

# Business Approach of Organic Farming in Punjab: Farmers Perspective

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## ABSTRACT

*The present study is an attempt to identify the Business approach towards organic farming in Punjab by analysing 400 farmers who have been interviewed personally through a structured questionnaire in four districts of Punjab, namely Patiala, Sangrur, Fatehgarh sahib and Mohali. The factor analysis technique has been used which explained 72.87 percent of the total variance. 13 factors has been extracted from the study. The findings show that currently organic farming is booming in india and farmers also expecting future of organic farming.*

## 1. Introduction

Farming as a Business curriculum creates profound change in a smallholder farmer's mentality and in their prospects for economic improvement. It is not merely a new way of thinking but also a substantial new way of operating that puts even a small farm on an enterprise plane and provides tools for proper management. It has been demonstrated to contribute to food and income security by putting more money into the pockets of rural farmers in developing countries. It does this by increasing both productivity and profitability. To achieve new empowerment, farmers are trained to view agriculture as a sustainable business and make the shift from subsistence farming to farming for profit. The business training stimulates change in farmers' attitudes by creating a class of business-minded farmers empowered to plan, produce, market, and keep and use records. It also encourages farmers to work in groups that can efficiently promote participatory research and training, business skills development, business services, information dissemination, bulk buying, and collective marketing. Farming as a Business also enables farmers to improve their standards of living, increase their household wealth, provide productive employment, and enhance their families and communities food security.

An individual farmer transitioning from subsistence to commercial farming can face many challenges. Joining together as a larger farming group can open up new opportunities to save money, manage risk and make long-term investments to maximize incomes.

## 2. Literature Review

**Xie et al. (2015)** The objective of the research is to evaluate the development of organic agriculture in china and impact of factors determining the transition to organic farming and provide some recommendations for government's policy relating to organic farming. The empirical results suggest that such factors as age, risk preferences, labour abundance, expected income and environment can significantly affect farmer's willingness to engage in organic agricultural production. The study showed the strong willingness of farmers to switch to organic agriculture, but restricted by limited

government's support and inadequate understanding of organic farming by farmers.

**Patidar and Patidar (2015)** The main objective of this research was to assess the farmer's viewpoint towards organic farming and issues related with it. The research was conducted in Madhya Pradesh, India, which consists of 39 districts. This study also shows some unpredictable results such as cost associated with organic farming does not affect farmer's perception other factors like knowledge, environment and gender have no explanatory significance towards belief of the farmers

**Cranfield et al. (2010)** The research is on the motives, benefits and problems of conversion to Organic production in Canada in year 2010. The data from certified organic or in-transition to organic vegetable and dairy producers in Canada has been explored. The Results advocate that health and safety concerns and environmental issues are the prevalent motives for conversion, while economic motives are of lesser importance.

**Crowder and Reganold (2015)** This research is on the comparison of financial performance of organic farming and conventional agriculture at global level. The data of 44 studies that examined the financial performance of organic farming compared with conventional farming has been used, which represents those 55 crops grown in 14 countries on five continents. It has been concluded by the author that organic farming is much more profitable than conventional farming and the studies also suggest that organic farming can continue to expand even if premium decline.

**Indu and Jagathy (2013)** This research is on the marketing practices, perceptions and problems of organic producers in Kerala. The study included a survey of 50 domestic producers and 10 exporters. The organic producers-both exporters and domestic producers, unanimously agree that there will be an increase in the organic product sales in the next five years and they are satisfied with their business. They expressed their willingness to expand the business also. They have a highly positive expectation about the future growth of organic consumption and Kerala market.

**Aulakh and Ravisankar (2017)** A study is on the various perspectives of organic farming in Indian context. It's concluded in the research that according to the total factor productivity growth score prepared by national institute of agricultural economics and policy research has revealed that technology-driven growth has been the highest in Punjab and the lowest in Himachal Pradesh. It implies that some of the states like Himachal Pradesh, Uttarakhand, Madhya Pradesh, Rajasthan, Jharkhand and north-eastern region of India have not been influenced much by the modern inputs of agriculture like chemical fertilisers and pesticides and can be the potential areas for organic farming. However, organic farming technologies need to be re-tuned and updated to further enhance the crop yields. Farmer friendly certification policies and supply-demand chain management is essential for the growth of organic farming in the country.

**Gaur (2016)** This paper has reviewed the Indian scenario with reference to organic farming. The paper is based on secondary data. The most important constraint felt in the progress of organic farming is the inability of the government policy making level to take a firm decision to promote organic agriculture. Unless such a clear and unambiguous direction is available in terms of both financial and technical supports, from the centre to the panchayats levels, mere regulation making will amount to nothing. It has been analysed from the research that, major issues raised for organic farmers in India are reduction in yield due to conversion to organic farm, soil fertility enhancement, and integration of livestock, certification constraints, ecology, marketing and policy support.

### 3. Research Objectives

The Objectives of the research are as follows:

- To understand the Present Scenario of business perspective of Organic farming in the different areas of Punjab.
- To examine the Future prospects of organic farming in Punjab.
- To assess government and non government factors which affects the organic farming in Punjab.

