



## PRODUCTION AND MARKETING OF MUSHROOM IN KANPUR NAGAR DISTRICT OF UTTAR PRADESH

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**ABSTRACT:** The present study was conducted in Kanpur Nagar district of Uttar Pradesh with 60 mushroom growers selected from five villages and categorized as small, medium and large based on wheat straw used by them mainly to study the marketing practices and channels involved in the marketing of mushroom and to estimate the selecting costs, margins and price spread. The study reveals that women co-operative society was the most important agency in the marketing of mushroom. Average quantity sold on per farm basis was 6.17 quintals. Half of the producer – sellers preferred to sell mushroom in 1 to 2 quintals size plot. Mushroom quantity (about 66 per cent) of mushroom was sold within the village by majority of producer-sellers (about 70 per cent). Three channels were identified in the marketing of mushroom. Producer's share in consumer's rupee was the highest (98.53 per cent) in channel-1 (farmer-consumer). Retailer earned to maximum marketing margin (12.89 per cent) in the marketing of mushroom.

**Keywords:** Mushroom, producers, consumers, retailers, wholesaler, paddy straw, wheat straw.

The mushroom crop is grown practically all over India with 50,000 tonnes production during 2009-10. The major mushroom growing states are Uttar Pradesh, Tamilnadu, Rajasthan, Maharashtra, Punjab, Haryana and Andhra Pradesh.

In Uttar Pradesh, the work on mushroom was initiated in late sixties. The state has conducive climate for ripening button, oyster and paddy straw mushroom. At present in Uttar Pradesh mushroom production is about 750 tonnes per annum due to installation of some big mushroom units nearby Kannauj, Ramabai Nagar, Unnao, Fatehpur and Fatehgarh cities. Among various districts of Uttar Pradesh Kanpur Nagar ranks first it ranks the first in production of mushroom. In Kanpur Nagar District, All India Co-ordinated mushroom improvement project is also functioning. Though mushroom is an important cash crop of the state. There is no location specific information on mushroom. With regards to its growth and various production and marketing aspects like cost of production, disposal pattern, cost, margin and price spread in the marketing of mushroom, the present study was undertaken in Kanpur Nagar district of Uttar Pradesh with the objectives of : 1. To study the marketing practices and channels involved in

the marketing of mushroom in the selected area. 2. To study the marketing costs and margins in mushroom marketing, and 3. To estimate the production share in consumer's rupee.

### MATERIALS AND METHODS

A list of all villages where AIMCMIP (All India Coordinated Mushroom Improvement Project) is providing technical support in Kanpur Nagar district was prepared and out of these five villages were purposively selected on the basis of the highest number of mushroom growers. The selected villages were divided into two zones i.e. zone I : villages on the road and distance of less than 15 kms from the market, and zone-II villages away from the road and at distance of 15 kms and more from the market. Thus, out of these selected five villages, three villages viz, Bidhnu, Patara, Kalayanpur were in zone I and remaining two villages viz., Singhpur and Sheorajpur were of zone II.

A list of mushroom growers was prepared for all the selected villages separately and the producers were divided in the three size groups on the basis of wheat straw used for mushroom cultivation.

1. Small size group: Less than one tonne

wheat straw used, 2. Medium size group: 1-2 tonnes wheat straw used, 3. Large size group: More than two tonnes wheat straw used.

From each selected village 12 respondents were randomly selected in proportion in the number of growers in each size holding. Thus in all 60 respondents were selected. Both secondary and primary data were collected for the year 2010-11. To fulfill the stated objectives, tabular analysis was used. Marketing efficiency was calculated by using Acharys' a index of marketing efficiency (Acharya 1).

## RESULTS AND DISCUSSION

The sale of mushroom can vary according to the mushroom growers size groups and the quantity produced. Therefore the production and sale of mushroom was analysed in relation to size groups and size of production.

The data presented in Table 1 show that about 46 per cent of the total mushroom production was contributed by medium size group and the remaining 54 per cent was almost equally contributed by small and large size groups. Production of mushroom perfarm increased with the increase in the size of unite. The average production per farm was 6.52 quintals. Small, medium and large size groups produced 2.52, 15.00 and 17.50 quintals of mushroom per farm, respectively.

