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Analysis of cashew marketing in Bastar district of Chhattisgarh state

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Abstract
The present study deals with analysis of cashew nuts marketing channels in Bastar district of Chhattisgarh state. The present objective of study was to examine the marketing pattern of cashew nut in the study area. In view of the objective the study Bastar district of Chhattisgarh is purposely select. Primary data relating to year 2019-20 were collected from the sample respondents by conducting personal interview and pretested schedule. 80 farmers were selected randomly from Bastar district of Chhattisgarh. Sample farmers sell cashew nut produce through three channels such as, marketing Channel-I = Producer → co-operative society→ Consumer, Channel-II = Producer → co-operative society → Wholesaler → Consumer, Channel-III = Producer → co-operative society → Wholesaler → Village merchant → Consumer. The marketing channel-I, II, and III were identified in cashew nut consumer price was Rs.630.00/Kg, Rs.830.00/Kg and Rs.950/Kg, respectively, price spread (Rs.22.38/kg, Rs.32.38/kg and Rs.32.38/kg), producer share in consumer's rupee (%) was 17.46, 13.25 and 11.58 percent, respectively and marketing efficiency was 88.34, 89.94 and 90.16 per cent, respectively. The suggestion for the marketing of cashew nuts of Cooperative societies should be formed more and more in the area.

Keywords: consumer price, price spread, producer share, marketing efficiency

Introduction
Cashew nut is a highly nutritious product. It gives more calories to the human body. Because of its nutritious content it gives more strength and stamina to the body. The cashew nut producers take a little percentage for their consumption and sell the remaining percentage. The outer surface of the nut which is bought by the hotels and industries is used as fire wood. The inner nut is marketed and used by the bakeries for preparing various types of sweets and it is used for some other tasty consumable products as well. The broken inner nut is used for local consumption (Bhat Venkataram 2019).
In Chhattisgarh, it is being cultivated in Bastar, Dantewada, Kanker, Raigarh, Sarguja and Jashpur district occupying an area of 8000 ha with a production of 3.0 thousand metric tons and productivity of 460 kg/ha (raw nut) in spite of this about 40 thousand hectare non-traditional area can be brought under Cashew cultivation [Nag S.K. 2016]. Cashew nut is a tropical tree crop of much importance. Looking to the economic importance of Cashew nut in the state has been undertaken [Saroj, P.L. 2015]. Therefore, there is a possibility of locating high yielding types and other diverse types suitable for growing in waste degraded lands. There are ample opportunities to develop the Cashew in the state by eliminating the socio-economic gaps of Cashew grower's farmers of the state [Malhotra S.K., 2015]. The objective of the study was to study the marketing pattern of cashew nut in the study area.

Materials and Methods
Collection of data
The study is based on primary. The primary data was collected from the selected respondents with the help of pre-tested interview schedule by the personal interview method.

Methodology
80 farmers were selected randomly from Bastar district farming area and market. A multistage simple random sampling technique (SRS) was adopted to select the block, villages and the respondents, market and different farmer involved in cashew nut production and marketing in Bastar farming area. The details of the sampling techniques at various stages are given as under:

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Marketing concept
Producer's share in consumer's rupee:

$$Ps = \frac{PF}{Pr} \times 100$$

Where,
Ps = Producer''s share
PF = Price received by the farmer
Pr = Retail price paid by the consumer
Total cost of marketing of commodity,
C = Cf + Cm1 + Cm2 + . . . + Cmn
Where, C= Total cost of marketing of the commodity
Cf = Cost paid by the producer from the time the produce leaves till he sells it
Cmi= Cost incurred by the ith middlemen in the process of buying and selling the products.

$$\text{Marketing efficiency} = 1 + \left(\frac{\text{Sum of profit or margin}}{\text{Sum of marketing cost}}\right)$$

Results and Discussion
General characteristics of sample households
Demographical features of sampled households
Demographical features of sampled households in study area considerably influence various economic activities like resource allocation, resource use efficiency, production pattern, distribution pattern and exchange of final product which is directly related with economy of farmers. Thus, the social beliefs', traditions and taboos influence the techniques of production particularly the use of improved technology in the production process. The social factors such as the size of family, literacy, sex-ratio, social disparities, socio-economic status, caste rigidities, social mobility etc, either retard or promote the process of economic growth by influencing the efficiency in production process.

