



## Institutional assistance for setting-up and financing of greenhouses with reference to Himachal Pradesh

Rajesh Dhorta<sup>1</sup>, Devinder Sharma<sup>2</sup>, Ajay Kumar<sup>3</sup>

<sup>1</sup> Associate Professor, Faculty of Commerce, Govt. College Sanjauli, Shimla, Himachal Pradesh, India

<sup>2</sup> Professor, Department of Commerce, Himachal Pradesh University, Shimla, Himachal Pradesh, India

<sup>3</sup> Assistant Professor, Faculty of Commerce, Govt. College Sanjauli, Shimla, Himachal Pradesh, India

### Abstract

Greenhouse cultivation is gaining popularity in the recent times. But for greenhouse cultivation, facilitation of the infrastructure and necessary services especially for their setting-up and financing is essential. All such considerations are the attributes which may influence the acceptability, success or failure of continuing the greenhouse cultivation. There are agencies which are meant for setting-up of business organizations and obviously, can be instrumental for setting-up of greenhouses. Further, in India there is a series of financial institutions to assist financially. The implementation agencies and organizations cannot come to the conclusion about such attributes without containing the responses and knowing how cultivators are perceiving greenhouse cultivation. The research endows to examine the institutions assisting for setting-up and financing of greenhouses based upon the primary data taken from Himachal Pradesh.

**Keywords:** agencies for setting-up of businesses, financial institutions, financing of greenhouses

### Introduction

Establishment and successful initiation of any activity requires proper guidance, promotional assistance and financial support. Finance is in fact, the first and the foremost necessity without which, new initiative cannot even be thought of. Indian agriculture is entering in a new phase where productivity, efficiency and quality are the major concerns. Horticulture and Livestock sectors are showing tremendous growth. Despite this massive growth, the horticultural production is much less than the requirement. The demand target can be achieved by increasing the area under the horticultural crops, using hybrid seeds, adopting improved technology and by promoting protected cultivation <sup>[1]</sup>. Greenhouse cultivation requires technological, managerial skills including financial, production, marketing management skills and is characterized by scientific knowledge, awareness, understanding and interaction with the experts. The protected cultivation, a technique of growing crops under controlled microclimate, is a capital-intensive activity, and the government provides subsidy for establishing greenhouses. From provision of knowledge about protected cultivation to marketing of the produce, numerous public and private institutions are performing different supportive functions. These institutions are quite active in the state of Himachal Pradesh, Maharashtra and Karnataka and therefore, protected cultivation grew faster in these states <sup>[2]</sup>. Greenhouse cultivation is gaining popularity in the recent times. The cultivation in the greenhouses is however, not professionally up to the expectations of the cultivators due to the reason that they may not be much friendly with the technology. Further, challenges of the new initiative which are expected to be occurring obviously in the initial stages may emerge in the form of hurdles for the farmers. Even the understanding and awareness about the procedures of

cultivation are incomplete, the outcome cannot be substantial and therefore, cultivators may not consider the cultivation much fruitful. Facilitation of the infrastructure and necessary services is essential. All such considerations are the attributes which may influence the acceptability, success or failure of continuing the greenhouse cultivation. The implementation agencies and organizations cannot come to the conclusions about such attributes without containing the responses and knowing how cultivators are perceiving greenhouse cultivation. The research endows to examine the institutions assisting for setting-up and financing of greenhouses based upon the primary data taken from Himachal Pradesh.

### Objectives

The research takes the following objectives to seek the findings and answers:

- To empirically examine the cost involved in raising greenhouses for cultivation.
- To identify the agencies which assist for setting-up of greenhouses?
- To know about the financial institutions providing financial assistance to greenhouse cultivators.
- To assess the procedural modalities accomplished by greenhouse cultivators for seeking finance.

### Scope

The study has been conducted in Himachal Pradesh based upon the primary information gathered from the respondents of three districts; Shimla, Solan and Bilaspur as per the framed schedule.

### Hypotheses

**H<sub>01</sub>:** District-wise there is no significant difference in the opinion of greenhouse cultivators regarding Cost Involved

in Raising Greenhouses for Cultivation.

**H<sub>02</sub>:** District-wise there is no significant difference in the opinion of greenhouse cultivators regarding financial institutions and other agencies for setting-up of greenhouse.

