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Rural livelihood through Organic Farming

Abstract

India is a land of villages in which the basic source of livelihood is small farming. With every passing day the agriculture is becoming a costly business due to sharp rise in the prices of agriculture inputs. In such a scenario there is shift in strategy of agricultural policy suggested by the agricultural economist towards development through organic farming. This paper explores that organic farming may be an empowering development technique in rural livelihood. Organic farming is raising interest from farmers, politicians, and consumers throughout the world. Italy is a leading country in the European Union's (EU) organic farming sector. In 2011, it contributed for 12 % of the total area under organic cultivation in the EU (Eurostat, 2013), second only to Spain. Generally, organic farming aims at creating a sustainable agroecological system based on local resources and thereby plays a significant role in development of rural India. In this paper various suggestions are also incorporated to enhance rural development through organic farming.

Keywords: Organic Farming, Development, Livelihood.

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Introduction

For thousands of years, India has indeed done amazing agriculture hence organic farming is not a new phenomena it is being followed since ancient times. Organic farming refers to the means of farming that does not involve use of chemical fertilizers and pesticides. India being an agro based nation where a huge part of the nation depends on agricultural sector for their livelihood. Therefore rural development can take place with the help of organic farming where the organic farming can provide rural development benefits through enhanced employment and through closer connections with the local economy, reconnecting consumers with producers and stimulating positive economic multipliers. Organic farming is an unconventional agricultural system which commenced early in the 20th century in reaction to drastically changing farming practices. Organic agriculture is developed by large number of organic agricultural organisations. Such organisations use the organic fertilizers such as natural compost; manure such as animals waste, bone meal etc. It relies more on crop rotation and companion planting. For better results Biological pest control, mixed cropping and the fostering of insect predators are encouraged. There are numbers of organic standards that are designed to restrict the synthetic fertilizers that are being used for production process. For instance, naturally occurring pesticides such as pyrethrin and rotenone are permitted, on the other hand use of synthetic fertilizers and pesticides are now restricted. There are some Synthetic substances that are allowed includes copper sulfate, elemental sulfur and Ivermectin and synthetic substances that are prohibited are such as genetically modified organisms, human sewage sludge, nanomaterials, plant growth regulators, hormones, and antibiotics that used in livestock husbandry. Reasons to be in favour of organic farming include large number of benefits in sustainability, openness, self-sufficiency, autonomy/independence, health security, food security, and food safety. Organic agricultural methods are internationally managed and legally implemented by many nations, in accordance with the standards and regulations set by the International Federation of Organic Agriculture Movements (IFOAM), an international guardianship organization for organic farming. This organization is established in 1972 with the prime objective to guide organic farming that is the necessity for sustainability. Organic agriculture can be determined as: a radically mixed farming system that aims for sustainability, the betterment of soil fertility and biological diversity whilst, with unusual exceptions, restricting synthetic pesticides, antibiotics, synthetic fertilizers, genetically modified organisms,

and growth hormones. The market for organic food and products has been rapidly growing since 1990s. And presently it has reached more than $63 billion users worldwide. This demand has also increased the organically managed farmland from 2001 to 2011 at a compounding rate of 8.9% per annum. In 2011, there were approximately 37,000,000 hectares (91,000,000 acres) worldwide were practising organic farming, representing approximately 0.9 percent of total world farmland. A report by Eurostat in 2013 stated that Italy is a topmost country in the European Union's (EU) with 12% of the total area under organic farming sector.

The growth of organic farming was driven by small, independent producers and by consumers. In recent years, there was explosive increase in organic market growth that has encouraged the participation of agribusiness interests to uplift this organic sector. As the quantity and quality of "organic" products increases, the viability of the small-scale organic farm is at risk, and the meaning of organic farming as an agricultural procedure is ever more easily confused with the related but distinguished areas of organic food and organic certification. Small farmers in Latin America, China, and India can reap the benefit from organic farming and will help in elminating poverty in these countries stated by a research by the Office of Evaluation and Studies (OE), at the International Fund for Agriculture Development (IFAD). The various advantages of organic farming for small farmers across the world include a high premium, low capital investment, the capability to achieve more and high premiums in the market, and the ability to use historic traditional knowledge. India holds a distinctive position among 172 countries for following organic agriculture: it has 6, 50,000 organic producers, 699 processors, 669 exporters and 7, 20,000 hectares under cultivation. But, this is merely 0.4 per cent of total agricultural land under organic cultivation; the industry has a long journey ahead. (BEDANGA BORDOLOI, 2016)

Last year, the Indian organic market has witnessed a huge increase in exports, and domestic market rose by 30 and 40 per cent respectively. It is expected that it will sustain in future also due to an increasing number of affluent and health conscious consumers. As the industry continues to grow, it faces many challenges. Due to relatively small quantity, the costs of organic food products are relatively very high. The cost of organic cultivation increases as it takes more time and energy to produce than its chemical-intensive counterpart.

