



**THE PERCEPTION OF SMALL-SCALE FARMERS ON THE ROLE OF ORGANIC
FARMING IN ANDHRA PRADESH**

Thamatam Chandana

Student, MBA, School of Management and Commerce

ITM University, Gwalior, Madhya Pradesh, India

Dr. Kahmeera Shaik

Assistant Professor, School of Management and Commerce

ITM University, Gwalior, Madhya Pradesh, India

ABSTRACT :

This study aims to investigate the perception of small-scale farmers in Andhra Pradesh regarding the role of organic farming. Organic farming has gained significant attention in recent years due to its potential benefits for environmental sustainability and human health. However, understanding the perspectives of small-scale farmers, who form a significant portion of the agricultural sector, is crucial for the successful adoption and promotion of organic farming practices.

The study employed a qualitative research design, utilizing interviews and focus group discussions to gather data from small-scale farmers in various regions of Andhra Pradesh. The participants were selected using a purposive sampling technique, ensuring representation from different demographics and agricultural practices.

The findings of the study revealed diverse perceptions among small-scale farmers regarding organic farming. Several farmers acknowledged the environmental benefits of organic practices, such as reduced chemical usage and improved soil fertility. They also expressed a positive perception of organic produce in the market, believing that it fetches premium prices and attracts health-conscious consumers.

Overall, the study provides valuable insights into the perception of small-scale farmers on the role of organic farming in Andhra Pradesh. The findings can guide policymakers, agricultural extension services, and relevant stakeholders in developing strategies to address the challenges and promote the adoption of organic farming practices among small-scale farmers.

KEYWORDS : Perception, Small-Scale Farmers, Organic Farming, Health-Conscious Consumers and Organic Agriculture

INTRODUCTION

Organic farming is the practise of cultivating land and producing crops with the use of biological fertilisers and pesticides derived from plant or animal waste (bio-waste).

In fact, the use of chemical pesticides and synthetic fertilisers caused environmental harm, which led to the introduction of organic farming.

Small-scale Farmers Using Organic Agriculture Small-scale polyculture organic farming aims to conserve and diversify biodiversity, improve soil quality, reduce greenhouse gas emissions, and strengthen adaptation strategies to disasters in contrast to intensive chemical monocultural crop production, which saps life out of soil (in many ways) (Jouzi et al. 2017;)

Environmentally friendly Cultivation and production

Organic farming is known to be the world's oldest style of farming. Organic farming not only includes the cultivation of land and production of food particles and produces, but also the maintenance and reverberance of eco system in well balanced manner.

Organic farming was the type of farming followed till the period of green revolution. And no petroleum-based chemicals (pesticide and fertilizers) were used in land cultivation till the time of green revolution.

And 74% of Indian economy based on the small-scale farmers of the country, which indirectly getting the pressure of producing the higher yield of food crops to reach the demand of food grains due to increasing population and increasing exports.

This scenario leading to the usage of improper ratio of chemicals and fertilizers and hybrid varieties and other adaptational activities in order to produce the necessity of farm produces respective to the scenario from past four decades.

And nowadays the land has started losing its fertility and balance leading to the improper production of farm produces. And lesser yield which held some focus to regain the balance around the eco system and nature by gaining the original state of nature to regain the higher yields and balanced phase of nature.

However, it is growing in importance in the world. It is hard to get information due to lack of official statistics and the level of confidentiality of systems of organic produce. Soil practices

such as crop rotations, organic fertilizers, symbiotic associations, cover crops, inter-cropping, and minimum tillage are central to organic practices

Health: Wholeness and integrity of living systems are indicators of health. The goal of organic agriculture is to preserve and improve the health of ecosystems and species, from the tiniest in the soil to humans, whether it is used for farming, processing, distribution, or consumption.

Fairness: Systems of production, distribution, and commerce must be open, equitable, and take into account the true environmental and social costs.