### 4. Research Methodology

The study has been comprised of organic farmers in four districts of Malwa region of Punjab i.e. Patiala, Fatehgarh Sahib, Sangrur & Mohali. 100 organic farmers of organic crops from each of the district were selected. In total, the sample size was 400. In the research we assumed intermediation to the farmer itself. Primary data has been collected from respondents in the form of questionnaires. The study had used governmental and non governmental publications either in print or electronic form. The sources of secondary data was statistical abstract of Punjab and economic survey of Punjab. National or local newspaper,. International and national journals had also used. The data collected has been quantified and processing has been done with latest version of SPSS.

### 5. Factor Analysis

The 68-item version of the farmers perspective was administered, however this analysis focused only on the 62 items from the proposed short form of the FPs. Initially, the

factorability of the 68 variables was examined. Several well-recognized criteria for the factorability of a correlation were used. Negative questions have been reverse coded for the proper analysis of particular variable. Firstly, it was observed that 62 of the 68 items correlated, suggesting reasonable factorability. Secondly, the Kaiser-Meyer-Olin measure of sampling adequacy was .95, above the commonly recommended value of .6, The diagonals of the anti-image correlation matrix were also all over 1. Finally, the communalities were all above .5 (see Annexure I), further confirming that each item shared some common variance with other items. Given these overall indicators, factor analysis was deemed to be suitable with all 62 items.

Thus the factor analysis of the farmers related factors is discussed below:-

**1. Communalities :** The communalities before and after extraction reveals that extracted components represents the variables well. The extraction of the communalities for every variable should be higher than 0.5. Communality also tells the extent to which an item correlates with all other items. The communalities in the output are all high. (See Appendix I) It means that correlation among the variables would also be very high. The highest extraction in the communalities is .951 i.e. Government support is required for cheaper access to organic certification of farms. and the lowest extraction in the communalities is .515 of the variable that Inputs for organic farming should be generated through government controlled mechanisms to ensure quality and timely availability.

**2. Total Variance:** As per the criteria stated by Kaiser that one should use a number of factors equals to the number of Eigen values of the correlation matrix that are greater than one. Principal components analysis was used because the primary purpose was to identify and compute composite scores for the factors underlying the short version of the FPs. Initial Eigen values indicated that the first six factors explained 40.1%, 5.7%, 3.6%, 3.4%, 3.1%, 2.8% of the variance respectively. The seventh to thirteen factors had Eigen values just over one, and each explained 2.6%, 2.3%, 2.1%, 1.9%, 1.9%, 1.7%, 1.6% of the variance respectively. Solutions for all the factors were examined using oblimin rotations of the factor loading matrix. The three factor solution, which explained 73% of the variance, was preferred because of: (a) its previous theoretical support; (b) the 'levelling off' of Eigen values on the scree plot after fourteen factors; and (c) the insufficient number of primary loadings and difficulty of interpreting the fourteenth and subsequent factors. There was little difference between the three factor varimax and oblimin solutions, thus both solutions were examined in subsequent analyses before deciding to use an oblimin rotation for the final solution. There are 13 factors in the initial solution whose Eigen value is greater than 1, as from the 14<sup>th</sup> factor Eigen value drops down to .88. Thus only 13 factors will be retained for the further studies. Together, they

account for almost 73% of the variability in the original values. Factor 1 is the most important as it individually explained the variance of 40.1 % .(See Appendix II)

**3. Component Matrix:** The 44 attributes from the questionnaire were divided into 13 factors. The table 5.25 shows the loading values of the 44 variables on the 13 extracted factors. The higher the factor loading, more the factor contributes to the variable. In other words factor loading describes the strength of relationship between the factors and variables grouped under that factor. The negative sign of the loading shows that the variable is negatively related

with the given factor. A total of twenty four items were eliminated because they did not contribute to a simple factor structure and failed to meet a minimum criteria of having a primary factor loading of .4 or above, and no cross-loading of .3 or above. For the final stage, a principal components factor analysis of the remaining 44 items, using varimax and oblimin rotations, was conducted. An oblimin rotation provided the best defined factor structure. All items in this analysis had factor loadings over .4. The factor loading matrix for this final solution is presented in Table 5.25

