

An Economic Analysis of Marketing of Mustard in Morar Block of Gwalior District (M.P.)

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Abstract - Agriculture marketing plays an important role not only in stimulating production and consumption, but in accelerating the pace of economic development. Efficient marketing of mustard increasing the producer's share in the consumer's price and maintain the tempo of increased production. The study was undertaken with the objective to find out marketing behaviour of mustard and to analyse the costs, returns price spread and to evaluate the marketing efficiency of mustard in different marketing channels in the marketing of mustard of farmers in Morar block of Gwalior district (Madhya Pradesh). A multistage stratified random sampling technique were adopted to select the block, the cultivators, market and different marketing function involved in mustard marketing in district Gwalior. Morar block of Gwalior district was selected purposively for the present study. In marketing of mustard marketing costs and margins were higher in channel II followed by channel III and channel I because the intervention of market intermediaries in channel II. Marketing cost was high in channel II and III because the processing cost is high. Producer share in the consumer's price was highest in channel-I followed by channel-III and channel-II. Price spread was lowest in channel- I followed by channel -III and channel- II, It was highest in channel - II Marketing efficiency was highest in channel-I followed by channel-II and channel-III because, as the number of intermediaries increased, costs and margins increased and inverse was the marketing efficiency.

Keywords: mustard; marketing cost and margin; price spread.

I. INTRODUCTION

Agriculture marketing plays an important role not only in stimulating production and consumption, but in accelerating the pace of economic development (Acharya and Agrawal 2004). India is the third largest mustard seed producer in the world. It plays an important role in the oil seed economy of the country. In Madhya Pradesh the crop area of mustard is about 8 lakh hectare. This crop is mainly cultivated in Morena, Bhind, Gwalior and Sheopur district. Due to low cost of cultivation and high economic profit, the area and productivity of mustard is continuously increasing. Efficient marketing of mustard increasing the producer's share in the consumer's price and maintain the tempo of increased production. Marketing channels for mustard vary from place to place and time to time. The efficient marketing provides higher returns to the producers and greater satisfaction to the consumers by reducing the

marketing cost. Open auction method of sale is adopted in the Gwalior mandi. Assembling and distribution of agricultural commodities take place in this mandi. The market functionaries are licensed and the market committees fix their charges. The marketing costs and margins influence the return to the producer on one hand and cost to the consumer on other hand. Mustard marketing in particular is mainly in the hands of middlemen. Hence the producer is only a price receiver. In process of marketing the producer has to incur various marketing costs. The costs are determined by the performance and efficiency of different marketing functionaries in different channels, which in turn influence the return to the producer. In this study content, there is a need for the study of efficiency of marketing channels in the marketing of mustard that is cultivated and marketed in the study area. The present study was undertaken with the objectives of to estimate the marketing cost, margin and price spread, and marketing efficiency under different marketing channels of sample respondents.

II. SYSTEM MODEL

In the study area researcher studied the different marketing channel of mustard through field survey. During study period researcher also studied the marketing cost and margin and efficiency in marketing of mustard.

III. PREVIOUS WORK

In India, Agriculture is playing very vital role in economic development and also it is back bone of the nation. Agricultural produce's marketing is difficult process to the farmers. The main purpose of study of market is to eliminate the unhealthy trade practice, to reduce marketing cost and to provide fair prices to the farmers. Ugalwat and Kunnal (1989) worked out the two channels were identified in marketing of groundnut viz., Channel-I: Farmer-Village merchants-Commission agents-Wholesalers-Mill owners and Channel II: Farmer-Commission agents-Wholesaler-Mill owners. The marketing margins (price-spread) constituted about 30 per cent of the retail price charged by the oil miller under Channel-I in Bagalkot market. The marketing margins under Channel-II in Bagalkot market were 22 per cent and 15 to 18 per cent in Badami market.

