



Channels for marketing of mint in Moradabad district of Uttar Pradesh

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ABSTRACT

The study was conducted in Moradabad district of UP with main objective of analyzing the marketing channels, marketing cost, margin and price spread. Four marketing channels were identified in the process. The marketing channels identified in the study area are Channel-I: Producers-Local Trader-Processor, Channel-II: Producer-Commission Agent-Processors, Channel-III: Producer-Wholesaler-Processors and Channel-IV: Producer-Processors. It was found that, the marketing margin/price spread was the highest in the case of Channel-II (Rs. 196.36/kg) followed by Channel-I (Rs. 185.65/kg) and Channel-III (Rs. 166.00/kg). The volatility analysis revealed that, prices were up in the production season and farmers in the study area had a tendency to store the produce in anticipation of higher price during lean season. Generally, during harvesting season, glut in the market resulted in discovery of low price to the farmers.

INTRODUCTION

Medicinal and aromatic plants constitute a major part of the flora, which provides raw materials for use in the pharmaceuticals, cosmetics, and drug industries. With the rise in consumers' purchasing power and in turn health concerns, the use of plant origin active ingredient is increasing compared to synthetic compounds. The indigenous systems of medicines, developed in India centuries ago, make use of many medicinal and aromatic herbs. India and China are the two major producing countries, constituting 40 per cent of the global medicinal and aromatic species. These are well known as the home of medicinal and aromatic crops that constitute a segment of the flora, and provide raw materials to the pharmaceutical, cosmetic, fragrance and flavour industries.

Mints are an aromatic perennial herbs belonging to the family *Lamiaceae* and are among the most important essential oil bearing plants in the world. Oil of mint, are probably third most important flavouring materials used world over. Although, there are several species and varieties of mint are available, five of them are grown on commercial scale in the world for the production of their essential oils. These are: Japanese mint (*Mentha arvensis*

L.), peppermint (*M. piperita* L.), native or common spearmint (*M. spicata* L.), Scotch spearmint (*M. gracilis*) and bergamot mint (*M. citrata* Ehrh.).

Oil of Japanese mint is a rich source of natural menthol and dementholised oil. Because of refreshing aroma and cooling effect, menthol finds extensive uses in tobacco, pan masala, chewing gum, toothpaste and pharmaceutical industries world over. Among the mint species, Japanese mint or corn mint is most important with respect to area under cultivation and production of oil. Japanese mint was first introduced in India by the Regional Research Laboratory, Jammu in 1954. In due course of time cultivation could spread to several parts of Uttar Pradesh and Punjab States, which accounts for almost 100% of mint oil production in the country. Cultivation of mentha in India is mainly concentrated in Moradabad, Rampur, Budaun and Barabanki districts of Uttar Pradesh, which contribute to more than 80% of area and production. However, on marketing front, the situation for mint is in no way different than other agricultural commodities. Several problems persist in marketing of mint and mint oil. There is need of studies on marketing aspects of medicinal and aromatic plants in India. In this context, the study was conducted by National Institute of Agricultural Marketing, Jaipur to



know the problems and prospects in marketing of mint oil in Moradabad district of Uttar Pradesh in the year of 2006-07. In this paper emphasis is given to find out the pattern and channel of marketing of mint oil in the district.

Methodology

To fulfill the objectives of the study, both primary and secondary data were collected and used. Conclusion and inferences do not entirely depend upon quantitative field of inquiry but a lot of qualitative explorations have been made during the course of the study but also depend on logical conclusion drawn from analysis of data.

A. Sample Selection

With the 80% share in the area and production of mint in the country, UP ranks first in the production of mint and processing of mint oil. Hence, UP was selected for the study. In the state of UP, in Moradabad district, there are maximum numbers of mint growers and the district contributes 43.66 % of the total mint oil produced in the country. Therefore, Moradabad was selected as a sample district for the present study. Moradabad district consists six tehsils i.e. Chandausi, Moradabad, Sambhal and Bahajoi, Bilari and Thakurdwara. All Tehsils play a very important role in the production of mint oil and helps in becoming Moradabad as a leading producer of mint oil in the country. Major concentration of mint cultivation is in four tehsils of Moradabad district viz., Sambhal, Chandausi, Moradabad and Bilari. Major quantity of produce is traded from that area. Hence, these four tehsils were purposively selected for the study to obtain equal proportion and representation of data from the district. With the help of agriculture officers, three villages from each tehsil, where mint production is concentrated; were selected for the purpose of study. In total, 12 villages were selected for the study. A list of farmers, distillers, traders and exporters with the help of BDO/VDO and industry people has prepared to make data collection easy for study. In case of farmers, list of total mint growing farmers i.e. 3222, was prepared for the purpose of study and 15% farmers were selected randomly for primary data collection from selected village for the purpose of study. In the study only 349 farmers from 12 villages were interviewed through personal interview method to get the information about mint and related aspects through administering well-structured and pre-tested Schedule.

