

Marketing of Medicinal Plants: Challenges and Strategies

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Introduction

- **Medicinal plants (MPs) as a group comprises approximately 8, 000 species and account for around 50% of all the higher flowering plant species of India.**
- **Millions of rural households use medicinal plants in a self-help mode.**
- **Over one and a half million practitioners of the ISM in the oral and codified streams use medicinal plants in preventive, promotive and curative applications.**
- **These are estimated to over 7, 800 manufacturing units in India (Planning Commission, 2000).**
- **The growing demand for herbal products has led to a quantum jump in volume of plant materials traded within and across the countries.**

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- **The EXIM Bank (2003) puts the international market of medicinal plants related trade at US\$ 60 billion per year growing at the rate of 7% only.**
- **WHO estimated that 80% of the population of developing countries relies on traditional medicines, mostly plant drugs, for their primary health care needs.**
- **MP sector has traditionally occupied an important position in the socio-cultural, spiritual and medicinal arena of rural and tribal lives of India.**
- **The growing demand is putting a heavy strain on the existing resources.**

Benefits of Medicinal Plants:

- MPs offer a wide range of subsistence, cultural and monetary benefits to people.
- In China, Nepal and India, they are an important revenue generating resources and providing income to economically marginalized and indigenous people.
- Medicinal plants can also contribute to address the chronic problem of global poverty and hunger.
- Poverty Reduction Strategy and Programs will require interventions which are grass roots-based, poor-centered and livelihood focused. Medicinal plants can meet the basic needs of the poor rural people.

Emerging Markets:

- Increasing interest by multinational pharmaceutical companies and domestic manufacturers of herbal-based medicines is contributing significant economic growth of the global medicinal plants sector.
- In 1997 there were 3, 500 tons of the bark of the shrub *Prunus Africana* (valued at US \$ 220 million) was exported from Africa, which used in the treatment of prostate disease.
- The global market potential of Aloe Vera used to treat burns and added to skin creams and cosmetics was estimated in the billions of dollars.
- Devil's Claw, is a major exports from Namibia for use in the treatment of arthritis and other inflammatory diseases.

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- In the three Himalayan countries of Nepal, Bhutan and Bangladesh, several thousand tones of Medicinal and Aromatic Plants (MAPs) are extracted from forests providing earnings that run into millions of dollars each year.
- India, which is the hub of the regional trade, at the national level up to 40% of the state forest-based revenues and 70% of forest export revenues come from MAPs & Non-Timber Forest Products (NTFPs), mostly in unprocessed and raw forms.
- In Nepal it is estimated that every year 20,000 tons of MAPs worth US\$ 18-20 millions are traded and about 90% of this collection is exported mainly to India in raw form.

Demand for Medicinal Plants:

- The demand for medicinal plants in India to meet both domestic and export markets which was projected to increase at about 15–16 percent annually, between 2002 and 2005.
- If properly organized, the cultivation and management of medicinal plants becomes highly remunerative both in financial and economic terms for the small-scale growers.
- The annual revenue stream from the three major Indian systems of medicine, i.e., Ayurveda, Unani and Siddha, is estimated at more than half a billion dollars annually.
- In 2000, the gap between demand and supply of MAPs was estimated to be about 40,000 to 2, 00,000 tons; by 2005 the gap was expected to increase from 1, 52, 000 to 4, 00, 000 tons (Planning Commission, 2000 & CRPA, 2001).
- MAP-based industries create employment opportunities in poor, job-starved states, thereby increasing the cash earnings of local people (Karki, 2002).

Role of NMPB in Promotion of MPs:

- The NMPB was set up in the Department of AYUSH in November, 2000 has been responsible for supporting initiatives for conservation and cultivation of medicinal plants both in-situ and ex-situ in India.
- During the 9th and 10th Plans, the Board provided assistance to State Forest Departments and voluntary agencies for conservation of medicinal plants over an area of about 30,000 hectares.
- Financial assistance was also provided to over 5,000 farmers for cultivation of medicinal plants over 40,000 hectares.

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- A study of demand and supply of medicinal plants carried out by the Board during 2007-08 brought out alarming shortages of some of the plants used by the Ayurvedic industry.
- The Board, thereafter, launched special drive to invite proposals for conservation and plantation of some of the rare and endangered species in high demand from states.
- Of particular interest were the tree species like Sita Ashoka (*Saraca asoca*) – the main ingredient of Ahsokaristha (a key Ayurvedic formulation for gyaenecological disorders),
- Guggul (*Commiphora wightii*) – a thorny bush which yields gum resin and is used in more than 100 Ayurvedic preparations, and
- the Dashmools – used in the most widely used Ayurvedic preparation – Dashmoolarishta.

