

SURENDRANATH COLLEGE

**ORGANIC
FARMING**

2020

INDIA'S
FUTURE

NAME:- SWAGATA MANDAL

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WHAT IS ORGANIC FARMING?

Organic farming is the use of agricultural production system reliant on green manure, compost, biological pest control, and crop rotation to produce crops, livestock and popularity. Organic centered agricultural production system fosters the cycling of the resources to conserve biodiversity and promote ecological balance. The use of green manure, cover crops, animal manure, and soil rotation , to interrupt the habitation of pests and diseases, improve soil fertility, and maximize the soil's biological activity are the primary aspects of organic farming.



In the other words, organic farming does not allow the use of synthetic chemical fertilizer, antibiotic, herbicides, or pesticides .Thus, the objective of organic farming is agricultural production of fibers, grains, vegetables, flowers, fruits, foods, and animal products such as milk, eggs, and meat is the best natural way.

OBJECTIVE OF ORGANIC FARMING:-

Organic farming may be adopted, to.....

1. Increase genetic diversity.
2. Promote more usage of natural pesticides.
3. Make sure the right soil cultivation at the right time.
4. Keep and build good soil structure and fertility.
5. Control pests, diseases and weed.

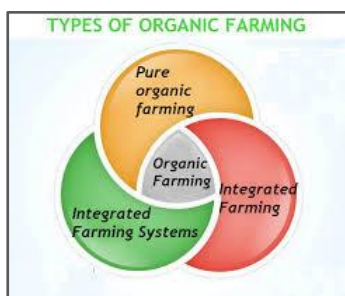
TYPES OF ORGANIC FARMING:-

1. Pure organic farming:-

It involves the use of organic manures and bio-pesticides with complete avoidance of inorganic chemicals and pesticides.

2. Integrated organic farming:-

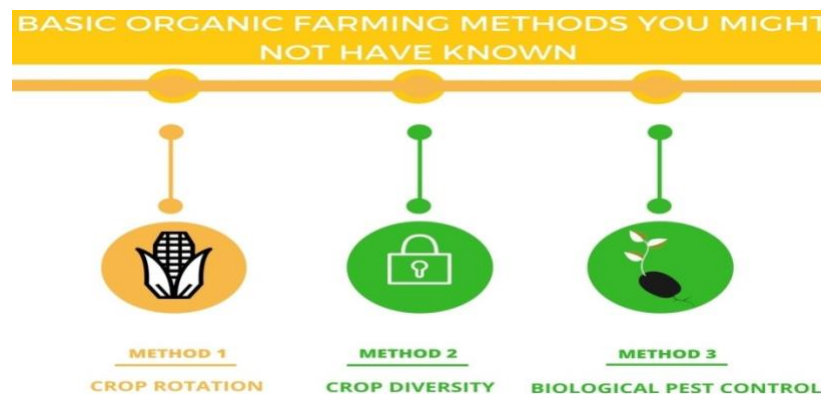
It involves integrated nutrients management and integrated pests management. It is the type of farming where you grow crops from natural resources. Further, having the complete nutritive value and also manage to prevent the crop or plants.



Relation between different branches of farming.

Techniques of organic farming :-

- **CROP ROTATION:-** It is technique to grow various kinds of crops in the same area, according to the different season, in a sequential way.
- **GREEN MANURE:-** It refers to the dying plants that are uprooted and turned into the soil to make them act as a nutrient for the soil to increase its quality.
- **BIOLOGICAL PEST CONTROL:-** *With this method, we use living organisms to control pests with or without the use of chemicals.*
- **COMPOST:-** Highly rich in nutrients, it is a recycled organic matter used as a fertilizer in the agriculture farms.



METHOD OF ORGANIC FARMING:-

1. Soil management:-

After cultivation of crops, the soil loses its nutrients and its quality deplete. Organic agriculture initiates the use of bacteria that is present in

animal waste . The bacteria helps in making the soil nutrients more productive and fertile

2. Weed management:-

Weed is unwanted plant that grows in agricultural fields. Organic agriculture focuses on lowering weed and not removing it completely. The two most widely used weed management techniques are-----

- **Mulching:** A process where we use plastic films or plant residue on the surface of the soil to block the growth of weed.
- **Mowing_or_cutting:-** Where there is a removal of weeds of top growth.

3. Crop diversity:

Monoculture is the practice used in the agriculture fields where we harvest and cultivate only type of crop in a particular place. Recently , polyculture has come in existence . where we harvest and cultivate kinds of crops . To meet the increasing crop demand and produce the required soil microorganism.

4. Controlling other organism:-

There are both useful and harmful organism in the agricultural farm which affect the field , So, we need to control the growth of such organisms to protect the soil and the crops. We can do this by the use of herbicides and pesticides that contain fewer chemicals or are natural.

HISTORY OF ORGANIC FARMING:-

- Organic farming is the oldest agricultural practice, was practice even more than 10000 years ago, dating back to Neolithic age by ancient civilization like Mesopotemia , Hwang Ho Basin etc.
- As per Ramayana , all dead things returned to earth that in nourish soil and life.

