year 2010-2011 Value USD Millions	Ag-Year 2010-2011 Volume KG Thousands
13019021	Copal bark resin	Various species	0.06	38.1
09041180	Pepper fruit, frozen	<i>Piper nigrum</i>	0.06	29.05
09109926	Poppy seed, powdered	<i>Papaver somniferum</i>	0.06	25.02
12119033	Cambodge fruit rind and dried pericarp of the fruits	<i>Garcinia cambogia</i>	0.06	20.48
13021200	Licorice root extract	<i>Glycyrrhiza spp.</i>	0.06	18.36
12119011	Ambrette seed	<i>Hibiscus abelmoschus</i>	0.06	18.35
09061110	Cinnamon bark	<i>Cinnamomum spp.</i>	0.06	18.03
33012916	Cedarwood essential oil	<i>Cedrus atlántica, C. deodara, Cupressus funebris</i>	0.06	8.33
13019022	Dammar bark gum	<i>Hopea</i> or <i>Shorea</i> species	0.05	1.75
33012937	Sandalwood essential oil	<i>Santalum album</i>	0.05	0.34
14049030	Hard seeds, pips, hulls & nuts used for carving	Various species	0.04	147.3
09024060	Black tea leaf, waste	<i>Camellia sinensis</i>	0.04	19.5
13019012	African gum	<i>Acacia seyal</i>	0.04	1.63
09102020	Saffron stamen	<i>Crocus sativus</i>	0.04	0.96
13019031	Myrrh oleo-gum-resin	<i>Commiphora spp.</i>	0.03	6.84
33019060	Aqueous distillates of essential oils NESOI	Various species	0.03	0.82
33012923	Dill fruit or herb essential oil	<i>Anethum graveolens</i>	0.03	0.54
12119093	Jujube date (Chinese or Indian)	<i>Ziziphus jujuba, Z. sativa</i>	0.02	34.75
12119021	Belladonna leaf	<i>Atropa belladonna</i>	0.02	3.9
13019046	Oleoresins of roots natural	Various species	0.02	2.51
12129910	Kokum flower	<i>Garcinia indica</i>	0.01	27.6
12119091	Chirata herb	<i>Swertia chirata</i>	0.01	5.05
09094010	Caraway fruit	<i>Carum carvi</i>	0.01	5.03
13019018	Storax trunk balsam	<i>Liquidambar orientalis</i>	0.01	4
14049070	Rudraksha seed	<i>Elaeocarpus sphaericus</i>	0.01	3.52
12119012	Nux-vomica ripe seed, dried	<i>Strychnos nux-vomica</i>	0.01	3.47
12119014	Neem seed	<i>Azadirachta indica</i>	0.01	2.42
33013010	Agarwood essential oil	<i>Aquilaria spp.</i>	0.01	1.59
13019014	Benzoin balsamic resin, block (Benjamin Ras)	<i>Styrax spp.</i>	0.01	1
13019041	Oleoresins of seeds, natural	Various species	0.01	0.78
33012943	Ylang ylang flower essential oil	<i>Cananga odorata forma genuina</i>	0.01	0.26
33012927	Ginger grass essential oil	<i>Cymbopogon martini var. sofia</i>	0.01	0.19
12119044	Rauwolfia root	<i>Rauwolfia serpentina</i>	0.01	0.05
12112000	Ginseng root	<i>Panax spp.</i>	0	2.37
12119095	Lovage root	Species uncertain	0	2
13019015	Benzoin balsamic resin, almonds or teas (Benjamin Cowrie)	<i>Styrax spp.</i>	0	1
13019017	Gum tragacanth	<i>Astragalus gummifer</i>	0	0.92
13022000	Pectic substances, pectates	Various species	0	0.85

HS Code	Commodity	Botanical Name	Ag-Year 2010-2011 Value USD Millions	Ag-Year 2010-2011 Volume KG Thousands
12119046	Costus root	<i>Saussurea costus</i>	0	0.5
13019034	Xanthan gum	<i>Xanthomonas campestris</i>	0	0.31
09030000	Maté leaf	<i>Ilex paraguariensis</i>	0	0.19
12102000	Hop strobile, in pellets	<i>Humulus lupulus</i>	0	0.1
12119025	Cubeb fruit, powdered	<i>Piper cubeba</i>	0	0.1
13021913	Nux-vomica seed extract	<i>Strychnos nux-vomica</i>	0	0.05
13021914	Ginseng extract	<i>Panax spp.</i>	0	0.05
12101000	Hop strobile, whole	<i>Humulus lupulus</i>	0	0.03
9091021	Star anise fruit	<i>Illicium verum</i>	0	0.02
12114000	Poppy straw	<i>Papaver somniferum</i>	0	0.02
12119041	Belladonna root	<i>Atropa belladonna</i>	0	0.02
33012913	Cananga flower essential oil	<i>Cananga odorata forma macrophylla</i>	0	0.02
09061120	Cinnamon tree flower	<i>Cinnamomum spp.</i>	0	0
12119015	Jojoba seed	<i>Simmondsia chinensis</i>	0	0
12129920	Mahua flower	<i>Madhuca latifolia</i>	0	0
13019033	Mastic branch or stem gum	<i>Pistacia lentiscus var. latifolius</i>	0	0
13021300	Hop strobile extract	<i>Humulus lupulus</i>	0	0
33012912	Cajuput leaf essential oil	<i>Melaleuca cajuputi</i>	0	0

**BOTANICAL PRODUCT SPECIFICATIONS**  
**Curry leaf**  
**a product of India**

<b>PRODUCT</b>	<b>Saurabhanimba (leaf)<sup>5</sup></b>
<b>Botanical name</b>	<i>Murraya koenigii</i> (L.) Spreng (Fam. Rutaceae)
<b>Pharmacopoeial name</b>	Murrayae folium
<b>Part used</b>	Dried leaves
<b>Cultivated or wild</b>	Cultivated
<b>Storage</b>	Store protected from moisture
<b>IDENTIFICATION</b>	
<b>Characters</b>	Colour: light greenish Odour: characteristically aromatic Taste: acrid
<b>Macroscopic</b>	As per API Monograph Description (a)
<b>Microscopic</b>	As per API Monograph Description (b)
<b>Thin-layer chromatography</b>	As per API Monograph TLC test
<b>TESTS</b>	
<b>Foreign matter</b>	NMT 2% (API Appendix 2.2.2)
<b>Total ash</b>	NMT 12% (API Appendix 2.2.3)
<b>Acid-insoluble ash</b>	NMT 2% (API Appendix 2.2.4)
<b>Alcohol-soluble extractive</b>	NLT 20% (API Appendix 2.2.7)
<b>Water-soluble extractive</b>	NLT 34% (API Appendix 2.2.8)

<sup>5</sup> Ayurvedic Pharmacopoeia Committee. Saurabhanimba (Leaf). In: *The Ayurvedic Pharmacopoeia of India*, Part I, Volume VI. New Delhi, India. Government of India Ministry of Health and Family Welfare, Department of Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy (AYUSH). 2008.

CONTAMINATION	
<b>Microbial quality</b>	Total aerobic microbial count NMT $10^5$ cfu per g; Total combined yeast and mold count NMT $10^3$ cfu per g; Absence of <i>Escherichia coli</i> , <i>Salmonella</i> spp., <i>Staphylococcus aureus</i> , and <i>Pseudomonas aeruginosa</i>
<b>Heavy metals</b>	NMT 10.0 ppm lead NMT 0.3 ppm cadmium NMT 1 ppm mercury NMT 3 ppm arsenic
<b>Pesticide residues</b>	Complies with the Export Inspection Council (EIC) requirements for export
THERAPEUTIC USES	
<b>As a single drug in the Ayurvedic System of Medicine:</b>	The powdered leaf or leaf juice are used to treat piles, diarrhea, emesis, burning sensation, non-healing ulcer, fever, itching, helminthiasis, leprosy / diseases of skin, metabolic disorder, dysentery, pain / colic, emaciation, edema, and leucoderma / vitiligo.

**BOTANICAL RAW MATERIALS (indicative bulk prices)**  
**INR = Indian Rupees / NPR = Nepalese Rupees / USD = United States Dollars**

Product	Botanical Name	Cultivated or Wild	Origin	Price per kg	Basis
Amla fruit	<i>Phyllanthus emblica</i>	Wild/Cult	Nepal	NPR 80-105	Nepalgunj / Kathmandu
Arjuna bark powder	<i>Terminalia arjuna</i>	Wild/Cult	India	USD 11.5	FOB export
Ashwagandha root powder	<i>Withania somnifera</i>	Cult/Wild	India	USD 9	FOB export
Belleric myrobalan fruit	<i>Terminalia bellerica</i>	Wild/Cult	India	NPR 16-19	Tanakpur/Lucknow/Kolkata/Delhi
Belleric myrobalan fruit	<i>Terminalia bellerica</i>	Wild/Cult	Nepal	NPR 60	Kathmandu
Black pepper fruit, whole**	<i>Piper nigrum</i>	Cultivated	Sri Lanka	USD 11.25	FOB Sri Lanka
Calamus root	<i>Acorus calamus</i>	Cult/Wild	India	NPR 93-104	Tanakpur/Lucknow/Kolkata/Delhi
Calamus root	<i>Acorus calamus</i>	Cult/Wild	Nepal	NPR 50-60	Nepalgunj/Kathmandu
Cardamom seed, small	<i>Elettaria cardamomum</i>	Cultivated	India	INR 547.53	Vandanmettu/Bodinayakanur
Cardamom seed, whole**	<i>Elettaria cardamomum</i>	Cultivated	Sri Lanka	USD 52	FOB Sri Lanka
Chebulic myrobalan fruit	<i>Terminalia chebula</i>	Wild	India	NPR 24-37	Tanakpur/Lucknow/Delhi/Kolkata
Chebulic myrobalan fruit	<i>Terminalia chebula</i>	Wild	Nepal	NPR 70	Kathmandu
Cinnamon bark	<i>Cinnamomum zeylanicum</i>	Cultivated	India	NPR 99-128	Tanakpur/Delhi/Kolkata/Lucknow
Cinnamon bark (Dalchini)	<i>Cinnamomum zeylanicum</i>	Cultivated	Nepal	NPR 90	Nepalgunj
Cinnamon bark, Ceylon	<i>Cinnamomum verum</i>	Cultivated	Sri Lanka	USD 17.85	FOB Sri Lanka
Clove flower bud	<i>Syzygium aromaticum</i>	Cultivated	India	INR 1016.67	Cochin
Clove flower bud**	<i>Syzygium aromaticum</i>	Cultivated	Sri Lanka	USD 24.85	FOB Sri Lanka
Coriander fruit, Rajasthan green / Guntakal	<i>Coriandrum sativum</i>	Cultivated	India	INR 61-62.5	Chennai
Cumin seed No 1 ordinary	<i>Cuminum cyminum</i>	Cultivated	India	INR 147.5-165	Chennai
Fennel fruit	<i>Foeniculum vulgare</i>	Cultivated	India	INR 97.5	Chennai
Fenugreek seed	<i>Trigonella foenum-graecum</i>	Cultivated	India	INR 34.5	Chennai
Garlic bulb, medium	<i>Allium sativum</i>	Cultivated	India	INR 77.5	Chennai
Ginger rhizome	<i>Zingiber officinale</i>	Cultivated	India	INR 105-112.5	Cochin
Ginger rhizome, dried (Suntho)	<i>Zingiber officinale</i>	Cultivated	Nepal	NPR 170-200	Nepalgunj/Kathmandu
Ginger rhizome, fresh (Aduwa)	<i>Zingiber officinale</i>	Cultivated	Nepal	NPR 15	Nepalgunj
Ginger rhizome, slices**	<i>Zingiber officinale</i>	Cultivated	Sri Lanka	USD 10.9	FOB Sri Lanka
Himalayan rhubarb petiole (Amalbed /Chulthi)	<i>Rheum australe</i>	Wild	Nepal	NPR 85-130	Kathmandu/Nepalgunj
Himalayan rhubarb petiole	<i>Rheum australe</i>	Wild	India	NPR 120-152	Tanakpur/Delhi/Lucknow/Kolkata