**Methodology**

The research is primary in nature. Data has been collected from a sample of 192 greenhouse cultivators i.e.64 from each district selected as per the list of registered greenhouse cultivators in the official record of agriculture and horticulture departments as per the convenient random sampling basis. Statistical tools have been applied to analyze data. Based upon the findings of the study, conclusion has been drawn and measures have been suggested.

**Results and Discussion**

As per the objectives of the research, the results are

discussed as under:

**Cost involved in raising greenhouses for cultivation**

The cost involved in raising greenhouses for cultivation has been examined with the help of responses of the greenhouse cultivators from three districts; Shimla, Solan and Bilaspur as discussed below:

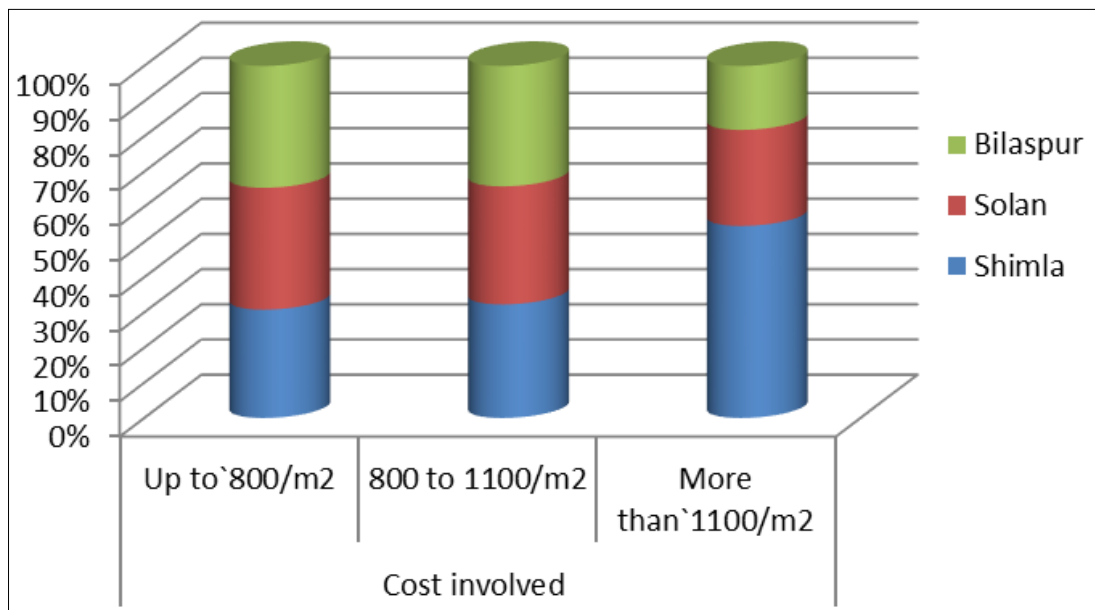
**Table 1:** Responses regarding cost involved in raising greenhouses for cultivation

Districts	Cost involved			Total
	Up to 800/m <sup>2</sup>	800 to 1100/m <sup>2</sup>	More than 1100/m <sup>2</sup>	
Shimla	8(12.5)	50(78.1)	6(9.4)	64
Solan	9(14.1)	52(81.2)	3(4.7)	64
Bilaspur	9(14.1)	53(82.8)	2(3.1)	64
Total	26(13.5)	155(80.7)	11(5.7)	192

Chi-Square =2.531 P. Value =.639

**Source:** Data collected through Schedule

**Note:** Figures in parenthesis depict percentage



**Fig 1**

The table and figure no. 1 describe about the cost involved in the raising of a greenhouse in the three district of Himachal Pradesh viz. Shimla, Solan and Bilaspur. Three categories of the cost involved have been developed in the present study and it shows the cost per square meter. The first one is upto Rs.800/m<sup>2</sup>, the second being Rs.1100/m<sup>2</sup> and more than the second lie in the third category. 80.7 percent respondents have raised their greenhouses after incurring cost between 800/m<sup>2</sup> to 1100/m<sup>2</sup>. In the three districts, 30.5 percent respondents are of the view that their cost of raising a greenhouse is less than Rs.800/m<sup>2</sup>, whereas 5.7 percent respondents in the three districts believe that they have incurred the cost of more than Rs.1100/m<sup>2</sup> while raising a greenhouse. In district Shimla, 78.1 percent respondents incurred cost of Rs.800/m<sup>2</sup> to 1100/m<sup>2</sup>, 12.5 percent up to Rs.800/m<sup>2</sup> and only 9.4 percent incurred cost of more than 1100/m<sup>2</sup>. In Solan district, 81.2 percent respondents believe that their cost of raising greenhouse is between Rs.800/m<sup>2</sup> to 1100/m<sup>2</sup>, 14.1 percent upto 800/m<sup>2</sup> and a meagre 4.7 percent have incurred cost of Rs.1100/m<sup>2</sup> and more. In the district of Bilaspur, 82.8 percent believe

