

# FACTORS RESPONSIBLE FOR ADOPTION OF RAVI VEGETABLES CROPS IN VADODARA DISTRICT

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**Abstract:** The study was conducted on 175 farmers randomly selected from five villages under community Development of Vadodara district, Gujarat. To find out the important factors responsible for adoption of Ravi vegetable crops by the farmers, 12 independent variables and one dependent variable were selected for the study. Data were collected by personal interview method in the months of January and February 2018 by the researcher. For analysis of the data, coefficient of correlation analysis was followed. It was found that educational status, annual income, use of mass media, economic motivation and innovative proneness were positively correlated and significant whereas age, operational land holding and risk orientation was negatively and significantly correlated with adoption of ravi vegetable crops.

**Key Words:** Vegetables, adoption; ravi crop, coefficient of correlation; motivation.

## 1. INTRODUCTION:

Vegetables comprises of a large number of plants, mostly, annual of which different parts like leaf, stem, flowers bud, flower, fruits, root, etc are eaten. They are one of the cheapest sources of natural nutritive foods. Their consumption in sufficient quantity provides taste, palatability and increase appetite for maintenance of good health. Vegetables also play a beneficial role in protecting the human body against some degenerative diseases. They also help in neutralizing the acids produced during digestion of proteins and fatty foods. It has been estimated that 150g of tropical leafy vegetables can provide 65-145mg of ascorbic-acid (vitamin-C), 150µg of folic acid, 5-7mg iron and 210-410 mg of calcium. A large number of vegetable crops in India have been introduced so far. Yet a planned development in the field of vegetables production can improve the nutritional requirement for people and also can meet the challenge of adequate food supply to the increasing population. There are number of vegetables namely sweet potato, chilly, spinach, brinjal, peas, beans, pigeon pea, carrot, brinjal, cabbage, cauliflower, tomato and many spices (Jati, *et. al*, 1980). In Vadodara district, Gujarat, the total area under vegetable production is 7254 ha with a production of 55936 metric tonnes. Although farmers grow Ravi vegetables in some part of state but the production have not been able to meet the requirement. The production of Ravi vegetables crops in Vadodara district, Gujarat is insufficient mainly due to lack of giving suitable irrigation methods practices and vegetables are imported. Arya, *et.al*. (1984) found that lack of co-ordination, awareness among farmers in village, low adoption by neighbours, conventional norms and adverse socio-political system in the villages are the most important constraints which do not permit farmers to accept and adopt new technology in vegetable farming. Adoption of a new technology is influenced by physical, socio-economic and mental factors; similarly, farmers' attitudes determine adoption of improved technology (Roger, 2003). The present study was conducted to study the factors influencing the adoption of Ravi vegetable crops by the farmers of Vadodara district, Gujarat.

## 2. MATERIALS AND METHODS:

The present study was conducted under the Community Development of Vadodara district, Gujarat. The purposive as well as simple random technique was adopted for the study. The district and were purposively selected whereas villages were selected randomly. Under the Padra (Takuka) five villages namely Chokari, Mujpur, Karakhadi, Masar and Sadhi, were selected. A total of 175 respondents, 25 respondents from each village have been selected by random sampling method. The data were collected in the month of January to March 2018 by personal interview method with the help of interview schedule. The independent variables used were age(X<sub>1</sub>), education(X<sub>2</sub>), annual income(X<sub>3</sub>), operational land holding(X<sub>4</sub>), family type (X<sub>5</sub>), innovative proneness(X<sub>6</sub>), economic motivation(X<sub>7</sub>), Level of organic manure used(X<sub>8</sub>), Source of information (cosmopolite and localite)(X<sub>9</sub>), risk orientation(X<sub>10</sub>), contact with extension staff (X<sub>11</sub>), mass media exposure(X<sub>12</sub>) and one dependent variable Adoption(Y) was selected. Frequency distribution and coefficients of correlation were followed for the analysis of data.

### 3. RESULT AND DISCUSSION:

An investigation was carried out on the factors responsible for adoption of rabi vegetable in Vadodara district, Gujarat and presented in table 1.

**Table.1: Co-efficient of correlation (r) between independents variables and adoption of rabi vegetable crops**

Variables	r-value
Age(X <sub>1</sub> )	-0.278*
Educational status(X <sub>2</sub> )	0.245*
Annual income(x <sub>3</sub> )	0.225*
Operational land holding(X <sub>4</sub> )	-0.375**
Innovation proneness(X <sub>6</sub> )	0.227*
Economic motivation(X <sub>7</sub> )	0.403**
Risk orientation(X <sub>10</sub> )	-0.219*
Mass-media exposure(X <sub>12</sub> )	0.198*

\*\* indicates 1% level of significance

\* indicates 5% level of significance

Table 1 shows that the association of the adoption of the Rabi vegetables by the farmers was studied in relation to 12 independent variables with the help coefficient of correlation. It was found that education; annual income; use of mass media; economic motivation and innovation proneness were positively correlated and significant whereas age; operational land holding and risk orientation were negatively and significantly correlated with adoption of rabi vegetable crops.