Concept

The term "organic farming" was invented by Lord Northbourne in his book "Look to the Land" (written in 1939, published 1940). Northbourne stated that "organic farming should fundamentally depend on renewable resources surrounded by locally organised agricultural systems. In order to reduce the use of non-renewable resources, wastes and by-products of plant and animal origin should be recycled to return nutrients to the land". According the United States Department of Agriculture USDA), "organic farming is a system which avoids or largely excludes the use of synthetic inputs (such as fertilizers, pesticides, hormones, feed additives etc) and to the extreme limits practicable rely upon crop rotations, crop residues, mal manures, off-farm organic waste, mineral grade rock additives and biological system of nutrient mobilization and plant protection. Organic farming is a process of farming that does not take into account the use of chemicals such as chemical fertilizers and chemical pesticides. Large number of small and marginal farmers practice organic farming; however, since they are unaware of the market opportunities, they are not able to reap the benefits of organic farming. The most famous definition of organic farming is "it is a production system that enhances the health of soils, ecosystem and people. It depends on environmental ecological processes, biodiversity and cycles to make adjustments to local conditions rather than the use of synthetic inputs with adverse effects. Organic agriculture is mixture of tradition and innovation including science to take advantage of shared environment and encourage fair relationships and set good standards of life for all involved". Thus, in organic farming, agriculture must be in complete agreement with nature. The whole motive of organic farming is to remain in harmony with the ecosystem. There are the four principles that will lay down the philosophy of organic farming. They are:

Health

Organic agriculture should encourage and sustain the health of soil, plant, animal, human and planet as one individual.

Ecology

Organic agriculture should focus on living ecological systems and cycles, develop ecological work with them and help sustain them.

Fairness

Organic agriculture ought to be built on relationships that safeguard fairness with regard to the common ecosystem and life opportunities.

Care

Organic agriculture should be directed in a preventive and responsible manner to safeguard the health and well-being of generations and the ecosystem.

Objective of the Study

This paper is exploratory in nature with the following objectives:

1. benefits of organic farming to different groups
2. need of organic farming in India
3. obstacles in pathway of organic farming

Research Methodology

This research is exploratory in nature. It is based on secondary data collected from various sources like research papers, journals, articles, websites, newspapers and an informal interaction with the people who run such organic farms.

Benefits of Organic Farming

Organic farming is an ancient phenomena leading to various benefits to the various groups of the society.

Benefits to Farmers

There are many benefits of organic farming for small farmers across the world includes

more premium, low capital investment, the capability to achieve higher premiums in the market, and the capability to use traditional knowledge. A research is being conducted by the Office of Evaluation and Studies (OE), at the International Fund for Agriculture Development (IFAD which stated that the small farmers in India, Latin America, and China can benefit remarkably from organic farming and will help in eliminating poverty in these countries.

High Premium

Organic food is normally expensive than the conventional food reason being it involves huge human efforts in every step. The comparative difference between the prices of organic and conventional food is near about 20% to 30%. This premium is very important for a small farmer whose income might only be sufficient to feed his/her family with one meal.

Low Investment

Organic farming generally does not involve capital investment as high as that required in conventional farming. Moreover the organic fertilizers organic and pesticides can be produced locally; the annual cost of production sustained by the farmer is also low. Agriculture greatly depends on external factors such as climate, pests, and disease. Besides this most of the small farmers are conditioned to natural rain for water. Therefore, in cases of natural disaster, pest or disease attack, or irregular rainfall, when there is a low crop production; small farmers practicing organic farming have to suffer less as their investments are low. It should be noted that while shifting from chemical farming to organic farming, the transition might be costly.

Less Dependence on Money Lenders

Many small farmers globally commit suicide or suffer from severe economic strife due to increasing debt. Since synthetic inputs, which are very costly, are not required in organic farming, small farmers are not as conditioned to money lenders. Low production, Crop failure, therefore, does not lead an organic farmer into enormous debt, and does not force him to take any extreme steps.

Synergy with Life Forms

Organic farming requires synergy with various plant and animal life forms. Small farmers appreciate this synergy easily and therefore find it easy to use the organic farming techniques.

Traditional Knowledge

Small farmers have a huge of traditional knowledge with them and within their community. Most of this unconventional knowledge cannot be used for chemical farming. However, when it comes to organic farming, farmers can make better use of this traditional knowledge. Moreover , in cases of organic farming, small farmers are independent on those who provide chemical know-how.

