

Marketing Costs and Margins in the Marketing of Groundnut in Punjab

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ABSTRACT

The present study was undertaken to examine the production, consumption and marketed surplus of groundnut on different size categories of farms in Hoshiarpur district, to estimate the marketing costs and margins of various intermediaries in the marketing of groundnut and to analyse the constraints associated with the marketing of groundnut in the study area. Primary data for the year 2017-18 were collected from 60 farmers comprised of 34 small, 14 medium and 14 large farmers from three villages of Bhunga block of Hoshiarpur district. To study the marketing aspects data were collected from various intermediaries in Hoshiarpur market. It was observed that the average size of holding in case of small, medium and large farmers was 4.73, 15.18 and 33.57 acres respectively. The area under groundnut on said categories of farmers was 3.48, 12.63 and 25.39 acres respectively. The marketed surplus in groundnut was found highest on large farms (99.53%) as compared to medium farms (98.89%) and small farms (95.61%). Only one marketing channel i.e., Producer-Commission Agent-Wholesaler-Roaster-Cum-Retailer-Consumer was identified in the study area for marketing of the produce. Price spread was estimated to be Rs.5027.00 in the prevailing channel. Producer's share in consumer's rupee was found to be 41.21 per cent. In marketing of the produce major problems faced by the farmers were output price fluctuation, transportation of produce to the market, dependence on commission agent for sale and delayed payment etc.. Farmers should be encouraged to organize themselves into cooperatives which will help them improve the bargaining power and also generates scale economies in acquisition of inputs, services, and information. Better marketing facilities, standardization of minimum support price are generally required to make groundnut production a remunerative enterprise in the study area. Govt. price policy should ensure better minimum support price to groundnut growers for their produce with a view to encourage the increase in area and production.

Keywords: Marketing Costs, Groundnut, kharif season

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INTRODUCTION

Groundnut is one of the principal and an important oilseed and supplementary food crops in the world. It is fourth most important source of edible oil and third most important source of vegetable protein. Groundnut crop was raised on 25.30 million hectare area with total production of 43.07 million metric tons in 2016-17 in the world. China is the largest producer of groundnut, contributing over 40.67 percent of the world production and around 20 percent of area (Anonymous 2018a). Globally, with annual all-season coverage of about 70 lakh hectares, India ranks first in acreage and with an output of about 85 lakh metric tonnes of in-shell groundnuts, it ranks second in production [1].

Gujarat is the leading groundnut producer with the largest area under this crop in the country. Gujarat alone accounted for 25.14 percent of area and 25.22 percent of groundnut production of whole country. Andhra Pradesh is the second largest producer of groundnut in the country. Both Gujarat and Andhra Pradesh accounted for more than 10 percent of total cropped area under groundnut crop. Rajasthan and Karnataka are third and fourth

largest producers of groundnut in the country. Major groundnut producing states were Gujarat, Andhra Pradesh, Rajasthan and Karnataka in India during 2016-17. However, total area under these states was decreased by 6.30 lakh ha (-13.4 percent) from 47.10 in 2016-17 to 40.80 lakh ha in 2017-18 and total production of crop also decreased by 2.75 lakh metric tonnes (-5 percent) from 53.75 in 2016-17 to 51.00 lakh metric tonnes in 2017-18 [2].

Groundnut is cultivated largely in *kharif* season mostly under rain-fed conditions in India. The area under groundnut cultivation was 6.80 million ha during 1980-81, which increased to about 8.71 million ha in 1989-90. The area under groundnut cultivation witnessed a significant decline to 4.68 million ha in 2014-15. The average groundnut production also showed fluctuations. It was 5.01 million tonnes in 1980-81 and increased rapidly to 8.10 million tonnes in 1989-90. The production of groundnut had seen a boom with production of 9.71 million tonnes in year 2014-15. The yield of groundnut increased from 736 kg per hectare in 1980-81 to 930 kg per hectare in 1989-90 and then to 1445 kg per hectare in 2016-17 [3].