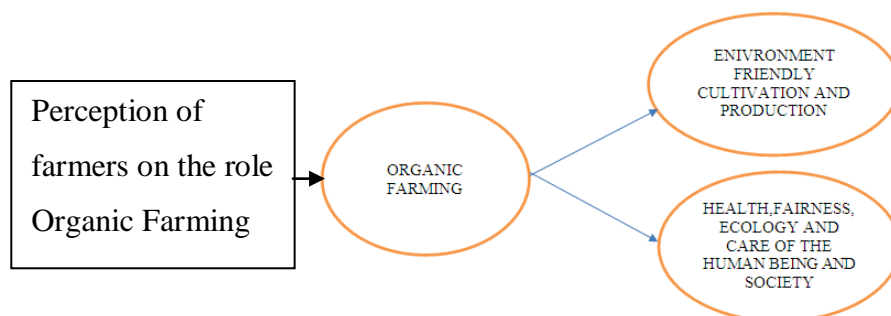
Ecology: According to ecology, organic farming has its main roots in dynamic ecological systems. Additionally, it emphasises that ecological processes and recycling should be the foundation of production.

Care: Care considers that organic farming is a dynamic, living system that responds to both internal and external pressures. It also considers management and technology decisions, as well as the health and welfare of present workers.

Customers choose organic food because they are confident in its high quality. Furthermore, the EU's legal and regulatory framework for organic farming and food emphasises excellent product quality as a key production objective. The requirement to identify food quality concepts and assessment techniques presents a significant problem. A backdrop is provided that enables the integration of quality definitions and evaluation techniques into a conceptual framework related to the goals of organic farming and food production. The quality of organic food is determined by a set of factors and standards.

Because organic farming lessens the environmental contamination caused by hazardous chemicals, it can improve both farmers' and consumers' health. Currently, there are progressively more organic farms. A framework for organic farmer behaviour (OFB) will inspire the smallholder farmer community to advance wilderness organic farming, a critical component of global agricultural agriculture.

CONCEPTUAL MODEL



REVIEW OF LITERATURE

During my past direct approach regarding the organic farming to a KVK in past months and years and the talks that've occurred between the officials and self. I got an opportunity to meet certain small scale organic farmers in and around the KVK.

As per the data that I collected there were approx. 500 and more number of organic farmers and almost 250 positively members do belong to the category of small-scale organic farming in this particular mandal.

Many people do follow the principles of traditional agricultural practices and majorly they produce the vegetables and grains for the family. Mostly they depend on the mechanical and cultural preventions and controls regarding pests and diseases.

And some of the farmers are following the mixed crop pattern to prevent the pests and insects and some other sprays and other measures using some products made from plant and other natural residues.

And when it come upon to the recent method of organic agriculture, that is Zero Budget natural Farming and some other implementations that are done and promoted by both state and central governments to retain the better soil in the nation and harmony around the nation .

A farmer A. Shiva Shankar, Parnapalle, is doing the mixed orchid cropping of guava, mango, and other fruit crops in the land of 1.9 acres of land.

Mr. Annem Pratap locating Devarayapalle, is cultivating mangoes and some other fruit crops in some piece of land nearby to the road and making his own style of selling organic fruits.

Mr. Rama Chandra from residing Peddachintakuntla, is cultivating some pulses and rice in some acres of land.

Mr. Narayana is cultivating the fruit crops and other flowering crops to make trial in his little piece of land hearing to some other ZBNF farmers.

Mr. Suraj is cultivating the turmeric and some other horticultural and commercial crops using the mixed cropping system in his land.

ZBNF team is also looking up for the monthly subsidiary funds to be released by government and other supportive team to help people and make the farmers aware and make the better healthy nation.

Mostly they are making more yield and diversified cropping in really lesser place of land believing in the forest like structural cropping.

Andhra Pradesh is using the most land in India for the organic farming approximately more than 2 lakh hectares of land as per the articles published in Niti.gov.in.

