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Prospects of Marketing of Medicinal Plants in the State of Assam

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ABSTRACT

Background: A study was conducted in Assam with the objectives to identify the marketing channels of medicinal plants and estimate the marketing efficiencies of the identified channels for six major medicinal plants *viz*. Amla, Hilikha, Bhomora, Arjun, Pipoli and Brahmi.

Methods: The study was conducted in all six agro-climatic zones of Assam with a sample size of 330 respondents. Primary data were collected from the respondents through personal interviews with the help of pre-tested schedules. Marketing efficiency was estimated by using Acharya Approach.

Result: Three major marketing channels were identified *viz*. producer to consumer (channel-I), producer/ collector to consumer through, processor, wholesaler and retailer (channel-II) and Producer/collector to consumer through processor and Retailer (channel-III). Marketing efficiency of Channel-III was found to be more than Channel-II for all the selected medicinal plants. Various problems associated with marketing of medicinal plants in Assam were non availability of processing mills, preference of hybrid varieties over locally available plants, non-availability of raw materials *etc*.

Key words: Marketing channel, Marketing efficiency, Medicinal plant, Price spread.

INTRODUCTION

From time immemorial plants have been used as medicines to cure diseases and to improve the health and wellness of people. Medicinal and Aromatic Plants (MAPs) are botanical raw materials, also known as herbal drugs, primarily used for therapeutic, aromatic or culinary purposes as components of cosmetics, medicinal products, health foods and other natural health products (Kalita and Khan, 2013). They are also the starting materials for value-added processed natural ingredients such as essential oils, dry and liquid extracts and oleoresins. There is an apparent industrial demand for MAPs thanks to the increased production of herbal health care formulations, herbal-based cosmetic products and herbal nutritional supplements (Ved and Goraya, 2007). In addition, traditional health care practitioners, traditional healers and consumption at the household level have all contributed to the demand for herbal medicinal products. Finished products made from medicinal and aromatic plants are increasingly prescribed and bought over the counter. The global market for botanical and plant-derived drugs is expected to increase from $19.5 billion in 2008 to $32.9 billion in 2013, an annual growth rate of 11.00 per cent, according to a 2009 study by Business Communications Company (BCC) Research. India's share in the global market of medicinal plants-related trade was just 0.50 per cent (Geisler, 2012). In India, the total area under aromatic and medicinal plans was 687 thousand ha producing 846 thousand tones of plant produce during 2018-19 (Annual Report 2019-20, National Horticulture Board). Among all states in India, Rajasthan had the highest area (450 thousand ha) under aromatic and medicinal plants followed by Uttar Pradesh and Madhya Pradesh, accounting for 135.04 thousand ha and 37.23 thousand ha, respectively. Whereas, Madhya Pradesh produced the highest aromatic and medicinal plant produce, followed by Rajasthan and Tamil Nadu. Assam recorded an area of 4.53 thousand ha under medicinal and aromatic plants with a production of 0.17 thousand tonnes. Despite the tremendous potential for the production and marketing of medicinal and aromatic plants in the state of Assam, no organized marketing is reported in the state. A comprehensive study on the marketing of medicinal plants, the marketing channels involved and the pricing mechanism of the raw and processed products would certainly be able to highlight the trade of medicinal plants as a profitable venture in the region in general and Assam in particular. With this view, an attempt has been made to explore the potential of marketing of medicinal plants in Assam through a research project entitled "Prospects of Marketing of Medicinal Plants in Assam" conducted at Assam Agricultural University, Jorhat funded by the Ministry of AYUSH- Government of India. The objectives of the study were, to identify the marketing channels of medicinal plants, to examine the marketing efficiency and to identify the problems related to marketing of medicinal plant produces.

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METERIALS AND METHODS

The study was conducted in all six agro-climatic zones of Assam from 2017 to 2019. Thirty numbers of growers / collectors, one processor, one wholesaler, three retailers and 20 consumers from each zone were selected randomly, resulting in a sample size of 330 respondents. Primary data on types of medicinal plants grown, resources used and output produced, channels of marketing, income earned *etc;* were collected from the respondents through personal interviews with the help of pre-tested schedules. The collected data were analyzed using simple tabular and statistical analysis. Though several types of medicinal plants were found to be grown by the growers, the study considered only six major medicinal plants *viz*; Amla (*Emblica officinalis*), Hilikha (*Terminalia chebula*), Bhomora (*Terminaila bellerica*), Arjun (*Terminalia arjuna*), Pipoli (*Piper longum*) and Brahmi (*Bacopa monnieri*).