With the increased level of incomes, growing population and urbanization, the demand for oils (edible or non-edible) is rising. This demand of vegetable oils has been rising at the rate of 6 percent annually but the domestic output has been increasing at just about 2 percent annually [8]. With increased per capita consumption (18 kg per annum), vegetable oils demand is likely to touch 20.4 million tonnes by 2017. (Anonymous 2017b). A substantial portion of our requirement of edible oil is met through import of palm oil from Indonesia and Malaysia. The import of edible oils is also increasing gradually. Production of edible and non-edible vegetable oils was 7.6 million tons while the import of vegetable oil was 15.0 million tons during 2016-17. Production of groundnut oil was 5.70 lakh metric tonnes in India during 2016-17. The continued dependence on imports to meet the edible oils demand causes a significant depletion of foreign exchange reserves of the country. According to present scenario, India is spending over Rs.70,000 crores for import of edible oils per annum and dependence on import is nearly 70 percent. This present scenario depicts that there is an urge need to boost up production of oil seeds in the country with the available resources. In Punjab, the production of oilseeds decreased rapidly because of increase in area under cereals crops. . Groundnut is grown only in Hoshiarpur district in the Punjab state in very small area i.e., nearly 1.2 thousand hectares. The productivity of groundnut in Punjab was 816 kg per hectare in 1990-91 which increased to 1739 kg per hectare in 2012-13 and then to 1920 kg per hectare in 2016-17 [4, 5].

Along with production, efficient agricultural marketing is being increasingly recognized as a powerful tool for agricultural development. But it has been observed that oilseed marketing in general and groundnut marketing in particular is mainly in hands of middlemen like village merchants, wholesalers and private oil millers etc. Thus, marketing becomes costly with high commission charges, trader's profit margins, wastages and malpractices [6] producers get less share of consumer's rupee. It is felt that farmers are not getting remunerative price of their produce. It becomes necessary to examine the marketing costs and margins of the intermediaries from time to time. In this backdrop, the present study was undertaken (1) to examine the production, consumption and marketed surplus of groundnut on different size categories of farms in Hoshiarpur district (2) to estimate the marketing costs and margins of the intermediaries in marketing of groundnut and (3) to analyse the constraints associated with the marketing of groundnut in the study area.

MATERIAL AND METHODS

Multistage sampling technique was used to select the sample respondents. Hoshiarpur district was purposively selected for having the highest area of groundnut in Punjab. At the first stage of sampling, one block namely Bhunga was selected as the density of groundnut growers was the highest. Three villages namely Ramtatwali, Sheikha and Mastiwal from Bhunga block were chosen randomly at the second stage of sampling. From each village, 20 farmers were selected randomly making a sample of 60 groundnut growing farmers for the study. Farmers were then categorized into three categories viz. small, medium and large. The selection of farmers was done on the basis of probability proportional to the number of farmers in each category. Consequently, 32 small farmers, 14 medium farmers and 14 large farmers were selected based on their area under groundnut. Primary data were collected

from sample households for the year 2017-18 by personal interview method using specially designed & pre-tested schedules. Information regarding the input use pattern and returns obtained from the groundnut crop and costs, returns and profits in groundnut were computed on per acre basis. Separate schedules were prepared to collect the information relating to source of purchase, source of sale, marketing costs and margins from different market intermediaries.

To analyze the price spread in marketing of groundnut, Hoshiarpur market was selected on the basis of highest quantitative arrival of groundnut. A list of various market functionaries operating in the selected market was prepared. A random sample of five intermediaries each i.e., Wholesaler & Roaster-Cum-Retailer, were selected. A sample of 20 consumers from the study area was thereafter selected randomly to examine the actual price paid of groundnut and the share of different agencies in consumer's rupee.

Concepts used:

Marketed surplus

It is the quantity which the producer actually sells respective of his needs for home consumption and other requirements.

Marketing channels

These refer to the chains of intermediaries through which rapeseed and mustard pass on from the producer to ultimate consumers.

