

Original Research Article

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## Identifying the Constraints in the Production and Marketing of Capsicum in the Solan District of Himachal Pradesh

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### ABSTRACT

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The present study was conducted with the objective to identify constraints in the production and marketing of Capsicum in the Solan District of Himachal Pradesh and to suggest measures to overcome them. Overall, 80 capsicum growers were selected for the study. Farmers were distributed according to land holding size, i.e., marginal, small, semi-medium and medium farmers. The study revealed that among various production and marketing problems, about 73 per cent of the farmers reported problems with diseases in the study area. Which showed significant differences between the different farm categories. The high transportation costs were the major problem faced by the farmers in marketing.

### Introduction

Vegetable cultivators face various challenges in production as well as marketing. High cost of inputs, losses due to climate changes, uncertainty of prices, disease & pest attack etc. are the major constraints faced by vegetable growers during production and marketing of vegetables (Nandeshwar *et al.*, 2013).

In particular, in the hilly regions of India, the vegetable growers have to deal with various factors such as unorganized marketing and low prices paid to farmers, lack of mechanical grading, packing and

proper storage facilities, malpractices, high and undue marketing margins & costs in markets, lack of village roads, lack of sufficient & low-cost transportation facilities, lack of market information, and lack of processing units & cooperative societies (Thakur *et al.*, 1994).

The marketing of vegetables in Himachal Pradesh generally faces the problems in the form of costly wooden boxes, time consuming manual grading, distant markets, high transportation charges, malpractices in the market and lack of market information were the major problems faced by

growers in storage, transportation, and marketing of vegetables (Sharma *et al.*, 1995).

Capsicum also called bell pepper has shown a rapid increase in demand and consumption, especially by urban consumers in India. This vegetable is generally considered as a rich source of vitamins like A, C and E. Due to increased demand in the market, farmers are showing a keen interest in the cultivation of capsicum (Jadhav and Gaurav, 2018). The area, production and productivity of capsicum are increasing significantly in Himachal Pradesh. The area under capsicum production in H.P. has shown a significant growth rate of 6 per cent per annum. The production and productivity of capsicum has shown a significant growth rate of 10.30 percent and 4.30 percent per annum (Kumari *et al.*, 2022). In open conditions, the quality and productivity falls as an effect of wide fluctuations in environmental conditions in hilly area.

As it is not favourable to cultivate capsicum in winters, its off-season production and supply is not possible for the farmers (Singh *et al.*, 2020).

Farmers in open field conditions, must undergo various problems in the form of bad weather, fluctuations in temperature, uncertain hailstorms, and diseases as well. These challenges has contributed to the varying scenarios in vegetable production, The protected cultivation is getting preference over open field cultivation for off-season quality production by extending availability of the quality produce, higher productivity and improved nutritional attributes of the polyhouse produce (Sreedhara, 2010). The post harvesting losses in marketing of vegetables in hilly regions of India are also there. The spoilage/loss of vegetables at the grower level results from lack of farmer's knowledge about proper post-harvest management. Improper grading, packing, lack of storage and inadequate transportation facilities contribute more to the problem. One of the most important causes of postharvest losses is harvest at inappropriate maturity, resulting in erratic ripening and poor quality (Sharma and Singh, 2011).

According to the research on the framework of the Indian vegetable supply chain management, there are numerous problems and obstacles in the country's fruit and vegetable supply chains, including a lack of cold storage, poor government policies, inadequate infrastructure, unrefrigerated modes of transportation, middlemen, a lack of post-harvest handling procedures, poor packaging standards, a lack of technology, weak market ties, etc. (Hajoary, 2016).

The solution lies in creation of horticulture-based self-help group or producer oco-operatives at village level, organization of weekly hat, strict compliance of rules & regulation of regulated market and guidance on market avenues from time to time to the vegetable growers (Kumar *et al.*, 2018). The facilities of grading and standardization of the produce should be improved in order to pay remunerative prices to the farmers. For the production and marketing of vegetables, agricultural departments and related sources should give farmers technical advice. The government should provide farmers with affordable seed through legitimate, recognised organisations (Nandeshwar *et al.*, 2013).