The producer's share in consumer's rupee was high in Badami market (80 %) compared to Bagalkot market (70%). Agarwal and Sharma (1994) studied the soybean marketing channels as follows: Channel-I: Producer –seller --Oilseed Growers Co-operative Society --Tilhan Sangh. Channel-II: Producer-seller--Oilseed agent—Tilhan Sangh. Channel-III: Producer-seller--Commission agent --local processor. Channel-IV: Producer -seller—Commission agent--Wholesaler—Local Processor. Channel-V: Producer-seller Commission agent--Wholesaler--Outside Processor. Producer farmers got the highest net price of Rs.668.56 per quintal in sale of soybean (96.22% of processor's price) when marketed their produce in village (Channel-I). In all other channels, farmers got lesser price by Rs.10 to 15 per quintal than they got in channel-I, Producer's share ranged between 86 to 92 per cent in these channels. The wholesalers got of Rs.30.56 per quintal in sale of soybean (4 per cent share in price paid by the processors). Raguwanshi *et al.* (2006) determined about the marketing pattern of soybean in Sehore district, Madhya Pradesh, India. Results revealed three marketing channels, viz., channel I through village merchant, channel II through wholesale, and channel III through ITC company. Luhah *et al.* (2009) studied two major marketing channels observed were Channel-I: Producer - Commission agent - Oil-expeller/oil-miller - Retailer - Consumer, and Channel-II: Producer - Commission agent - Wholesaler - Oil-expeller/Oil-miller - Retailer - Consumer. Among both the channel-I is most prevalent route through which majority of the farmers sell more than three-fourth of their quantity sold in different markets of the area. Banafar *et al.* (2006) reported most efficient marketing channel for mustard was Channel II (producer-processors of wholesale dealers of mustard oil and cake-retailers of mustard oil and cake-consumers) followed by Channel III (producer-wholesale dealers-processor-wholesale dealers of mustard oil and cake-retailers of mustard oil and cake-consumer) and Channel I (producer-village merchant-wholesale dealers-processor-wholesale- dealers of mustard oil and cake-retailers of mustard oil and cake-consumers). The producer share in the consumer rupee was higher in Channel II.

IV. PROPOSED METHODOLOGY

Morar block of Gwalior district was purposively selected for the present study. A multistage stratified random sampling technique were adopted to select the block, the cultivators, market and different marketing function involved in mustard marketing in district Gwalior. Out of 4 blocks Morar block was selected purposively for the present study. For the working out the producer' share in consumer's price, marketing cost and margin in the two selected markets (krishi upaj mandi lashkar and krishi upaj mandi deenapur), 10 producers from each mandi were selected randomly irrespective of their size group prevailed

in the marketing system. The study period pertains to the agricultural year 2011-12. The collected data was analysed by using certain tools and techniques as follows:

Marketing cost: $MC = C_f + C_{m_1} + C_{m_2} + \dots + C_{m_i}$

Where, MC = Total Marketing Cost

C_f = Cost paid by the producers from the time the produce leaves the farm till he sell it, and

C_{m_i} = Cost incurred by the *i*th middleman in the process of buying and selling the product.

Marketing efficiency = $\frac{V}{I} - 1$

Where, V = Value of goods sold (consumer's price)

I = Total marketing cost + margins.

V. EXPERIMENTAL RESULT

Channels of Marketing

Movement of the produce from producer to ultimate consumer comprises a chain of intermediaries, called marketing channel. Different intermediaries are involved in the handling of the produce through different channels of trade. From the preliminary survey conducted in the study area, it was observed that the marketing of mustard was done mainly through following channels,

Channel – I Producer to Regulated mandi to Oilseed Retailer to Oilseed Consumer

Channel – II Producer to Village merchant to Regulated mandi to Processor to Oil Retailer to Oil consumer

Channel – III Producer to Regulated mandi to Processor to Oil Retailer to Oil Consumer

Costs, Margins And Price Spread In Marketing Of Mustard Crop:

It is revealed from the Table 1, that in case of channel-I sale price of the producer or retailer's purchase price was received as Rs. 2781 per q. per farm. Producers got 76.94 per cent of the price paid by the consumer in sale of mustard at local market. Marketing costs incurred by the producer including has been Rs. 89.6 per q. with 3.22 per cent and marketing costs incurred by the retailer including has been Rs. 169.61 per q. with 4.85 per cent.