Producer's share in consumer rupee

It is the price received by the farmer expressed as a per cent of the retail price (price paid by the consumer). The producer's share in consumer's rupee may be expressed as follows:

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

Where,

Ps= Producer's share in consumer's rupee

Pf= Producer's price

Pr= Retail price

Price spread

The price spreads of groundnut in the sample market were investigated. The price spread refers to the difference between the price paid by the consumer and the price received by the producer for an equivalent quantity at a given point of time in a specific market.

Marketing margins

Marketing margin is the difference between the total payment (cost + purchase price) and receipt (sale price) of the middlemen.

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

Where,

A_{mi}=Absolute margin of ith middleman

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

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

C_{mi}= Cost incurred on marketing per unit

Garrett's Ranking Technique:

Garret's Ranking Technique was used to rank the problems perceived by the sampled respondents in the marketing of groundnut. The degree of response with regard to problems faced by sampled respondents was ranked. The most prevalent problem was given 1strank and accordingly the next important problem was ranked on the basis of the severity of the problem.

$$\text{Per cent position} = 100 \cdot (R_{ij} - 0.5) / N_j$$

Where

R_{ij} = Rank given for ithitems/problems by the Jth respondent

N_j = Number of items/problems ranked by the Jth respondent

The relative position of each rank is converted into scores by referring the table given by Garrett and Woodworth [9]. Then for each factor problem, the scores of individual respondents were added together and mean score was calculated. The factor with highest mean score was considered to be the most important problem.

RESULTS AND DISCUSSION**Agro-socio-economic characteristics of the sampled farmers.**

An attempt has been made to document the important agro-socio economic characteristics of the respondent households, which include age, family size, education status of head of the family, operational size of holding, occupation information etc. The agro-socio-economic characteristics of the sampled farmers is presented in Table 1.

Table-1: Agro-socio-economic characteristics of the sampled farmers.

Sr. No.	Particulars	Sampled farmers(60)
1.	Age of the respondents (years)	
	upto35	24(40.00)
	36-45	11(18.33)
	46-55	14(23.34)
	Above 55	11(18.33)
	Total no. of farmers	60 (100)
2.	Family size	5.00
	Family composition	
	Adult male	2.02
	Average farm workers	1.30
	Adult female	2.07
	Average farm workers	-
	Children	1.0
	Average farm workers	-
3.	Education of head of family	
	Illiterate	12(20.00)
	Upto Primary	18(30.00)
	Upto Matric	17(28.34)
	Sr.Secondary	5(8.33)
	Graduate and above	8(13.33)
	Total no. of farmers	60(100.00)
4	Average operational holding	
	Owned land	7.28
	Leased in land	6.62
	Operational holding (Acres)	13.90(100.00)
	Irrigated	10.56(75.96)
	Un-irrigated	3.34(24.04)
5.	Occupation	
	Agriculture	42(70.00)
	Agriculture & dairy	7(11.67)
	Agriculture and other activities*	11(18.33)
	Total sample size	60(100.00)

Figures in parentheses indicate the percentages to their respective totals.

Overall, the percentage of selected households falling within the age group of up to 35 years, 36 to 45 years, 46 to 55 years and above 56 years was 40, 18.33, 23.34 and 18.33 per cent respectively. The awareness and knowledge level of farmers can be best judged through their education level because better education enables to understand the advance practices, farming technologies and their possible adoption by them on the farms to enhance profitability. On an average, the percentage of farmers who were illiterate, had education up to primary, matric, senior secondary and graduate was 20.00, 30.00, 28.34, 8.33 and 13.33 per cent respectively.

Family size and its composition is an important contributory of crop production. It provides labour to perform different crop operations. On an average, farmers had 5 members in their family. Overall, the composition of families in terms of average number of adult males, adult females and children was 2.02, 2.07 and 1.0 respectively. Out of 2.02 males, only 1.30 were farm workers. Overall, 70 percent of farmers were engaged in agriculture while 11.67 percent and 18.33 farmers were engaged in dairy or some other activities respectively.

On the sampled farms, average operational land holding was 13.90 acres while average owned and average leased-in land was 7.28 and 6.62 acres respectively. At overall level,

75.96 per cent area was under irrigated and 24.04 per cent area was found un-irrigated.

