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A Study On Sustainability And Livelihood Of Organic Farmers In Pudukkottai District

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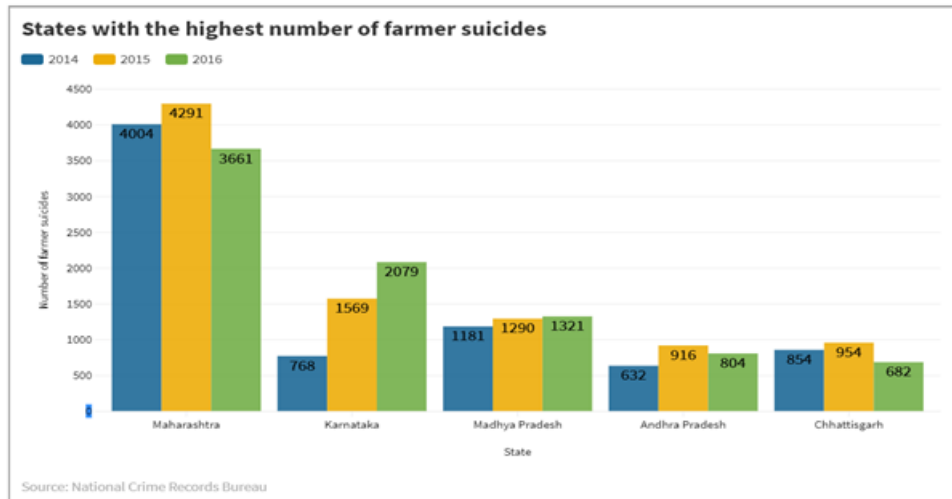
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INTRODUCTION

India is termed the land of farmers, as most of the people of the country are directly or indirectly involved in the agriculture sector. Farming is the process of using the land to grow a large style of crops. Agriculture in India also contributes significantly to the gross domestic product (GDP). Within the situation of food security, rural employment and environmental techniques like conservation, management of natural resources, sustainable agriculture is essential for the event of the whole geographical area. For overall rural development, the Indian agricultural sector has been an emblem of the revolution, the Yellow Revolution, the White Revolution, and the Blue Revolution. The condition of most farmers is terrible. About 80% of farmers in India are marginal (less than 1 hectare) or small farmers (1–2 hectares) category. Agriculture supports about 60% of employment but contributes only 17% to GDP. Every day, there are reports of Indian farmer suicides from different parts of the country. People sitting in cooling system rooms are formulating policies to rectify the issues of farmers. It is very difficult to get workers after the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). Its ruined agriculture with labour shortages and the schema is anti-agricultural. Farming could be a remarkable part of the economy in India because it adds about 17% of absolutely the GDP. It gives employment to over 60% of the population. Indian farmers and farming communities provide a superb environment to lift relations. They offer opportunities for young and old alike to achieve experiences in basic lifelong values, an appreciation for achievement, additionally because of the sorrow of life's most challenging occurrences.

Reason for Farmer's Suicide in India:

According to the NCRB report data, the number of farmer suicides in the country was 11,379 in 2016 as against 12,360 in 2014 and 12,602 in 2015, the reason for farmers suicide as follows:



Weather and Climate Issues: The weather has become unpredictable nowadays in India and it doesn't rain at the proper time. matters in central India is especially bad, which may be considered because the agricultural sector of India.

The scale of operation: Property prices had soared and reached level that folks are finding it difficult to shop for a home. In such circumstances, it's unrealistic for the common people to shop for farms for farming. The gap between small farmers, big farmers, and medium farmers are huge. India's inheritance laws are problematic with a stress on fragmentation.

Shortage of farm laborers: Nowadays, farm labour is taken into account exclusively as casual labour. Areas like construction and industry are already employing people that would rather be engaged in agriculture. this is often also one in every of the explanations why urban migration has increased such a lot within the previous few decades.

Unsatisfactory realization of prices: One in every of the foremost important problems facing farmers in India is about marketing. matters is especially terrible in sugar factories where weighing scales are always called dishonest and farmers take significant time just to interrupt them. In some situations, farmers are required to administer their products to moneylenders at no cost.

