Photo profile

***Saraca asoca* (Roxb.) W.J. de Wilde**

(Ashoka)

CAESALPINIACEAE

Trunk chipped | **Flowering twig** | **Leaves**

New foliage | **Fruits**

Awards and Recognitions

- **Norman Borlaug Award - 1998**, contributions to the conservation of medicinal plants.
- **Equator Initiative Prize**, **United Nations - 2002**, **Medicinal Plants Program** for linking conservation to livelihood needs.
- **Anchor Better Interiors Excellence Award - 2007**, for gardening and landscaping.
- **Cultural Stewardship - 2003**, the Rosenthal Centre for Complementary & Alternative Medicine, of the Medical School in Columbia University, New York.
- **Citizen Extra Ordinaire - 2007**, by Rotary Club of Bangalore for traditional medicine and environment consciousness.

Photograph by: K. Ravikumar, FRLHT

Neighbourhood Medicinal Plants of Bangalore

CDROM for High School Students

Now, Bangalore city students can use the new CDROM, to explore your fascinating plant world. Experience the richness of plant diversity in your traditions, life style and environ. Share with us your interesting and enriching learnings in a creative way(such as poems, essays, paintings etc. Best expressions will be published in our website www.envis.frlht.org.
E-mail:envis@frlht.org or send your entries by post.

We invite readers to send their responses/views/features of interest etc. through e-mail: *envis@frlht.org* (Please note: Articles for subsequent issues should not exceed more than 1000 words. It can be accompanied with images in .jpg format)

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Medplant

Quarterly
Volume 1
Issue 1
September 2008

ENVIS Newsletter on Medicinal Plants

Contents

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Quarterly publication is supported by: :
Ministry of Environment & Forests,
Government of India

Printed at:
Akshara Graphics, Bangalore

FRLHT Campus, ENVIS Centre

Next Quarterly Issue:

December 2008
Production and Supply of Botanicals in Trade

Editorial

It is with great pleasure, we wish to place in your hands the inaugural issue of our Quarterly Newsletter - **Medplant**. *This newsletter is an outcome of our commitment to the cause of conservation of our cherished medical heritage and an integral part of ENVIS Centre on Medicinal Plants. Through this newsletter, we hope to reach out to everyone working in the crucial areas of medicinal plants conservation and contribute towards their revitalization by creating greater awareness about problems and perspectives related to medicinal plants conservation. By the medium of this newsletter, it is proposed to highlight contemporary issues, views, news, discussions through enlightened articles, covering for e.g.; medicinal plants resource management, species of concern, traded species, holistic approach to conservation problems etc. It is hoped that this newsletter would find a ready readership amongst resource managers and practitioners of Indian System of Medicine, academia, and student and research community working in niche areas of medicinal plants conservation.*

India, as is well known is a major bio-diversity nation and thus has more than 7,000 flowering plant species recorded in the written and local health traditions. However, quantum of consumption of these plant based resources has often remained a matter of speculation in the absence of reliable data, for resource managers. There are no reliable species-wise demand estimates documents too, which further compounds the problem of resource management.Many of the medicinal plants in supply to the industries are facing serious decline and even possible extinction in the wild due to mindless, unscientific harvesting practices. In this context, the current issue shares the experience from the findings of a latest study titled: "Demand and supply of medicinal plants in India", which should be of topical interest. It also provides a comprehensive checklist of 178 medicinal plants species in high volume trade/consumption, which only goes to prove the need for further studies, in this critical domain.

We sincerely hope you will find this newsletter interesting and resourceful, which shall enable you to deepen your understanding about the herbal sector-its promises and problems, and of course the required solutions. The subsequent issue will focus on an important theme- "Production and supply of botanicals in trade".