Area under groundnut

The perusal of Table 2 depicts the average operational land holding and average area under the groundnut crop in the different categories of farmers. On overall basis, operational average area under groundnut was found to be 77.20 per cent (10.73 acres) of the operational holding. Average operational land holding of small, medium and large farmers were 4.73, 15.18 and 33.57 acres respectively, while the average area under groundnut on respective categories of farmers was 3.48, 12.63 and 25.39 acres respectively. The percent area under groundnut was respectively 73.57, 83.20 and 75.63 per cent of the operational holding for small, medium and large farmers respectively.

Table 2: Area under groundnut crop on the sampled farms in Hoshiarpur district, Punjab, 2017-18 (In acres)

S No	Particulars	Farm size categories			Overall
		Small	Medium	Large	
1	Average operational holding	4.73	15.18	33.57	13.90
2	Average area under groundnut	3.48	12.63	25.39	10.73
3	Percent area under groundnut crop (2/1)*100	73.57	83.20	75.63	77.20

Cropping pattern

The major kharif and Rabi crops in study area were groundnut and wheat that were grown on about 39 and 44 percent area respectively. The perusal of Table 3 indicated that gross cropped area under small, medium and large farmers was 9.46, 30.36 and 67.14 acres respectively. The medium farmers allocated more area under groundnut i.e., 41.60 per cent followed by 37.81 per cent and 36.78 per cent by large and small farmers respectively. After groundnut crop, highest proportion of area was allocated under paddy by small (6.98 %), medium (4.94%) and large farmers (4.78 %) respectively. In rabi season area allocated under wheat on small, medium and large farms was 43.76 , 45.95and 42.79 percent of the gross cropped area respectively.

Table 3: Cropping pattern on the sampled farms in Hoshiarpur district, Punjab 2017-18 (In acres)

Particulars	Farm size categories			Overall
	Small	Medium	Large	
Kharif crops				
Groundnut	3.48 (36.78)	12.63 (41.60)	25.39 (37.81)	10.73 (38.59)
Vegetables	0.06 (0.63)	0.08 (0.26)	0.4 (0.60)	0.14 (0.52)
Maize	0.18 (1.90)	0.23 (0.75)	1.18 (1.76)	0.43 (1.52)
Sugarcane	0.08 (0.85)	0.46 (1.52)	3.05 (4.54)	0.86 (3.10)
Paddy	0.66 (6.98)	1.50 (4.94)	3.21 (4.78)	1.45 (5.23)
Fodder (Sorghum)	0.27 (2.85)	0.28 (0.93)	0.34 (0.51)	0.29 (1.04)
Zaid crop				
Spring maize	0.14 (1.48)	0.28 (0.92)	1.01 (1.50)	0.38 (1.36)
Rabi crops				
Wheat	4.14 (43.76)	13.95 (45.95)	28.73 (42.79)	12.17 (43.77)
Vegetables	0.08 (0.85)	0.11 (0.36)	0.38 (0.57)	0.16 (0.56)
Sugarcane	0.08 (0.85)	0.46 (1.52)	3.05 (4.54)	0.86 (3.10)
Fodder (Barseem)	0.29 (3.07)	0.38 (1.25)	0.4 (0.60)	0.34 (1.21)
Net cropped area	4.73	15.18	33.57	13.90
Gross cropped area	9.46 (100.00)	30.36 (100.00)	67.14 (100.00)	27.80 (100.00)

Note: Figures in parentheses are the percentages to the gross cropped area

Production, consumption and marketed surplus of groundnut

Table 4 depicts that selected respondents retained groundnut crop for seed, home consumption, gifts & donation and sold as seed. The table reveals that 1.34 per cent of the total groundnut produce was used for home consumption by small farmers followed by medium (0.13%) and large farmers (0.03%). It was observed that medium farmers sold 0.15 per cent of produce as seed followed by small farmers (0.06 %) and large farmers (0.05 %). The small farmers kept 1.71 per cent of the produce for seed purposes for next crop as compared to medium farmers (0.70 %) and large farmers (0.32%). The small farmers gifted and donated 1.28 per cent of produce to their relatives.

