**Entrepreneurial Behaviour of Vegetable Farmers at Barwani District of Madhya Pradesh, India**

**Abstract**

Entrepreneurs' crucial role in a society is a significant contributor to the economic development of any country. Rural development and entrepreneurship are now more intertwined than ever. In developing nations like India, where there are many opportunities to utilise technologies to harness enormous resources, especially in the agriculture sector, these entrepreneurs are essential. The study aims to examine the entrepreneurial behaviour of vegetable farmers in the Barwani district of Madhya Pradesh, India. The study was carried out in the Barwani District of M.P. 200 vegetable farmers were selected for the study as a sample. The Barwani district of Madhya Pradesh comprises seven blocks. Among the seven blocks, 5 villages were selected. Out of those seven blocks, Pati, Rajpur, Sendhwa and Barwani blocks had the maximum number of vegetable growers, followed by the other blocks were selected purposively for the study. The vegetable farmers belonged to the middle-aged group (49.50%). They had primary education (36.50%) and belong to the SC/ST category (49.00%). Most vegetable growers were male (66.00%), small family size (40.00%), had medium experience (48.00%), small size of land holding (40.00%), and their main occupation was agriculture (63.00%). The majority of vegetable farmers had a medium annual income, medium material possessions, had medium information seeking behaviour and had medium extension contact. The majority of vegetable growers had medium levels of entrepreneurial behaviour. Education, family annual income, material possession, information seeking behavior, extension contact, experience in vegetable production, size of land holding, occupation, scientific orientation, economic motivation and marketing orientation and knowledge of vegetable growers, showed a positive and significant relationship with entrepreneurial behaviour whereas the variables, age, caste, family size, and gender, did not.

**Key Words: -** Vegetable Farmers, Entrepreneurial Behaviour, Risk Orientation, Innovativeness and Decision Making Ability

**Introduction**

Agriculture is highly valued in India as it not only supplies food for the rural populace but also greatly strengthens the national economy. The population in India is dependent (directly or indirectly) on agriculture as it is their main occupation (Thakur et al.,2022; Pathak, 2023). Agriculture is similarly essential since it provides employment and sustenance for more than 65% of India's population. Rural development and entrepreneurship are now more intertwined than ever. The rural environment has economic and structural characteristics that offer opportunities for entrepreneurs, which can be strengthened by developing networks of entrepreneurs, allowing regional transformation (del Olmo-García et al.,2023). The crucial role that entrepreneurs play in society is a significant contributor to the economic development of any country. In developing nations like India, where there are many opportunities to utilise technologies to harness enormous resources, especially in the agriculture sector, these entrepreneurs are essential.

It may be discovered that any group of individuals in our country which has a wealth of human resources have the requisite entrepreneurial abilities. Agriculture entrepreneurship involves the application of entrepreneurial principles and innovative marketing strategies within the realm of farming (Chopra & Rathore,2024). To promote entrepreneurship in rural and semi-urban areas, the Indian government established a dedicated ministry for micro, small, and medium-sized enterprises. Entrepreneurial behaviour is the term used to describe changes in an entrepreneur's skills, knowledge, and mindset. Determining how people will respond to a change is the first step in implementing it. It is essential to recognise each person's distinct abilities before acting to encourage and support entrepreneurial inclinations and entrepreneurship. Because entrepreneurship enhances people's quality of life and helps families, it is crucial to study it to keep society healthy.

Vegetable cultivation has long been a tradition among Indian farmers, and the country ranks second in terms of both area and production behind China. However, with the emergence of multinational corporations in the farming and processing industries in the early 1980s, there was a change in the amount of land. This might be explained by the intermittent efforts of forward-thinking farmers who were able to envision the possibilities in the context of globalisation and the World Trade Organisation. Numerous socio-psychological and technological problems continue to cause the farmers in Uttarakhand's mountainous regions to lag behind. Vegetable cultivation is mostly limited to a small number of sites in valleys and mid-to-high hill regions.

India's economy has always been based on its agricultural sector. As the largest private corporation in India, it provides for the livelihoods of around 72% of the population and contributes close to 22% of the GDP of the nation. Therefore, agriculture is essential to improving the quality of life for those living in rural areas. Because of this reality, economists do emphasise agriculture and rural development as crucial elements of national development (Pande et al. 2006).