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- The estimated demand of Sita Ashoka bark is in excess of 2,000 MT, however, the availability in the wild is extremely rare.
- Likewise, though more than 1,000 MT of gum resin of Guggul is used by the Ayurvedic industry, more than 90% of this is imported.
- The Board, sanctioned conservation/ plantation of Guggul over 4,000 hectares of forest areas in Gujarat and Rajasthan,
- Sita Ashoka over 800 hectares in the States of Karnataka, Orissa and Kerala and
- Dashmool trees over 1,100 hectares in the States of Gujarat, Madhya Pradesh, Tamil Nadu, Karnataka, Kerala, Tripura and A P.
- Special drive was also launched to conserve and propagate high altitude plants like Atees, Kuth, Kutki through the non-government organization working at the grass root level in the Himalayas.

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- Under the School Herbal Garden programme, more than 1,000 schools have been covered in different parts of the country creating awareness among citizens of tomorrow about the health promoting role of our bio-diversity.
- The Board is making new strides during the 11th Plan. Against a 10th Plan expenditure of Rs. 142 crores, the outlay during the 11th Plan is Rs. 990 crores – a seven fold increase.
- A new initiative in the form of National Mission on Medicinal Plants focus on inclusive growth in agri-business through medicinal plants and thereby improve the market access of growers/farmers for more remunerative prices for their produce and better quality of raw material for the Ayurvedic, Siddha and Unani industries.

Global Marketing Opportunities:

- Export opportunities of natural products are tremendous, as the world market is looking towards natural sources for the purposes of therapeutic use as well as nutritional dietary supplements.
- The global herbal remedies market can be classified into five strategic areas:
 - (i) Phyto-Pharmaceuticals - the plant based drugs containing isolated pure active compounds used to treat diseases;
 - (ii) Medicinal Botanicals / Dietary Supplements - the whole plant or plant-part extracts used for maintenance of health by affecting a body structure and its function;
 - (iii) Nutraceuticals - the food containing supplements from natural (botanical) sources, that deliver a specific health benefit, including prevention and treatment of disease;
 - (iv) Cosmeceuticals - the cosmetic products which contain biologically active ingredients having an effect on the user and
 - (v) Herbal raw material.

Exports:

- India is one of the major exporters of crude drugs mainly to the six developed countries, (USA, Germany, France, Switzerland, UK and Japan) about 75% to 80% of the total exports of crude drugs from India.
- The principal herbal drugs that have been finding a good markets in foreign countries are Aconite, Aloe, Ammi majus, Belladonna, Bach, Cinchona, Cassia tora, Dioscorea, Digitalis, Ephedra, Ergot, Hyoscymus, Ipecac, Isabgol, Liquorice, Opium, Papain, Podophyllum, Pyrethrum, Rauwolfia, Rhubarb, Senna, Stramonium, Valerian, Senna leaves, Isabgol seeds/husk and cassia tora seeds are in maximum demand.
- The total value of exports of crude drugs, Ayurvedic not put-up for retail and Ayurvedic put-up for retail has increased from Rs.394 crores in 1996-97 to Rs.446 crores in 1998-99.

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- Chinese exports of herbal medicines worth \$10 billion a year.
- India's exports of these products are hardly Rs 700 crore shows the vast scope for leveraging our advantages in this field to corner a larger market share.
- Out of the Rs 700 crore exports of herbal medicines, only 40 per cent is value addition and 60 per cent is export of raw medicinal plants.
- It was felt that if India is to depend on exports of raw medicinal plants so that countries in the West add value.
- Neither domestic farmers be ever given better prices nor could tribal people be given more returns for collection of these medicinal plants.

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- In India, medicinal plants are registered as a Minor Forest Produce (MFP) and there is a need to move away from unsustainable exploitation of forest wealth to contract farming where there is a link between the producer and the grower for better livelihood.
- It is more worrisome that in crops, which are grown only in India such as isabgol, psyllium, there are 848 patents in the last two decades in the USPTO and only four out of these are by Indians.

