Marketing of Mungbean (*Vigana Radiata*) in Nagaur District of Rajasthan

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Abstract: *The study was conducted in Nagaur district of Rajasthan which has highest area and production under Mungbean cultivation. Merta tehsil in Nagaur district and two villages from Merta tehsils were selected on the basis of highest area under mungbean. A sample of 50 farmers was surveyed for input use pattern in Mungbean and its marketing.*

Keywords: *Mungbean, Marketing, marketing cost, market margin and price spread.*

1. INTRODUCTION

India is a country of about 1.20 billion people. More than 65 percent of India's population lives in rural areas and their main occupation is agriculture. Pulses contain about 18.0 to 32.0% protein, about 1 to 5% fat and are considerably richer in calcium than most cereals. .

India is the largest producer and consumer of pulses in the world, accounting for about 25 per cent of global production, 27 per cent of global consumption and about 33 per cent of the world's area under pulses (FAO, 2008). Among the food grain, the production of pulses was 15.12 million tonnes from 23.86 million ha land with an average productivity of 638 kg/ha in 2008 in India.

Pulses are mainly grown in 17 states of the country. Of these some states, namely Madhya Pradesh, Maharashtra, Rajasthan, Orissa, Andhra Pradesh, Tamil Nadu, Bihar and Uttar Pradesh, contribute about 70 per cent of total pulse production.

In Rajasthan, the area under this crop was 8.85 lakh ha with the annual production of 3.73 lakh tonnes and productivity of 421 kg/ha in 2009. It is mainly cultivated in arid and semi arid district including Nagaur, Jaipur, Jodhpur, Sikar, Pali, Jhunjhunu and Ajmer.

2. METHODOLOGY

Nagaur district was purposively selected on the basis of highest average area, production, and productivity of mungbean among all the district in the Rajasthan state. Merta tehsil and two villages were selected on the basis of highest area. The farmers were classified in to small, medium and large. A sample of 50 farmers was randomly drawn with probability proportional to number of farmers in each size group. The sample included 21 small, 16 medium and 13 large farms. The primary data pertaining to crop year 2010-11 were collected by pre-tested schedules through personal interview method. Tabular analysis was carried out to work out marketing cost and price spread in marketing.

3. MARKETING ASPECTS

The basic objective of an efficient marketing is to ensure remunerative prices to the producer farmer and a reduction in marketing cost and margins, to provide commodities to consumers at reasonable prices and promote the movement of surpluses for economic development. The marketing cost, margins and price spread, computed for three important marketing channels are presented in this section.

4. STATISTICAL TOOLS

Price spread
To study the price spread in marketing of mungbean, the marketing costs and margins were worked out as under:

Marketing cost
Total cost of marketing was calculated as under:
$$C = C_F + C_{m1} + C_{m2} + C_{m3} + \ldots\ldots\ldots\ldots.. + C_{mn}$$
Where
C = Total cost of marketing
CF = Cost borne by the farmer in marketing of his produce
Cmi = Cost incurred by the ith middleman in the process of buying and selling

Producer share in consumer rupee:
The producer share in the consumer rupee was worked out as under:

$$P_s = \frac{P_F}{P_C} \times 100$$

Where,

P_S = Producer share in consumer rupee,

P$_F$ = Price of the produce received by the farmer and
P$_C$ = Price of the produce paid by the consumer
Absolute margin: Absolute margin earned by a middleman was calculated as:
Absolute margin: P$_{ri}$- (P$_{pi}$ + C$_{mi}$)

| **Percent margin** | $\dfrac{P_{ri} - (P_{Pi}+Cmi)}{P_{ri}}$ X 100 |

Where,

P$_{ri}$ = Total value of receipts (sale price)

P$_{pi}$ = Total purchase value of goods (purchase price) and

C$_{mi}$ = cost incurred in marketing

Marketing channels

Channel-I Producer- Wholesaler- Miller - Retailer - Consumer
Channel-II Producer- Wholesaler – Retailer- Consumer
Channel-III Producer- Commission agent- Wholesaler - Retailer –Consumer

5. RESULTS AND DISCUSSION

Marketing cost in marketing of mungbean through channel-I

The marketing costs in channel-I indicates that the cost incurred by producer was Rs. 44.50 per quintal of mungbean which was 0.94 per cent of consumer rupee. Cost incurred by wholesaler was Rs. 58.41 per quintal of mungbean which was 1.23 per cent of consumer rupee. Cost incurred by miller was Rs. 216.25 per quintal of mungbean which was 4.55 per cent of consumer rupee. Cost incurred by retailer was Rs. 40.00 per quintal of mungbean which was 0.84 per cent of consumer rupee. The farmer share in the consumer rupee was 75.80 per cent in channel-I.

