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A Strategic Model for Empowering Farmers by Improving Livelihood Security through Organic Farming Practices in Tamil Nadu, India

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ABSTRACT

Purpose: *There is a particular paucity of information emanating from Tamil Nadu state, where organic farming appears to have a promising future. Some of the constraints revealed from primary sources suggest to the importance for a comprehensive study that would resulting in a strategic model framework for sustainable organic farming in Tamil Nadu.*

Research Method: *Precisely, 180 organic farming practitioners from the Coimbatore, Erode, and Tiruppur districts in Tamil Nadu were selected through purposive random sampling method. A semi-structured questionnaire and a personnel interview style were used to collect data. To determine significant contributing independent variables that determine the impact of organic farming, a step-down regression approach was employed.*

Findings: *The majorities of participants were old-aged, had undergone collegiate to secondary education, had received organic farming training, and owned low livestock. Though there was a moderate level of media exposure, extension personal interaction, risk and scientific orientation among the respondents were apparent. Farmers' perceptions about environmentally friendly conservation practices, the use of organic manures, the profitability of organic farming, and environmental degradation ranged from moderate to high levels. Independent variables accounted for 77.30 percent of the variation in organic farming's impact on farmer livelihood security. Based on these observations, a model has been proposed for designing a future strategy.*

Originality/ Value: *The proposed model will serve as a wake-up call for policymakers and concerned officials in framing new programs from the standpoint of organic farming.*

Keywords: *Certified growers, organic adoption, profitability and strategic model, sustainable farming*

INTRODUCTION

Organic farming has become a widely discussed topic and research in the present decade. Promoting organic farming has become an issue of great importance recently due to improved perception and practices among farmers on a large scale. It is extremely satisfying that Tamil Nadu has achieved self-sufficiency in food production in such a short period of time in the country, but their traditional agro-system has suffered a significant setback, owing primarily to the indiscriminate use of agro-chemicals (Joithi Sivagnanam and Murugan, 2019). This has also resulted in soil fertility eroding, contamination of water resources, and food grains (Monikha

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and Jansirani, 2019). Organic farming and eco-friendly farming practices can produce high-quality food without harming the soil's health or the environment (Muralikrishnan and Philip, 2018). There has been an increased perception that more attention needs to be paid to this issue (Brzezina *et al.,* 2017). However, the benefits and drawbacks of organic farming in terms of food security are difficult to quantify (Garibaldi *et al.,* 2017). Moreover, the farmer's history, expertise, and the resources available to them will all have stimulation on their decision to switch to organic farming practices (Sumane *et al.,* 2018). It is reassuring to know that several studies have suggested that organic farming and sustainable systems can help to address these future issues (Siebrecht, 2020), and that they are regarded as an essential action for overall sustainable development (Trabelsi *et al.,* 2016). In recent years, this area has seen significant advances based on environmental and socio-economic sustainability; two of the most important factors in determining whether or not specific production practices are permitted (Nandi *et al.,* 2015). Organic farming is maturing, with a wealth of concepts and techniques available to avoid water contamination, pollution, and soil fertility loss and, it is the only way to ensure agricultural sustainability in any country (Ulian *et al.,* 2020). Organic farming methods with a sustainable input strategy, risk-minimizing restrictions, and ethically authorized production processes can provide cheaper food for an increasing number of people while minimizing environmental effects to the greatest extent possible (Morshedi *et al.,* 2017). Organic farming practices are more profitable and less harmful to the environment (John and Wachter, 2016). Organic agriculture currently outperforms in important sustainability categories such as farm economy, animal welfare, and pesticide consumption, traditional agriculture outperforms, but harvests are comparatively lesser (Röös *et al.,* 2018). Organic agriculture is one practical, but divisive, recommendation for improving the long-term viability of the food system. Synthetic fertilizers and pesticides are avoided, crop rotation is encouraged, and soil fertility and closed nutrient cycles are highlighted (Foley *et al.,* 2011). Organic farming has been suggested as an approach for building a long-term food system (Muller *et al.,* 2017). Organic farming is a kind of farming that aims to develop integrated, long-term, environmentally, and economically sustainable agricultural production systems (Pratap *et al.,* 2016). Organic agriculture was the lifeblood of India's ancient civilization. The majority of agriculture in traditional India was done organically, utilizing fertilizer, insecticides, and other biologically produced compounds (Manna *et al.,* 2021). Organic farming practices are mostly centered on local resources and are based on interactions with ecological systems. Because organic farming methods do not rely on industrially manufactured inputs, there are no economic problems. They are usually labor-intensive farming methods that have a variety of crops and goods on hand to ensure timely certification (Willer and Lernoud, 2021). Knowledge, awareness, and the ability to reflect and innovate are all, parts of organic agricultural systems. The old farming system was blamed for small and marginal farmers who produce food and basic animal products to make a living and cater for the livelihood of locals (Mukherjee *et al.,* 2018). Organic farming is a holistic approach to agriculture that ensures agricultural production's long-term viability, ecosystem health, including biodiversity, biological cycles, and soil biological activity (Tiziano Gomiero, 2011). Organic agriculture is based on India's ancient agricultural traditions, which have evolved over millennia in many villages and farming communities across the country. It highlights the need for a locally adapted system when considering regional features, as well as the employment of management strategies rather than off-farm inputs. Due to its different agro-climatic areas, India has a lot of potential for producing a wide range of organic products (Sivaraj *et al.,* 2018). India is a country with abundant indigenous resources and the potential to expand organic agriculture. Certified organic agriculture boosts the local richness of common species by just one-third in comparison to traditional farming (Tscharntke *et al.,* 2021). Despite being behind the curve in the adoption of organic farming for a variety of reasons, India has experienced a significant growth in organic agriculture and is currently one of the world's top organic producers (Das *et al.,* 2021). The

