

Marketing of watermelon in Allahabad District (UP) India

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Abstract

The present research entitled “Marketing of Watermelon in Allahabad District (UP) India” was carried out during the year 2016-17 in Soraon block of Allahabad district. The main objectives of the study are to analyze, socio economic characteristic of sample respondents, finding out the different marketing channels involvement in the marketing of watermelon and analyzing of marketing cost, marketing margin and producers share in consumers’ rupee. Out of the total villages of Soraon block, in total fourteen (14) villages and (140) respondents were selected randomly. Average size of land holding of respondents 2.65 hectares and most of the respondents were belonged to age group of 20 to 49 years (90 %), level of education is mostly primary (44.29%) and intermediate (36.43 %). Mean household size is nine persons. Mainly two marketing channels were found in the marketing of watermelon (Channel I – Producer – Commission agent – Retailers – Consumers) and (Channel II – Producer – Wholesaler – Retailers – Consumers). On an average per quintal, net price received by the producer was Rs. 307.13, consumer paid price was Rs. 1121.67, price spread was Rs. 741.67 and producer share in consumer rupee was 27.38 per cent in channel I on the sample farm groups. In channel II, on an average per quintal, net price received by the producer was Rs. 311.93, consumer paid price was Rs. 1115.33, price spread was Rs. 735.67 and producer share in consumer rupee was 27.97 per cent on different size farm groups. Main problems associated in the marketing of watermelon were lack of processing industries (100%), lack of storage facility (92.86%), lack of regulated market (80%), fluctuation of prices (75%) and high transportation charges (61.43%).

Keywords: watermelon, marketing efficiency, marketing cost, marketing margins, price spread

1. Introduction

Watermelon (*Citrullus lanatus*) is a native of tropical Africa, where it has long been used by the wild tribes. It came to India by the fourth century AD. The sweet juicy *pulp* of the ripe fruit is eaten fresh. Watermelon is a valuable alternative to drinking water in desert areas. The dried parched seeds are chewed, particularly in Southern China. Watermelon is made up of almost 95 per cent water. The remaining 5 per cent comprises fiber, proteins, fat and minerals. The fruit has juicy, pink, red or yellow flesh with numerous small black seeds. Watermelon is grown largely in China, Turkey, India and Iran in Asia, in Egypt and Algeria in Africa; in USA and Mexico in North America; in Bulgaria in Europe; in the Russian Federation; and in Brazil in South America. Traditionally, watermelon cultivation in India was confined to the riverbeds of the Yamuna, Ganges and Narmada in the north, and the Kaveri, Krishna and Godavari in the south. At present, it is grown in almost all parts of the country. It is a fast-growing cash crop for poor and marginal farmers with little acreage of their own. Currently, the total area under watermelon cultivation in India is about 30,000 hectares and the produce harvested is about 350,000 metric tons.

1.1 Objectives of the Study

1. To find out the different marketing channels involved in the marketing of watermelon.
2. To analyze marketing cost, marketing margin and producers share in consumers rupees.

2. Material and Methods

The present study was conducted in Allahabad district of Uttar Pradesh during 2016-2017.

Out of the total 20 blocks of district Allahabad, Soraon block was selected purposively for the study, as this block accounted for the maximum production of watermelon as well as this block was easily accessible to the researcher. This block has 57 panchayats and 106 villages in total. In the third stage, a complete list of all the watermelon cultivating villages of Soraon block was obtained from block development office. Out of the total 106 villages, 14 villages were selected randomly by simple random sampling technique. In the fourth stage, a list of all the watermelon growers of the selected villages was obtained from the village’s revenue office and the respective village heads. The watermelon growers were categorized into three groups on the basis of their size of land holding.

1. Small size group, which is having below one hectare of land.
2. Medium size group, which is having from one to two hectare land.
3. Large size group, which is having above two hectare land.

To identify the different marketing channels, the information were collected from the selected growers and other market functionaries, retailer on the disposal and the purchase of the produce were pooled together to analyze the movement of watermelons. The most common marketing channels engaged in the marketing of watermelon in Soraon Block were:

- 1. • Producers - Commission agent - Retailers - Consumers
- 2. • Producers - Wholesalers - Retailers - Consumers

Out of the total number of wholesalers in those mandi, 20 (10%) were selected randomly and 40 (10%) of retailers were selected from the list of retailers obtained from the wholesalers.