Quality of seeds, pesticides, and fertilizers: Farmers in India often should do with poor quality seeds. There are many reasons for the hardship, like untoward peasants, corruption of officials, laws of ineffective and coercion, and improper implementation of laws.

Organic Farming in India:

Organic farming is based on production standards that are environmentally supportive and are socially, economically, and ecologically sustainable. It is believed to play a pertinent role in safeguarding biodiversity, improving the soil health, and inclusive & sustainable development of the farming community.



Components of Organic Farming, Image source: TNAU Agri Tech portal

India produced around 1.35 million MT (2015-16) of certified organic products which include all kinds of food products. the assembly isn't limited to the edible sector but also produces organic cotton fiber, functional food products, etc. as per the most recent available cross-country statistics, within the year 2015, India ranked first in terms of the number of organic producers among over 170 countries and ninth in terms of the world under organic agriculture. India ranked 11th in organic product exports in 2015. India is home to 30 percent of total organic producers within the world but accounts for just 2.59 percent (1.59 million hectares) of the overall organic cultivation area of 57.8 million hectares. the most reason is lack of proper knowledge transfer has been a limiting factor towards lalarge-scalerorganic conversion or reduction in chemical load under conventional farming practice.

According to the International Federation of Organic Agriculture Movements (IFOAM) (2009), organic agriculture contains a significant role in addressing two of the world's biggest and most urgent issues – (1) temperature change (2) Hygienic Food Security.

Agriculture in Tamil Nadu

Agriculture is socially, economically, and culturally entwined with the lives of individuals of Tamil Nadu. Agriculture cannot be easily dispensed with because it is that the key component of economic process and development. Agriculture is undergoing perceptible changes because it gets transformed from a standard to a trendy economy which is a vital step toward economic development. The role of Agriculture in economic development cannot be belittled because it was the important factor to cause dynamism in the revolution during the 1960s, which revealed the contribution of the agriculture sector to holistic economic development.

Agriculture is that the prime propulsion for food security, rural economy, and sustainable socio-economic development of farmers. Agriculture, as a productive sector, provides a pathway out of poverty and has a vital macroeconomic role upon which diverse economies are built. A faster-growing agriculture sector alone can increase agricultural production, raise the per-capita income of the agricultural community, generate consumer demand-driven commodity surplus to push various agro-processing industries, create avenues for localized employment, slow down migration towards urban areas, create domestic demand for industrial goods and services and increase exports.

Agro Climatic Regions of Tamil Nadu

Tamil Nadu Government which leaves no stone unturned for uplifting the economic status of farmers has conceived an agriculture–demand–led –industrialization strategy to extend the agricultural productivity to expand the inner demand for intermediate and trade goods which might generate higher income for the farmers. Tamil Nadu State has been classified into seven distinct agro-climatic zones supported by rainfall distribution, irrigation pattern, soil characteristics, cropping pattern, and other physical, ecological, and social characteristics including administrative divisions.

Agro climatic regions of Tamil Nadu

| Sl. No | Agroclimatic Zone | Districts | Soil Types |
|--------|-----------------------|---|--|
| 1 | North Eastern Zone | Kancheepuram, Tiruvallur, Cuddalore, Vellore and Tiruvannamalai | Red sandy loam, clay loam, saline coastal-alluvium |
| 2 | Northern Western Zone | Dharmapuri, Salem and Namakkal | Non-Calcareousred, non-calcareous brown,calcareous black |
| 3 | Western Zone | Erode, Coimbatore, Tiruppur, Karur, Namakkal, Dindigul and Theni | Red loam, black |
| 4 | Cauvery Delta Zone | Trichy, Perambalur, Pudukkottai, Thanjavur, Nagapattinam, Tiruvarur and Part of Cuddalore | Red loam, alluvium |
| 5 | South Zone | Madurai, Sivaganga, Ramanathapuram, Virudhunagar, Tirunelveli and Thoothukudi | Coastal alluvium, black, red sandy soil, deep red soil. |
| 6 | Hugh Rainfall Zone | Kanniyakumari | Saline coastal alluvium, deep red loam |
| 7 | Hill Zone | The Nilgiris and Kodaikanal (Dindigul) | Eritic |