**Table-3 Rotated component matrix: Farmers**

| Item  | Greatest  Beta | Factor                                 |
|---|----------------|--|
| P6 I had experimented with organic practices on a small scale before implementing the practices far wide.   | 0.653          | 1, Implementation                      |
| P4 Organic famers got certified from the fiscal authorities.  | 0.642          | 1                                      |
| P14 In conversion period should be reduced.   | 0.539          | 1                                      |
| G19 Government support is required for cheaper access to organic certification of farms.  | 0.995          | 3,Certification & Conversion           |
| G11 Government should do the efforts to make the certification process easier.  | 0.991          | 3                                      |
| G17 Government should give scheme for compensating yield loss during the conversion period.   | 0.99           | 3                                      |
| G4 Government providing advisory services to farmers for conversion.  | 0.442          | 3                                      |
| G6 Organic farmers receive financial assistance for certification   | 0.422          | 3                                      |
| F12 The organic market can only grow if the farmers are ready to increase organic farming.  | 0.89           | 2,Future Perspective                   |
| F3 I wish to change the size of my organic farm, because it's profitable.   | 0.787          | 2                                      |
| F2 Future demand and price for organic products would increase.   | 0.594          | 2                                      |
| F7 There is ample scope for organic food industries to expand and generate revenue for strengthening the Indian economy                             | 0.572          | 2                                      |
| F4 Organic farming can generate employment opportunity for a vast section of rural communities.   | 0.888          | 1,Perception of organic farmers        |
| F8 There is a much scope to establish organic input preparation units in nearby villages.   | 0.841          | 1                                      |
| F1 They would expect number of changes in relation to organic production in near future   | 0.785          | 1                                      |
| F6 Organic farming will give rise to a healthy aspect of living for the current and the future generation.  | 0.486          | 1                                      |
| P18 NPOP (national program for organic production) is a Govt of India site which resolves all the queries related to organic farming.               | 0.949          | 3,NPOP                                 |
| P17I know about NPOP.   | 0.941          | 3                                      |
| C4 I am able to match the profits made in conventional production.  | 0.852          | 4,Financial Aspects                    |
| C6 The labour scarcity and cost involved therein, constrain adoption of organic farming.  | -0.762         | 1                                      |
| C11 Ccompetition of big players in the market influences small strategies.  | -0.691         | 1                                      |
| C13 Organic farming is a very risky venture.  | -0.673         | 1                                      |
| C8 There is lack of open local market for sale of organic produce.  | 0.868          | 2,Selling Platform                     |
| C10 Organic products have not been produced according to the demand in the market.  | 0.772          | 2                                      |
| C1We are able to sell our organic crops easily.   | 0.668          | 2                                      |
| F5There Should be organic seminar and workshops for students of agriculture.  | 0.908          | 1,Supporting factors for future growth |
| F10 Many farmers are apprehensive about adopting organic farming due to the high production cost and the three-year transition period.              | 0.897          | 1                                      |
| F9 In order to maintain the quality of organic production, pesticide residues should be provided with laboratories in collaboration with government | 0.89           | 1                                      |
| F11 Organic product labelling is a necessary step towards protecting confusion and building user trust.   | 0.758          | 1                                      |
| G3 Government providing sufficient subsidies to organic farmers.  | -0.795         | 4,Subsidy                              |

|   |        |                                   |
|---|--------|-----------------------------------|
| G2 I have enough knowledge about the various government schemes for agriculture credit.   | -0.699 | 4                                 |
| G5 The location of the farm and its size also affects the subsidy payment.  | -0.508 | 4                                 |
| G1 I am aware about the government and organisational policies for organic products.  | -0.476 | 4                                 |
| P9 Restaurants/Companies mainly buy organic crops from us.  | 0.906  | 3,Organic Vs Conventional Farming |
| P2Organic farming is more profitable than conventional farming.   | 0.411  | 5                                 |
| G8 Government of India is providing extension services, training and institutional demonstration, fiscal incentives to encourage organic farm sector to strengthen nation's economy and sustainability. | -0.818 | 3,Training & Awards               |
| G18 The awards and recognition should be given at regional/state level to the researchers/ extension workers/ organizations/ farmers involved in promotion of organic farming.                          | 0.442  | 2                                 |
| P19 There are many companies which promotes   | 0.795  | 2,Availability of Markets         |
| P7 Organic farmers are more involved in direct marketing.   | 0.761  | 2                                 |
| P8 Small consumers/households used to buy organic crops from us.  | 0.698  | 2                                 |
| P23 Organic market is currently booming in India.   | 0.651  | 2                                 |
| C9 There was lack of training facility in organic farming for farmers.  | 0.788  | 3,Input & its availability        |
| G12 Appropriate government policies aimed at improving the supply of inputs, credit and price will be a vital part of future efforts.   | 0.623  | 1                                 |
| G15 Inputs for organic farming should be generated through government- controlled mechanisms to ensure quality and timely availability.   | 0.437  | 2                                 |

Source: Primary survey conducted for this research (2018)

**Factor 1 Implementation**

**Table-4 Correlations among variables of Implementation (N =400)**

| Variable | P6    | P4    | P14 |
|----------|-------|-------|-----|
| P6       | 1.0   |       |     |
| P4       | .94** | 1.0   |     |
| P14      | .82** | .82** | 1.0 |

Note. *r* = correlation coefficient; *p* = 1-tailed *p* value; *n* = number of individuals.  
\**p* < .05 \*\* *p* < .001.

The first significant factor is the implementation. The sub scale consisted of 3 items, showing high internal consistency. A correlation has been used to determine the relationship between variable related to the implementation.. Variable P6 is significantly correlated *r* = 0.94, *p* < .001 with the variable P4, which clearly depicts that farmers get their farms certified from the fiscal authorities but before implementing the organic

practices at large scale, they experimented the organic practices on small scale also. The respondents who claimed that they got certified the farms form fiscal authorities, they also said that in conversion period should be reduced. As high correlation *r* = 0.82, *p* < .001 has been found between P4 and P14 also.