hereditary legacy of organic farming is an extra benefit in some sections of the country, resulting in the leading one in terms of the organic farm producers and eighth position in terms of land under organic cultivation. As it offers that, the organic farmers have wider options to tap into a market that is constantly growing in the local market. Around 4.33 million hectares are cultivated under the organic certification procedure, which is recognized under the National Program for Organic Production (2021). Organic farming and goods are becoming progressively wide spread in the Tamil Nadu region. According to the Tamil Nadu Organic Certification Department, in the year 2019, an area of roughly 13,000 hectares was recognized as organic, and this number is rapidly increasing. However, there is mixed evidence on the acceptance and impact of organic farming, and there is limited research on the subject in the Tamil Nadu region. This paper outlines a survey of certified organic growers in the Indian state of Tamil Nadu with a focus on developing a strategic model framework for sustainable organic farming in Tamil Nadu.

MATERIALS AND METHODS

Respondents

Using a purposive random sampling technique, 180 certified organic farms were chosen for the study, based on a list compiled by the Directorate of Organic Seed Certification and the Indian Society for Certification of Organic Products (ISCOP), Coimbatore, Tamil Nadu. Totally, 60 certified organic farmers from the sampling districts such as Coimbatore, Erode, and Tiruppur (Figure 01) were considered as an individual sampling unit.

Selection of the Crops

The study's major goals are to determine certified organic farmers' training needs. As a result, the respondents must have a strong connection to the crops being grown. Coconut, banana, legumes, and turmeric were chosen since the majority of farmers in the research area practice organic farming in these crops.

