



Farmers Attitude towards Organic Farming in Uttar Pradesh

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HIGHLIGHTS

- The maximum percentage of organic farmers had medium extension participation and medium level of information source uses
- 67.50 per cent had favourable attitude towards organic farmers
- Maximum farmers faced constraints like inadequate marketing facilities for produce

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ABSTRACT

Organic farming helps in raising income and employment for farmers and hence agrarian economy, through improvement in agricultural productivity and sustainability in agricultural production. Therefore, keeping this in view a study was performed using stratified random sampling method in specifically Prayagraj district of rural Uttar Pradesh to analyse farmers' attitude towards organic farming during 2023. The area under research was confined to two blocks of the selected district, Phulpur and Dhanupur with a sample of 80 farmers out of population. The independent and dependent variables selected for study of Farmers attitude were measured on different scales and data collected was analysed using basic statistical tools like percentages, frequency and chi-square test was applied to test goodness of fit and finally results were interpreted. Findings reveal that majority of the respondents (80%) had positive attitude towards organic farming and they are facing the problem of inadequate marketing facility for their produce. Further researches may be carried out in other areas so that generalization of results could be possible. Also, it is possible to consider the women folk in understanding the level of knowledge with respect to modern agriculture, organic farming, and organic foods.

INTRODUCTION

Organic farming is a traditional practice with inclusion of modern technology. Organic farming in agriculture is considered as socially sustainable (Ahmed et al., 2019; Gills et al., 2021). It provides a toxic free food system to the population leading to healthy generations (Singh et al., 2019). Gross area of organic agriculture in India was 0.51 million hectares with a rank is 15th among 170 countries. However, over 37.5 million ha of land (0.87% of total agricultural land) is being managed organically by 1.9 million producers across 164 countries (IFOAM & FiBL, 2014). Exports

of the organic food is also in demand and growing continuously (Subrahmanyeswari & Chander, 2022). In India, Madhya Pradesh state has the biggest area under organic certification followed by Rajasthan and Uttar Pradesh. In terms of area, Madhya Pradesh has largest area under organic farming (52%), Maharashtra is second (33.6%) and Orissa ranks third (9.7%) (apeda.gov.in). Farmers are having conventional level of knowledge related to organic farming. They need to be made well informed about the hands on so that the basic concept of the organic farming and its application part could be known as well as fruitful to the farmers (Sahu et al., 2010). Farmers having experiences or the young farmers can be made

interested towards the organic participation for the overall enhancements (Sihare, 2015). It is often seen that there are farmer producers who are engaged in the farming practices are illiterate, but at least a fraction of them should be schooled for the proper social participation (Oyedele et al., 2018); more innovative in the adoption (Gills et al., 2013); understanding and dissemination process of the knowledge (Kadam, 2016). There can be several external factors that are found affecting the producers to be present in the main stream flow of the development towards the modern approach. It can be the holding size of the farmers (Papnai et al., 2017), types of the family involved (Saini et al., 2017), the type of the income group falling into (Chandrakala & Kanchana, 2016), and much more. Inputs used leads to reduced incomes and debts; needs to improve the sustainability of the farming systems for better livelihoods of the farmers (Bhushan et al., 2016).

The technology is also playing a major role in the participation and interest of the farmers like extension parts, level of the information sources, exposure to the mass media, positive attitude and of course the extent of the knowledge level (Jaganathan et al., 2009). Results obtained will be ensured food security, enhanced viability of farming, and restored ecological balance (Sahu et al., 2021). Organic farming can accelerate the agro-economy of India but there is no utmost level of knowledge related to specific organic farming (Sharma et al., 2016). Thus, organic farming could help in raising income and employment through improvement in agricultural productivity and sustainability in agricultural production (Sahu et al., 2022).

METHODOLOGY

Stratified random sampling method used as a research design; in which Rural Uttar Pradesh specifically Prayagraj district with two blocks was selected out of 20 namely, Phulpur and Dhanupur, with a sample size of 80 farmers out of population. The variables (independent and dependent) selected for the study of Farmers attitude were measured on scale developed by Jhalihal (1982) for extension participation and Lakshmi (2000) for mass media exposure and others on simple scales. Analysis of the data collected was analysed using basic descriptive statistics on Linux. To ascertain the association between two variables and testing the goodness of fit, chi-square test was applied and the results were interpreted. The data was classified in $m \times n$ contingency table.

The a_1, a_2, \dots, a_n were "m" classes of attributes "A" and b_1, b_2, \dots, b_n were "n" classes of attributes "B".