Suma T.S
Editor

ENVIS Centre on Medicinal Plants

Foundation for Revitalisation of Local Health Tradition, Bangalore

FRLHT is a registered public trust, since 1991. Our vision is to "***revitalise Indian Medical Heritage"***. Mission is to design and implement strategic programs in the three key thrust areas, that will have high social impact:

- *Demonstrating the contemporary relevance of the traditional knowledge.*
- *Conservation of the natural and cultural resources used by Indian Medical Heritage.*
- *Large scale dissemination of traditional knowledge via informal, institutional and commercial transmission processes.*

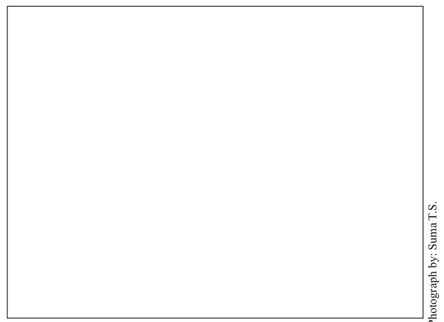
FRLHT is designated as "ENVIS Centre on Medicinal Plants" by MoEF, GoI. Here, we aim to bring awareness about the issues, concerns and experiences related to Indian Medicinal Plants conservation through the website: *http://envis.frlht.org.in* and quarterly newsletter: **Medplant**. By visiting our Centre at Bangalore, you can experience the beautifully landscaped medicinal plant garden with over 900 plant species. Amidst this paradise, you can meet 100 plus professionals, access exclusive Encyclopedia on Indian Medicinal Plants database; access exclusive FRLH- Herbarium and Raw Drug Repository with 35,000 accessions pertaining to 2,800 medicinal plant species, 602 plant raw drug samples pertaining to 452 species collected from authentic botanical sources; and 484 raw drugs pertaining to 395 species collected from various markets. It also has a full fledged laboratory: Centre for Pharmacology and Pharmacognosy, and Amruth Ayurveda Nursing Home and Yoga Centre.

Demand and Supply of Medicinal Plants

D.K Ved

The industrial demand for the medicinal plant resources has been on the rise due to the worldwide buoyancy in the herbal sector. In India, nearly 9,500 registered herbal industries and a multitude of unregistered cottage-level herbal units depend upon the continuous supply of medicinal plants for manufacture of herbal formulations. In addition to the industrial consumption, significant quantities of medicinal plant resources are consumed at the household level, by traditional healers and by practitioners of Indian Systems of Medicine. Whereas, more than 6,000 flowering plant species are recorded in the codified and folk healthcare practices in the country, the quantum of their consumption has remained a matter of guestimate. The fallout of the lack of reliable species-wise demand estimates has been an inadequate focus on the management of these resources. In fact, wild populations of many a medicinal plant species, forming the major resource base for the herbal industry, are reported to be facing a serious threat of decline and extinction due to indiscriminate harvesting.

It is in this context that the National Medicinal Plants Board (NMPB), Government of India, supported nation-wide study to assess the demand and supply of medicinal plants in India by Foundation for Revitalisation of Local Health Traditions (FRLHT), Bangalore.



Photograph by: Suma T.S.

*Elaeocarpus sphaericus (*Rudrakshi or Rudraksha) These deep blue fruits and seeds are from the tree growing at FRLHT Campus.

Some of the highlights of this study are as follows:

- A list of 960 medicinal plant species forming source of 1289 botanical raw drugs in trade in the country has been worked out.
- An annual trade value corresponding to the trade of 3,19,500 MT of botanical raw drugs in the country works out to Rs. 1,0691,058.90 crores for the year 2005-06 and the corresponding annual turnover of the herbal industry in the country has been industry estimated at more than Rs. 8,800 crores!
- Of the 960 traded medicinal plant species, 178 are consumed in volumes exceeding 100 MT per year each, with their consolidated consumption accounting for about 80% of the total industrial demand of all botanicals in the country. Analysis of these 178 species by their major sources of supply reveals that 21 species (12%) are obtained from temperate forests, 70 species (40%) are obtained from tropical forests, 36 species (20%) are obtained largely or wholly from cultivations / plantations, 46 species (25%) are obtained largely from road sides and other degraded land use elements and the remaining 5species (3%) are imported from other countries.
- Whereas all such species in high volume trade, sourced from the wild, need appropriate attention, the temperate and alpine herbs and the tropical trees form the most vulnerable group that need immediate management focus.
- As regards the 36 species sourced wholly or largely from cultivation, it needs to be appreciated that cultivation of these species has already stabilised and got firmly incorporated into the local agricultural systems and does not need any urgent promotional incentives. Instead, the focus in relation to these species would need to be on developing better cultivars/varieties and making their germplasm available to the growers in adequate quantities for enhancing their income.