Mahabharat (5500 B,C) Kamdhenu- The role of cow in human life and soil fertility .

Kautilya Arthasashtra (300 B.C) several manure like oil cake and extrta of animal.

Rigbed (2500-1500 B.C) Green manure , use of dung f goat , sheep, cow etc.

Birhat Sanhita Methods of choosing manure for crops and manuring.

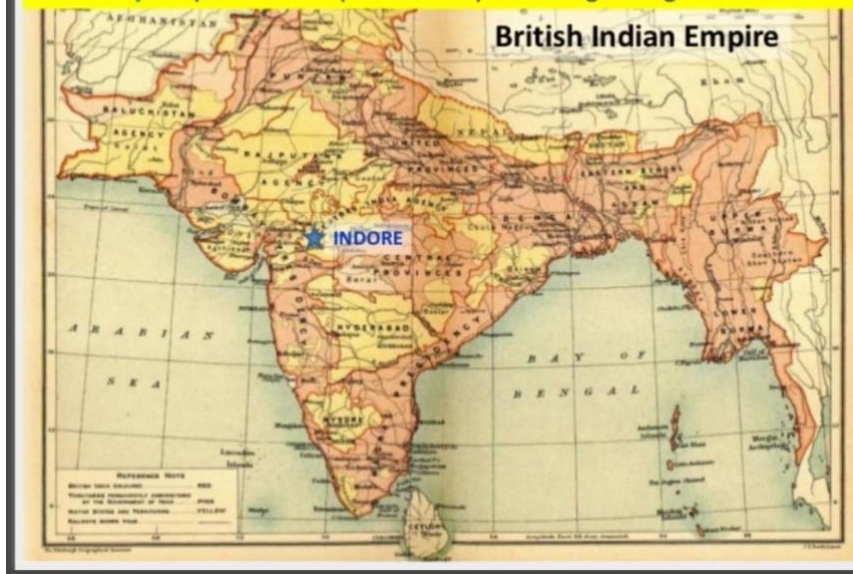
Although many concept s of organic farming predated his work , **Sir Albert howard is commonly regarded as the father of organic agriculture.**

He was raised on a farm in England, and educated at Cambridge university. He served as a mycologist in the Imperial Department of Agriculture for the West Indies (1899-1902), before returning to England

to teach agricultural science at South-Eastern Agricultural College in Wye (1903-1905).

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In An Agricultural Testament (1940) Howard laid out his vision for agriculture based on nature as a model with great emphasis on a concept that is central to organic farming--the importance of utilizing organic waste materials to build and maintain soil fertility and humus content.

DIFFERENCE BETWEEN ORGANIC AND INORGANIC FARMING:-

Inorganic farming is a technique that certain farmer use to grow crops bigger and faster. These farmers are allowed to use chemicals and fertilizers. Organic farming is a specific type of farming where no chemicals were added to the soil unless they are natural. The farmer must grow their crops naturally.

ORGANIC FARMING	INORGANIC FARMING
Based on ecological Orientation	Based on chemical orientation
Improve soil fertility	Deteriorate soil fertility
No problems like air, water, soil pollution	Pollution problems are present
GMOs are not allowed	GMOs are used
Irrigation requirements are used	Intensive irrigation
Uses bio- fertilizer	Uses chemical fertilizer
Harmony with nature	Domination of nature
Restraint of nature	Exploitation of nature
Improve Ecosystem	Impact Ecosystem
Manually weeds are removed here	Weeds are controlled through herbicides.

Here is the major difference between organic and inorganic compound.

IMPORTANCE OF ORGANIC FARMING:-

- The environment benefits because natural habitat sources are less threatened.
- It provides healthier food for people.
- The soil is in better condition because of manure used.

PRINCIPLE OF ORGANIC FARMING:-

1. Principle health:-

Organic agriculture must contributed to the health and well being of soil, plants, animals and human in earth.

2. The principle of ecological balance:-

We must model organic farming on living ecological system. Moreover, the methods of organic farming must fit the ecological balance and cycle.

3. Principle of fairness:-

Organic farming provides a good quality of life and helps in reducing soil infertility.

4. Principle of care:-

We should practice organic agriculture in a careful and responsible way to help the present and future generation and the environment.



PROS OF ORGANIC FARMING:-

1) High nutrition values

Organic food products contain very high nutrition content because they do not contain modified ingredients compare to the conventional agricultural food products. Another factor that makes them highly nutrition is that they are given time to develop and are provided with the best natural condition of growth .

2) Better taste

Apart from nutrition, the mineral and the sugar structures in organic foods are tasty because the crops are given more time to develop and mature. The use of natural and environmentally friendly agricultural production techniques is revealed to be the reason for the better taste in organic food products. It is commonly reported that the taste of organic vegetables and fruits are of higher quality compared to those that are conventionally grown.

