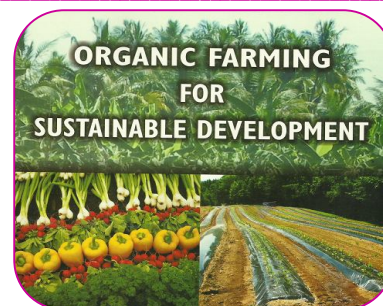




ROLE OF ORGANIC FARMING IN SUSTAINABLE AGRICULTURE DEVELOPMENT: A CASE STUDY OF SHIKARIPURA TALUK, KARNATAKA STATE

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ABSTRACT :

Organic farming is a method of crop and livestock production that involves much more than choosing not to use pesticides, fertilizers, genetically modified organisms, antibiotics and growth hormones. Organic production is a holistic system designed to optimize the productivity and fitness of diverse communities within the agro-ecosystem, including soil organisms, plants, livestock and people. Organic agriculture can be said to be practiced by more than 100 countries in the world. Indian policy makers also promoting organic farming for reasons like sustaining rural economy, improving soil health, creating good environment etc. In India organic farming has been in practice for decades. Organic farming is great importance and there are number of benefits for overall development of economy. The study pertained to Shikaripura Taluk, Shimoga District of Karnataka State. Development is a process of organized and dimensional growth driven by negative feed backs. It cannot be sustainable unless it is inclusive reducing poverty for the broad masses of people. This has particular concern for countries like ours having very large gap between rich and poor. The government needs to explore ways to enable rural poor to get benefit from agricultural development is the only one suggestion given adopting organic farming. The ultimate goal of the organic farming is to the enhancement of the sustainability. The organic farming is not an exclusive method for sustainable farming but it does soil and water protection and it conservation techniques of sustainable agriculture used to combat erosion, compaction, salinisation and other forms of degradation are evident in organic farming.

KEYWORDS : Organic Farming, Sustainable Agriculture, Development.

INTRODUCTION

Organic farming is a method of crop and livestock production that involves much more than choosing not to use pesticides, fertilizers, genetically modified organisms, antibiotics and growth hormones. Organic production is a holistic system designed to optimize the productivity and fitness of diverse communities within the agro-ecosystem, including soil organisms, plants, livestock and people. The principal goal of organic production is to develop enterprises that are sustainable and harmonious with the environment. Organic farming promotes the use of crop rotations and cover crops, and encourages balanced host/predator relationships. Organic residues and nutrients produced on the farm are recycled back to the soil. Cover crops and composted manure are used to maintain soil organic matter and fertility. Preventative insect and disease control methods are practiced, including crop rotation, improved genetics and resistant varieties. Integrated pest and weed management, and soil conservation systems are valuable tools on an organic farm. Organically approved pesticides include "natural" or other pest management products included in the Permitted Substances List (PSL) of the organic standards.

GROWTH OF ORGANIC AGRICULTURE

According to International Federation of Organic Agriculture Movement (IFOAM), 'organic agriculture' is a production system that sustains the health of soils, eco systems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved. The Food and Agriculture Organization (FAO) defines organic farming as a holistic production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity. This is accomplished by using, wherever possible, agronomic, biological and mechanical methods, as opposed to using synthetic materials, to fulfill any specific function within the system.

CHARACTERISTICS OF ORGANIC FARMING

- Protecting the long term fertility of soils by maintaining organic matter levels, encouraging soil biological activity, and careful mechanical intervention
- Providing crop nutrients indirectly using relatively insoluble nutrient sources which are made available to the plant by the action of soil micro-organisms
- Nitrogen self-sufficiency through the use of legumes and biological nitrogen fixation as well as effective recycling of organic materials including crop residues and livestock manures
- Weed, disease and pest control relying primarily on crop rotations, natural predators, diversity, organic maturing, resistant varieties and limited (preferably minimal) thermal, biological and chemical intervention.
- The extensive management of livestock, paying full regard to their evolutionary adaptations, behavioral needs and animals welfare issues with respect to nutrition, housing, health, breeding, and rearing.