The government should give farmers monetary rewards to encourage them to grow vegetables not just for their own consumption but also for sale. In order to raise vegetables on a greater scale, the government should also offer real insurances to Indian vegetable growers. The National Horticulture Mission (NHM), Rashtriya Krishi Vikas Yojana (RKVY), and other programmes need to be strengthened more to help Indian vegetable farmers continue to cultivate vegetables and make a larger profit (Choudhary and Kundal, 2015). The appropriate implementation of governmental measures to support farmers is necessary (Hajoary, 2016).

Taking these into consideration the present study was conducted with the objectives to analyze the constraints faced by capsicum growers in production and marketing in Solan Distt of Himachal Pradesh and to suggest possible measures to overcome them.

## Materials and Methods

To study the various problems associated with production and marketing of capsicum, it is assumed that the extent of a particular problem varies from place to place and farmer to farmer. The multiple responses of producers reporting various problems were taken into consideration for analysis.

### Chi-square

To test whether there is any significant difference among the responses of marginal, small, semi-medium and medium farms regarding the problems faced in the production and marketing of capsicum of the study, the chi-square test was used.

The chi-square test is one of the simplest and most widely used non-parametric tests in statistical work. The quantity  $\chi^2$  describes the magnitude of the discrepancy between observed and expected. It is defined as:

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

Where,

O refers to the observed frequencies

E refers to the expected frequencies (Chandra *et al.*, 2013).

## Results and Discussion

There are several constraints to production and marketing of capsicum faced by the farmers. Due to wide fluctuation in weather, highly perishable nature, lack of quality planting material, spurious chemicals and less irrigation facilities, growers face many problems in production and marketing.

In this section, an attempt has been made to analyse the production and marketing problems faced by the capsicum growers. The problems were classified into following two categories, viz., production and

marketing problems. The problems in production and marketing have been given in Table 1. Various production problems faced by the sampled farmers/growers may arise from the supply side of inputs or the availability of resources, which affect the yield of the produce and ultimately incomes of the farmers. The multiple responses of the sampled vegetable growers regarding different production problems are highlighted in Table 1.

### Quality of planting material

Availability and quality of High Yielding Varieties (HYVs) of seeds is one of the key inputs in the production of selected vegetables. Good quality crop cannot be expected without using good quality seed and seed should also be available at the proper time. Availability of quality planting material is the first requirement for the cultivation of any crop. From the table it is observed that at an overall level, 67.50 per cent of the growers reported that quality planting material of capsicum in the study area was not available.

### Plant protection chemicals

In case of plant protection chemicals, 71.25 per cent of the sampled farmers felt that the prices of plant protection chemicals were very high. Sale of spurious chemicals was reported by 25 per cent of the farmers.

### Lack or irrigation facilities

About 64 per cent of the farmers reported lack of irrigation facilities in the study area. Whereas 67.65 per cent of the marginal farmers felt the need of irrigational facilities in the study area followed by 64.29 per cent of small, 58.33 per cent of semi-medium and 37.50 per cent of medium farm category.

### Labour

About 48 per cent of the farmers realized high wage rate as another main problem in the cultivation of capsicum in the study area. Whereas 23.44 per cent

of the farmers reported that there was lack of availability of labour during peak season time in the study area.

### **Diseases**

About 73 per cent of the farmers reported the problems of diseases in the study area. Whereas 82.14 per cent of the small farmers reported the problems of diseases followed by 76.47 per cent of marginal and 50 per cent of semi-medium and medium farm category.

### **Lack of information about training programmes**

About 52 per cent of the farmers said that they did not get proper information about any training programmes or camps organized by any institution at time. Thus, the farmers were not able to attend the programmes at the time and did not get desired information about cultivation.