TABLE 1: AVERAGE COSTS AND MARGINS FOR VARIOUS AGENCIES IN THE MARKETING OF MUSTARD PER QUINTAL THROUGH

Channel - I Producer To Regulated Mandi To Oilseed Retailer To Oilseed Consumer		
S. No.	Market functionaries	Rs/Qt
A Marketing costs at producers level		
1.	Packing expenses	46 (1.65%)
2.	Loading and unloading charges	20 (0.72%)
3.	Transportation charges	18 (0.65%)
4.	Other charges	5.6 (0.20%)
Total		89.6 (3.22%)
Sale price of the farmer's /retailer's purchase price		2781
Price received by the producer's		2693
B Marketing cost incurred by the retailer		
1.	Packing expenses	51 (1.46%)
2.	Loading and unloading charges	23 (0.66%)
3.	Storage charges	2 (0.06%)
4.	Transportation charges	36 (1.03%)
5.	Mandi tax	55.612 (1.59%)
6.	Shop rent	2(0.06%)
Total		169.61 (4.85%)
Selling price of retailer's\consumer's purchase price		3500 (100%)
Retailer's margin		549.78
Producer's share in consumer rupee		76.94

It is observed from Table 2 that in case of channel-II sale price of the producer or village merchant's purchase price was received as Rs. 1788 per q. per farm. Producers got 100 per cent of the price paid by the village merchant in sale of mustard at village. Marketing costs incurred by the producer including was Rs. 0.00. In channels-II (Producer-village merchant- processor- retailer-consumer), a total of Rs. 117 incurred on all expenses during different stages of marketing of mustard by village merchants, which accounted 4.34 per cent of the village merchant's selling price or processor's purchase price. The village merchant's selling price or purchase price of processor was received Rs. 2700 of which 29.44 per cent was his margin. Selling price of processor or retailer's purchase price received was Rs. 3108 and selling price of mustard oil cake was Rs.607.60 in channel-II of which Rs. 621.60 or 16.73 per cent was incurred on marketing functions performed at different stages. The processor received 10 per cent (Rs. 393.80) margin in retailer's purchase price. Processing cost was very high due to traditional technology.

Selling price of retailer or consumer's purchase price was received Rs. 3280 in channel-II of which Rs. 30 or 0.91 per cent was incurred on marketing functions performed at different stages. The retailer received 04.34 per cent (Rs.

142 margin in consumer's purchase price while producer's share in consumer's rupee was obtained as 54.48 per cent.

In channels-III, a total of Rs. 624 incurred on all expenses during different stages of marketing of mustard oil and mustard oil cake by processors, which accounted 16.86 per cent of the processor's selling price or retailer's purchase price. The processor's selling price or purchase price of retailer was received Rs. 3120 and selling price of mustard oil cake was Rs.587 of which 14.36 per cent was his margin.

Table 3 showed that in case of channel III, out of the total marketing cost Rs. 100.9 qt. the producer's contribution was 3.96 per cent. Producer's selling price or processor's purchase price was received Rs. 2550 in channel-III of which Rs. 100.9 or 3.96 per cent was incurred on marketing functions performed at different stages. The producer received 96.04 per cent (Rs2449) in processor's purchase price.

In channel III, the retailers got a remunerative price of Rs. 3280 per quintal, of which 0.95 percent they had incurred on the marketing functions. Producer's share in consumer's rupee was obtained as 74.66 per cent.