It is essential to understand the detailed insight picture of sampled households under the demographical features which is presented in Table 1. It reveals that 80 numbers of sampled households comprised of marginal, small, medium and large farmers of 25, 25, 15 and 15 numbers, respectively. The average family members varied from 4.93 to 5.8 across the farm size.

Table 1: Demographical features of sampled households

S. No	Particulars	Marginal	Small	Medium	Large	Total
A	**No. of sample households**	**25**	**25**	**15**	**15**	**80**
	No. of family member	145	137	78	74	434
	Male	80	75	42	40	237
		(55.17)	(54.74)	(53.85)	(54.05)	(54.61)
	Female	65	62	36	34	197
		(44.83)	(45.26)	(46.15)	(45.95)	(45.39)
	Average family size	5.8	5.48	5.2	4.93	5.43
B	**Distribution of sampled households by social status**					
	a) Schedule tribe	10	9	5	4	28
		(40.00)	(36.00)	(33.33)	(26.67)	(35.00)
	b) Schedule cast	3	4	2	2	11
		(12.00)	(16.00)	(13.33)	(13.33)	(13.75)
	c) Other backward caste	10	8	4	4	26
		(40.00)	(32.00)	(26.67)	(26.67)	(32.50)
	d) Others	2	4	4	5	15
		(8.00)	(16.00)	(26.67)	(33.33)	(18.75)
	Total	25	25	15	15	80
C	**Distribution of family members by age of sampled households**					
	a) Up to 18 years	47	41	27	25	140
		(32.41)	(29.93)	(34.62)	(33.78)	(32.26)
	b) 18-60	65	69	39	38	211
		(44.83)	(50.36)	(50.00)	(51.35)	(48.62)
	c) Above 60 years	33	28	12	11	84
		(22.76)	(20.44)	(15.38)	(14.86)	(19.35)
	Total	145	138	78	74	435
D	**Distribution of family members by education level of sampled households**					
	a) Illiterate	20	15	4	4	43
		(13.79)	(10.95)	(5.13)	(5.41)	(9.91)
	b) Primary	15	13	12	10	50
		(10.34)	(9.49)	(15.38)	(13.51)	(11.52)
	c) Middle	61	55	19	15	150
		(42.07)	(40.15)	(24.36)	(20.27)	(34.56)
	d) High school & higher secondary	36	39	30	31	136
		(24.83)	(28.47)	(38.46)	(41.89)	(31.34)
	e) Above Higher secondary	13	15	13	14	55
		(8.97)	(10.95)	(16.67)	(18.92)	(12.67)
	Literacy	86.21	89.05	94.87	94.59	90.09

Note: Figure in parentheses is indicating the percentage of total number of family members.

Overall, family composition in proportion of male and female was 54.61 and 45.39 percent. The caste wise composition of sampled households was noticed the maximum of Schedule tribe (ST) and found to be (35.00%) followed by other backward caste (OBC) (32.50%), others (18.75%) and schedule caste (ST) (13.75%), respectively. The age of family members are important to understand the working force and categorized into upto 18 years old, 18 -60 years old and above 60 years old.

