

## Entrepreneurial Characteristics of Protected Cultivation Entrepreneurs in Pune District (Maharashtra)

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### ABSTRACT

The cultivation of crops in controlled environmental condition is known as protected cultivation. This innovative way of crop cultivation has led to increase in both quality and productivity of crops to higher level. As this technology is capital-intensive and very sophisticated, it requires certain skills and characteristics. Hence a study was conducted to analyse entrepreneurial characteristic, of protected cultivators. In this endeavour, to critically analyse the socio-economic, socio-psychological communication profile and technical skill of entrepreneurs in protected agriculture various parameters were formulated. Data were collected and analysed for understanding the correlation between these components. The study was conducted using 60 respondents in Pune district of Maharashtra as cultivation practice of cut flowers was quiet popular under protected cultivation. It was found that the majority of the entrepreneurs 56.7 per cent were of middle age and 36.7 per cent were graduate. Majority of respondents (73.3 %) showed moderate risk orientation. Large percentage of respondents had moderate to high mass media exposure. Majority of respondent had also undergone training for cultivation under protected cultivation, but still 35 per cent had not underwent any kind of special training.

**Key words:** Entrepreneurial characteristics, protected cultivation, risk orientation

### INTRODUCTION

Development of economy of any nation depends primarily on the important role played by entrepreneurs. The entrepreneur is an economic man, who tries to maximize his profits by innovations. However, the entrepreneurs are not simply innovators but are the persons with a will to act, to assume risk and to bring about a change through organization of human efforts. The part played by such entrepreneurs in agriculture is of vital importance in developing country like India, where there are ample opportunities for using innovations to exploit the available resources. Thus, there is great importance of entrepreneurs in agriculture for adoption of new technologies in crop production. 'Protected agriculture' has been defined as the modification of the natural environment to achieve optimum plant growth. Modifications can be made to both the aerial and root environments to increase crop yields, extend the growing season, and permit plant growth during the period of the year not commonly used to grow open field crops (Jensen and Malter, 1995). But success of such modern and sophisticated cultivation practice requires certain entrepreneurial characteristics which plays a major role. Keeping this in view, the present study was undertaken with the objective of assessing entrepreneurial characteristics of protected cultivation entrepreneurs in Pune district of Maharashtra.

### METHODOLOGY

The study was conducted in Pune district of

Maharashtra, one of the leading states of India which has larger area under protected cultivation. Pune district was purposively selected as protected cultivation is quite popular, owing presence of training institutions, good transportation facilities and proximity to urban market. From the district 60 respondents were selected by using simple random sampling from three major protected cultivation technology practicing tahsils: Maval, Khed and Haveli. In order to understand entrepreneurial characteristics of respondents practicing protected cultivation, an attempt was made to draw a profile sketch, especially highlighting the personal and socio-economic attributes of entrepreneurs, and their communication behaviour. Understanding importance of variables which do have significant effect on success of the enterprise, variables like experience in protected cultivation, special training received, crops cultivated in protected structures and annual income from protected cultivation were studied. An *ex-post facto* research design was used for data collection. A structured interview schedule was designed especially for the study constituting the above components. The statistical analysis of collected data was done by using statistical tools-frequency, mean and standard deviation.

### RESULTS AND DISCUSSION

Results of the data related to personal, socio-economic and psychological characteristic of protected cultivation entrepreneurs were given in Table 1. The study revealed that majority (65%) of the respondents possessed medium to large-size land holdings. As

cultivation under protected structure requires large capital for initial investments, only farmers having larger land holding had capacity to invest. The small and marginal farmers (28.3%) were also taking benefit of this technology by creating farming groups. The continuous fragmentation of family might be the reason for the division of land holding. The similar situation of land holding distribution was also noticed by Karpagam (2000) and Shashidhara (2003). In the pooled sample,

61.7 per cent of respondents had protected agriculture cultivation with farming as their occupation. This indicated that farmers were shifting from traditional cultivation to more commercial agriculture, as growing vegetable and flowers in protected structure is more remunerative than traditional crops. The results also revealed that (18.3%) farmers having less land had totally converted their entire land under protected cultivation.