Source: Tamil Nadu Agricultural University

Water Source Wise Net Area Irrigated:

| Source | Availability (Nos) | Net Irrigated Area (Lakh Ha.) | % wrt to Net Area Irrigated |
|--------------|--------------------|-------------------------------|-----------------------------|
| Canals | 2,239 | 5.27 | 22.10 |
| Tanks | 41,127 | 3.02 | 12.66 |
| Wells | 18,72,088 | 15.54 | 65.16 |
| Others | | 0.02 | 0.08 |
| Total | | 23.85 | 100.00 |

Tamil Nadu, a farmer-friendly state has set one of the most effective platforms for agricultural development by introducing innovative agricultural technologies to re-invent revolution for the second time within the state. Further, the govt has formulated and implemented policies and schemes to attain consistency and ascension at an accelerated pace.

Productivity Position of Tamil Nadu at the National Level

| National Level Crop | Position of Tamil Nadu at National Level | Yield in Tamil Nadu (Kg/ha) | All India Average Yield (Kg/ha) |
|-------------------------|--|-----------------------------|---------------------------------|
| Maize | 1 | 6,549 | 2,509 |
| Cumbu | 1 | 2,613 | 1,154 |
| Groundnut | 1 | 2,509 | 1,486 |
| Total Oilseeds | 1 | 2,230 | 968 |
| Cotton | 5 | 442 | 432 |
| Coconut | 2 | 9,238 | 6,721 |
| Rice | 2 | 3,918 | 2,404 |
| Sugarcane(MT) | 3 | 103 | 71 |
| Sunflower | 4 | 1,089 | 697 |
| Jowar | 3 | 1,558 | 780 |
| Coarse cereals | 2 | 3,759 | 1,596 |
| Food grains | 3 | 3,090 | 2,056 |
| Total Pulses | 8(*) | 689 | 744 |
| Total Geographical Area | | 130.33 | 100.00 |
| Cropping Intensity (%) | | 118 | - |

Source: Department of Agriculture, Policy note 2018-19

The southern Indian state of the province has reeled under its worst drought in additional than 100 years. the middle for Indian Knowledge Systems, an NGO within the district, has been giving technical support to farmers for quite twenty years, helping them to modify from chemical to organic farming. it is supplied drought-resistant, traditional crops that consume less water and helped farmers to make ponds to store rainwater. Farmers using chemical fertilizers lost their crops completely. Traditional crops, which once ruled this agricultural landscape, faded with the onset of the revolution – the boost in crop production after the appliance of hybrid seeds and chemical fertilizers in the 1970s. Nowadays, farmers are going back to traditional crops like coconuts, vegetables, and pulses, with rising consumer demand for such products in India. the normal crops have medicinal value, are well-suited to the local soil conditions, and may survive drought. In the province, where cases of farmers committing suicide are reported, traditional organic farming offers a ray of hope in the fight against failure.

REVIEW OF LITERATURE

A researcher finds alternative farming approaches are able to do high yields and profits, but evidence of the simultaneous impacts of farming systems on ecological, social, and economic aspects of sustainability is scarce (Lucas A.Garibaldi, 2017). With the increasing attention to organic farming, they conducted the study to research the most opportunities and challenges of the food production system of small-scale farmers in developing countries with a stress on their livelihoods. They find the foremost significant advantages of organic farming are environmental protection and better resilience to environmental changes, increasing farmers' income, and reducing external input costs. the most challenges of this food production system include lower yields as compared to traditional systems (Zeynab Jouzi, 2017). Zero Budget Natural Farming advocates the cultivation of diverse species of crops betting on site climate conditions. Mixed cropping helps to income source for farmers against the failure of one crop. This study shows organic farming gives more profit and low investment than modern technology farming (Kumar D. A, 2020). Effect of Zero Budget Natural Farming income was increased by reducing the price of production. The researcher concluded diversification shall also play a vital role in doubling farmer's income (Kumar S. et.al 2019). India contains a rich history of organic farming and the increasing domestic market of organic food can provide the required drive to the organic movement. But most significantly