It was found that age of youth as working force between age of 18 to 60 years was in majority of (38.62%) followed by above upto 18 years old (32.26%), and 60 years old (19.35%) respectively (figure 1). The literacy, irrespective to the level of education was quite high and found to be 90.09 percent. Among them level of education between middle school examinations passed was in majority and noticed to be 34.36 percent (figure 2).
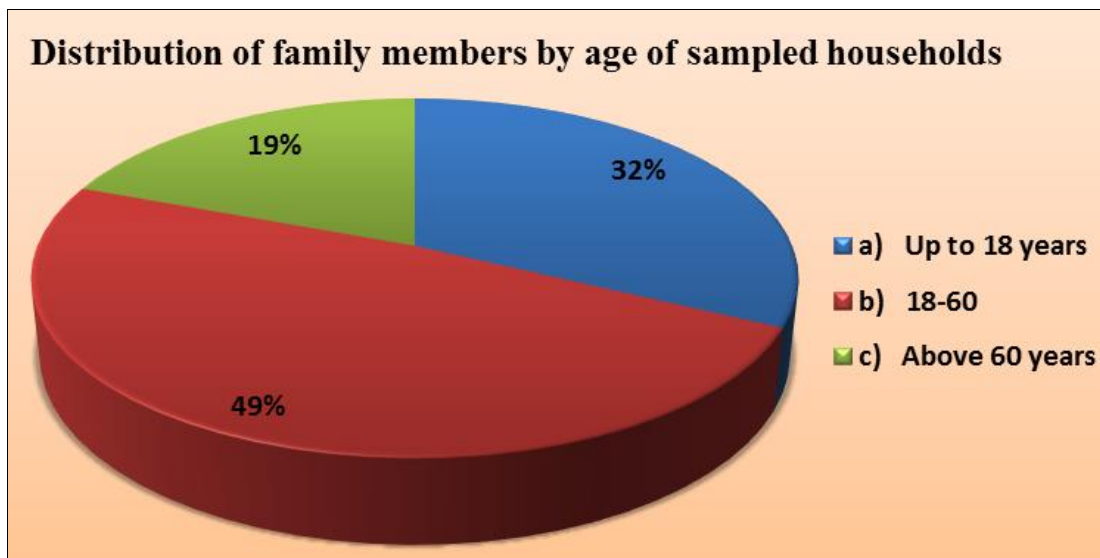

Fig 1: Distribution of family members by age of sampled households
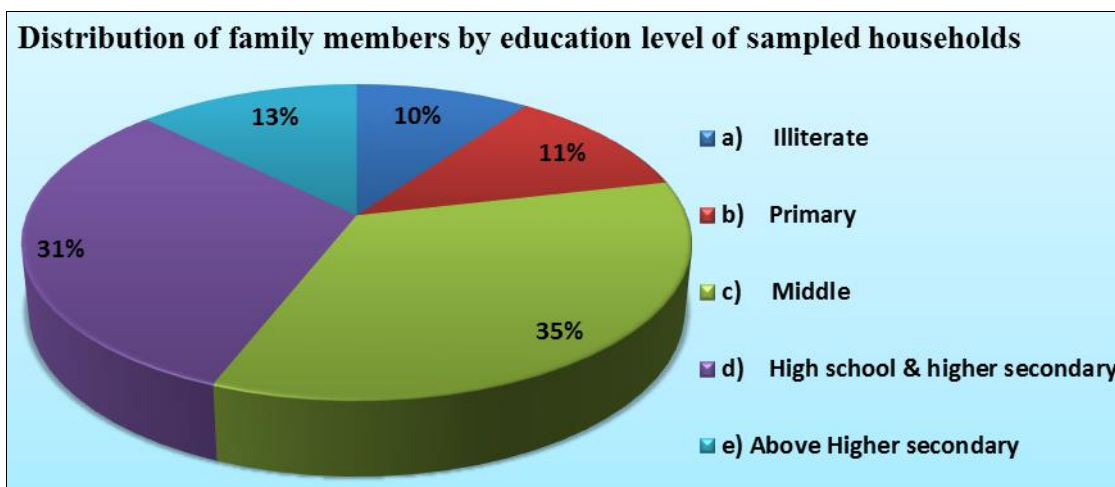

Fig 2: Distribution of family members by education level of sampled households

Operated area at sample farms
The operated area is estimated by owned area plus leased in and subtracted the leased out area of sample farms at the same in presented in table 2. It reveals that the overall farm size of sample farms was 2.11 hectares with 0.86, 1.59, 2.68 and 6.24 hectares for marginal, small, medium and large farms, respectively. The operated area was found to be overall 1.97

hectares with 0.78, 1.47, 2.53 and 5.92 hectares under respective farms under study. The area under irrigation was observed 44.67 percent and remaining area (55.32 percent) was observed un-irrigated in the district. Out of the total cropped area occupied the maximum area under large farms 94.87 per cent followed by medium farms 94.40, small farms 92.45 and marginal farms 90.70, respectively.