**Materials and Methods**

The study was conducted in the Barwani district of Madhya Pradesh. Barwani district was purposively chosen for the research out of Madhya Pradesh's 53 districts. The Barwani district of Madhya Pradesh comprises seven blocks with 414 panchayats. Among the seven blocks of Barwani district, Pati, Rajpur, Sendhwa, and Barwani blocks had the maximum number of vegetable growers, followed by other blocks were selected purposively for the study. A list of vegetable growing villages was prepared, and out of which 5 villages from each selected block were selected randomly for the study. From the selected villages, a list of vegetable growers was prepared with the help of RAEO’s and other officials. From each selected village, 10 farmers were selected by using a simple random sampling method to make the total sample size 200 for the study.

**Result and Discussion**

**1.1 Characteristics of Vegetable Growers**

The results reveal that a higher percentage of the respondents (49.50%) belonged to the middle age group. They had primary education (36.50%) and belong to the SC/ST (49.00%) cast. The results also reported that most of the vegetable growers were male (66.00%), small family size (59.50%), had medium experience (48.00%), small size of land holding (40.00%) and their main occupation is agriculture (63.00%). The majority of vegetable farmers had medium annual income (49.49%), medium material possession (57.50%), had medium information seeking behaviour (53.00%) and had medium extension contact (63.00%).

**Table 1: Characteristics of Vegetable Growers- (n=200)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S.N.** | **Characteristics** | **Frequency (n=200)** | **Percentage** | Mean | SD |
| **Age** |
| 1 | Young age (up to 35 years) | 43 | 21.50 | 2.07 | 0.724 |
| 2 | Middle age (35 to 50 years) | 99 | 49.50 |
| 3 | Old age (above 50 years) | 58 | 29.00 |
| **Education** |
| 1 | Illiterate | 22 | 11.00 | 1.81 | 1.246 |
| 2 | Primary school | 73 | 36.50 |
| 3 | Middle school | 41 | 20.50 |
| 4 | High school | 36 | 18.00 |
| 5 | Higher Secondary and above | 28 | 14.00 |
| **Cast** |
| 1 | General | 38 | 19.00 | 0.80 | 2.15 |
| 2 | OBC | 64 | 32.00 |
| 3 | SC/ST | 98 | 49.00 |
| **Gender** |
| 1 | Male | 132 | 66.00 | 1.29 | 0.454 |
| 2 | Female | 68 | 34.00 |
| **Family Size** |
| 1 | Small (up to 4 members) | 46 | 23.00 | 1.95 | 0.636 |
| 2 | Medium (5-8 members) | 119 | 59.50 |
| 3 | Large (more than 8 members) | 35 | 17.50 |
| **Experience** |
| 1 | Low | 40 | 20.00 | 2.14 | 0.699 |
| 2 | Medium | 96 | 48.00 |
| 3 | High | 64 | 32.00 |
| **Size of land holding** |
| 1 | Marginal (<1ha.) | 35 | 17.50 | 2.37 | 0.953 |
| 2 | Small (1.1-2 ha.) | 80 | 40.00 |
| 3 | Medium (2.1-5 ha.) | 55 | 27.50 |
| 4 | Large (>5.1 ha) | 30 | 15.00 |
| **Occupation** |
| 1 | Agriculture | 126 | 63.00 | 1.84 | 0.621 |
| 2 | Agriculture + Business | 42 | 21.00 |
| 3 | Agriculture + Business + Service / Other | 32 | 16.00 |
| **Annual Income** |
| 1 | Low (Below 50000) | 68 | 34.00 | 1.79 | 0.710 |
| 2 | Medium (50000-100000) | 98 | 49.00 |
| 3 | High (Above 100000) | 34 | 17.00 |
| **Material Possession** |
| 1 | Low | 51 | 25.50 | 8.203 | 2.601 |
| 2 | Medium | 115 | 57.50 |
| 3 | High | 34 | 17.00 |
| **Information Seeking Behaviour** |
| 1 | Low | 62 | 31.00 | 4.218 | 1.42 |
| 2 | Medium | 106 | 53.00 |
| 3 | High | 32 | 16.00 |
| **Extension Contact** |
| 1 | Low | 41 | 20.50 | 6.742 | 2.639 |
| 2 | Medium | 126 | 63.00 |
| 3 | High | 33 | 16.50 |
| **Scientific Orientation** |
| 1 | Low | 44 | 22.00 | 1.85 | 0.641 |
| 2 | Medium | 122 | 61.00 |
| 3 | High | 34 | 17.00 |
| **Economic Motivation** |
| 1 | Low | 50 | 25.00 | 5.108 | 1.983 |
| 2 | Medium | 83 | 41.50 |
| 3 | High | 67 | 33.50 |
| **Marketing Orientation** |
| 1 | Low | 68 | 34.00 | 1.78 | 0.721 |
| 2 | Medium | 97 | 48.50 |
| 3 | High | 35 | 17.50 |
| **Knowledge** |
| 1 | Low | 40 | 20.00 | 9.605 | 4.136 |
| 2 | Medium | 119 | 59.50 |
| 3 | High | 41 | 20.50 |