Table I: Marketing cost in marketing of mungbean Marketing cost in marketing of mungbean through channel-II

Particulars	Rs./qtl	% Share in Consumer Rupee
Net price received by producer	3600	75.80
Cost incurred by producer		
Loading cost	2.50	0.05
Unloading cost	1.50	0.03
Transportation	15.50	0.33
Gunny bags	25.00	0.53
Total cost	44.50	0.94
Sale price of producer/purchase price of wholesaler	3644.50	76.74
Mandi tax @ 1.6%	58.31	1.22
Weighing @0.10/qtl	0.10	0.002
Total cost	58.41	1.23
Net margin of wholesaler	72.89	1.53

Sale price of wholesaler/purchase price of miller	3775.80	79.50
Sale tax @ 1%	37.75	0.79
Loading	2.00	0.04
Unloading	1.00	0.02
Transportation	19.50	0.41
Storage cost	6.00	0.13
Processing cost	150.00	3.16
Total cost	216.25	4.55
Net margin of miller	377.58	7.95
Value of husk @ Rs. 9/kg. assuming dal,husk ratio of 75:25	225.00	4.74
Total margin of miller	602.58	12.69
Sale price of miller/purchase price of retailer	4594.63	96.74
Loading	2.50	0.05
Unloading	1.50	0.03
Transportation	30.00	0.63
Storage cost	6.00	0.13
Total cost	40.00	0.84
Net margin of retailer	114.86	2.42
Retailer's selling price/consumer purchase price	4749.49	100.00

The Table II indicates that the cost incurred by producer was Rs.51.50 per quintal of mungbean which was 1.28 per cent of consumer rupee. Cost incurred by wholesaler was Rs.96.98 per quintal of mungbean which was 2.41 per cent of consumer rupee. Cost incurred by retailer was Rs.30.50 per quintal of mungbean which was 0.76 per cent of consumer rupee. The farmer share was 91.28 per cent in consumer rupee.

Table II: Marketing cost in marketing of mungbean through Channel II
(Producer ➡ Wholesaler ➡ Retailer ➡ Consumer)

Particulars	Rs./qtl	% share in consumer rupee
Net price received by producer	3675	91.28
Cost incurred by producer		
Loading cost	2.50	0.06
Unloading cost	1.50	0.03
Transportation	22.50	0.56
Gunny bags	25.00	0.62
Total cost	51.50	1.28
Producer Sale price / wholesaler purchase price	3726.50	92.56
Mandi tax @ 1.6%	59.62	1.48
Sale tax @ 1%	37.26	0.92
Weighing	0.10	0.002
Total cost	96.98	2.41
Net margin of wholesaler	74.53	1.85
Saleprice of wholesaler/purchase price of Retailer	3898.01	96.82
Loading	2.50	0.07
Unloading	1.50	0.03
Transportation	20.50	0.51
Storage cost	6.00	0.15

Total cost	30.50	0.76
Net margin of Retailer	97.45	2.42
Retailer sale price /Consumer's purchase price	4025.96	100.00

Marketing cost in marketing of mungbean through channel-III

The marketing costs in channel-III indicate that the total cost incurred by producer was Rs.54.50 per quintal of mungbean which was 1.30 per cent of consumer rupee. Cost incurred by commission agent was Rs.60.57 per quintal of mungbean which was 1.44 per cent of consumer rupee. Cost incurred by wholesaler was Rs. 63.65 per quintal of mungbean which was 1.51 per cent of consumer rupee. Cost incurred by retailer was Rs.40.50 per quintal of mungbean which was 0.96 per cent of consumer rupee. The farmer share in consumer rupee was 88.70 per cent in consumer rupee.