Table 2: Average cropped and operated area of sample households (ha./farm)

S. No.	Particular	Farm size				
		Marginal	Small	Medium	Large	Overall
1	Owned land	0.86	1.59	2.68	6.24	2.11
2	Land for agriculture use	0.78	1.47	2.53	5.92	1.97
		(90.70)	(92.45)	(94.40)	(94.87)	(93.47)
3	Land for non-agriculture use	0.07	0.11	0.15	0.32	0.13
		(9.30)	(7.55)	(5.60)	(5.13)	(6.16)
4	Irrigated area	0.31	0.61	0.94	3.12	0.88
		(39.74)	(41.50)	(37.15)	(52.70)	(44.67)
5	Un-irrigated area	0.47	0.86	1.59	2.80	1.09
		(60.26)	(58.50)	(62.85)	(47.30)	(55.32)

Note: Figures in parentheses indicate percentages in braced.

Irrigated area by different sources

Table 3 (Figure 3) reveals that tube-well was the main source of irrigation and shared 35.27 percent irrigation. While canal source of irrigation (32.40 percent), tank (9.10 percent), river (0.15 percent), and well (0.06 percent) respectively. Looking to the forest ecology of the study area, measure to conserve water resources in the form of situation-specific rainwater harvesting structures should be created to strengthen the water resources in the region.

Table 3: Source wise irrigated area of sampled households (ha/farm)

S. No.	Particular	Farm size of holdings				
		Marginal	Small	Medium	Large	Overall
1	Tank	0.02	0.05	0.13	0.38	0.10
		(6.45)	(8.20)	(13.83)	(12.18)	(9.10)
2	Canal	0.14	0.21	0.18	0.29	0.19
		(45.16)	(34.43)	(19.15)	(9.29)	(32.40)
3	Tube-well	0.1	0.18	0.34	1.78	0.38
		(32.26)	(29.51)	(36.17)	(57.05)	(35.27)
4	River	0.03	0.13	0.22	0.47	0.15
		(9.68)	(21.31)	(23.40)	(15.06)	(16.56)
5	Well	0.02	0.04	0.07	0.2	0.06
		(6.45)	(6.56)	(7.45)	(6.41)	(6.67)
	Total irrigated area	0.31	0.61	0.94	3.12	0.88
		(100.00)	(100.00)	(100.00)	(100.00)	(100.00)

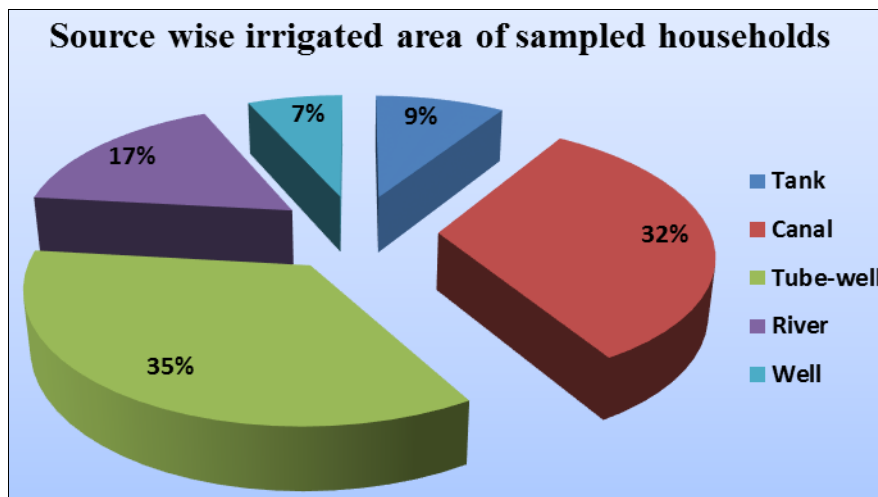**Note:** Figures in parentheses indicate percentages in braced.