Benefits to Environment

Reduce Dependence On Pesticides And Chemical Fertilizers

The Organic Trade Association stated that if individual farmer in the U.S. transformed to organic production, we could eliminate 500 million pounds of continuing and harmful pesticides from entering the environment yearly. Pesticide and synthetic chemical are the reason for many negative environmental issues: Pesticides allow disease persistent to build up in plants, weeds, plant-eating-insects, fungi, and bacteria. Pesticides and synthetic chemicals are sprinkled on plants to contaminate the soil, water supply, and air. Occasionally these harmful pesticides remain in soil for decades (maybe longer). Synthetic chemicals also demoralise smart farming practices such as crop plantation, cover crops and crop rotation, that is the reason it may cause other harmful environmental problems like erosion.

Builds Healthy Soil

Healthy soil is the necessity of the healthy food, both are complimentary to each other. If soil will be treated with harmful synthetic chemicals and pesticides, we may end up with soil that cannot thrive on its own. Natural fertilizers and techniques are far better than chemical soil management. A study conducted by USDA Agricultural Research Service (ARS) proved that organic farming leads top organic soil and healthy matter which is better than conventional no-till farming. “Only one teaspoon of organic rich soil is home to 600 million to 1 billion helpful bacteria from 15,000 species” said Dr. Elaine Ingham.

Resist Soil Erosion

Organic farming leads to healthy soil and this help to tackle serious soil and land issues, such as erosion. A major study comparing linking up organic and chemically treated wheat fields gave phenomenal results that the organic field featured eight more inches of topsoil than the chemically treated field and also had only one-third the erosion loss. The need of hour is to be worried about soil erosion. Erosion issues are very serious, affecting the land, food supply, and humans. However, organic farming or traditional farming does help discourage erosion from occurring.

Combat Global Warming

Rodale Institute Farming Systems Trial is America’s longest running, and continuously making comparison between conventional and organic agriculture. This trial states that since 1981, the healthy organic agriculture system is actually reducing carbon dioxide and assist to slow climate change. Rodale research further showed that: *"If only 10,000 medium size conventional farms in the U.S. converted to organic farms, they would store so much carbon and reduce its emission in the soil and that will be equivalent to taking 1,174,400 cars off the road, or reducing car miles driven by 14.62 billion miles.*

Supports Water Conservation and Water Health

In America the major threat is water pollution that is due to runoff from non-organic farms, such as harmful pesticides, synthetic fertilizers, and animal waste. Organic farming helps in keeping our water supplies by emitting pollution free runoff from agricultural farms. Organic farming also helps in conservation of water. Organic farmers, in general, tend to spend time amending soil correctly and using mulch - both of which help conserve water. Cotton, an in-demand crop, requires a lot of irrigation and excess water when grown conventionally. However, organic

cotton farming needs less irrigation and thus conserves water.

Supporting Animal Health and Welfare

Insects, birds, fish and all sorts of other critters experience problems when humans swoop in and destroy their natural habitat. Organic farming not only helps preserve more natural habitat areas but also encourages birds and other natural predators to live happily on farmland, which assists in natural pest control. Additionally, animals that live on organic farms are exposed to clean, chemical-free grazing that helps keep them naturally healthy and resistant to illness. As a perk for organic farmers, happy and healthy organic animals are productive organic animals.

Encourages Biodiversity

In general, the more biodiversity there is on a farm, and the more stable the farm is. Organic farming encourages healthy biodiversity, which plays a critical role in how resilient, or not, a farm is to issues like bad weather, disease, and pests. Additionally, reduced biodiversity may directly correlate with a rise in infectious diseases, which of course, isn't good for people or the planet.

BENEFITS TO CONSUMERS

1. A credible guarantee that the food they are buying has been grown organically. As there are no high third-party certification costs, the price remains affordable for the consumer and fair for the farmer.
2. The chance to become more involved in the food-growing process e.g. by visiting farms and participating in the peer review process to make sure the farmer is complying with organic standards.
3. Organic whole grain cereal contains no preservatives or artificial flavours. Such cereals grown in a system that relies on time-tested natural methods, including soil building and crop rotations that help protect and nurture the environment.

Benefits to Government

1. Countries practicing more of organic farming have stronger agricultural economies and contribute more to rural development and overall economies through total sales, net revenue, farm value, taxes paid, payroll, and purchases of fertilizer, seed, and repair and maintenance services.
2. Counties with organic farms leads to healthy soil and have more committed farmers and give more aids to local economies with high percentages of resident full-time farmers, greater direct to consumer sales, more workers hired, and higher worker pay.