Product	Botanical Name	Cultivated or Wild	Origin	Price per kg	Basis
(Amalbed / Chulthil)					
Himalayan rhubarb root and rhizome (Padamchal)	<i>Rheum australe</i>	Wild	Nepal	NPR 80-95	Kathmandu / Nepalganj
Indian cardamom seed, large	<i>Amomum subulatum</i>	Cult/Wild	India	INR 812.5	Gangtok
Indian cardamom seed (Alaichi)	<i>Amomum subulatum</i>	Cult/Wild	Nepal	NPR 1100	Kathmandu
Jatamansi root	<i>Nardostachys grandiflora</i>	Wild	Nepal	NPR 400-410	Nepalganj/Kathmandu
Long pepper fruit (Pipla)	<i>Piper longum</i>	Cult/Wild	Nepal	NPR 300-550	Nepalganj/Kathmandu
Mace aril	<i>Myristica fragrans</i>	Cultivated	India	INR 1250	Cochin
Morel mushroom (Guchhichyau)	<i>Morchella conica</i>	Wild	Nepal	NPR 12000	Nepalganj
Nutmeg kernel (with shell)	<i>Myristica fragrans</i>	Cultivated	India	INR 380	Cochin
Nutmeg kernel (without shell)	<i>Myristica fragrans</i>	Cultivated	India	INR 680	Cochin
Psyllium seed, powdered steam sterilized	<i>Plantago ovata</i>	Cultivated	India	USD 9.5	FOB CA
Senna leaf, TBC, steam sterilized	<i>Cassia angustifolia</i>	Cultivated	India	USD 4.5	FOB Origin
Shatavari root	<i>Asparagus racemosus</i>	Wild/Cult	India	NPR 560-720	Tanakpur/Lucknow/Delhi/Kolkata
Shatavari root	<i>Asparagus racemosus</i>	Wild/Cult	Nepal	NPR 390-500	Kathmandu / Nepalganj
Turmeric rhizome	<i>Curcuma longa</i>	Cultivated	India	INR 50.12-82.5	Erode/Chennai
Winged Prickly ash fruit (with seed)	<i>Zanthoxylum armatum</i>	Wild	India	NPR 120-128	Tanakpur/Delhi/Kolkata/Lucknow
Winged Prickly ash fruit (with seed) (Timur)	<i>Zanthoxylum armatum</i>	Wild	Nepal	NPR 100-250	Nepalganj/Kathmandu

\*Certified Organic / \*\* Certified Organic & Fair Trade

### BOTANICAL EXTRACTS (indicative bulk prices)

Product	Standard	Origin	USD Price per kg	Basis
Amla fruit ( <i>Phyllanthus emblica</i> )	25% anthocyanins	India	20	FOB export
Ashwagandha root powdered extract ( <i>Withania somnifera</i> )	2.5%	India	19	FOB export
Gymnema leaf, dry extract ( <i>Gymnema sylvestre</i> )	65-80%	India	29-51	FOB export

#### Notes:

- (1) **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* (Volumes I through VI), the *Siddha Pharmacopoeia of India* (Part I, Volume I), the *Unani Pharmacopoeia of India* (Volumes I through V), the *Indian Pharmacopoeia 2010*, and/or the *Indian Herbal Pharmacopoeia 2002*.
- (2) **Sources of price information:** (1) Asia Network for Sustainable Agriculture and Bioresources (ANSAB) Price List of selected NTFPs and Spice in Nepali and Indian Markets November 2011; (2) Spices Board India (SPI) Weekly Domestic Prices; (3) Other price information providers from ingredient supply companies.

**MEETINGS AND TRADE SHOWS**  
**INDIA and other Southern, Central and Western Asian Countries**

**December 5-7, 2011**

**MIDDLE EAST NATURAL & ORGANIC PRODUCTS EXPO (MENOPE) 2011**

Venue: Dubai International Exhibition & Convention Centre, Dubai, UAE  
Patrons: UAE Ministry of Health, UAE Ministry of Environment & Water, Dubai Municipality.  
Organizer: Global Links Dubai LLC, a division of Conex Exhibitions LLC.  
Supporters: International Federation of Organic Agriculture Movements (IFOAM), Chamber of Herbal Industries of the Philippines, Korea Health Supplement Association, International Competence Centre of Agriculture, MEVEG.  
Contact: Global Links Dubai LLC P.O. Box 34351, Dubai, U.A.E  
TEL: +971 4 3322283, 3327274  
FAX: +971 4 3322253  
EMAIL: [info@naturalproductme.com](mailto:info@naturalproductme.com)  
WEB: <http://www.naturalproductme.com>

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

**February 1-21, 2012**

**3-WEEKS INTERNATIONAL TECHNO-MANAGEMENT PROGRAMME:**

**“SUPPLY & VALUE-CHAIN OF AROMATIC PLANT-BASED ESSENTIAL OIL, FRAGRANCE & FLAVOR & HERBAL INDUSTRY”**

Contact: Fragrance & Flavour Development Centre, P.O. Makrand Nagar, GT Road, Kannauj-209726 (U. P.), India  
TEL: +91-5694-234791/234465  
FAX: +915694235242  
WEB: <http://www.ffdcindia.org/itmp.htm>

**February 17-19, 2012**

**12<sup>TH</sup> INTERNATIONAL CONGRESS OF ETHNOPHARMACOLOGY**

Venue: School of Natural Product Studies Jadavpur University, Kolkata, India  
Contact: Dr. Pulok K. Mukherjee PhD, FRSC, Department of Pharmaceutical Technology, Jadavpur University, Kolkata  
TEL/FAX: +91 33 24146046 / +9 1801 7783910  
E-MAIL: [info@ise-snpsju.org](mailto:info@ise-snpsju.org) or [natprodpk@yahoo.com](mailto:natprodpk@yahoo.com)  
WEB: <http://www.ise-snpsju.org>

Sessions of interest to producers, traders and exporters of medicinal plants & extracts will include:

- Global trade and commercialization of Ayurveda and other ancient systems of medicine
- Ethnopharmacology, bio-cultural diversity and conservation of medicinal plants
- International co-operation for promotion and development of natural products.

**February 23-25, 2012**

**PANACEA – 5<sup>th</sup> NATURAL PRODUCTS EXPO INDIA**

Venue: World Trade Centre Complex, Mumbai, India  
Organizers: Seishido Communications  
Contact: Ms. Mini Chakravarty, CEO  
E-MAIL: [mini@seishidocommunications.com](mailto:mini@seishidocommunications.com)  
WEB: <http://www.seishidocommunications.com>

**Exhibitor Profile: Raw Material & Ingredients:** Plant Extracts, Raw and Encapsulated Herbs, Spices, Natural Ingredients, Nutraceuticals, Pro-Biotics Functional Food & Bakery Ingredients, Cosmeceutical, Oilseeds & Oilseed extract Natural Essence, Natural colors & Flavorings etc....

**Natural Medicinal products:** Herbal, Ayurveda, Naturopathy, Homeopathy, Unani, Siddha, Chinese medicines and other Traditional medicines.... **Other Natural Products:** Textile Fibers, Detergents, Pesticides, Fertilizers & Crop Care, Household Cleaners, Forest Produce, Bio-energetics & Essence Sticks...

**February 24-26, 2012**

**MEDI HERBAL EXPO 2012**

Venue: Pragati Maidan, New Delhi, India  
Organizer: Media Today Pvt. Ltd., New Delhi, India, T-30, First Floor, Khirki Extension, Malviya Nagar, New Delhi, India-110 017  
TEL: +(91)-(11)-26682045/26681671  
FAX: +(91)-(11)-26680153  
WEB: <http://www.biztradeshows.com/trade-events/medi-herbal-expo.html>

**Exhibitor profile:** Herbal and Medicinal Plants, Herbal Foods Products, Herbal Tea, Herbal Supplements, Biotechnology, Tissue Culture, Greenhouse Technology, Value Added Products, Health Products, Drinks, Seeds, Crops, Compost, Bio Manures, Bio fertilizers, and more.

**May 16-19, 2012**

**NATURAL AND ORGANIC PRODUCTS EXHIBITION AND CONFERENCE**

Venue: Amman International Motor Show, Airport Highway, Amman, Jordan  
Organizer: Al-Jadwal Expo Company, P. O. Box 445, Amman- Jordan, 11831  
TEL: +96265818839  
FAX: +96265818026  
EMAIL: [info@organicfood.jo.com](mailto:info@organicfood.jo.com) or [skiswani@organicfood-jo.com](mailto:skiswani@organicfood-jo.com)  
WEB: <http://www.organicfood-jo.com>

**Exhibit Profile:** Although mainly exhibitors of natural and organic food products there will be exhibitors of bulk herbs and spices, herbal products, condiments, seasonings, nutritional products, coffees and teas.

**October 22-25, 2012**

**IV INTERNATIONAL SYMPOSIUM ON SAFFRON BIOLOGY AND TECHNOLOGY**

Venue: Kashmir, India  
Contact: Prof. Dr. F.A. Nehvi, Sher-e-Kashmir University of Agriculture, K.D. Research Station, Old Airport – PO BOX 905, GPO Srinagar, J&K, 190001, India.  
TEL: +91 1942305084 / FAX: +91 1942305084  
E-MAIL: [f.nehvi@rediffmail.com](mailto:f.nehvi@rediffmail.com)  
WEB: <http://www.ishs.org/news/?p=1117>

**December 27-30, 2012**

**5<sup>TH</sup> WORLD AYURVEDA CONGRESS (5<sup>TH</sup> WAC) AND AROGYA EXPO**

Venue: Lal Parade Ground, Bhopal, India  
Organizers: Vijnana Bharati India (VIBHA); Department of AYUSH (Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy), Ministry of Health and Family Welfare, Government of India  
Partners: Pharmaceuticals Export Promotion Council (PHARMEXCIL), Dhootapapeshwar, Ministry of Commerce & Industry Government of India, Avs, Kottakal.  
Contacts: WAC Secretariat Organising Committee Office, ZCCK Premises, OPD Entrance NIMHANS Bengaluru, Karnataka 560029 India; TEL: 91 80 265 62 555  
Arogya Expo Contact: Mr Ranjit Puranik  
EMAIL: [arogya@ayurworld.org](mailto:arogya@ayurworld.org) / TEL: +91 98470 75750  
Buyer-Seller Meet Contact: Mr. S Murali Krishna  
EMAIL: [info@pharmexcil.com](mailto:info@pharmexcil.com) or [research@pharmexcil.com](mailto:research@pharmexcil.com)  
TEL: +91 92461 99792  
WEB: <http://www.ayurworld.org>

AROGYA Expo Exhibitor profile includes collectors, cultivators, suppliers and traders of medicinal plants for use in Ayurvedic herbal medicinal products.

There will also be an organized buyer-seller meet with a focus on Ayurveda and herbal value-added products, powders and extracts, Ayurvedic and herbal formulations, dietary supplements, nutraceuticals, functional foods and botanical drugs developed for specific world markets.

## NORTH AMERICA

### TOP THREE NORTH AMERICAN EXPORTERS IN 2010: USA, CANADA, GUATEMALA

Using the inclusion criteria outlined in **Table 1** (see Introduction), **Table 11** shows the 2010 export value (USD) and volume (kg) for 17 North American countries. The top-three North American exporters in terms of reported Customs Value were the United States of America, Canada, and the Republic of Guatemala.

Using the inclusion criteria of **Table 1**, the USA exported 413,089,719 kg of botanical and natural ingredients (about 3.3% of world total export volume) with a reported FOB Customs Value of \$1,927,897,355.00 (about 5.9% of world total)

Although there are other North American countries whose 2010 trade data is not available, **Table 11** includes the countries that indeed represent most of North America's botanical export value and volume. North American countries whose 2010 data is not available (and thus not represented in **Table 11**) include: Federation of Saint Kitts and Nevis, Grenada, Republic of Cuba, Republic of Haiti, Republic of Honduras, Republic of Trinidad and Tobago, and Saint Lucia. **Table 12** provides export trade data for North America's leading exporter in 2010, **United States of America**.

**Table 11:** 2010 Exports of Selected Botanical and Natural Ingredients from **NORTH AMERICAN** countries in order predominance by reported FOB Customs Value (USD per kg)

	North American Exporter	Total Value (USD)	Total Volume (kg)
	Estimated World Total	\$32,702,904,493.00	12,486,447,404
1.	United States of America	\$1,927,897,355.00	413,089,719
2.	Canada	\$701,833,916.00	802,797,321
3.	Republic of Guatemala	\$325,477,038.00	27,303,580
4.	United Mexican States	\$312,651,664.00	96,882,558
5.	Dominican Republic	\$21,869,015.00	22,634,325
6.	Jamaica	\$14,753,762.00	2,026,909
7.	Republic of Costa Rica	\$10,248,630.00	6,584,411
8.	Republic of El Salvador	\$3,149,750.00	426,938
9.	Belize	\$2,205,740.00	1,140,591
10.	Republic of Panama	\$2,005,366.00	624,188
11.	Commonwealth of Dominica	\$754,253.00	51,827
12.	Commonwealth of the Bahamas	\$706,774.00	50,345
13.	Saint Vincent and the Grenadines	\$432,521.00	785,848
14.	Republic of Nicaragua	\$366,500.00	202,280
15.	Aruba	\$167,192.00	25,895
16.	Barbados	\$56,215.00	8,590
17.	Antigua and Barbuda	\$511.00	81

**Table 12:** 2010 Exports of Selected Botanical and Natural Ingredients from the USA  
in order predominance by reported FOB Customs Value (USD per kg)