**Factor 2 Government support for Certification and conversion**

**Table-5 Correlations among variables of Certification & Conversion (N =400)**

| Variable | G19   | G11   | G17   | G4    | G6  |
|----------|-------|-------|-------|-------|-----|
| G19      | 1.0   |       |       |       |     |
| G11      | .94** | 1.0   |       |       |     |
| G17      | .97** | .94** | 1.0   |       |     |
| G4       | .42** | .40** | .43** | 1.0   |     |
| G6       | .39** | .40** | .37** | .44** | 1.0 |

Note. *r* = correlation coefficient; *p* = 1-tailed *p* value; *n* = number of individuals.  
\**p* < .05 \*\* *p* < .001.

Table 5 showing the results for the factor naming Certification & Conversion process. The extraversion subscale consisted of 5 items ( $\alpha = .875$ ) which mainly concentrate that how government help farmers in certification and conversion

process. The result shows that data is highly reliable enough. And it also reveals that majority of the farmers had neutral response towards the entire selected variable under this factor.

**Factor 3 Future Perspective**

**Table-6 Correlations among variables of Future perspective (N =400)**

| Variable | F12 | F3 | F2 | F7 |
|----------|-----|----|----|----|
| F12      | 1.0 |    |    |    |

|    |        |        |        |     |
|----|--------|--------|--------|-----|
| F3 | .485** | 1.0    |        |     |
| F2 | .505** | .192** | 1.0    |     |
| F7 | .512** | .250** | .628** | 1.0 |

Note. *r* = correlation coefficient; *p* = 1-tailed *p* value; *n* = number of individuals.

\**p* < .05 \*\* *p* < .001.

The factor consisted of 4 variables which concentrate on the future perspective of the organic farming. Most of the respondents said that future demand and price of the organic products would increase. As we can see in table 6 that variable F2 and F7 are significantly highly correlated *r* = 0.62, *p* < .001 with each other. The result also states that respondents who said that organic market can only grow if the farmers are ready to increase organic farming; they are also in favour that there is ample scope for organic food industries to expand and generate revenue and strengthening the Indian economy. As

both the variable i.e. F12 & F7 are significantly correlated *r* = 0.51, *p* < .001 with each other. At the other extreme, a very weak but significant correlation *r* = 0.19, *p* < .001 has been found between F2 & F3. In which the respondents said that future demand and price of the organic products would increase, thus they wish to change the size of their farm, because it will be profitable. The result of the research concludes that there is huge scope of organic industries to flourish in the market in near future.

**Factor 4 Perception of organic farmers**

**Table-7 Correlations among variables of Perception of Organic farmers (N =400)**

| Variable | F4    | F8    | F1    | F6  |
|----------|-------|-------|-------|-----|
| F4       | 1.0   |       |       |     |
| F8       | .55** | 1.0   |       |     |
| F1       | .48** | .90** | 1.0   |     |
| F6       | .32** | .75** | .80** | 1.0 |

Note. *r* = correlation coefficient; *p* = 1-tailed *p* value; *n* = number of individuals.

\**p* < .05 \*\* *p* < .001.

The result signalled (See table 7) that high significant correlation *r* = 0.90, *p* < .001 has been found between variable F8 & F1, which states that respondents who claimed that they would expect number of changes in relation to organic production in near future are also in favour of the statement that there is much scope to establish input preparation unites in nearby villages. An average but significant correlation *r* =

0.55, *p* < .001 has been found between variable F4 & F8. At the end we can conclude that majority of the organic farmers perceive that in future the organic industry will grow, because today's generation is very health conscious and they would also expect other numerous changes also in relation to organic farming. Thus they have positive perception towards the growth of organic farming.

**Factor 5 National program for organic production**

**Table-8 Correlations among variables of NPOP (N =400)**

| Variable | P18    | P17 |
|----------|--------|-----|
| P18      | 1.0    |     |
| P17      | .855** | 1.0 |

Note. *r* = correlation coefficient; *p* = 1-tailed *p* value; *n* = number of individuals.

\**p* < .05 \*\* *p* < .001.

Respondents had neutral opinion towards variable P17 and P18. As factor consisted of these two variables having

cronbach's alpha 0.445 (See table 8), which signalled that data is not reliable enough to express this factor.

**Factor 6 Financial Aspects**

**Table-9 Correlations among variables of Financial Aspects (N =400)**

| Variable | C4     | C6    | C11   | C13 |
|----------|--------|-------|-------|-----|
| C4       | 1.0    |       |       |     |
| C6       | -.40** | 1.0   |       |     |
| C11      | -.36** | .80** | 1.0   |     |
| C13      | -.36** | .77** | .91** | 1.0 |

Note. *r* = correlation coefficient; *p* = 1-tailed *p* value; *n* = number of individuals.

