

Research Article MARKETING COSTS, MARGINS AND PRICE SPREAD IN MUNGBEAN IN NAGUAR DISTRICT IN RAJASTHAN

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Abstract: The present investigation was undertaken with a view to study the marketing costs, margins and price spread in mungbean in the Nagaur district of Rajasthan. A random sample of 100 mungbean cultivators was selected for the study. Both primary and secondary data were used for the study. The primary data were collected from cultivators, using personal interview method for the year 2015-16. Total marketing cost in sale of mungbean was ₹403.75 and ₹378.21 per quintal at village and regulated market. Marketing margins in sale of mungbean have been ₹380.3 per quintal at village and ₹282.52 per quintal at mandi. Producer's share in consumer's rupee in sale of mungbean was 89.9 percent, 91.49 percent and 100 percent in village, regulated market and direct sale to consumer. Net price received in channel-III adopted by producer farmers was higher than that realized in Channel-I and channel-II.

Keywords: Marketing margins, Mungbean, Marketing cost, Price spread, Marketing channels

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Introduction

Since the mid-1990s, Canada has been the world's leading supplier of pulses to world markets, exporting mostly to India, Bangladesh and China. Australia and Myanmar, the second and third largest pulse exporters, mainly export to India and Pakistan. These destinations constitute the major importing countries, with India currently the largest buyer accounting for almost one-third of global volumes. The EU is also an important destination in world pulse trade [1]. In October 2015, prices had shot up sharply allegedly due to cartelization by traders. Pulse prices had hit Rs 200/kg in retail in major cities. Globally, prices of pulses hike every few years. The prices rise when either demand rises or supply fails to keep pace with demand. In India, both the factors have played out. Demand for pulses has been increasing as the per-capita income rises and people improve their dietary pattern. Supply has remained constrained at 17-19 million tonnes annually over the past few years as yields stagnate and area under sowing remains stable [2-5]. An efficient marketing system is an important means for raising the income level of the farmers. Good marketing facilities, efficient marketing channels and marketing machinery provide better price for the produce in the economy than its operation in haphazard way. The marketing channels for marketing of mungbean were: Channel-I Producer \rightarrow Village trader \rightarrow Wholesaler-cum-commission Channel-II Producer→ agent→Retailer→Consumer, Wholesaler-cumcommission agent \rightarrow Retailer \rightarrow Consumer and Channel-III Producer \rightarrow Consumer. In the marketing of mungbean several market middlemen were involved for selling the farmer's produce due to which the producer's share in consumer rupee decreased and maximum profit of produce received by meddlimen. Hence, there is a need to estimate marketing costs, margins and price spread in marketing of mungbean crop in the Nagaur district of Rajasthan.

Data Base and Methodology

The marketing costs and margins including average gross margin, absolute margin, percent margin and producer's share in processor's /consumer's rupee

were calculated by using the following formula:

Total cost of marketing

 $\begin{array}{l} C = C_0 + C_{mi} + C_{m2} + ----- + C_{mn} \\ \\ Where, \\ C = Total cost of marketing of mungbean \\ C_0 = Cost of marketing of mungbean incurred by the producer farmer \\ \\ C_{mi} = Cost of marketing of mungbean incurred by the ith middleman \\ i = 1, 2, 3.....n \end{array}$

Absolute margin

Absolute margin of ith middleman = $P_{si} - (P_{pi} + C_{mi})$ Where,

P_{si} = Sale price obtained by the ith middlemen

P_{pi} = Purchase price obtained by the ith middlemen

C_{mi} = Marketing costs incurred by the ith middlemen

Percent margin

Percent margin of ith middleman = $P_{si} - (P_{pi} + C_{mi}) / P_{si} x 100$ The notation P_{si} , P_{pi} and C_{mi} have the same meanings as defined earlier. Producer's share in processor's / consumer's price $P_s = P_f / P_p x 100$ Where, $P_s = Producer's$ share in processor's / consumer's price $P_f = Price$ of the produce received by the farmer $P_p = Price$ of the produce paid by the processor / consumer

Price spread

It is the difference between the price paid by the utility consumer and the price received by the producer for an equivalent quantity of the farm produce. It is often known as farm retail spread.