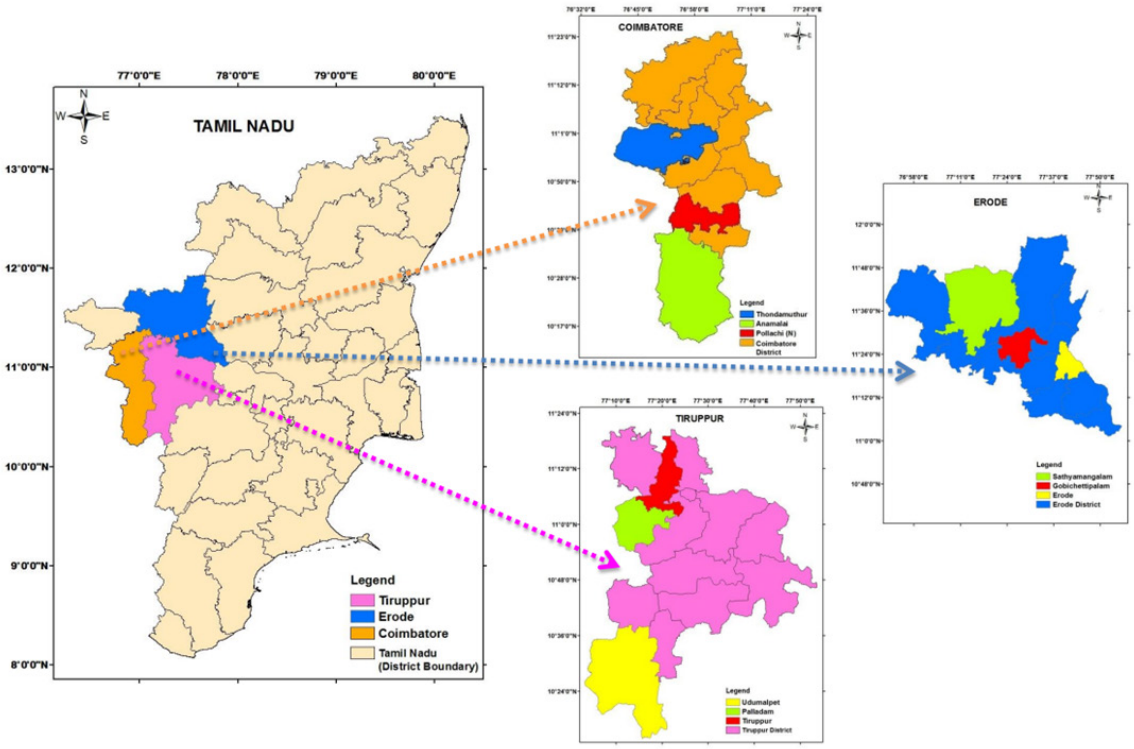

Figure 01: The map shows the study area

Design of the Study

In this study, according to Kerlinger (1964), an *ex post facto* design was used as a systematic empirical learning in which proctor has no straight control over independent variables since they have previously manifested or are essentially uncontrollable. This strategy was adopted since the researcher needed to analyze the influence of the phenomenon after it occurred rather than designing a therapy.

Data collection and analysis

The study's major aim was to design an effective strategic extension plan to encourage farmers to adopt organic farming. The schedule was created with the most pertinent, straightforward, and practical questions in mind while avoiding irrelevant things. Before being finalized, the interview schedule was pre-tested in a non-sampling area. Using an interview schedule, each of the selected organic farmers was personally called and interviewed. The obtained data were quantified and tabulated. Descriptive statistics such as frequencies, percentages, standard deviation, and means were used to analyze the data. Step down regression approach; simple correlation and multiple regression analysis are some of the techniques used in data analysis.

RESULTS AND DISCUSSION

Socio-economic features

In social science studies, analyzing respondent characteristics is crucial since it provides a basic and clear understanding of the organic farmers' background. This would also aid in the accurate interpretation of the data obtained. Furthermore, items that were later discarded tended to focus on the consumer's socioeconomic impact rather than the manufacturer's (Durham and Mizik, 2021). This study looked into 17 socio-personal characteristics. The distribution of respondents based on the characteristics analyzed and relevant conversations is shown in Table 01.

Table 01: Certified organic farmer's socioeconomic status

S. No.	Independent variables	SD	Mean
1.	Age	0.57	2.65
2.	Educational status	1.25	4.75
3.	Annual income	1.15	2.09
4.	Farm size	0.74	2.56
5.	Farming experience in organic farming	0.82	1.96
6.	Cropping pattern	3.51	6.02
7.	Irrigation source	0.74	2.30
8.	Trainings undergone	0.85	2.98
9.	Mass media exposure	4.14	19.55
10.	Extension agency contact	8.22	18.16
11.	Risk orientation	3.52	32.82
12.	Scientific orientation	6.16	25.76
13.	Livestock possession	0.83	1.86
14.	Perception on eco-friendly conservation practices	1.59	13.72
15.	Perception on use of organic manures	2.30	22.10
16.	Perception on profitability of organic farming	6.88	38.93
17.	Perception on environmental degradation	2.21	21.12

(n=180)

In line with the findings of this study, the majority of respondents was old aged and had a collegiate to secondary education. Despite being confined to the category of large farmers, their farming experience in organic farming was found to be low, and they practiced a mixed cropping pattern. Farmers rely on a bore well and an open well for irrigation. The majority of them had received organic farming training, had low level of livestock, a moderate level of media exposure, extension personal interaction, risk and scientific orientation. Farmers' perceptions of environmentally friendly conservation practices, the use of organic manures, the profitability of organic farming, and environmental degradation ranged from moderate to high.