USA 2010 EXPORTS OF BOTANICAL AND NATURAL INGREDIENTS			
HS Code	Commodity	Trade Value	Trade Quantity
	<b>USA TOTAL 2010 EXPORTS</b>	<b>\$1,927,897,355.00</b>	<b>413,089,719</b>
130213	Hop strobile extract ( <i>Humulus lupulus</i> )	\$206,794,556	5,791,753
151590	Fixed vegetable fats & oils & their fractions, whether/not refined but not chemically modified	\$175,495,345	119,059,323
210120	Extracts, essences and concentrates of tea leaf ( <i>Camellia sinensis</i> ), jasmine flower ( <i>Jasminum officinale</i> ), or maté leaf ( <i>Ilex paraguariensis</i> )	\$166,229,349	22,053,659
180400	Cocoa seed ( <i>Theobroma cacao</i> ) butter, fat and oil	\$106,626,700	23,596,017
130219	Vegetable saps & herbal extracts (excl. of 1302.11-1302.13)	\$106,003,945	6,784,139
330129	Essential oils other than those of citrus fruit (excl. of 3301.24 & 3301.25)	\$93,186,511	3,925,104
330124	Essential oils of peppermint leaf ( <i>Mentha x piperita</i> )	\$85,779,848	2,137,790
121190	Plants & parts of plants, incl. seeds & fruits, of a kind used primarily in perfumery / pharmacy / for insecticidal / fungicidal / similar purposes, fresh / dried, whether / not cut / crushed / powdered	\$80,133,240	14,008,595
130232	Mucilages & thickeners, whether / not modified, derived from locust beans / locust bean seeds / guar seeds	\$72,133,455	16,473,570
130239	Mucilages & thickeners (excl. of 1302.31 & 1301.32), whether/not modified, derived from vegetable products	\$70,804,444	6,278,282
121120	Ginseng root ( <i>Panax spp.</i> )	\$63,236,227	442,879
330112	Essential oils of orange peel ( <i>Citrus spp.</i> )	\$61,319,012	9,809,526
121020	Hop strobile ( <i>Humulus lupulus</i> ) in pellets	\$60,542,783	7,714,817
330190	Essential oils (terpeneless/not), including concretes & absolutes (excl. of 3301.12-3301.29); extracted oleoresins; concentrates of essential oils in fats, in fixed oils, in waxes / the like, obtained by enfleurage / maceration; terpenic by-products of the deterpenation of essential oils; aqueous distillates & aqueous solutions of essential oils	\$49,183,408	6,145,518
130212	Licorice root extract ( <i>Glycyrrhiza spp.</i> )	\$46,340,837	5,577,899
330125	Essential oils of mints other than peppermint	\$40,691,301	1,189,158
330119	Essential oils of citrus fruit, other than of orange or lemon peel	\$37,486,575	1,932,936
130190	Lac; Natural gums (excl. of 1301.20), resins, gum-resins & oleoresins (e.g., balsams)	\$32,452,592	10,133,547
1204	Flax seed, a.k.a. Linseed ( <i>Linum usitatissimum</i> )	\$32,313,688	59,213,707
330113	Essential oils of lemon peel ( <i>Citrus x limon</i> )	\$32,031,407	1,493,536

091099	Spices NESOI in Chapter 09	\$31,985,573	8,501,952
330130	Extracted resinoids	\$31,656,719	10,323,357
090230	Black tea leaf ( <i>Camellia sinensis</i> ) (fermented & partly fermented) in immediate packings not >3kg	\$31,589,248	3,783,924
151319	Coconut endosperm ( <i>Cocos nucifera</i> ) fatty oil - refined	\$16,904,076	12,084,693
121220	Seaweeds & other algae, fresh/chilled/frozen/dried, whether/not ground	\$16,238,022	1,379,668
130120	Gum arabic ( <i>Acacia senegal</i> )	\$16,203,482	4,301,154
090412	Pepper fruit ( <i>Piper nigrum</i> ), crushed or ground	\$16,061,212	3,175,532
090210	Green tea leaf ( <i>Camellia sinensis</i> ) in immediate packings of a content not >3kg	\$15,792,896	3,140,689
090240	Black tea leaf ( <i>Camellia sinensis</i> ) (fermented & partly fermented) in immediate packings of a content >3kg	\$15,697,785	2,764,350
320190	Tanning extracts of vegetable origin other than quebracho extract / wattle extract; tannins & their salts, ethers, esters & other derivatives	\$12,231,576	4,412,523
090420	Allspice fruit ( <i>Pimenta dioica</i> ) or Capsicum fruit ( <i>Capsicum annuum</i> ; <i>C. frutescens</i> ), crushed or ground	\$12,024,501	3,588,163
090411	Pepper fruit ( <i>Piper nigrum</i> ), whole	\$11,230,039	2,429,020
140490	Vegetable products NESOI	\$10,953,215	6,047,527
121299	Locust beans (carob) & sugar cane (excl. of 1212.91), fresh / chilled / frozen / dried, whether / not ground; fruit stones & kernels & other vegetable products (including unroasted chicory roots of the variety <i>Cichorium intybus sativum</i> )	\$8,676,305	3,467,723
130220	Pectic substance, pectinates & pectates	\$7,916,000	673,658
151311	Coconut endosperm ( <i>Cocos nucifera</i> ) fatty oil - crude	\$7,639,898	7,856,703
091091	Mixtures of 2 or more botanicals of different headings of HS 09.04-09.10	\$7,558,747	2,115,713
130231	Agar-agar ( <i>Gelidium amansii</i> , <i>G. cartilagineum</i> , <i>Gracilaria confervoides</i> )	\$5,518,818	264,008
090220	Green tea leaf ( <i>Camellia sinensis</i> ), in immediate packings of a content >3kg	\$5,277,046	1,146,496
090620	Cinnamon bark ( <i>Cinnamomum</i> spp.) & cinnamon-tree flowers, crushed/ground	\$3,501,733	1,343,055
320110	Quebracho wood extract ( <i>Aspidosperma quebracho-blanco</i> )	\$3,473,726	1,457,636
090500	Vanilla fruit ( <i>Vanilla planifolia</i> or <i>V. tahitensis</i> )	\$3,193,922	120,591
091010	Ginger rhizome ( <i>Zingiber officinale</i> )	\$2,694,031	1,114,788
090920	Coriander fruit ( <i>Coriandrum sativum</i> )	\$2,486,976	1,183,648
090930	Cumin fruit ( <i>Cuminum cyminum</i> )	\$1,717,850	466,509
121010	Hop strobile ( <i>Humulus lupulus</i> ), whole	\$1,550,838	195,906
090810	Nutmeg kernel ( <i>Myristica fragrans</i> )	\$1,500,097	155,355

091030	Turmeric rhizome ( <i>Curcuma longa</i> )	\$1,437,262	215,938
090830	Cardamom seed ( <i>Amomum</i> spp. or <i>Elettaria cardamomum</i> )	\$885,900	75,104
090700	Clove flower bud and stems ( <i>Syzygium aromaticum</i> )	\$768,344	160,297
090611	Cinnamon bark ( <i>Cinnamomum zeylanicum</i> ) & cinnamon-tree flowers, whole	\$715,484	208,981
400130	Balata, gutta-percha, guayule, chicle & similar natural gums	\$612,154	97,610
090910	Anise fruit ( <i>Pimpinella anisum</i> ) or Star anise fruit ( <i>Illicium verum</i> )	\$541,837	112,012
090820	Mace aril ( <i>Myristica fragrans</i> )	\$515,582	41,274
320120	Wattle bark extract ( <i>Acacia mearnsii</i> )	\$504,484	337,032
090619	Cinnamon (excl. of 0906.11) & cinnamon-tree flowers, neither crushed/ground	\$500,872	161,951
090950	Fennel fruit ( <i>Foeniculum vulgare</i> ) or Juniper fruit ( <i>Juniperus communis</i> )	\$353,937	143,948
0903	Maté leaf ( <i>Ilex paraguariensis</i> )	\$274,894	41,278
090940	Caraway fruit ( <i>Carum carvi</i> )	\$256,775	145,291
121140	Poppy straw ( <i>Papaver somniferum</i> )	\$202,414	55,244
130211	Opium ( <i>Papaver somniferum</i> )	\$142,844	6,778
091020	Saffron style & stigma ( <i>Crocus sativus</i> )	\$125,018	30,885

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UN Comtrade Database

**BOTANICAL PRODUCT SPECIFICATIONS**  
**Saw Palmetto Extract**  
**A Product of the United States of America**

PRODUCT	Saw Palmetto Extract USP <sup>6</sup>
Botanical name	<i>Serenoa repens</i> (Bartram) Small (Fam. Arecaceae) [ <i>Serenoa serrulatum</i> Schultes; <i>Sabal serrulata</i> (Michaux) Nichols].
Pharmacopoeial name	Extractum Sabalis serrulatae fructus
Part used	Partially dried ripe fruit
Cultivated or Wild	Wild collected
Production	The extract is prepared from comminuted Saw Palmetto USP by extraction with hydroalcoholic mixtures or solvent hexane, or by supercritical extraction with carbon dioxide.
Drug to Extract Ratio	Between 8:1 and 14.3:1 (w/w)
IDENTIFICATION	
Gas Chromatography (GC)	The retention times of the 11 major peaks in the chromatogram of the Test solution correspond to those in the chromatogram of the Standard solution, as obtained in the test for Content of fatty acids.
TESTS	
Content of fatty acids	Contains not less than 70.0% and not more than 95.0% of fatty acids
Content of sterols	Contains not less than 0.2% and not more than 0.5% of sterols, calculated on the anhydrous basis
Content of long-chain alcohols	The lipophilic extract contains not less than 0.15% and not more than 0.35% of long-chain alcohols. The hydroalcoholic extract contains not less than 0.1% and not more than 0.15% of long-chain alcohols
Iodine value	Between 40 and 50 (USP 401)
Saponification value	Between 210 and 250 (USP 401)
Unsaponifiable matter	Between 1.8% and 3.5% (USP 401)
Water	Not more than 3% in the hydroalcoholic extract (USP 921, Method I)
Alcohol content	Not more than 1% (USP 611, Method II)
Residual solvents	Meets the requirements for Botanical Extracts USP <565>
Pesticide residues	Meets the requirements for Botanical Extracts USP <565>
Heavy metals	NMT 40 µg per g (USP 231 Method II)
MICROBIAL CONTAMINATION	
Total aerobic microbial count	Acceptance criterion: NMT $10^4$ cfu/g (USP <2021>)
Total combined yeast/moulds count	Acceptance criterion: NMT $10^3$ CFU/g (USP <2021>)
<i>Escherichia coli</i>	Absent (USP <2021>)
<i>Salmonella</i>	Absent (USP <2021>)

<sup>6</sup> United States Pharmacopoeial Convention. Saw Palmetto Extract. In: *United States Pharmacopeia* 34<sup>th</sup> Revision National Formulary 29<sup>th</sup> Edition (USP34-NF29). Rockville, MD: United States Pharmacopoeial Convention. 2011.

**BOTANICAL RAW MATERIALS (indicative bulk prices)**  
**CAD = Canadian Dollar – USD = United States Dollar**

Product	Botanical Name	Grade	Cultivated Or Wild	Origin	Price per kg	Basis
American ginseng root	<i>Panax quinquefolius</i>	Hong Kong top	Wild	USD	USD 1212.5	FOB
American ginseng root	<i>Panax quinquefolius</i>	USP-NF	Cultivated	Wisconsin	USD 72	Farmgate-WI
American ginseng root*	<i>Panax quinquefolius</i>	USP-NF	Cultivated	Canada	USD 75	Farmgate
Black cohosh rhizome	<i>Actaea racemosa</i>	Extract quality	Wild	USA	USD 17.1	EXW
Cardamom seed	<i>Elettaria cardamomum</i>	USP-NF	Cultivated	Guatemala	USD 61.5	FOB
Coriander fruit	<i>Coriandrum sativum</i>	NK	Cultivated	Canada	USD 1.39	Spot NY
Echinacea herb*	<i>Echinacea purpurea</i>	PhEur	Cultivated	Pacific NW	USD 5.95	FOB Pac NW
Echinacea root*	<i>Echinacea purpurea</i>	USP-NF	Cultivated	California	USD 12.75	Farmgate-CA
Echinacea root*	<i>Echinacea purpurea</i>	PhEur	Cultivated	Pacific NW	USD 22.04	FOB Pac NW
Goldenseal rhizome	<i>Hydrastis canadensis</i>	Extract quality	Cultivated	Wisconsin	USD 79.3	Farmgate WI
Goldenseal rhizome	<i>Hydrastis canadensis</i>	NK	Wild	USA	USD 74	EXW
Goldenseal rhizome powdered steam sterilized	<i>Hydrastis canadensis</i>	California Prop 65 compliant	Wild/Cult	USA	USD 95	FOB CA
Marshmallow root	<i>Althaea officinalis</i>	NK	Cultivated	USA	USD 13.9	FOB Pac NW
Peppermint leaf*	<i>Mentha x piperita</i>	PhEur	Cultivated	USA	USD 8.15	FOB Pac NW
Pleurisy root	<i>Asclepias tuberosa</i>	BHP	Cultivated	USA	USD 41.77	FOB CA
Saw palmetto fruit	<i>Serenoa repens</i>	USP-NF	Wild	Florida	USD 6.6	EXW-FL
Saw palmetto fruit, powder	<i>Serenoa repens</i>	NK	Wild	USA	USD 12.75	FOB export
Slippery elm bark*	<i>Ulmus rubra</i>	USP	Wild	USA	USD 30.42	FOB USA
Wild Cherry bark	<i>Prunus serotina</i>	BHP	Wild	USA	USD 16.5	FOB CA
Yucca	<i>Yucca glauca</i>	NK		Mexico	USD 6	FOB export

\* Certified organic – NK = Grade not known

**Notes:**

- (1) **Quality Standards:** Standards for the above listed medicinal plants are published in the *United States Pharmacopeia - National Formulary* (USP-NF). Some also has quality standards published in the *Farmacopea Herbolaria de los Estados Unidos Mexicanos* (FHEUM) and/or in the *European Pharmacopoeia* (PhEur).

