

MARKET INFORMATION SYSTEM FOR SUSTAINABLE MANAGEMENT OF MEDICINAL PLANTS

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Introduction

People everywhere rely on plants for staying healthy and extending the quality and length of their lives. According to the World Health Organization (WHO) estimates, 3.5 billion people in developing countries rely on plant-based medicine for their primary health care. Ayurvedic and other traditional healers in South Asia use at least 1,800 different plant species in treatments and are regularly consulted by some 800 million people. Herbal therapies are growing rapidly in popularity in developed countries as well. In 1992, the booming US retail market for herbal medicines reached nearly US\$1.5 billion, and the European market is even larger.

The international trade in medicinal plants is estimated at US\$ 70 billion and is growing at a rate of seven per cent annually. The Planning Commission of the Government of India has plans to increase the trade in medicinal plant extracts to Rs. 3,000 crores by the year 2005 and Rs. 10,000 crores by the year 2010. New opportunities are thus being created that could lead to generation of employment in the medicinal plant sector (Bhattacharya and Mittra, 2002). Domestic demand of

medicinal plants in 1999-2000 was estimated at Rs. 1,099 crores which is expected to rise to Rs. 2,000 crores by the year 2004-2005 as per CERPA estimates (Anon., 2001). Medicinal plants are traditionally derived from forests by the local communities who depend on these plants for their subsistence needs. The ever increasing demand for medicinal plant parts has put tremendous pressure on forest vegetation. These important resources have declined significantly in the recent past, which has led to near extermination of some of the most valuable plants.

Medicinal plants by complementing timber-based management, offer a basis for managing forests in a more sustainable manner. The role of Non-Wood Forest Products (NWFP) in sustainable management of forests has already been recognized by the UN Conference on Environment and Development held in 1992. One of the important steps in realizing these prospects is to ensure better economic returns to collectors of medicinal plant parts. This will certainly help in restricting the exploitation to sustainable levels and better management of forests.

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The collectors of medicinal plants, while very knowledgeable of the different species growing in their area, are often not sufficiently aware of the markets available for these products and of the means to reach the markets in competition with other suppliers. Usually traders or their representatives, visiting local areas are the only source of information used by the local collectors. Often collectors do not know about the products that are in high demand and how to increase existing markets for their products. Lack of proper market information and suitable opportunities to search the trade market has led to exploitation of local communities engaged in collection of medicinal plants.

There are many existing market information systems for agricultural and related commodities. For example, the Tribal Cooperative Marketing Development Federation of India Ltd. (TRIFED) operates a market information system, which mainly serves the agricultural sector but also covers some NWFPs as well. The price information is collected from the domestic and export markets, and disseminated to the member cooperatives through a fortnightly publication.

Medicinal plants are generally marketed in private sector where intermediaries/middlemen keep a strong control on the market because they provide the collectors' three essential services, *viz.*, quick credit, quick and non-bureaucratic payment and good organization (Pswaravyi-Riddihugh and Jones, 1995). Middlemen also play an important role by centralizing supply among dispersed producers and help to absorb risk in markets that require product

volumes too large for individual producer to provide.

Middlemen, on the other hand, often exploit collectors' ignorance of market factors and claim a disproportionate share of producer's value for themselves. With increased availability of market information, producers will have the potential to strengthen their position in markets and possibly get higher prices. This should lead to higher employment and income at local level. Access to market information is therefore crucial and will result in increased awareness of marketing practices in general. Therefore, a system is needed that can help local communities as well as others involved in collection and cultivation of medicinal plants, to access market information regularly, reliably, timely and at a lowest possible cost.

Market Information

Market information relates to generating information about markets, means of accessing the markets, market environment and competition. Information is needed on the demand, supply, end-uses of the products, distribution channels, product promotion, prices, marketing environment and institutions related to marketing. The information may also be required on primary processing costs, value addition, transportation costs, cultivation techniques, sources of planting materials etc. Systematically collected, analysed and disseminated information on medicinal plants is seldom available except for a few products and markets. Marketing information makes the market more transparent so that the business people can make more informed choices of products and sale.

There is a scope for improving returns to collectors of medicinal plants by simple interventions, such as better methods of collection, storage, grading, and ensuring fair wages at local level (Pande and Singh, 2001). Better processing of the plant parts and value addition at local level can also substantially enhance returns.

Marketing Capabilities

Marketing capabilities include basic knowledge of marketing, skills to apply that knowledge in practice, and appropriate attitudes to recognise and appreciate the value of marketing as one of the basic functions in NWFPs businesses (Lintu, 1995). These capabilities are needed at all levels, starting from collector and cultivator through intermediaries to further wholesalers and the processing industries. The members of marketing and distribution channels need the requisite capabilities for their day-to-day operations. The Government officials at decision-making and implementation level also need to have basic understanding and appreciation of marketing. Poor recognition of the role of marketing is clear in trade of medicinal plant parts. Planners and operators in this sectors are more involved with issues of conservation, community participation, mass cultivation than with those related to identification of potential markets and developing appropriate marketing approaches to take advantage of them.