Marketing efficiency was estimated by using Acharya Approach (Acharya and Agarwal, 2007).

Marketing effeciency =

$$\frac{\text{Net selling price of grwer}}{\text{Marketing cost + Total marketing margin}}$$

RESULTS AND DISCUSSION

Identification of the marketing channels of medicinal plants

From the study, it was revealed that there was no distinctly visible marketing channel for medicinal plants in Assam. However, a significant portion of the medicinal plants was going out of the state through some channels which were not traceable. During the survey, no publicly regulated channel was found and the existing ones were controlled by private players. Well-established market channels prompt farmers to cultivate medicinal and aromatic crops (Choubey, 2011). From the survey, majorly three marketing channels for the six selected medicinal plants were identified in Assam, which are explained as follows:

Channel-I: Producer / collector → Consumer (25%)

Channel-II: Producer / collector → Processor → Wholesaler → Retailer → Consumer (30%).

Channel-III: Producer / collector → Processor → Retailer → Consumer (45%).

Figures within parentheses indicate the volume of trade. In channel-I, medicinal plants such as *Brahmi, Amla, Hilikha etc*. were traded primarily in fresh form in local markets where the approximate volume was around 25.00 per cent of total trade. The producer / collectors brought their produces to local markets and the consumers bought those products. However, no processed forms of medicinal plants were found to be traded in that channel. In channel-II, the producers sold their products to some processors in raw form. The processors processed those products and sold those to the whole sellers. The whole sellers sold those products to the retailers and ultimately, the consumers got those products from the retailers. The approximate volume of trade through this channel was 30.00 per cent. In Channel-III, it was found that producers / collectors sold their products to the processor and the processors sold the processed form of the products to retailers rather than to whole sellers and the retailers sold their products to the consumers. In a similar study, Mohapatra *et.al.,* (2018) identified the following marketing channels for medicinal and aromatic plants in Karnataka:

Gatherers / Cultivators → Pharmacy

Gatherers / Cultivators → Traders → Pharmacy

In Himachal Pradesh, Chandresh *et al.*, (2014) also found that seven marketing channels comprising processing units, cooperatives, local traders, local trader cum commission agents, wholesalers, traditional healers and consumers were the most essential in medicinal and aromatic plants trade.

Marketing cost, price spread and marketing efficiency

Estimation of marketing costs was done by compiling all the cost incurred by various intermediaries present in the marketing channels specified above. In channel-I, there was no marketing cost as the raw plant products were directly sold to the consumers. In channel-II, the processor, wholesaler and retailer were the intermediaries and in channel-III the processor and retailer were the intermediaries. The price was more in Channel-II and channel-III due to value addition to the product through processing. The prices of all six products were more in channel-II because of the presence of more intermediaries. The pricing and efficiency of different channels are discussed for these six medicinal plants. Marketing efficiency was not estimated for channel-I as it was a direct channel from the producer / collector to consumer. The marketing efficiencies of 6 crops were calculated with the Acharya approach for both channel-II and channel-III. Medicinal plant-wise estimation of marketing cost, price spread and marketing efficiency are presented in Table 1, Table 2 and Table 3, respectively.

For Amla (*Emblica officinalis*), the net price received by growers was Rs. 70 per kg in channel-II and channel-III. The total marketing cost of Amla in channel-II and channel-III was Rs. 37.50 and Rs. 35.00 per kg, respectively. The net margin of intermediaries for channel-II and channel-III was Rs. 17.50 and Rs. 15.00 per kg, respectively. The Marketing efficiency for Amla was higher in channel-III (1.40) than that in channel-II (1.27) showing that channel-III was more efficient for Amla marketing in the study area.

For hilikha (*Terminalia chebula*), the net price received by growers was Rs 50 per kg in channel-II and channel-III. The marketing cost of Hilikha in channel-II and channel-III was Rs. 25 and Rs. 20 / kg, respectively. The net margin of intermediaries for channel-II and channel-III was Rs. 10 and Rs. 7.5, respectively. Marketing efficiency was found to be higher in channel-III (1.82).

The growers received a net price for Bhomora (*Terminila bellerica)* of Rs 80 per kg in channel-II and channel-III. The marketing cost of channel-II and channel-III was Rs. 37.50

and Rs. 35, respectively, for Bhomora .The net margin of intermediaries for the channel-I and channel-II was Rs. 17.50 and Rs. 15, respectively. Marketing efficiencies were 1.45 and 1.60, for the channel-II and channel-III, respectively. The growers of Arjun (*Terminalia arjuna*) gained a net price of Rs 50 per kg in both channel-II and channel-III. The marketing cost of channel-II and channel-III were Rs. 45 and Rs. 35, respectively for Arjun. The total net margins of intermediaries for channel-I and channel-II were Rs. 35 and Rs. 30, respectively. The estimated marketing efficiencies were 0.63 and 0.77 for channel-II and channel-III.