TABLE 2. COSTS AND MARGINS BORNE BY VARIOUS AGENCIES IN THE MARKETING OF MUSTARD PER QUINTAL THROUGH

Channel – II Producer – Oilseed Village Merchant –Regulated Mandi –Processor - Oil Retailer – Oil Consumer		
S. No.	Market functionaries	Rs./Qt.
A Marketing costs at producers level		
	Producer's selling price/Village merchant's purchase price	1788
	Price received by the Producer's	Rs. 1788
B Marketing costs incurred by the village merchants		
1	Packing expenses	48 (1.78%)
2	Loading and unloading charges	18 (0.67%)
3	Storage charges	6 (0.22%)
4	Transportation charges	38 (1.41%)
5	Other charges	7.2 (0.27%)
Total		117.2 (4.34%)
	Village merchant's Selling price / processor's purchase price	2700 (100%)
	Village merchant's margin	795 (29.44%)
C Marketing cost incurred by the processor		
1	Packing expenses	134 (3.61%)
2	Transportation charges	57 (1.53%)
3	Loading and unloading charges	31 (0.83%)
4	Mandi tax (2%)	54 (1.45%)
5	Commission charges	1.60 (0.04%)
6	VAT tax	135 (3.63%)
7	Other charges	209 (5.63%)
Total		621.6(16.73%)
	Selling price of processor (oil)/ retailer's purchase Price	3108 (83.65%)
	Selling price of processor(moc)/consumer's purchase price	608 (16.35%)
	Total selling price	3715 (100%)
	Processor's margin	394 (10.6%)
D Marketing cost incurred by the retailer		
1	Loading and unloading charges	16 (0.49%)
2	Storage charges	2 (0.06%)
3	Shop rent charges	2 (0.06%)
4	Other charges	10 (0.30%)
Total		30 (0.91%)
	Selling price of retailer's / consumer's purchase Price	Rs. 3280
	Retailer's Margin	142 (4.34%)
	Producer's share in consumer rupee	54.48

TABLE 3

AVERAGE COSTS AND MARGINS BORNE BY VARIOUS AGENCIES IN THE MARKETING OF MUSTARD PER QUINTAL THROUGH

Channel – III Producer – Regulated Mandi - Processor - Oil Retailer – Oil Consumer

Sr. No.	Market functionaries	Rs./Qt.
A Marketing costs at producers level		
1	Packing expenses	50.5(1.98%)
2	Loading and unloading charges	15.7 (0.62%)
3	Storage charges	1 (0.4%)
4	Transportation charges	28 (1.10%)
5	Commission	0.3 (0.01%)
6	Other charges	5.4 (0.21%)

Total		100.9 (3.96%)
Producer's selling price / processor's purchase price		Rs. 2550
Price received by the producer's		2449 (96.04%)
B	Marketing costs incurred by the processor	
1	Packing expenses	133 (3.58%)
2	Loading and unloading charges	31 (0.83%)
3	Transportation charges	56.5 (1.52%)
4	Mandi tax (2%)	51 (1.38%)
5	Commission	0.4 (0.01%)
6	VAT tax (5%)	127.5 (3.44%)
7	Other charges	225.5 (6.08%)
Total		624.89(16.86%)
processor's selling price(oil)/ retailers purchase price		3120 (84.16%)
Selling price of processor's(moc)		587 (15.84%)
Total selling price		3707 (100%)
processor's margin		532.41(14.36)
D	Marketing costs incurred by the retailer	
1	Loading and unloading	20 (0.61%)
2	Storage charges	1 (0.03%)
3	Transportation charges	10 (0.30%)
Total		31 (0.95%)
Retailer selling price / consumer purchase Price		3280 (100%)
Retailer margin		128.9 (3.93%)
Producer's share in consumer rupee		74.66

Price Spread

The Table 4 presents the clear and comparative picture of price spread through different marketing channels for mustard, prevailed in the markets of the study area. It is evident from Table that the net share of producer's in consumer's rupee was Rs. 2693, 1788 and 2449 being percentage 76.94, 54.48 and 74.66, in channel-I to channel- III respectively.

Regarding cost incurred by producers on marketing of mustard, it is observed that the highest cost received in channel- III i.e. Rs. 100.9 followed by channel-I (Rs. 89.6) while Rs. 0.00 incurred in channel-II. In respect of village merchant's purchase price/ producer's sale price, channel-II was Rs. 1788 per quintal. Village merchants marketing costs (cm1) was Rs.117.2 with 4.34 per cent. Where, margin of village merchant was 795 with 29.44 percent.