\**p* < .05 \*\* *p* < .001.

We can say that organic farming will be profitable in near future but presently it is not profitable as much as conventional farming. Because there is huge loss of production in organic farming during first few years. When the farm get certified after the conversion, then the farmers are able to sold their crops labelled as organic and can charge premium price from the consumers. We can easily see from the results (See table 9) that variable C13 and C4 are negatively significantly correlated

*r* = -0.36, *p* < .001 with each other. The farmers who said that organic farming is a very risky venture they also neglected the statement that they are able to match the profits in conventional production. Majority of the farmers had accepted the statement that the labour scarcity and cost involved therein, constrain adoption of organic farming and competition of big players in the market influences the strategies of small farmers. As both these variable are highly correlated *r* = 0.80, *p*

< .001 thus it proves that due to high cost involvement and competition, farmers are reluctant to adopt organic farming and moreover with the high usage of chemical and pesticides they

can increase their production and thus earn more in conventional production.

**Factor 7 Selling platform**

**Table-10 Correlations among variables of Selling platform (N =400)**

| Variable | C8    | C10   | C1  |
|----------|-------|-------|-----|
| C8       | 1.0   |       |     |
| C10      | .84** | 1.0   |     |
| C1       | .76** | .67** | 1.0 |

Note. *r* = correlation coefficient; *p* = 1-tailed *p* value; *n* = number of individuals.  
\**p* < .05 \*\* *p* < .001.

The most important factor of the research is selling platforms. All the 3 variables of the factor are significantly correlated with each other. The result states that farmers are able to sell their organic crops easily because demand is more in comparison to supply. A high significant correlation *r* = 0.67 *p* < .001 has been found in variable C1 & C10 But still the farmers said that there are lack of open local market for sale of

organic yield. As it's easy to sold their conventional crops in Anaj mandis and moreover rates are regulated by Government. So there must be open local market for organic food also, where they can sell their organic crops easily. And it will become beneficial for consumers also. They can easily access the market whenever they want.

**Factor 8 Supporting Factors for Future growth**

**Table-11 Correlations among variables of supporting factors for future growth (N =400)**

| Variable | F5    | F10   | F9    | F11 |
|----------|-------|-------|-------|-----|
| F5       | 1.0   |       |       |     |
| F10      | .80** | 1.0   |       |     |
| F9       | .76** | .73** | 1.0   |     |
| F11      | .85** | .79** | .73** | 1.0 |

Note. *r* = correlation coefficient; *p* = 1-tailed *p* value; *n* = number of individuals.  
\**p* < .05 \*\* *p* < .001.

The result states that all the variables related to the future growth are significantly correlated with each other. Most of the respondents are in favour of the view that organic product labelling should be must to safeguard the consumer's interest and to build their trust. They also said that pesticide residues should be provided with laboratories in collaboration with government. As high correlation *r* = 0.73, *p* < .001 has been found in variable F9 & F11. It has been also said by farmers

that most of the farmers are reluctant to adopt organic farming due to high production cost and three year transition period. They also said that to generate awareness among students, seminar and workshops on organic farming should be organised for the students of agriculture. The result signalled high correlation *r* = 0.80, *p* < .001 between variable F5 & F10. Therefore all the variables are supporting factors towards the growth of the organic farming in Punjab.

**Factor 9 Subsidy**

**Table-12 Correlations among variables of Subsidy (N =400)**

| Variable | G3    | G2    | G5    | G1  |
|----------|-------|-------|-------|-----|
| G3       | 1.0   |       |       |     |
| G2       | .53** | 1.0   |       |     |
| G5       | .51** | .50** | 1.0   |     |
| G1       | .31** | .29** | .43** | 1.0 |

Note. *r* = correlation coefficient; *p* = 1-tailed *p* value; *n* = number of individuals.  
\**p* < .05 \*\* *p* < .001.

Even the farmers don't have enough knowledge about the government and organisational policies and credit schemes for organic farming but still they neglected the statement that government is providing sufficient subsidies to organic farmers. A highly significant correlation *r* = 0.51, *p* < .001 has been

found in G3 & G5, which clearly signalled that government is not providing sufficient subsidies to the organic farmers and the location and size of the farm, did not affect the payment of subsidy.

**Factor 10 Organic VS Conventional Farming**

**Table-13 Correlations among variables of Organic vs Conventional farming(N =400)**

| Variable | P9     | P2  |
|----------|--------|-----|
| P9       | 1.0    |     |
| P2       | .240** | 1.0 |

Note. *r* = correlation coefficient; *p* = 1-tailed *p* value; *n* = number of individuals.  
\**p* < .05 \*\* *p* < .001.

This factor states that majority of the respondents neglected the statement organic farming is more profitable than conventional farming because there are platforms to sell

organic farming moreover it is also very difficult to implement organic farming.

**Factor 11 Training and Awards**

**Table-14 Correlations among variables of Training & Awards (N =400)**

| Variable | G8     | G18 |
|----------|--------|-----|
| G8       | 1.0    |     |
| G18      | -.25** | 1.0 |

Note. *r* = correlation coefficient; *p* = 1-tailed *p* value; *n* = number of individuals.  
\**p* < .05 \*\* *p* < .001.

