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Original Research Article

Marketing Cost, Marketing Margin and Price Spread of Black Gram in Auraiya District of Uttar Pradesh

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A B S T R A C T

Pulses are the cheapest source of proteins and Indians fulfill 20 to 30 per cent of their protein requirement from pulses, rich in calcium and iron also. Black gram or urd bean grown as sole crop, mixed crop, catch crop or sequential crop under rainfed or semi irrigated condition in kharif and spring/ summer season. It Black gram is also as ingredient of famous South Indian preparations like Dosa, Idli, Vada etc. Keeping in view the importance of the black gram a study entitled "Marketing cost, marketing margin and price spread of black gram in Auraiya District of Uttar Pradesh" was specifically carried out. District Auraiya was purposively selected and two blocks, namely Auraiya and Ajeetmal selected purposively for the study, a separate list of all villages of selected block was prepared along with acreage under black gram cultivation, 5-5 villages were selected from each block randomly for study. Finally 100 respondents were selected following the proportionate random sampling. These selected respondents divided into three categories according to land holding, 44 marginal (below 1 ha), 37 small (1-2 ha) and 19 mediums (2-4 ha & above). The data were collected by personal interview method with the help of pre-structured schedule. The period of enquiry pertains to agricultural year 2020-21. Tabular analysis of data was applied for arriving the results. Objective of this investigation is to identify different marketing channel of black gram and find the marketing cost, marketing margin and price spread of black gram crop. The price spread obtained Rs. 40.50, Rs. 247.38 and Rs. 528.22 per quintal in channel I, II and III respectively, with accounted for 0.71, 4.23 and 8.76 per cent of the consumer's price. It also revealed from the table that the producer's share in consumer price was highest (99.29) in channel I followed by channel II(95.77) and channel III (91.24). Total marketing cost in channel I, Channel II and Channel III were obtained 40.50, 140.88 and 228.69 respectively. It also concluded that channel I was most efficient then rest of two channel. Marketing cost, price spread as well as marketing margin were found highest on channel III followed by Channel II and channel I.

Keywords

Price spread, Marketing channel, Marketing margin, Marketing cost and proportionate random sampling

Introduction

India produces a variety of pulse crops and is recognized globally as a major player in pulses contributing about 25 per cent to the global production, consumer (27 per cent of world consumption) and importer (14 per cent) of pulses in the world. The projected

pulses demand is 32 million tonnes by 2030 (Vision 2030) and 50 million tonnes by the year 2050 which necessitates an annual growth rate of 4.2 per cent (Vision 2050). India primarily produces a variety of pulse crops like chickpea, lentil (masur), red gram (tur), black gram (urd) and green gram (moong). Pulses account for around 20 per cent of the area under food grains and contribute around 7-8 per cent of the total food grains production in the country.

The contribution of Rabi season pulses to the total pulse production is more than Kharif season pulses. The area under pulses in India has increased from 19.09 million hectares in 1950-51 to 23.1 million hectares in 2014-15, showed an increase of 21 per cent whereas the production of pulses during the same period has increased from 8.41 million tonnes to 17.19 million tonnes an increase of over 100 per cent. Similarly, the productivity has increased from 441 kg/ha in 1951 to 744 kg/ha in 2014-15 (Agricultural Statistics at a Glance, 2015). In India, the production of pulses has not been able to keep pace with their domestic demand, resulting in imports of 4-5 million tonnes of pulses per annum, especially from the countries like Canada, Myanmar and Australia to meet its domestic requirement, however exports a large quantity of chickpea to countries like Pakistan, Turkey etc. In pulses, no intensive irrigation is required and these are mostly grown under rainfed conditions thus, pulses are grown in areas left after satisfying the demand for cereals/cash crops. Even in rainfed conditions, pulses give a better benefit-cost ratio. Pulses have several other qualities like higher protein content, suitable in various cropping methods as an inter-crop, mixed crop, crop rotations, improve soil chemical and physical property, green pods can be used as vegetables and provide nutritious fodder for animals as well. Pulses constitute an essential part of the Indian diet for nutritional security and environmental sustainability. Pulses are the cheapest source of proteins and Indians fulfill 20 to 30 per cent of their protein requirement from pulses, rich in calcium and iron also. Per capita net availability of pulses in India, however, has reduced from 69.0gm/day (1961) to 47.2gm/day (2014) as against WHO recommendation of 80gm/day (FAOSTAT, 2014).

