

# Importance of Organic Farming in Economy with Special Reference to Sikkim



Udeshna Buragohain

**Abstract:** Ever wondered why people aren't healthy as they use to be these days and why the generation is facing new health problems? Manmade chemicals cause the environment to get poisoned and everybody's health is at risk? How we went from a healthy nation to a sick nation? This is because of three dangers that threaten our food security i.e, chemical fertilizers, pesticide and genetically modified crops. The government invest the collected taxes to subsidies these chemical fertilizers. In the year 2009, the government spent 98000 crore rupees on subsidizing chemical fertilizers. Although the fertilizers provide food for the plant they are unhealthy for them as they are artificially produced. It also percolates and gets mixed with the ground water. Along with chemical fertilizers the farmers also uses chemical pesticides. This pesticide not only kills specific pest but also many friendly organisms. People are getting health conscious these days. They are ready to pay a premium price for good chemical free products. Organic products have the quality of satisfying the wants of this era.

In this paper I tried to study the importance of organic farming in this growing population and how can it be a tool of economic development. I have based the study of organic farming on Sikkim as this

**Keywords:** state is recognized as the first organic state in the world and is awarded the Oscar for best policies.

## I. INTRODUCTION

The concepts can be traced back to the early 1900s and the concept was introduced by F.H. King, Sir Albert Howard and Rudolf Steiner. They were of the thought that practicing crop rotation, biologically based pest controls and animal manure cover crops resulted relatively better farming system. The modern concept of organic farming merges the tradition, innovation and science. Organic farming is an agricultural producing system which promotes sustainable use resources and bring natural balance in the environment. It tries to enhance agricultural health that includes biodiversity, biological cycles and soil biological health. It avoids the use of herbicide, chemical fertilizers, insecticides and fungicides. This farming focuses on enrichment of soil rather than nurturing the plant and is based on the concept "Feed the soil not the plant" and aims for human welfare. It is the combination of tradition, innovation and science to benefit the quality of life and environment. In the year 2002 United States Department of Agriculture (USDA) established National Organic Program (NOP), to implement, develop and administer standard production, handling, and labeling practices for organic agricultural products.

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Organic farming relies on ecologically formed practices like cultural and biological pest management and brush aside the use of manmade chemicals in crop and animal production and also ignores the use of antibiotics and hormones in livestock production. In this process the fundamental and natural components such as soil organism activities, nutrient cycling, and species distribution and competition, are used as farm management tools.

## II. OBJECTIVE

- To study the growing importance of organic farming in this era.
- To study the benefits of organic farming in economic development.

## III. EXISTING LITERATURE

As per the definition by United State Department of Agriculture study team on organic farming "It is a system which avoids or largely excludes the use of synthetic inputs and to the maximum extent feasible relies upon crop rotations, crop residues, animal manures, off-farm organic waste, mineral grade rock additives and the biological system of nutrient mobilization and plant protection".

Singh and Padey (2012) have found that the growth of organic farming in India is comparatively slower cause of numerous constrain like inaccessible organic supplements, organic fertilizers, market opportunities etc. The effects can be mostly seen in the small farm holder adopting organic farming.

A.K Barik (2017), organic farming plays as an input output function envisaged a natural process. The present status of organic farming in India is in an emerging uniqueness as it attempts to produce products ranging from edible to organic cotton and fiber etc. a case study with IRF organic package of practice has been conducted to overcome the technological breakthrough and provide an accessible and better future of organic farming in India.

Gupta (2013) studied on Horticulture and organic farming and highlighted the issues regarding the performance of organic farming in Madhya Pradesh, India. It shows that the state is producing main organic crops by increasing total area under organic cultivation and horticulture is the fastest growing sector in agriculture. Even though, development of agriculture is still a critical factor in the overall performance of the state. The state requires chemical free, low cost product and horticulture production and improvement in education of farmers to enhance the productivity.

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## IV. METHODOLOGY

The data collected here is from secondary sources. Different newspapers, magazines, websites, research articles and book have been studied to find out about the topic. The findings and conclusion is drawn from the empirical evidences.

### METHODS OF ORGANIC FARMING

There are various methods by which organic farming is practiced:

- 1. Crop Diversity:** In this technique a variety of crops are cultivated simultaneously. It helps in increasing the production to meet the rising demand of crops. Previously, Monoculture was practiced where only one variety of crop was cultivated but now it has shifted to polyculture.
- 2. Soil Management:** The method starts the use of natural process to treat and enhance the health of soil. It aims at the use of bacteria present in animal's waste increasing soil nutrients.
- 3. Green manure and Compost:** The recycling of organic organism and plants into fertilizers and act as a nutrient for the soil and helps in increasing its fertility.
- 4. Weed Management:** It is also known as mechanical cultivation. Organic agriculture focuses on reducing the unwanted plant rather than uprooting. There are generally five methods of weed control i.e. preventative weed control, chemical weed control, cultural weed control, biological weed control, mechanical weed control.
- 5. Biological pest control:** There are useful as well as harmful organisms in the agricultural farm which affect the field. The growth of these organisms needs to be controlled and it is done by the use of herbicides and pesticides that contain less chemicals or are natural. Proper sanitization of the farm can be maintained to control other organisms.
- 6. Livestock:** Motivate the use of domestic animals to increase the sustainability of the farm.