3. Results and Discussion

3.1 Disposable pattern of watermelon per hectare in different Size of Farms Group

Watermelon is mostly used in fresh which can be used by farmers directly. A little quantity of produce is consumed by producer in the harvesting period of mentioned fruit for home need. Remaining quantity of watermelon is dispose- off by them in the hands of village traders, commission agent and wholesalers just after harvest the crop. The marketable surplus at sampled households is shown in Table 1.

Table 1: Disposable pattern of Watermelon per hectare in different Size of Farms Group (qt/ha)

S. No.	Particulars	Size of Farms Groups			Sample Average
		Small	Medium	Large	
1	Area under Watermelon cultivation per hectare	0.72	1.62	3.74	2.03
2	Total production of Watermelon in quintals per Farm level	224.00 (100)	221.00 (100)	234.00 (100)	226.33 (100)
3	Retained for Watermelon (in quintals)	-	-	-	-
a)	Home Consumption	0.52 (0.23)	1.13 (0.51)	1.84 (0.79)	1.16 (0.51)
b)	Kind Payment as wages	0.96 (0.43)	1.67 (0.76)	2.54 (1.09)	1.72 (0.76)
c)	Relatives and Religious person	0.48 (0.21)	1.30 (0.59)	1.94 (0.83)	1.24 (0.55)
d)	Retain for Next years	-	-	-	-
4	Total retention for Watermelon	1.96 (0.88)	4.10 (1.86)	6.32 (2.70)	4.13 (1.82)
5	Marketable Surplus	222.04 (99.13)	216.90 (98.14)	227.68 (97.30)	222.21 (98.18)

Note: Figures in parentheses indicate percentage of total quantity produced.

3.2 Marketing cost of Watermelon

The cost involved in marketing of watermelon in both channels prevailed in the study area viz. channel – I and channel – II is estimated in Rs/q and if is given in channel wise on given sub- heads:

3.2.1 Marketing Cost, Marketing Margin, Price Spread and Producer Shares in Consumers Rupee in Different Size of Farms Group

Channel I = Producer – Commission agent – Retailer - Consumer

Table 2 reveals that marketing cost, net income of the producers, marketing margin, price spread and producer shares in consumer rupee for channel I. Two intermediaries were identified through which the watermelon reaches to the consumers, i.e. commission agents and retailers. The producers sell their produce to commission agents, in turn they sell it to retailers in the market. Finally the produce reaches to consumers after collecting margin.

Table 2: Marketing cost, marketing margin, price spread and producer share in consumers’ rupee in Channel I (in qt)

S. No	Particulars	Size of Farms Groups			Sample Average	
		Small	Medium	Large		
1	Producer sale price to Commission agent	380.00	380.00	380.00	380.00	
2	Cost incurred by the producer					
	a)	Packing/ Weighing cost	9.00 (0.80)	9.40 (0.84)	10.80 (0.96)	9.73 (0.87)
	b)	Packing material cost	-	-	-	-
	c)	Transportation cost	35.00 (3.13)	35.80 (3.20)	36.20 (3.22)	35.67 (3.18)
	d)	Market fee	-	-	-	-
	e)	Loading / Unloading charges	14.00 (1.25)	16.00 (1.43)	15.40 (1.37)	15.13 (1.35)
	f)	Miscellaneous charges	11.00 (0.98)	13.00 (1.16)	13.00 (1.16)	12.33 (1.10)
3	Total Cost	69.00 (6.16)	74.20 (6.63)	75.40 (6.70)	72.87 (6.50)	
4	Net price received by producer	311.00	305.80	304.60	307.13	
5	Sale price of Commission agent to Retailers	760.00	770.00	782.00	770.67	
6	Cost incurred by the Commission agent					
	a)	Loading / Unloading charges	16.50 (1.47)	16.90 (1.51)	17.30 (1.54)	16.90 (1.51)
	b)	Packing/ Weighing cost	10.00 (0.89)	10.40 (0.93)	11.00 (0.98)	10.47 (0.93)
	c)	Market fee	22.60 (2.02)	22.60 (2.02)	23.00 (2.04)	22.73 (2.03)
	d)	losses & miscellaneous charges	13.00 (1.16)	13.40 (1.20)	13.70 (1.22)	13.37 (1.19)
	e)	Commission agent margin	130.00 (11.61)	140.00 (12.50)	147.00 (13.07)	139.00 (12.39)
7	Total Cost	192.10 (17.15)	203.30 (18.15)	212.00 (18.84)	202.47 (18.05)	
8	Sale price of Retailers to Consumers	1120.00	1120.00	1125.00	1121.67	
9	Cost incurred by the Retailers					
	a)	Loading / Unloading charges	18.00 (1.61)	18.00 (1.61)	18.60 (1.65)	18.20 (1.62)