Pulses in India have long been considered as good source of protein thus play a crucial role in healthy diets, sustainable food production. Black gram or urd bean and green gram or mung bean are grown as sole crop, mixed crop, catch crop or sequential crop under rainfed or semi irrigated condition in kharif and spring/ summer season. It is mainly consumed as dal, whole or splatted, husked or unhusked.

Black gram is also as ingredient of famous South Indian preparations like Dosa, Idli, Vada etc. Black gram is highly nutritive and contains high proportion of digestible protein with many essential amino acid, minerals and vitamins. Black gram is one of the important pulse crops grown throughout India. Black gram contains about 24 per cent protein, 60 per cent carbohydrates, 1.3 percent fat, and is the richest among the various pulses in phosphoric acid, being 5 to 10 times richer than in other. Black gram (*V. mungo)* is one of the important pulse crops in India which plays an important role in supplementing the income of small and marginal farmers.

Materials and Methods

Sampling technique

The purposive cum random sampling technique was applied for the selection of district, block, villages as well as respondents (black gram grower).

Method of enquiry and collection of data

Selection of district

The investigator is familiar to the socioeconomic and cultural conditions of the area; it helps in rapport building and authentic data collection. Thus Auraiya district of Uttar Pradesh was selected purposively seeing the convenience of investigator.

Selection of block

A list of all blocks of Auraiya district was prepared and two blocks namely Auraiya and Ajeetmal having highest area coverage under black gram crop was purposively selected for the study.

Selection of village

A list of all the villages falling under selected blocks Auraiya and Ajeetmal was prepared and five villages were selected randomly from the list.

Selection of respondents

A separate list of all the black gram growers of selected five villages were prepared along by their size of holdings, and were grouped into three categories; [1] Marginal (below 1ha.), [2] Small (1-2 ha.), and [3] Medium (2-4ha.). From this list, samples of 100 respondents were selected following the proportionate random sampling technique.

Period of study

The data were pertained to the agricultural year 2020-21.

Analytical tools

Simple tabular and functional analyses were used to analyze the data for presentation of the results.

Tabular analysis

In tabular analysis the percentages, arithmetic mean & weighted mean were applied.

$$\text{Arithmatic mean} = \frac{\sum X_i}{N}$$

Where i = 1……..n

$$\text{Weighted average} = \frac{\sum W_i X_i}{\sum Wi}$$

Where,

W.A. = Weighted average of Xi

X_i = Variable

W_i =Weights of variable

Market for disposal of Black gram production

Most of the Agricultural produce of the study area are disposed in the local market Auraiya and Ajeetmal which is situated at 20-25 km distance from the sample villages. Few sample farmers having heavy marketable surplus also approach district level market Auraiyato dispose off their produce in whole sale market. Thus the data concerned with marketing of chickpea were recorded from a large number of market functionaries functioning in both the market.

Marketed surplus

The marketable and marketed surplus of, Black gram originated by different size groups of sample farms have been worked out as follow:

MS = P-C

Where,

MS = Marketable surplus

P = Total production of crop

C = Total requirement (family consumption, seeds, education, payment of wages to labours, cattle feed, payments to service providers persons such as carpenter, blacksmith, barber, etc).