### IMPORTANCE

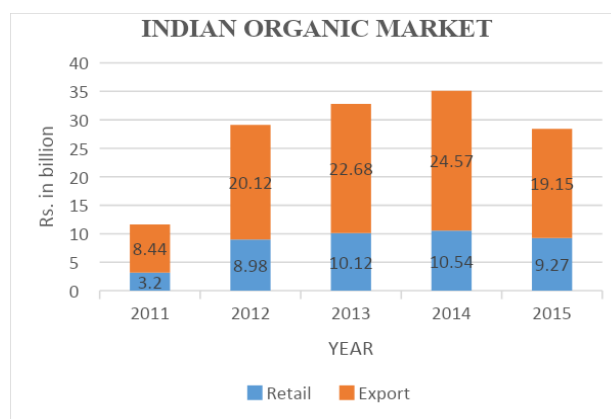
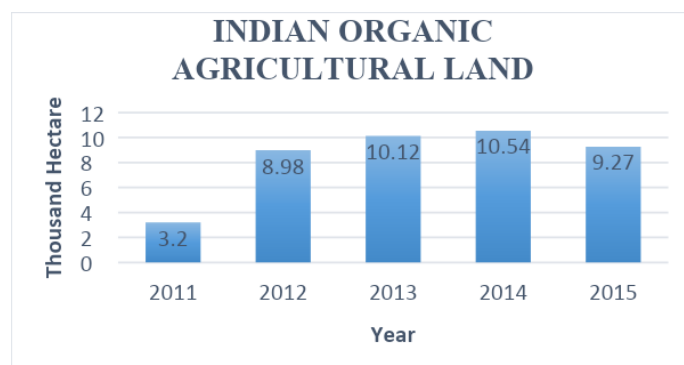
Organic farming is getting importance when people are polluting the soil and environment with harmful chemicals and pesticides. Organic farming provides the option of enriching the soil with organic compost and preventing soil from chemicals. Soil is origin for many food crops, hence the food we get from organic soils are good for health as well. Organic farming helps in sustainable rural environment, sound health of soil and creating ecological balance etc. In Indian context this kind of agricultural practice can be traced back to decades.

The organic agriculture has a greater scope of minimizing all forms of pollutants and brings sustainability. This practice gives a very low adverse effect in the economy; it also helps in conservation of biodiversity. The exposure of toxic material to human, animals and the environment can be reduced. Sustainable agriculture can contribute significantly to rural vitality by increasing the number of farms follow such practices; double the income of the family as comparing with conventional practices. It is very cost effective and bring premium return on organic products. It

also helps in providing pesticide residue free food reducing the pollution and also generates employment.

### ORGANIC FARMING IN INDIA

The advent of green revolution in India in the early 1960s led to an overwhelming increase in the agricultural production in the country, due to use of large scale of chemical fertilizers and pesticides. This however proved to be harmful in the long run, the need to rejuvenate the yielding farming scenario became the need of the era and the alternative was to go organic. India has 1.5 million hectares of organic farmland in 2016, later added 0.3 million hectares in the same year. According to World of Organic Agriculture Report 2018, India produces 30% of total organic production but accounts only 2.59% of total cultivation area. It has about 835,000 certified producers. It was observed that the production of the organic products and the cultivation area has been continuously increasing over years. The data was being collected by Research Institute of Organic Agriculture, State of Sustainable Initiative and International trade Center. The increase in organic cultivation is the result of the entrepreneurs advocating organic farming and also due to the awareness among the people.



### MARKET OPPORTUNITIES IN INDIA

- Indian organic mangoes have high demand in Netherland, UK and Germany, so export will bring good amount of income in India.
- There are three major pineapple importing countries i.e US, EU, Japan. Therefore India also have the opportunity to export pineapple.

- India can aim at the organic banana market giving attention to the geographically closer Japanese market and the EU
- The Indian market of organic vegetable can be expanded in the EU, Australia, and Singapore
- EU, UK and Netherlands has an increasing demand for organic grapes as there is an increase in the consumption of organic wine, thereby giving India the opportunity of targeting these countries for exporting grapes.
- European Commission have granted “equivalence” status to Indian organic certifying agencies. Indian organic tea producers can expand their markets in Europe as it is one of the leading tea consuming regions.

Organic agriculture producers have the ability to assemble community resources for the development of the locality, including livelier assist in local government and the creation of new community economic development structures and new businesses.

In the year 2017-18 India exported a total volume of 4.58 lakh MT. The total earning from organic product was around Rs. 3453.48 crore (515.44 million US Dollar). The countries that import organic food from India are Canada, Japan, USA, Switzerland, Vietnam, European Union, Australia, South Korea, New Zealand, Israel etc.

According to export value realization Oilseeds has highest realizing amount (47.6%) followed by Cereals and millets (10.4%), Plantation products i.e., Tea and Coffee (8.96%), Dry fruits (8.88%), Spices and condiments (7.76%) and others.

