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# A study on consumer preference towards natural fertilizer

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**Abstract**
The research was undertaken to A study on consumer preference towards natural fertilizer. The Natural fertilizer are naturally available mineral source that contain moderate amount of plant essential nutrients. They are capable of mitigating problems associated with synthetic fertilizer. They reduce the necessity of repeated application of synthetic fertilizer to maintain soil fertility. The study undertaken by using random sampling method. A total of 110 consumers are taken as sample of study. The study makes use of statistical techniques such as simple percentage, Garrett ranking, chi-square. The study reveals They are capable of mitigating problems associated with synthetic fertilizers. They reduce the necessity fertilizers. They reduce the necessity of repeated application of synthetic fertilizers to maintain soil fertilizer. They gradually release nutrient balance for healthy growth of crop plants.

**Keywords:** Natural fertilizers, consumer preference, sustainable agriculture

## Introduction
Organic farming has been practiced in India for Thousands of years. The great Indian civilization thrived on organic farming; India was one of the most prosperous countries in the world until the British invaded and ruled it. In traditional India, the entire industry of agriculture was practiced using organic techniques, where the fertilizers and pesticides were obtained from plant and animal's products. Organic farming was the backbone of the Indian economy and cows were worshiped as sacred animals from God. The cow not only provided milk but also provided bullocks and dung.

- Organic farming is the best and the most viable alternative for traditional farming technique
- The producer of organic farming has a high nutritional value in comparison to conventional food.
- Organic farming helps reduce soil pollution and air pollution.
- Use of harmful chemical fertilizers and pesticides will poison our food cycle.
- India has the most organic farmers in the whole world.
- The only disadvantage of organic farming is that it is costlier in comparison to conventional farming methods.

"An organic fertilizer refers to a soil amendment derived from natural sources that guarantees, at least, the minimum percentages of nitrogen, phosphate, and potash."
Virtually any organic materials can be used as a fertilizer; however, materials vary considerably in the concentration of plant nutrients they contain and the rate which these nutrients are released for the plant's use.

## Review of literature
**Hamiedeh Malek-Saedi *et al.* (2005):** The study undertakes a "Iranian agricultural professionals knowledge on organic farming". The main purpose of his research was to investigate factors influencing agricultural professionals knowledge an organic farming. The survey was conducted among Agricultural professionals in the jihad-e-keshavarzi organization of two southern provinces in Iran. Using Stratified random sampling, frequencies, percentage, mean, score, standard deviation, correlation and multiple regression as mediation test.

The result showed that age and access to information on agriculture and environment were two important variables that had a positive and direct effect on the organic knowledge.

**Oulsola Olugbenga Ibitoye (2014):** Carried out a research entitled "factors influencing consumers purchasing organic rice in Malasiya". The research have used a structured questionnaire for collecting data from 344 consumers selected randomly. The data collected from the sample of respondents were put through analysis. Descriptive analysis and exploratory factory analysis. The most Influencing factors of purchase of organic rice were healthy, food safety and environmental benifits.

**Ingale S.P and Thombre R.R (2016):** Conducted a research on "A study of farmers awareness towards Bio - fertilizer consumption in Aurangabad districts". The objective of the study were to assess the level of awareness of farmers towards bio-fertilizers and to reveal the importance of bio-fertilizer in agriculture. They have selected 100 respondents among the farmers Aurangabad district used primary and secondary method to collecting the data and also using convenience sampling method. They have found that 50 percent of the respondents have been using bio- fertilizers only. While 30 percent of the farmers used chemical fertilizer and 20 percent of the respondent have been using both bio-fertilizers and chemical fertilizers. This study finds that the relevance of the bio-fertilizers usage particularly for farmers it's cheap and safe source of inputs of agriculture, protect environment eco-friendly and helpful to increase production as well as decrease in the pollution and soil contamination

**Anand Dave and Mishra Sneha (2018):** Published a paper entitled, "Study on farmer's perception towards organic inputs in selected districts of Gujarat". The Research was conducted mainly to examine the perception of organic inputs study area. The other objectives of the study were to assess the level of awareness and level of satisfaction of the farmers about the agricultural inputs. In this regards 320 respondents were selected using purposive sampling method.
For this purpose 19 farmers from each of the four taluks of 8 districts of Gujarat were selected as sample respondents. The data collected from these farmers have been Analised and the finding of the study indicated that higher level of awareness was found among the farmers about bio-products. The farmers were found satisfied with the availability and accessibility of organic inputs. The farmers were not found to have satisfied with the price and productivity of the organic inputs.