**Table 1: Personal, socio-economic and psychological characteristics of protected cultivation entrepreneurs.**

<b>n=60</b>			
<b>Characteristic</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Standard Deviation</b>
<b>Age</b>			
Young aged ( $\leq 35$ years)	17	25.00	
Middle aged (36 to 58 years)	34	56.70	
Old aged ( $\geq 59$ years)	11	18.30	
<b>Education</b>			
Primary level	08	13.30	
High School	09	15.00	
Higher Secondary School	15	25.00	
Graduation	22	36.70	
Post Graduation	06	10.00	
<b>Land-size categories</b>			
Marginal ( $< 1$ ha)	09	15.00	
Small (1.1- 2 ha)	08	13.30	
Semi medium (2.1- 4 ha)	04	06.70	
Medium (4.1-10 ha)	18	30.00	
Large ( $> 10$ ha)	21	35.00	
<b>Occupation</b>			
Only protected cultivation	11	18.30	
Protected cultivation and farming	37	61.70	
Protected cultivation + business	08	13.30	
Protected cultivation + Govt. service	04	06.70	
<b>Experience in protected cultivation</b>			
$< 2$ years	08	13.30	
2 to 5 years	24	39.90	
5 to 10 years	23	39.40	
$> 10$ years	05	08.30	
<b>Special training received</b>			
Cultivation	31	51.70	
Packaging	01	01.70	
Export quality	07	11.70	
No special training	21	35.00	
<b>Annual income through protected cultivation (In lakhs)</b>			
Lower ( $< \text{Rs.}2$ Lakh)	07	11.70	
Lower middle (Rs.2 to 5 Lakh)	19	28.30	
Middle (Rs.5 to 10 Lakh)	12	20.00	
Upper middle (Rs. 10 – 15 Lakh)	08	13.30	
Higher ( $> \text{Rs.}15$ Lakh)	16	26.70	
<b>Risk orientation</b>			
Low ( $< \text{Mean} - \text{SD}$ )	07	11.70	1.76
Medium (Between Mean $\pm$ SD)	44	73.30	
High ( $> \text{Mean} + \text{SD}$ )	09	15.00	
<b>Economic motivation</b>			
Low ( $< \text{Mean} - \text{SD}$ )	08	13.30	3.69
Medium (Between Mean $\pm$ SD)	39	65.00	
High ( $> \text{Mean} + \text{SD}$ )	13	21.70	
<b>Social participation</b>			
Low ( $< \text{Mean} - \text{SD}$ )	18	30.00	3.20
Medium (Between Mean $\pm$ SD)	27	45.00	
High ( $> \text{Mean} + \text{SD}$ )	15	25.00	
<b>Mass media exposure</b>			
Low ( $< \text{Mean} - \text{SD}$ )	13	21.70	1.42
Medium (Between Mean $\pm$ SD)	15	25.00	
High ( $> \text{Mean} + \text{SD}$ )	32	53.35	
<b>Numbers of protected cultivation units</b>			
One	11	18.30	
Two	22	36.70	
Three	15	25.90	
Four	05	08.30	
More than five	07	11.70	