Director FRLHT
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Saraca asoca (Roxb.) W.J. de Wilde

Synonym *- Saraca indica sensu Baker auct. non L.*

Family: Caesalpiniaceae
Vernacular names: Hindi - Asoka; **Kannada** - Ashoka mara, Seethe mara;
Malayalam - Asokam; **Sanskrit** - Ashoka, Hema pushpa; **Tamil** - Asoka maram; **Telugu** - Asokamu
Threat status: Endangered– Karnataka, Andhra Pradesh, Maharashtra; Data Deficient - Kerala, Tamil nadu
Trade Information: Listed as High Volume Trade Medicinal Plant(Ved et al,2008)
Trade name: Stem bark sold under the name Ashoka chal
Major Supply Source: Tropical forests
Adulterant: Stem bark of *Polyalthia longifolia* is an adulterant.

Photograph by: K. Ravikumar, FRLHT

Distribution: Global: Indo-Malayan. **National:** Southern India mainly the western ghats extending to some parts of North East at 400 - 1000m altitude in moist deciduous to evergreen forests especially along shady slopes and river sides. In India its presence is reported from Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, Orissa, Bihar, Jharkhand & Meghalaya. Planted as an ornamental in many parts of India.

Special characters: A handsome tree with prominent, drooping pendulous branches, purplish red new flush of leaves and the brilliant orange scarlet flowers in ball-like heads draw immediate attention. Interestingly, the colourful parts of the flowers are actually floral stalks, calyx, stamens and styles, not petals.

Flowering: February to June; **Fruiting:** August September. Stray flowers are seen almost throughout the year.

Description: Medium sized trees, 5-10 m tall and about 1 m girth. Bark thin ashy brown. Wood white and soft. Leaves alternate, leaflets 6-12, opposite, oval-shaped- 3-7 cm,. glossy. Flowers stalked, fragrant, orange yellow turning red, 2.5-4 cm long, born in the leaf axils or on old wood. Sepals yellowish orange to scarlet, petals absent. Pods are long, oval shaped, flat, tapering at both ends. Seeds 2-8, oval to ellipsoid.

Medicinal uses: Bark – is used to treat indigestion, fever, burning sensation, ulcers, menstrual disorders, dysentery, leucorrhoea and pimples. - **Leaves** - are used as blood purifier. Leaf juice mixed with cumin seeds used for treating stomachache. **Flowers** - are useful in treating burning sensation, bleeding piles, dysentery and scabies. - **Seeds** - are used in treating bone fractures, strangury and vescical calculi.

Mode of propagation: By seeds

Reference: *Ravikumar K. and Ved D.K.(2000), 100 Red Listed Medicinal Plants of Conservation Concern in Southern India, Foundation for Revitalisation of Local Health Traditions, Bangalore .*

Cultivating Urban Green Ambassadors: World Bio - Diversity Day

On 22nd May, "World Bio-diversity Day" was celebrated at FRLHT. There were nearly 300 students, teachers from different parts of Bangalore city came together and shared their experiences related to exploring neighbourhood plant world. On this occasion. Mr. Vijay Kumar S., Assistant Commissioner, Kendriya Vidyalaya Sanghatan, Bangalore Region, Mrs. Anu Thomas, Principal, KV-CRPF school and Mrs. Shobha Bhat, Principal, BVB's Nagarjuna Vidyaniketan School, Bangalore. FRLHT released unique CD ROM titled "**Neighborhood Medicinal Plants of Bangalore City" version 1.0. for high school students**. This CD development is supported by Ratan Tata Trust, corpus fund. This comprises of 300 plus common medicinal plants of Bangalore city with botanical and vernacular names correlation. It also has 700 plant images, an interactive *"Green Pad Module"* where students can jot down their field notes.

On the same day, three posters viz **Medicinal Plant Wealth of India- Red Listed Medicinal Plants and Wild Edible Fruits (supported by Centre of Excellence project, Government of India) and Common Butterflies of Bangalore city** were released.

Reported by: Suma T.S.

Photograph by: Suma T.S.

Sariva versus Sariva

Venu Gopal, S.N.