**Ogboru *et al.* (2015):** Published an article of "Assessment of fertilizer Management practices among yam farmers and consumers perception on the quality of yam farmers and consumers perception on the quality of yam growth with fertilizers". A field survey was carried out of assess fertilizer management in increasing yam production and buyers perception on the quality of yam grown with the fertilizer in atakumosa local government area of Osun state. Six village and 20 farmers were randomly selected from each village to make a total sum of 120 respondents. Out of 120 yam farmers, 40,32,16 and 12 farmers used broad casting, ring, row and spot method of fertilizers application respectively. In sampled area, no respondent was aware of organomineral fertilizer 100% of the respondents preferred yam growth without fertilizer to yam grown with fertilizer in terms of taste, storability, poundability and colour. The buyer perception about the quality of yam grown with mineral fertilizer may hinder mass yam production.

**Statement of problem**

Farmers are the backbone of every nation without whom nothing is possible. They are the one who always does work to fulfil the basic need of hungry around the world day and night. In early days, the farming are done only on natural basis. but due to development in technology, many make use of inorganic fertilizers that are manmade to yield more production. But still certain farmers are not ready to go for inorganic fertilizers because even though gives high yield also affects the health of people more. So to find out, question is raised. Even aware about natural fertilizer, but farmers have no idea about different types of natural fertilizers that yield more crops than manmade fertilizer thus to find out.
Although the farmers are aware about various types of natural fertilizers that can be created by the farmers themselves, still the customers are ready to go for only a easy source for high yields. So, to find out.

**Objectives**

To find out the answers to the above raised questions, the following objectives are formed.

1. To find out how much farmers are aware of natural fertilizers.
2. To identify the type of natural fertilizer preferred by farmers.
3. To find out the factors for preference of natural fertilizer and impact of use of natural fertilizer

**Research methodology**

The present study is mainly based on primary data random respondents by diatributing the questionnaire, the questionnaire containing related to consumer preference towards natural fertilizer. The questionnaires include questions pertaining to socio economic profile of sample of consumer, and their details of using consumer preference of natural fertilizer. The necessary data for the study have obtained through issue of 110 of questionnaires to consumer using natural fertilizer. Method random sampling techniques has been adopted to collect the data from the sample consumers. The data have been analysed by making of statistical tools like simple percentage, chi square test.

**Finding of the study**

**Socio-economic profile of sample respondents**

The findings of the Respondent's socio-economic profile and level of consumer preference towards natural fertilizer study are briefly summarized below.

**Table 1:** Demographic Profile, Land Characteristics, and Awareness and Usage of Natural Fertilizers Among Respondents (N=110)

| Particulars | No. of. Respondents | Percentage to total |
|---|---|---|
| **Age** | | |
| 20-30 Yrs | 58 | 53 |
| 31-40 Yrs | 17 | 15 |
| 41-50 Yrs | 19 | 17 |
| 50 Above | 16 | 15 |
| **Gender** | | |
| Male | 44 | 40 |
| Female | 66 | 60 |
| Married | 55 | 50 |
| Unmarried | 55 | 50 |
| **Area of residency** | | |
| Urban | 18 | 16 |
| Rural | 92 | 84 |
| **Family type** | | |
| Nuclear | 71 | 65 |
| Joint | 39 | 35 |
| **Number of members in the family** | | |
| Below 3 | 13 | 12 |
| 3-5 | 74 | 67 |
| Above 5 | 23 | 21 |
| **Monthly income** | | |
| Upto 20,000 | 27 | 25 |
| 20,000-30,000 | 44 | 40 |
| 30,000-50,000 | 27 | 25 |
| Above 50,000 | 12 | 11 |
| **Educational qualification** | | |
| Illiterate | 15 | 14 |
| Primary | 10 | 9 |
| Secondary | 16 | 15 |
| Ug | 29 | 26 |
| Pg | 34 | 31 |
| Others | 6 | 5 |
| **Acres of land** | | |
| 1-5 | 69 | 63 |
| 5-10 | 24 | 22 |
| 10-15 | 10 | 9 |
| ABOVE 15 | 7 | 7 |
| **Types of land** | | |
| Own land | 85 | 77 |
| Rental | 25 | 23 |
| **Expected return of cultivation** | | |
| Above 50,000 | 51 | 46 |
| 50,000-100,000 | 28 | 25 |
| 100,000-150,000 | 24 | 22 |
| 150,000-200,000 | 7 | 7 |
| **Awareness about natural fertilzer** | | |
| Highly agree | 19 | 17 |
| Neutral | 64 | 58 |
| Less aware | 27 | 25 |
| **Purchase of natural fertilizer** | | |
| Agro based industry | 31 | 28 |
| Society | 42 | 38 |
| Fertilizer agent | 29 | 26 |
| Others | 8 | 8 |
| **Influencing about to purchase natural fertilizer** | | |
| Self decision | 39 | 35 |
| Friends & relatives | 16 | 15 |
| Fertlizer agent | 29 | 26 |
| Advertisement | 26 | 24 |
| **Price of natural fertilizer** | | |
| Below 10000 | 34 | 31 |
| 10,000-20,000 | 53 | 48 |
| 20,000-30,000 | 16 | 15 |
| More 30,000 | 7 | 7 |
| **Useses of fertilizers** | | |