Table 4: Production, consumption and marketed surplus of groundnut on the sampled farms in Hoshiarpur district, Punjab, 2017-18 (Qtls/farm)

S No.	Particulars	Farm size categories			Overall
		Small	Medium	Large	
1.	Total production	16.39 (100.00)	60.11 (100.00)	143.47 (100.00)	56.24 (100.00)
2.	Utilization				
i	Quantity sold as seed	0.01 (0.06)	0.09 (0.15)	0.07 (0.05)	0.04 (0.08)
ii	Seed	0.28 (1.71)	0.42 (0.70)	0.46 (0.32)	0.35 (0.63)
iii	Home consumption	0.22 (1.34)	0.08 (0.13)	0.05 (0.03)	0.15 (0.26)
iv	Gifts & donation	0.21 (1.28)	0.08 (0.13)	0.09 (0.06)	0.15 (0.27)
3.	Marketed surplus	15.67 (95.61)	59.44 (98.89)	142.80 (99.53)	55.55 (98.76)

Note: Figures in parentheses are the percentages to their respective totals.

On an average, 0.63 per cent of the produce was kept for seed. In case of large farms, marketed surplus was higher (99.53%) as compared to medium farms (98.89%) and small farms (95.61%) because large farms retained less produce for home consumption, seed, quantity sold as seed and gifts and donations. Similar findings were depicted by Choudhary *et al*, [7].

Marketing of groundnut

Marketing of a commodity is an important part of every production process. Marketing channel refers to part through which a commodity move from the producer to ultimate consumer. It is the desired that the movement of goods from producer to consumer should be at the minimum cost consistent with provision of services. One marketing channel was identified in the study area through which the commodity passes from producer to consumer:

Producer- Commission Agent- Wholesaler- Roaster-Cum Retailer- Consumer

Price spread in groundnut marketing

Price spread in the marketing of groundnut in market of Hoshiarpur district is presented in the Table 5. This was the main channel of marketing of groundnut in Hoshiarpur district. The net price received by consumer was Rs. 3523.78 in Hoshiarpur market. Costs incurred by the producer on transportation, cleaning, loading & unloading and wastage were 0.47, 0.04, 0.06 and 0.41 per cent respectively. Costs incurred by commission agent on storage was 0.20 per cent and margin of the commission agent was 2.95 per cent of the price paid by consumer.. The purchase price of wholesaler's was Rs. 3877.53 and the sale price of the wholesaler was Rs. 4872.12.. The costs incurred by wholesaler were transportation cost, market fees @2 %, R.D.F @ 2%, cost of gunny bags, cost of storage, cost of filling, stitching charges and labour charges and these were Rs. 0.36, 0.91, 0.91, 0.21, 0.40, 0.05, 0.04 and 0.07 per cent of the consumer rupee. respectively. The market margin of wholesaler's was 8.68 per cent. Costs incurred by roaster-cum-retailer for transportation, storage, packaging and roasting charges were 0.41, 0.13, 0.70 and 23.10 per cent respectively of the consumer rupee.. The market margin of Roaster-Cum-Retailer's was 18.66 per cent. Total market

margins, total marketing cost and price spread was 30.30, 28.49 and 58.79 per cent respectively of the consumer rupee. The producer's share in consumer's rupee was 41.21 per cent.

Table 5: Price spread of groundnut in Channel: Producer-Commission Agent-Wholesaler-Roaster-Cum-Retailer-Consumer in Hoshiarpur district of Punjab, 2017-18 (Rs./qtls)

