

FUTURE PROSPECTS OF HERBAL MEDICINES IN INDIA

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Abstract: Scientific research and inventions have always been the thrust of mankind and is largely responsible for the standard of living he has today. Natural resources of a country are of primary importance for the economic development. Plants were in existence even before man came into existence. Man found that a plant which is astringent in taste will arrest diarrhoea, a plant which is acid to taste will control vomiting and a plant which is aromatic will control nausea. India has abundant supply of medicinal plants. Medicinal plants are the primary life-supporting system for rural and tribal communities and over 8000 species of plants have been estimated to be used in indigenous health system. There are around fifty species, widely used under cultivation. While the demand for medicinal plants is growing, some of them are increasingly being threatened in their natural habitat. In the olden days indigenous medicine had attained a very high standard, and we have stalwarts in Ayurveda, Siddha, Unani, Allopathy and Homeopathy. The importance of plants in the medical treatment cannot be overestimated. Hence, the global knowledge about Indian herbals will hopefully be enhanced by information on the evidence-base of these plants. This will yield rich dividends in the coming years. In this present study, an attempt has been made to study the various ayurvedic plants and medicines available in market for the ailment of the common illnesses affecting the various systems of our body.

Key Words: Medicinal plants, Herbal medicine, Ayurveda, Nutraceuticals

Introduction: Due to weather and climatic conditions prevalent and regional topography, India has abundant natural resources. Our herbal wealth constitutes more than 8000 species and accounts for around 50 per cent of all higher flowering plant species of India. About 1800 species are used in classical Indian systems of medicines. The emerging field of herbal products industry holds a great potential to the economic development of the Indian region. There is an increasing trend of using plants as a source of food, medicine and perfumes. It is important to understand that nutraceuticals are nutritionally and medicinally enhanced food with health benefits of recent origin.

Today's medicinal science has been developed from ancient Indian science and many of the pharmaceuticals currently available in the modern medicines have long history of use as herbal remedies including opium, aspirin, digitalis and quinine. In these days, major chronic diseases such as diabetes mellitus, rectal diseases like piles, fistula, renal stones, skin diseases, different types of arthritis, pulmonary diseases, hyperacidity and constipation, impotency and paralysis are treated by herbal medicines. According to World Health organization (WHO) nearly 80 per cent of the world population depends on traditional medicines. Recent surveys have revealed that almost 50 per cent of the prescription drugs are based on natural products and raw materials. India and China are the largest users of herbal medicines. Table: 1 represents the Family wise representation of traded medicinal plants:

Family	Species
Fabaceae (Bean Family)	67
Asteraceae (Aster family)	54
Euphorbiaceae (castor family)	48
Caesalpiniaceae (Tamarind family)	41
Apiaceae (Coriander family)	37
Lamiaceae (Basil family)	37
Solanaceae (Tomato family)	35
Cucurbitaceae (Cucumber family)	32
Rubiaceae (Coffee family)	29
Malvaceae (Hibiscus family)	28

(Source; Biodiversity: Life of our mother earth)