innovative organic farming technologies can popularize the practice even among resource-poor farmers by ensuring ecologically and economically sustainable organic crop production in a very time-bound manner (**S.K. Bharti, 2019**). In Uganda, organic farming adoption was increased. because of the efforts of this NGO and impacted farmers' livelihoods in some areas. like increased food and nutrition security, better incomes, and access to functional markets. They highlighted the dearth of presidential policy on agriculture. They concluded public sector involvement and support are key to the further development of the organic sector (**Jane Nalunga,2019**). Climate-smart agriculture (CSA) in promoting sustainable agricultural development and ensuring food security in India. CSA adaptation gives enhancing crop yields and farm incomes and reduces greenhouse emissions. A researcher concluded zero budget natural farming as a climate-resilient farming system can enhance food and nutritional security, enabling farmers to boost soil fertility and yields through lower costs, risk, and irrigation requirements and protecting the ecosystem (**Ghosh,2019**).

STATEMENT OF THE PROBLEM

Agriculture is the predominant occupation in the Pudukkottai District in the state of Tamil Nadu. The farmers of the district depend closely on agriculture for earning their livelihood. They are notably skilled in the use of high-yield variety seeds, irrigation, fertilizers, pesticides, and insecticides. Among the farmers, some farmers are transferred into the practice of natural farming. For that purpose, the researcher has chosen to study the sustained socio-economic status, sustainability of organic farming, and advantages of organic farming and gathered the important points about the impacts of chemical fertilizer and pesticides from the organic farmers.

OBJECTIVES OF THE STUDY

- To study the socio-economic status of the organic farmers.
- To study the pattern of agricultural practices among organic farmers.
- To provide suggestions for the Sustainability and Livelihood of Organic Farmers

RESEARCH DESIGN

A descriptive Research Design was used in this study.

UNIVERSE

The universe of the present study consists of the total number of organic farmers in Kolunji Ecological Farm, Pudukkottai.

METHOD OF DATA COLLECTION

The researcher has chosen all the 30 organic farmers who are a member of Kolunji Ecological Farm, Pudukkottai by applying Census Method.

TOOLS OF DATA COLLECTION

The researcher used a self-prepared semi-structured interview schedule to collect the primary data from the respondents. The questionnaire was translated into the Tamil language for the convenience of the respondents.

ANALYSIS OF THE DATA

The collected raw data were analyzed and interpreted using Statistical Analysis for Social Sciences. Appropriate statistical techniques were adopted for the analysis of data. The research adopted the Chi-square test and Karl Pearson Correlation test to produce meaningful inferences.

ANALYSIS AND INTERPRETATION

Table 1
Distribution of the respondents by their Age

| S. No | Age | No of Respondents (n=30) | Percent |
|-------|-------|-----------------------------|---------|
| 1 | 25-40 | 9 | 30.0 |
| 2 | 41-55 | 16 | 53.3 |
| 3 | 56-70 | 5 | 16.7 |

Source: Primary Data

It is inferred from the above table that more than half of the respondents (53.3 percent) were between 41-55 years old. More than one-fourth (30.0 percent) of the respondent was between 25-40 years old. Less than one-fourth (16.7 percent) of the respondent was between 56-70 years old.

Table 2
Distribution of the respondents by their Gender

| S. No | Gender | No of Respondents (n=30) | Percent |
|-------|--------|-----------------------------|---------|
| 1 | Male | 22 | 73.3 |
| 2 | Female | 8 | 26.7 |

Source: Primary Data

It is inferred from the above table that the majority of the respondents (73.3 percent) were male and more than one-fourth of the respondents (26.7 percent) were female.

Table 3
Distribution of the respondents by their Education

| S. No | Education | No of Respondents (n=30) | Percent |
|-------|-----------------------------|-----------------------------|---------|
| 1 | Primary (1-5) | 7 | 23.3 |
| 2 | Secondary (6-10) | 8 | 26.7 |
| 3 | Higher Secondary (11-12) | 6 | 20.0 |
| 4 | Under Graduate | 7 | 23.3 |
| 5 | Illiterate | 2 | 6.7 |

Source: Primary Data

It is inferred from the above table that more than one-fourth of the respondents (26.7 percent) were educated at a Secondary level. Close to one-fourth of the respondents (23.3 percent) were educated at the Primary and Under Graduate levels respectively. Less than one-fourth of the respondents (20.0 percent) were educated at the Higher secondary level. Less than one-fourth of respondents (6.7 percent) were not educated.

