

**AN ECONOMIC ANALYSIS OF MARKETING OF
MUSTARD IN MORAR BLOCK OF GWALIOR
DISTRICT (M.P.)**

THESIS

Submitted to the
**Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya,
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**In partial fulfilment of the requirements for
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In
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MANAGEMENT)**

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2012

CERTIFICATE – I

*This is to certify that the thesis entitled “**An Economic Analysis Of Marketing Of Mustard In Morar Block Of Gwalior District Of Madhya Pradesh**” submitted in partial fulfilment of the requirement for the degree of “**MASTER OF SCIENCE IN AGRICULTURE**”, (Department of Agricultural Economics and Farm Management,) of the **Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya Gwalior** is a record of the bonafide research work carried out by **Ms. MEGHA SAHU** under my guidance and supervision. The subject of the thesis has been approved by the Student’s Advisory Committee and the Director of Instructions.*

No part of the thesis has been submitted for any other degree or diploma (certificate awarded etc.) or has been published / published part has been fully acknowledged. All the assistance and help received during the course of the investigations has been acknowledged by her.

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CHAPTER – I

INTRODUCTION

India is one among the leading oil seed producing countries in the world. India is the third largest mustard seed producer in the world. Oilseeds form the second largest agricultural commodity after cereals. Mustard is the second important edible oil seed crop after groundnut. It plays an important role in the oil seed economy of the country. Rapeseed and mustard belong to Cruciferae family and genus Brassica. Rapeseed is locally called as sarson, toria, yellow toria, whereas, mustard is called as rai or laha.

In the world, the mustard crop area is 27million ha and production is 47million ton and productivity is 1730 kg per ha during the year 2011. The important mustard growing countries of the world are India, Canada, China, Pakistan, Poland, Bangladesh and Sweden. In India, mustard crop area is 6-7million ha and production is 7-8 million ton and productivity is 1000-1150 kg per ha. In India, its cultivation is mainly confined in the states viz., Uttar Pradesh, Rajasthan, Madhya Pradesh, Haryana, Punjab, Assam, Bihar, Gujarat and West Bengal. In Madhya Pradesh the crop area of mustard is about 8 lakh ha. 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. In Madhya Pradesh the production of mustard is 8.5 lakh ton and productivity is 1040 Kg/Ha. & area production and productivity is highest in Morena district of M.P. and productivity is 1608 Kg/Ha.

Efficient marketing of mustard plays an important role in increasing the producer's share in the consumer's price and maintain the tempo of increased production. 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 mustard seed produced in India is mainly for domestic consumption, and is mostly consumed in the northern, central and eastern parts of the country. Once the oil is extracted, the remaining part of the seed is used to produce mustard meal, an important source of cattle and poultry feed. This represents a significant source of oil meal in the country, supplying on average about 3 to 3.2 million tones of meal annually. India is world's fourth largest edible oil economy after the U.S., China and Brazil, and is the second largest importer after China. The total market size of the Indian oilseed sector is about Rs. 600 billion (US\$13.4 billion). India's international trade in oilseeds is Rs. 130 billion (US\$2.9 billion). The sector directly or indirectly employs more than a million people.

Mustard oil, used primarily in cooking, is a rich source of mono saturated fatty acids, making it a healthier option than most other cooking oils. Over the years, its health advantages have continued to improve, especially with the recent, limited introduction of the "Canola" strain of the seeds. Two varieties of the oil are popular in India: the Kaccha Ghani (preferred by most consumers due to its characteristic color and pungency) and Pakki Ghani (refined mustard oil preferred mostly by health conscious people). Other than its culinary advantages, mustard seed and its oil also hold a number of diverse applications, from fertilizers to lubricants to massage oils.

Government dependence on revenue from the mustard oil sector:

The mustard seed produced in India is sold in the form of both oil and oil meal. Around 80 per cent of this is marketed by the small-scale sector in loose form, with only 20 per cent sold by the organized sector. A major portion of seeds enters the regulated mandis (organized markets for selling agricultural products) and is purchased by oilseed crushers across the country. As in India, mustard seed is produced mainly for domestic consumption, the agricultural and fiscal policies formulated by the

government influence the production and revenue generated by the mustard oil sector. The personal income derived from agriculture in India is exempt from income tax, and as such government revenues must come from other sources. Sellers pay taxes for intra- and inter-state sales to both the state and central government, however in many states this sale tax has been replaced by a value added tax (VAT) system— which for edible oils is five per cent.

Exim policy for mustard

India does not import or export mustard seeds. It was not into imports of mustard oil also but now it has started importing it due to a fall in production of oil and oil seeds. The oil is not exported, as it does not match with the international quality standards. India is an exporter of mustard oil cake and exports around 4 lakh tons of cake annually.

India is exporting a number of oilseeds among which the quantity of mustard is not very high and the Govt. has adopted certain short and long term policy measures to enhance oilseed export. Besides common mustard seeds and rape/ colza seeds, the other items like low level erucic acid varieties of mustard seeds and cakes have good export potential.

Thus the study in view of our importance is conducted in Morar block of Gwalior district. The specific objectives of the present study are as under –

Specific objectives:

1. To find out the marketed and marketable surplus of the mustard.
2. To estimate the marketing cost, margin and price spread, under different marketing channels of sample respondents.
3. To evaluate the marketing efficiency of mustard in different marketing channels.
4. To identify the problems faced by mustard growers during marketing and suggest the measures for efficient marketing system.

Significance of the study:

The problem of efficient marketing of farm products has received considerable attention of many researchers and extension workers in the recent years. Their importance has greatly increased owing to the recent changes in agricultural technology as well as the social patterns. The vital role of marketed and marketable surplus of agricultural products in economic development of a developing country like India can hardly be over emphasized. As a level for promoting industrialization in predominantly agrarian economics like. Thus, the rate at which agricultural production expands affording on increasing supply of food and raw materials largely determines the pace of economic development, proper planning for procurement and distribution of mustard. In view of high rate of population growth and high marginal propensity to consume, the producers themselves consume most of the increase in agricultural production. Thus, the study of marketing cost, margin and price spread, marketed and marketable surplus in the economic system is more important than the study of increase in agricultural production so as to find ways to increase the tempo of marketed and marketable surplus. Hence, the present study on all these aspects and the factors that govern the flow of mustard marketing was considered in order to identify the weakness of the present marketing systems and to provide empirical evidence on its structural components. This in turn would ultimately serve as a feed back to the public policy makers.

Limitation of the study:

1. The study was exploratory in nature and was conducted in five villages of Morar block of Gwalior district .
2. The findings of the study are based on individual's research work and may have limited generalization.
3. The study was carried out on limited numbers of farmers. Hence, the findings will not be generalized and is only applicable to the study area.
4. The study was restricted to a few variables due to limited time and resources.