Sariva is a major ingredient in many of the Ayurvedic formulations and besides is popularly used to prepare herbal drinks in rural India, since centuries. According to authentic references in Ayurveda, the fragrant roots from the climber is widely used for treating nearly, 5-20 clinical conditions, such as, blood related disorders (rakta, pitta disorders), inflammatory conditions of skin in children, blood purification, nutritive or general tonic recommended for children, dermatitis conditions, anaemic conditions, fever, diabetic disorders, indigestion, tastelessness, diarrhea, respiratory disorders, poisonous bites, menstrual disorders etc.

Ayurvedic texts describe two types of Sariva, namely Sveta-sariva,- which is correlated to *Hemidesmus indicus* - , and Krsna- sariva, which is correlated to *Cryptolepis buchanani* or *Ichnocarpus frutescens* ,according to majority of experts.

The most popularly used Sariva is however, *Hemidesmus indicus* which is found to be distributed all over India, and in Sri Lanka, South East Asia and Malaysia. In India, it is widely found in North India, Sikkim and Peninsular India. However despite its widespread occurrence and distribution in the Indian sub-continent, the procurement of this herb in bulk volumes is a formidable practical problem for most of the user- industries. In the light of this, the other two Sariva candidates are generally relied upon by industries, due to their ease of large scale availability in desired volumes. However many of Ayurvedic pharmaceuticals in different parts of India also use *Vallaris solanacea, Decalepis hamiltonii and Tylophora fasciculata as sariba.*

Many of the alternative herbs mentioned above, have found considerable usage in traditional formulations, as they are readily available in required volumes, and besides due to their unmistakably identical odour characteristics. However it is important to note that not all of them have matching properties, as prescribed in many of the Ayurvedic texts. It has also been observed that quite often many a herbal Sherbet prepared using *Hemidesmus indicus* in typically rural settings and houses, does seem to be a more useful and reliable herbal drink from a clinical angle!

Ayurvedic Physican, FRLHT,
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Distribution of Krsna Sariva:

Cryptolepis buchanani, is very widely distributed across Sri Lanka, India, Burma and China. Its distribution has been recorded throughout India, particularly in Subtropical Himalayas, Middle and South Andaman, Kashmir to Nepal, in terrains rising up to an altitude of 1500 m. It is also widely distributed in monsoon forests of Western Ghats, common in hedges, and along N.Goa & S.Goa. It is very commonly found as a weed growing on bunds of fields.

Ichnocarpus frutescens, is globally distributed, spanning across Indo-Malaysia to Australia.

It is also common in moist deciduous forests and forest plantations.

ASCLEPIADACEAE
(*Hemidesmus indicus* (L.) Schult.)

Trade names: Anantmool, Sariva, Sarasaparilla
Parts traded: Roots
Used in: Ayurveda, Siddha, Unani, Folk and Homeopathy
Vernacular names: Kannada; Namdaberu, Sogadaberu;
Sanskrit; Sariva, Gopi; **Hindi;** Magrabu, Hindisalsa;
Tamil and Malayalam; Nannari; **English;** Indian Sarsaparilla

Description: A perennial slender climber with white milky latex. Root-stock is woody and fragrant. Leaves are simple, opposite, variable in shape from oval to linear shape. Mosaic patterns of silvery white can be seen on the leaves. Flowers are greenish purple. Fruits are a pair of follicles. They are cylindrical, 10 cm long, tapering to a point at the apex and have numerous wind borne seeds that is similar to milkweed.

Distribution: Globally the species is distributed in India, SriLanka, South East Asia and Malesia. In India, it is found in North India, Sikkim and Peninsular India.

Tabassum IF Shariff
Senior Research Fellow
FRLHT

Simple Home Remedy

Sariva - *Hemidesmus indicus*
Parts used: Root, Root bark
Preparation:

- Hot infusion of the root bark with milk and sugar is a good alterative and tonic, especially for children in chronic cough and diarrhea.
- For ulcers, swellings and rheumatic joints paste of the root is applied to cleanse and cure.
- Root powdered and mixed with cow's milk is given in cases of scanty urine.