Imports:

- All the raw materials used by the Pharmacies are not of indigenous origin.
- Considerable supplies are received from Nepal, Bhutan, Bangladesh, Pakistan, Afganistan, Singapore, etc., often through informal routes.
- For instance most of the 'Chiraita' and other Himalayan medicinal plant crude drugs come from Nepal and Bhutan, 'Oleoresin gugul' of best quality from Pakistan, 'Liquorice' from Afganistan and good quality of 'Banshalochan' from Singapore.
- According to the data from CHEMEXCIL, of the total estimated annual demand of 31, 780 tons of raw herbal material of pharmaceutical industries 7, 180 tons is met with through import.
- The requirements of Akkalkada - *Anacuclus pyrethrum*, Jestimadh - *Glycrrhiza glabra* (Pakistan, Iran, Afganistan),
- Dalchini - *Cinnamomum zeylanica* (China),
- Gajpimpli - *Scindapus officinalis*, and Kankol - *Piper cubeba* (Indonesia),

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- Chopchini - *Smilax china*, Maiphal - *Quercus infectoria* and Revchini - *Garania pictoria* are mostly met through imports.
- About 90% requirement of Guggul (*Commiphora wightii*) is imported from Pakistan.
- Clove (*Syzygium aromaticum*), Nutmeg mace (*Myristica fragrance aril*), Ginger (*Zingiber officinale*), Kapurkachri (*Hedychium spicatum*) and Patang (*Caesalpinia sappan*) are the other raw materials partially imported to fulfill the requirements.
- According to a survey conducted by Mac Alpine Thorpe Warriar, Commonwealth Consultants, (1997), the global market for herbal products was estimated of US \$ 9 billion (Rs.36, 000 Crores) which is expected to grow to US \$ 40 billion (Rs.1, 60,000 Crores) by 2010.
- Of this European market is of the size of US \$ 2.7 billion i.e., Rs.10, 800 crores.
- India's share of this market is less than one per cent revealing the fact that there is substantial scope for the country to exploit this opportunity.

Challenges:

- Collectors, processors and traders face problems in finding favorable markets due to price factors, quality and quantity considerations.
- Local and regional price fluctuations as well as the lack of current market and price information affect the income of the actual local collectors who are dependent on the middlemen or village traders.
- Financial and logistic constraints make it difficult for local producers and collectors to interact more closely with prospective clients.
- The followings are the major challenges in trading of Medicinal Plants both at domestic and international level.

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- Inadequate knowledge and incomplete information on products, markets and prices on the part of collectors/producers.
- Difficult to No proper recognition access appropriate markets and market information.
- of environmentally and commercially sound MPs.
- Lack of standardization and consistency in quality for international marketing
- Astringent phyto-sanitary regulations such as requirement of microbiological test, pesticides and heavy metal test by international markets.
- Uneven distribution of benefits.

Marketing Strategies:

- The current increase in the worldwide consumption and use of 'green' products, especially drugs, flavors and fragrances of natural origin, has indeed amplified the scope of the use of indigenous flora and collection & trade of exotic species.
- The identification of the ultimate suppliers and buyers is also big issue in this sector.
- The gaps between the producers/collectors and traders or buyers need to be minimized as these are at present very wide and often inequitable.
- Linkages should be developed in order to have better understanding about the NTFPs business & between the businesses and the producers/collectors.

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- A holistic management action plan is necessary to formulate for assessment and management of resource base; best harvesting and processing practices; trade issues and aspects dealing with the intellectual property rights on the traditional medicines by the tribal people.
- Investments are needed for the development of appropriate conservation, cultivation harvesting strategies, which will simultaneously meet the demand for low-cost and locally available medicines.
- At the same time, there must be immediate efforts to ensure the conservation of diverse biological resources and the preservation and application of local and cultural knowledge on the use of these resources.

Conclusion:

- Medicinal plants constitute a vast, undocumented and overexploited economic resource and they are the principal health care resources for majority of the people.
- Demand for medicinal plant is increasing in both developing and developed countries, and the bulk of the material trade is still from wild harvested sources on forest land and only a very small number of species are cultivated.
- The expanding trade in medicinal plants has serious implications on the survival of several plant species, with many under serious threats to become extinct.
- As India's share is less than one per cent in the \$ 62 billion market, which is growing 7 to 12 % per annum.
- All-our efforts should be made to adopt a package of best practices encompassing conservation, cultivation, quality control and standardization and research and development for medicinal and herbals for improving its marketing performance efficiently.



Thank you All