5. The conclusions are based on the data provided by the farmers, therefore, the validity and reliability depends how honestly they provided the information.

CHAPTER – II

REVIEW OF LITERATURE

Review of literature helps to determine, what research work has been done in the past, as a basis for conceptual frame work. This also provides insight in to the methods and procedures adopted. At the same time this also takes practical definitions of various concepts and terms in to consideration, used in the study. In other words review of literature provides some basic ideas to any research worker in making his work of study comparatively more easy and appropriate.

The research studies conducted on or related to the theme of this study are reported as under to provide a support to the findings of the present study:

Nandal (1986) examined the share of producer in the consumer's rupee for mustard and rapeseed in Hissar district of Haryana state. He traced Channel-I as producer wholesaler-oil expeller-retailer-consumer and identified that the producer's share in the consumer's rupee had not changed in spite of emphasis in the consumer's rupee.

Ugalwat and Kunnal (1989) worked out the producer's share in consumer's rupee for groundnut in Bagalkot and Badami markets. 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. In Badami market, they constituted 19 to 25 per cent of the retail price charged by the oil miller. This clearly indicated superiority of Channel-I in Badami market over that 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 problems in Rajasthan and identified five 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).

Jairath (1994) the paper investigated the effect of the wholesale market on agricultural and economic development in tribal areas of Madhya Pradesh, India. Constraints and problems faced in agricultural marketing are identified. The wholesale market examined is popularly acknowledged as the 'soybean market of tribals'. The market receives oilseeds, pulses and minor forest produce. Wholesale prices are more stable for soybeans than for pulses. The development of the market has led to the growth of market-oriented crop production in the tribal areas. The cropping pattern has shifted from cereals and pulses to oilseeds and other crops. Tribal farmers faced many problems at the rural assembly centers, which lack even basic facilities.

Vasisht *et al.* (1995) reported that the spatial, temporal and seasonal price spread behavior of selected agricultural commodities in India, and the effect of market arrivals on price spread during harvesting and lean season crops. The commodities covered in the analysis are wheat, chickpeas, rapeseed and mustard, and potatoes. The study utilizes time-series data on farm harvest prices and retail prices of selected agricultural commodities. The results revealed wide regional disparities in the price spread as well as the producers' share

of the consumer price. During the more recent period, the producer's share of consumer price has not changed much for cereals, but increased slightly for oilseeds and pulses. Marketing margins and costs are relatively higher for oilseeds and vegetables than cereals. Price spread is found to be inversely related to market arrivals.

Suryawanshi *et al.* (1995) revealed that marketable surplus and marketing cost of oilseeds and pulses are analyzed based on data collected from 312 holdings in seven districts in the scarcity zone of western Maharashtra, India. Retention of oilseeds and pulses for own consumption accounted for 10%-15% of total production. The bulk of production was sold in nearby regulated markets.

Shukla and Pandey (1996) analyzed the costs and returns in processing of mustard and rapeseed in Hissar. The profit margin was observed to be Rs.3.43 per quintal in the case of small sized units with traditional techniques. The profit per quintal was Rs.486 in the case of medium sized units with modern technique and Rs.702 per quintal in the case of large sized units with improved technique. 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.

Soni (1999) examine the comparative economics of soybean and its competing kharif crops; identify the different patterns of sale of soybeans by farm families; and estimate the marketing costs and margins for the different patterns of sale in Sagar district, Madhya Pradesh, India. Data were obtained through a questionnaire survey of 45 farmers. The study revealed that soybean is the most profitable kharif crop in the area. Soybeans are sold to private traders, organized agencies (sub-mandi), the Oil Federation, and the Krishi Upaj Mandi. Among all the marketing channels, Krishi Upaj Mandi pays the highest price of produce (Rs 1052 per quintal), followed by the Oil Federation (Rs 1020 per quintal), and organized agencies (Rs 1006 per quintal), respectively. The farmer can receive a net margin of Rs 27-71 per quintal from the sale of soybeans to Krishi Upaj Mandi

Khan *et al.* (1999) stated that groundnut marketing costs and marketing margins, and problems in groundnut marketing were studied at Kishoregonj and Mymensingh town, Bangladesh. Data were collected in 1996 from 20 groundnut growers and 64 traders. Recommendations are made for improving the existing marketing system.

Pawar *et al.* (1999) identified marketing channels for soybean in Maharashtra, India computed marketing costs and margins. Data were obtained from a survey of 114 soybean growers in Satara district and 24 commission agents, 16 wholesalers, and 29 retailers in the Satara, Karad, Koregaon and Umbraj markets. Three channels were identified: producer - itinerant trader - commission agent - oil miller (channel 1); producer - commission agent - wholesaler - oil miller (channel 2); and producer - wholesaler - oil miller (channel 3). Commission charges were the most expensive item in the marketing costs. Gross marketing margins were highest in channel 1 followed by channels 2 and 3.

Patel *et al.* (2000) studied the extent of market integration, and the relationship between the pattern of market arrivals and the prices of rapeseed and mustard, in selected markets of Mehsana district, north Gujarat, India. Time-series data on wholesale prices and farm-harvest prices were obtained. The spatially located primary as well as secondary wholesale markets in Mehsana were found to be well integrated in terms of movement of prices. There exists normal conspicuous seasonality in prices and arrivals of rapeseed and mustard. Year-wise and market-wise analyses revealed that market arrivals were high in post-harvest months when prices were low and low arrivals were observed in subsequent months when prices were high.

Perumal (2000) revealed that data were collected through interviews with 40 groundnut farmers from Trichirapalli district, Tamil Nadu, India to determine the costs and returns of groundnut production, the marketing channels for groundnuts, and the marketing costs and margins. It is shown that irrigated groundnut cultivation is more profitable than rainfed cultivation. Even though the net price received by

groundnut growers in regulated markets is very high as compared to other modes of sale, majority of the respondents sell their produce only at the village level because of risk aversion.

Velavan and Balakrishnan (2000) identify the marketing channels for groundnut and calculated the efficiency of groundnut and marketing in Salem district, Tamil Nadu, India. Data were obtained from 120 farmers and 60 market intermediaries. Four channels were identified in the study area. The most efficient channel has been found to be 'farmers - commission agents - millers' agents - oil mills - brokers - wholesaler - retailer - consumer'.

Balaji *et al.* (2001) studied the marketing channels of groundnut grown in Tinavannamalai district of Tamil Nadu. In this study five marketing channels were identified. The most important channel was selling through regulated markets which was 55 per cent of the quantity sold while least important one was selling to the primary processors which was 15 per cent of the quantity sold. It was found that the producer's share in consumer rupee was the highest (76.48%) in selling to oil millers since farmers sold the produce directly to oil millers. The study recommended that greater attention should be given to reduce the marketing cost and margin to intermediary by taking source measures in selling to regulated markets and to commission mandies because most of the produce passed through these channels.