Result and Discussion Marketing channels

The producer sold mungbean in the village itself as well as in the nearby regulated market. The marketing channels identified in the sale of mungbean in the study area were as follows:

Channel-I

Producer \rightarrow Village trader \rightarrow Wholesaler-cum-commission agent \rightarrow Retailer \rightarrow Consumer

Channel-II

 $\mathsf{Producer} \to \mathsf{Wholesaler}\text{-}\mathsf{cum}\text{-}\mathsf{commission} \; \mathsf{agent} \to \mathsf{Retailer} \to \mathsf{Consumer}$

Channel-III

 $\mathsf{Producer} \to \mathsf{Consumer}$

Marketing channel-I

Producer \rightarrow Village trader \rightarrow Wholesaler-cum- commission agent \rightarrow Retailer \rightarrow Consumer

In this channel, farmers sold their produce to the village traders who in turn sold it to the wholesaler-cum-commission agents who then sold it to the retailers and finally, it was sold to the consumer. [Table-1] shows that this channel was adopted by 41 percent of selected farmers in the study area. Among the different size groups of farmers, this channel was adopted by 63.15 percent marginal, 41.38 percent small, 35.71 percent semi-medium, 30.17 percent medium and 25 percent large farmers. This channel was inversely related with the size of land holding, i.e., it decreased with the increase in size of land holding. Channel-I was inversely related with channel-II.

Marketing channel-II

 ${\sf Producer} {\rightarrow} {\sf Wholesaler} {-} {\sf commission} \; {\sf agent} \; {\rightarrow} {\sf Retailer} {\rightarrow} {\sf Consumer}$

Nagaur market is one of the main markets of the Nagaur district for transaction of mungbean. Nagaur market stands second among the important mandi of Rajasthan for mungbean arrivals. In this channel, farmers sold their produce to the wholesaler-cum-commission agents who then sold it to the retailers and finally, sold it to the consumers. [Table-1] shows that this channel was adopted by 48 percent of selected farmers in selling of mungbean in the study area. Among the different size groups of farmers, this channel was adopted by 15.79 percent marginal, 44.82 percent small, 53.57 percent semi-medium, 61.54 percent medium and 75 percent large farmers. Channel-II was noted to be adopted increasing with the increase in size of land holding.

Marketing channel-III

$Producer \rightarrow Consumer$

In this channel, farmers sold their produce directly to the consumer. The [Table-1] shows that this channel was adopted by 11 percent of selected producer farmers in the study area. Among the different size groups of farmers, this channel was adopted by 21.05 percent marginal, 13.79 percent small, 10.71 percent semimedium and none of the medium or large farmers.

Marketing costs

Following kinds of marketing costs were incurred by different middlemen including producer farmers engaged in the marketing of mungbean in the study area.

Transportation charges

The cost of transportation was one of the important marketing costs. In channelthe producer farmers did not incurred any cost on transportation. In this channel produce was sold to village traders at producer godown who in turn transported it to the mandi for sale through wholesaler-cum-commission agents and retailers to consumers. In this channel [Table-2] both village traders and retailers incurred on an average ₹40.58 and ₹17.79 per quintal, respectively on transportation. In channel-II the producer farmers and retailers together incurred on average ₹36.7 per quintal and ₹17.79 per quintal [Table-3]. In channel-III the producer farmers sold their produce to consumer at farm itself and the consumer incurred on transportation on an average ₹33.75 per quintal.

Weighment, cleaning and gunny bag charges

Weighment, cleaning and gunny bag charges were borne by producer farmers, village traders and retailers on an average ₹2, ₹3 and (₹5 and ₹10) per quintal, respectively.