that their cost of raising a greenhouse is between Rs.800/m<sup>2</sup> to 1100/m<sup>2</sup>, 14.1 percent are of the opinion that their cost is up to Rs.800/m<sup>2</sup> and only 3.1 percent have incurred cost of more than Rs.1100/m<sup>2</sup>. While applying chi-square test, it has been analysed that there is a significant difference in the respondents in the three districts of Himachal Pradesh, as the table value of chi-square falls in the rejection region resulting to reject the null hypothesis.

**Identification of agencies for setting-up of greenhouses**

In India, promotional agencies are playing a pro-active role to assist for setting-up and pursuing of the business enterprises. Greenhouse cultivation is a technically advanced system of production for the cultivators which needs to be properly guided right from the stage of setting-up to the processing. In this direction, in order to understand the role of different agencies to support greenhouses, attempt has been made to identify such agencies and the responses evidently assert the support they have taken as per the following:

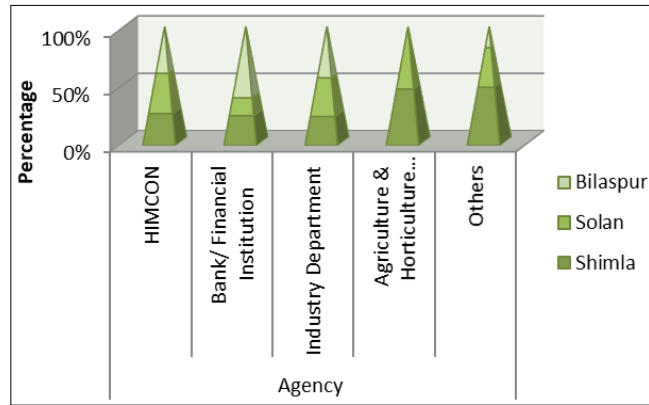
**Table 2:** Responses regarding agencies for setting-up of greenhouse

Districts	Agency					Total
	HIMCON	Bank/ Financial Institutions	Industry Department	Agriculture & Horticulture department	Others	
Shimla	19(29.7)	5(7.8)	9(14.1)	9(14.1)	22(34.4)	64
Solan	24(37.5)	3(4.7)	12(18.8)	10(15.6)	15(23.4)	64
Bilaspur	28(43.8)	12(18.8)	16(25.0)	0(0)	8(12.5)	64
Total	71(37.0)	20(10.4)	37(19.3)	19(9.9)	45(23.4)	192

Chi-Square =26.531 P. Value =.001

Source: Data collected through Schedule

Note: Figures in parenthesis depict percentage



**Fig 2**

Table and figure no. 2 depict that the different agencies helping for setting greenhouse system include banks and financial institutions, Himachal Management and Consultancy Organization (HIMCON), industry department, agriculture and horticulture departments and other institutions. They are assisting the greenhouse cultivators in the state as in all the three districts viz. Shimla, Solan and Bilaspur, greenhouse cultivator respondents have revealed that they have been assisted by these agencies. It is pertinent

to mention that all the informants have stated that banks and financial institutions are assisting the greenhouse cultivators while assistance availed from other institutions has been admitted by a very few respondents. It has been described in the data exhibited in the table and figures no 5.16 that 37.0 percent have been helped by HIMCON while they were setting up the greenhouse in all the three district of the state. About 20.0 percent respondents received such assistance from the industries department of the state. In district Shimla and Solan, state horticulture department has also provided assistance to the cultivator as claimed by 14.0 percent respondents in the district Shimla and 15.6 percent respondents in the district Solan. While applying chi-square test, it has been analysed that there is no significant difference in the respondents in the three districts of Himachal Pradesh, as the table value of chi-square falls in the accepted region resulting to accept the null hypothesis.

