



Price Spread and Marketing Efficiency of Capsicum: A Study of Kandaghat Block of Solan District in Himachal Pradesh (India)

Prerna Kalia¹, Kapil Kathuria, Krishan Kumar, Mohammad Sadaqat Farooq

10.18805/ajdr.DR-1579

ABSTRACT

Background: Capsicum is one of the major cash crops of Himachal Pradesh. Marketing of their produce has always been considered the major constraint by the farmers of this region hence it necessitated the present study to investigate the price spread and marketing efficiency of capsicum grown in Kandaghat block of Solan district which is a leading producer of capsicum in Himachal Pradesh.

Methods: A multistage random sampling technique with purposive selection of Kandaghat block was followed. Primary data was collected from 73 farmers of 12 different villages in Kandaghat block of Himachal Pradesh and also from 10 traders and other intermediaries operating in nearby markets and APMC. The data collected was analyzed by calculating price-spread and marketing efficiency.

Result: Most of the farmers sold their produce in local markets while few farmers sold their produce in distant markets to fetch better price. The average marketing cost was found ₹ 145.78 per quintal and share of producer in consumers' rupee was observed to be 66.43 per cent. Most of the marketing cost was found to be borne by farmers and least by the retailers. Marketing efficiency was found to be of 1.97.

Key words: Capsicum, Marketing efficiency, Marketing cost, Price spread.

INTRODUCTION

India is a leading vegetable producer in the world second only to China, its diverse agro-climatic zones provide conditions suitable for growing wide range of vegetables. Total area under vegetables in 2017-18 was 10259 thousand ha and production was 184394 thousand MT (NHB, 2018). The Fruit and Vegetable (F and V) sector has seen a healthy growth trend in Indian agriculture in the past few decades due to the increased intake of F and V because of change in the consumption pattern of the population due to increased health consciousness. Presently, Indian agriculture, including small holding farmers, is witnessing diversification into the production of high value commodities like fruits and vegetables. Himachal Pradesh has diverse climatic conditions and is thus suitable for growing large variety of vegetable crops. Area under vegetables in Himachal Pradesh was 88.37 thousand ha and production of 1805.377 thousand MT in 2017-18 (NHB, 2018). Earlier, the economy of state was fruit based and was excessively dependent on fruits, especially Apple. In this era of crop diversification, vegetable cultivation in Himachal Pradesh in general has gained significant importance because of favourable agro-climatic conditions for growing quality off season vegetables. India contributes one fourth of world production of capsicum with an average annual production of 326 thousand MT from an area of 24 thousand ha (NHB, 2017-18).

Capsicum, Shimla mirch as it is called in Hindi, is generally cultivated in India and Himachal Pradesh under

Department of Business Management, Dr. Yashwant Singh Parmar University of Horticulture and Forestry, Nauni, Solan-173 230, Himachal Pradesh, India.

Corresponding Author: Prerna Kalia, Department of Business Management, Dr. Yashwant Singh Parmar University of Horticulture and Forestry, Nauni, Solan-173 230, Himachal Pradesh, India. Email: pkalia95@gmail.com

How to cite this article: Kalia, P., Kathuria, K., Kumar, K., Farooq, M.S. (2021). Price Spread and Marketing Efficiency of Capsicum: A Study of Kandaghat Block of Solan District in Himachal Pradesh (India). Asian Journal of Dairy and Food Research. 40(2): 225-228. DOI: 10.18805/ajdr.DR-1579.

Submitted: 14-09-2020 **Accepted:** 16-04-2021 **Online:** 06-05-2021

open condition although for boosting productivity the same can be cultivated under greenhouse condition. Himachal Pradesh is also a major capsicum producer in the region with 57.7 thousand MT of capsicum production with 18.77 per cent share in total capsicum production of the country that is second only to Karnataka (APEDA, 2017-18). Mid hills of Himachal are the leading producers of capsicum during off season that is during summer and rainy season which is economically beneficial to the farmers as this help them to realise better prices. It is grown in about 1,200 ha mainly in Solan, Shimla and Sirmaur districts of the state. The main problem faced by small and marginal farmers of the state is of marketing their produce which is why state authorities have also underlined marketing as an aspect of

farming that needs improvement while issuing guidelines under Himachal Pradesh Crop Diversification Promotion Project (JICA, 2015, pg 64-70). Capsicum being a perishable crop faces complexity while marketing the produce and the price spread is controlled by the demand and supply of the commodity between various intermediaries. The present study was undertaken to study the price spread and marketing efficiency in marketing of capsicum, given its perishable nature which makes the farmers vulnerable to low price realization.