Zeynab Jouzi et al. (2017) They expressed their viewpoint as the main worry of food policy-makers around the world has always been producing enough food to meet the needs of a growing population. According to the study, the most important benefits include environmental protection, increased resistance to environmental change, increased farmer income and lower costs for external inputs, improved social capability, and more employment prospects. As well as improving locals' ability to buy food, which in turn will improve food security.

Arun Barik et al. (2017) The Inhana Rational Farming (IRF) Technology, an organic farming method used in India, has shown some encouraging outcomes that have highlighted the value of organic farming in the current agricultural environment.

Hari Prakash Meena (2013) Green insecticides like neem, compost tea, and Spinosad are non-toxic and kind to the environment. These herbicides aid in early detection and removal of sick and dying plants, strengthening crop defence mechanisms as a result. With 62 million ha of certified wild lands for the organic collection of bamboo shoots, wild berries, mushrooms, and nuts, and 31 million ha of certified croplands and pastures (less than 0.7 percent of the world's agricultural lands and an average of 4 percent in the European Union), organic agriculture is commercially practised in 120 countries (Willer and Youssefi, 2007).

RATIONALE OF THE STUDY

The main purpose of the organic farming is that the nature is already polluted due to the petroleum-based pesticides and fertilizers. We need to retain the better phase of soil and nature and get back to the healthy way of farming and getting balanced nature. Nowadays the pollution is going to extreme levels and we need to sustain the nature by reducing the pollution and taking controlling measures. India has the most diversified nature and cropping patterns and does the major proportion of food production as the nation needs to the increasing population, so nature needs to be protected.

Higher yields can be achieved from practicing the organic farming helping to reach the food production targets for increasing population. Organic farming is the most important necessary practice that has to be adopted to maintain healthy nation and reducing the diseases and abnormalities that can be caused by the chemicals used on food production. Main importance of the organic farming is to responsibly use the energies and other natural resources like water, soil, and light and other renewable and non-renewable natural resources.

It also helps in maintaining the bio diversity. It helps in protecting the animal welfare and having the balanced eco system. Improves soil fertility, nutritional value, water quality

OBJECTIVE OF THE STUDY

1. To know the role of organic farming for small-scale farmers.
2. To understand the relationship of organic farming towards environmentally friendly cultivation and production, health, fairness, ecology, and care of human beings and society.
3. To find out the impact of organic farming towards environmentally friendly cultivation and production, and health, fairness, ecology, and care of human beings and society.

HYPOTHESIS OF THE STUDY

H0: There is no statistical significant relationship between Organic farming towards environmental friendly cultivation and production and health, fairness, ecology and care of human being and society

H1: There is a statistical significant relationship between Organic farming towards environmental friendly cultivation and production and health, fairness, ecology and care of human being and society

H0: There is no statistical significant impact of Organic farming on environmental friendly cultivation and production and health, fairness , ecology and care of human being and society

H2: There is a statistical significant impact of Organic farming on environmental friendly cultivation and production and health, fairness , ecology and care of human being and society

RESEARCH METHODOLOGY

The total population includes 500 small-scale farmers practicing organic farming in Kurnool district. The sample size for small-scale farmers practicing organic farming was 222 respondents.

In this study, the sample element is organic farming of small-scale farmers. Non-probability convenience sampling technique was used to collect the data.

Data has been gathered by using a structured questionnaire. Data has been collected by using a 5-point Likert scale from 1 to 5 i.e. Strong Disagree to Strong Agree.