Community-based MIS for Medicinal Plants

The objective of a community based Market Information System (MIS) is to provide the collectors with support for their marketing efforts. Use of this system

should result in increased value for their products, more efficient marketing, and improved production levels where local processing may become feasible. Before developing such a system at local level, a thorough market information "needs assessment" should be conducted. Local market information sources also need to be identified. Products for the MIS need to be selected so that majority of the producers will benefit from and therefore will participate in the system (Hammett, 1994).

Harvest, storage, value addition and transport technologies should also be included in the marketing development package. This will help assure that maximum amount of product reaches the market and the collectors achieve maximum possible return on his products. Involvement of government, co-operatives, or NGOs in the operation of the MIS is also important. The level of community participation and sophistication of the system are also important. The system must match the capabilities and needs of the local producers (Hammett, 1994).

As collection, analysis and dissemination usually do not exist at local level, many users will be unfamiliar with just what market information is and how it can be best used. There is generally a lack of existing market information sources and reluctance, especially on part of the traders, to divulge information. The information that is available may be biased. Most important is that the increased markets should not deplete local resources, whether they are natural forests or human labour (Anon., 1995).

Collection of Market Information

One of the important means to collect market information is through market research. Detailed information on demand, supply and end-uses of individual medicinal plants and means of accessing the markets has to be obtained through specific market studies. These studies are needed to analyse the flow of raw materials from collectors to the primary processing industries and further to study the market opportunities and means of accessing the markets for products from the primary processing industries. Information from the studies can be used both for planning and operation of marketing activities, also including components of marketing, such as product development, pricing, promotional policies and market and delivery channel development.

Domestic market and marketing studies are carried out by local research institutes and universities. For example, in the Philippines the few existing marketing studies on multi-purpose tree species have mostly been conducted in research and academic institutions in different regions, particularly state universities and colleges (Lintu, 1995). Similar studies on "Market Monitoring of Tree Products" have been carried out by the Forest Research Institute, Dehra Dun during 1995-2001, based on which, useful information viz., price trends and market mechanisms could be assessed (Anon., 2001).

At the local level, some market studies could be carried out with the assistance of market surveyors. There is, however, a need for appropriate guidelines and training of surveyors on how to carry out such studies. One of the major problems in

developing MIS for medicinal plants is the substantial quantum of illegal component involved and the tendency of tax evasion by the traders. Due to this neither the traders nor the middlemen divulge the price, quantity and the source of medicinal plant parts. It is also very difficult to guess about the volumes of illegal trade.

Collection and growing of medicinal plant is a seasonal activity. In some cases more than one crop can be taken in a year. Therefore, due to all around availability in a particular season and lack of primary processing facilities at collection and production centres brings down the prices. In such cases MIS should not only aim at disseminating the prevailing market prices but also provide detailed information on basic minimum primary processing techniques like cleaning, drying and grading. The prices vary a lot on these characteristics. MIS may also provide the specifications and costs of processing equipment, addresses of suppliers, and more importantly of medicinal plant based industries. This would help in saving the plant material from decay especially during rainy season and may provide better prices at the primary level.

Institutional and Infrastructural support

At the operational level, institutional support may comprise of various co-operative arrangements amongst collectors, intermediaries, marketing federations, research institutions, credit services and marketing information services. Repeated attempts on sustainable collection, cultivation and sale will not bear fruits unless suitable marketing opportunities are created. Medicinal plants are most important to three main groups,

viz., (i) forest dwellers, (ii) traders including middlemen, and (iii) urban consumers. Other important stakeholders being Forest Department, marketing federations, cooperatives and various R&D organizations. Institutional support is crucial to the development of MIS, which may be at local, regional or national level.

A case of development of MIS for Uttaranchal State by Forest Research Institute, Dehra Dun can be cited in this regard. Uttaranchal Forest Department allows collection of specific medicinal plants against payment of royalty from specific areas for specific duration through 'Bheshaj Sanghs' which operate at district level. Village-level societies, registered with district level Bheshaj Sanghs, collect medicinal plants, which are supposed to be procured and marketed by these Sanghs.

Due to the inability on the part of Bheshaj Sanghs to provide marketing assistance, the collected plants are sold directly in the markets of Ramnagar, Saharanpur and Delhi, often at very low prices. The societies have no source of any kind of market information. Now, FRI has started sending market information on prevailing prices in important markets, list of buyers, cultivation techniques etc., in the form of a quarterly MIS newsletter to these societies. The newsletter is also sent to Bheshaj Sanghs, Forest Department and other agencies. The Institute contemplates to increase the frequency of publication of this newsletter and include information on other important aspects, *viz.*, demand, price trends, export potential etc. of the important medicinal plants of Uttaranchal. A web site is also being developed to

disseminate the information at a much faster rate.