This factor discusses about the awards and training provided to organic farmers. The results of the research clearly states that respondents did not have enough knowledge that Government is providing any extension services, training and institutional demonstration, fiscal incentives to encourage organic farm sector or not. Majority of the respondents had

neutral opinion towards this statement. But the farmers said that awards and recognition should be given at regional/state level to the researchers/ extension workers/ organizations/ farmers involved in promotion of organic farming. As we can see the results in table 14 that both the variable G8 & G18 are negatively correlated *r* = -0.25, *p* < .001 with each other.

**Factor 12 Marketing and Promotion**

**Table-15 Correlations among variables of Marketing & Promotion (N =400)**

| Variable | P19   | P7    | P8    | P23 |
|----------|-------|-------|-------|-----|
| P19      | 1.0   |       |       |     |
| P7       | .45** | 1.0   |       |     |
| P8       | .43** | .40** | 1.0   |     |
| P23      | .56** | .61** | .54** | 1.0 |

Note. *r* = correlation coefficient; *p* = 1-tailed *p* value; *n* = number of individuals.  
\**p* < .05 \*\* *p* < .001.

This factor throws light on the promotion and marketing of organic products. The result clearly states that more than 50 percent of the respondents were in favour of the statement that organic farming is currently booming in India. The same respondents also said that there are many companies which promote organic farming. The variable P19 & P23 shows highly

significant correlation *r* = 0.56, *p* < .001. The result also clearly depicts that farmers are also involved in direct marketing also by giving free samples or word of mouth marketing etc. they also said that small consumers and households also used to buy organic crops from them.

**Factor 13 Input and its availability**

**Table-16 Correlations among variables of Input and its availability (N =400)**

| Variable | C9    | G12   | G15 |
|----------|-------|-------|-----|
| C9       | 1.0   |       |     |
| G12      | .44** | 1.0   |     |
| G15      | .25** | .37** | 1.0 |

Note. *r* = correlation coefficient; *p* = 1-tailed *p* value; *n* = number of individuals.  
\**p* < .05 \*\* *p* < .001.

As discussed earlier also that government controlled mechanism is required for the inputs required for organic farming to ensure its quality and timely availability. The respondents also claimed that appropriate government policies aimed at improving the supply of inputs, credit and price will be a vital part of future efforts. Variable G12 & G15 are significantly correlated *r* = 0.37, *p* < .001. with each other. Thus it states that government should do efforts to control the input mechanism for organic farming so that farmers may not face any difficulty in availability of inputs required for the growth of organic crops.

**6. Findings of the study**

1. The result of the research clearly states that organic farming is currently booming in india. Even demand of the organic products is more than its supply.

2. The result also suggest that farmers had not enough knowledge about various government organization working for organic farmers.
3. Farmers are expecting that future demand and price of organic products would increase
4. The farmers also expecting that if organic farming increases, then it may generate employment opportunity for a vast section of rural communities.
5. The result also states that few of the factors like three year conversion period, government policies etc. are hindrance in the development of organic farming.
6. The result declares that there is lack of open local market for sale of organic products.
7. Result also signalled that government is not providing sufficient subsidies and support for the upliftment of organic farming.

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## APPENDIX I

Table-1 Communalities

|   | Initial | Extraction |
|---|---------|------------|
| G19 Government support is required for cheaper access to organic certification of farms.  | 1.000   | .951       |
| G11 Government should do the efforts to make the certification process easier.  | 1.000   | .935       |
| G17 Government should give scheme for compensating yield loss during the conversion period.   | 1.000   | .944       |
| F8 There is a much scope to establish organic input preparation units in nearby villages.   | 1.000   | .906       |
| C11 Competition of big players in the market influences small strategies.   | 1.000   | .899       |
| P17 I know about NPOP.  | 1.000   | .895       |
| P18 NPOP (national program for organic production) is a Govt of India site which resolves all the queries related to organic farming.               | 1.000   | .895       |
| F1 They would expect number of changes in relation to organic production in near future   | 1.000   | .894       |
| C13 Organic farming is a very risky venture.  | 1.000   | .871       |
| F10 Many farmers are apprehensive about adopting organic farming due to the high production cost and the three-year transition period.              | 1.000   | .867       |
| C8 There is lack of open local market for sale of organic produce.  | 1.000   | .868       |
| F5 There Should be organic seminar and workshops for students of agriculture.   | 1.000   | .862       |
| F11 Organic product labelling is a necessary step towards protecting confusion and building user trust.   | 1.000   | .862       |
| C4 I am able to match the profits made in conventional production.  | 1.000   | .832       |
| C10 Organic products have not been produced according to the demand in the market.  | 1.000   | .829       |
| F7 There is ample scope for organic food industries to expand and generate revenue for strengthening the Indian economy                             | 1.000   | .819       |
| C6 The labour scarcity and cost involved therein, constrain adoption of organic farming.  | 1.000   | .816       |
| P4 Organic farmers got certified from the fiscal authorities.   | 1.000   | .811       |
| G16 Government should establish more National Centres to promote capacity building, training and awareness programmes.                              | 1.000   | .803       |
| P14 In conversion period should be reduced.   | 1.000   | .802       |
| P6 I had experimented with organic practices on a small scale before implementing the practices far wide.   | 1.000   | .801       |
| F9 In order to maintain the quality of organic production, pesticide residues should be provided with laboratories in collaboration with government | 1.000   | .798       |
| F6 Organic farming will give rise to a healthy aspect of living for the current and the future generation.  | 1.000   | .798       |
| P3 Organic farming has more risk due to yield fluctuations.   | 1.000   | .775       |
| F12 The organic market can only grow if the farmers are ready to increase organic farming.  | 1.000   | .774       |
| P13 Organic supplements and bio fertilisers are easily available in market.   | 1.000   | .746       |
| C1 We are able to sell our organic crops easily.  | 1.000   | .738       |
| P9 Restaurants/Companies mainly buy organic crops from us.  | 1.000   | .737       |
| P23 Organic market is currently booming in India.   | 1.000   | .732       |