**Financial institutions for financial assistance to greenhouse cultivators**

On the basis of the responses, the financial institutions which have provided financial assistance to the greenhouse cultivators are identified as under:

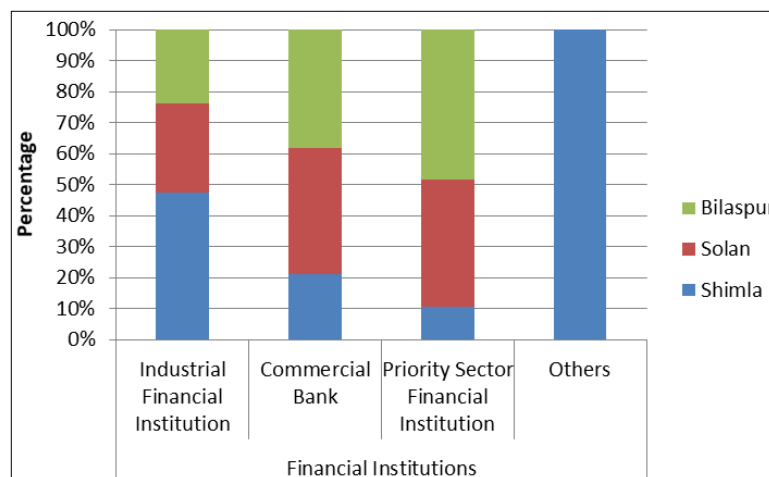
**Table 3:** Responses regarding institutions providing financial assistance

Districts	Financial Institutions				Total
	Industrial Financial Institutions	Commercial Bank	Priority Sector Financial Institutions	Others	
Shimla	20(31.2)	15(23.4)	6(9.4)	23(35.9)	64
Solan	12(18.8)	29(45.3)	23(35.9)	0(0)	64
Bilaspur	10(15.6)	27(42.2)	27(42.2)	0(0)	64
Total	42(21.9)	71(37.0)	56(29.2)	23(12.0)	192

Chi-Square = 68.166 P. Value =.000

Source: Data collected through Schedule

Note: Figures in parenthesis depict percentage



**Fig 3**

Financial assistance is necessary for the setting up of a greenhouse. Table and figure no. 3 bring forward the data analysis of the financial institution that have provided financial assistance to the greenhouse cultivators in the three districts Shimla, Solan and Bilaspur. In these three districts of the state of Himachal Pradesh, the funding for greenhouse cultivation have been raised from industrial financial institutions, commercial banks, priority sector financial institutions and some other. In district Shimla, the financial assistance to 31.2 percent respondents has been provided by industrial financial institutions, the financial assistance to 23.4 percent of them has been provided by the commercial banks. Here, 35.9 percent respondents have financially assisted their project of the greenhouse from some other agencies. In district Solan, the percentage of the respondents is 18.8, 45.3 and 35.9 as they have raised financial assistance from industrial financial institutions,

commercial banks and priority sector financial institutions respectively. The respondents in Bilaspur district have been assisted equally by commercial banks and priority sector financial institutions and the percentage of respondents stands at 42.2. Only 15.6 percent in this district have been financially assisted by industrial financial institutions. While applying chi-square test, it has been analysed that there is no significant difference in the respondents in the three districts of Himachal Pradesh, as the table value of chi-square falls in the accepted region resulting to accept the null hypothesis.

**Procedural modalities for seeking financial assistance**

With the objective to know whether the procedure of seeking funds is easy or cumbersome, the respondents were asked to state the procedure they followed for getting funds. The procedural modalities accomplished by them are stated to be as under:

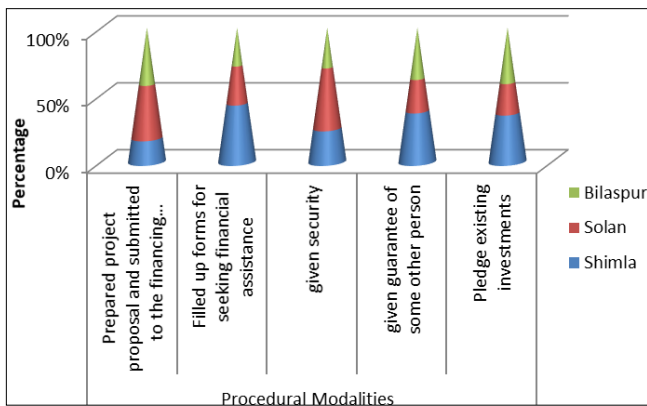
**Table 4:** Responses regarding procedural modalities accomplished for managing finance

