# Constraints Experienced by Vegetable Growers of Barwani District of M.P. in Adoption Scientific Vegetable Production Technology


## Abstract

The study was carried out in Barwani District of M.P. 200 vegetable farmers were selected for the study as a sample. The results reveal that higher percentage of the respondents (49.50%) belonged to middle age group. They had primary education (36.50%) and belong to 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%). The majority of farmers had medium scientific orientation (61.00%), per cent respondents were in the medium economic motivation (41.50%) and medium knowledge (59.50%) about vegetable cultivation. The most important technical constraints faced by the vegetable growers were lack scientific understanding of the package and its procedures (87.00 %), regarding socioeconomic factors, the main constraints mentioned by vegetable farmers were lack of knowledge about newer technologies and less exposure to the media (80.50%) and major constraints associates with organizational aspects expressed by the vegetable growers were low price during harvesting of vegetables/ market surplus (69.50%). The majority vegetable farmers suggested that vegetable growers need training on the scientific manner of vegetable producing techniques (67.50%) and there should be more cooperatives and FPOs readily available (70.00%).



**Key Words: -** Constraints, Suggestions, Vegetable Growers, Vegetable Production Technology.




## Introduction

India places a high value on agriculture since it not only provides food for the rural population but also significantly boosts the country's economy. Since it sustains and creates work for over 65% of India's people, agriculture is equally important. Entrepreneurship and rural development are now more closely related than ever. An important factor in any nation's economic progress is the vital role that entrepreneurs play in society. Such entrepreneurs play a critical role

in developing countries such as India, where there is ample opportunity to apply innovations to exploit abundant resources, particularly in the agriculture sector.

Any group of people in our nation, which has an abundance of human resources, may be found to possess the necessary entrepreneurship skills. The Indian government created a specific ministry for micro, small, and medium-sized businesses in an attempt to encourage entrepreneurship in rural and semi-urban regions. Changes in an entrepreneur's knowledge, abilities, and attitude are referred to as entrepreneurial behavior. The first step in putting a change into practice is figuring out how others will react to it. Prior to taking action to promote and foster entrepreneurial tendencies and entrepreneurship, it is crucial to acknowledge each person's unique skills. Researching entrepreneurial behavior is essential to maintaining a healthy society since it improves people's quality of life and supports families.

Indian farmers are growing vegetable from a long time as a part of tradition and India ranks next to China in area and production. However, a shift has taken place in acreages in early 1980s with the commencement of multinational companies in farming and processing sector. This may be attributed to sporadic attempts of the progressive farmers who could visualize the opportunities in the scenario of globalization and World Trade Organization. The farmers in hill areas of Uttarakhand are still lagging behind due to various technological and socio-psychological factors. Cultivation of vegetable is restricted mainly to few pockets ranging from mid to high hills and valley areas.

Growing vegetables is seen as a traditional, non-entrepreneurial activity. The support system for vegetable production in the hills is made up of three main parts: i) training and extension; ii) marketing; and iii) input supply. The support of these three elements determines how well a vegetable producing firm performs. The process must be accelerated in order to fortify the supply chain and demand. It is now understood that fostering an entrepreneurial culture among farming communities as a whole may lead to a vertical increase in production and productivity. In light of this, the goal of the current study was to identify the variables that both directly and indirectly affect vegetable producers' entrepreneurial behavior.

India's agriculture has long been the foundation of the country's economy. Being the biggest private company in India, it supports the livelihoods of around 72% of the people and accounts for

nearly 22% of the country's GDP. As a result, agriculture plays a crucial role in raising rural populations' standard of living. Economists do highlight agriculture and rural development as essential components of national development due to this reality (Pande et al. 2006).

It is now recognized that entrepreneurship contributes to a nation's development in a number of ways, including assembling and utilizing different inputs, assuming risks, developing and copying production methods to lower costs and improve quality and quantity, broadening the market, and organizing and overseeing the manufacturing facility at different phases. In actuality, the quantity of entrepreneurial skills is a critical factor in a nation's quick economic development.