Overall quantity of mushroom marketed by selected growers was 93.33 per cent of the total production. Across the size groups, both small and

medium growers sold 94.34 per cent while large growers sold 97.14 per cent of their total mushroom production. Thus, more than 93 per cent of the total production was sold by different size groups confirming the findings of Chanda (3).

The average quantity of mushroom sold per seller farm was 6.17 quintals. Quantity of mushroom sale of per farm by small, medium and large size groups were 2.38, 14.00 and 17.00 quintals, respectively. Thus sale of seller increased with increase in size of unit.

The number of sellers and quantity of mushrooms sold according to size of lots by different size groups (Table 2) clearly indicates that nearly 80 per cent of the total quantity was sold by 85 per cent producer sellers in different size of lots i.e <1, 1-2, 2-4 and above quintals. The remaining 20 per cent mushroom quantity was sold by 15 per cent producer sellers in combination of different size of lots.

Maximum number of producers sellers sold the maximum quantity i.e. 128.87 quintals (34.83 per cent) of the total sale in lot size of 1-2 quintals. The minimum quantity i.e. 36.90 quintals (9.97 per cent) was sold by 12 (20.00 per cent) producer sellers in the lot size of less than 1 quintal.

Across the size groups producer of small size groups sold mushroom in lot size of less than one quintals, 1-2 quintals and in the combination of these two lots. The maximum quantity (46.62%) was sold by maximum producer-sellers (59.52%) of this size group in the lot size of 1-2 quintals, 2-4

**Table 1: Mushroom production and sale according to size groups.**

Size group	No. of producer	Production (q)		Quantity sold (q)	
		Total	Per farm	Total	Per farm
Small	42	106	252	100	238
Medium	12	180	15	168	14.00
Large	6	105	17.50	102	17.00
Total	60	391	6.52	370	6.07

**Table 2: Number of sellers and quantity of mushroom sold according to size of lots by different size-groups.**

Particulars	Size of lots (quintals)					Total
	<1	1-2	2-4	4 & above	Combination of different size of lots	
Small number of sellers	12 (28.57)	25 (59.52)	-	-	5 (11.91)	42 (100.00)
Medium number of sellers	-	5 (41.67)	3 (25.00)	1 (8.33)	3 (25.00)	12 (100.00)
Quantity sold (qtls)	-	82.25 (48.96)	19 (11.59)	33.36 (19.80)	33.02 (19.65)	168 (100.00)
Total No. of sellers	12 (20.00)	30 (50.00)	7 (11.67)	2 (3.33)	9 (15.00)	60 (100.00)
Quantity sold (qtls)	36.90 (36.90)	46.82 (46.62)	-	-	16.48 (12.48)	100 (100.00)

Figure in parenthesis are percentage of respective row total.

quintals, 4 quintals and above and in the combination of these three lots.

In this size groups also the maximum quantity (48.96%) was sold by the maximum producer-sellers (41.67%) in the lot size of 1-2 quintals. The producer-seller of large size group did not sell their mushroom in small size of lot i.e. less than 1 quintal and 1-2 quintals, 4 quintals and above and the combination of these two lots. The maximum producer-sellers (66.66%) of this group sold their maximum quantity (54.16%) in the lot size of 2-4 quintals. Thus, it can be concluded that maximum quantity was sold by maximum number of producer sellers in lot size of 1-2 quintals and minimum quantity was sold in the lot of size of less than 1 quintal. The minimum number of producer-sellers belonged to lot size of 4 quintals & above. The maximum producer-sellers of small and medium size groups sold their maximum quantity of mushroom in the lot size of 1-2 quintals while the maximum producer-sellers of large size group sold the maximum quantity of mushroom in the size of 2-4 quintals.