Benefits to Society

Organic agriculture may have a significant social impact on rural communities. To begin with, organic farming may lead to improved employment opportunities in local communities. Organic farming often requires more manual labour to compensate for the loss of synthetic fertilizers and pesticides, and thus generates more jobs in rural communities. In general, however, the labour needed to manage an organic farm is 10% to 20% higher than on comparable conventional farms.

Economic Benefits of Organic Agriculture

Organic agriculture has seen tremendous economic growth in the last decade. This has been mainly demand-driven, as consumers have become increasingly concerned with the safety of conventionally-grown foods and the ethical downfalls of industrial agriculture. Farmers, in turn, have realized that consumers are willing to pay a premium for organically grown foods. This is particularly attractive to farmers in developing nations, as it is expected to provide access to lucrative and emerging markets. Low income of the consumers currently limit their demand mainly to the industrialized world: the prices of organic products are generally higher than their conventional in order to cover the higher cost of production and processing and to capture unexplored savings linked to issues such as environmental protection, animal welfare, and rural development.

Need For Organic Farming

1. Source of income- *Organic farming* can reconstruct resources in rural areas and supports to promote economic stability through self employment.
2. Optimum utilisation of local resources
3. Make environment healthy
4. Healthy food to consumers
5. Sustainable development
6. Raise the standard of living of farmers.

Problems

India has the highest number of organic farmers globally, but most of them are struggling because of following reasons: Poor policy measures, rising input costs and limited market are affecting growth of organic farming in the country

Organic farming fraught with hurdles

According to the Indian Council of Agricultural Research, productivity on an average dips by 6.7 per cent in the first year, and the government needs to have a plan in place to support farmers during the transition. The report on Doubling of Farmers' Income by Ashok Dalwai committee, too, echoes the concern of the farmers who claim up to 30 per cent drop in yields when embracing organic. It takes about a decade to attain pre-conversion yield levels, according to the committee report.

Expensive Organic Produce Discourages Customers, Affects Sales

The organic products are comparatively expensive than the conventional products because of high labour cost. The difference between the cost of two products is usually Rs1200 to Rs1500 per month therefore consumer prefer to stick to the conventional product which affects the sales of organic farms. According to the ASSOCHAM report, post-harvest handling of relatively small quantities of organic foods also results in higher costs because of the mandatory segregation of organic and conventional produce, especially for processing and transportation. "Specialised farmer training costs, processing and inventory holding costs (without chemical additives), and increased packaging, logistics and distribution

costs (due to low volumes), contribute to the high price of organic food products," says the report.

Multiple Certification System

There is rigorously complex procedure for jumping into the organic product market and even the farmers have to struggle in order to find a better market. The existing certification norms for organic food are making things difficult for them. There are two problems related to certification system: firstly time consuming and secondly it is very expensive (due to multiple certificate system). In fact, FSSAI is reconsidering its regulations on organic food that kicked in from July 1 this year, after farmers' protests. The government, meanwhile, has not done enough to address the hurdles. Paramparagat Krishi Vikas Yojana (PKVY)—the Centre's free certification programme for organic farmers—is an example. A 2018 report on the implementation of PKVY highlights that all states, except Tripura, Odisha and Karnataka, have failed to utilise even 50 per cent of their funds under the scheme. While the Centre has increased allocation for the scheme by 44 per cent for the current year, corrective measures are needed to ensure that the states become responsible and contribute toward "organic India".

Suggestions

1. Promotion of Organic Farming- Organic farming being an eco-friendly, low cost technique using locally available inputs; it has good scope for wider replication. Promotion of organic farming should be a regular campaign as a part of social marketing at par with the marketing of agro-chemicals, through publicity and field demonstration. To enhance the benefits of organic farming and to compensate for the low yield particularly during the initial stages, special marketing efforts should be made to sell the products at premium prices. Formation of consumer network for distribution of organic products can facilitate easy marketing.
2. Develop bio-villages- First physical step towards conversion of Sikkim agriculture to organic was adoption of bio-village programmed using Effective Microbiology (EM) technology. Starting from 2003-04 till 2009-10, 396 villages were adopted as bio-villages by the Department of Food Security and Agriculture Development in collaboration with Maple Orgtech Pvt. Ltd, Kolkata. About 14,000 farmers and 14,000 acres of land in all the 4 districts of Sikkim were benefited under the programme.
3. Adequate literature on the techniques and benefits of organic farming should also be made available to farmers through various outlets and public communication systems for better adoption of this technology.
4. Recycling collection- Effective waste and recyclables collection operations rely on trained professionals, using the latest technology, and coordinating with municipal authorities.
5. Government is making various policies to tackle the obstacles in the pathway of organic farming but the on ground implementation of these policies is not satisfactory. Therefore there is need for strong action to implement these policies in order to improve the plight of India

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