	b)	Weighing charges	14.40 (1.29)	14.00 (1.25)	15.00 (1.33)	14.47 (1.29)
	c)	Carriage up to shop	22.00 (1.96)	22.00 (1.96)	22.00 (1.96)	22.00 (1.96)
	d)	Miscellaneous charges	20.00 (1.70)	21.00 (1.88)	21.00 (1.87)	20.67 (1.84)
	e)	Retailers margin	122.00 (10.89)	130.00 (11.61)	134.00 (11.91)	128.67 (11.47)
10	Total Cost		196.40 (17.54)	205.00 (18.30)	210.60 (18.72)	204.00 (18.19)
11	Consumer paid price		1120.00 (100)	1120.00 (100)	1125.00 (100)	1121.67 (100)
12	Price spread		740.00	740.00	745.00	741.67
13	Producer share in consumers Rupee (%)		27.77	27.30	27.08	27.38
14	Marketing Efficiency (%)		5.70	5.46	5.34	5.50

Notes: Figure in the parenthesis indicates percentage to the total consumer price

3.2.2 Marketing Cost, Marketing Margin, Price Spread and Producer Shares in Consumers Rupee in Different Size of Farms Group

Channel II = Producer – Wholesaler – Retailer – Consumer

Table 3 reveals that marketing cost, net income of the producers, marketing margin, price spread and producer shares

in consumer rupee for channel II. Two intermediaries were identified through which the watermelon reaches to the consumers, i.e. wholesalers and retailers. The producers sell their produce to wholesalers, in turn they sell it to retailers in the market. Finally the produce reaches to consumers after collecting margin.

Table 3: Marketing cost, marketing margin, price spread and producer share in consumers’ rupee in Channel II (in qt)

S. No	Particulars	Size of Farms Groups			Sample Average	
		Small	Medium	Large		
1	Producer sale price to Wholesaler	374.00	380.00	385.00	379.67	
2	Cost incurred by the producer					
	a)	Packing/ Weighing cost	8.30 (0.75)	8.60 (0.77)	9.00 (0.80)	8.63 (0.77)
	b)	Packing material cost	-	-	-	-
	c)	Transportation cost	34.00 (3.07)	35.20 (3.15)	35.70 (3.18)	34.97 (3.14)
	d)	Market fee	-	-	-	-
	e)	Loading / Unloading charges	13.00 (1.17)	13.00 (1.16)	13.90 (1.24)	13.30 (1.19)
	f)	Miscellaneous charges	9.00 (0.81)	11.50 (1.03)	12.00 (1.07)	10.83 (0.97)
3	Total Cost		64.30 (5.80)	68.30 (6.12)	70.60 (6.29)	67.73 (6.07)
4	Net price received by producer		309.70	311.70	314.40	311.93
5	Sale price of Wholesaler to Retailers		748.00	755.00	758.00	753.67
6	Cost incurred by the Wholesaler					
	a)	Loading / Unloading charges	14.40 (1.30)	14.80 (1.33)	15.60 (1.39)	14.93 (1.34)
	b)	Packing/ Weighing cost	11.00 (0.99)	12.00 (1.08)	12.00 (1.07)	11.67 (1.05)
	c)	Market fee	17.00 (1.53)	17.00 (1.52)	18.20 (1.62)	17.40 (1.56)
	d)	losses & miscellaneous charges	12.40 (1.12)	13.00 (1.16)	13.00 (1.16)	12.80 (1.15)
	e)	Wholesaler margin	130.00 (11.73)	134.00 (12.01)	143.00 (12.75)	135.67 (12.16)
7	Total Cost		184.80 (16.68)	190.80 (17.10)	201.80 (17.99)	192.47 (17.26)
8	Sale price of Retailers to Consumers		1108.00	1116.00	1122.00	1115.33
9	Cost incurred by the Retailers					
	a)	Loading / Unloading charges	16.20 (1.46)	16.80 (1.51)	17.50 (1.56)	16.83 (1.51)
	b)	Weighing charges	14.00 (1.26)	14.00 (1.25)	15.00 (1.34)	14.33 (1.29)
	c)	Carriage up to shop	20.00 (1.81)	20.60 (1.85)	21.00 (1.87)	20.53 (1.84)
	d)	Miscellaneous charges	16.00 (1.44)	17.80 (1.59)	19.00 (1.69)	17.60 (1.58)
	e)	Retailers margin	120.00 (10.83)	127.00 (11.38)	132.00 (11.76)	126.33 (11.33)
10	Total Cost		186.20 (16.81)	196.20 (17.58)	204.50 (18.23)	195.63 (17.54)
11	Consumer paid price		1108.00 (100)	1116.00 (100)	1122.00 (100)	1115.33 (100)
12	Price spread		734.00	736.00	737.00	735.67
13	Producer share in consumers Rupee (%)		27.95	27.93	28.02	27.97
14	Marketing Efficiency (%)		5.95	5.69	5.49	5.71