Mandi fee

It was collected by the Krishi Upaj Mandi Samiti for rendering various services in the mandi area. The rate of mandi fee was @ 1.60 per 100-rupee worth of produce and this cost was borne by the buyer. and Commission was realized by the commission agent at the rate of 2 percent of the value of mungbean from the buyers of the produce. The magnitude of costs incurred and margins earned in marketing of a commodity is an indicator of the marketing efficiency. Generally, higher the magnitude of costs and margins, lower the efficiency of marketing system. Thus, knowledge of marketing costs and margins is necessary for bringing improvement in the efficiency of marketing system. Channel wise descriptions of marketing costs incurred by producer farmers to retailers are discussed as under.

Costs incurred on mungbean marketing in Channel-I

[Table-2] shows that the total marketing costs were ₹403.75 per quintal when producer farmers sold mungbean through channel-I. In this channel ₹24.73 (6.13 percent), ₹71.08 (17.6 percent), ₹265.65 (66.8 percent) and ₹42.29 (10.47 percent) were incurred by producers, village traders, wholesaler-cum-commission agents and retailers in the study area. Commission, mandi fee and transportation charge were main items of costs for marketing of mungbean which together accounted for 76.73 percent of the total costs of marketing. These results were in conformation with that reported by Sidhu *et al.* (2011) [2], Meena and Singh (2012) [3], Chavhal *et al.* (2014) [4] and Pichad and Wagh (2014) [5].

Costs incurred on mungbean marketing in channel-II

It was the most common method for selling of mungbean in the study area. In this channel, the producer farmers took the produce to the Krishi Upaj Mandi and sold it to the wholesalers through commission agents. The wholesalers sold it to the retailers. The marketing costs incurred by farmers and middlemen in this channel are presented in [Table-3]. In the channel total marketing cost was estimated at ₹378.21 per quintal when producer farmers sold mungbean through channel-II. In channel-II ₹70.27 (18.58 percent), ₹265.65 (70.24 percent) and ₹42.29 (11.18 percent) were incurred by producers, wholesaler-cum commission agents and retailers in the study area. Commission, mandi fee and transportation charge were main items of costs for marketing of mungbean which together accounted for ₹305.84 (80.53 percent) of the total costs of marketing in the study area.

Costs incurred on mungbean marketing in channel-III

In this channel mungbean moved from producer farmers to consumers directly and no marketing costs were borne by producer farmers themselves.

Marketing margins and price spread

It includes the costs incurred in moving the produce from the godown to the point of consumption and profits realized in that process by different market functionaries involved in the marketing of the product. The overall efficiency of marketing system is judged by the extent of price spread.

Price spread in marketing of mungbean in channel-I

The price spread in marketing of mungbean in channel-I is presented in [Table-4]. The producer's net share in consumer's rupee in the sale of mungbean through channel-I was ₹6982.01 (89.9 percent). In this channel the village traders purchased mungbean from the producer-farmer at farmer's field on an average price of ₹7006.74 per quintal. The village trader took it to the Krishi Upaj Mandi and sold to the wholesaler through the commission agent at an average price of ₹7175.6 per quintal and sold to the retailer at an average price of ₹7615.04 per quintal and finally sold it to the retailer at an average price of ₹7766.06 per quintal. In this channel an average cost incurred by farmers, village traders, wholesalercum-commission agents and retailers were ₹24.73 (0.32 percent), ₹71.08 (0.92

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Table-1 Distribution of mungbean farmers adopting different marketing channels

SN	Marketing channel Farm size Group				Total		
		Marginal	Small	Semi-Medium	Medium	Large	N=100
		N _M = 18	N _S = 29	N _{SM} =28	N _M = 13	N _L =12	
I.	$Producer \to Village \ trader \to Wholesaler-cum-commission \ agent \to Retailer \to Consumer$	12(63.15)	12(41.38)	10(35.71)	4(30.76)	3(25.00)	41(41)
11.	Producer \rightarrow Wholesaler-cum-commission agent \rightarrow Retailer \rightarrow Consumer	3(15.79)	13(44.82)	15(53.57)	8(61.54)	9(75.00)	48(48)
III.	Producer \rightarrow Consumer	4(21.05)	4(13.79)	3(10.71)	-	-	11(11)
	Total	19(100)	29(100)	28(100)	13(100)	12(100)	100(100)