## Materials and Methods

The study was conducted in 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 panchayat. Among seven blocks of Barwani district Pati, Rajpur, Sendhwa and Barwani block had maximum number of vegetable growers followed by others blocks were selected purposively for the study. A list of vegetable growing villages 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 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 higher percentage of the respondents (49.50%) belonged to middle age group. They had primary education (36.50%) and belong to 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 behavior (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 medium scientific orientation (61.00%), per cent respondents were in the medium economic motivation (41.50%) and medium knowledge (59.50%) about vegetable cultivation.

### 1.2 Constraints Examined By Vegetable Growers During Adoption of Scientific Vegetable Production Technology

#### A. Constraints Associate with Technical Aspect

Analyzing the data presented in Table 2, it was determined that the most important technical constraints faced by the vegetable growers were lack scientific understanding of the package and its procedures (87.00 %), followed by lack of training Programme (72.50%), lack of information regarding conserving of natural resources (67.50%), poor farm mechanization (65.00%), lack of Suitable local specific technology (62.50%), insufficient knowledge about post-harvest management (57.50%), inadequate knowledge regarding integrated nutrient management (56.00%) inadequate knowledge about integrated plant protection management (55.00%).

#### B. Constraints Associate with Socio Economic Aspect

Regarding socioeconomic factors, the main constraints mentioned by vegetable farmers were lack of knowledge about newer technologies and less exposure to the media (80.50%), followed by unreliable information source (70.50%), high costs for seeds and other inputs (68.00%), less purchasing power of the vegetable growers (66.00%), Lack of abilities for entrepreneurship (65.00%), poor inventiveness (60.50%), Lack of motivation for success (56.50%), lack of education (54.50%) and shortage of good cultivable land (54.50).

**Table- 2 Constraints examined by vegetable growers during adoption of scientific vegetable production technology-(n=200)**

| S.N. | Types of Constraints | Frequency (n=200) | Percentage | Rank |
|---|---|---|---|---|
| 1 | Lack scientific understanding of the package and its procedures | 174 | 87.00 | I |
| 2 | Lack of Suitable local specific technology | 125 | 62.50 | V |
| 3 | Lack of training Programme | 145 | 72.50 | II |
| 4 | Inadequate knowledge regarding integrated nutrient management | 112 | 56.00 | VII |
| 5 | Inadequate knowledge about integrated plant protection management | 110 | 55.00 | VIII |
| 6 | Insufficient knowledge about post-harvest management | 115 | 57.50 | VI |
| 7 | Lack of information regarding conserving of natural resources | 135 | 67.50 | III |
| 8 | Poor farm mechanization | 130 | 65.00 | IV |

**B. Constraints Associate with Socio Economic Aspect**

| S.N. | Types of Constraints | Frequency (n=200) | Percentage | Rank |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1 | Lack of knowledge about newer technologies and less exposure to the media | 161 | 80.50 | I |
| 2 | Poor inventiveness | 121 | 60.50 | VI |
| 3 | Lack of education | 109 | 54.50 | VIII |
| 4 | Less purchasing power of the vegetable growers | 132 | 66.00 | IV |
| 5 | Shortage of good cultivable land | 106 | 53.00 | IX |
| 6 | High costs for seeds and other inputs | 136 | 68.00 | III |
| 7 | Lack of abilities for entrepreneurship | 130 | 65.00 | V |
| 8 | Lack of motivation for success | 113 | 56.50 | VII |
| 9 | Unreliable information source | 141 | 70.50 | II |