| | | |
|---|---|---|
| Best quality | 29 | 26 |
| Increase in production | 23 | 22 |
| Chemical free product | 29 | 26 |
| Increase land fertility | 29 | 26 |
| **Level of production** | | |
| Less | 9 | 8 |
| Below average | 23 | 21 |
| Average | 27 | 25 |
| Above average | 46 | 42 |
| High level | 5 | 5 |
| **Level of satisfaction** | | |
| Highly satisfied | 37 | 34 |
| Satisfied | 50 | 45 |
| Neutral | 20 | 18 |
| Dissatisfied | 3 | 3 |
| Highly disagree | 0 | 0 |

The study reveals important demographic and behavioral characteristics of the respondents. A majority (53%) belong to the age group of 20-30 years, with females accounting for 60% of the sample. Half of them (50%) are married, and a significant proportion (80%) reside in rural areas. Most respondents (65%) come from nuclear families, and 67% have more than four family members. Regarding economic status, 44% of the respondents fall under the middle-income category. In terms of land ownership, 63% possess 1-5 acres of land, and 77% own their land. With respect to agricultural return, 46% expect an income above ₹50,000 from cultivation. Awareness about natural fertilizers is high, with 58% being well- informed. Furthermore, 38% prefer purchasing natural fertilizers from cooperative societies, and 35% make independent decisions regarding their purchase. Nearly 48% of respondents spend reasonably on natural fertilizers, and many believe these fertilizers provide better quality produce, are chemical-free, and enhance soil fertility. Overall, 45% of the respondents are satisfied with their experience using natural fertilizers.

**Table 2:** Attributes associated with preference towards natural fertilizer

| Variables | Chi-Square | D.F | Table value @ 5% Level |
|---|---|---|---|
| Age | 4.222 | 6 | 12.592 |
| Gender | 4.988 | 2 | 5.991 |
| Marital status | 1.089 | 2 | 5.991 |
| Family type | 4.605 | 2 | 5.991 |
| Family members | 2.204 | 2 | 5.991 |
| Monthly income | 9.876 | 4 | 9.488 |
| qualification | 2.976 | 4 | 9.488 |

**Ho: There is no association between two variables**

1. The chi- square reveals that there is an association between age and consumer preference towards natural fertilizer.
2. The chi-square reveals that there is no association between gender and consumer preference towards natural fertilizer.
3. The chi-square reveals that there is no association between marital status and consumer preference towards natural fertilizer.
4. The chi-square reveals that there is no association between family type and consumer preference towards natural fertilizer.
5. The chi-square reveals that there is no association between family member and consumer preference towards natural fertilizer.
6. The chi-square reveals that there is no association between monthly income and consumer preference towards natural fertilizer.
7. The chi-square reveals that there is an association between qualification and consumer preference towards natural fertilizer.

**Suggestions**

1. There is need to create awareness among few farmers (those who are not using natural fertilizer) about consumption of natural fertilizer.
2. The government of Tamil Nadu should encourage to farmers for using natural fertilizer because of it is cost effective & eco- friendly
3. More free campaigns should be organized by the government to create awareness among the farmers
4. More training should be provided by the government or any other specialist of how to create Natural fertilizer as it increase the land fertility and produce quality food to the consumers.
5. Awareness about natural fertilizer gives the farmers to encourage to produce quality product and large production with less expenses.
6. Farmers should be provided with subsidies by the government to buy natural fertilizer as it might help them in less investment
7. Farmers should be made aware that natural fertilizer yield non-toxic production so leads to less health issues for the consumers.

**Conclusion**

From the foregoing discussion, about the research undertaken it is inferred that organic farming appears to be a sustainable, economic and eco-friendly, since there is no risk of residual toxicity. It improves soil fertility and yields quality and increases amount of production. An addition of compost prepared from farm wastes i.e FYM, Neem -cake, biogas slurry, vermi compost etc. helps maintain organic matter in soil. Thus the use of natural fertilizer is only the good way of farming that paves the way for healthy life.

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