Marketed surplus

The marketed surplus connotes the actual quantity of produce sold by the farmers in the markets has been worked out as follows:

MT = MS + PS + D – L

Where,

MT = Marketed surplus

MS = Marketable surplus actually sold

D = Distress sale

PS = Post stock sold out, if any

L = Losses during storage and transmit marketable surplus left for sale.

Price spread

"The difference between the price paid by the consumer and the net price received by producer was taken as the concept of spread". This included not only the actual prices at various stages of marketing channels, but also the costs incurred in the process of the movement of the produce from the point of producer farm to the consumer and the margin of the various intermediaries. The model prices at different levels were obtained to work out the gross margins of various agencies. The deduction of the costs included the costs incurred by the concerned agencies from the gross margin referred rise to net margins.

Results and Discussion

Three channels were prevalent in the study area in respect of the disposal of chickpea produced on the sample farms. Three marketing channels identify in study area i.e.

Channel 1st: Producer - Consumer

Channel 2nd: Producer - Village trader/Retailers - Consumer

Channel 3rd: Producer - Village trader - Whole seller - Retailers - Consumer

The price spread (marketing cost + market margin) of chickpea in the study area was worked out and presented in table 1.

It depicted from the table that the price spread came to Rs. 40.16per quintal in channel I with accounted for 0.93 per cent of the consumer's price.

And marketing margin 0 because of no middlemen presents in market produce sale his produce directly to consumer and enjoying the highest consumers share Rs.

It also evident from the table that the producer's share in consumer price was highest (99.29) in channel I and cost incurred by producers obtained Rs.40.50.

The price spread (marketing cost + market margin) of chickpea in the study area was worked out and presented in table 2. It depicted from the table that the price spread came to Rs. 247.38 per quintal in channel II with accounted for 4.23 per cent of the consumer's price.

Table.1 Price spread, marketing margin and marketing cost for the Black gram in Auraiya district in Channel I

S. No.	Particulars	Channel I	
		Rs/qt	% share
1.	**Net price received by producer**	5590.50	(99.29)
2.	**Expenditure incurred by producer**	40.50	0.71
a.	**Preparation charges**	10.50	0.19
b.	Transportation cost	5.0	0.09
c.	Cost of gunny bags	25.00	0.44
d.	Loading Unloading		
e.	**Weighing Charges**		
f.	**Marketing fees**		
g.	Losses		
3.	**Retailer's sale price/ V.T. sale price /Consumer's Purchase price**	5631.00	100

(Figure in parenthesis show the per cent to corresponding consumer's price)

Table.2 Price spread, marketing margin and marketing cost for the Black gram in Auraiya district in Channel II

S. No.	Particulars	Channel II	
		Rs/qt	% share
1.	**Net price received by producer**	5599.45	95.77
2.	**Expenditure incurred by producer**	85.21	1.46
a.	**Preparation charges**	15.32	0.26
b.	Transportation cost	10.80	0.18
c.	Cost of gunny bags	25.00	0.43
d.	Loading Unloading	10.00	0.17
e.	**Weighing Charges**	8.50	0.15
f.	**Marketing fees**	10.00	0.17
g.	Losses	5.59	0.96
3.	**Producer sale price/V.T. purchase price**	5684.66	97.87
4.	**Expenditure incurred by V.T.**	55.67	0.95
a.	Grading and cleaning	10.00	0.17
b.	Market fees	5.50	0.09
c.	Loading Unloading	10.50	0.18
d.	Weighing charges	5.90	0.10
e.	Transportation cost	16.85	0.28
f.	Losses	6.92	0.12
5.	**V.T. Net margin**	106.50	1.82
6.	**Price spread**	247.38	4.23
7.	**Total marketing margin**	106.50	1.82
8.	**Total marketing cost**	140.88	2.34
9.	**Retailer's sale price/ V.T. sale price /Consumer's Purchase price**	5846.83	**100**

(Figure in parenthesis show the per cent to corresponding consumer's price)

Table.3 Price spread, marketing margin and marketing cost for the Black gram in Auraiya district Channel III