The tools used to analyse data are Frequency, Reliability Mean and Standard Deviation, Correlation, Regression Analysis and Exploratory Factor Analysis

RESULTS AND DISCUSSIONS

Table No 1: Frequency Tables for Sociodemographic Factors

S.No	Particulars		Frequency	Percent
1	Gender of the Respondents	Male	122	55.0
		Female	99	44.6
		Transgender	1	.5
2	Age of the Respondents	Below 30	145	65.3
		31 – 40	36	16.2
		41 – 50	21	9.5
		Above 51	20	9.0
3	Qualifications of the Respondents	10th Standard	2	.9
		12th Standard	19	8.6

		Under Graduate	127	57.2
		Post Graduate	74	33.3
4	Work Experience of the Respondents	Below 5 years	89	40.1
		6-10 years	69	31.1
		11-15 years	24	10.8
		16-20 years	20	9.0
		Above 21 years	20	9.0
5	Family Type of the Respondents	Joint Family	84	37.8
		Nuclear Family	138	62.2
6	Annual Income of the Respondents	Below 25,000/-	160	72.1
		25,001-45,000/-	44	19.8
		45,001-65,000/-	6	2.7
		65,001-85,000/-	3	1.4
		Above 85,001	9	4.1

The above table no 1 reveals that 122 are male respondents, 99 are female respondents and 1 is transgender. 145 respondents are below 30 age group, 36 respondents are from 31-40 age group, 21 respondents are from 41-50 age group and 20 respondents are above 51 age group. 127 respondents are Under Graduates, 74 respondents are Post Graduates, 19 respondents are 12th standard, and 2 respondents are 10th standard. 89 respondents are below 5 years , 69 respondents are from 6-10 years, 24 respondents are from 11-15 years, 20 respondents are from 16-20 years and 20 respondents are from Above 21 years of Work Experience. The number of respondents whose income is below 25,000 are 160, number of respondents whose income from 25,001 - 45,000 are 44, number of respondents whose income is from 45,001-65,000 are 6, number of respondents whose income is from 65,001-85,000 are 3, and the number of respondents whose income is from Above 85,001 are 9. The number of respondents from the joint family are 84 and Nuclear family type are 138.

Mean and Standard Deviation: Among the given variables, the highest mean value is 4.4279, which corresponds to the statement: "Organic farming contains rich nutrients and nourishes the soil and improves the environment." The highest standard deviation value is 1.43545, which corresponds to the statement: "Organic products are produced without using chemicals."

Reliability Test: Cronbach's Alpha is a measure of internal consistency, which show close relation of set of items. Its is considered to be measure of scale reliability. The reliability of the independent variable is 0.933 for 10 items. The reliability of the independent variable is 0.872 for 10 items. Hence, it is said that the questionnaire is reliable and internally consistent.

Table No 2: Correlation

Correlations			
		Environment Friendly Cultivation and Production	Health, Fairness ,Ecology, Care of human being and Society
Environment Friendly Cultivation and Production	Pearson Correlation	1	.892**
	Sig. (2-tailed)		.000
	N	222	222
Health, Fairness ,Ecology, Care of human being and Society	Pearson Correlation	.892**	1
	Sig. (2-tailed)	.000	
	N	222	222
**. Correlation is significant at the 0.01 level (2-tailed).			

Ho: There is no statistical significant relationship between Organic farming towards environmental friendly cultivation and production and health, fairness , ecology and care of human being and society

H1: There is a statistical significant relationship between Organic farming towards environmental friendly cultivation and production and health, fairness , ecology and care of human being and society.

From the above table, it depicts that the direction of the relationship among environmentally friendly cultivation and production and Health ,fairness ecology and care of human being and society is strong and positive ($r=1.000$). The results reveals that there is a statistical significant relationship among environmentally friendly cultivation and production and Health ,fairness ecology and care of human being and society where, $p=0.000 < 0.05$. It means we are rejecting the null hypothesis(Ho)

Table No 3: Regression Analysis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.892 ^a	.795	.794	.35079
a. Predictors: (Constant), Health, Fairness ,Ecology, Care of human being and Society				

Table No 4:

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	104.923	1	104.923	852.662	.000 ^b
	Residual	27.072	220	.123		
	Total	131.994	221			
a. Dependent Variable: Environment Friendly Cultivation and Production						
b. Predictors: (Constant), Health, Fairness ,Ecology, Care of human being and Society						

Table No 5:

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.871	.117		7.438	.000
	Health, Fairness ,Ecology, Care of human being and Society	.793	.027	.892	29.200	.000
a. Dependent Variable: Environment Friendly Cultivation and Production						

H0: There is no statistical significant impact of Organic farming on environmental friendly cultivation and production and health, fairness , ecology and care of human being and society

H2: There is a statistical significant impact of Organic farming on environmental friendly cultivation and production and health, fairness , ecology and care of human being and society

Based on the information provided in the above table, it indicates that there is high degree of correlation between the variables. The R value is .892a suggest a strong positive correlation. Additionally, R square value is 0.795 indicates that 79.5 % of the variance in the dependant variable, which is Environment Friendly Cultivation and Production .

Furthermore, the Anova table suggest that the regression model, which predicts the impact of Environment Friendly Cultivation and Production on Health, Fairness ,Ecology, Care of human being and Society is statistically significant. Where, p-value of 0.000 is less than accepted significance level of 0.05 , leading to the rejection of the null hypothesis. This means the regression model is effective in predicting the impact of Environment Friendly Cultivation and Production on Health, Fairness ,Ecology, Care of human being and Society.

Table No 6: Factor Analysis

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.957
Bartlett's Test of Sphericity	Approx. Chi-Square	3410.902
	df	190
	Sig.	.000

The KMO and Barlett’s test measures the strength of the relationship among variables . The KMO measures the sampling adequacy which should be greater than 0.5 for a satisfactory factor analysis to proceed . The above table reveals that the KMO sampling adequacy is .957 which is greater.

Table No 7:

Communalities		
	Initial	Extraction
Organic products are produced without using chemicals	1.000	.526
Organic farming is good for the environment	1.000	.604
Organic farming increases resilience to climate change	1.000	.657

Organic farming improved soil quality, crop yields, and pest infestations since I started practicing	1.000	.696
The overall impact of environmentally friendly farming practices will positively affect the environment and human health	1.000	.747
I strongly believe that environmentally friendly farming practices are crucial for the sustainability of the agriculture industry as a whole	1.000	.721
I believe that consumer demand for environmentally friendly products will ultimately benefit my farm and increase demand for my products.	1.000	.746
I am willing to invest in environmentally friendly farming practices, even if it means higher upfront costs.	1.000	.454
I actively seek out information and training on environmentally friendly farming practices	1.000	.509
Organic farming contains rich nutrients and nourishes the soil and improves the environment	1.000	.963
Organic food contains more nutrients	1.000	.680
Market demand for organic food has positive impacts on rural economy due to health benefits	1.000	.717
Organic Food Products” keeps us healthy and prolongs our life due to its better quality and non-contamination	1.000	.740
I have noticed changes in my income and profitability since I started practicing organic farming	1.000	.673
Organic Food Products” are free from hazardous chemical contamination	1.000	.711
The priority of organic farming is quality not quantity and products are less caloric	1.000	.637
I strongly believe that organic farming is beneficial for the health of consumers and the environment	1.000	.692
Do you believe it is to protect the ecology and biodiversity of the land through environmentally friendly farming practices	1.000	.729

I believe that environmentally friendly farming practices are necessary to protect the ecology and biodiversity of the land	1.000	.747
I prioritize fairness in my farm's business practices, including fair wages for employees and fair pricing for customers	1.000	.361
Extraction Method: Principal Component Analysis.		

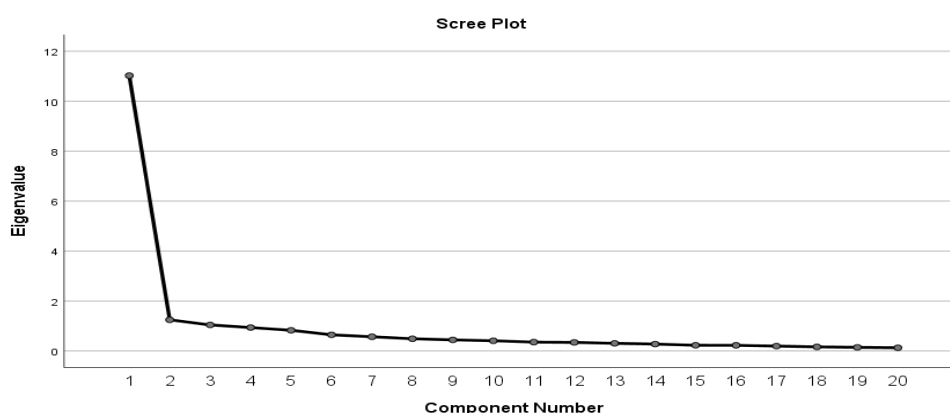
Table No 8:

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.022	55.112	55.112	11.022	55.112	55.112	10.805	54.026	54.026
2	1.247	6.233	61.345	1.247	6.233	61.345	1.460	7.302	61.327
3	1.042	5.210	66.555	1.042	5.210	66.555	1.045	5.227	66.555
4	.937	4.687	71.242						
5	.828	4.141	75.383						
6	.646	3.232	78.615						
7	.568	2.842	81.457						
8	.489	2.445	83.902						
9	.444	2.221	86.123						
10	.409	2.044	88.167						
11	.354	1.768	89.936						
12	.342	1.711	91.647						
13	.306	1.531	93.178						
14	.276	1.380	94.557						
15	.229	1.143	95.700						
16	.227	1.134	96.834						
17	.195	.973	97.808						
18	.163	.817	98.625						
19	.146	.730	99.354						

20	.129	.646	100.000						
----	------	------	---------	--	--	--	--	--	--

Extraction Method: Principal Component Analysis.

This table shows that the actual factors that were extracted .If see the “Rotation Sums of Squared Loadings”, it shows you only those factors that met the cut-off criterion (Extraction method). In this case , there was only one factor with eigenvalues greater than (i.e., 55.112).The “% of variance” column tells you how much of the total variability (in all of the variables together) can be accounted for by each of these summary scales of factors. Factor 1 accounts for 55.112% of the variability in all 20 variables.



Here’s the scree plot that showed slightly different . It looks like the slope of this curve levels out after just one factors, rather than others.

Table No 9:

Rotated Component Matrix^a			
	Component		
	1	2	3
Organic products are produced without using chemicals	.702	.151	.104
Organic farming is good for the environment	.772	.027	-.085
Organic farming increases resilience to climate change	.790	.170	.070
Organic farming improved soil quality, crop yields, and pest infestations since I started practicing	.826	.115	-.007
The overall impact of environmentally friendly farming practices will positively affect the environment and human health	.855	.128	.012

I strongly believe that environmentally friendly farming practices are crucial for the sustainability of the agriculture industry as a whole	.841	.111	.027
I believe that consumer demand for environmentally friendly products will ultimately benefit my farm and increase demand for my products.	.861	.073	-.007
I am willing to invest in environmentally friendly farming practices, even if it means higher upfront costs.	.172	.652	.001
I actively seek out information and training on environmentally friendly farming practices	.124	.700	-.065
Organic farming contains rich nutrients and nourishes the soil and improves the environment	-.011	.007	.981
Organic food contains more nutrients	.813	.135	-.034
Market demand for organic food has positive impacts on rural economy due to health benefits	.838	.093	-.078
Organic Food Products” keeps us healthy and prolongs our life due to its better quality and non-contamination	.838	.177	-.086
I have noticed changes in my income and profitability since I started practicing organic farming	.809	.133	.027
Organic Food Products” are free from hazardous chemical contamination	.827	.065	-.154
The priority of organic farming is quality not quantity and products are less caloric	.797	.012	.035
I strongly believe that organic farming is beneficial for the health of consumers and the environment	.829	.009	-.062
Do you believe it is to protect the ecology and biodiversity of the land through environmentally friendly farming practices	.850	.070	.027
I believe that environmentally friendly farming practices are necessary to protect the ecology and biodiversity of the land	.858	.064	.080

I prioritize fairness in my farm's business practices, including fair wages for employees and fair pricing for customers	-.022	.598	.057
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 4 iterations.			