Afruz *et al.* (2002) revealed that the marketable and marketed surpluses of leading crops, viz. different varieties of rice, wheat, potato, mustard and lentil, in Bangladesh. Data were collected through a field survey of 180 households in Comilla and Mymensingh districts. Marketed surplus as a percentage of total production was found highest in potato (64%), followed by lentil (59.5%), Boro rice (57.5%), mustard (52.7%), Aman rice (48%), Aus rice (38%) and wheat (14%). Small farmers are large suppliers of agricultural produce during harvest time and they sold their crops to meet their cash obligation even when prices are low. On the other hand, they purchased the same crop during the off-season, when prices are high, to meet their

consumption requirement. Therefore, small farmers are worse off because of this seasonal sales pattern and price variation. Large farmers received the highest prices because of their relatively strong bargaining capacity with the market intermediaries, and their pre-harvest time sales are higher than other size groups of farms. They suggest that farmers are very much price sensitive irrespective of their farm size. Price elasticity of marketable surplus as estimated for Aman rice, Boro rice, wheat, potato and mustard was 1.89, 2.7, 1.23, 2.46 and 1.40, respectively, indicating that prices significantly influenced the marketable surpluses of these crops. In general, marketable surpluses of crops reflect farmers' well-being. It is concluded that price policy has an important role in increasing marketable and marketed quantities. Some policy options are suggested.

Babu *et al.* (2002) analysed the sale pattern and producer's share in consumer's rupee in the marketing of groundnut in Andhra Pradesh, India. It was found that small farmers sold most of their produce in the local market (i.e., weekly market/fairs and to village vendors) and received lesser price as compared to the wholesale market and as against other size groups. Reverse results were found in the case of large size groups. They sold most of their produce of selected farm products in the wholesale market (i.e., to wholesaler, commission agent, and at district market committees) and gained higher price than the other groups. The study on the marketing of groundnut further revealed that channel II was more efficient due to higher producer's share of the price as compared to channel I. The producers are recommended to sell their produce through channel II, where, village traders are not involved and also to obtain more share in consumer's rupee.

Banafar *et al.* (2003) data were obtained from 120 soybean farmers as well as from market intermediaries and processors to examine the marketing patterns, costs and margins for soybean in Sehore district, Madhya Pradesh, India. Three channels for marketing soybeans to processors were identified: (1) through village merchants

and wholesale dealers; (2) through cooperative societies; and (3) through wholesale dealers in regulated markets. Total marketing cost was highest on channel 1 (Rs. 202.52) and lowest on channel 2 (Rs. 160.40). The producer's share in the consumer price was almost similar in channel 2 and 3.

Chole *et al.* (2003) found the producer's share in consumer's rupee was maximum in channel I (68.28%), followed by channel II (57.94%) and channel III (53.14%). The share of retailer in consumer's price 21.04 per cent in channel I, 24.37 per cent in channel II and 25.83 per cent in channel III. The share of wholesaler in consumer's price was 5.12 per cent in channel II and 5.06 per cent in channel III. The net share of commission agent was 6.17 per cent in consumer's rupee in channel III. The total marketing cost was maximum in channel III (46.86%) and minimum in channel I (30.72%). It was also revealed that the marketing efficiency was higher in Channel-I (2.25%) followed by Channel-II (1.37%) and Channel-III (1.13%).

Shenoi *et al.* (2003) reported that the factors influencing the production, processing, consumption, and trade in oilseeds and its products like oil and oilcakes in India. The present public policy is critically evaluated, and new policy options are explored. Chapter 1 outlines the approach of the study as well as the demand and supply perspectives for oilseeds and oils in India. Chapter 2 focuses on oilseed production, particularly the development of technology and its transfer to the farmers. Chapter 3 analysed the processing of oilseeds and oils, focusing on the technologies employed, public policies, and research and development. Chapter 4 deals with the domestic marketing of oilseeds and oils, focusing on the structure of the markets, consumption patterns, and market interventions by the government. The external economy of the oilseeds sector is dealt with in chapter 5. Chapter 6 sums up the conclusions and policy recommendations relating to the production, processing, marketing, trade and other aspects of oilseeds, oils and other by products.

Babu *et al.* (2003) revealed that net share of the producer in the consumer's rupee was very low (41.48%). It was due to the presence of large number of intermediaries in between the producer and the consumer. So, the farmers were not getting good remunerative price for their produce. It was due to the absence of middlemen and negligible marketing cost. Generally, farmers dispose off their produce immediately after harvest due to lack of infrastructure facilities.

Banafar *et al.* (2004) reported constraints in soybean production in Sehore district, Madhya Pradesh, India, are outlined, including the lack of appropriate production and postharvest technologies, as well as some socioeconomic factors. Constraints in soybean marketing and processing were also identified. Finally, suggestions for increasing soybean production are outlined.

Tropentag (2004) revealed that the market margins (the difference between the buying (wholesale) and selling (retail) price of a certain product at a specific market) are highest at Hang Dong Market followed by Ton Payom Market. The reason for higher margins of these two markets is related to various factors. Hang Dong market is very new with much space for parking and has a good market infrastructure. Either market margins are higher due to the higher attractiveness of the market or there is a bias in the data as the prices were only collected from one retailer. Other explanations such as distance to wholesale market and other marketing cost do not hold as in comparison other markets in the outskirts of Chiang Mai such as San Pa Tong Market have higher marketing costs with a lower marketing margin. The higher marketing margins for Ton Payom market can be explained by higher market and stands fees, greater distance to the wholesale market and its location in a neighborhood with average to higher incomes compared to other retail markets in the city.

Badtine *et al.* (2004) studied the nature of the marketing channels, costs and margins of coconut, in central Kerala, India. Data were obtained through structured interviews with 142 farmers, 24 village traders/copra makers, 8 oil millers, 12 wholesalers, and 12 retailers.

Results indicate that about 51% of the farmers sold coconuts in the non-husked form. Furthermore, most farmers (86%) traded it on-farm, and only about 14% of the respondents sold it outside. The most common marketing channel identified was the 'producer - copra maker - oil miller - wholesaler - consumer'. The producer's share in consumer's rupee was only 60.58%, implying a high price spread. Value addition at the farm-level, however, may help the producers to secure a higher proportion

Sudha *et al.* (2005) concluded that the profit margin of Rs. 29.2 per quintal taking a high share in the market costs with 2.09 per cent. The wholesalers purchase price was Rs. 1133.33 per quintal. They had to incur the cost upto 7.32 per cent taking a profit margin of Rs. 22.66 (1.62%). They further revealed that millers purchase price was Rs. 1235.31 per quintal. The miller's profit margin was Rs. 8.00 on oil. They had to incur Rs. 94.86 (7.0%) for processing. Besides this they are getting profit from cake. The cake is the main profit for them. The miller's share in consumer's rupee was worked out to 7.38 per cent. The oil wholesalers purchase price was Rs. 1338.17. The oil wholesalers incurred Rs.5.00 (0.36%). They had taken a profit margin of Rs. 22.00. Their share in consumer's rupee worked out was 1.93 per cent. The oil retailers purchase price was Rs. 1365.17. The costs incurred by retailers were Rs. 2.00. They had taken a profit margin of Rs. 25.00. Their share in consumer's rupee was 1.93 per cent.