Table: 2

Some Important threatened medicinal plants of Western Himalaya

Common Hindi name	Scientific name	Habitat	Plant part used	Medicinal uses
Manjistha	<i>Rubia cordifolia</i> Linn	Lower Himalayas	Whole plant	In Eye-Ear disorder, Leprosy Stomach disorders, in swelling.
Chirayata	<i>Swertia chirayata</i> Buch.ham.	Lower Himalayas	Whole plant	In stomach disorders
Daruhaldi	<i>Berberis asiatica</i> DC.	Lower Himalayas	Roots	In fever, jaundice, Dysentery
Maida	<i>Polygonatum cirifolium</i>	Lower Himalayas	Roots	In Blood disorders, Cough, Tuberculosis and as Spermatula.
Dioscoria	<i>Dioscorea deltoidea</i> Wall.	Lower Himalayas	Roots	Fish poison, Source steroidal hormones
Lahasuniya	<i>Mycrostylis Wallichii</i>	Lower Himalayas	Roots	In tuberculosis, Asthma, Tonic, in Asthwarga
Pathar long	<i>Didymocarpus pedicellata</i> R Br.	Lower Himalayas	Leaves	In Renal calculi, perfum
Kalihari	<i>Gloriosa superba</i>		Roots	Purgative, antihelminthic, In Leprosy, Snakehole
Pashan bedh	<i>Bergenia ligulata</i>	Lower/higher Himalayas	Rhizomes	In fever, renal stones, stomach disorders, pulmonary disorder
Maha maida	<i>Polygonatum verticilatum</i>	Lower/higher Himalayas	Roots	In leucorrhoea, blood purifier, in Asthawarga.
Kuth	<i>Saussurea lappa</i> C.B. Clarke	Higher Himalayas	Roots	In Cough, Ant asthmatic
Talish patra	<i>Taxus baccata</i> Linn.	Higher Himalayas	Bark/leaves	Anticancerous, Germicidal
Ban kakri	<i>Podophyllum hexandrum</i> Royle	Higher Himalayas	Roots	Anti cancerous, Hepatic stimulant
Kutiki	<i>Picrorhiza kurroa</i>	Higher Himalayas	Roots	In jaundice, fever, stomach-disorders
Atish	<i>Aconitum heterophyllum</i> Wall.	Higher Himalayas	Tubers	In cough, Aphrodisiac, ant-periodic
Salam punja	<i>Orchis latifolia</i> Linn.	Higher Himalayas	Roots	Anti diabetic, wound healer
Salam mishri	<i>Orchis latifolia</i> Linn.	Higher Himalayas	Roots	Spermaturia, Blood purifier, for enhancement of sexual power
Salam	<i>Ephedra gerardiana</i> Wall	Higher Himalayas	Whole plant	Tonis, Appetizer, in Headache
Dolu	<i>Rheum emodi</i> Wall.	Higher Himalayas	Roots	For healing internal wounds, in sprain and fractures
Jatamansi	<i>Nardostachys jatamansi</i> D.C.	Higher Himalayas	Whole plant	In nervous disorders, Heart tonic, Piles
Gandhrayan	<i>Achillea glauca</i>	Higher Himalayas	Roots	Appetizer, Gastric troubles and Stomach disorders
Meetha/banwa	<i>Jurinea macrocephala</i> Benth	Higher Himalayas	Tubers	In Leprosy, Arthritic pains
Guggal dhoop			Whole plant	In Stomachache, Boils, perfumery value.
Jamboo	<i>Allium strachey</i>	Higher Himalayas	Leaves	Carminative, Gastric-disorders, as Condiments
Kanda	<i>Meconopsis aculeata</i> Royle.		Roots	Narcotic properties

(Source; Biodiversity: Life of our mother earth)

From the above table, it clearly indicates that there are various plants playing a major role in treating various disorders and diseases in human and it is important to preserve the natural resources for the betterment of human health.

Methodology: To understand the current trend for various medicinal plants and herbal medicines, secondary data sources were used. Primary survey carried at various ayurvedic health clinics, hospitals and dispensaries in Navi Mumbai. The pilot survey was conducted and the respondents were the users of ayurvedic medicines and products, the chemists selling the same and the ayurvedic practitioners.

Results and discussion: With the increase in population, rapid expansion of area under food and commercial crops, deforestation, extension of urban area, establishment of industries in rural areas, etc., there is considerable depletion of plant genetic resources, wealth, many of them being in the process of extinction day by day(Vijayalatha,2004 and Singh,2005). Medicinal plants contain various organic compounds which are pharmacologically active. Many of these compounds become pure drugs. In Kerala, even today ayurvedic practitioners produce oil by boiling rotten coconut Kernels. Various medicinal plants are researched and being researched into for cosmetic values also. People started using Taxus for AIDS, Vinca for leukaemia, Bacopa for memory building etc. In India, large scale cultivation of Ocimum, Gloriosa superba, Coleus barbatus, Phyllanthus amarus and Bacopa monnieri has been taken up.

The demand for herbal medicines is increasing mainly because of less toxicity and side effects of the medicines. In India, there are more than 16 recognized manufacturers and about 1300 licensed small manufacturers are on records. Standardization starts at the initial stages from the production of quality materials. Quality control plays a major role in the drug production. Standardization of medicinal plants and its extracts have great importance since the cosmetics and nutraceuticals production are important and emerging segments in the global market.