Finally, the Rotated component Matrix shows that the factor loadings for each variable. The highlighted factor that each variable loaded most strongly on. The above table showed only one factor loaded. Based on the factor the first 5 subsets loaded strongly which were of environmentally friendly cultivation and producing

IMPLICATIONS AND LIMITATIONS

Positive Perception: Small-scale farmers may have a positive perception of organic farming, recognizing its potential benefits for environmental sustainability, soil health, and biodiversity conservation.

Economic Viability: Some farmers may express concerns about the economic viability of organic farming, particularly in terms of lower yields and higher production costs. The findings may shed light on the factors influencing farmers' perceptions of the profitability of organic farming.

Environmental Benefits: The study may highlight the farmers' awareness of the positive environmental impacts of organic farming, such as reduced chemical usage, improved soil fertility, and water conservation.

Market Demand: The findings may indicate the farmers' perception of increased market demand for organic produce, potentially leading to higher prices and better market opportunities.

Challenges and Barriers: The study may uncover the challenges faced by small-scale farmers in adopting organic farming practices, such as limited access to organic inputs, technical knowledge, and certification processes.

It is important to note that the actual findings would depend on the specific research design, methodology, and sample population of the study conducted on the perception of small-scale farmers on the role of organic farming in Andhra Pradesh.

LIMITATIONS:

Small-scale farmers often face challenges in accessing resources required for organic farming, such as certified organic seeds, organic fertilizers, and pest management techniques. Small-scale farmers may lack adequate knowledge and training in organic farming techniques. Organic farming requires specialized knowledge of sustainable farming practices, composting, crop rotation, and natural pest control methods.

Shifting from conventional farming methods to organic farming involves a transition period, usually three years, during which farmers need to follow organic practices without reaping the benefits of organic certification.

While organic produce commands premium prices in the market, small-scale farmers may face challenges in accessing organic markets.

Organic farming is often more labor-intensive than conventional farming.

CONCLUSION

The use of organic farming methods is a choice, and a suitable management strategy would help to improve the soil health environment and, as a result, increase crop quality and productivity. In a different sense, organic farming is a type of agriculture that respects the natural life cycle systems of the environment while offering consumers nutritious, flavourful, and dependable food.

Organic products have important environmental benefits for the planet in addition to health advantages for customers. Because organic farming produces food that is more wholesome and safe, it has become increasingly popular. As consumers look for organic foods because they believe they are safer and healthier, the popularity of organic food is rising drastically. So possibly eating organic food insures food safety from farm to fork. Compared to conventional farming, organic farming is more environmentally friendly. Organic farming promotes consumer health by preserving the purity of the environment and the health of the soil. Additionally, the organic produce market is currently expanding at the quickest rate in the entire world, including India.

In a comprehensive way, organic farming fosters a nation's consumer health, ecological health, and economic growth through the generation of income. Given that India is currently the greatest producer of organic food in the world (Willer and LernoudSS, 2019), we can infer that supporting organic farming in India will help create a soon-to-be economically, environmentally, and nutrient-sound country. Motivate people to establish the finest potential interactions between humans and the environment

FURTHER SCOPE FOR FUTURE STUDY

The further study can be done in soil management field which an investigation of organic soil management practices such as composting, cover cropping, and crop rotation. Assess their impact on soil fertility, structure, and nutrient content, as well as their effectiveness in preventing soil erosion and improving water retention.

The further study can be done in crop selection and breeding where organic crop varieties that are well-suited for small-scale farming systems. Assess traits like disease resistance, yield potential, nutritional quality, and adaptability to local conditions, while considering the importance of maintaining biodiversity.