Sudha *et al.* (2005) reported that the net share of the producer was 80.72 per cent and 78.55 per cent in channel I and channel II respectively. The village merchants purchase price Rs. 1093.66 per quintal. They had to incur the same costs as producers which accounted to be Rs. 10.46 and sell the produce @ Rs. 1133.33 per quintal.

Sudha *et al.* (2005) reported that the producer had to incur Rs. 1.00 (0.07%) towards loading and unloading, Rs. 3.46 (0.24%) towards weighing, Rs. 3.00 (0.22%) towards transportation and Rs. 2.00 towards market fee (0.14%).

Sudha *et al.* (2005) revealed that the producers with small quantity of produce are selling the produce through village merchants. The village merchant is entering the market as farmer and sells the produce to wholesaler at market. The wholesaler sells the produce to miller where the produce gets transformed into oil and cake. From there the oil reach the consumer through oil wholesaler and oil retailer. It was noted that the average net price received by the cultivator was Rs. 1123.87 and Rs. 1093.66 through channel I and II respectively. The major channels of marketing in Lae. It is necessary to reduce the price spread by encouraging the development of producers' cooperative and providing increased facilities for marketing. The government should take up appropriate steps in this direction.

Raguwanshi *et al.* (2006) this study was conducted to determine 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. On the average, 90.78% soybean was marketed and 12.27% was retained as seed source. It was also observed that as the size of holding increased, the marketable and marketed surplus also increased. Total marketing cost of grain was lowest in channel III (Rs. 76.70/q) followed by channel II (Rs. 82.20/q) and channel I (Rs. 88.70/q). Producers achieved the highest return in channel III followed by channel II and channel I.

Banafar *et al.* (2006) reported the marketing cost and price spread under different marketing channels in the mustard-growing area of Ambikapur of Chhattisgarh in India. Three village traders, four wholesalers and six retailers of mustard grain, four wholesalers of mustard oil and cake and five retailers of mustard oil and cake, were selected randomly from the Ambikapur block. The 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.

Kumar *et al.* (2007) the study has examined the dynamics of agricultural marketing and farm level efficiency in marketing farm products using data from wheat, mustard, paddy and gram markets in Haryana state by employing cointegration and error-correction techniques. Based on field work data of 400 households and analysis of secondary data of wholesale prices of various regulated mandies, the study revealed that agricultural mandis in Haryana in general are well integrated in the long run while in the short run price transmissions are lacking because of paucity of information and lack of its dissemination. It also analyses marketed surplus and related issues using primary data and confirms the existence of equitable market access of farmers of all size classes and the disappearance of the practice of excess market charges. The study indicates that farmers of this region are, by and large, well-situated with respect to markets. However there exists a scope for raising the short run integration of markets by improving communication through better information/services and by providing incentives to the farmers to produce more quality products.

Sharma *et al.* (2007) the study was based on data collected from a sample of 120 sugarcane growers in 2001-02, this study identifies the marketing channels and analyses the marketing costs and margins for sugarcane in Himachal Pradesh, India. The study reveals, among others, that majority of the farmers are supplying their sugarcane to the sugar mills and that large-scale farmers enjoy higher margins than small-scale farmers.

Luhah *et al.* (2009) reported that retailer's share in consumer's rupee was highest which ranged from 5.06 to 5.53% followed by oil-miller (3.59 to 3.61%), oil-expeller (2.94 to 3.0%) and commission agent (1.78%). In channel-II the retailer's share in consumer's rupee was

maximum (5.33 to 5.48%) followed by oil-miller (3.38 to 4.01%), oil-expeller (2.53 to 2.84%), commission agent (1.74 to 1.75%) and wholesaler (1.27 to 1.30%) in both the markets. In channel-I cost of oil expeller was maximum ranging between Rs 164 to Rs 167 and minimum for retailer as Rs 5.25 in channel-II. While the cost of wholesaler was maximum ranging between Rs 87.99 to Rs 88.81 and minimum for retailer Rs 5.25. Bhiwani market was found to be more efficient in both the channels compared to Charkhidadri market.

Luhah *et al.* (2009) reported that, on the basis of primary data collected from randomly selected 240 respondents scattered in eight villages of Mahendragarh and Bhiwani districts of Haryana it was observed that gross returns and net returns were found higher on small farms as compared to medium and large farms in both the selected districts. 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. The share of producers in consumer's rupee under channel-I was almost the same in all the four markets.

Shelke *et al.* (2009) revealed that, among the important oilseeds grown in the country groundnut occupies a predominant place in respect of area as well as production. Of the total area under groundnut in Maharashtra about 35 per cent is confined to Parbhani district only (Epitome of all districts of Maharashtra State. The need for efficient marketing assumes added importance to achieve the future groundnut production targets to meet the growing needs of a growing economy. The producers share in consumer's rupee was only 49.99 per cent. The roaster incurred the cost of Rs.240.81/Q of groundnut pods. The retailers meet the expenses of Rs.18.00/Q of roasted groundnut. The margin of the roaster is Rs. 105.65 per quintal whereas the margin of retailers was Rs.278.76 per quintal constituting 21.43 per cent of the

consumers purchase price. The share of producer is quite low. For this the retailer under such a situation can be branded as exploiter on account of its high margin. The arrivals of *groundnut* are mainly confined to six months i.e. about 80-90 per cent during the months of October and November (peak period). Hence it can be concluded that the arrival of groundnut is mainly concentrated in the post harvest period i.e. peak period.

Ghulghule, *et.al.* (2009) reported that, an attempt was made to study price spread in marketing of fig (*Ficus carica* Linn.) in Maharashtra with cross sectional random sample of 60 fig growers from Aurangabad market and Gultekadi market yard from Pune district. In the marketing of fig following channels are studied viz., (I) Producer - Consumer, (II) Producer - Retailer - Consumer, (III) Producer - Commission Agent-cum-wholesaler - Retailer - Consumer. Maximum percentage of produce of fig growers was sold through channel-II. Marketing cost was maximum in channel-III as compared to other channels. Producer's share in consumer's rupee was maximum in Channel-I, while it was minimum in Channel-III.