#### Place of sale:

The data presented in Table 3 reveal that maximum quantity i.e. 66 per cent of total mushroom was sold with villages while about 25

per cent quantity was sold in Kanpur Nagar market and the remaining 9 per cent quantity of mushroom was sold in combination of different places of sale i.e., sold in more than one place of sale. In the sale of small size of groups the higher number of producers i.e. 35 (83.33 per cent) sold the maximum quantity (83 per cent) with in the village followed by 4 (9.53%). Producer – sellers who sold 10 per cent quantity of mushroom in Kanpur Nagar market. The remaining 7 per cent quantity of mushroom was sold by 7.14 per cent producer – sellers in both the place of sale i.e. with in the village and sellers in both the place of sale i.e. with in the village and in Kanpur Nagar market.

In medium size group about 74 per cent of the total quantity was sold by 50 per cent of the producer – sellers with in the village followed by 25 per cent producer – sellers who sold 20 per cent quantity of mushroom in Kanpur Nagar market. The remaining 6 per cent quantity of mushroom was sold by 25 per cent producer – sellers in both places of sale.

In the large size group two-third of producer – seller (66.67 per cent) sole of the maximum quantity i.e. 47.06 per cent of their total sale of mushroom in Kanpur Nagar market and one-sixth (16.67 per cent) of producer- sellers sold (36.27 per cent) with in village. The remaining one – sixth

**Table 3: Number of sellers and quantity of mushroom sold according to place of sale by different size group of farms.**

Particulars	Within village	Place of sale		Total
		Kanpur Nagar market	Combination of different places of sale	
Small no. of sellers	35 (83.33)	4 (9.53)	3 (7.14)	42 (100.00)
Quantity sold (qtls)	83 (83.00)	10 (10.00)	7 (7.00)	100 (100.00)
Medium no. of sellers	6 (50.00)	3 (25.00)	3 (25.00)	12 (100.00)
Quantity sold (qtls)	124.32 (74.00)	33.60 (20.00)	10.08 (6.00)	168 (100.00)
Large no. of sellers	1 (16.67)	4 (66.66)	1 (16.67)	6 (100.00)
Quantity sold (qtls)	34 (36.27)	48 (47.06)	17 (16.67)	102 (100.00)
Total	42 (70.00)	11 (18.33)	7 (11.67)	6 (100.00)
No. of sellers/quantity sold (qtls)	244.32 (66.03)	91.60 (91.60)	34.08 (9.21)	370 (100.00)

(16.66 per cent) producer–sellers sold the remaining one-sixth quantity of mushroom in both these place of sale. The findings are in consonance with Acharya and Agrawal (1) and Chauhan and Sood (4).

In all, the maximum produce of 244.32 quintals (66.03 per cent) was sold with in the village by the majority of producer – sellers i.e. 70 per cent, whereas about 92 quintals (about 25 per cent) was sold in Kanpur Nagar market by 18 per cent producer–sellers. The remaining 34.08 quintals (9.21 per cent) of mushroom was sold by 11.67 per cent producer – sellers in both the places of sale i.e., with in the village and in Kanpur Nagar Market.

#### **Marketing channels:**

Marketing channels are the routes through which mushroom moves from producer to ultimate consumer. In this process, mushroom has to pass through more than one hand, except when it is directly sold to consumer by producers. In the marketing channels for mushroom various

agencies. The following channel were identified in mushroom marketing in the study area.

#### **Channel I:**

In this channel producers sold 14.19 per cent of total mushroom directly to consumer or consumers purchased mushroom directly from producers.

#### **Channel II:**

In this channel, producers sold 60.81 per cent of the total sale of mushroom to societies with in the village.

#### **Channel III:**

Through this channel producers sold 25 per cent of the total mushroom to wholesaler in regulated market of kanpur Nagar by arranging their own transportation. Thus, it can be concluded that channel- II was the most important channel by which maximum quantity of mushroom (60.81 per cent) reached the consumer followed by channel- III (25 per cent).

Channel I was less important because only

**Table 4: Quantity of mushroom moved through various marketing channels.**

S. No.	Channels	Quantity moved (qtls)	Percentage of quantity moved
1.	Producer – consumer	52.50	14.19
2.	Producer – societies – consumer	225.00	60.81
3.	Producer – wholesaler – retailer – consumer	92.50	25.00
	Total	370.00	100.00

(14-19 per cent quantity) of mushroom was sold through this channel.