Notes: Figure in the parenthesis indicates percentage to the total consumer price

3.3 Constraints in Watermelon Marketing

Marketing constraints are presented in Table 4 and Fig 1. The major constraint in marketing is lack of processing industries

based on watermelon as well as storage facility in watermelon is (100%) and (92.86%) respectively.

Table 4: Problems Associated with Watermelon Marketing

S. No	Problems	Number of respondent		Rank
		Yes	No	
1	Lack of processing industries based on watermelon	140 (100.00)	-	1 st
2	Lack of storage facility of watermelon	130 (92.86)	10 (7.14)	2 nd
3	Lack of regulated and co-operative market	112 (80.00)	28 (20.00)	3 rd
4	Fluctuation of prices	105 (75.00)	35 (25.00)	4 th
5	Due to high transportation charges	86 (61.43)	54 (38.57)	5 th
6	Less no. of purchasers available in market	61 (43.57)	79 (56.43)	6 th
7	Lack of awareness about market information	55 (39.29)	85 (60.71)	7 th
8	Heavy damage of fruit at time of transportation	48 (34.29)	92 (65.71)	8 th
9	Not economical transportation due to small quantity of produce	34 (24.29)	106 (75.71)	9 th

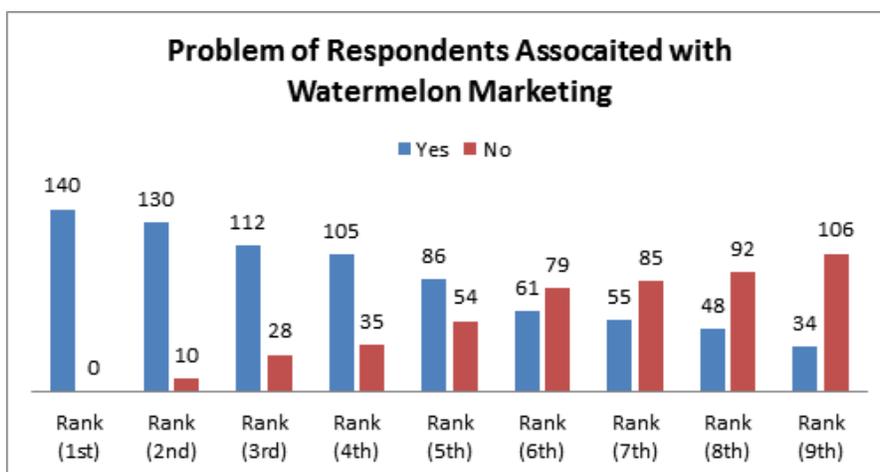


Fig 1: Constraints in Watermelon Marketing

4. Conclusion

From the findings of the study following conclusion has been derived.

1. The study observed that technical efficiency of watermelon farmers varied due to the presence of technical inefficiency effects in watermelon production. This shows that there is a great opportunity for farmers to increase their level of efficiency in watermelon production.
2. The total costs involved in the marketing of watermelon in channel I were found Rs 169.2 per quintal and incurred in channel II is Rs 191.8 per quintal thus cost of marketing is very high.
3. The net price received by the producer in channel I was noticed Rs. 307.13 per quintal while in channel II was observed Rs. 311.93 per quintal hence farmers were profitable in channel II.
4. The price paid by consumers for per quintal of watermelon was calculated as Rs. 1121.67 in channel I and in channel II was Rs. 1115.33 thus producers share in consumer rupees was 27.38 and 27.97 per cent respectively.
5. The study indicated that there is scope to increase the producer’s share in consumer’s rupee by making the market more effective so that the number of intermediaries is to be restricted and marketing costs and marketing margins to be reduced.
6. The major problem associated in marketing of watermelon is lack of processing industries, storage facilities, lack of regulated and cooperative market, fluctuation of prices, high transportation charges and lack of awareness about market information were found.

5. References

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