The processor purchase price or village merchant's sale price of mustard was comparatively higher in channel-II than channel-III i.e. Rs. 2700 and 2550 respectively. Marketing cost of processor in channel-II and channel- III was estimated Rs 621.60 (16.73%) and Rs 624 (16.86%). processor's margin was comparatively higher in channel-III (Rs. 532.41) than channel-II (Rs. 393.8) in absolute terms i.e. 14.36 and 10.60 respectively.

Retailer's purchase price or processor's sale price was highest in channel-III i.e. Rs. 3120 than other Rs. 3108, and Rs. 2781 in channel-II and channel-I respectively. Regarding marketing cost, it was found comparatively higher in absolute terms in channel-I (04.85%), followed by 0.95 per cent in channel-III and 0.91 per cent in channel-II. The highest margin for retailers was in channel-I i.e. Rs. 549.78 or 15.70 per cent followed by Rs. 142.2 and Rs. 128.9 with 4.34 and 3.93 per cent in channel--III and channel-II respectively.

Total marketing costs of channel-II and channel-III were high because of high processing cost, due to traditional techniques were adopted in the study area. It was concluded that there was considerable scope to reduce the unit cost of processing by adopting improved technology, which would eventually increase the operational efficiency and benefit to the consumers.

Marketing Margins

The Table 5 clears the comparative picture of absolute margin, percentage margin and percentage mark-up of middleman. It revealed in case of village merchant, the absolute margin was Rs. 735 per quintal whereas the percentage margin was 27.2 and percentage mark-up was 41.1 in channel-II. Absolute margin (Rs. 533), percentage margin (17) and percentage mark-up (20.9) was higher in

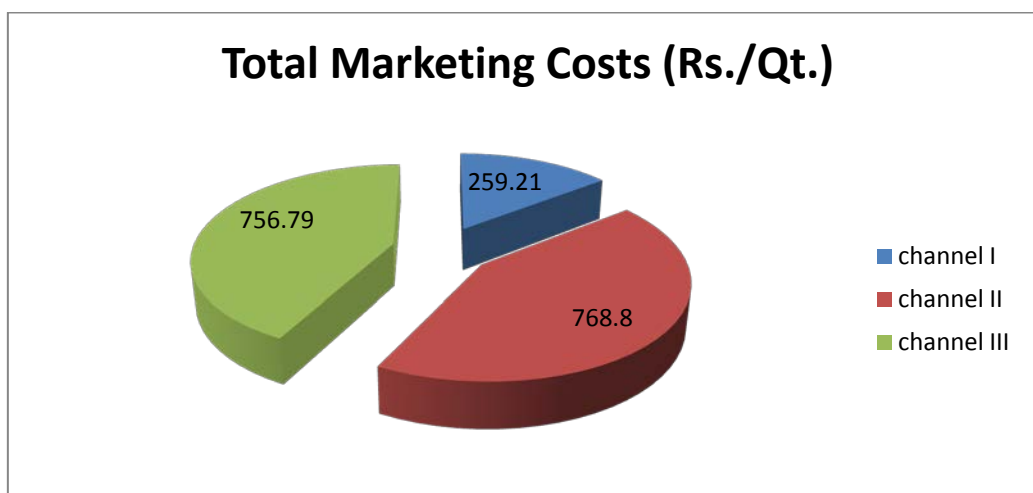
channel-III in comparison of channel-II which was Rs. 394, 12.6 and 14.5 respectively in case of processor

The data indicate that in case of retailers, absolute margin (Rs. 549, percentage margin (15.6) and percentage mark-up (19.7) was higher in channel-I as compared to other

channels of marketing. The absolute margin for channel-II was Rs. 142 and channel-III was Rs. 129. Percentage margin estimated for channel-II and channel-III was 4.34 and 3.93 per cent respectively. In terms of percentage mark-up greater in channel-I i.e. 19.35 followed by 4.5 in channel-II and 4.1 in channel-III.