Fig 3: Source wise irrigated area of sampled households.

1. Different marketing cost of different farm size of cashew nut farmers

Table 4 reveals that overall different marketing cost when different farm size marginal, small, medium, and large farms size of cashew nut producers sold their product in the market. Among these overall producers transportation cost was most important which accounted for Rs.8.13/kg (7.39 per cent) followed by other cost (Rs. 1.75/kg and 0.18 percent) and packaging and packaging material cost (Rs.1.08/kg and 0.11 per cent). The overall producer sell price was Rs.110/kg. The overall co-operative society marketing cost was accounted these overall total cost was Rs.126.42/kg. The labour and transportation cost was equal Rs.5.00/kg and 0.53 per cent followed by other cost (Rs.2.00/kg and 0.21 per cent) and processing cost (Rs.1.37/kg and 0.14 per cent). The co-operative societies sell cashew nut in market with Rs. 630/kg. The overall wholesalers/ retailers cashew nut marketing total cost sell price was Rs.640/kg and Rs.830/kg. Also the overall

village merchant marketing cost, total and sell price was Rs.10.00, 840 and 950/kg, respectively. The overall price spread, producer share in consumer's rupee (%) and marketing efficiency was Rs.47.38/kg, 11.58 per cent and 70.16 percent, respectively.

2. Channel-I = Producer → co-operative society → Consumer

Table 5 was identified one intermediary through which cashew nut reaches to the consumer's i.e. co-operative society. In the channel –I, producer sells his produce to the co-operative society, who in turn sells in the market. Finally the produce reaches to consumers after collecting margin. Average marketing cost when producers sold their produce to co-operative society in the market was Rs.126.42/kg. The labour and transportation cost was equal Rs.5.00/kg and 0.53 per cent followed by other cost (Rs.2.00/kg and 0.21 per cent) and processing cost (Rs.1.37/kg and 0.14 per cent). In this marketing channel found the marketing margin of producer and co-operative society was Rs.52.94/kg (8.40 percent) and Rs.503.58/kg (79.93 per cent), respectively. The consumer price, price spread, producer share in consumer's rupee (%) and marketing efficiency was identified in Rs.630.00/Kg, Rs.22.38/kg, 17.46 per cent and 88.34 percent, respectively.

3. Channel-II = Producer→ co-operative society → Wholesaler → Consumer

In the table 5 show that the two intermediaries through which cashew nut reaches to the consumer's i.e. co-operative society, wholesaler. In the channel –II, The producer sells his produce to the co-operative society, who in turn sells it to wholesaler in the market. In this channels the total producer, co-operative society and wholesaler cost was Rs.57.06/kg, Rs.126.42/kg and Rs.640/kg, respectively. The labour and transportation cost was equal 0.79 per cent (Rs.5.00/kg)

followed by other cost 0.32 per cent (Rs.2.00/kg) and processing cost 0.22 per cent (Rs.1.37/kg). In this marketing channel found the marketing margin of producer, co-operative society and wholesaler was Rs.52.94/kg (6.38 per cent), Rs.503.58/kg (60.67 per cent) and Rs.190/kg (22.89 per cent), respectively. The consumer price, price spread, producer share in consumer's rupee (%) and marketing efficiency was identified in Rs.830.00/Kg, Rs.32.38/kg, 13.25 per cent and 89.94 per cent, respectively.