REVIEW OF LITERATURE

1. **Adhikari T. Manna M.C. and Biswas A.K. (1997)** analyses that organic matter improves soil health an overview. They explain that organic farming improves soil health, condition and its fertility.
2. **Chandra Subhash and Chauhan S.K. (2004)** reports the various prospects of organic farming and give guidelines for organic farming.
3. **Gahukar R.T. (2006)** states that bio-fertilizers are natural and organic products. They help to provides and keep in the soil all the materials and micro-organism required for the plant growth.
4. **Gaur A.C. (2001)** explains the important of organic manure in organic farming. Many of growing successfully crops like coconut, spices, banana, grapes etc. with the liberal use of organic manures.
5. **Jadhav A.S. Gaikwad C.B. Shaikh A.A. and Tumbare A.D. (2001)** studies that there is a growing concern about the health and the environmental hazards of chemical-based intensive agriculture.
6. **Kaur Jaswinder and Kalra R.K. (2006)** attempts to know the type of farmers engaged in organic farming background and functioning of the concerned private firms and identify the problems faced by the farmers along with the reasons for practicing organic farming.
7. **Kokate K.D. Kharde P.B. and Ahire M.C. (2007)** highlights on social aspects and benefits arising from organic farming and also studies the challenges of organic farming.
8. **Murthy K. Srinivasa and Nigam G.L (2001)** stated that, organic farming systems, water management, balanced use of fertilizers, use of bio-pesticides and botanicals form part of integrated pest management strategies to control that losses owing to pests and diseases (10% to 30%) hole to successful farming.
9. **Pal S.S., Singh Ravindra, Biswas Chinmay and Jat M.C. (2005)** focused that green revolution technology has undoubtedly increased production and labor efficiency. But it showed remarkable side effects on field and farm-level diversity as well as on environment.
10. **Prabhakar Shetty R.K. (2007)** discusses as organic farming has the potential to provide positive externalities in social aspects like job opportunities and rural development.

11. **Ramesh P. Singh Mohan and Rao Subha (2005)** explains the potential environmental benefits of organic production and its compatibility with integrated agricultural approaches to rural development, organic agriculture may be considered as a developed vehicle for developing countries like India in Practical.
12. **Suri V.K. (2007)** studies in his paper that waste material organic farmer presently using a variety of other local products to meet nutritional requirement of crops and protect them against pest with a good measure of success.
13. **Telashikar S.C. and Mehta V.B. (2007)** attempted to find out the quality of organic inputs and their standards for organic farming. He studied on crop recycles. Major sources for organic farming crop residues are utilized for different purposes since the inception of agriculture.
14. **Thansanga R. (1999)** studies merit and demerit of organic farming in Mizoram. Organic farming as an alternative agriculture in India. This paper discusses various problems and prospects of organic farming in India.

STATEMENT OF THE PROBLEM

The world-wide trend of a growing organic sector is also detectable in India. From 2000 to 2002 the number of farmers who had converted to organic farming in India increased six fold, and although organic farming still accounts only for a minute percentage of the total number agricultural producers, the increasing importance of this sector is apparent. Based on survey results, information was gathered about organic farmers in India concerning socio-demographic aspects, farming operations, motivations and problems of the conversion process. These results were analyzed in the context of possibilities to support the organic farming movement theoretically and practically. With respect to the findings it is recommended that the conversion to organic farming should be supported, not necessarily via direct financial support to the organic farmers, but by means of different instruments such as the development of an improved infrastructure for marketing, networking and information exchange. Several areas for future research are identified to increase our understanding of organic farming in the Indian context.

NEED FOR THE STUDY

Organic agriculture can be said to be practiced by more than 100 countries in the world. Indian policy makers also promoting organic farming for reasons like sustaining rural economy, improving soil health, creating good environment etc. In India organic farming has been in practice for decades. Organic farming is great importance and there are number of benefits for over all development of economy.

OBJECTIVES

- To study the socio economic conditions of organic farmers.
- To examine the role of organic farming in sustainable agricultural development.
- To analyze the reasons for organic farming.
- To study the benefit and effect of organic farming on farmers.
- To examine the effect of organic farming on fertility of soil.

HYPOTHESES

1. The respondents prefer organic farming in their lands.
2. The respondents are satisfied with crop yield from organic farming.

METHODOLOGY

The data is collected by following method

- **Primary data:** The primary data is collected through the direct interview with farmers followed by the structured questionnaire. Face to face interview was conducted.

- **Secondary data:** Secondary data is collected from our Library, Newspaper, Literature, websites, and etc. which have been enumerated in the Bibliography.

PROFILE OF THE STUDY AREA

The study pertained to Shikaripura Taluk, Shimoga District of Karnataka State. Shivamogga District is a district in the Karnataka state of India. A major part of Shivamogga district lies in the malnad region of the Western Ghats, a hilly area known for its green forests, plentiful rainfall and as the source of many of the area's rivers. Shikaripura is a town in Shimoga district in the Indian state of Karnataka. It is the headquarters of Shikaripur taluk. The sample size is 200 organic farmers.

LIMITATION OF STUDY

The study concentrates only on small scale organic farming in Shikaripura. The study does not show the position of entire organic farming in Shikaripura. But represent only a certain place in the Shikaripura.

ANALYSIS OF DATA

Table 1: Gender Classification

Gender	No. of Respondents	Percentage (%)
Male	160	80
Female	40	20
Total	200	100

Table-1 shows that out of 200 respondents, 160 respondents i.e. (80%) of them are male and 40 respondents i.e., (20%) of them are female respondents.