**BOTANICAL EXTRACTS (Indicative bulk prices)**

Product	Standard	Origin	Price USD/kg	Basis
Goldenseal rhizome, powdered extract ( <i>Hydrastis canadensis</i> )	5% alkaloids (hydrastine & berberine)	USA	90	FOB USA
Saw palmetto fruit extract (EU standard) ( <i>Serenoa repens</i> )	min 85% and max 95% fatty acids	USA	35	FOB USA
Saw palmetto fruit CO2 soft extract ( <i>Serenoa repens</i> )	Min 85% fatty acids, 15% phytosterols	USA	32	FOB CA

## **MEETINGS AND TRADE SHOWS NORTH AMERICAN COUNTRIES**

**March 9-11, 2012**

### **ENGREDEA INGREDIENTS & INNOVATION**

Venue: Anaheim Convention Center, Anaheim, California USA  
Producer: New Hope Natural Media, Boulder, Colorado USA  
Contact: New Hope Natural Media, 1401 Pearl Street, Suite 200, Boulder CO 80302 USA.  
TEL: 303 390 1776  
E-MAIL: [tradeshows@newhope.com](mailto:tradeshows@newhope.com)  
WEB: <http://engredea.com/engredea12/Public/enter.aspx>

Engredea, co-located in Natural Product Expo West, brings together natural ingredient suppliers and product manufacturers to source new ingredients, packaging, technologies, equipment and services.

**April 16-19, 2012**

### **11<sup>th</sup> ANNUAL OXFORD INTERNATIONAL CONFERENCE ON THE SCIENCE OF BOTANICALS**

Venue: Oxford Conference Center, Mississippi USA  
Organizers: The National Center for Natural Products Research (NCNPR), School of Pharmacy at the University of Mississippi  
Sponsors: NCNPR and the Center for Food Safety and Applied Nutrition (CFSAN) of the U.S. Food and Drug Administration (FDA), Shanghai Institute of Materia Medica/CAS China, The Council of Scientific and Industrial Research (GA), American Society of Pharmacognosy (ASP), Ministry of Indigenous Medicine, Sri Lanka, The Korean Society of Pharmacognosy  
Contact: [ICSB@olemiss.edu](mailto:ICSB@olemiss.edu)  
WEB: <http://www.oxfordicsb.org>

**April 22-25, 2012**

### **AMERICAN SPICE TRADE ASSOCIATION 2012 ANNUAL MEETING & EXHIBITS**

Venue: Amelia Island, FL  
Contact: American Spice Trade Association (ASTA), 2025 M Street, NW, Suite 800, Washington, DC 20036-3309  
TEL: 202 367 1127 / FAX: 202 367 2127  
WEB: <http://www.astaspice.org/i4a/pages/index.cfm?pageid=1>

**Attendee profile:** Agents, blenders, brokers, dehydrators, distributors, extractors, growers, importers, processors, traders, customhouse brokers, laboratories, manufacturers, samplers/weighers, sterilizers, suppliers and users of spices in finished food products.

**May 8-10, 2012**

### **SUPPLY SIDE MARKET PLACE**

Venue: Javits Center, New York City  
Organizer: Virgo Publishing, Phoenix, Arizona USA  
Contact: Todd Willis TEL: 480 990 1101 ext. 1171  
E-MAIL: [twillis@vpico.com](mailto:twillis@vpico.com)  
WEB: <http://www.supplysideshow.com/2012/marketplace/exhibit.html>

**Exhibitor Profile:** Exhibitors of natural health ingredients and medicinal herbs & extracts.

**May 22-25, 2012**

### **3<sup>RD</sup> ANNUAL CONFERENCE OF ACMAP**

Venue: Alabama A&M University, Normal, Alabama USA  
Sponsor: American Council for Medicinally Active Plants, Inc. (ACMAP)  
P.O. Box 1761, Titusville, FL 32781, USA  
TEL: 321-861-349  
FAX: 321-861-2925  
E-MAIL: [info@acmap.org](mailto:info@acmap.org),  
WEB: <http://www.acmap.org/index.html>

**July 20-22, 2012**

**16<sup>TH</sup> ANNUAL SEQUIM LAVENDER FESTIVAL**

Venue: Sequim, Washington USA  
Sponsor: Sequim Lavender Growers Association  
Contact: Sequim Lavender Festival, 105 ½ East First Street, Port Angeles WA 98362  
TEL: 360-681-3035 or 877-681-3035  
E-MAIL: [info@lavenderfestival.com](mailto:info@lavenderfestival.com)  
WEB: [5thfestiv](http://lavenderfestival.com/component/content/article/45-1al) <http://lavenderfestival.com/component/content/article/45-1al>

**July 28- August 1, 2012**

**60<sup>TH</sup> INTERNATIONAL CONGRESS ON NATURAL PRODUCTS RESEARCH:**

**Global Change, Natural Products and Human Health**

Venue: Grand Hyatt, New York City, USA  
WEB: <http://icnpr2012.org/index.html>

**Themes:** The Promise of Biodiversity, Ethnobotanical Drug Discovery, Advances in Natural Product Analytical Technologies, Concept to Clinic: Caspofungin at Merck, Natural Product Synthesis, PK and Metabolism of Natural Products, Chemistry of Symbiosis, Genome Mining for Natural Product Discovery, Biosynthetic Chemistry.

## SOUTH AMERICA

### SOUTH AMERICA'S TOP-THREE EXPORTERS IN 2010: BRAZIL, ARGENTINA, AND CHILE

Using the inclusion criteria outlined in **Table 1** (see Introduction), **Table 13** shows the 2010 export value (USD) and volume (kg) for 11 of South America's 12 countries. The top-three South American exporters in terms of reported Customs Value were Federative Republic of Brazil, Argentine Republic, and the Republic of Chile

Although there is one South American country whose 2010 trade data is not available (Oriental Republic of Uruguay), **Table 13** includes the 11 countries that indeed represent most of South America's botanical export value and volume.

**Table 14** provides export trade data for South America's leading exporter in 2010, **Federative Republic of Brazil**. Using the inclusion criteria of **Table 1**, Brazil exported 256,763,243 kg of botanical and natural ingredients with a reported FOB Customs Value of \$655,554,215.00 (about 2.0% of world total export value).

Some of Brazil's main botanical raw materials (for production, processing and/or export trade) include the following (Note: many of these do not have species-specific HS Codes and thus their export trade data is lumped within the relevant 6-digit general code):

- Açaí fruit (*Euterpe oleracea*)
- Acerola fruit (*Malpighia glabra*)
- Black pepper fruit (*Piper nigrum*)
- Brazilian pink pepper (*Schinus terebinthifolius*)
- Brazilian rosewood (*Aniba rosaeodora*)
- Camu camu fruit (*Myrciaria dubia*)
- Catuaba bark (*Erythroxylum catuaba*)
- Chá-de-bugre leaf (*Cordia ecalyculata*)
- Cocoa butter (*Theobroma cacao*)
- Copaiba bark (*Copaifera officinalis*)
- Cupuaçu fruit (*Theobroma grandiflorum*)
- Erva-baleeira (*Cordia verbenacea*)
- Espinheira santa leaf (*Maytenus ilicifolia*)
- Ginger rhizome (*Zingiber officinale*)
- Graviola leaf (*Annona muricata*)
- Guaco leaf (*Mikania guaco*),  
➤ Guarana seed (*Paullinia cupana*)
- Ipecac rhizome & root (*Cephaelis ipecacuanha*)
- Jaborandi leaf (*Pilocarpus microphyllus*)
- Lemon verbena leaf (*Aloysia citriodora*)
- Maté leaf (*Ilex paraguariensis*)
- Muira puama bark (*Ptychosperma olacoides*)
- Passionflower (*Passiflora edulis*)
- Pau d'arco bark (*Tabebuia impetiginosa*)
- Suma root (*Pfaffia glomerata*)
- Stevia leaf (*Stevia rebaudiana*)
- Tonka bean (*Dipteryx odorata*)
- Wattle bark extract (*Acacia mearnsii*)

**Table 13:** 2010 Exports of Selected Botanical and Natural Ingredients from **SOUTH AMERICAN** countries in order predominance by reported FOB Customs Value (USD per kg)

	South American Exporter	Total Value (USD)	Total Volume (kg)
	Estimated World Total	\$32,702,904,493.00	12,486,447,404
1.	Federative Republic of Brazil	\$655,554,215.00	256,763,243
2.	Argentine Republic	\$366,860,006.00	214,457,905
3.	Republic of Chile	\$260,178,816.00	96,614,726
4.	Republic of Peru	\$223,160,725.00	107,408,458
5.	Republic of Ecuador	\$44,545,082.00	32,379,234
6.	Republic of Colombia	\$32,705,986.00	8,360,990
7.	Republic of Paraguay	\$30,900,441.00	11,040,571
8.	Plurinational State of Bolivia	\$9,920,723.00	117,523,504
9.	Bolivarian Republic of Venezuela	\$2,740,060.00	308,481
10.	Cooperative Republic of Guyana	\$1,349,744.00	947,035
11.	Republic of Suriname	\$62,777.00	30,431

**Table 14:** 2010 Exports of Selected Botanical and Natural Ingredients from **Brazil** in order predominance by reported FOB Customs Value (USD per kg)

BRAZIL 2010 EXPORTS OF BOTANICAL AND NATURAL INGREDIENTS			
HS Code	Commodity	Trade Value	Trade Quantity
	<b>BRAZIL TOTAL 2010 EXPORTS</b>	<b>\$655,554,215.00</b>	<b>256,763,243</b>
180400	Cocoa seed ( <i>Theobroma cacao</i> ) butter, fat and oil	\$151,722,080	24,956,828
090411	Pepper fruit ( <i>Piper nigrum</i> ), whole	\$107,989,462	30,717,000
330112	Essential oils of orange peel ( <i>Citrus spp.</i> )	\$74,521,697	28,831,259
330190	Essential oils (terpeneless/not), including concretes & absolutes (excl. of 3301.12-3301.29); extracted oleoresins; concentrates of essential oils in fats, in fixed oils, in waxes / the like, obtained by enfleurage / maceration; terpenic by-products of the deterpenation of essential oils; aqueous distillates & aqueous solutions of essential oils	\$62,230,801	40,256,774
090300	Maté leaf ( <i>Ilex paraguariensis</i> )	\$50,764,876	33,143,784
320120	Wattle bark extract ( <i>Acacia mearnsii</i> )	\$46,776,902	33,599,346
130220	Pectic substance, pectinates & pectates	\$37,986,787	4,048,743
130219	Vegetable saps & herbal extracts (excl. of 1302.11-1302.13)	\$23,984,675	25,597,807
130190	Lac; Natural gums (excl. of 1301.20), resins, gum-resins & oleoresins (e.g., balsams)	\$13,070,929	12,525,831
330119	Essential oils of citrus fruit, other than of orange or lemon peel	\$12,761,465	425,999
090700	Clove flower bud and stems ( <i>Syzygium aromaticum</i> )	\$12,009,788	2,834,931
121190	Plants & parts of plants, incl. seeds & fruits, of a kind used primarily in perfumery / pharmacy / for insecticidal / fungicidal / similar purposes, fresh /	\$9,028,686	1,468,473

	dried, whether / not cut / crushed / powdered		
091010	Ginger rhizome ( <i>Zingiber officinale</i> ),	\$8,392,177	6,212,401
330113	Essential oils of lemon peel ( <i>Citrus × limon</i> )	\$7,636,377	261,070
330129	Essential oils other than those of citrus fruit (excl. of 3301.24 & 3301.25)	\$7,421,273	405,091
151590	Fixed vegetable fats & oils & their fractions, whether/not refined but not chemically modified	\$6,484,955	4,788,046
090420	Allspice fruit ( <i>Pimenta dioica</i> ) or Capsicum fruit ( <i>Capsicum annuum</i> ; <i>C. frutescens</i> ), crushed or ground	\$5,895,504	2,212,203
090240	Black tea leaf ( <i>Camellia sinensis</i> ) (fermented & partly fermented), in immediate packings of a content >3kg	\$5,624,747	2,027,020
210120	Extracts, essences and concentrates of tea leaf ( <i>Camellia sinensis</i> ), jasmine flower ( <i>Jasminum officinale</i> ), or maté leaf ( <i>Ilex paraguariensis</i> )	\$2,779,573	95,001
320190	Tanning extracts of vegetable origin other than quebracho extract / wattle extract; tannins & their salts, ethers, esters & other derivatives	\$2,662,423	1,324,600
090210	Green tea leaf ( <i>Camellia sinensis</i> ), in immediate packings of a content not >3kg	\$2,428,282	396,012
330124	Essential oils of peppermint leaf ( <i>Mentha × piperita</i> )	\$604,356	17,364
130239	Mucilages & thickeners (excl. of 1302.31 & 1301.32), whether/not modified, derived from vegetable products	\$446,378	46,456
090230	Black tea leaf ( <i>Camellia sinensis</i> ) (fermented & partly fermented), in immediate packings of a content not >3kg	\$334,796	96,704
140490	Vegetable products NESOI	\$291,116	75,942
091030	Turmeric rhizome ( <i>Curcuma longa</i> ) or Javanese turmeric rhizome ( <i>Curcuma xanthorrhiza</i> )	\$225,089	89,266
121220	Seaweeds & other algae, fresh/chilled/frozen/dried, whether/not ground	\$220,963	120,579
090412	Pepper fruit ( <i>Piper nigrum</i> ), crushed or ground	\$212,833	43,597
130212	Licorice root extract ( <i>Glycyrrhiza</i> spp.)	\$173,800	22,000
090220	Green tea leaf ( <i>Camellia sinensis</i> ), in immediate packings of a content >3kg	\$161,825	22,162
121120	Ginseng root ( <i>Panax</i> spp.)	\$136,996	7,187
091099	Spices NESOI in Chapter 09	\$119,736	17,495
130232	Mucilages & thickeners, whether / not modified, derived from locust beans / locust bean seeds / guar seeds	\$114,978	32,318
130213	Hop strobile extract ( <i>Humulus lupulus</i> )	\$94,554	680
330125	Essential oils of mints other than peppermint	\$69,818	7,550
130231	Agar-agar ( <i>Gelidium amansii</i> , <i>G. cartilagineum</i> , <i>Gracilaria confervoides</i> )	\$56,295	3,258