Let O_{ij} be observed frequency of (ij)th cell,

where,

$i = 1, 2, \dots, m$ and $j = 1, 2, \dots, n$

let A_1, A_2, \dots, A_m be sum of "m" classes of "A" and B_1, B_2, \dots, B_n be sum of "n" classes of B,

then –

$\sum \sum O_{ij} = \sum A_i = \sum B_j = N =$ total observations.

Now, for each of the 'mn' cells, we find expected frequencies using–

$$E_{ij} = \frac{A_j \times B_i}{N} = \frac{\text{Row total} \times \text{Column total}}{\text{Grand total}}$$

Now, null and alternate hypotheses were formulated as under:

H_0 = Character A and B are independent

H_1 = Characters A and B are not independent and level of significance is chosen, (0.05 and 0.01).

If H_0 is true then,

$$\chi^2 \text{ cal.} = \sum_{i=1, j=1}^{mn} \frac{\sum (O_{ij} - E_{ij})^2}{E_{ij}}$$

With (r-1) (c-1) degree of freedom.

When any of the cell frequency is small (<5), then Yates's correlation of contingency was applied:

$$\chi^2 \text{ cal.} = \sum_{i=1, j=1}^{mn} \frac{\sum \{(O_{ij} - E_{ij})^{-1}/2\} \times 2}{E_{ij}} \text{ with degree of freedom of } (m-1) (n-1).$$

where, E_{ij} = Expected frequency { (i, j) cell }

O_{ij} = Observed frequency { (i, j) cell }

r = Rows

c = Columns

χ^2 = Chi-square

RESULTS

The results found from the data collected and analysed related to the attitude of the farmers towards the organic farming, and the constraints confronted by the farmer producers, is produced under the below mentioned headings.

Attitude of farmer towards organic farming

To measure the favorableness and attitude of farmers towards organic farming, the respondents were asked to rate the agreement on five-point scale as, strongly agree (SA), Agree (A), Undecided (UD), Disagree (DA), Strongly disagree (SDAF). Table 1 pertains to the respondent's attitude towards organic farming. It is evident from the table that 55 per cent of the respondents were "agree" to the statement that "organic farming improves texture and structure of soil" followed by 45 per cent of the farmers who "strongly agree" with the statement. Regarding the statement "organic farming increases the productive capacity of the soil," 50 per cent of the sample farmers were "agree" with the statement followed by "strongly agree" (35%) and undecided (15%). As far as statement "organic farming results in more production" is considered, 55 per cent of the farmers were "disagree" with the statement followed by "strongly disagree" (30%) and undecided (15%). The statement "increase the quality of grains obtained from organic farming," result in higher market value" was agreed by 35 per cent of the respondents followed by 20, 20, 16.25, 8.75 per cent of the sample farmers who were "disagree", "strongly agree", "strongly disagree" and "undecided", respectively with the statement.

Further, the statement "environmental pollution is not done on organic farming", was "agreed" by 50 per cent of the sample respondents followed by "strongly agree" (38.75%) and "undecided" (11.25%). Regarding the statement "organic farming is more profitable than chemical cultivation," 30.00 per cent of the respondents expressed their agreement followed by "disagree" (28.75%), "strongly agree" (17.50%), "strongly disagree" (15%) and "undecided" (8.75%). Further, 40.00 per cent of the sample

Table 1. Distribution of the respondents (Statement wise) based on their attitude towards organic farming

S.No. Statement	SA %	A%	UD%	DA %	SDA %
1. Organic farming improves texture and structure of soil	45.00	55.00	-	-	-
2. Organic farming increases the productive capacity of the soil	35.00	50.00	15.00	-	-
3. Organic farming results in more production	-	-	15.00	55.00	30.00
4. Increase the quality of grains obtained from organic farming, result in higher market value	20.00	35.00	8.75	20.00	16.25
5. Environmental pollution is not done on organic farming	38.75	50.00	11.25	-	-
6. Organic farming is more profitable than chemical cultivation	17.50	30.00	8.75	28.75	15.00
7. It is difficult to stop insects and diseases in organic farming	25.00	40.00	20.00	15.00	-
8. In the field of organic farming, production is less compared to chemical cultivation	30.00	50.00	20.00	-	-
9. It possible to grow all the crops under organic farming	18.75	30.00	15.00	25.00	11.25
10. Costs compare to chemical cultivation in organic farming seems less costly	38.75	45.00	16.25	-	-

F- Frequency, SA- Strongly Agree, A- Agree, UD- Undecided, DA- Disagree, SDA- Strongly Disagree, % - percentage

respondents were “agree” with the assertion “it is difficult to stop insects and diseases in organic farming followed by “strongly agree” (25%), undecided (20%) and disagree (15%). As far as the statement “in the field of organic farming, production is less compared to chemical cultivation” is concerned, 50 per cent of the respondents exhibits their agreement followed by 30 and 20.00 per cent of the sample respondents who were “strongly agree” and “undecided”, respectively with the assertion. About the statement “it possible to grow all the crops under organic farming,” 30 per cent of the respondents were “agree” followed by “disagree” (25), “strongly agree” (18.75%), “strongly disagree” (11.25%) and “undecided” (15%). Regarding the statement “costs compare to chemical cultivation in organic farming seem less costly,” 45 per cent of the sample respondents were “agree” with statement following “strongly agree” (38.75%) and “undecided” (16.25%).