Figures in the parentheses are the percentages by their respective column totals

Table-2 Marketing costs incurred on mungbean in Channel-I in (₹/quintal)

		U		U		
SN	Particulars	Producer	Village trader	Wholesaler	Retailer	Total costs
1	Transportation	-	40.58(57.1)	-	17.79(42.07)	58.37(14.45)
2	Cleaning	3(12.13)	3(4.22)	-	-	6(1.49)
3	Commission	-	-	139.64(52.57)	-	139.64(34.59)
4	Mandi fee	-	-	111.71(42.05)	-	111.71(27.69)
5	Cost of gunny bag	5(20.22)	5(7.03)	5(1.88)	5(11.82)	20(4.95)
6	Loading charges	5(20.22)	5(7.03)	-	5(11.82)	15(3.72)
7	Unloading charges	5(20.22)	5(7.03)	-	5(11.82)	15(3.72)
8	Weighing charges	-	2(2.82)	-	2(4.73)	4(0.99)
9	Miscellaneous charges*	6.73(27.21)	10.5(14.77)	9.3(3.5)	7.5(17.73)	34.03(8.49)
	Total cost	24 73 (100) [6 13]	71 08 (100) [17 6]	265 65 (100) [65 8]	12 20(100) [10 47]	402 75 (100) [100]

 Total cost
 24.73 (100) [6.13]
 71.08 (100) [17.6]
 265.65 (100) [65.8]
 42.29(100) [10.47]
 403.75 (100) [100]

 Figures in the parentheses are the percentages by their respective column totals. Figures in square brackets are the percentages by the total marketing costs.
 * Miscellaneous charges included cost of sutli, food, tea and mobile charge
 total marketing costs.

Table-3 Marketing costs incurred on mungbean in channel-II in (Rs. /quintal)

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SN	Particulars	Producer farmer	Wholesaler	Retailer	Total costs
1	Transportation	36.7(52.22)	-	17.79(42.06)	54.49(14.07)
2	Cleaning	3(4.27)	-	-	3(0.79)
3	Commission	-	139.64(52.57)	-	139.64(36.92)
4	Mandi fee	-	111.71(42.05)	-	111.71(29.54)
5	Cost of gunny bag	10(14.23)	5(1.88)	5(11.82)	20(5.29)
6	Loading charges	5(7.12)	-	5(11.82)	10(2.64)
7	Unloading charges	5(7.12)	-	5(11.82)	10(2.64)
8	Weighing charges	2(2.84)	-	2(4.72)	4(1.05)
9	Miscellaneous charges*	8.57(12.2)	9.3(3.5)	7.5(17.73)	25.37(6.7)
	Total cost	70.27 (100) [18.58]	265.65 (100) [70.24]	42.29 (100) [11.18]	378.21 (100) [100]

Figures in the parentheses are the percentages by their respective column totals. Figures in square brackets are the percentages by the total marketing costs. * Miscellaneous charges included cost of sutli, food, tea and mobile charge.

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SN	Particulars	₹/quintal	Share in consumer's rupee (in percent)
1	Producer's net share	6982.01	89.90
2	Costs incurred by		
	(a) Producer	24.73	0.32
	(b) Village trader	71.08	0.92
	(c(c)Wholesaler-cum- commission agent	265.65	3.42
	(e(d) Retailer	42.29	0.54
	Total costs	403.75	5.20
3	Margins earned by		
	(a) Village trader	97.78	1.26
	(b(b)Wholesaler-cum-commission agent	173.79	2.24
	(c) Retailer	108.73	1.40
	Total margins	380.30	4.90
4	Total costs and margins	784.05	10.10
5	Consumer's price	7766.06	100