Root powder: 1 - 4 gm
Decoction: 28 - 56 ml

Shilpa Naveen
Ayurvedic Physician, FRLHT

Medicinal Plant Species in high Volume Trade/ Consumption (> 100 MT) year)

As per "Demand and supply of medicinal plants in India" (Ved, D.K, and G.S, Goraya, 2008), a study supported by National Medicinal Plants Board, 960 species are in trade. Amongst them, 178 species fall under high volume trade or consumption category. i.e >100 MT/year. The major sources of supply reveals that 21 species (12%) are obtained from temperate forests, 70 species (40%) are obtained from tropical forests, 36 species (20%) are obtained largely or wholly from cultivation / plantations, 46 species 25%) are obtained largely from road sides and other degraded land use elements and the remaining 5 species (3%) are imported from other countries. The following list provides botanical name & trade name of high volume traded medicinal plants.

1. *Abelmoschus moschatus* Medik. -(Mushakdana)
2. *Abies spectabilis* (D.Don) Spach -Talispatra
3. *Abrus precatorius* L. -Gunja
4. *Acacia catechu* (L.f.) Willd. -Katha
5. *Acacia nilotica* (L.) Willd. *ex* Del.-Babul
6. *Acacia sinuata* (Lour.) Merr. -Shikakai
7. *Achyranthes aspera* L. -Apamarga
8. *Aconitum ferox* Wall. *ex* Ser.-Vachnag
9. *Aconitum heterophyllum* Wall. *ex* Royle-Atis
10. *Acorus calamus* L. -Vach
11. *Adhatoda zeylanica* Medic.-Adusa
12. *Aegle marmelos* (L.) Correa -Bael
13. *Aerva lanata* (L.) Juss. -Cheroola
14. *Albizia amara* (Roxb.) Boivin -Krishna shirish
15. *Aloe barbadensis* Mill. -Kumari
16. *Alpinia calcarata* (Haw.)Roscoe -Chittartha
17. *Alstonia scholaris* (L.) R.Br. -Saptaparni
18. *Andrographis paniculata* (Burm.f.) Wall. *ex* Nees -Kalmegh
19. *Anogeissus latifolia* (Roxb. ex DC.) Wall. *ex* Guill. & Perr. -Dhawada
20. *Aquilaria agallocha* Roxb. -Agar kala
21. *Asparagus racemosus* Willd. -Shatavari
22. *Azadirachta indica* A.Juss. -Neem
23. *Bacopa monnieri* (L.) Wettst. -Brahmi
24. *Baliospermum montanum* (Willd.)Muell.-Arg.-Dantimool
25. *Berberis aristata* DC. -Daruhaldi
26. *Bergenia ciliata* (How.) Sternb.-Pashanabheda
27. *Boerhavia diffusa* L. -Punarnava
28. *Bombax ceiba* L.-Mochrus
29. *Boswellia serrata* Roxb. -Salai guggul
30. *Buchanania lanzan* Spreng.-Chironji
31. *Butea monosperma* (Lam.) Taub. -Tesu phool
32. *Caesalpinia sappan* L. -Pathimugam
33. *Cardiospermum halicacabum* L. -Mudakkathan
34. *Careya arborea* Roxb. -Vaari kumbha
35. *Cassia absus* L. -Chaksoo
36. *Cassia angustifolia* Vahl-Sonamukhi
37. *Cassia fistula* L. -Amaltas
38. *Cassia tora* L. (L.) Roxb -Chakoda beeja
39. *Catharanthus roseus* (L.) G.Don-Sadabahar
40. *Cedrus deodara* (Roxb.) G.Don -Devdar
41. *Celastrus paniculatus* Willd. -Malkangani
42. *Centella asiatica* (L.) Urban -Brahmi booti
43. *Centratherum anthelminticum* (L.)Kuntze-Kali zeeri
44. *Chlorophytum tuberosum* Baker- Safed musli
45. *Cichorium intybus* L. -Kasani
46. *Cinnamomum sulphuratum* Nees -Dalchini
47. *Cinnamomum tamala* (Buch.-Ham.) Nees & Eberm -Tejpatta
48. *Citrullus colocynthis* (L.) Schrad. -Indrayan
49. *Clerodendrum phlomides* L.f. -Arnimool
50. *Commiphora wightii* (Arn.) Bhandari -Guggul
51. *Convolvulus microphyllus* Sieb. *ex* Spreng.-Shankhapushpi
52. *Coscinium fenestratum* (Gaertn.) Coleb. -Maramanjal
53. *Croton tiglium* L. -Jamalghota
54. *Curculigo orchioides* Gaertn. -Kali musli
55. *Curcuma angustifolia* Roxb. -Thikhur
56. *Curcuma zerumbet* Roxb.-Kachur
57. *Cyclea peltata* (Lam.) Hook.f. & Thomson -Paadu kizhangu
58. *Cynodon dactylon* (L.) Pers. -Durva
59. *Cyperus esculentus* L. -Musta
60. *Cyperus rotundus* L. -Nagarmotha
61. *Datura metel* L. -Duttura
62. *Decalepis hamiltonii* Wight & Arn. -Magali
63. *Desmodium gangeticum* (L.) DC. -Salparni
64. *Eclipta prostrata* (L.) L. -Bhringraj
65. *Embelia tsjeriam-cottam* (Roem. & Schult.) DC. Vaividang
66. *Emblica officinalis* Gaertn. - Amla
67. *Ephedra gerardiana* Wall. ex J.A. Mey-Somlata
68. *Ficus benghalensis* L. -Vada chhal
69. *Ficus religiosa* L. -Lakh pippal
70. *Fumaria indica* (Hausknn.) Pugsley -Shahtara
71. *Garcinia indica* (Dup.) Choisy -Kokam
72. *Gardenia resinifera* Roth -Dikamali
73. *Gloriosa superba* L. -Kalihari
74. *Glycyrrhiza glabra* L.-Mulethi
75. *Gmelina arborea* Roxb. -Gambar chhal