Shelke, *et.al.*(2009) studied that this study examines the existing marketing system of paddy, studies the role of different channels of marketing and distribution in paddy and examines the costs incurred and marketing margins retained by the wholesaler, retailer, processor in the Raigad market. A survey was conducted on 50 producer sellers, 20 wholesaler/processor, 10 commission agents, 25 retailers and 10 fair price shop dealers from October to January 2004-05. In Raigad, the marketing channels of paddy are: producers-commission agents-wholesalers/rice millers-retailers-consumers; producers-commission agents-wholesalers/rice millers-fair price shop-consumers; and producer-retailers-consumers. The marketing cost is higher in channel II as compared to channel I due to the involvement of the government agency between the rice millers and the fair price shops which results in additional cost of their services and commission.

Thombre, *et.al.* (2009) this study investigates the constraints faced by the major pulse growers in the production and marketing and suggestions made to overcome them. A survey was conducted on 256 respondents from the Parbhani and Nanded districts of the Maharashtra State in India with respect to four major pulses viz., pigeonpea, greengram, blackgram and chickpea. The findings of the study revealed that the non-availability of labour at the time of harvesting was the major constraint faced by 62.89% respondents followed by high rate of inputs (57.42%) in the production while high transportation charges was faced by 72.65% respondents in the marketing of these major pulses. To overcome these constraints, they suggested the contract system for harvesting, provision of inputs at a low rate and provision of transportation facilities at a cheaper rate.

Zala *et al.* (2011) reported the present investigation undertaken to estimate the marketable and marketed surplus of red gram and to identify the factors influencing them in Vadodara district of Gujarat. Required data were collected from 120 red gram growers spread over 10 villages of Karjan taluka. Multiple Regression technique was used to quantify the effect of the factors influencing marketable and marketed surplus. As red gram is market oriented crop, about 86 per cent of total production on an average was the marketable surplus and 77 per cent was marketed surplus. The results showed that marketable surplus was positively and significantly related with cropped area and average productivity in all the four categories of farms. It was negatively related with family size and quantity retained for wages in kind indicating inverse relationship between extent of marketable surplus and these factors. Further, in case of marketed surplus, the examination of individual coefficients revealed that marketed surplus was positively and significantly related with total production, current prices and financial obligation for sample as a whole while the family size showed negative sign indicating inverse relationship of marketed surplus with family size in sample farms.

CHAPTER – III

RESEARCH METHODOLOGY

This study is undertaken to work out the marketing cost incurred in mustard production, marketable and marketed surplus, market margin and price spread in Morar block along with various problems which are faced by the growers during the process of mustard marketing. This chapter deals with the nature and type of data required, sampling techniques used for collecting the data and the analytical tools applied in processing of the data for their economic interpretation. It also includes the general description of the study area, concepts and terms used in the study etc. This research study is split into following four sections.

3.1 Nature and collection of data and method of enquiry.

3.2 Sampling technique

3.3 Analysis of data

3.1 Nature and collection of data and method of enquiry:

3.1.1 SAMPLING TECHNIQUE: A multistage stratified random sampling technique were adopted to select the block, villages and the cultivators, market and different marketing function involved in mustard marketing in district Gwalior.

SELECTION OF BLOCK: Out of 4 blocks Morar block was selected purposively for the present study.

SELECTION OF VILLAGES: A list of all the villages growing mustard falling under Morar block was prepared. Than from this list 5 villages were selected randomly under *pps* scheme.

SELECTION OF FARMERS: from of all 5 selected villages, a separate list of mustard grower according to their farm size i.e. small (up to 2.00ha), medium (2.01 to 4 ha) and large (above 4.01 ha) were prepared and from these prepared list of mustard growers, 90 mustard growers as respondent were

selected with the help of stratified random sampling under equal allocation scheme

SELECTION OF THE PRODUCER: For the working out the producer' share in consumer's price, marketing cost and margin in the two selected markets, 10 producers were selected randomly irrespective of their size group prevailed in the marketing system.

Table 3.1: List of Selected Villages of Morar Block

S.No.	Name of Village	Total No. of mustard grower	Numbers of respondents selected from the village
1.	Hiri	21	18
2.	Rai	19	18
3.	Ratwai	29	18
4.	Sonarpura	37	18
5.	Udaypur	33	18
Total	5 villages	139	90

List of Selected Farmer of Morar Block

S. No.	Farmers category	Total mustard grower	Numbers of respondents selected from the village	Percent to total
1.	Small size farmers (up to 2 ha.)	53	30	56.60
2.	Medium size farmers (2.01 to 4 ha.)	47	30	63.82
3.	Large size farmers (above 4.01 ha.)	39	30	76.92
	Total	139	90	

Table 3.1.2: List of selected mandies of Morar block

S.No.	Name of mandi	Numbers of respondents selected from the mandi
1.	Krishi upaj mandi lashkar	10

2.	Krishi upaj upmandi deenarpur	10
Total	2 mandies	20

Method of Data Collection

The primary data were collected by personal interview survey method. A interview schedule was developed as per objectives stated for the purpose of data collection and each of the selected cultivators was approached personally. The relevant information was gathered through pre tested interview schedule, and then the data were tabulated in light of stated objectives.

Period of Study

The study period pertains to the agricultural year 2011-12

3.2 Analysis of data:

3.2.1 Marketable surplus:

Marketable surplus refers to the residual quantity left with the producers after meeting their requirement for family consumption, seeds, wages and other requirements. The marketable surplus 'M' is calculated as per the formula.

$$M = Q - C$$

Where

M = Marketable surplus.

Q = Total production. C = Total consumption

3.2.2 Marketed surplus

It is the quantity of a commodity which a farmer actual sale in the market.

3.2.3 Marketing channels

Marketing channel is a path traced in the direct or indirect transfer of title to a product, as it moves from a producer to ultimate consumer or industrial users. Market channel is the structure of intra-company agent's dealers, wholesalers and retailers through which the commodity product or service is marketed.

3.2.4 Marketing cost

Marketing cost is the actual expenses incurred in bringing the goods and services from the producer to the consumer marketing cost included, handling charges at local point, assembling charge, transport, handling by wholesalers and retailing charges to consumers. The producer, marketing agencies, and pays purchasers at different stages these cost.

$$MC = C_f + C_{m_1} + C_{m_2} + \dots + C_{m_n}$$

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.

3.2.5 Marketing margin

Actual income obtained in the marketing process

3.2.6 Marketing margin of a middleman

(i) Absolute margin of i th middleman (A_{mi})

$$A_{mi} = P_{ri} - (P_{pi} + C_{mi})$$

(ii) Percentage margin of i th middleman (P_{mi})

$$P_{ri} - (P_{pi} + C_{mi})$$

$$P_{mi} = \frac{\quad}{P_{ri}} \times 100$$

(iii) Percentage mark-up of i th middleman (M_i)

$$P_{ri} - (P_{pi} + C_{mi})$$

$$M_i = \frac{\quad}{P_{pi}} \times 100$$

Where P_{ri} = Total value of receipt per unit (sale price)

P_{pi} = Purchase value of goods per unit (purchase price)

C_{mi} = Cost incurred on marketing per unit

3.2.7 Price spread

This is the difference between price paid by the consumer and price received by the producer for an equivalent quantity of farm produce.