MATERIALS AND METHODS

The study was conducted in Kandaghat district of Himachal Pradesh by Department of Business management, Dr. Y.S Parmar University of Horticulture and Forestry during the year 2017-18. In order to justify the objectives, a multistage random sampling technique with purposive selection of Kandaghat block of Solan district was followed because it is one of the leading vegetables growing areas of the state (KVK, Kandaghat). 12 villages of the block were randomly selected and a sample of 73 farmers involved in capsicum cultivation from the selected villages was studied. In addition, relevant primary data was collected from 10 traders and other intermediaries operating in nearby markets and Solan APMC. The primary data was collected through structured questionnaires which were administered in person.

The data collected from different sources were classified and tabulated. The analysis of present study has been done through appropriate statistical and mathematical tools as given below.

Producer's share in consumer's rupee

Producer's share in consumer's rupee refers to the share of capsicum producers in amount spent by the consumer. The producer's share in the consumer's rupee was worked out as:

$$Ps = \frac{P_F}{P_C} \times 100$$

Where,

P_S = Producer's share in consumer's rupee.

P_F = Price of the produce received by the farmer and

P_C = Price of the produce paid by the consumer. (Acharya and Agarwal, 2001).

Marketing efficiency

Marketing Efficiency is an output-input ratio. An efficient marketing system acts as an important agent who helps in raising the farmer's income and the consumer's satisfaction. Marketing efficiency of different marketing channels have been calculated by Acharya's Modified Marketing Efficiency model.

$$MME = FP / (MC + MM)$$

Where,

MME = Modified measure of marketing efficiency.

FP = Price received by farmers.

MC = Marketing cost.

MM = Marketing margin (Acharya and Agarwal, 2001).

RESULTS AND DISCUSSION

Average marketing cost of capsicum

Table 1 presents the marketing cost incurred by the farmers, per quintal for selling the produce in nearby market. The marketing cost includes various charges like packaging charges, transportation charges, spoilage loss etc. As crates were either bought or rented for marketing purpose, packaging charges varied accordingly. Most of the respondents rented crates for packaging the produce which cost an average of ₹ 41.45 per quintal. While average transportation charges were ₹ 74.33 per quintal which considers both scenarios of farmers selling their produce in distant market as well as farmers selling in local area and also includes loading and unloading charges. Given the delicate nature of crop some spoilage loss was noticed as well which was estimated to be about ₹ 30 per quintal, making the total marketing cost for the farmers to be ₹ 145.78 per quintal.

Marketing channels

There were mainly four channels of distribution that are used in the marketing of capsicum in the study area. (Table 2) depicts various channels used for the marketing of capsicum in Kandaghat block and the functionaries involved in each of these channels.

Table 3 below, depicts the frequency with which different marketing channels being used by the farmers to sell their produce. The table illustrates that the marketing channel most commonly used by the respondents was channel- II

Table 1: Average marketing cost of capsicum.

Particulars	Average cost/quintal (₹)
Packaging charges	41.45
Transportation charges	74.33
Spoilage loss	30
Total average marketing cost	145.78

Table 2: Marketing channels used.

Marketing channels	Functionaries in the channel
I	Producer → Consumer
II	Producer → Retailer → Consumer
III	Producer → Wholesaler → Retailer → Consumer
IV	Producer → Village Trader/Commission Agents → Wholesaler → Retailer → Consumer

Table 3: Marketing channels used.