Step down regression / backward regression

Potential confounding the extent to which main independent factors subsidize to the influence of organic farming on farmer livelihood security, a step-down regression approach was used. In the current study, the correlation and regression co-efficient estimates largely revealed a link between profile traits and the influence of organic farming on farmer livelihood security. To identify important contributing variables, a step-down regression technique was used (Table 02).

This study's original R^2 value was 0.773. All of the independent factors combined account for 77.30% of the variation in the influence of organic farming on farmer livelihood safekeeping. Using a backward regression strategy or a step-down regression approach, an attempt was made to identify the independent variables that contributed the most to the 77.30% of the variation. The variables perception of eco-friendly conservation practices (X_{14}), farm size (X_4), scientific orientation (X_{12}), perception of use of organic manures (X_{15}), age (X_1), and irrigation source (X_7) were found to influence the R2 value only up to 1.00 percent after each variable was eliminated one by one based on its significance. As a result, the remaining independent variables account for roughly 76.30 percent of the total. Table 02, shows the general trend of 'R square' values. Seven models were identified to possess the major contributing independent variables hence, ranked based on significant values which were portrayed in Table 03.

Table 03, shows that education status (X_2), farming experience in organic farming (X_5), mass media exposure (X_9), extension agency contact (X_{10}), and livestock possession (X_{13}) are in the first place, each contributing significantly to the influence of organic farming on farmers' livelihood security. Annual income (X_3) is in second place, risk orientation (X_{11}) is in third place, organic farming trainings (X_8) is in fourth place, cropping pattern (X_6) is in fifth place, perception on environmental degradation (X_{17}) in sixth place and perception on profitability of organic farming (X_{16}) in seventh place.

Table 02: Model identification using step-down regression approach

Model identification	R square value	Dropped variables	Significant values
1	0.773	None	--
2	0.773	Perception on eco-friendly conservation practices	0.914
3	0.772	Farm size	0.462
4	0.770	Scientific orientation	0.274
5	0.769	Perception on use of organic manures	0.211
6	0.769	Age	0.267
7	0.763	Irrigation source	0.148

(n=180)

Table 03: Maximum contributing independent variables on impact of organic farming on farmer's livelihood security by step-down regression

S. No.	Independent Variables	't' value	Significant values	Ranking order
1.	Educational status	3.671**	0.000	
2.	Farming experience in organic farming	4.232**	0.000	
3.	Mass media exposure	6.907**	0.000	I
4.	Extension agency contact	3.554**	0.000	
5.	Livestock possession	3.945**	0.000	
6.	Annual income	3.463**	0.001	II
7.	Risk orientation	3.081**	0.002	III
8.	Trainings undergone in organic farming	-2.623**	0.010	IV
9.	Cropping pattern	2.456*	0.015	V
10.	Perception on environmental degradation	2.425*	0.016	VI
11.	Perception on profitability of organic farming	1.995	0.052	VII

(n=180)

Contribution and association of selected independent variables

The results of correlation and regression analyses were used to determine the association between self-determining variables and the influence of organic farming on farmers' livelihood security (Table 04). It can be shown in Table 04 that the correlation coefficient of educational status (X_2), annual income (X_3), farm size (X_4), farming experience in organic farming (X_5), cropping pattern (X_6), irrigation source (X_7), mass media exposure (X_9), extension agency contact (X_{10}), risk orientation (X_{11}), scientific orientation (X_{12}), livestock possession (X_{13}), perception on the profitability of organic farming (X_{16}) and perception on environmental degradation (X_{17}) had a positively significant relationship with the impact of organic farming on farmers livelihood security at one percent level, whereas, training undergone in organic farming (X_8) and perception on eco-friendly conservation practices (X_{14}) had a positively significant relationship with the impact of organic farming on farmers' livelihood security at five percent level of significance.

The results of multiple linear regression analysis indicate the R^2 value of 0.773 which revealed that 77.30 percent of the variation in the impact of organic farming on farmers livelihood security which was explained by the selected seventeen variables such as age (X_1), educational status (X_2), annual income (X_3), farm size (X_4), farming experience in organic farming (X_5), cropping pattern (X_6), irrigation source (X_7), training undergone in organic farming (X_8), mass media exposure (X_9), extension agency contact (X_{10}), risk orientation (X_{11}), scientific orientation (X_{12}), livestock possession (X_{13}), perception on eco-friendly conservation practices (X_{14}), perception on the use of organic manures (X_{15}), perception on the profitability of organic farming (X_{16}) and perception on environmental degradation (X_{17}). The 'F' value was significant at a one percent level of probability. Since the 'F' value was significant, the prediction equation was fitted for the impact of organic farming on farmers' livelihood security.