B. Selection of mentha species

Japanese mint or corn mint (*M. arvensis* L.) is most popular species with respect to area under cultivation and production in the world. This species is also widely grown and accounts for 86% of the total acreage and 91.3% of total production of 16000 tons mint oil in India. Among the various mints growing regions, (Rampur, Bareilly, Budaun, JP nagar and Barabanki, Pilibhit and Lucknow) Moradabad district contributes 47.3% to the total oil produced in India.

- C. Secondary data were collected through different sources, such as different periodicals, publication, govt. records and various other sources.
- D. Appropriate statistical tools and techniques were applied for analysis of the data collected from both primary and secondary sources to draw the inferences in accordance with the objectives. Tools and techniques used for the study include.
- E. Analytical tools used: Volatility in Mentha oil prices has been worked out as per formula given below:

$$SD_p = \text{stdev} \left[\ln \left(\frac{P_t}{P_{t-1}} \right) \right]$$

$$P_{vol} = \text{sqrt}(D) \times SD_p$$

Where,

SD_p = Standard Deviation of return of logged prices, and

D = Number of Days

RESULTS AND DISCUSSION

Marketing Channels

Both the primary and secondary data collected were subjected to analysis using the techniques as mentioned in the methodology for drawing logical inferences. The results of the same are presented as under.

Mainly large mint growers in the study area have their own distillation unit at farm site. Marginal and small farmers distill mint oil from other distillation unit on payment basis and sale mint oil to different agencies.

The marketing channels identified in the study area are as under



- Channel-I: Producers-Local Trader-Processor
- Channel-II: Producer-Commission Agent-Processors
- Channel-III: Producer-Wholesaler-Processors
- Channel-IV: Producer- Processors

A detailed analysis of individual channels was carried out for various parameters such as marketing cost, margin and price spread

Marketing Cost, Margin and Price Spread in Marketing of Mentha Oil

As stated above, there existed four channels of marketing of mentha oil in the study area. Channel-wise marketing cost, margin, producer's share in consumer rupee were worked-out in order to know which channel is better paying to the farmers. The results of the same were worked-out and are presented in the Table-1.

When farmer sold through local trader and commission agents, the margin in consumer rupee realized was around 71 per cent. It was little higher, when sold through wholesaler. It is interesting to note that, the net price received by the farmer was high when sold through

commission agent (Rs.474.16/kg) as against local traders (Rs.460.96). However, selling through local trader was equally popular, as the farmers need not take his produce to place of sale and thereby saving Re.1 per kg of mentha oil sold in transportation. Moreover, it will save the time of farmers and other juggleries involved in marketing. Those farmers who sold through commission agent got little higher net price and they were having financial transaction with him for personal obligations. Commission agents tried to get the farmers a competitive price so as to increase his volume of business and thereby earning more profit through commission. Apart from it, the commission agent charged interest from farmers for lending money to farmers. This was an additional income and was quite lucrative for commission agents. This sort of borrowing was prevalent among farmers and wholesaler also. The purchase price of wholesaler was also on par with local traders (Rs.456.61/kg). Wholesalers also collected produce from the farmers by appointing the aggregators on his behalf.

The profit margin earned by all the three intermediaries amounted to Rs.172.46 per kg for local traders, Rs.175.51 per kg for commission agent and Rs.147.24 for wholesalers. The marketing margin/price spread was the highest in the

Table-1: Price Spread in Marketing of Mentha Oil

Sl. No.	Particulars	Channel-I		Channel-II		Channel-III		Channel-IV	
		Rs	%	Rs	%	Rs	%	Rs	%
1	Price received by the producer	463.47	71.40	476.67	71.09	459.12	73.44	524.15	100.00
2	Marketing cost of producer	3.51	0.39	2.51	0.37	2.51		2.51	0.48
3	Net price received by producer	460.96	71.01	474.16	70.72	456.61	73.04	521.64	99.52
3	Marketing cost of								
	a. local traders	13.19	2.03						
	b. commission agent			18.34	2.74				
	c. Wholesaler					16.25	2.60		
4	Profit of local traders	172.46	26.57						
5	Local trader's purchase price								
6	Margin of commission agent			175.51	26.17				
7	Whole seller purchase price					497.38	79.56		
8	Profit of Whole Seller					147.24	23.55		
11	Purchase price of processor	649.12	100.00	670.52	100.00	625.12	100.00	524.15	100.00
12	Marketing Margin/price spread	185.65	28.60	196.36	29.28	166.00	26.56	2.51	0.48
13	Producer's Share in consumer (Processor) price	71.01		70.72		73.04		99.52	



case of Channel-II (Rs.196.36/kg) followed by Channel-I (Rs.185.65/kg) and Channel-III (Rs.166.00/kg).