The further study can be done in sustainable resource management by investigating methods for efficient use of water, energy, and other resources in organic farming systems. Assess the impact of sustainable practices such as rainwater harvesting, renewable energy use, and precision farming techniques on the overall sustainability of small-scale organic farms

REFERENCES

1. Zeynab jouzi.et.al (2017) - Organic Farming and small-scale farmers: Main opportunities and challenges ([https://www.researchgate.net/journal/Ecological- Economics-0921-8009](https://www.researchgate.net/journal/Ecological-Economics-0921-8009) - 132:144-154) DOI:(<http://dx.doi.org/10.1016/j.ecolecon.2016.10.016>), Febúaíy 2017.
2. M. Yuva raj, et.al (2020) – Role of organic farming in agriculture (DOI-<http://dx.doi.org/10.5772/intechopen.93431>), December 2020.
3. Arun Barik, et.al (2017) – Organic Farming in India: Present Status, Challenges and Technological Break Through, International Journal of Economic Plants 2017, 04(04):182-189, November 2017.
4. Hari Prakash Meena (2013), Organic Farming: Concept and Components, Popular Kheti, ISSN:2321-0001, Vol-1, Issue-4, October-December 2013.
5. Parveen Kashyap.et.al (2022) Organic Farming in India: A Vision towards a Healthy Nation, e-ISSN: 2582-8223, Vol.2 Issue-9, May 2022.
6. Gopinath.K.A.et.al (2018), Organic Farming Research in India: Present status and way forward, DOI: <http://dx.doi.org/10.31220/osf.io/qxetj> , Article ID: IJEP103, May 2018.
7. Dr.S.Narayan (2005), Organic Farming in India: Relevance, Problems and Constituents, Occasional Paper-38, 2005.

8. Axel Mie et al., (2017), Human health implications of organic food and Organic Agriculture: A comprehensive review, DOI: 10.1186/s12940-017-0315-4, Mie et al. Environmental Health (2017) 16:111, 27 October 2017.
9. Dileep Kondapati (2019), Research paper on organic farming, ISSN: 2581-365X, Volume-3, Issue-2, February 2019.
10. Andhra Pradesh State Organic Certification Agency (APSOCA): Check the official website of APSOCA (<https://apsoca.ap.gov.in/>) for reports, publications, and data related to organic farming in Andhra Pradesh.
11. Andhra Pradesh State Horticulture Department: The horticulture department of Andhra Pradesh may have research reports, case studies, and statistical data on organic farming for small-scale farmers. Visit their official website for relevant information (<http://horticulture.ap.nic.in/>).
12. Reddy, K.R., Srinivasarao, C., & Reddy, T.S. (2017). Organic Farming in Andhra Pradesh: Status, Issues, and Perspectives. Journal of Pharmacognosy and Phytochemistry, 6(6), 1785-1789.
13. Reddy, P.R., Rao, K.R., & Kumari, S.S. (2018). An Overview of Organic Farming in Andhra Pradesh. International Journal of Research in Engineering, Science and Management, 1(1), 75-78.
14. Devi, M. S., Rao, S. R., & Reddy, N. N. (2018). Role of organic farming in enhancing income of small scale farmers: A case study in Andhra Pradesh. Journal of Agricultural Extension and Rural Development, 10(8), 143-150.
15. Reddy, G. R., & Raghavendra, V. B. (2019). Organic farming practices and their impact on the livelihoods of small scale farmers in Andhra Pradesh. Indian Journal of Agricultural Economics, 74(3), 408-421.
16. Ravindra, V., & Kumar, P. (2020). The potential of organic farming for small scale farmers in Andhra Pradesh: A comparative analysis. Agroecology and Sustainable Food Systems, 44(4), 408-424.
17. Naidu, V. S., & Raju, V. S. (2021). Role of organic farming in improving agricultural sustainability among small scale farmers in Andhra Pradesh. Journal of Organic Agriculture and Environment, 9(2), 78-90.
18. Kumar, S., & Reddy, P. S. (2022). Economic analysis of organic farming and its impact on small scale farmers in Andhra Pradesh. International Journal of Agricultural Sciences, 14(3), 234-245.