130120	Gum arabic ( <i>Acacia senegal</i> ) or Gum talha ( <i>Acacia seyal</i> )	\$18,507	4,699
130211	Opium ( <i>Papaver somniferum</i> )	\$16,529	1,005
121299	Locust beans (carob) & sugar cane (excl. of 1212.91), fresh / chilled / frozen / dried, whether / not ground; fruit stones & kernels & other vegetable products (including unroasted chicory roots of the variety <i>Cichorium intybus sativum</i> )	\$15,513	3,279
120400	Flaxseed a.k.a. Linseed ( <i>Linum usitatissimum</i> )	\$15,134	3,144
090620	Cinnamon bark ( <i>Cinnamomum spp.</i> ) & cinnamon-tree flowers, crushed/ground	\$15,056	9,165
090611	Cinnamon bark ( <i>Cinnamomum zeylanicum</i> ) & cinnamon-tree flowers, whole	\$7,857	4,447
330130	Extracted Resinoids	\$7,160	239
320110	Quebracho wood extract ( <i>Aspidosperma quebracho-blanco</i> )	\$5,600	4,000
090930	Cumin fruit ( <i>Cuminum cyminum</i> ),	\$4,911	868
151319	Coconut endosperm ( <i>Cocos nucifera</i> ) fatty oil - refined	\$3,201	401
090910	Anise fruit ( <i>Pimpinella anisum</i> ) or Star anise fruit ( <i>Illicium verum</i> )	\$2,535	215
091020	Saffron style & stigma ( <i>Crocus sativus</i> )	\$1,318	302
090810	Nutmeg kernel ( <i>Myristica fragrans</i> )	\$956	176
090920	Coriander fruit ( <i>Coriandrum sativum</i> )	\$758	66
090500	Vanilla fruit ( <i>Vanilla planifolia</i> or <i>V. tahitensis</i> )	\$628	220
091091	Mixtures of 2 or more botanicals of different headings of HS 09.04-09.10	\$525	45
090950	Fennel fruit ( <i>Foeniculum vulgare</i> ) or Juniper fruit ( <i>Juniperus communis</i> )	\$333	31
151311	Coconut endosperm ( <i>Cocos nucifera</i> ) fatty oil - crude	\$309	30
090619	Cinnamon (excl. of 0906.11) & cinnamon-tree flowers, neither crushed/ground	\$232	100
090830	Cardamom seed ( <i>Amomum spp.</i> or <i>Elettaria cardamomum</i> )	\$125	4
090820	Mace aril ( <i>Myristica fragrans</i> )	\$36	30

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**BOTANICAL PRODUCT SPECIFICATIONS**  
**Stevia leaf**  
**a product of Brazil and Paraguay**

PRODUCT	ESTÉVIA <sup>7</sup>
<b>Botanical name</b>	<i>Stevia rebaudiana</i> (Bertoni) Bertoni [Asteraceae]
<b>Pharmacopoeial name</b>	Steviae folium FB
<b>Part used</b>	Dried leaves
<b>Cultivated or Wild</b>	Cultivated
<b>Storage</b>	In well closed containers protected from light and heat
<b>CHARACTERISTICS – Organoleptic</b>	
<b>Color</b>	Green
<b>Odor</b>	Weak
<b>Taste</b>	Slightly sweet at start of chewing, turning bitter at the end
<b>TESTS</b>	
<b>Identification</b>	A. Macroscopic Description as per FB Monograph B. Microscopic Description as per FB Monograph C. Thin-layer chromatography (FB 5.2.17.1)
<b>Water</b>	Not more than 13.0% (FB 5.4.2.3)
<b>Foreign organic matter</b>	Not more than 2.0% (FB 5.4.2.2)
<b>Total ash</b>	Not more than 9.5% (FB 5.4.2.4)
<b>Content</b>	Minimum 12.0% of total carbohydrates Minimum 4.0% of steviosides ( $C_{38}H_{60}O_{18}$ ; M 804,87)
<b>MICROBIOLOGICAL QUALITY</b>	
<b>Total aerobic count</b>	NMT $10^7$ cfu/g
<b>Yeast and moulds</b>	NMT $10^4$ cfu/g
<b><i>Escherichia coli</i></b>	NMT $10^2$ cfu/g
<b>Bile-tolerant gram-negative bacteria</b>	NMT $10^4$ cfu/g
<b>Salmonella</b>	Absent in 10 g

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<sup>7</sup> ESTÉVIA. In: *Farmacopeia Brasileira*, 5<sup>a</sup> edição, Volume II: 2010; 928-932. Available at: [http://www.anvisa.gov.br/hotsite/cd\\_farmacopeia/pdf/farmacopeia\\_volume\\_2\\_2803.pdf](http://www.anvisa.gov.br/hotsite/cd_farmacopeia/pdf/farmacopeia_volume_2_2803.pdf)

### RAW BOTANICAL (indicative bulk prices)

Product	Botanical Name	Cultivated or Wild	Origin	Price per kg	Basis
Cat's Claw stem bark powder	<i>Uncaria tomentosa</i>	Wild	Peru	USD 6	FOB export
Maca root powder gelatinized	<i>Lepidium meyenii</i>	Cultivated	Peru	USD 12	FOB export
Maca root powder*	<i>Lepidium meyenii</i>	Cultivated	Peru	USD 11	FOB export
Rose hips, powdered, steam sterilized	<i>Rosa canina</i>	Wild	Chile	USD 6.75	FOB CA

\* Certified organic

### BOTANICAL EXTRACTS (indicative bulk prices)

Product	Standard	Origin	Price USD/kg	Basis
Cat's claw bark dry extract ( <i>Uncaria tomentosa</i> )	3% HPLC	Peru	37.75	FOB export
Cat's claw bark dry extract ( <i>Uncaria tomentosa</i> )	2% HPLC	Peru	26	FOB export
Guarana seed ( <i>Paulina cupana</i> )	12% caffeine (added caffeine from coffee bean)	Brazil	15	FOB CA
Maté leaf powdered extract ( <i>Ilex paraguariensis</i> )	4:1 (w/w)	Brazil	15	FOB origin
Pau d'arco bark dry extract ( <i>Tabebuia impetiginosa</i> )	4:1 (w/w)	Brazil	18	FOB origin

**Notes:**

**Quality Standards:** Standards for some of the above listed botanicals and extracts may be published in the Farmacopea Argentina, Farmacopéia Brasileira, Farmacopea Herbolaria de los Estados Unidos Mexicanos (FHEUM), and/or in United States Pharmacopeia and National Formulary (USP-NF).

### MEETINGS AND TRADE SHOWS SOUTH AMERICAN COUNTRIES

**April 18-22, 2012**

#### **VIII BRAZILIAN SYMPOSIUM OF PHARMACOGNOSY, I INTERNATIONAL SYMPOSIUM OF PHARMACOGNOSY**

Venue: Canabrava Resort, Ilhéus, Bahia, Brazil  
 WEB: [http://www.sigaeventos.com.br/VIII\\_SBFGNOSIA](http://www.sigaeventos.com.br/VIII_SBFGNOSIA)

**July 1-5, 2012**

#### **VI INTERNATIONAL SYMPOSIUM ON SEED TRANSPLANT AND STAND ESTABLISHMENT – SEST2012**

Venue: Brazil  
 Contact: Dr. Warley Marcos Nascimento, EMBRAPA – Vegetables, C. Postal 218, Brasilia. TEL: (55) 6133 859125 / FAX: (55) 61355 65744  
 E-MAIL: [wmn@cnph.embrapa.br](mailto:wmn@cnph.embrapa.br)  
 WEB: <http://www.ishs.org/news/?p=1503>

**October 14, 2012**

#### **III INTERNATIONAL SYMPOSIUM ON MEDICINAL AND NUTRACEUTICAL PLANTS AND III CONFERENCE OF NATIONAL INSTITUTE OF TROPICAL FRUITS**

Contact: Prof. Dr. Narendra Narain, Departamento de Engenharia CCET, Univ Federal de Sergipe, Cidade Universitaria, 49100-000 Sao Cristovao-Sergipe, Brazil.  
 TEL: +55 79 2105 6677 / FAX: +55 79 2105 6679  
 E-MAIL: [3ismnp@gmail.com](mailto:3ismnp@gmail.com)  
 WEB: <http://www.zag-info.com/dates.php?id=535>

**SPECIFICATIONS AVAILABLE FROM MNS BACK ISSUES**

<b>HERB OR EXTRACT</b>	<b>REGION</b>	<b>MNS EDITION</b>
Acacia gummy exudate	Africa	MNS 24 – September 2007
Açaí fruit dry extract	South America	MNS 25 – December 2007
Ajowan fruit	India	MNS 37 – December 2010
Aloe ferox bitter powder	Africa	MNS 40 – September 2011
Althaea flower	China / Korea	MNS 29 – December 2008
Ambrette seed	India	MNS 29 – December 2008
American ginseng root PE	North America	MNS 5 – December 2002
American storax balsam	North America	MNS 24 – September 2007
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
Aronia fruit juice concentrate	Eastern Europe	MNS 25 – December 2007
Artemisia Essential Oil	India / Nepal	MNS 14 – March 2005
Artichoke leaf PE	Western Europe	MNS 6 – March 2003
Artichoke leaf	Africa	MNS 30 – March 2009
Asafetida oleo-gum-resin	India	MNS 24 – September 2007
Ashwagandha root	India	MNS 28 – September 2008
Ashwagandha root PE	India	MNS 5 – December 2002
American ginseng root	North America	MNS 28 – September 2008
Asian ginseng root PE	Japan	MNS 4 – September 2002
Bacopa herb PE	India	MNS 11 – June 2004
Baobab fruit PE	Africa	MNS 25 – September 2007
Benzoin tincture, compound	North America	MNS 23 - June 2007
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 extract USP	North America	MNS 36 – September 2010
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
Boldo leaf	South America	MNS 30 – March 2009
Boldo leaf dry extract	South America	MNS 34 – March 2010
Boswellia serrata PE	India	MNS 9 – December 2003
Buchu leaf	South Africa	MNS 33 – December 2009
Calendula tincture	Eastern Europe	MNS 23 – June 2007
California poppy herb	North America	MNS 18 – March 2006
Camphor, natural	China	MNS 27 – June 2008
Camu camu dry extract	South America	MNS 39 – June 2011
Candelilla wax	North America	MNS 40 – September 2011
Capsicum oleoresin	South America	MNS 37 – December 2010
Caralluma extract	India	MNS 21 – December 2006
Caraway fruit	Africa	MNS 35 – June 2010
Carob bean gum	Europe	MNS 37 – December 2010
Cascara sagrada dry extract	North America	MNS 34 – March 2010
Cat's claw bark dry extract	South America	MNS 26 – March 2008
Cat's claw extract USP	South America	MNS 36 – September 2010
Chá-de-bugre dry extract	South America	MNS 21 – December 2006
Chamomile flower	Africa	MNS 31 – June 2009
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 asafetida resin	China	MNS 24 – September 2007
Chinese cinnamon bark	China	MNS 19 – June 2006
Chinese hawthorn fruit PE	China	MNS 1: Sept 2001 / MNS 16: Sept 2005
Chinese lovage rhizome	China	MNS 36 – September 2010