Table 4
Distribution of the respondents by their Religion

| S. No | Religion | No of Respondents (n=30) | Percent |
|-------|-----------|-----------------------------|---------|
| 1 | Hindu | 27 | 90.0 |
| 2 | Christian | 2 | 6.7 |
| 3 | Muslim | 1 | 3.3 |

Source: Primary Data

It is inferred from the above table that the majority of the respondents (90.0 percent) belong to the Hindu religion and less than one-fourth of the respondents (6.7 percent) and 3.3 percent) belong to Christian and Muslim religion's respectively.

Table 5
Distribution of the respondents by their Family Type

| S. No | Age | No of Respondents (n=30) | Percent |
|-------|----------------|-----------------------------|---------|
| 1 | Joint Family | 16 | 53.3 |
| 2 | Nuclear Family | 14 | 46.7 |

Source: Primary Data

It is inferred from the above table that more than half of the respondents (53.3 percent) were from Joint Families and close to half of the respondents (46.7 percent) were from the nuclear family.

Table 6
Distribution of the respondents by their membership in the Agricultural & Milk Society

| S. No | Membership | No of Respondents (n=30) | Percent |
|-------|------------|-----------------------------|---------|
| 1 | Member | 18 | 60.0 |
| 2 | Non-Member | 12 | 40.0 |

Source: Primary Data

It is inferred from the above table that the majority of the respondents (60.0 percent) have reported that they are a member of the Agricultural & Milk Society and less than half of the respondents (40.0 percent) have reported that they are not a member of the Agricultural & Milk society.

Table 7
Distribution of the respondents by their Annual Family Income

| S. No | Family Income(Rupees) | No of Respondents (n=30) | Percent |
|-------|--------------------------|-----------------------------------|---------|
| 1 | 25000-125000 | 10 | 33.3 |
| 2 | 125000-225000 | 11 | 36.7 |
| 3 | 225000-325000 | 3 | 10.0 |
| 4 | 325000-425000 | 1 | 3.3 |
| 5 | 425000-526000 | 5 | 16.7 |

Source: Primary Data

It is inferred from the above table that less than half of the respondents (36.7 percent) are having an annual family income between Rs.125000-225000. More than one-fourth of the respondents (33.3 percent) have an annual family income between Rs.25000-125000. Less than one-fourth of the respondents (16.7 percent), (10.0 percent), and (3.3 percent) had an annual family income between Rs.425000-526000, Rs.225000-325000, and Rs.325000-425000 respectively. The main income comes from selling milk, harvesting, and selling Paddy, Groundnut, Pulses, Spinach, Nursery, and Sugarcane. And some respondents get economic support from family members

Table 8
Distribution of the respondents by their crop prefers

| S. No | Types of crops | No of Respondents (n=30) | Percent |
|-------|----------------------|-----------------------------------|---------|
|-------|----------------------|-----------------------------------|---------|

| | | | |
|---|----------------------|----|------|
| 1 | Food Crop | 22 | 73.3 |
| 2 | Cash Crop | 6 | 20.0 |
| 3 | Horticulture Crop | 1 | 3.3 |
| 4 | Plantation Crop | 1 | 3.3 |

Source: Primary Data

It is inferred from the above table that the majority of the respondents (73.3 percent) prefer the Food Crop. Due to it gives more profit as well as a high need in society. Close to one-fourth of the respondents (20.0 percent) prefer the Cash Crop. Once upon a time, the respondent prefers sugarcane (cash crop). Now why it is low, the consumer prefers organic products. So, sugar factories are slowly close to the company. Few respondents (3.3 percent) prefer the Horticulture Crop and Plantation Crop respectively.

Table 9
Distribution of the respondents by their Irrigation System

| S. No | Irrigation System | No of Respondents (n=30) | Percent |
|-------|--------------------|--------------------------|---------|
| 1 | Flood Irrigation | 6 | 20.0 |
| 2 | Sprinkle/Drip | 5 | 16.7 |
| 3 | Surface Irrigation | 2 | 6.7 |
| 4 | Well Irrigation | 17 | 56.7 |

Source: Primary Data

It is inferred from the above table more than half of the respondents (56.7 percent) are using Well Irrigation for farming. Well, irrigation is highly available in that village. Less than one-fourth of respondents (20.0 percent) are using Flood Irrigation for farming. Less than one-fourth of respondents (16.7 percent) are using Surface Irrigation for farming. It shows technology is implemented by educated farmers in the village. Few respondents (6.7 percent) are using Surface Irrigation.