Table-5 Price spread in marketing of mungbean in channel-II

SN	Particulars	₹/quintal	Share in consumer's rupee (in percent)			
1	Producer's net share	7105.33	91.49			
2	Costs incurred by					
	(a) Producer	70.27	0.90			
	(b(b) Wholesaler-cum-commission agent	265.65	3.42			
	(c) Retailer	42.29	0.55			
3	Total costs	378.21	4.87			
	Margins earned by					
	(a)Wholesaler-cum-commission agent	173.79	2.24			
	(b) Retailer	108.73	1.40			
	Total margins	282.52	3.64			
4	Total costs and margins	660.73	8.51			
5	Consumer's price	7766.06	100			

percent), ₹265.65 (3.42 percent) and ₹42.29 (0.54 percent), respectively in the study area. On an average margin earned by village traders, wholesaler-cumcommission agents and retailers were ₹97.78 (1.26 percent), ₹173.79 (2.24 percent) and ₹108.73 (1.4 percent) in the study area. In this channel highest margin ₹173.79 was earned by wholesaler-cum-commission agents and lowest ₹97.78 (1.26 percent) by village traders. Share of cost was highest ₹265.65 (3.42 percent) with wholesaler-cum-commission agents and lowest ₹24.73 (0.32 percent) with farmers in the study area. Small producer farmers preferred to sell mungbean in village to the village traders because of their poor economic condition as well as small quantity of produce available with them.

Price spread in marketing of mungbean in channel-II

The price spread in marketing of mungbean is channel-II is presented in [Table-5]. The producer's net share in consumer's rupee in the sale of mungbean through channel-II was ₹7105.33 (91.49 percent). In this channel the producer-farmers directly sold the produce in the Krishi Upaj mandi and sold to the wholesaler-cum-commission agent at an average price of ₹7175.6 per quintal and sold to the retailer at an average price of ₹7615.04 per quintal and finally sold it to the retailer at an average price of ₹7766.06 per quintal. In this channel the average cost incurred by farmers, wholesaler-cum-commission agents and retailers were ₹70.27 (0.9 percent), ₹265.65 (3.42 percent) and ₹42.29 (0.55 percent), respectively in the study area.

On an average margin earned by wholesaler-cum-commission agents and retailers were ₹173.79 (2.24 percent) and ₹108.73 (1.4 percent) in the study area. Share of cost was highest ₹265.65 (3.42 percent) with wholesaler-cum-commission agents and lowest ₹42.29 (0.55 percent) with retailers in the study area. Wholesaler-cum-commission agents and retailers were margins ₹282.52 (3.64 percent) contribute in total consumer's rupee.

Price spread in marketing of mungbean in channel-III

In this channel, the consumer paid ₹7269.89 per quintal of mungbean and producer got ₹7269.89 per quintal, which accounted for 100 percent of the consumer's rupee. There were no marketing costs incurred by the producer farmers in this channel [Table-6]. These results were in conformation with that reported by Sidhu et al. (2011).

Table-6 Price spread in marketing of mungbean in channel-III

SN	Particulars	₹/quintal	Share in consumer's rupee (in percent)
1	Producer's net share	7269.89	100
2	Consumer's price	7269.89	100

From the above discussion, it could be concluded that the net price received in channel-III adopted by producer farmers was higher than that realized in Channel-I and channel-II.

Conclusion

The total marketing costs in sale of mungbean was higher in Channel-I (₹403.75 per quintal) followed by channel-II (₹378.21 per quintal) because of involvement of intermediaries in the marketing process. In channel-III no intermediaries were involved in the marketing process. Producer farmers directly sold the produce to the consumer.

Transportation charges, mandi fee, commission and cost of gunny bag were the main items of costs.

There existed significant difference in the margins earned by different market intermediaries. The village traders, wholesaler-cum-commission agents and retailers received 1.26 percent (₹97.78 per quintal), 2.24 percent (₹173.79 per quintal) and 1.4 percent (₹108.73 per quintal) margin in Channel-I. Among the functionaries, wholesaler-cum-commission agents got the higher margins due to sale of mungbean at higher prices to the retailers.

Application of research: The producer's net share in consumer's rupee in the sale of mungbean through Channel-I, II and III was ₹6982.01 (89.9 percent), ₹7105.33 (91.49 percent) and ₹7269.89 (100 percent), respectively in the study area.

Research Category: Agricultural Economics and Management

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Study area / Sample Collection: Naguar District in Rajasthan

Cultivar / Variety / Breed name: Mungbean

Conflict of Interest: None declared

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