76. *Gymnema sylvestre* R.Br. ex Schult.-Gudmar
77. *Hedyotis corymbosa* (L.) Lam-Pitpapra
78. *Helicteres isora* L. -Marodphali
79. *Hemidesmus indicus* (L.) R.Br. -Anatmool
80. *Holarrhena pubescens* (Buch.-Ham.) Wall. *ex* G.Don-Kutja
81. *Holoptelea integrifolia* (Roxb.) Planch. -Aavithali
82. *Holostemma ada-kodien* Schult.-Jeevanti
83. *Hygrophila schulli* (Buch.-Ham.) M.R. & S.M.Almeida-Tal makhana
84. *Indigofera tinctoria* L. -Akika
85. *Inula racemosa* Hook.f. -Pushkarmool
86. *Ipomoea mauritiana* Jacq. -Palmudhakkan
87. *Ipomoea nil* (L.) Roth -Kaladana
88. *Ixora coccinea* L. -Thechippoovu
89. *Jatropha curcas* L. -Nepalam seed
90. *Juniperus communis* L. -Hauber
91. *Jurinea macrocephala* DC.-Dhoop
92. *Kaempferia galanga* L. -Kachora
93. *Lannea coromandelica* (Houtt.) Merr. -Jingini
94. *Lawsonia inermis* L. -Mehndi
95. *Lepidium sativum* L. -Kurassani
96. *Litsea glutinosa* (Lour.) C.B. Rob.-Maida chhal
97. *Lobelia nicotianaefolia* Roth *ex* Roem. & Schult. -Lobelia leaves
98. *Madhuca indica* J.F.Gmel -Madhuka
99. *Merremia tridentata* (L.) Hallier.f.-Prasarani
100. *Mesua ferrea* L. - Nagekesar
101. *Mimusops elengi* L. -Bakul
102. *Morinda pubescens* J.E.Sm.-Manjanathi
103. *Mucuna pruriens* (L.) DC. -Kaunch beej
104. *Nardostachys grandiflora* DC. -Jatamansi
105. *Nilgirianthus ciliatus* (Nees) Bremek - Kurinji
106. *Ocimum americanum* L. -Ban tulasi
107. *Ocimum basilicum* L. -Kali tulasi
108. *Ocimum tenuiflorum* L. [=*O. sanctum* L.]-Tulasi
109. *Onosma hispidum* Wall. *ex* G.Don -Ratanjot
110. *Operculina turpethum* (L.) J.Silva Manso-Nishoth
111. *Oroxylum indicum* (L.) Benth. ex Kurz. -Tetu chhal
112. *Parmelia perlata* (Huds.) Ach. -Chadila
113. *Peganum harmala* L. -Harmal
114. *Phyllanthus amarus* Schumach. & Thenn. -Bhumiamla
115. *Picrorhiza kurroa* Royle *ex* Benth.-Kutaki
116. *Piper chaba* Hunter -Kabab chini
117. *Piper longum* L. -Pippali
118. *Pistacia integerrima* Stew. ex Brand.-Kakar singi
119. *Plantago ovata* Forssk. -Isabgol
120. *Plectranthus barbatus* Andrews - Gandhira
121. *Pluchea lanceolata* (DC.) Oliver & Hiern. -Rasna
122. *Plumbago zeylanica* L. - Chitrak
123. *Pongamia pinnata* (L.) Pierre-Karanji
124. *Premna integrifolia* L.-Arnimool
125. *Prunus armeniaca* L.-Chuli
126. *Pseudarthria viscida* (L.) Wight & Arn. -Moorva
127. *Psoralea corylifolia* L. -Bawachi
128. *Pterocarpus marsupium* Roxb. -Damulakhwain
129. *Pterocarpus santalinus* L.f. -Rakatachandan
130. *Quercus infectoria* G.Oliver -Majuphal
131. *Rauwolfia serpentina* (L.) Benth. *ex* Kurz -Sarpagandha
132. *Rheum australe* D.Don-Revan chini
133. *Rhododendron anthopogon* D.Don -Talispatra
134. *Rubia cordifolia* L. -Manjistha
135. *Santalum album* L. -Chandan
136. *Sapindus mukorossi* Gaertn.-Reetha
137. *Saraca asoca* (Roxb.) W.J. de Wilde -Ashoka chhal
138. *Saussurea costus* (Falc.) Lipsch.-Kuth
139. *Schrebera swietenioides* Roxb. -Ghanti phool
140. *Semecarpus anacardium* L.f. -Balave
141. *Shorea robusta* Gaertn. -Raal
142. *Sida rhombifolia* L-Bala
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144. *Simmondsia chinensis* (Link) C.K.Schneid.-Jojoba