Table 10
Distribution of the respondents by their following occupation variables

| S. No | Variables | No of Respondents (n=30) | Percent |
|-------|--|--------------------------|----------------------|
| 1 | Does organic farming give more yield than Inorganic farming Disagree Neutral Agree | 4 12 14 | 13.3 40.0 46.7 |
| 2 | Chemical pesticides/fertilizers affect the farming land. Neutral Agree | 4 26 | 13.3 86.7 |
| 3 | Chemical pesticides/fertilizers introduce new diseases in society. Yes No | 25 5 | 83.3 16.7 |

| | | | |
|---|---|---------------|----------------------|
| 4 | I am facing a problem by the mediator Disagree Neutral Agree | 5 3 22 | 16.7 10.0 73.3 |
| 5 | Which type of cropping pattern are you using on the land Mono-crop Multi-crop | 8 22 | 26.7 73.3 |
| 6 | Government providing benefits/policy for organic farming Disagree Neutral Agree | 16 12 2 | 53.3 40.0 6.7 |
| 7 | I am aware of government subsidies for organic farming Disagree Neutral Agree | 10 8 12 | 33.3 26.7 40.0 |
| 8 | The organic product highly demanded by people Disagree Neutral Agree | 4 5 21 | 13.3 16.7 70.0 |
| 9 | Organic product gives more profit Disagree Neutral Agree | 4 16 10 | 13.3 53.4 33.3 |

Source: Primary Data

It is inferred from the above table that nearly half of the respondents (46.7 percent) agree organic farming gives more yield. Less than half of the respondents (40.0 percent) told organic farming and inorganic farming both are given equal yields. Less than one-fourth of respondents (13.3 percent) told inorganic farming gives more yield. It is inferred from the above table that the majority of the respondents (86.7 percent) agree chemical fertilizer/pesticide affects the farming land. Less than one-fourth of the respondent (13.3 percent) were not ready to agree.

It is inferred from the above table that the majority of the respondents (83.3 percent) agree chemical fertilizers/pesticides introduce new diseases in society. Less than (16.7 percent) do not agree chemical fertilizers/pesticides introduce new diseases in society.

It is inferred from the above table that the majority of the respondents (73.3 percent) had a problem with the mediator at the time of selling the product. Less than one-fourth of the respondents (16.7 percent) not having problems with the mediator at the time of selling the product. Few respondents (10.0 percent) had lowers problems with the mediator at the time of selling the product.

It is inferred from the above table that the majority of the respondents (73.3 percent) prefer the multi-crop pattern system for farming. Why do they prefer, if one crop is affected then another crop will give the profit? Also, it improves the fertility of the soil. More than one-fourth of the respondents (26.7 percent) prefer the mono-crop pattern system for farming. They feel different crops in the field make it difficult to maintain.

It is inferred from the above table that more than half of the respondents (53.3 percent) agree on the government does not provide benefits/policies for organic farming. Less than half of the respondents (40.0 percent) partly know about the government benefits/policy for organic farming. Few respondents (6.7 percent) only know very well about the government benefits/policy for organic farming.

It is inferred from the above table that less than half of the respondents (40.0 percent) knew about government subsidies for organic farming. More than one-fourth of the respondents (33.3 percent) do not know the government subsidy for organic farming. Less than one-fourth of the respondents (26.7 percent) partly know the government subsidy for organic farming.

It is inferred from the above table that the majority of the respondents (70.0 percent) agree to organic products are highly demanded by people. Less than one-fourth of the respondents (16.7 percent) agree with only partly of people's demand for organic products. Few respondents (13.3 percent) people do not demand organic products.

It is inferred from the above table that more than half the respondent (53.4 percent) agree with organic products gives equal profit to inorganic product. More than one-fourth of respondents (33.3 percent) agree with organic products are given more profit than inorganic products. Few respondents (13.3 percent) agree with inorganic produare cts given more profit.