Table 2: Age Composition

Age	No. of Respondents	Percentage (%)
Below 20 years	32	16
20-35 years	64	32
35-50 years	80	40
Above 50 years	24	12
Total	200	100

From Table-2, out of 200 respondents, 80 respondents i.e. (40%) of them belongs to the age group of 35-40 years, 64 respondents i.e. (32%) of them belongs to the age group of 20-35 years, whereas 32 respondents i.e. (16%) of them belongs to the age of below 20 years and only 24 respondents i.e. (12%) of them belongs to the age group of above 50 years.

Table 3: Level of Education

Qualification	No. of Respondents	Percentage (%)
Below SSLC	24	12
PUC/ITI/Diploma/D.Ed.	40	20
Graduation	88	44
Post Graduation	48	24
Others	00	00
Total	200	100

From Table-3, out of 200 respondents, 88 respondents i.e. (44%) of them are graduates, 48 respondents i.e. (24%) of them are postgraduates, 40 respondents i.e. (20%) of them are having the educational qualification of PUC/ITI/Diploma/D.Ed. and only 24 respondents i.e. (12%) of them are having an educational qualification of below SSLC.

Table 4: Classification on the basis of Annual Income

Annual Income	No. of Respondents	Percentage (%)
Less than 1 lakh	20	10
Rs. 1 lakh to Rs. 3 lakhs	64	32
Rs. 3 lakhs to Rs.5 lakhs	60	30
Above Rs. 5 lakhs	56	28
Total	200	100

Table-4 explains that out of 200 respondents, 64 respondents i.e. (32%) of them belongs to the income group of Rs. 1 lakh to Rs. 3 lakhs, 60 respondents i.e. (30%) of them belongs to the income group of Rs. 3 lakhs to Rs. 5 lakhs, 56 respondents i.e. (28%) of them belongs to income group of Rs. Above 5 lakhs and only 20 respondents i.e. (10%) of them to income group of less than 1 lakh.

Table 5: Opinion about Organic Farming

Particulars	No. of Respondents	Percentage (%)
Good	128	64
Very good	64	32
Excellent	08	04
Total	200	100

From Table-5, out of 200 respondents, 128 respondents i.e. (64%) of them are having good opinion, 64 respondents i.e. (32%) of them are very good opinion and 8 respondents i.e. (4%) of them are having more excellent opinion.

Table 6: Problems faced by the Organic farmer

Particulars	No. of Respondents	Percentage (%)
Finance	100	50
Land	44	22
Labour	32	16
Others	24	12
Total	200	100

From Table-6, 50% of the respondents has problem of finance, 22% of the respondents of land, 16% of them have labour and only 12% of them have problem of others.

Table 7: Reasons for Organic Farming

Particulars	No. of Respondents	Percentage (%)
Soil fertility	112	56
High yielding	48	24
Quality	40	20
Other	00	00
Total	200	100

Table-7 shows that out of 200 respondents, 56% of them have engaged in organic farming for the reason of soil fertility, 24% of them have for high yielding, 20% of them have for quality.

Table 8: Income from Organic Farming

Particulars	No. of Respondents	Percentage (%)
Low Income	24	12
Medium Income	96	48
High income	80	40
Total	200	100

From Table-8, 48% of the respondents receive medium income, where as 40% of them receive high income and only 12% of them receive low income.

Table 9: Satisfaction with Organic Farming

Particulars	No. of Respondents	Percentage (%)
Satisfied	120	60
Un Satisfied	80	40

Table-9 shows that about 60% of the respondents are satisfied by practicing organic farming and 40% are not satisfied.

FINDINGS

- It is the fact that many farmers in the study area have only vague ideas about organic farming and its advantages and disadvantages as against the conventional farming methods. Use of bio-fertilizers and bio pesticides requires awareness and willingness on the part of farming community.
- Knowledge about the availability of usefulness of supplementary nutrients to enrich the soil is also vital to increase productivity. Farmers lack knowledge of compost making using the modern techniques and its application.
- The maximum they do is making a pit and fill it with small quantities of wastes. Often the pit is flooded with rain water and result in the top of the compost results under the composted the bottom becomes like the hard cake.
- Proper training to farmers is necessary to make vermin composing on the modern lines. Attention on the application of compost/organic manure is also lacking.
- The organic matter is spread during the months when the right moisture level is absent on the soil. The whole manure is turn to waste during the process. The required operation is of course labour intensive and costly, but it is necessary to obtain the desired results.
- It is found that before the beginning of cultivation of organic crops, their marketability and that too at premium over the conventional produce has been assured.
- The cost of marketing of both products was also same and but cultivation yield become very low than cost of production increases due to low productivity the buyers of organic products were not prepare to pay higher prices to the organic variety.
- Shortage of bio-mass farmers is not sure whether all the nutrients with the required quantities can be made available by the organic materials. Even if this problem can be view that the available organic matter is not simply enough to meet the requirements.