**Annual income** was also found to be positively correlated with adoption of Rabi vegetables by the farmers. Annual income refers to total amount of cash received in year by the farmers from various sources like agriculture, animal husbandry, fisheries etc. High annual income serves as a motive to move and undertake something different new such as rabi vegetable crops instead of leaving land barren. Since rabi vegetable crops are short duration, it helps to provide additional income to farmers. Therefore it was found that annual income serve as motivation to farmer to adopt rabi vegetable crop cultivation.

**Economic motivation** was found to be positively correlated with adoption of Rabi vegetables by the farmers. Farmers who are presently practicing vegetable cultivation were describing various reasons such as additional cash from vegetable crops, short duration in nature, varieties of vegetable crops can be grown in one land and demand of vegetable crops are more as compared to rice. This implies that with increase in income from rabi vegetables, the rate of adoption also increases. This may be due to the fact that Rabi vegetables have enabled the farmers to fetch better price than vegetables of other season which therefore made them more motivated in adopting it.

**Educational** was found to be positive and significantly correlated with adoption of Rabi vegetables by the farmers. Education simmers the process of cognitive changes, motivational changes and motor change in a positive direction and helps people to move for a wider and diverse exposure to farm enterprise and farm operation and consequently build of meticulous observation of yield decline or change. Here education has been recorded to be positively and significantly correlated to adoption of organic farming. The operational link can be like that education provides a descent urbanite disposition and utilitarian role in increasing the organic farming experience by adapting modern technology being supported by annual income and availability of irrigation facilities.

**Use of mass media** was found to be positively correlated with adoption of Rabi vegetables by the farmers. When farmers have more mass media exposure they have more access to information related to various kinds of farming such as input facilities and marketing information and other various information relating to crop production. Mass media exposure also motivate farmer to interact with different innovative ideas and ultimately influence to adopt new venture.

**Innovative proneness** implies one being relatively more venturesome and ready to adopt new ideas or technologies relatively earlier than others. Thus, it was found that with the increase in innovative proneness of the farmers there was an increase in adoption of rabi vegetables. This may be due to the willingness of the farmers to try and adopt new

things and take responsibilities for the success or failure of the new venture. It was found that young aged farmers were more innovative and receptive as compared with old aged farmers because younger farmers had more mass media exposure and various farm literatures.

**Age** in case of the farmers it was found to be significant but negatively correlated with adoption of rabi vegetable crops. This implies that farmers of younger age were more likely to adopt Rabi vegetables where as older age farmers are rather stick with only cultivation of rice and other cereal crops. This may be due to more willingness, innovativeness and quick learning ability of the younger aged farmers than the older farmers who are slow in catching up ideas with the younger farmers.

**Operational land holding** was found to be significant and negatively correlated with the adoption of Rabi vegetables by the farmers. This implies that farmers with smaller operational land holding were more likely to adopt rabi vegetables. Vegetables when grown in a smaller scale are less laborious and easier to manage which in turn yield quality produce. Therefore, farmers with smaller operational land holding were more adoptive than farmers with larger operational land holding.

**Risk orientation** was also found to be significant and negatively correlated with the adoption of Rabi vegetables by the farmers. Cultivating Rabi vegetables involve certain risks such as unavailability of markets, irrigation, and high cost of inputs which act as barriers for its adoption. Therefore it implies that farmers with low risk orientation were more likely to adopt rabi vegetable crops. But Samantaray (2009) has confirmed that lack of location specific recommendations, lack of community awareness, lack of proper follow up service, and lack of effective supervision were the factors influencing adoption rabi vegetable crops by the farmers and Oladele (2005) mentioned various parameters that have been influencing the adoption behavior of farmers who adopt the technology were demographic variables, technology characteristics, information source, knowledge, awareness, attitudes and group influence affect adoption behavior of the farmers.

#### **4. CONCLUSION:**

The study was conducted to identify important factors responsible adoption of rabi vegetable crops by the farmers of Vadodara district, Gujarat. In this study it was found that variables like educational status, annual income, use of mass media, economic motivation and innovative proneness were positively correlated and significant whereas age, operational land holding and risk orientation was negatively and significantly correlated with adoption of rabi vegetable crops.

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