Marketing channels	Multiple responses	
	N	Percent
Channel I (P→C)	24	19.35
Channel II (P→R→C)	46	37.10
Channel III (P→Ws→R→C)	21	16.94
Channel IV (P→CA→Ws→R→C)	33	26.61
Total	124	100.00

(37.10%) which involved farmers selling their produce to retailers, while 26.61 per cent of respondents preferred selling through channel-IV. This was followed by 19.35 per cent of farmers who prefer to sell their produce directly to consumers without any intermediaries that is channel- I. Selling through channel- III was the least common channel followed by the farmers (16.94%) probably due large amount of intermediaries involved leading to less profit for farmer. Another reason for this could be that compared to channel- IV where the farmer just have to transport produce to agent without any hassle, channel-III involved considerable marketing efforts.

Price spread in channel- III

Price Spread is the difference between the price paid by the ultimate consumer and price received by farmer for an

equivalent quantity of produce. It includes the cost of performing various marketing functions and margins of different agencies associated in the marketing process of the commodity (Jadav *et al.*, 2011).

Table 4 shows the price spread in channel-III which was least frequently used channel due to more number of intermediaries involved in it as compared to channel-I and channel-II. Channel-III flows from farmer to wholesaler to retailer and then at last to consumer, therefore it was expected that the marketing cost is more and farmers share in consumer's rupee was less. Whereas the intermediaries in channel-IV may have been more but the channel is difficult to define after the produce is transferred from farmers to agent, hence channel-III was assumed to be the most inefficient channel and therefore was chosen for further analysis. Total cost incurred and margin involved at different

Table 4: Price spread in marketing channel –III.

Particulars	Cost incurred per quintal (₹)	Price spread (%)
Producer		
Picking and packing	48	2.00
Grading	0	0.00
Transportation	90	3.75
Loading and unloading	10	0.41
Tax/market fee @2-2.5%	27.5	1.14
Spoilage loss	30	1.25
Farmers total cost	205.5	8.56
Farmers price realized	1594.5	66.43
Wholesaler		
Purchasing price	1800	75.00
Loading/unloading	10	0.41
Spoilage loss	50	2.08
Tax/market fee	110.5	4.60
Miscellaneous charges	7	0.29
Total cost borne by the wholesaler	177.5	7.38
Total cost borne by the wholesaler (with purchasing price)	1977.5	82.39
Wholesalers margin	172.5	7.18
Retailer		
Purchase price of retailer	2150	89.58
Transportation	20	0.83
Spoilage loss	30	1.25
Rent and miscellaneous	25	1.04
Cost borne by retailer	75	3.12
Total cost borne by retailer (with purchasing price)	2225	92.70
Retailers margin	175	7.29
Consumer purchase price	2400	100

Table 5: Marketing efficiency for channel – III.

Channel	Farmers price (FP)	Marketing cost (MC)	Marketing margin (MM)	Marketing efficiency (ME)
III	1594.5	458	347.5	1.97

stages along with price spread for different intermediaries is presented below:

The table indicates cost incurred by the producer was ₹ 205 per quintal that is 8.56 per cent of consumer's rupee. The share of the producer in consumers' rupee was observed to be of 66.43 per cent. With low average cost of production of capsicum that is ₹ 582 per quintal and capsicum being grown as an off-season vegetable in the mid hill regions of Himachal, leads to higher price realization by the farmer. The cost incurred by commission agent or wholesaler was ₹ 177.5 that is 7.38 per cent of consumer's rupee whereas the margin earned was ₹ 172.5 that is 7.18 per cent share of consumer's rupee. The cost incurred by retailer was ₹ 75 per quintal that is 3.12 per cent of consumer's rupee, whereas the margin earned by retailers was observed to be ₹ 175 per quintal. From the above results it could be derived that most of the marketing cost is borne by the farmers that is 8.56 per cent followed by wholesalers (7.38%), whereas retailers incur just 3.12 per cent of the total marketing cost.

Spoilage loss is maximum when the produce is with the wholesalers, which was ₹ 50 per quintal that is 2.08 per cent of consumer's rupee. The spoilage loss with farmers and retailers was ₹ 30 per quintal each which is 1.25 per cent of consumer's rupee. Spoilage loss is higher with wholesalers because of the bulkiness of the crop leading to mismanagement which leads to spoilage as the crop is delicate in nature. Total spoilage loss appears to be less keeping in consideration the perishable nature of the crop is because the supply chain is not that long as well as the time lapse between harvesting and marketing of the crops is not too long.