|   |       |      |
|---|-------|------|
| P5 Weeds, pests and diseases in the organic farms is being controlled without using chemical.   | 1.000 | .731 |
| F4 Organic farming can generate employment opportunity for a vast section of rural communities.   | 1.000 | .727 |
| G13 Government should come up with stringent punishment for selling counterfeit organic produce.  | 1.000 | .717 |
| G14 Government must rope in agricultural scientists and international research institutions to develop organic herbicides.  | 1.000 | .705 |
| G10 There are enough labs for the testing of organic products.  | 1.000 | .697 |
| P21 Public should be made aware of the organic and conventional foods.  | 1.000 | .688 |
| F2 Future demand and price for organic products would increase.   | 1.000 | .684 |
| G5 The location of the farm and its size also affects the subsidy payment.  | 1.000 | .678 |
| G3 Government providing sufficient subsidies to organic farmers.  | 1.000 | .677 |
| F3 I wish to change the size of my organic farm, because it's profitable.   | 1.000 | .674 |
| C7 Access to certification and cost involved therein and a time lag of three years (conversion stage) often constrain farmers especially small land holders in India from adopting organic farming.     | 1.000 | .668 |
| G8 Government of India is providing extension services, training and institutional demonstration, fiscal incentives to encourage organic farm sector to strengthen nation's economy and sustainability. | 1.000 | .666 |
| C9 There was lack of training facility in organic farming for farmers.  | 1.000 | .665 |
| G12 Appropriate government policies aimed at improving the supply of inputs, credit and price will be a vital part of future efforts.   | 1.000 | .661 |
| G18 The awards and recognition should be given at regional/state level to the researchers/ extension workers/ organizations/ farmers involved in promotion of organic farming.                          | 1.000 | .659 |
| G9 Government incentives and subsidies should be enhanced.  | 1.000 | .646 |
| P22 NGO's are engaged in promotion of organic farming and provide training, extension services information and marketing services to farming communities.   | 1.000 | .643 |
| P20 Do you think that Organic products are less caloric.  | 1.000 | .638 |
| C14 Organic farming is difficult to implement.  | 1.000 | .632 |
| P2 Organic farming is more profitable than conventional farming   | 1.000 | .624 |
| P7 Organic farmers are more involved in direct marketing.   | 1.000 | .617 |
| P19 There are many companies which promotes   | 1.000 | .611 |
| G4 Government providing advisory services to farmers for conversion.  | 1.000 | .608 |
| G2 I have enough knowledge about the various government schemes for agriculture credit.   | 1.000 | .601 |
| P8 Small consumers/households used to buy organic crops from us.  | 1.000 | .594 |
| G1 I am aware about the government and organisational policies for organic products.  | 1.000 | .579 |
| P16 There is equality among demand and supply of organic products.  | 1.000 | .559 |
| G7 Information regarding organic farming practices and markets is available online, TV and in magazines.  | 1.000 | .558 |
| P1 Farmers are aware about the benefits of organic farmers.   | 1.000 | .553 |
| P12 Organic farmers need more labour in comparison to conventional farmers.   | 1.000 | .552 |
| G6 Organic farmers receive financial assistance for certification   | 1.000 | .549 |
| C2 Consumers have knowledge about organic products.   | 1.000 | .544 |
| G15 Inputs for organic farming should be generated through government- controlled mechanisms to ensure quality and timely availability.   | 1.000 | .515 |

Source: Primary survey conducted for this research (2018)