Channel-IV in marketing of mentha oil gives the highest net price to the farmers. Because, farmers directly sell their produce to processors and in doing so no intermediary is involved. On an average, the price realized in this channel amounted to Rs. 521.64 per kg. Only marketing cost incurred by the producer is the marketing margin in this channel. Hence, farmers share in consumer rupee is 99 per cent and this is the most efficient channel. However, this channel was not so popular and only few farmers sold their produce directly to the processors. Because, it was easy for processor to have tie-up with few commission agent and wholesalers, rather than buying raw material from thousands of farmers. Farmers those who sold to processors might have personal rapport with the processors and may be located near by processing units.

Trends in Mentha Oil Prices

It is well known fact that, prices of agricultural commodities are subject fluctuations due to their perishable nature and seasonality. This phenomenon is also true with prices of mentha oil. Hence, an attempt was made in this study to study the trends in daily prices of mentha oil.

The analysis of daily prices was done for the period from August 2005 to September 2008 and results are presented in the Table-2. It is revealed from the analysis that, prices of Mentha oil are highly volatile in the market owing to changes in supply. In the study area harvesting pattern by the farmers was not uniform. It was subject to availability of labour and maturity herbage. As can be observed from the fig-1 that the price of mentha oil ranged from about Rs 400/kg to Rs 850/kg in the Chaudausi Market. Fluctuations in prices were found to be relatively high during study period. It is also revealed that, prices were at a lower level in the harvesting season i.e. during May, June and July except during 2008. During all the three years, prices started rising from July onwards and reached peak in the month of January with exception of year 2008. The higher price during July 2008 was mainly due to reduction in quantum of total production in the country. In the year 2007, the production was 35000 MT and hence, prices during January 2008 were very low as the output in the year 2007 arrived in the market during November 2007, December 2007 and January to March 2008, even being the lean season of the crop.

Table- 2: Monthly Average Prices of Mentha Oil at Chaudausi

Month	2005	2006	2007	2008
January		743.3	616.7	498.3
February		607.6	614.1	508.5
March		461.3	585.5	503.9
April		483.5	594.6	504.5
May		491.2	582.2	519.1
June		467.5	525.1	541.0
July		556.0	512.5	725.6
August	454.3	558.2	542.2	628.7
September	436.5	675.5	534.2	
October	432.3	681.6	526.3	
November	490.5	654.6	501.4	
December	623.9	658.3	501.4	
Annual Average	487.5	586.5	553.0	553.7

Trends in Prices of Mentha Oil

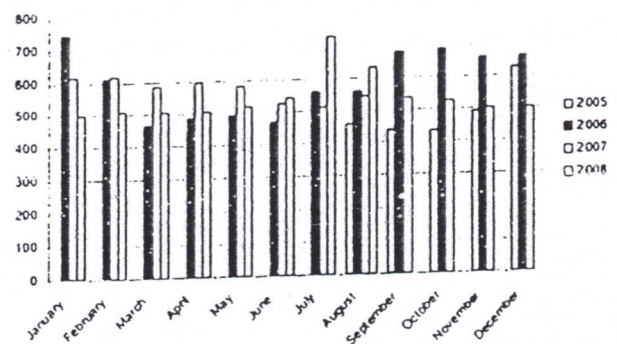


Fig.- : Mentha oil prices in Chaudausi market

The results of the volatility analysis presented in Table-3. The volatility results indicated that Mentha oil price were highly volatile during the year 2006 and remain stable during 2007. Monthly volatility analysis does not show any trend in volatility and gave mixed picture. Volatility was observed to be higher during December 2005 to March 2006. This is the lean season for mentha production and also in anticipation of higher prices in the month of December, farmers of the area stored oil with them and hence there was a decline in the supply of mentha oil in the market. This tendency among farmers emerged from their long experience in cultivation of mentha and observations made by them in the movement of price over the years.



Table- 3: Volatility in Mentha oil prices at Chandausi Market.

Month	2005	2006	2007	2008
January		14.7	9.3	2.6
February		20.3	5.0	3.2
March		12.8	3.9	5.0
April		8.9	5.3	2.1
May		10.0	9.0	2.1
June		10.9	5.6	10.1
July		10.5	4.9	19.0
August		4.8	6.1	6.8
September	10.9	12.1	2.9	5.0
October	5.6	7.9	3.7	
November	10.3	10.2	4.6	
December	18.6	7.0	3.9	
Annual volatility	19.8	40.4	19.6	24.4

Conclusion and recommendation

Despite mentha being a different crop in itself compared to other crops, the traditional marketing problems persisting in the study area revealed the dominance of middlemen in the form of commission agent, trader and processor. Farmers also were deprived of remunerative prices and also price discovery mechanism is not in their favour. Hence, there is a need to evolve fair marketing practices to benefit the farmers in the study area.

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