S. No.	Particulars	Channel III	
		Rs/qt	% share
1.	**Net price received by producer**	5500.26	91.24
2.	**Expenditure incurred by producer**	90.09	1.49
a.	**Preparation charges**	10.50	0.17
b.	Transportation cost	20.85	0.35
c.	Cost of gunny bags	25.00	0.41
d.	Loading Unloading	10.00	0.17
e.	**Weighing Charges**	8.50	0.14
f.	**Marketing fees**	10.00	0.17
g.	Losses	5.24	0.09
3.	**Producer sale price/V.T. purchase price**	5590.35	92.73
4.	**Expenditure incurred by V.T.**	60.14	1.00
a.	Grading and cleaning	10.50	0.17
b.	Market fees	5.50	0.09
c.	Loading Unloading	10.50	0.17
d.	Weighing charges	6.25	0.11
e.	Transportation cost	20.00	0.33
f.	Losses	7.39	0.12
5.	**V.T. Net margin**	100.67	1.31
6.	**V.T. sale price/W.S. purchase price**	5751.16	95.40
7.	**Expenditure incurred by W.S.**	41.77	0.69
a.	Storage charges	5.90	0.10
b.	Transportation cost	10.09	0.17
c.	Loading Unloading	10.00	0.17
d.	Market fees	5.50	0.09
e.	Weighing charges	6.25	0.11
f.	Losses	4.03	0.07
8.	**W.S. Net margin**	100.09	1.66
9.	**W.S. sale price/R. purchase price**	5893.02	97.75
10.	**Expenditure incurred by R.**	36.69	0.61
a.	Transportation cost	8.79	0.15
b.	Grading and cleaning	4.70	0.08
c.	Loading Unloading	10.00	0.17
d.	Marketing fees	5.50	0.09
e.	Weighing charges	4.30	0.07
f.	Losses	3.40	0.06
11.	**Retailer's Net margin**	98.77	1.64
12.	**Price spread**	528.22	8.76
13.	**Total marketing margin**	299.53	4.97
14.	**Total marketing cost**	228.69	3.79
15.	**Retailer's sale price/ V.T. sale price /Consumer's Purchase price**	6028.48	**100**

(Figure in parenthesis show the per cent to corresponding consumer's price)

Table.4 Price spread, marketing margin and marketing cost for the Black gram in Auraiya district (inter comparison between different channels)

S. No.	Particulars	Channel I		Channel II		Channel III	
		Rs/qt	% share	Rs/qt	% share	Rs/qt	% share
1.	**Net price received by producer**	5590.50	(99.29)	5599.45	95.77	5500.26	91.24
2.	**Expenditure incurred by producer**	40.50	0.71	85.21	1.46	90.09	1.49
a.	**Preparation charges**	10.50	0.19	15.32	0.26	10.50	0.17
b.	Transportation cost	5.0	0.09	10.80	0.18	20.85	0.35
c.	Cost of gunny bags	25.00	0.44	25.00	0.43	25.00	0.41
d.	Loading Unloading			10.00	0.17	10.00	0.17
e.	**Weighing Charges**			8.50	0.15	8.50	0.14
f.	**Marketing fees**			10.00	0.17	10.00	0.17
g.	Losses			5.59	0.96	5.24	0.09
3.	**Producer sale price/ V.T. purchase price**	5631.00	100	5684.66	97.87	5590.35	92.73
4.	**Expenditure incurred by V.T.**			55.67	0.95	60.14	1.00
a.	Grading and cleaning			10.00	0.17	10.50	0.17
b.	Market fees			5.50	0.09	5.50	0.09
c.	Loading Unloading			10.50	0.18	10.50	0.17
d.	Weighing charges			5.90	0.10	6.25	0.11
e.	Transportation cost			16.85	0.28	20.00	0.33
f.	Losses			6.92	0.12	7.39	0.12
5.	**V.T. Net margin**			106.50	1.82	100.67	1.31
6.	**V.T. sale price/W.S. purchase price**					5751.16	95.40
7.	**Expenditure incurred by W.S.**					41.77	0.69
a.	Storage charges					5.90	0.10
b.	Transportation cost					10.09	0.17
c.	Loading Unloading					10.00	0.17
d.	Market fees					5.50	0.09
e.	Weighing charges					6.25	0.11
f.	Losses					4.03	0.07
8.	**W.S. Net margin**					100.09	1.66
9.	**W.S. sale price/R. purchase price**					5893.02	97.75
10.	**Expenditure incurred by R.**					36.69	0.61
a.	Transportation cost					8.79	0.15
b.	Grading and cleaning					4.70	0.08