### SIKKIM’S ORGANIC FARMING POLICIES

“Sikkim” nestled in the lap of Himalaya and is the home of the mighty mount Kanchenjunga became India’s first organic state. It has geographical area of 7096sq km and a population of over 6 lakhs, the state is rich in natural resources and a biodiversity hotspot. With only 11% of total area of land for cultivation and difficult terrain and lack of assured irrigation, the farmers of Sikkim practice integrated farming system with mix cropping under rain fed condition. The state decided to adopt organic farming in 2003 to ensure availability of healthy food grains and veggies to the people. Apart from these long term advantages in the form of conservation and protection of local environment, enrichment of biodiversity, improvement of soil fertility, protection of flora and fauna, balanced ecology and more rewarding farming practices inspired the state to go organic. Initially the framers of the state were not ready and reluctant to make the switch to organic farming. Many workshops, massive awareness and training programs were organized across the state to make them understand the long term benefits of organic farming. Farmers adopted bio villages were trained to produce bio manure using various available technologies such as rural composting, vermin composting, EM composting and bio dynamic. Farmers were trained and encouraged to prepare bio pesticides, insecticides and fungicides using locally available plants of medicinal value and cow urine. The creation of automated green houses for production of quality plant material gave further boost to the organic movement.

Sikkim Organic Mission was launched on 15<sup>th</sup> Aug, 2010 to execute the programs of organic farming and certification process in a mission mode and in a stipulated period of time.

As a marketing strategy, organic retail outlet was opened at Greater Kailash market, New Delhi. Internationally, the state has showcasing its organically grown products at various international fairs in European countries. The state stopped import of chemical fertilizers and pesticides, for these organic regulatory inspectors were posted at various check post.

Sikkim’s organic journey went by three different phrases, i.e the foundation, preparation and implementation starting from 2003 to 2015. It is world’s first 100% organic state and has won Oscar for its best policies conferred by the food and agriculture organization for world’s best policies promoting agro-ecological and sustainable food system. It won Future Policy Award 2018 beating 51 nominations from 25 different countries.

In the years Sikkim made transformational shift from using chemicals and pesticides to imposing complete ban on them. In January 2016, Narendra Modi declared Sikkim as India’s first fully organic state and now the efforts of the North-Eastern state towards achieving sustainable goals have been rewarded by the United Nations.

Transformation stages to 100% Organic State

- 2003: adopted resolution to switch to organic farming
- It will ensure fertility of the soil, protect environment and maintain ecological balance.
- Healthy living and decreasing the risk of health issues
- Discontinue the practice of using chemical fertilizers and pesticides
- Total ban on the sale and use of chemical pesticides in the state
- Stopped the imports of chemical fertilizers
- Use organic manure
- 2010: launched Sikkim Organic Mission to fastrack the journey. This mission provided seeds and manure and trained the farmers in using organic methods.

The transition to an organic state benefited over 66,000 family in the state bringing about rural development and sustainable living. Besides proving transformational for public health and environment, organic farming is also attracting large number of tourist to see its lush green farms, pure and organic agro products and meal made out of fresh produce.

In 2015-2017 the number of tourist in Sikkim went up by 50%.

### CHALLENGES

Despite development in the field, it is surprising that organic farming has not yet managed to enter the agricultural mainstream. Switch to organic farming methods is not easy task and the farmers are not receiving the expected premium amount for their products.

- A very low production to meet 276 million tons of food grain.
- Lack of marketing issue is one of the major issues.
- There is no policy for encouraging the spirit of farmers for promoting organic agriculture
- Excessive use of pesticides, chemicals to get rid of weeds have made the pest and weeds

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- During the transition period farmers face low productivity as organic farming prohibits use of synthetic pesticides, farmers face severe pest attack.
- Lack of suitable infrastructure and lack of cold storage facilities organic products gets damaged as it is mostly perishable.
- Non organizing awareness and proper guidelines for the interested farmers.
- Organic products are expensive due to high labor cost and low yields and hence the consumers are discouraged to buy them.
- Unable to supply the export demand.

The challenges first have to be overcome for successfully implementing the organic mission.

### V. RESULT & ANALYSIS

There can be seen a positive relation between organic farming and development as clearly improvement of Sikkim's rural area and standard of living could be seen. Indian markets have shown a rise in export of organic product bringing home more of foreign exchange which leads to prosperity of the country including health and hygiene. Although there is increase in the organic farming and people are getting aware of it still there are drawbacks due to which farmers find conventional methods easier and the consumer finds organic products to be expensive.

### VI. RECOMMENDATION & CONCLUSION

Different policies and aid should be initiated and further research should be done and effort in these areas is required, with much depending on the relevance of current research. Policy makers need to invest in program and policy modifications for promotion of organic farming. As there is increase in the population, the demand for food grains is also increasing. Keeping in mind the increasing demand, downfall of the natural resources, excess use of manmade chemicals and the health of the people it would be better if the farmers adopt integrated production process where both chemicals and non-chemical production process is mixed.

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