Sr. no	Particulars	Amount (Rs./qtl)	Percentage of consumer price
1	Producer's sale price/ commission agent purchase price	3607.50	42.19
2	Costs incurred by producer		
i.	Transportation charges	40.76	0.47
ii.	Loading & unloading charges	4.32	0.06
iii.	Cleaning charges	3.40	0.04
iv.	Wastage 1 %	35.24	0.41
iv.	Total marketing cost by producer	83.72	0.98
v	Net price received by producer	3523.78	41.21
3	Costs incurred by Commission agent		
i.	Storage	17.5	0.20
ii.	Total marketing cost by Commission Agent	17.5	0.20
iii.	Commission Agent's sale price/ wholesaler's purchase price	3877.53	45.34
iv.	Commission Agent's margin	252.53	2.95
4	Costs incurred by wholesaler		
i.	Transportation charges	30.67	0.36
ii.	Market fees @ 2%	77.55	0.91
iii.	R. D. F @ 2 %	77.55	0.91
iv.	Cost of gunny bags	17.70	0.21
v	Filling	4.40	0.05
vi.	Storage cost	34.00	0.40
vii.	Stitching charges	4.02	0.04
viii.	Labour charges for unloading	6.25	0.07
ix.	Total marketing cost by Wholesaler	252.14	2.95
x	Wholesaler's Margin	742.45	8.68
xi	Wholesaler's sale price/ Roaster-Cum-Retailer's purchase price	4872.12	56.98
5	Costs incurred by Roaster-Cum-Retailer		
i.	Transportation charges	35.53	0.41
ii.	Storage cost	11.25	0.13
iii.	Packaging cost	60.00	0.70
iv.	Roasting charges	1975.77	23.10
v.	Total marketing cost by Roaster	2082.55	24.35
vi.	Roaster-Cum-Retailer's sale price/ Consumer's purchase price	8550.78	100.00
vii.	Roaster-Cum-Retailer's margin	1596.11	18.66
6	Total marketing cost	2435.91	28.49
7	Total marketing margins	2591.09	30.30
8	Price spread	5027.00	58.79
9	Producer's share in consumer's rupee (%)		41.21

Constraints related to marketing of groundnut

The constraints as perceived by groundnut farmers during the marketing of groundnut are summarized in table 6. According to Garrett Mean score, price variability was given the top rank. Transportation of produce to market was the second major constraint in marketing of

produce. Delayed payment was given third rank by the groundnut farmers. As there was lack of marketing channel and most of the farmers sold their produce to a single intermediary, who used to exploit farmers by making delayed payments. As perceived by farmers, lack of minimum support price was another important constraint in marketing of groundnut. Even during the low demand season, farmers had to sell produce immediately, due to lack of storage facilities. Low market demand and movement of stray animals in the markets occupied fifth and sixth position respectively. Similar findings were observed by Balaji *et al* [6].

Table6: Perceived constraints in the marketing of groundnut in Hoshiarpur district, Punjab, 2017-18

Sr. No.	Particulars	Total score	Garrett Mean score	Rank
1.	Transportation of produce to market	4164	69.40	2
2..	Low market demand	2800	46.67	5
3.	Delayed payment	3685	61.42	3
4.	Stray animals	2785	46.42	6
5.	Lack of minimum support price	3250	54.17	4
6.	Price variability	4836	80.60	1

Conclusions

Based on the finding it is inferred that, the cropping pattern of sampled farmers was dominated by groundnut crop and it contributed about (38.59 %) share in the gross cropped area which was greater than competing crops viz . maize and paddy. On an average the marketed surplus of groundnut was estimated 55.55 qtls/ farm (98.76%) which varied from 15.67 qtls /farm (95.61%) on small and 142.80 qtls/ farm (99.53%) on large farms Only one marketing channel i.e., Producer-Commission Agent-Wholesaler-Roaster-Cum-Retailer-Consumer was identified in the study area for marketing of the produce. Producer's share in consumer rupee's in groundnut was estimated to 41.21 per cent. The results revealed that as the number of market functionaries increases , they add value to the commodity in the marketing channels resulting in fall in producer's share in consumer rupee's. Low price, delayed payment to producer sellers , low market demand, movement of stray animals in the market yard, lack of minimum support price etc. marketing problems were identified in study area.

Policy Implications

Co-operative marketing societies should be organized to enable the producer sellers to realize better prices for their produce. Arrangement of pooling of small lots would go a long way in reducing exploitation of small producers by traders. Small scale processing units in groundnut producing areas will not only increase employment but also improve the economic condition of farmers through value addition in the raw product. Govt. price policy should ensure better minimum support price to groundnut growers for their produce with a view to encourage the increase in area and production.

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