4. Channel-III = Producer → co-operative → society Wholesaler → Village merchant → Consumer

In the table 5 show that the two intermediaries through which cashew nut reaches to the consumer's i.e. co-operative society, wholesaler and village merchant. In the channel –III, The producer sells his produce to the co-operative society than sell to wholesaler, who in turn sells it to village merchant in the market. Finally the produce reaches to consumers after collecting margin. In this channels the total producer, co-operative society, wholesaler and village merchant cost was Rs.57.06/kg, Rs.126.42/kg, Rs.640/kg and Rs.840/kg, respectively. The producer transportation cost was 0.86 per cent (Rs.8.13/kg) followed by co-operative society intermediary labour and transportation cost was equal 0.53 per cent (Rs.5.00/kg), other cost 0.21 per cent (Rs.2.00/kg) and processing cost 0.22 per cent (Rs.1.37/kg). In this marketing channel found the marketing margin of producer, co-operative society wholesaler and village merchant was Rs.52.94/kg (5.57 per cent), Rs.503.58/kg (53.01 per cent), Rs.190/kg (20.00 per cent) and Rs.110/kg (11.58 per cent), respectively. The consumer price, price spread, producer share in consumer's rupee (%) and marketing efficiency was identified in Rs.950/Kg, Rs.32.38/kg, 11.58 per cent and 90.16 per cent, respectively.

Table 4: Marketing cost of cashew nut in different size of cashew nut farmers (in Rs./kg)

Particulars	Marginal	Small	Medium	Large	Overall
Producer					
Production cost (Rs./kg)	50.02	49.65	49.39	46.9	46.1
Packaging and packaging material cost	1.25	1.15	1.1	1.05	1.08
	(0.13)	(0.12)	(0.12)	(0.11)	(0.11)
Transportation cost (Rs./kg)	10.00	8.00	8.50	7.50	8.13
	(1.05)	(7.27)	(7.73)	(6.82)	(7.39)
Other cost (Rs./kg)	2.00	2.00	1.85	1.50	1.75
	(0.21)	(0.21)	(0.19)	(0.16)	(0.18)
Producer sell price (Rs./kg)	110	110	110	110	110
Co-operative society					
Purchased price	110	110	110	110	110
Labour cost	5.00	5.00	5.00	5.00	5.00
	(0.53)	(0.53)	(0.53)	(0.53)	(0.53)
Processing cost (Rs./kg)	1.50	1.50	1.45	1.36	1.37
	(0.16)	(0.16)	(0.15)	(0.14)	(0.14)
grading cost (Rs./kg)	1.20	1.20	1.20	1.20	1.20
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
Packaging material cost (Rs./kg)	0.85	0.85	0.85	0.85	0.85
	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)
Packaging cost (Rs./kg)	1.00	1.00	1.00	1.00	1.00
	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
Transportation cost (Rs./kg)	5.00	5.00	5.00	5.00	5.00
	(0.53)	(0.53)	(0.53)	(0.53)	(0.53)
Other cost (Rs./kg)	2.00	2.00	2.00	2.00	2.00
	(0.21)	(0.21)	(0.21)	(0.21)	(0.21)
Total cost	126.55	126.55	126.5	126.41	126.42
Sell price (Rs./kg)	630	630	630	630	630

Wholesalers/ Retailers					
wholesalers purchased price (Rs./kg)	630	630	630	630	630
Marketing cost (Rs./kg)	10	10	10	10	10
	(1.05)	(1.05)	(1.05)	(1.05)	(1.05)
Total cost	640	640	640	640	640
sell price (Rs./kg)	830	830	830	830	830
Village merchant					
Purchased price (Rs./kg)	830.00	830.00	830.00	830.00	830.00
Marketing cost (Rs./kg)	10.00	10.00	10.00	10.00	10.00
	(1.05)	(1.05)	(1.05)	(1.05)	(1.05)
Total cost	840	840	840	840	840
sell price (Rs./kg)	950	950	950	950	950
Consumer price	950	950	950	950	950
	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)
Price spread	49.80	47.70	47.95	46.46	47.38
Producer share in consumer's rupee (%)	11.58	11.58	11.58	11.58	11.58
Marketing efficiency (%)	69.49	69.75	69.75	70.17	70.16

Table 5: Price spread, producer share in consumers rupee and marketing efficiency under different marketing channels of cashew nut.