Transportation cost was mostly borne by farmers that is 3.75 per cent of consumer's rupee, the transportation cost of ₹ 90 per quintal borne by farmers in this channel is more compared to the average marketing cost of ₹ 74.33 because the length of supply chain is more in this channel compared to others where farmers are selling their produce directly to the agents or to local customers. Whereas wholesalers only have to incur loading and unloading charges which constitute to only 0.41 per cent of consumer's rupee and retailers incurred transportation cost of ₹ 20 per quintal which is just 0.83 per cent of consumer's rupee. Transportation cost and availability were observed to be major issues faced by the farmers of the study area.

Marketing efficiency

For estimation of efficiency of marketing, the Modified Marketing Efficiency model given by Acharya and Agarwal (2001) was used. Marketing efficiency for channel-III was worked out and presented in Table 5. In this channel marketing efficiency was found to be 1.97. A similar research was conducted to study the Price Spread and Marketing Efficiency for Tomato crop in Rajasthan, where in Jaipur district the marketing efficiency of tomato for a channel with similar intermediaries was found to be 1.00; whereas in Kota district the efficiency was found to be 1.12 (Meena and Singh, 2014). Comparing these results with the present study it is

concluded that channel- III followed by the farmers in Kandaghat area may not be commonly used by them but still is more efficient compared to same channel followed in other states.

CONCLUSION

The present study reveals that most the farmers *i.e.* 79.45 per cent preferred traditional supply chain that is local market for selling their produce. It was observed that, 20.55 per cent of respondents sold their produce in distant markets of Chandigarh or Delhi, which ostensibly offered better prices. The average marketing cost was found ₹ 138.25 per quintal, with the varying degree of transportation and spoilage cost which were observed to be less where farmers were selling their produce in local market while for distant market the costs increased. For channel- III the share of producer in consumers' rupee was observed 66.43 per cent. Farmers bore most of the marketing cost that is 8.56 per cent whereas the least of it was borne by retailers that is 3.12 per cent. Most of the spoilage loss that is about ₹ 50 per quintal was incurred when the produce was with the wholesalers due to the large quantities of produce with them which generally gets mishandled, the damage being increased due to the delicate nature of the crop. Transportation costs substantially increases for farmers selling their produce to wholesalers of distant markets. Transportation cost and availability of transport were one of the major issues faced by farmers of the sample area hence to improve this situation subsidized transportation facilities should be provided during the harvest period to the farmers. Marketing efficiency was found of 1.97 which is observed to be high when compared to the efficiency of similar channels in other states.

REFERENCES

- Acharya, S.S. and Agarwal, N.L. (2001). *Agricultural Marketing in India*. Oxford and IBH, New Delhi (India).
- JICA. (2015). Guidelines for Crop diversification in Himachal Pradesh. Himachal Pradesh Crop Diversification Promotion Project [Online] Available from https://hpcdp.nic.in/WriteReadData/PDF_ManualsGu_35_29_3_2019_13_16_43_582_@Guideline%20for%20Crop%20Diversification%20in%20Himachal%20Pradesh.pdf Retrieved September 9, 2020.
- Jadav, K.S., Leua, A.K. and Darji, V.B. (2011). Economic analysis of supply chain of fresh Potato in middle Gujarat. *Indian Journal of Agricultural Research*. 45: 266-274.
- Kumar, M.P. (2012). A Study on Problems of Marketing Vegetables in Farmers Market. *International Journal of Rural Development and Management Studies*. 6: 241-251.
- Krishi Vigyan Kendra, Kandaghat. (n.d). Achievements. [Online] Available from <http://www.yspuniversity.ac.in/kvk-kandaghat/kgt-achi.html> Retrieved September 9, 2020.
- Meena, S. and Singh, I. P. (2014). Price Spread and Efficiency of Marketing of Tomato in Rajasthan. *Indian Journal of Agricultural Research*. 48: 294-300.
- NHB. (2017-18). *Indian Horticulture Database- 2018*, Ministry of Agriculture, Government of India, Gurgoan.