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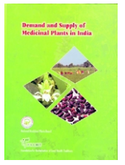
150. *Soymida febrifuga* (Roxb.) A.Juss. -Rohan
151. *Sphaeranthus indicus* L. -Gorakh mundi
152. *Sterculia urens* Roxb. -Karaya
153. *Stereospermum chelonoides* (L.f.) DC-Patala
154. *Strychnos nux-vomica* L. -Kuchla
155. *Strychnos potatorum* L. -Nirmali
156. *Swertia chirayita* (Roxb. *ex* Fleming) H.Karst. -Chiraiyata
157. *Symplocos racemosa* Roxb.-Pathani Lodh
158. *Taxus wallichiana* Zucc. -Talispatra
159. *Tephrosia purpurea* (L.) Pers. -Sarpankha
160. *Terminalia arjuna* (Roxb.ex DC.) Wight & Arn. -Arjun
161. *Terminalia bellirica* (Gaertn.)Roxb.-Behra
162. *Terminalia chebula* Retz. -Harda
163. *Tinospora cordifolia* (Willd.) Miers ex Hook.f. & Thomson -Giloy
164. *Trachyspermum ammi* (L.) Sprague -Ajwain
165. *Tragia involucrata* L. -Barhanta
166. *Tribulus terrestris* L. -Gokhru
167. *Trichosanthes cucumerina* L. -Patol panchang
168. *Valeriana jatamansi* Jones -Musakbala
169. *Vateria indica* L. -Manda dhupa
170. *Vetiveria zizanioides* (L.) Nash -Lavancha
171. *Viola pilosa* Bi.-Banafsha
172. *Vitex negundo* L. -Neergundi
173. *Withania coagulens* Dunal -Paneerdodi
174. *Withania somnifera* (L.) Dunal -Ashwagandha
175. *Woodfordia fruticosa* (L.) Kurz -Dhai phool
176. *Wrightia tinctoria* R.Br. -Inderjau
177. *Ziziphus jujuba* (L.) Gaertn-Ber
178. *Ziziphus xylopyrus* (Retz.) Willd. -Ghonta phala

Daruharidra
Is it Berberis or Coscinium ?