Dissemination of Market Information

Market information, once available through market intelligence systems, can also be disseminated through mass media. For example, in India the major means for disseminating market information to remote farmers include: All India Radio with almost 100% coverage of the country's area of inhabitation, national television channels with 95 per cent coverage and the business sections of various newspapers. In order to be able to tap this vast and powerful network following basic factors need to be recognized (Dwivedi, 1993) :

- *Choice of products* : Considering the limitation of space in newspapers and time in electronic media, it may not be possible to take up all the medicinal plants of interest in the region.
- *Standardization of product* : Price and other marketing information can only be reported for products, *viz.*, medicinal plant parts, which are defined clearly enough.
- *Important markets* : Most MIS providers make a distinction between the clients they serve. They concentrate on providing information on markets within the region, which best serve the purpose of users.
- *Supply of information* : MIS providers commonly appoint one or two traders in the selected markets who send in prevailing prices of different commodities. Information from some newspapers is also picked up for bigger market. The State Marketing Boards also supply market information, which is disseminated through the mass media.

- *Number of people involved* : MIS providers are interested to know the economic importance of the activity and the number of people involved in it at various levels to judge its relevance.

These days, websites play a very important role in dissemination of market information. The website not only allows instant updation, the information can also be downloaded at block or even at village level for further dissemination at local levels.

Level of Market Information System

In developing MIS, especially for communities groups and small scale users, two critical issues arise, *viz.*, how sophisticated do the information systems have to be and can the small enterprises afford them?

To begin with, the information systems can be fairly simple and still serve a useful purpose. However, with experience in using information, the needs for up gradation will increase and the costs involved in collection, processing and dissemination of the information will undoubtedly go up. One way to keep costs at an affordable level is to cooperate in collection of information. The fact that all enterprises need the market information should make cooperation in information collection feasible as soon as users realize the real value of information. This also means that the improvement of marketing information systems has to be closely tied to the development of capabilities in marketing and using market information. The increased benefits from access to information will make it possible even for small-scale enterprises to help upgrade marketing information services.

SUMMARY

Medicinal plants, by complementing timber based management, offer a basis for managing forests in a sustainable manner. One of the important steps in realizing this prospect is to ensure better economic returns to collectors and cultivators of medicinal plants. Availability and access to market information is key to improving returns to producers of medicinal plants. The information is needed on demand, supply, end uses, distribution channels, product promotion, prices, marketing environment and institutions related to marketing. Even simple interventions such as better methods of collection, storage, grading and local level value addition can substantially improve returns to local communities. The paper discuss about to importance of market information, marketing capabilities, establishment of community based market information system (MIS), collection of market information, institutional and infrastructural support dissemination of market information and level of MIS.

औषध पादपों का लम्बे समय तक प्रबन्ध करने के लिए विपणन सूचना प्रणाली

मोहित गेरा, एन०एस० बिष्ट व ए०के० राणा

सारांश

प्रकाष्ठाधारित प्रबन्ध का अनुपूरण करके औषध पादप वनों के दीर्घकालिक प्रबन्ध के लिए आधार प्रस्तुत करते हैं। इस संभावना को प्राप्त करने के महत्वपूर्ण कदमों में से एक कदम औषध पादपों के संग्रहकर्ताओं और खेती करने वालों के लिए ज्यादा अच्छी आर्थिक प्रत्याय सुनिश्चित कराना है। बाजार जानकारी की उपलब्धता और उस तक पहुंच ही औषध पादपों के उत्पादकों को मिलने वाली आय सुधारने की कुंजी है। मांग और आपूर्ति, अन्य उपयोग, वितरण की धारा, उत्पाद प्रोत्साहन कीमतें, बाजार पर्यावरण और विपणन से जुड़ी संस्थाओं के बारे में जानकारी की जरूरत पड़ती है।

मामूली से हस्तक्षेप भी, जैसे संग्रह, भण्डारण और श्रेणीकरण की श्रेष्ठतर रीतियां और स्थानीय स्तर पर मूल्य में थोड़ी वृद्धि भी स्थानीय समुदायों को मिलने वाली प्रत्याय में काफी वृद्धि कर सकते हैं। इस अभिपत्र में बाजार जानकारी का महत्व, विपणन की योग्यताओं, समुदाय आधारित विपणन जानकारी प्रणाली की स्थापना, बाजार जानकारी का संग्रह, सांस्थानिक और अधोसंरचना सहायता, बाजार सूचना प्रणाली का स्तर और बाजार सम्बन्धी जानकारी के प्रसारण का विवेचन किया गया है।

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