**C. Constraints Associate with Organizational Aspect**

| S.N. | Types of Constraints | Frequency (n=200) | Percentage | Rank |
|---|---|---|---|---|
| 1 | Inadequate communication with line departments | 118 | 59.00 | IV |
| 2 | Less credibility of extension personnel | 98 | 49.00 | VII |
| 3 | Lack of effective supervision and monitoring by extension officers | 106 | 53.00 | VI |
| 4 | Difficult process for available loans | 116 | 58.00 | V |
| 5 | Lack of good quality inputs | 125 | 62.50 | III |
| 6 | Low price during harvesting of vegetables/ market surplus | 139 | 69.50 | I |
| 7 | Insufficient storage space | 132 | 66.00 | II |

**C. Constraints Associate with Organizational Aspect**

The major constraints associates with organizational aspects expressed by the vegetable growers were low price during harvesting of vegetables/ market surplus (69.50%), insufficient storage space (66.00%), lack of good quality inputs (62.50%), inadequate communication with line departments (59.00%), difficult process for available loans (58.00%), lack of effective

supervision and monitoring by extension officers (53.00%) and less credibility of extension personnel (49.00%).

### 1.3 Suggestions Overcome Constraints Faced By Vegetable Growers during Adoption of Scientific Vegetable Production Technology

According to the data presented in Table No. 3, the majority vegetable farmers suggested that vegetable growers need training on the scientific manner of vegetable producing techniques (67.50%), there should be more cooperatives and FPOs readily available (70.00%), The government ought to offer appropriate manufacturing input subsidies (68.50%), reducing the price of high-quality seeds (67.50%), farmers should receive timely and adequate financial facilities (66.00%).

**Table: 3 Distribution of vegetable growers according to their suggestion to overcome on constraints-(n=200)**

| S.N. | Suggestions | Respondents | | |
|---|---|---|---|---|
| | | Frequency | Percentage | Rank |
| 1. | Vegetable growers need training on the scientific manner of vegetable producing techniques | 162 | 81.00 | I |
| 2. | Ensuring that government organizations provide an adequate supply of high-quality seeds | 120 | 60.00 | IX |
| 3. | Improving the timely availability of fertilizers and pesticides | 148 | 64.00 | VI |
| 4. | Reducing the price of high-quality seeds | 135 | 67.50 | IV |
| 5. | Fertilizer and pesticides must to be made accessible at reasonable costs | 121 | 60.50 | VIII |
| 6. | Extension services must to be delivered in a timely and appropriate manner | 115 | 57.50 | X |

| | | | | |
|---|---|---|---|---|
| 7. | Make sure vegetable producers have access to necessary facilities for irrigation | 127 | 63.50 | VII |
| 8. | The government ought to offer appropriate manufacturing input subsidies | 137 | 68.50 | III |
| 9. | Farmers should receive timely and adequate financial facilities | 132 | 66.00 | V |
| 10 | There should be more cooperatives and FPOs readily available | 140 | 70.00 | II |

Most of vegetable farmers suggested that improving the timely availability of fertilizers and pesticides (64.00%) make sure vegetable producers have access to necessary facilities for irrigation (63.50%), fertilizer and pesticides must to be made accessible at reasonable costs (60.50%), ensuring that government organizations provide an adequate supply of high-quality seeds (60.00%) and extension services must to be delivered in a timely and appropriate manner (57.50%).

**Conclusion**

The vegetable farmers belonged to middle age group. They had primary education and belong to SC/ST category. The most vegetable growers were male, small family size, had medium experience, small size of land holding and their main occupation is agriculture. The majority of vegetable farmers had medium annual income, medium material possession, had medium information seeking behavior and had medium extension contact. The most important constraints faced by the vegetable growers were lack scientific understanding of the package and its procedures, lack of knowledge about newer technologies and less exposure to the media and low price during harvesting of vegetables/ market surplus. The majority vegetable farmers suggested that vegetable growers need training on the scientific manner of vegetable producing techniques, there should be more cooperatives and FPOs readily available, the government ought to offer appropriate manufacturing input subsidies, farmers should receive timely and adequate financial facilities.

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