Districts	Procedural Modalities						Total
	Prepared project proposal and submitted to the financing institution	Filled up forms for seeking financial assistance	Given security	given guarantee of some other person	Pledge existing investments	Paid some cash	
Shimla	8(12.5)	17(26.6)	11(17.2)	11(17.2)	8(12.5)	9(14.1)	64
Solan	18(28.1)	11(17.2)	20(31.2)	7(10.9)	5(7.8)	3(4.7)	64
Bilaspur	19(29.7)	11(17.2)	13(20.3)	11(17.2)	9(14.1)	1(1.6)	64
Total	45(23.4)	39(20.3)	44(22.9)	29(15.1)	22(11.5)	13(6.8)	192

Chi-Square =10.110 P. Value =.028

Source: Data collected through Schedule

Note: Figures in parenthesis depict percentage



**Fig 4**

Table and figure 4 describe the procedural modalities accomplished by the cultivator for managing finance in the three districts of the state of Himachal Pradesh. Some of the respondents prepared project proposal and submitted the same to relevant financial institution. Some others have filled up requisite form for seeking the financial assistance, whereas some of those have taken the path of security, guarantee and pledge. On analysing the data it is observed that the respondents of the three districts namely Shimla Solan and Bilaspur who have prepared project proposal deposited security against which they have been given financial assistance by the institution. About 20 percent of the respondents of the state filled up form for seeking financial help and deposited the same for processing. The percentage of the respondents, who gave guarantee, pledged some assets or even paid cash is 15.1, 11.5 and 6.8 respectively. While applying chi-square test, it has been analysed that there is a significant difference in the respondents in the three districts of Himachal Pradesh, as the table value of chi-square falls in the rejection region

resulting to reject the null hypothesis.

**Conclusion and Findings**

Based upon the above analysis, it has been found that greenhouse cultivation is a costly entrepreneurial activity as it is based upon setting-up of technologically advanced poly houses. So high cost is involved in setting-up of the greenhouses of different types and for the new person before investing is such cultivation, there is need to understand the system of its setting-up and cultivation. There are agencies including HIMCON, banks and financial institutions, Industry department, agriculture department and horticulture department and other agencies which are providing guidance and support in Himachal Pradesh. Himachal Management and Consultancy Organization is performing a leading role and the Industry department is also involved to guide people. But the role of agriculture and horticulture which are exclusively related with cultivation techniques is found to be confined. The study finds that the cultivators have to accomplish modalities and the procedure is cumbersome as they need to ensure guarantee and perform other formalities for seeking funds and only then funds are provided by the financial institutions like priority sector banks, financial institutions and other institutions. Thus, it can be concluded that the procedure for understanding is not easy, sufficient support particularly from the concerned agencies is not substantial and the greenhouse cultivators need huge amount of funds for raising of the greenhouses. Based upon these findings and conclusion, the following measures are recommended:

**Recommendations**

The promotional agencies must have specialized professional entrepreneurial development officers to properly guide and motivate greenhouse cultivators as it will

lead to meet-out the consumer demand through-out the year and will contribute the national economy at a large scale.

The procedure for financial assistance needs to be quite easy for greenhouse cultivators. The financial institutions and other financing agencies can provide funds based upon the report of the promotional agencies to assist the cultivators who have consulted with the promotional agencies rather than to submit guarantees and after accomplishing other conditions.

The government bodies need to frequently interact and develop liaison with the greenhouse cultivators and to assist them time and again. For this, the registration of the cultivators can be taken as the basis to interact with them.

### References

1. Singh K, Vashist GD. An analysis of production and marketing system of vegetables in Lambagaon block of District Kangra (HP). Bihar Journal of Agricultural Marketing,1999;(7):376-389.
2. Punera B, Pal S, Jha Girish P. Economics and Institutional Aspects of Protected Cultivation of Carnations in Himachal Pradesh. Agricultural Economics Research Review,2017;30(1):73-80.
3. Chandra P, Sirohi PS, Behera TK, Singh AK. Cultivating vegetables in Punjab and Haryana. Journal of Indian Horticulture,2000;45:17-22.
4. Pathnaik RK, Mohanty S. Protected cultivation: important scope and status. Food and scientific reports,2021;2(3):18-21.
5. <http://hpanchayat.nic.in>
6. <http://www.hpshimla.nic.in>