3.2.8 Producer's share in the consumer's rupee

Producer's share in consumer's rupee has been calculated by using following formulas: -

$$\text{Producers share (PS)} = \frac{\text{Price received by the producer}}{\text{Price paid by the consumer}} \times 100$$

3.3.9 Marketing efficiency

Marketing efficiency was analyzed through the formula as:

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

Where,

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

I = Total marketing cost + margins.

The higher the ratio, the more the marketing efficiency and vice versa.

CHAPTER – IV

RESULTS AND DISCUSSION

Marketing of Mustard

Marketing of mustard plays an important role in the production process of the crop. 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.

Although mustard was seen to be sold in the market in gunny bags containing 85 kg of the produce, the estimation of marketing cost was done on per quintal basis.

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 Processer to Oil Retailer to Oil consumer

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

Table 4.1. Total requirement under various categories of farmers (in Qt.)

Particulars	Food	Seed	Total
Small	17.69 (72.28%)	0.66 (27.1%)	18.35
Average	0.59	0.22	0.6
Medium	78.01 (74.48%)	26.71 (25.5%)	104.72
Average	2.6	0.89	3.4
Large	93.9 (78.25%)	26.1 (21.75%)	120.00
Average	3.13	0.86	0.4
Over all	189.6	53.47	243.07

Land holding wise average requirement as food and seed, are presented in Table 4.1. It is quite obvious from the table that total requirement was 18.35 qt in small size farms out of which, 17.69 qt or 72.28 per cent was utilized as food, and 0.66 qt or 27.1 per cent was for seed. In case of medium size landholders, total requirement was 104.7 qt. out of which, 78.01 qt or 74.48 per cent was utilized as food, and 26.71 qt or 25.5 per cent for seed, in case of large farmers, 93.9 qt. or 78.25 per cent of total requirement was utilized as food, 26.1 qt. or 21.75 per cent for payment of seed. Thus, in related term positive relation for food against inverse in case of seed was observed with the farm size.

Table 4.2. Marketable and Marketed surplus of Mustard of selected three categories farmers.

Categor y	Land Holdin g (ha)	Area under mustar d crop (ha)	Total productio n (qt)	Total requireme nt (qt)	Marketabl e surplus (qt)	Markete d surplus (qt)
Small	16.85	12.00	205.1	18.35	186.75	197.68 (97.53) *

Average	0.56	0.40	6.8	0.61	6.25	6.49
Medium	83.20	55.20	936.10	104.72	831.38	852.63 (92.11) *
Average	2.77	1.84	31.20	3.5	27.7	27.35
Large	142.50	71.10	1195.9	120.00	1075.9	1026.9 (86.72) *
Average	4.73	2.37	39.68	4	35	34.30
Total	242.55	138.3	2337.1	243.07	2094.03	2077.2 1 (89.82)

()* figure indicates % to marketed surplus.

Land holding wise average utilization, marketable and marketed surplus of mustard is presented in Table 4.2. As observed the total production of mustard was 2337.1 qt. it is quite obvious from the table that 243.07 qt. of total production was utilized for different types of requirement, and remaining 2094.03 qt was marketable surplus and 2077.21 qt or 89.82% was marketed.

As regards to small size farm holders, total production was 205.1 q. out of which, 18.35 qt was utilized as requirements, and remaining 186.75 qt. or 97.53 per cent was marketed. In case of medium size land holders, total production was 936.10 q. out of which, 104.72 qt. was utilized for different needs, and remaining 831.38 qt was marketable surplus, of which, 852.63 or 92.11 per cent quantity was marketed surplus.

Total production was 1195.9 q. in large size farms out of which, 120 qt. was the requirement of farmers for different needs and 1075.9 qt. was marketable surplus of which 1026.9 or 86.72 per cent quantity marketed by farmers. Due to need for cash payment, small farmers sold maximum quantity of their produce, and large farmers generally sell less than the marketable surplus because of their better retention capacity. They retain extra produce in the hope that they would get a higher price in the later period.

Table4.3. Marketing channels of Mustard and quantity of Mustard sold under different marketing channels.

Channels	Channels	Channel wise Mustard sold	
		Quantity	Percent
Channel – I	Producer to Regulated mandi to oilseed Retailer to Consumer	41.65	12.00%
Channel – II	Producer to village trader to regulated mandi to Processor to oil Retailer to Consumer	72.25	20.83%
Channel – III	Producer to Regulated mandi to processor to oil Retailer to Consumer	232.9	67.16%
TOTAL		346.8	100%

The study of marketing channels in the study area is of primary importance to know the marketing pattern. There were three type of marketing channels prevailed in the marketing of Mustard within the study area.

It is observed that the highest quantity of produced mustard was marketed through channel-III (Producer to Regulated mandi - Processor to Retailer to Consumer) i.e. 67.16% followed by Channel-II (Producer to village merchant to Regulated mandi to Processor to Retailer to Consumer) and Channel-I (Producer to Regulated mandi to Retailer to Consumer) with sold quantity of 20.83, and 12.00 per cent respectively.

Table4.4. 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 revealed 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 and out of the total marketing cost incurred by the producer, the cost of packing Rs. 46 with 1.65 per cent and the loading unloading charges was Rs.20 with 0.72 percent and the Transportation charges Rs.18 with 0.65 per cent, and other charges (like weighing) Rs.5.6 with 0.20 percent.

Out of the total marketing cost incurred by the retailer, the cost of packing Rs. 51 with 1.46 per cent and the loading unloading charges Rs.23 with 0.66 percent and the storage charges Rs.02 with 0.06 percent, the Transportation charges Rs.36 with 1.03 per cent, and mandi tax (2%) 55.61 with 1.59 percent, other charges (like shop rent) Rs.2 with 0.06 percent. Producer got 76.94% in consumer price because there was only one intermediary between the producer and consumer.

It is revealed 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.

Out of the total marketing cost incurred by the village merchants, again the cost of packing (1.78%), loading and unloading charges(0.67%), storage charges(0.22%), expenditure on transportation (1.41%), and other charges (0.27%) in the overall study area. The village merchant's selling price or purchase price of processor was received Rs. 2700 of which 29.44 per cent was his margin.

Table4.5. 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

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. 921.60 or 16.73 per cent was incurred on marketing functions performed at different stages. The cost of transportation (3.61%), loading and unloading charges (0.83%) transportation charges (1.53%), mandi tax (1.45%) and other charges (5.63%) and VAT tax (3.63%). 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 cost of loading and unloading (0.48%) storage charges (0.06%), incurred on Shop rent charges (0.06%) and other charges (0.30%). 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 (Producer-Regulated mandi -processor- retailer-consumer), 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.