Table 11
Association between profit and demand of the organic product

| The organic products give more profit | The Organic product highly demanded by people | | | Total |
|---------------------------------------|---|------------|-------------|------------|
| | Disagree | Neutral | Agree | |
| Disagree | 1 25.0% | 2 50.0% | 1 25.0% | 4 100% |
| Neutral | 3 18.8% | 2 12.5% | 11 68.8% | 5 100% |
| Agree | 0 0.0% | 1 10.0% | 9 90.0% | 21 100% |
| Total | 4 13.3% | 5 16.7% | 21 70.0% | 30 100% |

| Chi-Square Test | | | | | |
|--------------------|--------------------|----|-----------------------------------|-----------------|--|
| Chi-Square | Calculated Value | Df | Asymptotic Significance (2 sided) | Significance | |
| Pearson Chi-Square | 6.926 ^a | 4 | 0.140 | Not Significant | |

Source: Primary Data

Chi-square was calculated to test the above hypothesis. The calculated value is 6.926 which is not significant either at $0.05 < 0.140$ level. Therefore, it can be inferred that there is an association between profit and demand of the organic product. Hence hypothesis is rejected.

Table 12
Association between Education and Irrigation Systems in Farming

| Education | Type of Irrigation System | | | | Total |
|--------------------------|---------------------------|-----------------|--------------------|-----------------|------------|
| | Flood Irrigation | Sprinkle / Drip | Surface Irrigation | Well Irrigation | |
| Primary (1-5) | 0 0.0% | 0 0.0% | 0 0.0% | 7 100% | 7 100% |
| Secondary (6-10) | 2 25.0% | 0 0.0% | 0 0.0% | 6 75.0% | 8 100% |
| Higher Secondary (11-12) | 2 33.3% | 2 33.3% | 0 0.0% | 2 33.3% | 6 100% |
| Under Graduate | 2 28.6% | 2 28.6% | 1 14.3% | 2 28.6% | 7 100% |
| Illiterate | 0 0.0% | 1 50.0% | 1 50.0% | 0 0.0% | 2 100% |
| Total | 6 20.0% | 5 16.7% | 2 6.7% | 17 56.7% | 30 100% |

| Chi-Square Test | | | | |
|--------------------|---------------------|----|-----------------------------------|--------------|
| Chi-Square | Calculated Value | Df | Asymptotic Significance (2 sided) | Significance |
| Pearson Chi-Square | 21.241 ^a | 12 | 0.047 | Significant |

Source: Primary Data

Chi-square was calculated to test the above hypothesis. The calculated value is 21.241 which is not significant either at $0.05 > 0.047$ level. Therefore, it can be inferred that there is an association between education and irrigation systems in farming. Hence hypothesis is accepted. It shows that education should play a role in selecting the irrigation system. Educated respondents enter advanced irrigation systems in farming. It helps to water conservation.

Table 13
Karl Pearson's Co-efficient of Correlation between Profit and Demand of the Organic Product by the Respondents

| The organic products give more profit | The Organic product highly demanded by people | | | Total |
|---------------------------------------|---|------------|-------------|------------|
| | Disagree | Neutral | Agree | |
| Disagree | 1 25.0% | 2 50.0% | 1 25.0% | 4 100% |
| Neutral | 3 18.8% | 2 12.5% | 11 68.8% | 5 100% |
| Agree | 0 0.0% | 1 10.0% | 9 90.0% | 21 100% |
| Total | 4 13.3% | 5 16.7% | 21 70.0% | 30 100% |

| Symmetric Measures | | | | |
|--------------------|-------------------|--|--------------------------|--------------------------|
| Correlation | Correlation Value | Asymptotic Standardized Error ^a | Approximate Significance | Approximate Significance |
| Karl Pearson | 0.399 | 0.126 | 0.029 ^c | Significant |

Source: Primary Data

This value of r (0.39) indicates a weak positive correlation between the profit and demand for organic products by the respondents. It shows that the low demand for organic products leads to a low profit for organic farmers. Because high demand gives more profit respectively.

The above table indicates there is a significant relationship between organic product profit and organic product demand.