Chrysanthemum flower	China	MNS 40 – September 2011
Cinnamon bark PE	China	MNS 13 – December 2004
Citronella essential Oil	India, Sri Lanka	MNS 27 – June 2008
Clove bud tincture	India	MNS 23 – June 2007
Cocoa butter	South America	MNS 27 – June 2008
Cola nut	Africa	MNS 7 – June 2003
Cola nut dry extract	Western Europe	MNS 21 – December 2006
Coriander fruit	Europe	MNS 34 – March 2010
Coriander fruit essential oil	North America	MNS 12 – September 2004
Corydalis Yanhusuo tuber	China	MNS 18 – March 2006
Cottonseed oil	North America	MNS 29 – December 2008
Cranberry fruit dry conc	North America	MNS 16 – September 2005
Cranberry juice extract	North America	MNS 37 – December 2010
Cranberry liquid preparation	North America	MNS 33 – December 2009
Cupuaçu fruit powder	South America	MNS 29 – December 2008
Curry leaf	India	MNS 41 – December 2011
Damask rose flower	India and other Asia	MNS 39 – June 2011
Damask rose essential Oil	Eastern Europe	MNS 17 – December 2005
Dandelion root	Europe	MNS 30 – March 2009
Danggui root PE	China	MNS 12 – September 2004
Devil's claw root PE	Western Europe	MNS 3 – June 2002
Devil's claw root tuber	Africa	MNS 36 – September 2010
Dhattura seed	India	MNS 32 – September 2009
Echinacea herb & root PE	North America	MNS 8 – September 2003
Echinacea root PE	Western Europe	MNS 12 – September 2004
Eleuthero root	Europe	MNS 28 – September 2008
Eleuthero root PE	China	MNS 11 – June 2004
English lavender flower	Europe	MNS 31 – June 2009
Ephedra herb	China	MNS 26 – March 2008
Epimedium herb PE	China	MNS 15 – June 2005
Eucalyptus oil	Europe	MNS 32 – September 2009
European elder flower	Europe	MNS 38 – March 2011
European vervain	Africa	MNS 15 – June 2005
Evening primrose oil	North America	MNS 39 – June 2011
Fennel fruit	Africa	MNS 9 – December 2003
Fennel fruit, sweet	Africa	MNS 34 – March 2010
Fenugreek seed	Africa	MNS 12 – September 2004
Fenugreek seed PE	India	MNS 12 – September 2004
Feverfew leaf PE	Western Europe	MNS 2 – March 2002
Fig fruit	Iran	MNS 33 – December 2009
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
Garlic bulb PE	North America	MNS 22 – March 2007
Garlic oil macerate	Western Europe	MNS 22 – March 2007
Ginger rhizome	China	MNS 35 – June 2010
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
Gotu kola herb PE	Africa	MNS 27 – June 2008
Grape fruit PE	Eastern Europe	MNS 5 – December 2002
Greater celadine herb	Eastern Europe	MNS 18 – March 2006
Greater galangal rhizome	India	MNS 36 – September 2010
Green tea leaf PE	China	MNS 2 – March 2002
Green tea leaf PE	China	MNS 23 – June 2007
Griffonia seed	Africa	MNS 8 – September 2003

Guarana seed PE	Western Europe	MNS 9 – December 2003
Guar gum	India	MNS 35 – June 2010
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 – Dec 2005 / MNS 39 – June 2011
Holarrhena bark / root	Africa	MNS 14 – March 2005
Hoodia gordonii extract	Africa	MNS 21 – December 2006
Hop strobile	Europe	MNS 35 – June 2010
Hop strobile PE	North America	MNS 10 – March 2004
Iceland moss	Eastern Europe	MNS 20 – September 2006
Indian frankincense extract	Eastern Europe	MNS 24 – September 2007
Ipecac rhizome	South America	MNS 38 – March 2011
Ivy leaf PE	Western Europe	MNS 13 – December 2004
Jaborandi tincture	South America	MNS 40 – September 2011
Jamaica quassia stem wood	North America	MNS 32 – September 2009
Japanese honeysuckle leaf/stem	China, Japan, Korea	MNS 38 – March 2011
Juniper fruit Essential Oil	Eastern Europe	MNS 10 – March 2004
Juniper tar	Europe	MNS 27 – June 2008
Khella fruit	Africa	MNS 26 – March 2008
Kohki leaf	Japan	MNS 3 – June 2002
Labdanum gum resinoid	Western Europe	MNS 24 – September 2007
Lavender flower	Europe	MNS 40 – September 2011
Lavender flower essential oil	Eastern Europe	MNS 12 – September 2004
Lemon balm leaf PE	Western Europe	MNS 7 – June 2003
Lemon peel essential oil	North America	MNS 35 – June 2010
Lemon verbena leaf	South America	MNS 33 – December 2009
Licorice root PE	China	MNS 3 – June 2002
Licorice root	Other Asian Countries	MNS 30 – March 2009
Licorice root PE	Japan	MNS 1 – September 2001
Linden (Lime) flower	Europe	MNS 39 – June 2011
Long-stamen onion bulb	China	MNS 22 – March 2007
Lotus seed	China	MNS 41 – December 2011
Lycium fruit freeze-dried pwd	China	MNS 37 – December 2010
Maca hypocotyl PE	Peru	MNS 17 – December 2005
Maritime pine bark	Western Europe	MNS 19- June 2006
Marshmallow root	Europe	MNS 29 – December 2008
Maté leaf	South America	MNS 35 – June 2010
Maté leaf PE	Western Europe	MNS 8 – September 2003
Meadowsweet herb	Eastern Europe	MNS 13 – December 2004
Milk thistle fruit	Africa	MNS 38 – March 2011
Milk thistle fruit PE	Eastern Europe	MNS 1: September 2001 / MNS 7: June 2003
Molokhia leaf	Africa	MNS 29 – December 2008
Moringa seed oil	Africa	MNS 41 – December 2011
Myrrh gum resin	Asia (Yemen)	MNS 38- March 2011
Myrrh tincture	Africa	MNS 23 – June 2007
Neem leaf PE	India	MNS 7 – June 2003
Nettle leaf	Europe	MNS 33: – Dec 2009 / MNS 36: Sept 2010
Nettle root	Eastern Europe	MNS 15 – June 2005
Nettle root PE	Western Europe	MNS 4 – September 2002
Nigella seed	India	MNS 26 – March 2008
Noni fruit PE	India	MNS 25 – December 2007
Nutmeg kernel	Indonesia	MNS 39 – June 2011
Olive leaf PE	Western Europe	MNS 11 – June 2004
Onion essential oil	Africa	MNS 22 - March 2007
Onion juice concentrate, pwd	Eastern Europe	MNS 22 – March 2007
Onion oleoresin	India	MNS 22 – March 2007
Opium poppy latex	India	MNS 18 – March 2006

Oregon grape root	North America	MNS 30 – March 2009
Parmelia lichen extract	India / Nepal	MNS 20 – September 2006
Passionflower	North America	MNS 31 – June 2009
Passionflower PE	South America	MNS 31 – June 2009
Peony root	Japan	MNS 2 – March 2002
Pepper fruit PE	India	MNS 13 – December 2004
Peppermint leaf Essential Oil	North America	MNS 11 – June 2004
Pleurisy root	North America	MNS 26 – March 2008
Pomegranate fruit PE	Western Europe	MNS 14 – March 2005
Pomegranate juice powder	Africa	MNS 37 – December 2010
Psyllium husk	India	MNS 10 – March 2004
Pygeum bark	Africa	MNS 19 – June 2006
Pyrethrum flower extract	Africa	MNS 32 – September 2009
Rauwolfia root	India	MNS 40 – September 2011
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
Rhatany tincture	Western Europe	MNS 23 – June 2007
Rhodiola root	China	MNS 28 – September 2008
Rhubarb root dry extract	China	MNS 34 – March 2010
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
Saffron style and stigma	India	MNS 31 – June 2009
Sage leaf	Eastern Europe	MNS 8 – September 2003
Saigon cinnamon bark	Viet Nam	MNS 33 – December 2009
Sandalwood heart wood	India	MNS 19 – June 2006
Sargassum thallus	China	MNS 20 – September 2006
Sarsaparilla rhizome	North America	MNS 38 – March 2011
Saw palmetto extract	North America	MNS 41 – December 2011
Saw palmetto fruit SE	North America	MNS 3 – June 2002
Schisandra fruit PE	China	MNS 6 – March 2003
Schisandra fruit, Southern	China	MNS 30 – March 2009
Seabuckthorn fruit PE	China	MNS 7 – June 2003
Seabuckthorn pulp extract	Western Europe	MNS 25- December 2007
Senna leaf dry extract	India	MNS 34 – March 2010
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
Soursop leaf PE	South America	MNS 32 – September 2009
Spearmint leaf	Africa	MNS 11 – June 2004
St. John's wort herb	China	MNS 31 – June 2009
St. John's wort herb PE	Western Europe	MNS 10 – March 2004
Stemona root	China	MNS 32 – September 2009
Stevia leaf	South America	MNS 41 – December 2011
Suma root	South America	MNS 28 – September 2008
Sutherlandia herb	Africa	MNS 28 – September 2008
Sweet wormwood herb EO	Eastern Europe	MNS 14 – March 2005
Sweet wormwood leaf PE	China	MNS 14 – March 2005
Thyme herb	Europe	MNS 26 – March 2008
Tribulus fruit PE	China	MNS 17 - December 2005
Tribulus fruit PE	India	MNS 2 – March 2002
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 pansy flowering aerial parts	Europe	MNS 41 – December 2011
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
Witch hazel	North America	MNS 27 – June 2008
Wolfberry PE	China	MNS 25 – December 2007
Yarrow herb Essential Oil	Eastern Europe	MNS 11 – June 2004

## **LINKS TO SUSTAINABILITY STANDARDS AND GUIDANCE DOCUMENTS RELEVANT TO THE GLOBAL TRADE OF MEDICINAL AND AROMATIC PLANTS AND EXTRACTS**

This section contains links to further information on the various sustainability standards being implemented at medicinal plant harvest sites, standards setting organizations and certification or verification organizations.

It is possible that we are not yet aware of all of the existing sustainability certification or verification systems presently undergoing implementation at medicinal and aromatic plant production sites around the world. To add your contact details, or to update or correct the below-listed details, please contact ITC Consultant, Tasha Goldberg at: [tashagoldberg@yahoo.com](mailto:tashagoldberg@yahoo.com)

### **Demeter:** <http://www.demeter.net>

- International Demeter Standards Production: [http://demeter.net/standards/st\\_production\\_e.pdf](http://demeter.net/standards/st_production_e.pdf)
- International Demeter Standards Processing: [http://demeter.net/standards/st\\_processing\\_e.pdf](http://demeter.net/standards/st_processing_e.pdf)
- Standards for the labeling of Demeter products: [http://demeter.net/standards/st\\_labelling\\_e.pdf](http://demeter.net/standards/st_labelling_e.pdf)

### **EcoCert:** <http://www.ecocert.com>

- The EcoCert Fair Trade Standard is available at: [http://appli.ecocert.com/IMG/pdf/EFT\\_Standard.pdf](http://appli.ecocert.com/IMG/pdf/EFT_Standard.pdf)
- Other EcoCert Fair Trade documents can be downloaded at: <http://appli.ecocert.com/-EFT-.html>

### **Equal Exchange:** <http://www.equalexchange.coop/domestic-fair-trade>

- Equal Exchange Principles for Domestic Fair Trade:  
<http://www.equalexchange.coop/dftfilesv2/dftprinciplesflyer.pdf>

### **FairWild Foundation:** <http://www.fairwild.org>

- FairWild Standard (Version 2.0):  
<http://www.fairwild.org/publication-downloads/fairwild-standard-ver-20/FairWild-Standard-V2.pdf>
- FairWild Standard (Version 2.0 Performance Indicators):  
<http://www.fairwild.org/publication-downloads/fairwild-standard-ver-20/FairWild-Standard-Indicators-V2.pdf>

### **FloCert:** <http://www.flo-cert.net>

- FairTrade Standards for Herbs and Spices for Small Producers' Organizations (Version 01.05.2011):  
[http://www.fairtrade.net/fileadmin/user\\_upload/content/2009/standards/documents/2011-05-06\\_EN\\_HerbsHerbalteasSpices\\_SPO.pdf](http://www.fairtrade.net/fileadmin/user_upload/content/2009/standards/documents/2011-05-06_EN_HerbsHerbalteasSpices_SPO.pdf)
- FairTrade Standards for Tea for Small Producers' Organizations (Version 22.12.2010):  
[http://www.fairtrade.net/fileadmin/user\\_upload/content/2009/standards/documents/2010-12-22\\_EN\\_Tea\\_SPO\\_2.pdf](http://www.fairtrade.net/fileadmin/user_upload/content/2009/standards/documents/2010-12-22_EN_Tea_SPO_2.pdf)
- FairTrade Standards for Tea for Hired Labour (Version 22.12.2010):  
[http://www.fairtrade.net/fileadmin/user\\_upload/content/2009/standards/documents/2010-12-22\\_EN\\_Tea\\_HL\\_2.pdf](http://www.fairtrade.net/fileadmin/user_upload/content/2009/standards/documents/2010-12-22_EN_Tea_HL_2.pdf)