$$Y_3 = 39.29 + 0.267\,(X_1) + 0.000\,(X_2) + 0.001\,(X_3) + 0.462\,(X_4) + 0.000\,(X_5) + 0.015\,(X_6) + 0.148\,(X_7) + 0.010\,(X_8) + 0.000\,(X_9) + 0.000\,(X_{10}) + 0.002\,(X_{11}) + 0.274\,(X_{12}) + 0.000\,(X_{13}) + 0.914\,(X_{14}) + 0.211\,(X_{15}) + 0.052\,(X_{16}) + 0.016\,(X_{17})$$

Certified organic farmers with educational status (X_2), annual income (X_3), farming experience in organic farming (X_5), mass media exposure (X_9), extension agency contact (X_{10}), risk orientation (X_{11}) and livestock possession (X_{13}) were positively significant at one percent level which implies that if educational status, annual income,

farming experience in organic farming, mass media exposure, extension agency contact, risk orientation and livestock possession increased by one percent, the impact of organic farming on farmers livelihood security *Ceteris paribus* would increase by 2.115, 3.540, 2.679, 1.314, 0.488, 0.589 and 3.081, units respectively. Cropping pattern (X_6) and perception on environmental degradation (X_{17}) were positively significant at five percent level which implies that if cropping pattern and perception on environmental degradation increased by five percent, the impact of organic farming on farmers' livelihood security *Ceteris paribus* would increase by 3.860 and 0.901, units respectively. Organic farmers' educational status may have aided them in absorbing and understanding organic procedures, which in turn may have aided them in gaining greater knowledge about organic agricultural processes. This could explain how some educational attainment has a positive relationship with organic farming's impact. Organic farming has been demonstrated to have a positive and significant relationship with annual revenue. Organic produce has a high market value and demand among all customer groups, resulting in an increased profit. It piqued their attention and encouraged them to adopt organic farming practices to ensure that agricultural cultivation is both sustainable and environmentally friendly. Our results are in line with a recent study showing that, how the annual income has a positive association with the impact of organic farming (David Norse, 2003).

Organic farmers have a positive and significant relationship with the consequences of organic farming. The adoption of a traditional method of cultivation, which has resulted in a wealth of knowledge in organic crop growing, could be one of the explanations. They would have accepted inorganic farming, if it hadn't been for scientific intervention. Older people with a lot of experience in traditional farming would know a lot more about organic farming than inorganic farming. There were few factors like radio, television and newspapers, along with other mass media, that were identified that appeared to play an essential role in disseminating information about farms to a wide variety of farmers. However, in the practice of organic farming, the media has played a significant role in disseminating organic farmers' success stories, that have instilled in the minds of farmers, a desire to adopt organic farming. This could explain why media coverage of organic farming has shown a favorable and significant association with its impact. Extension professionals inspired certified organic farmers and increased their trust in organic farming. The farmers' extension agency contact was higher, which would have increased the adoption of organic farming practices, bringing more profit in practicing organic farming, and fruit flying the result that the extension agency contact was encouraging a positive and significant relationship with organic farming's impact.

The influence of organic farming was found to have a favorable and significant link with risk orientation. In comparison to conventional farms, organic farmers were more willing to take risks. The majority of them needed marketing help as well as timely payment for their produce. Farmers' risk orientation was linked to their perceptions of input provision, extension services, marketing support, and payment for produce. Livestock is crucial in organic farming since it provides nutritional food to families. Furthermore, organic farming receives excellent organic waste from cattle. This could be one of the reasons why having animals has a beneficial impact on organic farming. The farmers' knowledge of environmental issues had improved. Organic farmers were well aware of the significant decrease in soil fertility, as well as the population of soil microorganisms and earthworms, caused by contemporary agricultural inputs. This could explain why people's perceptions of environmental degradation have a positive and significant association with organic farming's impact.

Organic farmers in the research area used a diversified cropping pattern, which enhanced farmers' income, improved soil fertility, and reduced risk by producing more crops. As a result, cropping patterns demonstrated a favorable and significant association with the impact of organic farming result of these factors.

Table 04: Relationship of independent variables with the impact of organic farming on farmers' livelihood security.