Among 880 medicinal plants, the highest proportion is herbs including grasses, followed by trees (26%), shrubs (17%) and climbers (16%). The major share is from 10 plant families. They include Fabaceae, Asteraceae, Euphorbiaceae, Apiaceae, Solanaceae, Cucurbitaceae, Rubiaceae and Malvaceae (Table1). In western Himalayan region Forest Corporation is responsible for the collection of raw herbal drugs from their natural habitat. Due to the lack of knowledge on their

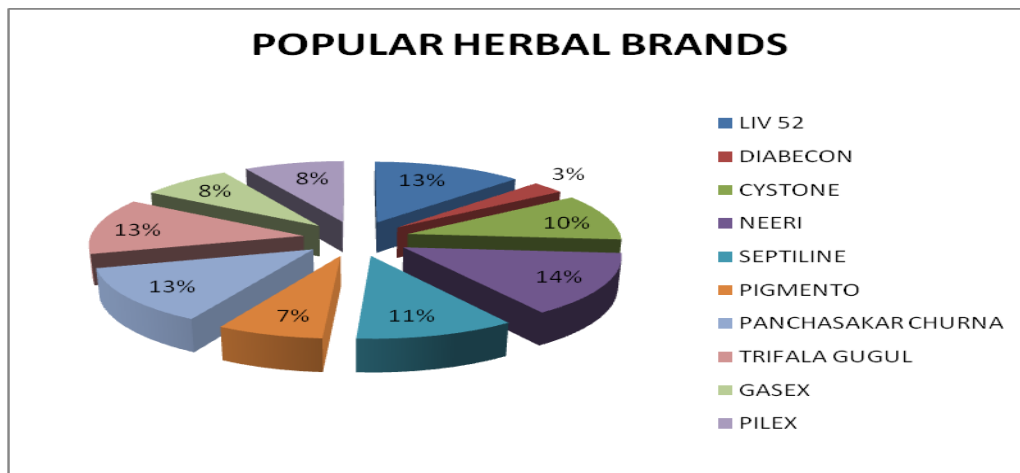
proper methods of collection, unscientific and irregular exploitation of these herbs from its natural resources, many important and highly demanded medicinal herbs are at verge of extinction.(Table;2) It is found that the species are used widely across different medical systems. Majority of these plants (approximately 82) are used in Ayurveda system of medicine. The survey indicated that most of the herbalists were not licensed, educated or trained in the field of herbal medicine and has acquired expertise/ knowledge from their predecessor.

Among the 880 species, 42 species are imported. Some of these imported species are semi processed and the extracts of the same are exported to various places. The majority of the imported drugs are from tree species. Fourteen drugs are from herbs while 9 are from shrubs and 3 from climbers. (Noorunnia begam and ved, 2003). It is also understood that most popular among the herbal medicines are LIV-52, Pudinhara, Adulsa, Pilex, Septilin, Cystone and Trifala Guggul. (Figure 1)

Accoding to chemists, LIV 52 is very much in demand. Trifala guggul have a moderate turnover compared to the products such as Aswaganda and septilin. (Fig: 2)