c.	Loading Unloading					10.00	0.17
d.	Marketing fees					5.50	0.09
e.	Weighing charges					4.30	0.07
f.	Losses					3.40	0.06
11.	**Retailer's Net margin**					98.77	1.64
12.	**Price spread**	40.50	0.71	247.38	4.23	528.22	8.76
13.	**Total marketing margin**	-		106.50	1.82	299.53	4.97
14.	**Total marketing cost**	40.50	0.71	140.88	2.34	228.69	3.79
15.	**Retailer's sale price/ V.T. sale price / Consumer's Purchase price**	5631.00	100	5846.83	**100**	6028.48	**100**

(Figure in parenthesis show the per cent to corresponding consumer's price)

It also revealed from the table that the producer's share in consumer price was highest channel II (95.77). Total marketing cost in Channel II was obtained Rs. 140.88. And total marketing margin were found Channel II Rs. 140.88. So it revealed that highest marketing cost and marketing margin as well as price spread found in Channel II in comparison to channel I. it was clear from table 2 that channel I more efficient then channels II.

The price spread (marketing cost + market margin) of chickpea in Channel III. It depicted from the table that the price spread came to Rs. 528.22 per quintal III with accounted for 8.76 per cent of the consumer's price. It also revealed from the table that the producer's share in consumer price was highest in channel III(91.24). Total marketing cost in Channel III obtained Rs.228.69. And total marketing margin were found highest on channel III Rs. 299.53. So it also revealed that highest marketing cost and marketing margin as well as price spread found in channel III. And Net price received by producer Rs. 5500.26 (Table 3).

The price spread (marketing cost + market margin) of chickpea in the study area was worked out and presented in table 4 It depicted from the table that the price spread came to Rs. 40.50, Rs. 247.38 and Rs. 528.22per quintal in channel I, II and III respectively, with accounted for 0.71, 4.23 and 8.76 per cent of the consumer's price. It also revealed from the table that the producer's share in consumer price was highest (99.29) in channel I followed by channel II(95.77) and channel III (91.24). Total marketing cost in channel I, Channel II and Channel III were obtained 40.50, 140.88 and 228.69 respectively. And total marketing margin were found highest on channel III Rs. 299.53followed by Channel II Rs. 140.88 and channel I Rs. 40.50. So it revealed that highest marketing cost and marketing margin as well as price spread found in channel III followed by Channel II and channel I. it was clear from table 4 Channel I more efficient then other channels II and III.

It concluded from the results that producer's share in consumer's price were 99.29, 95.77 and 91.24 per cent in marketing of chickpea in channel I, II and III respectively, comparing the efficiency index of all three channel in chickpea marketing, it also concluded that channel I was most efficient then rest of two channel. Marketing cost, price spread as well as marketing margin were found highest on channel III followed by

Channel II and channel I.It also evident from results that lowest marketing cost, marketing margin incurred in channel one followed by channel II and Channel III.

Price spread in channel I, also minimum in comparison to rest channels which involved in marketing of black gram. Channel I was found more efficient then other channels because producer sale his produce directly to consumers and gain maximum amount of consumers share rupees.

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