Particulars	Channel – I	Channel – II	Channel -III
Producer			
Production cost (Rs./kg)	46.10	46.10	46.10
Packaging and packaging material cost	1.08	1.08	1.08
	(0.17)	(0.13)	(0.11)
Transportation cost (Rs./kg)	8.13	8.13	8.13
	(1.29)	(0.98)	(0.86)
Other cost (Rs./kg)	1.75	1.75	1.75
	(0.28)	(0.21)	(0.18)
total cost	57.06	57.06	57.06
Marketing margin (Rs./kg)	52.94	52.94	52.94
Marketing margin (Per cent)	(8.40)	(6.38)	(5.57)
Producer sell price (Rs./kg)	110.00	110.00	110.00
Co-operative society			
Purchased price	110.00	110.00	110.00
Labour cost	5.00	5.00	5.00
	(0.79)	(0.60)	(0.53)
Processing cost (Rs./kg)	1.37	1.37	1.37
	(0.22)	(0.17)	(0.14)
Grading cost (Rs./kg)	1.20	1.20	1.20
	(0.19)	(0.14)	(0.13)
Packaging material cost (Rs./kg)	0.85	0.85	0.85
	(0.13)	(0.10)	(0.09)
Packaging cost (Rs./kg)	1.00	1.00	1.00
	(0.16)	(0.12)	(0.11)
Transportation cost (Rs./kg)	5.00	5.00	5.00
	(0.79)	(0.60)	(0.53)
Other cost (Rs./kg)	2.00	2.00	2.00
	(0.32)	(0.24)	(0.21)
Total cost	126.42	126.42	126.42
	(20.07)	(15.23)	(13.31)
Marketing margin (Rs./kg)	503.58	503.58	503.58
Marketing margin (Per cent)	(79.93)	(60.67)	(53.01)
Producer sell price (Rs./kg)	630.00	630.00	630.00
Wholesalers/ Retailers			
wholesalers purchased price (Rs./kg)	-	630.00	630.00
Marketing cost (Rs./kg)	-	10.00	10.00
	-	(1.20)	(1.05)
Total cost	-	640.00	640.00
	-	(77.11)	(67.37)
Marketing margin (Rs./kg)	-	190.00	190.00
Marketing margin (Percent)	-	(22.89)	(20.00)
Producer sell price (Rs./kg)	-	830.00	830.00
Village merchant			
Purchased price (Rs./kg)	-	-	830.00
Marketing cost (Rs./kg)	-	-	10.00
	-	-	(1.05)
Total cost	-	-	840.00
	-	-	(88.42)

Marketing margin (Rs./kg)	-	-	110.00
Marketing margin (Per cent)	-	-	(11.58)
Producer sell price (Rs./kg)	-	-	950.00
Consumer price	630.00	830.00	950.00
Price spread	22.38	32.38	32.38
Producer share in consumer's rupee (%)	17.46	13.25	11.58
Marketing efficiency (%)	88.34	89.94	90.16

Constraints in cashew nut marketing

The Table 6 revealed that there were six major problems in cashew nut marketing confronted by sampled cashew nut growers among these problem low price of cashew nut most severe problem with 66.03 average score in Garret ranking, followed by problem of crop marketing problems (62.62) and lack of grading Facilities (57.62) respectively.

Table 6: Ranking and traits associated to cashew nut marketing in Bastar district of Chhattisgarh

Problems of marketing		
Lack of marketing intelligence	47.01	IV
Lack of transportation facilities	42.74	V
Lack of storage facilities	37.16	VI
Marketing problems (like direct selling)	62.62	II
Low price of cashew nut	66.03	I
Lack of grading Facilities	57.62	III

Suggestion

To identify the different marketing channels of cashew nut production and marketing in Chhattisgarh state. Cashew processing industry should also be established for the promotion of cashew nut cultivation area and production. Co-operative societies should be formed more and more for the marketing of cashew nuts and they should be used only. Suggestions for future work should mention about the need to examine the processing and value chain study of cashew nut.

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