The majority of farmers had a medium scientific orientation (61.00%), per cent respondents were in a medium economic motivation (41.50%) and medium knowledge (59.50%) about vegetable cultivation.

**1.2 Entrepreneurial Behaviour of Vegetable Farmers**

 Entrepreneurial behaviour refers to the actions an entrepreneur takes to create their business. It is a composite skill, formed by the combination of several abilities and features.

 The entrepreneurial behaviour of vegetable farmers comprised nine components, such as innovativeness, achievement motivation, decision-making ability, risk orientation, coordinating ability, planning ability, information seeking, cosmopoliteness and self-confidence. Data collected in this regard has been furnished in Table 2.

**Table 2: Distribution of vegetable growers based on components of entrepreneurial behaviour of vegetable farmers-(n=200)**

|  |  |  |
| --- | --- | --- |
| **S.N.** | **Components** | **Category** |
| **Low** | **Medium** | **High** |
| 1 | Innovativeness | 44 (22.00) | 134 (67.50) | 21 (10.50) |
| 2 | Achievement motivation | 31 (15.50) | 137 (68.50) | 32(16.00) |
| 3 | Decision making ability | 27(13.50) | 130 (65.00) | 43(21.50) |
| 4 | Risk Orientation | 39 (19.50) | 126 (63.00) | 35 (17.50) |
| 5 | Co-ordinating ability | 41 (20.50) | 124 (62.00) | 35(17.50) |
| 6 | Planning ability | 24 (12.00) | 145 (72.50) | 31 (15.50) |
| 7 | Information seeking behaviour | 27 (13.50) | 134 (67.00) | 39 (19.50) |
| 8 | Cosmopolitanisms | 29 (14.50) | 137 (68.50) | 34 (17.00) |
| 9 | Self confidence | 31 (15.50) | 125 (62.50) | 44 (22.00) |
|  | Overall mean | 32 (16.00) | 132 (66.00) | 36 (18.00) |

**1.2.1 Innovativeness:-**

 Table 2 shows that the majority of vegetable growers (67.50%) had a medium level of innovativeness, 22.00% had low innovativeness, and 10.50% had high innovativeness.
**1.2.2 Achievement The** data presented in Table 2 shows that the majority (68.50%) of vegetable growers were motivated by medium achievement, while 15.50% were motivated by low achievement and 16.00% were motivated by high achievement.
**1.2.3 Decision-making ability:-**

 The results show that the majority of vegetable growers (65.00%) had medium decision-making ability, 21.50 per cent had high decision-making ability, and 13.50% had low decision-making ability.

**1.2.4 Risk orientation:-**

 From Table 2 that the majority (63.00%) of the vegetable growers had medium risk orientation, whereas less than one fourth (19.50%) had low, and only 17.50 per cent of vegetable growers had high risk orientation.

**1.2.5 Co-ordinating ability:**

 The data in Table 2 shows that the majority of vegetable farmers (62.00%) had medium coordinating ability, whereas 20.50% had low and 17.50% had low coordinating ability.

**1.2.6 Planning ability:-**

 It could be revealed that the majority (72.50%) of vegetable growers demonstrated medium planning skill, followed by high (15.50%) and low (12.00%).

**1.2.7 Detection information behaviour:-**

 Table 2 showed that the majority (67.00%) of vegetable growers had medium information seeking conduct, 19.50% had high behaviour, and 13.50% had low behaviour.