Table 14
Karl Pearson's Coefficient of Correlation between Yield and Profit of Organic Products

| Organic farming gives more yield than Inorganic farming | Organic Product gives more profit | | | Total |
|---|-----------------------------------|-------------|-------------|--------------|
| | Disagree | Disagree | Disagree | |
| Disagree | 2 50.0% | 2 50.0% | 0 0.0% | 4 100.0% |
| Neutral | 1 8.3% | 8 66.7% | 3 25.0% | 12 100.0% |
| Agree | 1 7.1% | 6 42.9% | 7 50.0% | 14 100.0% |
| Total | 4 13.3% | 16 53.3% | 10 33.3% | 30 100.0% |

| Symmetric Measures | | | | |
|--------------------|-------------------|--|--------------------------|--------------------------|
| Correlation | Correlation Value | Asymptotic Standardized Error ^a | Approximate Significance | Approximate Significance |
| Karl Pearson | 0.438 | 0.158 | 0.016 ^c | Significant |

Source: Primary Data

This value of r (0.43) indicates a close to moderate positive correlation between the Yield and profit of organic products. It shows that the low yield of organic products leads to a low profit for organic farmers. Also, the investment amount is equal for organic as well as organic farming. Because high yield gives high profits respectively. Also, low investment leads to more profit. The above table indicates there is a significant relationship between the yield and profit of organic products.

MAJOR FINDINGS

- More than half of the respondents (53.3 percent) were between 41-55 years old.
- The majority of the respondents (73.3 percent) were male.
- More than one-fourth of the respondents (26.7 percent) were educated at a secondary level.
- The vast majority of the respondents (90.0 percent) belong to the Hindu religion.
- More than half of the respondents (53.3 percent) were from Joint Families.
- Close to two-thirds of the respondents (60.0 percent) have reported that they are a member of the Agricultural & Milk Society.
- Less than half of the respondents (36.7 percent) are having an annual family income between Rs.125000-225000.
- The majority of the respondents (73.3 percent) prefer the Food Crop for farming.
- More than half of the respondents (56.7 percent) are using Well Irrigation for farming.
- Less than half of the respondents (46.7 percent) agree organic farming gives more yield.
- The vast majority of the respondents (86.7 percent) agree chemical fertilizer/pesticides affects farming land.
- The vast majority of the respondents (83.3 percent) agree chemical fertilizers/pesticides has introduced new diseases in society.
- The majority of the respondents (73.3 percent) had problems with the mediator at the time of selling the product.
- The majority of the respondents (73.3 percent) prefer the multi-crop pattern system for farming.
- More than half of the respondents (53.3 percent) agree that the government does not provide benefits/policies for organic farming.
- Less than half of the respondents (40.0 percent) knew about government subsidies for organic farming.

FINDINGS RELATED TO THE RESEARCH HYPOTHESES

1. There is no association between Profit and Demand for organic products.
2. There is a significant association between Education and Irrigation systems in farming.
3. There is a significant correlation between Profit and Demand for the organic product.
4. There is a significant correlation between the Yield and Profit of organic products.

SUGGESTIONS

- As the majority of the respondents opined that chemical fertilizers/pesticides have introduced new diseases in society, social workers must create awareness among the people.
- Government must provide benefits/policies for organic farming.
- Organic farmers must be sensitized by the social workers on the subsidies provided by the Government
- Training programs on the techniques of organic farming by social workers can help them for their sustainability.

CONCLUSION

The researcher intended, through this study, to recognize the issues confronted in the exercise of natural farming. This study gives an overview of the socio-economic situation of organic farmers. Our country has a massive geographical area and a variety of eco-regions, and our country has a huge potential to capitalize on natural farming. However, small farm holders in India are restricted by problems such as resource availability, certification, lack of a nearby market, and other factors. Therefore, an integrated effort is wanted through the government and non-government agencies to eliminate constraints encouraging small farm holders to undertake organic farming as an answer to meet meal demand while conserving the soil, water, energy, and biological resources. Also, customers have put an excessive demand for organic food. Because our traditional ingredients never create new diseases in society. Also, youngsters to give importance to entering into agriculture. two Because, in India, demand is excessive

and the supplier is low in agriculture. two So producers use chemical fertilizer for excessive production. two It leads to new diseases in society.

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