The net price earned by growers of Pipali (*Piper longum*) was Rs 400 per kg in channel-II and channel-III. The total marketing cost of channel-II and channel-III was Rs. 75 and Rs. 65, respectively, for Pipali. The net margin of intermediaries for the channel-I and channel-II was

Table 1: Marketing cost and price spread of selected medicinal plants for Channel II. (Rs./kg)

Particulars	Amla	Hilikha	Bhomora	Arjun	Pipali	Brahmi
Grower's gross selling price	70.00	50.00	80.00	50.00	400.00	200.00
Grower's net selling price	70.00	50.00	80.00	50.00	400.00	200.00
Purchase price of processor	70.00	50.00	80.00	50.00	400.00	200.00
Marketing cost of processor	30.00	15.00	30.00	30.00	60.00	5.00
Marketing margin of processor	10.00	5.00	10.00	20.00	20.00	2.50
Selling price of processor	110.00	70.00	110.00	100.00	480.00	220.00
Purchase price of wholesaler	110.00	70.00	110.00	100.00	480.00	220.00
Marketing cost of wholesaler	2.50	5.00	2.50	10.00	10.00	5.00
Marketing margin of wholesaler	1.50	2.50	2.50	5.00	5.00	5.00
Selling price of wholesaler	114.00	77.50	115.00	115.00	495.00	230.00
Purchase price of retailer	114.00	77.50	115.00	115.00	495.00	230.00
Marketing cost of retailer	5.00	5.00	5.00	5.00	5.00	5.00
Marketing margin of retailer	4.00	2.50	5.00	10.00	10.00	5.00
Selling price of retailer	122.00	85.00	125.00	130.00	510.00	240.00
Consumer's purchase price	122.00	85.00	125.00	130.00	510.00	240.00
Net price received by the grower	70.00	50.00	80.00	50.00	400.00	200.00
Total marketing cost	37.50	25.00	37.50	45.00	75.00	14.00
Total net margin of intermediaries	17.50	10.00	17.50	35.00	35.00	13.50
Price spread	52.00	35.00	45.00	80.00	110.00	140.00

Table 2: Marketing cost and price spread of selected medicinal plants for Channel III. (Rs./kg)

Brahmi	Particulars	Amla	Hilikha	Bhomora	Arjun	Pipali
Grower's gross selling price	70.00	50.00	80.00	50.00	400.00	200.00
Grower's net selling price	70.00	50.00	80.00	50.00	400.00	200.00
Purchase price of processor	70.00	50.00	80.00	50.00	400.00	200.00
Marketing cost of processor	30.00	15.00	30.00	30.00	60.00	5.00
Marketing margin of processor	10.00	5.00	10.00	20.00	20.00	15.00
Selling price of processor	110.00	70.00	110.00	100.00	480.00	220.00
Purchase price of wholesaler	-	-	110.00	-	-	-
Purchase price of retailer	110.00	70.00	125.00	100.00	480.00	220.00
Marketing cost of retailer	5.00	5.00	5.00	5.00	5.00	5.00
Marketing margin of retailer	4.00	2.50	5.00	10.00	10.00	5.00
Selling price of retailer	120.00	77.50	135.00	115.00	495.00	230.00
Consumer's purchase price	120.00	77.50	135.00	115.00	495.00	230.00
Net price received by the grower	70.00	50.00	80.00	50.00	400.00	200.00
Total marketing cost	35.00	20.00	35.00	35.00	65.00	10.00
Total net margin of intermediaries	15.00	7.50	15.00	30.00	30.00	20.00
Price spread	50.00	27.50	55.00	65.00	95.00	30.00

Table 3: Marketing efficiency in Channel II and Channel III.

Channel	Amla	Hilikha	Bhomora	Arjun	Pipali	Brahmi
Channel-II	1.27	1.43	1.45	0.63	3.64	7.27
Channel-III	1.40	1.82	1.60	0.77	4.21	10.8

Rs. 35 and Rs. 30, respectively. The estimated marketing efficiencies were 3.64 and 4.21 for channel-II and channel-III. The net price gained for Brahmi (*Bacopa monnieri*) was Rs 200 per kg in channel-II and channel-III. The marketing cost of the channel-II and channel-III was Rs. 14 and Rs. 10, respectively for Brahmi. The net margin of intermediaries for channel-I and channel-II were Rs. 13.50 and Rs. 8.50, respectively. So, marketing efficiencies were 7.27 and 10.8 for channel-II and channel-III, respectively.