Out of the total marketing cost incurred by the processor, processing charges (6.08%) accounted for major component followed by transportation charges (1.52%) packing charges(03.58%), loading and unloading charges (0.84%), mandi tax (1.38%) and VAT tax (3.44%) in the overall study area. The processor's selling price or purchase price of retailer was received Rs. 3120 and selling price of mustard oil cake was Rs.587of which 14.36 per cent was his margin.

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.

Table 4.6 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

The highest cost (1.98%) incurred on packing followed by, 1.10 per cent on transportation, 0.62per cent on loading and unloading, and 0.04 per cent on storage 0.01 percent on commission and 0.21 percent on other charges. 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. Expenses on loading and unloading charges 0.61%, storage charges 0.03%. Transportation charges 0.30% and 03.93 per cent were his margin. Producer's share in consumer's rupee was obtained as 74.66 per cent.

Table 4.7 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	

The Table 4.7 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. According to Shukla and Pandey (1996) analyzed the costs and returns in processing of mustard and rapeseed in Hissar. 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.

The Table 4.8 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.

Table4.8. 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

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 4.9. 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

The data in Table 4.9 indicates that marketing efficiency was highest in channel-I followed by channel-II, and channel-III. 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. 4.10. Constraints involved in marketing of mustard

Sr. No.	Constraints related to marketing	No. of sample farmers expressed the problems (N=90)	Per cent to total	Rank
1	Lack of transportation	09	45	VI
2	High charges of transportation	12	60	V
3	Higher market charges	15	75	IV
4	Lack of market yard	05	25	VIII
5	Lack of credit facilities	07	35	VII
6	Late payment	04	20	IX
7	Lack of price information	17	85	II
8	Price fluctuations	18	90	I
9	Malpractices by traders	16	80	III

The selected farmers were contacted through opinion survey for analyzing the constraints in the marketing of mustard. They expressed a number of constraints, which are listed in Table 4.10. The table reveals that price fluctuations of mustard were the main problem expressed by 90% of the sample farmers. About 85.00 per cent had reported lack of price information,

which were ranked as second constraint. About 80% farmers are faced malpractices by traders. About 75% of farmers faced by higher market charges. 60% are faced by High charges of transportation. Lack of transportation was other major constraint faced by 45% of sample farmers. Lack of credit facilities also include in constraints and 35% farmers was faced. Lack of market yard, late payment was some of the problems faced by farmers at the mandi or selling points which were reported by 25.00, 20.00 per cent mustard growers.

CHAPTER – V

SUMMARY, CONCLUSION AND SUGGESTIONS

The present study entitled “An Economic Analysis of Marketing of Mustard in Morar Block of Gwalior district of Madhya Pradesh” was undertaken with the specific objectives of the study were:

1. To find out the marketed and marketable surplus of the Mustard.
2. To estimate the marketing cost, margin and price spread, under different marketing channels of sample respondents.
3. To evaluate the marketing efficiency of mustard in different marketing channels.
4. To identify the problems faced by Mustard growers during marketing and suggest the measures for efficient marketing system.

Efficient marketing of mustard plays an important role in increasing the producer's share in the consumer's price and maintain the tempo of increased production. 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.

A multistage random sampling technique was adopted for data collection. The study was conducted in Morar block of Gwalior district where Mustard is an important crop. Stratified random sample procedure was adopted for the selection of villages and farmers. A sample of 5 villages of the Morar block was selected randomly. A sample of 90 farmers was selected randomly. The farmers were classified into three groups viz., small farmer (up to 2 ha.), medium farmer (2-4 ha.) and large (above 4 ha.) farms. For the study of marketing aspect, Gwalior krishi upaj

mandi (lashkar) and krishi upaj upmandi (deenarpur) were selected. The actual marketing costs incurred by the sampled mustard producers through different channel were considered. The marketing channel identified for the study is -

Channel – I Producer- Regulated mandi - Oilseed Retailer- Consumer,

Channel – II Producer –Village merchant- Regulated mandi - Processer- Oil Retailer- Consumer,

Channel–III Producer- Regulated mandi- Processer- oil Retailer- Consumer.

The total production generated by large, medium and small farmers was 1195.9 quintals, 936.1 quintals and 205.1 quintals respectively. The total household requirement under different categories was found to be 120 quintal for large farmers, 104.7 quintal for medium farmers and 18.35 quintal for small farmers. Thus the marketable surplus generated was 1075.9 quintals by large farmers, 831.38 quintals by medium farmers and 186.75 quintals by small farmers. Thus the marketed surplus generated was 1026(86.72%) quintals by large farmers, 852.63 quintals (92.11%) by medium farmers and 198 quintals (97.53%) by small farmers.

The marketing costs and marketing margins in three channels identified in the present study were as follows. The channel –I consisted of producer, retailer and consumer. In this channel, retailer purchased directly from producers. Producers incurred total marketing costs of Rs. 89.6 per quintal in channel – I. Consumer purchased from retailers. Retailer incurred total marketing costs of Rs. 169.61 per quintal in channel – I. However, they received Rs. 549.78 per quintal as margin. Producer share in consumer's price was obtained as 76.94 percent.

The channel –II consisted of producer, village merchant, processer, retailer and consumer. It is revealed that in case of channel-II 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 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. In channel-II Rs. 621.60 or 16.73 per cent was incurred on marketing functions performed at different stages by processor. The processor received 10 per cent (Rs. 393.80) margin in retailer's purchase price. Rs. 30 or 0.91 per cent was incurred on marketing functions performed at different stages by retailer. 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 case of channel III, (Producer- regulated mandi-processor-retailer- consumer) out of the total marketing cost (Rs. 100.9 qt.) the producer's contribution was 3.96 per cent. The producer received 96.04 per cent (Rs2449) in processor's purchase price.

In channels-III, a total of Rs. 624.89 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. Out of the total marketing cost incurred by the processor, of which 14.36 per cent was his margin.

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. 03.93 per cent was his margin. Producer's share in consumer's rupee was obtained as 74.66 per cent.

The producer received the maximum share of consumer's rupee in channel – I (76.94%) followed by channel – II (54.48%), and channel – III (74.66%) The farmers in channel obtained the highest share in consumer's rupee – I. In third channel, the producer received only 74.66% of consumer's rupee and retailer received 3.93% of consumer's rupee. In second channel the farmers received 54.48% of consumer's rupee. The share of village merchant, processor and retailer were 29.44%, 10.60% and 4.34% of consumer's rupee, respectively.

The producer's share was less in channel – II, as producers were located at a large distance from market place. The intervention of market intermediaries has reduced the producer's share in consumer's rupee.

The 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. Comparison of price spread in different channels indicated that price spread was lowest in channel- I (76.94%) followed by channel –III (74.66%) and channel- II (54.48%). It was highest in channel - II (54.48%). Comparison of Acharya's indicated that channel – I (3.32) was most efficient followed by channel – III (1.31) and channel – II (0.56).