Efficient marketing of vegetables is also as important as production for the farmers to get the remunerative prices for their produce. The various marketing problems faced by the vegetable producers are as given below:

### **Market Prices**

About 71 per cent of the farmers in the study area reported the wide fluctuations in the price of capsicum as a major problem, whereas 29.38 per cent of the farmers reported the problem of delayed payments. The farmers' response towards the price fluctuations varied from 62.50 per cent in medium farm category to 73.53 per cent in marginal farm category.

### **Lack of market information**

An efficient market information network can greatly help the farmers in reading the pulse of the market and hence in taking appropriate measures to best

harness the market advantage. About 17.19 per cent of the farmers felt the problem of the lack of market information. Farmers' response to the problem of lack of market information varied from 12.50 per cent in medium farms to 25 per cent in case of semi-medium farms.

### **Transportation cost**

An analysis of growers' transportation problems revealed that 49.06 per cent of the farmer's major concern was high transportation charges. About 55.88 per cent of the marginal farmers shared the problem of high transportation charges followed by small (53.57 %), medium (37.50 %) and semi-medium farmers (25 %).

### **Poor storage**

Fifty-five per cent of the farmers in the study area face the problems of non-availability of storage facilities in the market at an overall level. Due to lack of storage facility, some amount of their produce gets spoiled. Poor storage of capsicum was reported by a majority of (58.33 %) the semi-medium farmers followed by small (57.14 %), marginal (52.95 %) and medium farmers (50 %).

Chi-square test was also carried out to test whether the problems identified by the vegetable growers are farm category specific or they are independent of farm category. It can be seen from the Table 1 that among the production problems, lack of information about training programmes and incidences of diseases proposed by the vegetable growers showed significant difference between the different farm categories.

In case of marketing problems, high transportation cost showed significant difference in the farm categories. All other marketing problems did not differ significantly between the farm categories. This implies that these problems were faced by all farm categories.

**Table.1** Production and marketing problems faced by the sampled households

Particulars	Marginal	Small	Semi-medium	Medium	(Multiple response, %)	
					Overall	Chi square
<b>Production Responses</b>						
Non availability of quality planting material	67.65	75.00	58.33	50.00	67.50	3.73
High prices of chemicals	70.59	75.00	75.00	50.00	71.25	2.88
Sale of spurious chemicals	38.24	35.71	33.33	25.00	35.63	1.51
Lack of irrigation facilities	67.65	64.29	58.33	50.00	63.75	1.72
High wages of labour	44.12	50.00	58.33	37.50	47.81	3.37
Non availability of labour at peak time	23.53	21.43	33.33	12.50	23.44	6.23
Incidences of diseases	76.47	82.14	50.00	50.00	72.50	11.04*
Lack of information about training programmes	52.94	64.29	33.33	25.00	51.88	15.92*
<b>Marketing responses</b>						
Wide Price fluctuations	73.53	71.43	66.67	62.50	70.94	0.67
Delayed payments	29.41	28.57	33.33	25.00	29.38	0.78
Lack of market information	14.71	17.86	25.00	12.50	17.19	4.01
High transportation cost	55.88	53.57	25.00	37.50	49.06	14.18*
Poor storage	52.94	57.14	58.33	50.00	55.00	0.52

\* Significant at 5% level of significance

The study has brought into focus many problems incurred by vegetable growers in production and marketing of capsicum in the study area. The findings of the present study have resulted into number of policy implications for the vegetable growers.

The study area requires the establishment of producer co-operatives to handle various activities relating to production and marketing of vegetables. It will become helpful to deal with high prices of chemicals, labour issues, training, price fluctuations, delayed payments, market information, high transportation, and poor storage. Along with it Short-term exposure to education programmes on resource management, marketing, and growing techniques should be set up in the regions that produce capsicum. There is a requirement of rain water harvesting structures in the fields to avoid problems in irrigation. The growers require technical guidance and proper trainings to use recommended plant protection measure to reduce the cost.

Demonstration of package of practices should be given to the farmers. The transmission of technology in capsicum farming should be given high importance because farmers often follow their own conventional technique of cultivation by not using proper, enough inputs and practices. The use of modern farming practices should be promoted through increasing farmer awareness.

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