**1.2.8 Cosmopolitenes:-**

 From Table 2 that the majority of vegetable growers (68.50%) have a medium level of cosmopolitanism. In contrast, 17.0 per cent of vegetable growers had a high level of cosmopolitanism, while 14.50 per cent had a low level of it.

**1.2.9 Self-confidence:-**

 Table 2 clearly shows that the majority (62.50%) of vegetable growers had medium self-confidence, while 22.00% had a high degree of self-confidence and 15.50% had low self-confidence.

**Overall entrepreneurial behaviour of vegetable growers:**

 Entrepreneurial conduct was operationally described as a series of actions taken by an entrepreneur to develop his business. It is a composite skill, resulting from the combination of several abilities and features. The entrepreneurial scores achieved by vegetable growers have been classified into three categories: low, medium, and high, with frequency distributions shown in Table 3.

**Table 3: Distribution of the respondents according to their overall entrepreneurial behaviour-(n=200)**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.N.** | **Category** | **Frequency** | **Per centage** |
| 1 | Low (Less than 36) | 32 | 16.00 |
| 2 | Medium (between 36.00-72.00) | 132 | 66.00 |
| 3 | High (More than 72) | 36 | 18.00 |
| Total | 200 | 100 |

 The frequency distribution of respondents' entrepreneurial behaviour appeared to follow a normal distribution, with nearly 66.00 per cent reporting medium levels of entrepreneurial behaviour, 18.00 per cent reporting high levels of entrepreneurial behaviour, and 16.00 per cent reporting low levels of entrepreneurial behaviour.

**1.3 The Relationship between the Attributes of Vegetable Growers and their Entrepreneurial Behaviour**

 The coefficient of correlation of each of the socio-economic characteristics with their entrepreneurial behaviour of vegetable growers has been furnished.

**Table 4: Relationship between personal socio-economic profiles with entrepreneurial behaviour of vegetable growers (n=200)**

|  |  |  |
| --- | --- | --- |
| **S. No** | **Variable** | **Correlation coefficient (r)** |
| 1 | Age | 0.059 NS |
| 2 | Education | 0.351\*\* |
| 3 | Caste | 0.042NS |
| 4 | Family size | 0.048NS |
| 5 | Gender | 0.055 NS |
| 6 | Experience  | 0.279\* |
| 7 | Size of land holding | 0.287\* |
| 8 | Occupation | 0.283\* |
| 9 | Annual income | 0.342\*\* |
| 10 | Material possession | 0.323\*\* |
| 11 | Information Seeking Behaviour | 0.335\*\* |
| 12 | Extension Contact | 0.399\*\* |
| 13 | Scientific orientation | 0.251\* |
| 14 | Economic motivation | 0.288\* |
| 15 | Marketing orientation | 0.245\* |
| 16 | Knowledge | 0.314\*\* |

\*\*Significant at 1% level. \*Significant at 5% level. NS- Non-Significant

 The data presented in table 4 revealed that the coefficient of correlation of each of the socio-personal characteristics of vegetable growers, viz., education, family annual income, material possession, information seeking behavior, extension contact, and knowledge of vegetable growers, showed a positive and significant relationship with entrepreneurial behaviour at the 0.01 level of probability. Experience in vegetable production, size of land holding, occupation, scientific orientation, economic motivation, and marketing orientation all had a positive and significant relationship with entrepreneurial behaviour at the 0.05 level of probability, whereas the remaining four variables, age, caste, family size, and gender, did not.

**Conclusion**

The vegetable farmers belonged to the middle-aged group. They had primary education and belong to the SC/ST category. Most vegetable growers were male, small family size, had medium experience, small size of land holding, and their main occupation was agriculture. The majority of vegetable farmers had a medium annual income, medium material possessions, had medium information seeking behaviour and had medium extension contact. The majority of vegetable growers, 66.00 per cent, reporting medium levels of entrepreneurial behaviour, 18.00 per cent reported high levels of entrepreneurial behaviour, and 16.00 per cent reported low levels of entrepreneurial behaviour. Characteristics of vegetable growers, viz., education, family annual income, material possession, information seeking behavior, extension contact, experience in vegetable production, size of land holding, occupation, scientific orientation, economic motivation and marketing orientation and knowledge of vegetable growers, showed a positive and significant relationship with entrepreneurial behaviour whereas the remaining four variables, age, caste, family size, and gender, did not.

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