TABLE 4: PRICE SPREAD THROUGH IMPORTANT CHANNELS OF MUSTARD (Rs. /Qt)

S.NO.	Particular	Ch-I	%	Ch-II	%	Ch-III	%
1	Producer's net share	2693	76.94	1788	54.48	2449	74.66
2	Producer's costs	89.6	03.22	0.00	0.00	100.9	3.96
3	Village merchant's purchase price/ Producer's sale price	2781		1788			
4	Village merchant's costs (cm1)			117.20	04.34		
5	Village merchant's margin			795	29.44		
6	Processor's purchase price/Village merchant's sale price			2700		2549.9	
7	Processor's costs (cm2)			621.60	16.73	624.89	16.86
8	Processor's margin			393.8	10.60	532.41	14.36
9	Retailer's purchase price/ processor's sale price	2781		3108		3120	
10	Retailer's costs (cm3)	169.61	4.85	30	0.91	31	0.95
11	Retailer's margin	549.78	15.70	142.2	04.34	128.9	3.93
12	Consumer's price/ retailer's sale price	3500		3280		3280	
Total marketing costs		259.21		768.80		756.79	



Marketing Efficiency

The data in Table 6 indicates that marketing efficiency was highest in channel-I followed by channel-II, and channel-III (Solanki et. al.2014). It shows that marketing efficiency was in inverse relation with the total costs and margins. As the number of intermediaries increased, costs and margins increased and inverse was the marketing efficiency. Thus, it can be stated that from the point of view of marketing efficiency, that mustard growers have to pay more attention on channel-I i.e. producers- retailer - consumers to meet out the maximum profit. Marketing efficiency was highest in channel - I because total costs and margins were low than other channels due to only one middleman was present between producer and consumer.

TABLE 5: AVERAGE MARKETING MARGINS UNDER DIFFERENT MARKETING CHANNELS OF MUSTARD
 (Rs. / Qt)

Sr. No	Particular	Channel – I			Channel – II			Channel – III		
		Ami	Pmi (%)	Mi (%)	Ami	Pmi (%)	Mi (%)	Ami	Pmi (%)	Mi (%)
1.	Village merchant's margin				735	27.2	41.1			
2.	Processor's margin				394	12.6	14.5	533	17	20.9
3.	Retailer's margin	549	15.6	19.7	142	4.32	04.5	129	3.93	4.1

TABLE 6: MARKETING EFFICIENCY OF DIFFERENT CHANNELS OF MUSTARD

Channels	Consumer's Price	Total marketing costs & margins	Marketing Efficiency
Channel –I	3500	809	3.32
Channel –II	3280	2100	0.56
Channel –III	3280	1418	1.31



VI. CONCLUSIONS

The finding of the study show that, in the study area (Morar block of Gwalior district), three channels were identified and the marketing costs and marketing margins in three channels were identified. Channel-III was most preferred in the study area and maximum quantity of produce was marketed through channel-III because of regulated mandi and gain proper remunative prices of gain. Marketing costs and margins were higher in channel III i.e.Rs.2160 followed by channel II (Rs.1316) and channel I (Rs.809) because the intervention of market intermediaries in channel II. Marketing cost was high in channel II and III because the processing cost is high.

Producer share in the consumer's price was highest in channel-I (76.94%) followed by channel-III (74.66%) and channel-II (54.48%) Chole *et. al.* (2003). Price spread was lowest in channel- I followed by channel –III and channel- II, It was highest in channel – II. Marketing efficiency was highest in channel-I (3.32) followed by channel-II (0.56) and channel-III (1.31) Chole *et al.* (2003) because, as the number of intermediaries increased, costs and margins increased and inverse was the marketing efficiency. It is suggested that fixing price based on quality of mustard. Farmers can avail the facilities to market their produce direct to the agencies like NAFED, Oilseeds Co-operatives etc. to get better return of produce. Farmers should be got up-to-date

market information regularly from Radio, T.V. and bulletins. More modern processing plants should be established around the major producing regions/areas for higher extraction of oil and minimize the processing costs.

VII. FUTURE SCOPE

The present study is not an end itself but it opens various doors for future research especially in area of agriculture marketing. There may be some other issues related to the performance of marketing channels, marketing cost, margins, price spread and efficiency of markets of agricultural products which the current research have not touched.

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