Variable No.	Variables	'r' value	Regression coefficient	PRC	SE	't' value
$X_{1.}$	Age	0.112 NS	0.267	1.482	0.600	1.114
$X_{2.}$	Education status	0.351**	0.000	2.115	0.307	3.671**
$X_{3.}$	Annual income	0.539**	0.001	3.540	0.343	3.463**
$X_{4.}$	Farm size	0.379**	0.462	3.844	0.518	-0.737
$X_{5.}$	Farming experience in organic farming	0.294**	0.000	2.679	0.468	4.232**
$X_{6.}$	Cropping pattern	0.380**	0.015	3.860	0.466	2.456*
$X_{7.}$	Irrigation source	0.192**	0.148	1.693	0.353	1.454
$X_{8.}$	Training has undergone in organic farming	0.186*	0.010	1.161	0.276	-2.623**
$X_{9.}$	Mass media exposure	0.723**	0.000	1.314	0.104	6.907**
$X_{10.}$	Extension agency contact	0.534**	0.000	0.488	0.045	3.554**
$X_{11.}$	Risk orientation	0.276**	0.002	0.589	0.089	3.081**
$X_{12.}$	Scientific orientation	0.197**	0.274	0.241	0.056	-1.096
$X_{13.}$	Livestock possession	0.341**	0.000	3.081	0.377	3.945**
$X_{14.}$	Perception on eco-friendly conservation practices	0.149*	0.914	0.669	0.197	-0.109
$X_{15.}$	Perception on use of organic manures	-0.066 NS	0.211	-0.214	0.136	-1.254
$X_{16.}$	Perception on the profitability of organic farming	0.397**	0.052	0.433	0.043	1.995
$X_{17.}$	Perception on environmental degradation	0.266**	0.016	0.901	0.137	2.425*

(n=180)

*R^2 = 0.773; F = 32.39**; * Significance at 0.05 level; ** Significance at 0.01 level; SE = Standard error; NS - Non-Significant; PRC = Partial Regression Co-efficient*

Strategic extension model developed from the research

Based on the results of farmers' profile characteristics and the association and contribution of selected independent and dependent variables, the strategic extension model for empowering farmers by improving livelihood security through organic farming practices developed from this research is provided below in Figure 02.

Appropriate extension methods: Developing and disseminating successful video modules on organic farming practices via television, radio, and the internet. It could assist farmers in increasing their acceptance and implementation of organic farming. To make the agricultural community realize the importance and benefits of organic farming, the importance of increasing the awareness of organic farming using various ICT and mass media such as mobile phones, television, radio, and farm publications was identified. Young farmers are more likely than older farmers to use suggested organic farming practices. As a result, scientists may be able to discover and document successful organic farming cases to inspire and urge other teenagers to switch to organic farming. Artificial intelligence, such as an expert system, can be designed specifically to supply all types of information and answer organic farmers' questions. Organic farmers, rural youths, and other stakeholders might benefit from capacity-building programmes organized by regional KVKs, NGOs, and other institutions. Identifying the top farmer plots that are performing organic farming and providing organic cultivation training to their other farmers are also successful methods.

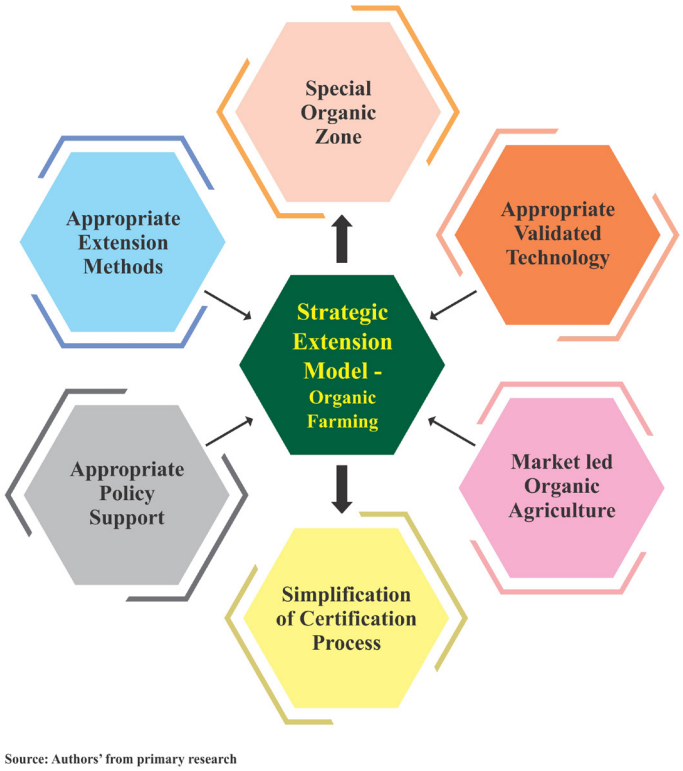

Figure 02: **Strategic extension model for empowering the farmers by enhancing livelihood security through organic farming practices.**