APPENDIX II

Table-2 Total Variance Explained

| =Component | Initial Eigen values |               |              | Extraction Sums of Squared Loadings |               |              | Rotation Sums of Squared Loadings <sup>a</sup> |
|------------|----------------------|---------------|--------------|-------------------------------------|---------------|--------------|--|
|            | Total                | % of Variance | Cumulative % | Total                               | % of Variance | Cumulative % | Total  |
| 1          | 24.861               | 40.098        | 40.098       | 24.861                              | 40.098        | 40.098       | 12.251   |
| 2          | 3.529                | 5.692         | 45.790       | 3.529                               | 5.692         | 45.790       | 3.490  |
| 3          | 2.255                | 3.637         | 49.427       | 2.255                               | 3.637         | 49.427       | 3.606  |
| 4          | 2.137                | 3.447         | 52.873       | 2.137                               | 3.447         | 52.873       | 7.197  |
| 5          | 1.950                | 3.145         | 56.018       | 1.950                               | 3.145         | 56.018       | 3.064  |
| 6          | 1.762                | 2.841         | 58.860       | 1.762                               | 2.841         | 58.860       | 9.061  |
| 7          | 1.607                | 2.592         | 61.451       | 1.607                               | 2.592         | 61.451       | 8.478  |
| 8          | 1.405                | 2.265         | 63.717       | 1.405                               | 2.265         | 63.717       | 14.924   |
| 9          | 1.290                | 2.081         | 65.798       | 1.290                               | 2.081         | 65.798       | 9.469  |
| 10         | 1.154                | 1.862         | 67.660       | 1.154                               | 1.862         | 67.660       | 6.091  |
| 11         | 1.152                | 1.858         | 69.517       | 1.152                               | 1.858         | 69.517       | 5.214  |
| 12         | 1.064                | 1.716         | 71.234       | 1.064                               | 1.716         | 71.234       | 14.108   |
| 13         | 1.018                | 1.642         | 72.876       | 1.018                               | 1.642         | 72.876       | 8.833  |
| 14         | .879                 | 1.418         | 74.294       |                                     |               |              |  |
| 15         | .845                 | 1.364         | 75.658       |                                     |               |              |  |
| 16         | .815                 | 1.314         | 76.972       |                                     |               |              |  |
| 17         | .790                 | 1.274         | 78.246       |                                     |               |              |  |
| 18         | .711                 | 1.146         | 79.392       |                                     |               |              |  |
| 19         | .667                 | 1.076         | 80.468       |                                     |               |              |  |
| 20         | .609                 | .982          | 81.450       |                                     |               |              |  |
| 21         | .590                 | .951          | 82.401       |                                     |               |              |  |
| 22         | .582                 | .939          | 83.340       |                                     |               |              |  |
| 23         | .565                 | .912          | 84.252       |                                     |               |              |  |
| 24         | .546                 | .881          | 85.133       |                                     |               |              |  |
| 25         | .541                 | .872          | 86.006       |                                     |               |              |  |
| 26         | .505                 | .814          | 86.820       |                                     |               |              |  |
| 27         | .492                 | .794          | 87.614       |                                     |               |              |  |
| 28         | .478                 | .771          | 88.385       |                                     |               |              |  |
| 29         | .440                 | .709          | 89.094       |                                     |               |              |  |
| 30         | .432                 | .696          | 89.791       |                                     |               |              |  |
| 31         | .400                 | .646          | 90.436       |                                     |               |              |  |
| 32         | .375                 | .605          | 91.041       |                                     |               |              |  |
| 33         | .369                 | .595          | 91.636       |                                     |               |              |  |
| 34         | .346                 | .557          | 92.193       |                                     |               |              |  |
| 35         | .334                 | .539          | 92.732       |                                     |               |              |  |
| 36         | .325                 | .524          | 93.256       |                                     |               |              |  |
| 37         | .305                 | .491          | 93.747       |                                     |               |              |  |
| 38         | .302                 | .487          | 94.234       |                                     |               |              |  |
| 39         | .282                 | .455          | 94.689       |                                     |               |              |  |
| 40         | .268                 | .431          | 95.120       |                                     |               |              |  |
| 41         | .262                 | .423          | 95.544       |                                     |               |              |  |
| 42         | .242                 | .390          | 95.934       |                                     |               |              |  |
| 43         | .229                 | .369          | 96.303       |                                     |               |              |  |
| 44         | .214                 | .345          | 96.648       |                                     |               |              |  |
| 45         | .200                 | .322          | 96.971       |                                     |               |              |  |
| 46         | .196                 | .317          | 97.287       |                                     |               |              |  |

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|    |      |      |         |
|----|------|------|---------|
| 47 | .188 | .304 | 97.591  |
| 48 | .182 | .293 | 97.884  |
| 49 | .161 | .260 | 98.144  |
| 50 | .153 | .246 | 98.390  |
| 51 | .149 | .240 | 98.630  |
| 52 | .123 | .199 | 98.829  |
| 53 | .118 | .190 | 99.019  |
| 54 | .107 | .172 | 99.192  |
| 55 | .094 | .152 | 99.344  |
| 56 | .090 | .145 | 99.489  |
| 57 | .078 | .126 | 99.614  |
| 58 | .068 | .110 | 99.725  |
| 59 | .057 | .092 | 99.817  |
| 60 | .052 | .084 | 99.901  |
| 61 | .039 | .062 | 99.963  |
| 62 | .023 | .037 | 100.000 |

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Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.