Table 2. Distribution of sample respondents based on their attitude towards organic farming

S.No. Attitude	Percentage
1. Unfavorable (10 - 23 score)	7.50
2. Neutral (24 - 36 score)	25.00
3. Favorable (37 - 50 score)	67.50
Total	100.00

Results from the Table 2 indicates that, among the sample of total organic farmers, 67.50 per cent were possessing favorable attitude followed by 25 per cent which were having neutral attitude towards organic farming but only 7.50 per cent of the respondents were consist of unfavorable attitude in context of the organic farming. Hence, observation can be concluded that majority of the sample respondents i.e., 67.50 per cent were consist of favorable attitude towards organic farming. Majority of organic farmers had favorable attitude towards organic farmers followed by neutral and unfavorable with 25 per cent and 7.50 per cent respectively.

Constraints faced by farmers in adoption of organic cultivation practices

Table 3 explains that most of the farmers were facing the constraints of insufficient marketing facilities of the produce (80%).

Table 3. Constraints faced by farmers in adoption of organic cultivation practices

S.No. Constraints	Percentage	Rank
1. Hiked Labor requirement due to a time consuming and slow process	62.50	IV
2. Lack of information regarding use of bio-fertilizers	70	II
3. Lack of technical know-how of the organic farming	50	VI
4. Inadequate marketing facilities for the organic produce	80	I
5. Less outcome as compared to inorganic farming	60	V
6. Inadequate availability of organic inputs (Vermicompost, Bio-fertilizer etc.)	65	III

Unavailability of regular information concerning to the use of bio-fertilizers (70%), inadequate availability of input factors like vermicompost, bio-fertilizers, and organic manure (65%), increase in labor due to being time consuming and slow process (62.50%), low production as compared to inorganic farming (60%) and finally the lack of technical knowledge of organic farming (50%). Therefore, majority were lacking the proper marketing structure and inputs related to the organic type of farming practice.

DISCUSSION

The results found above holds the confirmation of the earlier findings in context of the organic farming related to the favorableness towards the organic farming including the statements that organic farming improves soil as well as the productive capacity of the soil, but less productivity as compared to the chemical depending farming (Malik et al., 2023; Sahu et al., 2021) and the attitude of the farmers towards the adoption of the organic practices (Malik et al., 2023). The attitude of the growers is of utmost importance in context of the applicability of the technology implications. It is because, then only the proper dissemination of the message to the ground level farmers will be conveyed in relation to the profitability and usefulness of the organic practices (Sahu et al., 2022). Increase the quality of grains obtained from organic farming, result in higher market value holds the positive perception of not only the

producers but also the consumers, which further cause a remunerative outcome in the favor of the producer as well as the future oriented towards the practices and inclusion of more hands towards it (Yadav et al., 2024). The major constraints confronted by the organic farmers in the marketing of the organic produce, unavailability of the organic inputs, and the lack of the information related to bio-fertilizers is supported by the outcomes of Thangjam et al., (2024). There are extension concerns of GAP like methodologies for impact monitoring with particular respect to environmental impacts of agriculture, Social and environmental certification, approaches to support farmers experiential learning etc. (Nain et al., 2021) which also need attention.

CONCLUSION

Majority of the organic farmers were having positive attitude for organic farming showing positive disposition and reflects their belief in benefits and sustainability of organic practices. Most of the farmers faced barriers like improper marketing facilities for the produce, which shows significant challenges faced by farmers is lack of efficient channels to sell their organic produce. Inadequate marketing infrastructure hinders their ability to reach consumers effectively. Access to accurate information is crucial for optimizing soil health and crop productivity. Lastly, inadequate availability of organic input (vermi-compost, bio-fertilizer) was found. Scarcity of essential organic inputs, such as vermi-compost and bio-fertilizers, poses a hurdle. These inputs play a vital role in maintaining soil fertility and promoting sustainable agriculture. While most organic farmers hold a positive view of organic farming, addressing barriers related to marketing, information dissemination, and input availability is essential for further adoption and success of organic practices.

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