- The crop residues useful to prepare vermin-compost are removed after harvest from the farms and they are used as fodder and fuel. Even if some are let out on the farms termites, etc destroy them. Experiments have shown that the crop residues ploughed back into soil will increase productivity and a better alternative is conversion into compost.
- Increasing pressure of population and the disappearance of the common lands including the wastes and government lands make the task difficult.
- The state government is yet to formulate policies and a credible mechanism to implement them. There are only for agencies for accreditation and their expertise is limited to fruits and vegetables, tea, coffee and spices only.
- The small and marginal farmers in India have been practicing a sort of organic farming in the form of the traditional farming system. They use local or own farm renewable resources and carry on the agricultural practices in an ecologically friendly environment.
- However, now the costs of the organic inputs are higher than those of industrially produced chemical farming system.
- The groundnut cake, neem seed and cake, vermin-compost, silt, cow dung, other manures, etc. applied as organic manure are increasingly becoming costly making them unaffordable to the small cultivators.
- Higher margins of profit for chemical fertilizers and pesticides for retailing, heavy advertisement campaigns by the manufacturers and dealers are other major problems affecting the markets for organic inputs in India.
- Majority of the respondents belong to male group and 20% belongs to female group.
- Majority of the respondents belongs to the age group between 30-40 years.
- Majority of respondents falls below the annual income of Rs. 25000/-
- Most of the respondents have education up to higher secondary.
- Most the respondent's economic condition is better after practicing organic farming.
- Most of the respondents are used organic farming methods are large farmers.

SUGGESTIONS

- The small and marginal cultivators have difficulties in getting the organic manures compared to the chemical fertilizers, which can be bought easily, of course if they have the financial ability. But they have to either produce the organic manures by utilizing the bio-mass they have or they have to be collected from the locality with a minimum effort and cost.
- The certifying agencies are inadequate, the recognized green marks are non-existent, the trade channels are yet to be formed and the infrastructure facilities for verification leading to certificate of the farms for organic cultivation
- Absence of an Appropriate Agriculture Policy Promotion of organic agriculture both for export and domestic consumption, the requirements of food security for millions of the poor, national self-sufficiency in food production, product and input supplies, etc. are vital issues which will have to be dealt with in an appropriate agriculture policy of India.
- These are serious issues the solution for which hard and consistent efforts along with a national consensus will be essential to go forward. Formulation of an appropriate agriculture policy taking care of these complexities is essential to promote organic.
- Government taking initiation for developing organic farming, conduct organic fare, free training in urban and rural areas.
- Promoting organic farming providing financial support to farmers for cultivation and marketing of their commodity.

CONCLUSION

Development is a process of organized and dimensional growth driven by negative feed backs. It cannot be sustainable unless it is inclusive reducing poverty for the broad masses of people. This has particular concern for countries like ours having very large gap between rich and poor. The government needs to explore ways to enable rural poor to get benefit from agricultural development is the only one suggestion given adopting organic farming.

The ultimate goal of the organic farming is to the enhancement of the sustainability. The organic farming is not an exclusive method for sustainable farming but it does soil and water protection and it conservation techniques of sustainable agriculture used to combat erosion, compaction, Stalinization and other forms of degradation are evident in organic farming. In this organic farming crop rotation, usage of organic manure and mulches improves the soil structure and encourages the development of a vigorous population of soil microorganisms. Organic farming is used by farms commercial green houses and residential gardeners. It is adopted extensively in areas of acute nutrition scarcity and especially for crops such as coconuts, containerized landscape trees, grapes, bananas, beer, eggplant citrus, strawberries, sugarcane, cotton, maize and tomatoes. In urban and rural areas with appropriate technologies would help to build up the organic carbon of the hungry soils. High organic carbon content in soil would ensure the soil productivity under all circumstances.

Available organic sources are insufficient and often costly for them to use in agriculture. Non arable lands denuded of vegetation have very low carbon content. Often organic farming practices cuts down the production costs, increases the benefit cost ratio and farm income. Farmers should be aware about Government programmes in order to enhance their living conditions and in order to make some improvement in cultivation operations and they should provide special attention for the adoption of organic farming.

Organic farming products becoming very popular, it has been created a new exporting opportunities for developing word. Some consumers are given preference to regionally grown organic food products. But in one area of circle r border we cannot able to produce all required organic products of our own. Therefore many developing countries have started to grow and exports organic products very successfully. The price of organic products is also 20% higher than the identical products produced on non-organic farms. It helps to increase in exporting activities of organic farmers. The organic farmer families income gradually increasing because the long term potential for such market premiums hikes the income of the products and also the organic farming has been contributed to the local food security under the circumstances of local markets

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