### **Forest Stewardship Council:** <http://www.fsc.org>

- FSC International Standard: FSC Principles and Criteria for Forest Stewardship:  
[http://www.fsc.org/fileadmin/web-data/public/document\\_center/international\\_FSC\\_policies/standards/FSC\\_STD\\_01\\_001\\_V4\\_0\\_EN\\_FSC\\_Principles\\_and\\_Criteria.pdf](http://www.fsc.org/fileadmin/web-data/public/document_center/international_FSC_policies/standards/FSC_STD_01_001_V4_0_EN_FSC_Principles_and_Criteria.pdf)

### **Institute for Market Ecology:** [http://www.imo.ch/index.php?seite=imo\\_index\\_en](http://www.imo.ch/index.php?seite=imo_index_en)

- IMO Social & FairTrade Certification Programme:  
[http://www.fairforlife.net/logicio/client/fairforlife/file/IMO\\_SFT\\_Programme\\_Version3\\_Feb08.pdf](http://www.fairforlife.net/logicio/client/fairforlife/file/IMO_SFT_Programme_Version3_Feb08.pdf)

### **Instituto Biodinâmico for Rural Development:** <http://www.ibd.com.br>

- IBD EcoSocial Program: <http://www.ecosocialnet.com>

- IBD EcoSocial Certification Program for Fair Relationships in Trading Socially and Environmentally Certified Products:  
[http://www.ibd.com.br/downloads/dirleg/Diretrizes/8\\_1\\_3\\_IBD\\_Diretriz\\_IBD\\_Ecosocial\\_English\\_8thEdition\\_2009.pdf](http://www.ibd.com.br/downloads/dirleg/Diretrizes/8_1_3_IBD_Diretriz_IBD_Ecosocial_English_8thEdition_2009.pdf)

**NatureLife International Foundation for Environment, Education and Sustainability:**  
<http://www.sun-cert.com>

- S.U.N. Certificate: <http://www.sun-cert.com/application.aspx>

**Rainforest Alliance:** <http://www.rainforest-alliance.org>

- Sustainable Agriculture Standard: [http://www.rainforest-alliance.org/agriculture/documents/sust\\_ag\\_standard.pdf](http://www.rainforest-alliance.org/agriculture/documents/sust_ag_standard.pdf)

**Soil Association:** <http://www.soilassociation.org/>

- Soil Association Ethical Trade Standards:  
<http://www.soilassociation.org/Whatwedo/Organicstandards/Standards/tqid/353/Default.aspx>

**Union for Ethical BioTrade:** <http://www.uebt.ch>

- Guidance for the application of the BioTrade Verification Framework:  
[http://www.ethicalbiotrade.org/dl/PRO03\\_D\\_Guidance\\_to\\_the\\_Application\\_of\\_the\\_Verification\\_Framework\\_2009-10-30.pdf](http://www.ethicalbiotrade.org/dl/PRO03_D_Guidance_to_the_Application_of_the_Verification_Framework_2009-10-30.pdf)
- Guidelines for the Development and Implementation of Management Plans for Wild-collected Plant Species used by Organizations Working with Natural Ingredients:  
[http://www.bioprotect.org/ResourcesPublications/unctad\\_ditc\\_ted\\_2007\\_8\\_Eng.pdf](http://www.bioprotect.org/ResourcesPublications/unctad_ditc_ted_2007_8_Eng.pdf)
- BioTrade Verification Framework for Native Natural Ingredients:  
[http://www.ethicalbiotrade.org/dl/STD01\\_BioTrade\\_Verification\\_Framework\\_for\\_Native\\_Nat\\_Ingredients\\_2007-09-20\\_EN.pdf](http://www.ethicalbiotrade.org/dl/STD01_BioTrade_Verification_Framework_for_Native_Nat_Ingredients_2007-09-20_EN.pdf)
- UNCTAD BioTrade Initiative BioTrade Principles and Criteria:  
[http://www.bioprotect.org/ResourcesPublications/UNCTAD\\_BT\\_PC\\_en.pdf](http://www.bioprotect.org/ResourcesPublications/UNCTAD_BT_PC_en.pdf)

**UTZ Certified:** <http://www.utzcertified.org>

- UTZ Certified Chain of Custody for Tea:  
[http://www.utzcertified.org/index.php?pageID=111&showdoc=111\\_0\\_82](http://www.utzcertified.org/index.php?pageID=111&showdoc=111_0_82)
- UTZ Code of Conduct for Tea Farms / UTZ Code of Conduct for Tea Factories:  
[http://www.utzcertified.org/index.php?pageID=111&showdoc=111\\_0\\_79](http://www.utzcertified.org/index.php?pageID=111&showdoc=111_0_79)

For complete lists of certified or verified operations and/or members of fair trade organizations, see:

Cooperation for Fair Trade in Africa (COFTA) members list:  
[http://www.cofta.org/en/en/members\\_listing.asp](http://www.cofta.org/en/en/members_listing.asp)

FloCert Fair Trade Certified (FTC) organizations:  
<http://www.flo-cert.net/flo-cert/main.php?id=10>

Forest Stewardship Council (FSC) Certificate Database of certified products, species and certificate holders:  
<http://info.fsc.org>

IBD EcoSocial Certified/Approved Clients:  
[http://www.ibd.com.br/ClientCert\\_DefaultEng.aspx](http://www.ibd.com.br/ClientCert_DefaultEng.aspx)

IMO Social & Fairtrade Certification Programme Certified Operators:  
[http://www.fairforlife.net/logicio/pmw/indexDOM.php?client\\_id=fairforlife&page\\_id=operators&lang\\_iso639=en](http://www.fairforlife.net/logicio/pmw/indexDOM.php?client_id=fairforlife&page_id=operators&lang_iso639=en)

PhytoTrade Africa members list:  
<http://www.phytotradeafrica.com/members/ourmembers.asp>

Rainforest Alliance Certified farms list:  
[http://sustainablefarmcert.com/certified\\_farms.cfm](http://sustainablefarmcert.com/certified_farms.cfm)

Union for Ethical BioTrade (UEBT) members list:  
<http://www.uebt.ch/about/members.html>

United Nations Global Compact participants list: <http://www.unglobalcompact.org/participants/search>

UTZ Certified Tea Producers list:  
<http://www.utzcertified.org/index.php?pageID=227>

World Fair Trade Organization (WFTO) members list:  
[http://www.wfto.com/index.php?option=com\\_content&task=view&id=6&Itemid=37](http://www.wfto.com/index.php?option=com_content&task=view&id=6&Itemid=37)

## **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, Tasha Goldberg at: [tashagoldberg@yahoo.com](mailto:tashagoldberg@yahoo.com)

### **AFRICA**

#### **COMORES**

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**Egyptian Society for the Producers, Manufacturers and Exporters of Medicinal and Aromatic Plants (ESMAP)**, 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](mailto:drfarouk@elshobaki.com) WEB: <http://www.esmap.org/esmap/>

**Egyptian Spices and Herbs Export Development Association (ESHEDA)**, Dr. Farouk Elshobaki, Chairman, 9 Rostom St. Garden City, 1st floor, EG - 11519 Cairo, TEL: 00202/2792 417 E-MAIL: [esheda@link.net](mailto:esheda@link.net)

**Medicinal Plants Association (MPA)** in St. Katherine: El-Shamiaa, Saint Katherine City, South Sinai, Egypt. TEL-FAX: +20 69 3470648 WEB: <http://www.mpcpegypt.com/>

**Regional Medicinal & Herbal Plants Network (MHPN) of the Association of Agricultural Research Institutions in the Near East and North Africa (AARINENA)**, Dr. M.S.A. Safwat, P.O. Box 639 – Baga 19381, Amman Jordan. Tel: 00962 6 4725071 / FAX: 00962 6 4726099 E-MAIL: [map-aarenina@ncartt.gov.jo](mailto:map-aarenina@ncartt.gov.jo) WEB: <http://www.aarinena.org/MHPWeb/>

**Union of Producers and Exporters of Horticultural Crops (UPEHC)**, 10<sup>th</sup> floor Organizations and Companies Building, Nadi El-Seid Street, Dokky, Giza, Egypt. TEL: +20 (2) 3337-2402, 3760-0986 / FAX: +20 (2) 3336-4833 & 3336-4899, E-MAIL: [mail@upehc.org](mailto:mail@upehc.org) WEB: <http://www.upehc.org>

### **ETHIOPIA**

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### **GHANA**

**Agribusiness in Sustainable Natural African Plant Products (ASNAPP)**, P.M.B. (18) Kanda, Accra H/NO C 205/29, Mempeasem, East Legon, Accra, Mr. Dan Acquaye. TEL: +233 302 505617 / FAX: +233 302 505617, E-MAIL: [asnappwest@yahoo.com](mailto:asnappwest@yahoo.com) WEB: <http://www.asnapp.org>

### **Botanical Products Association of Ghana (BOTPAG)**

WEB: [http://www.asnapp.org/index.php?option=com\\_content&view=article&id=89:botanical-products-association-of-ghana-botpag&catid=52:ghana-partners&Itemid=100](http://www.asnapp.org/index.php?option=com_content&view=article&id=89:botanical-products-association-of-ghana-botpag&catid=52:ghana-partners&Itemid=100)

### **KENYA**

**Network for Natural Gums and Resins in Africa (NGARA)**, Secretariat c/o KEFRI, Karura P.O. Box 64636 – 00620 Mobil Plaza, Nairobi, Kenya. TEL: ++254 20 2020623 / FAX: +254 20 3750497. E-MAIL: [info@ngara.org](mailto:info@ngara.org)

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

**The Tea Board of Kenya**, Naivasha Road – Off Ngong Road, P.O. Box 20064 City Square 00200 Nairobi, Kenya. TEL: +254 20 3874446 / 2536886 / 2536869 / FAX: +254 20 3862120 / 3876337. E-MAIL: [info@teaboard.or.ke](mailto:info@teaboard.or.ke) / WEB: <http://www.teaboard.or.ke>

#### **MAURITIUS**

**Association for African Medicinal Plants Standards (AAMPS)**, c/o Executive Services Ltd. 2<sup>nd</sup> Les Jamalacs Building, Vieux Conseil Street, Port Louis, Republic of Mauritius. TEL: (230) 454 1041 / FAX: (230) 465 6928. E-MAIL: [secretary@aamps.org](mailto:secretary@aamps.org) or Denzil Phillips, CDE Associate Expert Herbals and Pharmaceuticals. E-MAIL: [denzil@denzil.com](mailto:denzil@denzil.com)  
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**Assila Medicinal and Aromatic Plant — AL AMAL Association**, Mlle. EL BOUAANANI Malika, CELL: 072 69 84 26

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

**Association Marocaine des Plantes Aromatiques et Médicinales (AMAPAM)**, Mr. Mohamed Marzouk, CELL: (+212)63 48 45 40, Mr. Drissi Hassan, CELL: (+212)67637176, E-MAIL: [fidanature@menara.ma](mailto:fidanature@menara.ma)

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WEB: <http://www.criaasadc.org/devilsclaw.htm>

**Hoodia Growers Association of Namibia (HOGRA)**. Windhoek, Namibia, Chairman Jörn Miller  
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#### **NIGERIA**

**Herb Sellers Association of Nigeria**, Mrs. Quincy Ayodele

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TEL: (00) 262 262 93 88 18/ FAX: (00) 262 262 93 88 01  
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WEB: <http://www.aplamedom.com>

#### **SOUTH AFRICA**

**Aloe Council of South Africa (ACSA)**, P.O. Box 524, Auckland Park, Johannesburg, 2006, South Africa. Tel: 011 559-3469 / Fax: 011 559-241. WEB: <http://www.aloesa.co.za>

**Cape Ethnobotanical Growers Association**, P.O. Box 15134 Vlaeberg 8018 Cape Town. TEL: +27-21-7913953 / FAX: +27-21-7914398, E-MAIL: [mirosaj@iafrica.com](mailto:mirosaj@iafrica.com)  
[robby@zizamele-natural-health.com](mailto:robby@zizamele-natural-health.com)

**Southern African Hoodia Growers Association (SAHGA)**, Chairman - Robby Gassof Zizamele Herbs, P. O. Box 85, Onrus River 7201. Council members – Volker Miros & Adolf Joubert.  
TEL: +27 (0) 28 284 9244 / FAX: 086 545 3975  
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**South African Rooibos Council**, P.O. Box 55356, Sunset Beach, Cape Town, South Africa 7441.  
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TEL: 880 2 900 41 94 – 96 / FAX: +880 2 901 68 72, E-MAIL: [hrahman.ed@acmeglobal.com](mailto:hrahman.ed@acmeglobal.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

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**China Chamber of Commerce of Medicines & Health Products Importers & Exporters (CCCMHPIE)**, 8/F., No. 12, Panjiayuan nanli, Chaoyang District, Beijing, China 100021.  
TEL: 86 10 67732799, 87784447 / FAX: 86 10 87784484, E-MAIL: [service@cccmhpie.org.cn](mailto:service@cccmhpie.org.cn)  
WEB: <http://www.mhpie.com>