#### **Marketing cost of mushroom in different marketing channels:**

The marketing charges of the different channels are summarized in Table 5. Marketing charges varied considerably from channel to channel and were related directly with the length of channels distance of the market), i.e. the longer the channel and distance, more were the charges.

Channel – III (producer – wholesaler – retailer – consumer) being the longer channel and in this channel the highest marketing cost per quintal i.e. Rs. 127.48 were observed. The channel – I is the smallest channel accounting for the lowest marketing charges i.e. Rs. 97.06 per quintal.

Thus it may be concluded that as the length of channel increase the marketing cost also increases and vice-versa.

#### **Producer's share in consumer's rupee in mushroom marketing :**

A comparative view of producer's share and the marketing costs and margins of the various intermediaries involved in the different marketing channels it is presented in Table 6. It is evident from the table that producer's share in consumer's rupee

decreased with the increase in the length of the marketing channels. The producer's net share was the highest (98.53%) in channel- I while the lowest (79.23%) in channel-III.

Channel-III was the least favourable to the producers at their share was the lowest in consumer's rupee. The consumers paid the lowest price when they purchased directly from the producer (Channel-I) and the highest price paid when to intermediaries were involved between the producer and consumer i.e. wholesaler and retailer in channel-III in the kanpur nagar market. The price paid by the consumer increased with the increase in the distance to sale of mushroom and the length of the marketing channels. In channel-III, where two intermediaries were involved the margin in channel-I as no marketing intermediary was involved and producer sold their produce directly to consumer. the retailer margin was more compared to wholesaler in channel-III. The profit of the wholesaler was 5.44 per cent and that of retailers was 13.99 per cent. The margin of societies was 8.91 per cent in channel-II. Findings of Boonlart (2) and Singh and Kalra (5) are also in line of present analysis.

#### **Marketing efficiency :**

In channel-I since no intermediary was

**Table 5: Marketing cost of mushroom in different marketing channels.****Rs. q/ha**

Marketing channel	Producer	Societies	Wholesaler	Retailer	Total
Channel - I	97.06 (100.00)	-	-	-	97.06 (100.00)
Channel - II	7.58 (7.15)	98.47 (92.85)	-	-	106.05 (100.00)
Channel - III	85.30 (86.91)	-	20.10 (15.77)	21.08 (17.32)	127.48 (100.00)

**Table 6: Quantity of mushroom moved through various marketing channels.**

S. No.	Particular	Channel-I		Channel-III		Channel-III	
		Rs. q/ha	%	Rs. q/ha	%	Rs. q/ha	%
1.	Net price received by producer/net share	6524.94	98.53	6384.93	89.60	5828.52	79.23
2.	Market cost incurred by						
	i. producer	97.06	1.47	7.58	0.11	85.30	1.16
	ii. Societies	-	-	98.47	1.38	-	-
	iii. Wholesaler	-	-	-	-	20.10	0.27
	iv. retailer	-	1.47	-	20.10	22.08	0.30
	Total marketing cost	97.06	1.47	106.05	1.49	127.48	1.74
3.	Net margin of						
	i. Societies	-	-	635.00	8.91	-	-
	ii. Wholesaler	-	-	-	-	100.00	5.44
	iii. retailer	-	-	-	-	100.00	13.59
	Total profit margin	-	-	635.00	8.91	1400.00	19.03
	Price paid by consumer	6622.00	100.00	7126.00	100.00	7356.00	100.00

**Table 7: Marketing efficiency of mushroom for different marketing channels.**

S. No.	Particular	Channel- II	Channel-II
1.	Net price received by producers (q/ha)	6384.95	5878.52
2.	Total marketing cost (Rs./qtl)	106.05	127.48
3.	Total marketing margins (Rs./qtl.)	633.00	1400.00
4.	Consumer's price (Rs./qtl.)	7125.00	7356.00
5.	Marketing efficiency (%)	8.62	3.82

involved and less quantity was moved from producer to consumer, marketing efficiency was not estimated for the channel.

The marketing efficiency presented in Table-7 for the remaining two channels, indicate that channel-II (861.61 per cent) was more efficient compared to channel-III (38.58 per cent).

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