It was observed that most of the respondents (53.2 %) had experience of five years in protected cultivation, which indicate that new comers in this venture were more. The respondents (39.4 %) having more than 10 years experience in protected cultivation were exporters of flowers and vegetables to other countries. Thus, with the increase in experience in protected cultivation, entrepreneurs were earning higher incomes. It was evident that 51.7 per cent respondents had received training for cultivation of either vegetables or flowers. Training received by respondents on export quality was 11.7 per cent. Hence, there is great significance of training in this high-tech practice. But 35 per cent respondents received no special training. Similar findings were reported by Meena *et al.* (2009). Hence there is need for training intervention and to make awareness regarding importance of training. About 60 per cent of the respondents (middle to higher net income level) were earning good income from protected cultivation Table 1. But still some respondents (11.7%) were unable to get substantial net income; possible reason for this might be lack of training in quality production and marketing skills. During the survey it was observed that natural hazards like cyclone, fire, earthquake damage the protected structure and small farmers were unable to reinvest on protected structure due to high cost involved. The entrepreneurs appeared to take moderate level of risks as can be seen by their risk taking behaviour scores. It indicated that majority of the entrepreneurs, *i.e.* 73.3% found to have medium risk orientation followed by 11.7 per cent entrepreneurs having low risk orientation and 15 per cent high risk orientation. Similar findings were reported Ram *et al.* (2013). The frequency distribution of entrepreneur respondents on economic motivation revealed that 65 per cent of respondents were observed in medium level of economic motivation followed by high (21.70%). High measure of standard deviation also pointed to this wide variation (Table 1). The distribution appeared to be normal, though skewed towards higher level of economic motivation among the respondents. The distribution of respondents on social participation ranges from medium to high (45 and 25%) indicated the importance of this variable in success of enterprise. The mean score of social participation was 3.20 and the standard deviation 1.42. It can be observed from Table 1 that the mean mass media score was 8.03. The scores ranged very closely from 6 to 13, indicated that consistency among the respondents on their mass media exposure. The frequencies did not fall into a normal distribution, skewed towards the higher side of exposure to mass media. A majority (53.35 %) of farmer had high level of mass media exposure. Shashidhara (2003) reported similar findings. The result revealed that 55 per cent respondents had up to two protected structures. As

majority of the respondents were new comers in this practice, number of protected units were found less. Very few respondents (11.7%) had protected units more than five, were large land holder. Thus, higher investment capacity might be reason for more protected cultivation unit among entrepreneurs of large land holding. These findings are in congruent with findings of Mohanty *et al.* (2003).

**Table 2: Distribution of respondents according to flowers and vegetables in protected structures**

Crops Cultivated In Protected Structure				
Flowers	Maval	Haveli	Khed	Frequency (%)
Rose	14	09	10	33 (55.00)
Gerbera	11	13	12	36 (60.00)
Ice Burge	10	09	07	26 (43.00)
Anthurium	07	08	04	19 (31.66)
<b>Exotic- vegetables</b>				
Colour capsicum	09	06	07	22 (36.66)
Cherry tomato	04	05	07	16 (26.66)
Broccoli	03	04	05	12 (20.00)
Celery	02	00	03	05 (8.30)
Chinese cabbage	02	01	00	12 (20.00)
Carnation	04	03	02	09 (15.00)

The results in respect of protected structure, given in Table 2, revealed that majority of the respondents were more oriented towards flower cultivation than vegetable cultivation. The results also revealed that majority of respondents were growing gerbera (60%), followed by rose (55%). The entrepreneurs were opting more towards flowers than vegetables; the reason might be ready availability of the planting materials, information on flower cultivations, big organized urban flower markets and proximity training institution. In case of vegetable cultivation, unavailability of assured quality of seeds, lack of well-organized markets, lack of cold-storage facilities were hurdles for non-popularity.

## CONCLUSION

Majority of the entrepreneurs had high level of economic motivation, mass media exposure and higher educational orientation. However, entrepreneurs expressed moderate level of risk taking willingness and social participation. The distribution of entrepreneurs was skewed towards younger age and medium to large size of land holding. More over the substantial per cent of entrepreneurs had not undergone any sort of training due to lack of awareness regarding importance of training. The results indicated increase in income level of entrepreneurs resulting in higher satisfaction to the respondents. During the study, it was observed that the reason preventing individual small farmers in entering this enterprise was lengthy procedure, delayed payment of subsidies and lack of technical knowhow of production.

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