CONCLUSION

From the above study it may be concluded that,

1. The farmers of small, medium and large category marketed their produce less than the marketable surplus but small farmers reported higher marketed surplus i.e. 97.53% followed by medium 92.11% and large size farmers 86.72% according to, the same conclusion expressed by (Afruz and Siren 2002).
2. Channel-III (producer- Regulated mandi - processor- retailer- consumer) was most preferred in the study area and maximum quantity of produce were marketed through channel-III because of regulated mandi and gain proper remunerative prices of gain. It has been reported by (Sudha and Lalitha 2005).
3. Market intermediaries reap more profit in indirect marketing routes (channel).
4. Marketing costs and margins were higher in channel II i.e. Rs.2160 followed by channel III (Rs.1316) and channel I (Rs.809) because the intervention of market intermediaries in channel II. The same study concluded by (Sudha and Lalitha 2005).
5. Marketing cost was high in channel II and III because the processing cost is high.

6. 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%). Price spread was lowest in channel-I followed by channel-III and channel-II, It was highest in channel-II (Babu, Naidu and Prasad 2002) and (Chole, Talathi and Naik 2003) has also supported my statement.
7. Marketing efficiency was highest in channel-I (3.32) followed by channel-II (0.56) and channel-III (1.31) because, as the number of intermediaries increased, costs and margins increased and inverse was the marketing efficiency.
8. Farmers expressed a number of constraints, the study reveals that price fluctuations of mustard were the main problem expressed by 90% of the sample farmers.

Suggestions for marketing problems

The following are the major suggestions for further improvement in Gwalior mandi

- (i) Fixing price based on quality
- (ii) Large number of middlemen. 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
- (iii) Farmers should be got up-to-date market information regularly from Radio, T.V., and bulletins.
- (iv) Proper borrowing facility and market information should also be followed which influence the return of this crop.
- (v) More modern processing plants should be established around the major producing regions / areas for higher extraction of oil and minimize the processing costs.
- (vi) The quality of mustard oil should be improved to match with the international quality standards to start or enhance the export of mustard oil.

To conclude the main areas of concern are restriction of agricultural marketing channel and adoption of modern agricultural marketing (Gwalior Mandi) to ensure better prices to the farmer and availability of agricultural commodities to the consumers.

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Interview Schedule

Topic: - “An Economic Analysis of Marketing of Mustard in Morar block of Gwalior district”

Major Advisor

Investigator

Dr. J.S.RAGHUWANSHI

Megha Sahu

Date:

(A) Basic Information of respondent:

Name of the farmer -

Village: - -

Block: - Caste: - SC/ST/OBC/General: -

Age: - Educational level: -

(B) Description of the family:

S. No.	Name of Members	Relationship with respondent	Age	Education level

(C) Information about land holding (ha.):

Total land holding	Cultivated land	Uncultivated land	Net sown area	Irrigated area

(D) Cropping Pattern:

S. No.	Kharif crops		Rabi crops	
	Crop	Area (ha.)	Crop	Area (ha.)

(E) Production level of mustard:

Plot	Area (ha.)	Total production (qt.)	Rate (Rs. /qt.)	Value in Rs.

(F) Total requirement (qt.):

Crop	Food	Wages	Seed	Feed	Others

(G) Marketable surplus:

Crop	Total Production (qt.)	Total requirement (qt.)	Marketable surplus (qt.)

(H) Quantity of mustard sale by respondent:

Month	Quantity (qt.)	Rate (Rs. /qt.)	Value in Rs.

(I) Where did you sell your produce?

S. No.	Name of Market	Quantity (qt.)
1.	In the village	
2.	Local market	
3.	Mandi	

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Major Advisor

Investigator

Dr. J.S.RAGHUWANSHI

Megha Sahu

Date:

Name of Market

Distance from the village

(J) Charges born by the Producer's to: -

S. No.	Items	Producer (Rs. /qt.)	Village merchant	processor	Wholesaler	Retailer	Consumer
1.	Packing expenses						
2.	Loading and Unloading charges						
3.	Storage charges						
4.	Transportation charges						
5.	Mandi tax						
6.	Commission						
7	Other charges						
	Sub total						
8.	Producer's Selling price						

(K) Charges borne by the village merchant to:

S. No.	Items	Village merchant (Rs. /qt.)	processer	Wholesaler	Retailer	Consumer
1.	Packing expenses					
2.	Loading and Unloading charges					
3.	Storage charges					
4.	Transportation					
5.	Mandi tax					
6.	Commission					
7.	Other charges					
	Sub total					
8.	Purchase Price of village merchant					
9.	Selling price of village merchant					

(L) Charges borne by the processer to:

S. No.	Items	processer	Wholesaler (Rs. /qt.)	Retailer	Consumer
1.	Transportation				
2.	Loading and unloading charges				
3.	Storage charges				
4.	Shop rent charge				
5.	Mandi tax				
6.	Other charges				
	Sub total				
7.	Purchase price of processer				
8.	Selling Price of processer				

(M) Charges borne by the Wholesaler to: -

S. No.	Items	Wholesaler	Retailer (Rs./qt.)	Consumer
1.	Transportation			
2.	Loading and unloading charges			
3.	Storage charges			
4.	Mandi tax			
5.	Polythene bag charge			
6.	Other charges			
	Sub total			
7.	Purchase price of Wholesaler			
8.	Selling Price of wholesaler/ consumer's price			

Charges borne by the retailer to: -

S. No.	Items	Retailer (Rs. /qt.)	Consumer
1.	Transportation		
2.	Loading and unloading charges		
3.	Storage charges		
4.	Mandi tax		
5.	Polythene bag charge		
6.	Other charges		
	Sub total		
7.	Purchase price of Retailer		
8.	Selling Price of retailer/ consumer's price		

(N) Problems faced by mustard growers during marketing of mustard:

S.No.	Problems	
1.	Transportation Problems	Yes/No
(i)		
(ii)		
2.	Marketing information Problems	Yes/No
(i)		
(ii)		
3.	Financial Problems	Yes/No
(i)		
(ii)		
4.	Weighing problems	Yes/No
(i)		
(ii)		
5.	Middlemen problems	Yes/No
(i)		
(ii)		
6.	Mandi problems	Yes/No
(i)		
(ii)		
7.	Other Problems (Specify)	Yes/No
(i)		
(ii)		
(iii)		

VITA

The author, of this thesis **MEGHA SAHU** was born on 28 October 1985 at Itarsi (M.P.). She passed her High School (10th) in 2001 with 83% and higher secondary (12th) in the year 2003 with 78% from **ST. JOSEPH'S CONVENT HIGHER SECONDARY SCHOOL** Itarsi (M.P.)

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