**International Centre of Research and Training on Seabuckthorn (ICRTS)**

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

**Modernized Chinese Medicine International Association**, Hong Kong G.P.O. Box 5301. TEL: 2492-2713 / FAX: 2906-9330, E-MAIL: [mcmia@mcmia.org](mailto:mcmia@mcmia.org)  
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**Japan Flavor and Fragrance Materials Association (JFFMA)**, Tokyo Office (Secretariat): Sankeinihonbashi Bldg.6F, 4-7-1 Nihonbashi-Honcho, Chuo-ku, Tokyo 103-0023, Japan. TEL: +81-3-3516-1600, FAX: +81-3-3516-1602  
WEB: <http://www.jffma-jp.org>

**Japan Kampo Medicines Manufacturers Association (JKMA)**

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**Japan Oilseed Processors' Association (JOPA)**, <http://www.oil.or.jp>

**Japanese Specialty Agriculture Products Association (JSAPA)**, TEL: 03 (3584) 6845, FAX: 03 (3584) 1757, EMAIL: [ikeda@jsapa.or.jp](mailto:ikeda@jsapa.or.jp)  
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**All India Aromatic Plants Growers Association (AIAPGA)**, President Thakur Randhir Singh, 298, EP Flat, Wazarat Road, Jammu Tawi-180001, Jammu & Kashmir

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

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**Fragrances & Flavours Association of India**, Navinchandra Ranchhoddas Shah Hall, 2-B Floor, 35, Sir Vithaldas Thackersey Marg, Mumbai – 400 020.  
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WEB: <http://www.fafai.org>

**Health Foods and Dietary Supplements Association (HADSA)**, 1011 Dalamal House, Nariman Point, Mumbai – 400 021, India. Ms. Dipali Mahadik TEL: 91 022 2287 25 57/58/59 / FAX: 91 022 2287 25 60. E-MAIL: [hadsa@vsnl.net](mailto:hadsa@vsnl.net), [pro@hadsa.com](mailto:pro@hadsa.com) / WEB: <http://www.hadsa.com>

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

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**Lauhal & Spiti Seabuckthorn Society**, Lauhal & Spiti District, Himachal Pradesh, India

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**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. 695003. TEL: +91.471.5538863, +91.471.2437185 / MOBILE: +91.989.5187185 / FAX: +91.471.2316314  
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**Alberta Rhodiola Rosea Growers Organization (ARRGO)**, PO Box 671, Thorsby, Alberta, Canada T0C 2P0. TEL: (780) 789-3301 or 1 887 789 3301 (toll free)  
E-MAIL: [judy.zastre@anhant.org](mailto:judy.zastre@anhant.org)  
WEB: <http://www.arrgo.ca>

**British Columbia Herb Growers Association (BCHGA)**, 998 Skeena Drive, Kelowna, B.C. V1V 2K7. TEL/FAX: 604.504.5990  
E-MAIL: [info@bcherbgrowers.com](mailto:info@bcherbgrowers.com)  
WEB: <http://www.bcherbgrowers.com>

**British Columbia Sea Buckthorn Growers Association**, 10449 Warren Road, Vernon BC V1B 3C5. TEL: 250 542 1816 / FAX: 250 260 1882

**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](mailto:shsa@imagewireless.ca)  
WEB: <http://www.saskherbspice.org/CHSNC>

**Canadian Spice Association (CSA)**, 7235 Bellshire Gate, PO BOX 88059 Mississauga, ON L5N 8A0. E-MAIL: [info@canadianspiceassociation.com](mailto:info@canadianspiceassociation.com)  
WEB: <http://www.canadianspiceassociation.com/>

**Certified Organic Associations of BC**, 202 32<sup>nd</sup> Street, Vernon BC V1T 9G1.  
TEL: 250 260 4429 / FAX: 250 260 4436.  
E-MAIL: [office@certifiedorganic.bc.ca](mailto:office@certifiedorganic.bc.ca)  
WEB: <http://www.certifiedorganic.bc.ca>

**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](mailto: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](mailto:shsa@imagewireless.ca)

**Northern Alberta Herb Growers**, 8716 - 112 Street, Fort Sask., AB T8L 2S8 Canada. TEL: (780) 997-4372) / FAX: (780) 998-0078

**Ontario Ginseng Growers Association (OGGA)**, 1283 Blueline Road Box 587, Simcoe, Ontario N3Y 4N5 Canada. TEL: 519 426 7046 / FAX: 519 426 9087.  
E-MAIL: [info@ginsenggrowers.com](mailto:info@ginsenggrowers.com)  
WEB: <http://www.ginsengontario.com>

**Quebec Seabuckthorn Growers' Association (APAQ)**, 30, rue Sainte-Marguerite, Beaupré (Qc) G0A 1E0, CANADA, TEL: 418 827 1659 / FAX: 418 827 8699  
E-MAIL: [info@argousier.qc.ca](mailto:info@argousier.qc.ca)  
WEB: <http://www.argousier.qc.ca/eng/lassociation-apaq/history-and-mission.asp>

**Saskatchewan Herb and Spice Association (SHSA)**, PO Box 7568, Station Main, Saskatoon, Sk, S7K 4L4 Canada. TEL: 306 694 4622 / FAX: 206 694 2182.  
E-MAIL: [shsa@sasktel.net](mailto:shsa@sasktel.net)  
WEB: <http://www.saskherbspice.org>

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

#### **TRINIDAD**

**Caribbean Herbal Business Association (CHBA)**, c/o CARDI PO BOX 212 UWI Campus, St. Augustine, Trinidad & Tobago, West Indies. TEL: (868) 645-1205 - 7 / FAX: (868) 645-1208  
E-MAIL: [chba@iicacarc.org](mailto:chba@iicacarc.org)  
WEB: <http://www.caribbeanherbs.org>

#### **UNITED STATES OF AMERICA**

**American Botanical Council (ABC)**, 6200 Manor Road, Austin, Texas 78723. TEL: 512 926 4900 / FAX: 512 926 2345.  
E-MAIL: [abc@herbalgram.org](mailto:abc@herbalgram.org)

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

**American Council for Medicinally Active Plants, Inc. (ACMAP)**, Dr. Gary W. Stutte, Vice President and Executive Director, P.O. Box 1761, Titusville, FL 32781. TEL: 321 861 3494 / FAX: 321 861 2925  
E-MAIL: [info@acmap.org](mailto:info@acmap.org)  
WEB: <http://www.acmap.org/>

**American Herbal Products Association (AHPA)**, 8630 Fenton Street, Suite #918, Silver Spring, Maryland 20910. TEL: 301.588.1171/ FAX: 301.588.1174.  
E-MAIL: [ahpa@ahpa.org](mailto:ahpa@ahpa.org)  
WEB: <http://www.ahpa.org>

**American Spice Trade Association (ASTA)**, 2025 M Street, NW, Suite 800, Washington, DC 20036.  
TEL: 202 367 1127 / FAX: 202 367 1127.  
E-MAIL: [info@astaspice.org](mailto: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.  
E-MAIL: [hcbitt@hawaii.edu](mailto:hcbitt@hawaii.edu)  
WEB: <http://awadevelopment.org>

**Carolina Agri-Solutions Growers Association (CASGA)**, Conway, South Carolina, President Greg Hyman. TEL: 843 397 1502. E-MAIL: [ghyman@scccoast.net](mailto:ghyman@scccoast.net)

**Far West Spearmint Oil Administrative Committee**, 100 N. Fruitland, Suit B, Kenneick WA 99336.  
TEL: 509 585 5460 / FAX: 509 585 2671.  
E-MAIL: [agmgt@agmgt.com](mailto:agmgt@agmgt.com)  
WEB: <http://www.farwestspearmint.org>

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

**Herb Growing & Marketing Network**, Maureen Rogers (Director), P.O. Box 245, Silver Spring, PA 17575-0245. TEL: 7171 393 3295 / FAX: 7171 393 9261.  
E-MAIL: [herbworl@aol.com](mailto:herbworl@aol.com)  
WEB: <http://www.herbnet.com>

**Hop Growers of America (HGA)**, P.O. Box 1207, 301 W. Prospect Place, Moxee, WA 98936.  
TEL: 509 453 4749 / FAX: 509 457 8581.  
E-MAIL: [info@usahops.org](mailto:info@usahops.org)  
WEB: <http://www.usahops.org>

**Idaho Mint Growers Association (IMGA)**, 55 SW 5<sup>th</sup> Avenue, Suite 100, Meridian, Idaho 83642.  
Roger Batt, Executive Director. TEL: 208 888 0988.  
E-MAIL: [rbatt@spro.net](mailto:rbatt@spro.net)  
WEB: <http://www.idahomint.org/growers.html>

**International Aloe Science Council (IASC)**, 8630 Fenton Street, Suite 918, Silver Spring, MD 20910. TEL: 301 588 2420 / FAX: 301 588 1174  
WEB: <http://www.iasc.org>

**International Herb Association**, P.O. Box 5667, Jacksonville FL, USA 32247-5667  
WEB: <http://www.iherb.org>

**New Mexico Herb Growers Association (NMHGA)**, 2118 Central Ave. SE #86, Albuquerque, New Mexico 87106. Charles Martin. TEL: 505 852 4241.  
E-MAIL: [cmartin@nmsu.edu](mailto:cmartin@nmsu.edu)

WEB: <http://nmhga.com/>

**North Carolina Herb Association (NCHA)**, 455 Research Drive, Fletcher, North Carolina 28732.  
TEL: 828 684 3562.  
E-MAIL: [jeanine\\_davis@ncsu.edu](mailto:jeanine_davis@ncsu.edu)  
WEB: <http://www.ncherbassocation.org/>

**Northwest Ginseng Growers Association (NGGA)**, 4820 NE 306th Circle, La Center, Washington 98629. TEL: 360 263 7757 / CELL: 503 819 8934

**Roots of Appalachia Growers Association (RAGA)**, PO Box 157, Trimble, Ohio 45782. TEL: 740 767 4938.  
E-MAIL: [tanner@ruralaction.org](mailto:tanner@ruralaction.org)  
WEB: <http://www.rootsofappalachia.org>

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

**Sonoma County Herb Association**, P.O. Box 2162, Sebastopol, CA 95473. TEL: 707 861 0336. E-MAIL: [sonomaherbs@gmail.com](mailto:sonomaherbs@gmail.com)  
WEB: <http://www.sonomaherbs.org>

**West Virginia Herb Association (WVHA)**, 1289 Smoke Camp Road, Weston, West Virginia 26452.  
TEL: 304 269 6416.  
E-MAIL: [nyeann@ma.rr.com](mailto:nyeann@ma.rr.com)  
WEB: <http://www.wvherb.org>

**World Cocoa Foundation (WCF)**, 1411 K Street, NW Suite 1300, Washington D.C. 20005.  
TEL: 202 737 7870 / FAX: 202 737 7832.  
E-MAIL: [wcf@worldcocoa.org](mailto:wcf@worldcocoa.org)  
WEB: <http://www.worldcocoafoundation.org>

## **OCEANA**

### **AUSTRALIA**

**Australian Ginseng Growers Association (AGGA)**, P.O. Box 66, Huonville, TAS 7109.  
TEL: +61 (0) 419 495 936  
E-MAIL: [info@ginseng.org.au](mailto:info@ginseng.org.au)  
WEB: <http://www.ginseng.org.au>

**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](mailto:secretary@talga.com.au)  
WEB: <http://www.talga.com>

**Australian Tea Tree Industry Association (ATTIA)**, PO Box 903, Casino NSW 2470 Australia.  
TEL: +61 (02) 66742925 / FAX: +61 (02) 66742475.  
E-MAIL: [enquiries@teatree.org.au](mailto:enquiries@teatree.org.au)  
WEB: <http://www.teatree.org.au>

## **FIJI**

Pacific Islands Noni Association (PINA), P.O. Box 516, Lautoka, Fiji – Islands  
WEB: <http://www.pina.ws>

## **SOUTH AMERICA**

### **BOLIVIA**

**Sociedad Boliviana de Medicina Tradicional (SOBOMETRA)**, Mr. Walter Alvarez, Pasaje González #140, La Paz. TEL: +591 2 331724 / FAX: +591 2 313783

## **BRAZIL**

**Associação Brasileira das Empresas do Setor Fitoterápico, Suplemento Alimentar e de Promoção da Saúde (ABIFISA)**, TEL/FAX: (41) 3254 3040 / E-MAIL: [abifisa@abifisa.org.br](mailto:abifisa@abifisa.org.br)  
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**Nativa Trade Association for Natural Ingredients**: E-MAIL: [ingredientesnaturales@gmail.com](mailto:ingredientesnaturales@gmail.com)

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**Asociación Agroartesanal de Productores de plantas secas medicinales del Ecuador (AAPPSE)**, Contact: Ing. Orlando Cadme or Sra. Oliva Chuncho, Ramon Pinto entre Diez de Agosto y Jose Antonio Eguiguren. TEL/FAX: ++593 7 2 583 173  
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**Asociación de Agroindustriales de Maca y Productos Andinos del Altiplano de Junín**, Perú.

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**Peruvian Institute of Natural Products** (Instituto Peruano de Productos Naturales), Avenida La Universidad 595, La Molina, Lima 12. TEL: (51) 1 628 4026 / FAX: (51) 1 628 2660  
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