Identification of problems related to the marketing of medicinal plant produces

Some problems related to the marketing of medicinal plant reported by the respondents during the survey were non-availability of processing mills for medicinal plants, preference for a hybrid variety of medicinal plants over locally available plants by the consumers, non-availability of raw materials, problems related to drying of the product of some medicinal plants like *bhomora, pipali, hotmul etc.* and less organized market for the products. The growers did not have much idea about the prices of different medicinal plants and also they had less idea about the existing marketing channels as well as there are significantly few processing units, growers had to sell most of their products in raw form that fetched significantly lower prices compared to the prices of processed form. Chandra *et al.* (2013) reported some problems in the production and marketing of medicinal plants, such as, poor harvesting (indiscriminate) and post-harvest treatment practices, lack of research on the development of high-yielding varieties, domestication, inefficient processing techniques, poor quality control procedures, lack of research and development on product and process development, lack of local markets for primary processed products and lack of access to latest technology and market information.

CONCLUSION

Out of the three marketing channels, most of the medicinal plants were transferred through the channel III, *i.e*. from Producer/collector to consumer through processor and retailer. Its marketing efficiency was also better than other channels. Non availability of processing mills and raw materials for medicinal plants, preference of hybrid variety, drying problems of certain products, less organized market and lack of knowledge about price and existing marketing channels were the major problems in marketing of medicinal plants. It was observed that hybrid variety of medicinal plants was more preferable. Therefore, the adoption of hybrid variety can be an alternative measure.

Extensive Brahmi cultivation can be a better income source for the Assamese growers considering the lower production cost, higher price and favourable climatic conditions. Focusing on important thrust areas like post-harvest and value addition in medicinal plants, developing clusters in village level processing units of medicinal plants, the establishment of incubation centres, activity wise stakeholder allocation should be empathised. Contract farming can also be a better option for farmers to increase the production of medicinal plants.

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Disclaimers

The views and conclusions expressed in this article are solely those of the authors and do not necessarily represent the views of their affiliated institutions. The authors are responsible for the accuracy and completeness of the information provided, but do not accept any liability for any direct or indirect losses resulting from the use of this content.

Informed consent

No animal was harmed during the study.

Conflict of interest

The authors declare that there are no conflicts of interest regarding the publication of this article. No funding or sponsorship influenced the design of the study, data collection, analysis, decision to publish, or preparation of the manuscript.

REFERENCES

Acharya, S.S. and Agarwal, N.L. (2007). Agricultural Marketing in India. Oxford and IBH Publishing Company. New Delhi. pp. 385-417.

Chandra, P., Kuniyala, P.C., Jitendra S. Butolaa C. and Sundriyala, R.C. (2013). Trends in the marketing of some important medicinal plants in Uttarakhand, India. International Journal of Biodiversity Science, Ecosystem Services and Management. 9(4): 324-329.

Chandresh, G., Vaidya, M.K., Sharma, R. and Dogra, D. (2014). Economics of production and marketing of important medicinal and aromatic plants in mid hills of Himachal Pradesh. Economic Affairs. 55(3): 364-378.

Choubey, V. (2011). Market system of Indian medicinal plants: Problems and possibilities. Economic Affairs. 56(1): 75-79.

Geisler, M. (2012). Medicinal Herb Profile, AgMRC, Iowa State University, Agricultural Marketing Resource Centre AGMAC.

Kalita, J. and Khan, M.L. (2013). Medicinal plants from the high altitudes of the western part of Arunachal Pradesh, India and Their Trade. International Journal of Conservation Science. 4(3): 337-346.

Mohapatra, U., Shreeshail, R., Deepa, B.H. and Shruti, M. (2018). Medicinal and aromatic plants sector in Karnataka: An economic perspective and SWOT analysis. Journal of Pharmacognosy and Phytochemistry. SP 3. pp. 232-235.

National Horticulture Board (2020). Annual Report: 2019-20, Ministry of Agriculture and Farmers welfare, Government of India.

Ved, D.K. and Goraya, G.S. (2007). Demand and Supply of Medicinal Plants in India, National Medicinal Plants Board, New Delhi NMPB, New Delhi and FRLHT, Bangalore, India.