Table III: Marketing cost in marketing of mungbean through Channel III (Producer → CA → Wholesaler → Retailer → Consumer)

Particulars	Rs./qtl	% share in consumer rupee
Net price received by producer	3725	88.70
Cost incurred by producer		
Loading cost	2.50	0.06
Unloading cost	1.50	0.03
Transportation	25.50	0.61
Gunny bags	25.00	0.60
Total cost	54.50	1.30
Producer Sale price / commission agent's purchase price	3779.50	90.00
Mandi tax @ 1.6%	60.47	1.44
Weighing	0.10	0.002
Total cost	60.57	1.44
Net margin of CA	75.59	1.80
Commission agent's Sale price /Wholesaler purchase price	3915.66	93.24
Loading	2.50	0.06
Unloading	1.50	0.03
Transportation	20.50	0.49
Sale tax @ 1%	39.15	0.93
Total cost	63.65	1.51
Net margin of wholesaler	78.31	1.86
Wholesaler sale price / Retailer purchase price	4057.62	96.62
Loading	2.50	0.06
Unloading	1.50	0.03
Transportation	30.50	0.73
Storage cost	6.00	0.14
Total cost	40.50	0.96
Net margin of Retailer	101.44	2.42
Retailer's sale price/consumer purchase price	4199.56	100.00

Price spread in marketing of mungbean in channel I

The producer share in consumer rupee was 75.80 per cent and price spread was as high as 24.20 per cent, out of which, 7.56 per cent was accounted for by marketing cost and 16.64 per cent was accounted for by margin.

Table IV: Price spread in marketing of mungbean in Channel-I (P-W-M-R-C)

S. No.	Particular	Rs./qt.	% share in consumer rupee
1.	Producers net price	3600	75.80
2.	Cost incurred by		
	Producer	44.50	0.94
	Wholesaler	58.41	1.23
	Miller	216.25	4.55
	Retailer	40.00	0.84
	Total cost	359.16	7.56
3.	Margin of		
	Wholesaler	72.89	1.53
	Miller	602.58	12.69
	Retailer	114.86	2.42
	Total margin	790.33	16.64
4.	Sale price of retailer/purchase price of consumer	4749.49	100.00

Price spread in marketing of mungbean in channel II

The analysis of price spread in channel II indicates that producer share in consumer rupee was 91.28 per cent and price spread was 8.72 per cent, out of which, 4.45 per cent was accounted for by marketing cost and 4.27 per cent was accounted for by margin.

Table V: Price spread in marketing of mungbean in Channel-II (P-W- R-C)

S. No.	Particular	Rs./qt.	% share in consumer rupee
1.	Producers net price	3675	91.28
2.	Cost incurred by		
	Producer	51.50	1.28
	Wholesaler	96.98	2.41
	Retailer	30.50	0.75
	Total cost	178.98	4.45
3.	Margin of		
	Wholesaler	74.53	1.85
	Retailer	97.45	2.42
	Total margin	171.98	4.27
4.	Sale price of retailer/purchase price of consumer	4025.96	100.00

Price spread in marketing of mungbean in channel III

The analysis of price spread in channel III indicates that producer share in consumer rupee was 88.70 per cent and the price spread was 11.30 per cent, out of which, 5.22 per cent was accounted for by marketing cost and 6.08 per cent was accounted for by margin.

Table VI: Price spread in marketing of mungbean in Channel-III (P-CA-W-R-C)

S. No.	Particular	Rs./qt.	% share in consumer rupee
1.	Producers net price	3725	88.70
2.	Cost incurred by		
	Producer	54.50	1.30
	Commission agent	60.57	1.44
	Wholesaler	63.65	1.51
	Retailer	40.50	0.96
	Total cost	219.22	5.22
3.	Margin of		
	Commission agent	75.59	1.80
	Wholesaler	78.31	1.86
	Retailer	101.44	2.42
	Total margin	255.34	6.08
4.	Sale price of retailer/purchase price of consumer	4199.56	100.00

6. CONCLUSION

The analysis of marketing channels revealed that in channels I, marketing cost incurred by producer, wholesaler, miller and retailer was 0.94, 1.23, 4.55 and 0.84 per cent of consumer rupee, respectively. In channel II, marketing cost incurred by producer, wholesaler and retailer was 1.28, 2.41 and 0.76 per cent of consumer rupee, respectively. In channel III, marketing cost incurred by producers, commission agent, wholesaler and retailer was 1.30, 1.44, 1.51 and 0.96 per cent of consumer rupee, respectively. The analysis of relative share of producer per quintal of mungbean revealed that channel II was more remunerative channel than I and III, respectively. In channel-II the net share of producer was 91.28 per cent of consumer rupee. The analysis of price spread revealed that it was highest in channel I (24.20 per cent) followed by channel III (11.30 per cent) and channel II (8.72 per cent), respectively, Thus channel II was more efficient as price spread in this channel was lower and farmer's share in consumer rupee was higher.

7. ACKNOWLEDGEMENT

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