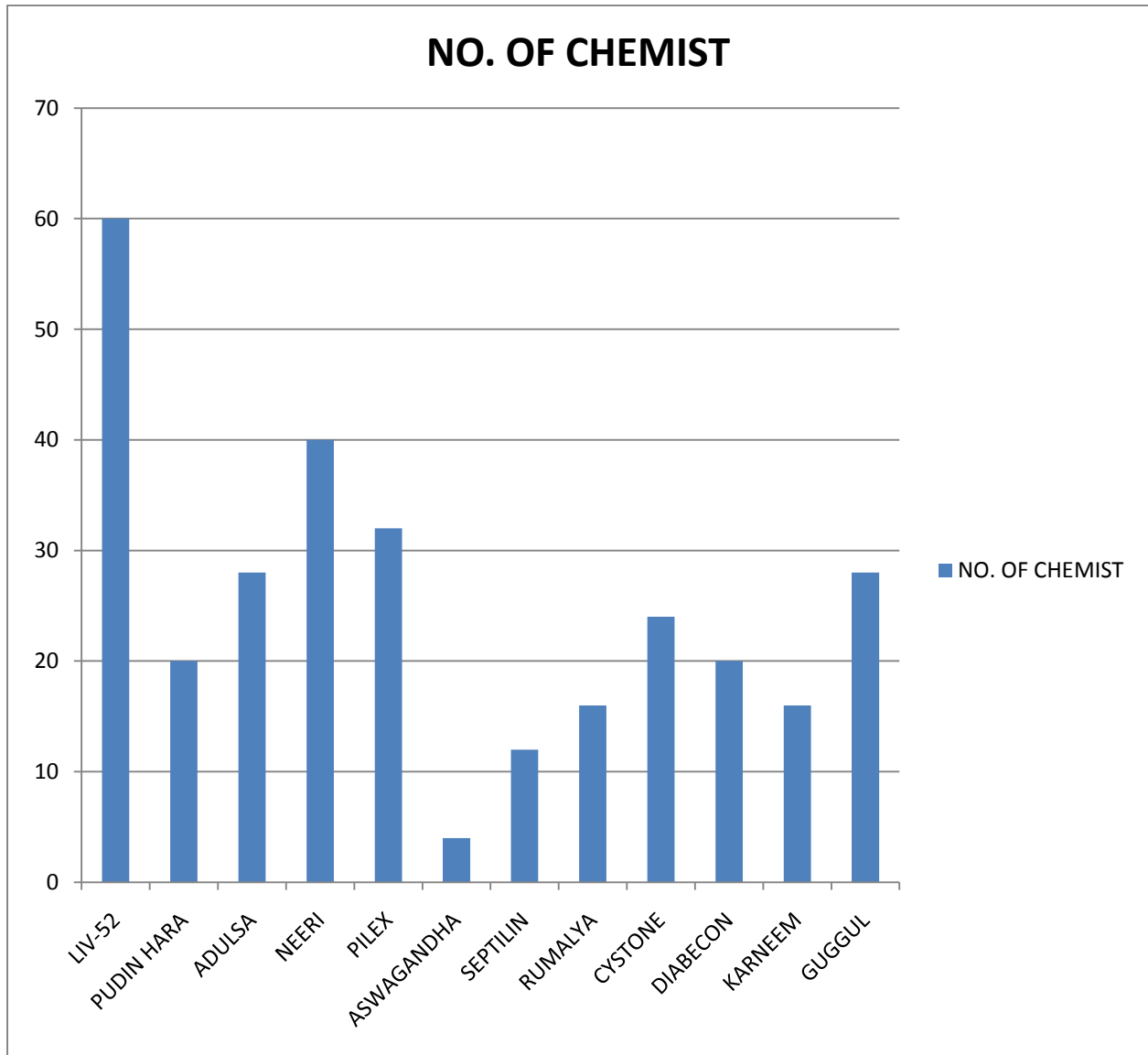
The survey results of chemists and General physicians reveals thar ayurvedic medicines are more effective in the case of skin related treatment and liver and stomach related diseases and disorders. It also revealed that ayurvedic products are economical and effective in treating diseases. Various herbal products are well accepted by the patients. Research in the area of psychiatric, AIDS, various types of cancer and Tuberculosis are to be taken up.

Figure 1



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Figure:2



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Table -3

RUNNING BRANDS

BRANDS	DISEASES USE FOR	BRANDS	DISEASES USE FOR
LIV-52	(Liver Disorder)	SEPTILIN	(Immune system)
PUDIN HARA	(Indigestion)	RUMALYA	(Arthritis)
ADULSA	(Cough)	CYSTONE	(Kidey-Stone)
NEERI	(Renal Stone)	DIABECON	(Diabetis)
PILEX	(Piles)	KARNEEM	(Diabetis)
ASWAGANDHA	(Energy Rejuvant)	GUGGUL	(Arthritis)

For various types of diseases and disorder problems, number of ayurvedic drugs are available in the market. Table 3 represents the various brands available in the market to treat the diseases accordingly.

Conclusion: In developing countries more than 80 per cent of the population relies on traditional medicines, mostly plant drugs, for their primary healthcare. Herbal remedies are available in all chemists and grocery stores. Ayurvedic products are reasonably cost effective and well accepted by patients. They are easily available and do not have side effects. These herbal drugs and Indian medicinal plants are also rich sources of beneficial compounds including antioxidants and components that can be used in functional foods. Newer approaches utilizing collaborative research and modern technology in combination with established traditional health principles will yield rich dividends in the near future in improving health, especially among people who do not have access to the use of costlier western systems of medicine. Bio Pharma companies need to carry out more extensive market penetration and research for ayurvedic medicines to be more frequently used by consumers. All manufacturers in India with the support of State and Central Governments have to set up a world standard laboratory in quality control, R&D facility which would facilitate and help exporters in respect to qualify assurance of drugs exported from India. A reasonable status of scientific vigour is needed to assess the threat status of species to be banned. The conservation status of all species in trade should also be studied. This clearly opens up a huge challenge for conservationist, policy makers, researchers, industry and farmers to manage one of the most important natural resources, medicinal plants wisely.

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