Appropriate policy support: Special initiatives to encourage organic farming should be mainstreamed so that organic farmers can benefit from subsidies and other inputs. The government might set a Minimum Support Price (MSP) for organic produce to ensure that organic farmers are compensated fairly for their products, to encourage farmers to practice organic farming. To raise awareness among young minds, educational institutions should include organic farming as a component of the curriculum.

Appropriate validated technology: The study, suggests the formulation of a standardized package of organic practice to allow organic farmers to obtain unambiguous solutions and produces. To ensure uniform and consistent quality, a quality testing facility for organic produce will be established. Collecting and validating accessible organic farming practices are important to ensure that they are good organic practices.

Market-led organic agriculture: Due to its diverse agro-climatic conditions in various regionsin India, it is feasible that organic farming has a lot of potentials to create a varied range of organic products (Sabine *et al.,* 2013). Towards achieving marker feasibilities, creating stable organic retailing markets in each zone to make it easier for organic farmers to sell their products attainably is an effective measure. Aiding organic farmers in forming Farmer-Producer Companies/ Farmer-Producer Organizations to process and market their bulk produce by establishing relationships with various export-oriented organizations is essential. Permanent market yards are being established to assist farmers to have a distinct organic produce market where they may sell their products directly to consumers. Farm-level processing and value addition of organic goods are encouraged to help farmers become more profitable. To avoid the exploitation of farmers by middlemen in the marketing channel, direct procurement of organic goods through the Public Distribution System (PDS), Mid-Day Meals Schemes, or government hospitals is recommended. It also provides the opportunity to tap into a market that

is steadily developing domestically as a result of the organic farming dynamism. The proposed popularization of the organic produce label and nationalized logo promote consumers to have a positive attitude and purchase mindset (Meike Janssen, 2012).

Special organic zone: Special Organic Zones (SOZs) will be established across the country to promote organic farming. So, in a particular organic zone like Sikkim, sufficient infrastructure and financial support might be provided to build market yards. Zonal offices should be formed in each state to oversee the activities of organic farming methods and to address the issues that farmers and other stakeholders experience. Special zones that own an organic certification scheme should attempt to make people more aware of the logo and influence consumer attitudes and views towards the scheme's standards and regulatory systems. The popularization of the organic produce label and logo would surely lead to a positive attitude among consumers.

Simplification of the certification process: The majority of farmers had to go through a long process, and the time required to achieve organic certification was a major barrier. As a result, the government can take steps to simplify the certification process by implementing relevant measures. It may be considered to digitalize the process of organic farming certification so that farmers can obtain certificates with fewer obstacles in the certification process. Organizing need- based organic certification training programmes are important for farmers and other stakeholders to ensure the quality of produces. It will make it much easier for them to achieve organic certification.

CONCLUSION

The main conclusion that can be drawn from this work is about the adoption of organic agriculture by the farmers enables them with a significant contribution to livelihood security. With this significance, based on the study, the proposed model will facilitate the enhancement of organic adoption in the study area and state. The suggested extension approach will provide plenty of job opportunities for rural farmers and unemployed youth. Farmers' knowledge and attitudes toward organic farming will change as a result of this developed model. Farmers are encouraged to get a better understanding of the impact of organic farming on food and livelihood security by taking part in a number of capacity-building programmes. (organic farming training, workshops, exposure trips, and farmer demonstrations). It is also advised that government authorities' farms and other officials from line departments be educated on current organic farming projects so that they may swiftly and effectively transfer the technology to farmers using this model. This model serves as a wake-up call for policymakers and concerned officials in terms of framing new programmes from an organic farming standpoint. Moreover, boosting organic farming in the study area, especially western zone will help the Tamil Nadu state become more economically, environmentally, and nutritionally healthy in the near prospect.

Conflict of Interest

The authors have declared that they have no conflict of interest that is relevant to the content of this work.

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