Roots and wood of *Berberis* spp. (*Berberis aristata*, *B. Lycium, B. asiatica, B.Chitira,* etc) from western Himalayan states enter the trade as ' Kashmal' and become 'Daruharidra' or 'daruhaldi' in the larger markets like Delhi. Similarly, wood of *Coscinium fenestratum* from western ghats enters trade as 'Maramanjal' and also becomes 'Daruharidra' in the larger markets in Southern India. ' Daruharidra' forms an important raw material in a number of classical formulations and is used in significant quantities. Information from the industry would at best provide information about the quantities of 'Daruharidra' used by it. However, whether this material pertains to one or more species of the genus *Berberis* from Himalayas or *Coscinium fenestratum* from Western Ghats remains unclear.



New Release

The "Demand and Supply of Medicinal Plants in India", based on a nation-wide study on the consumption and sourcing of medicinal plants, seeks to fill this information gap. The total annual demand of botanical raw drugs in the country for the year 2005-06 has been estimated as 3,19,000 MT with corresponding trade value of Rs. 1,069 crores. The publication contains a check-list of 960 medicinal plant species, which form source of 1289 botanicals recorded in trade. Of these 960 species, 178 species have been identified for priority management action due to their high annual demand to meet needs of domestic herbal industry, rural households and exports. Supply position of the traded species has been looked into and source-wise lists of the 178 species in high trade have also been provided for focused action. Recommendations for improving the status of medicinal plant resources in the country have also been provided.

The text is laced with graphic presentation of results and provides substantial supporting information in the form of boxes. The book attempts to provide with reliable data in a consolidated manner and may be very useful for planners and policy makers for management and holistic development of medicinal plant sector.Dehra Dun & FRLHT, Bangalore, India.

Citation
Ved D.K. & G. S. Goraya (2008), Demand and Supply of Medicinal Plants in India, Bishen Singh, Mahendra Pal Singh, Dehra Dun & FRLHT, Bangalore, India.

What's in news?

- On 4th Jan, 2008, a book titled: **Demand and Supply of Medicinal Plants in India,** Ved, D.K. and G.S. Goraya, 2008, Bishen Singh Mahendra Pal, Dehradun was released byDr. Gaurishankar Shejwar, Honorable Health Minister, Madhyapradesh at Indore in the presence of Ms. Anita Das, Secretary AYUSH and Mr. Sajawan, CEO, National Medicinal Plants Board, GoI.

- On 21st March 2008, a CDROM titled: **Medicinal plants of Orissa**, was released by the Principal Chief Conservator of Forest,, Bhuvaneshwar.

- On 11th April, four CDROMs titled **(Medicinal plants in Siddha System of Medicine, Medicinal plants in Unani, Medicinal plants In Homeopathy, and Atlas of Geographical Distribution of Prioritized Indian Medicinal Plants, supported by MoEF,** and **"Jalabandhu",** a copper coil for water purification", designed and developed by FRLHT were released by Mr. Sam Pitroda, Chairperson, Knowledge Commission, on the mega event -**Tri-murti Avatar** Celebration, at FRLHT. On the same occasion, FRLH Herbarium and Raw Drug Repository building and Indian Institute of Ayurveda and Integrated Medicine wing was officially inaugurated.

- On 30th July, 35 teachers from Kendriya Vidyalaya Sangathan, Bangalore Region participated in Teachers' Training program workshop.

- 30th May 2008, an edited book titled, Kinhal G.A. and R.J. Rao, **Adaptive Management of Medicinal Plants and NTFPs-Strategies, Implication and Policy for Sustainable Harvesting,** Bishen Singh Mahendra Pal, Dehradun was released by Mr. A.K. Verma, I.F.S., PCCF and Mr.B.K. Singh I.F.S, Additional P.C.C.F, Karnataka Forest Department, Aranya Bhavan, Bangalore.
  On 10th July 2008, a CDR OM titled: **Medicinal plants of Rajasthan**, was released by P.C.C.F., Udaipur.