3) Improved human health

Organic produce offers the safest products for human consumption compared to any other available food products. Organic products are high in nutrition content, they contain lower levels of chemicals, and they do not have modified ingredients. Besides, organic standards have set strict regulations to ensure all products that are labeled organic are truly organic in production and processing which ensure that they are free from synthetic chemicals components and genetically modified production technologies.

4) Environmental sustainability

Achieving tremendous environmental sustainability mileage is the dream of every nation in the world. This can be partly be achieved by the use of organic farming. Research reveals that organic farming can provide impressive mechanisms for advancing ecological harmony, biodiversity, and biological cycles which are environmentally sustaining. For example, the primary objectives of organic farming are soil management and conservation, promoting nutrient cycle, ecological balance and conserving biodiversity. Environmental sustainability

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biodiversity, and biological cycles which are environmentally sustaining. For example, the primary objectives of organic farming are soil management and conservation, promoting nutrient cycle, ecological balance and conserving biodiversity.

5) Food security

The demand against the supply of food has always been disproportionate due to the effects of climate change and poor farming practices that cause poor crop produce. Various people around the globe are facing starvation and lack enough food supply as there is a general shortage of safe and nutritious food to satisfy food preferences and dietary needs for a healthy and active life.

CONS OF ORGANIC FARMING:-

1) The Diminished productivity in the long-term

contemporary world agricultural production goal is superior productivity. While organic farming promises improved and healthier produce, it is only beneficial in the short term as the massive inputs such as machinery and chemicals are out of the picture. By contrast, over the long-term, the productivity advantages diminish. As the soil health and fertility declines over time in organic farming, so does the yields and this happens when the soil

reaches the point where it can no longer convert the existing humus into soil fertility.

2) Time consuming

It requires a lot of commitment, patience and uphill struggle to effectively grow crops organically. Organic farming needs a high amount of interaction between a farmer and his/her crops or livestock. Whether it is ensuring the crops are pest and disease free in an organic way or the use of natural methods to control weeds or raising animals in an organic way, the process is highly time consuming.

3) Skills

More skills are needed to farm organically compared to mechanical and chemical agriculture. This is greatly associated with the fact that the definitive aspect of organic farming maintains the use of natural inputs and close observation of the production process. Organic farmers lack the convenience of using mechanized or chemical techniques to fix every problem that is encountered.

4) Organic products are extremely expensive

Organic foods are the most expensive agricultural produces in the market. Perhaps this is one of the main reasons that organic farming is not fully supported as not so many people realize its great benefits. In the supermarkets, for instance, organic vegetables and fruits

cost as much as 20 to 40 percent more than their non-organic equivalent. The consumers pay the price and this is said to be one of the major disadvantages of organically produced food products. The exorbitant prices of organic products are linked with the notion that organic farmers do not yield as much out of their farms as conventional farmers do.

5) Lacks the flexibility of utilizing GMO advantages

The classic nature of organic farming is the complete avoidance of any sort of genetic modification. Well, despite the fact that this helps to bolster healthy lifestyle, organic growers miss out on significant genetic engineered technologies which can assist crops to better resist pests and diseases or tolerate weeds. Convectional farmers have the flexibility of taking advantage of genetic modification, which is generally lacking in organic farming.

GROWTH OF ORGANIC FARMING:-

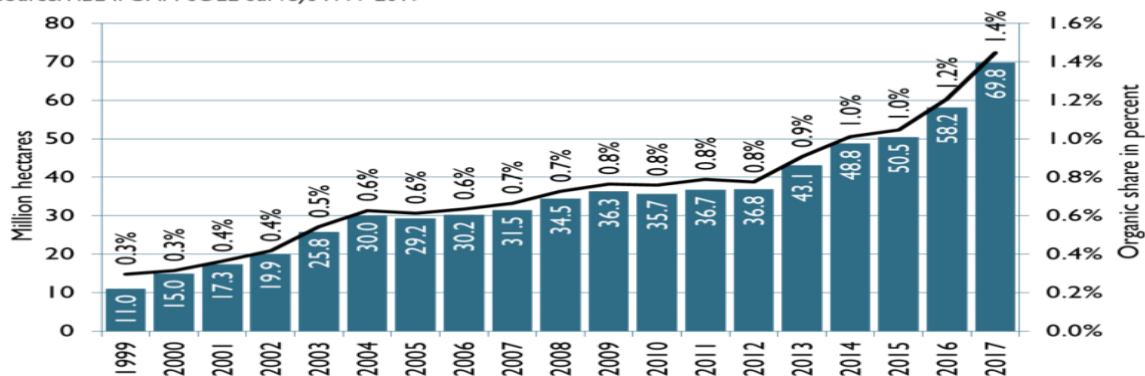
- ❖ In order to satisfy the increasing demand of organic products the organic farming sector in India has substantially increased over the count of year.
- ❖ India ranks 33 in world in terms of area under organic farming

- ❖ India rank 88" in terms of the ratio of agriculture land under organic crop to total farming area
- ❖ Madhya Pradesh has highest area under organic farming (1 m or 52%)
- ❖ Maharashtra is at second (0 mho33.6%)
- ❖ Orissa is third (0.67mhar or 9.7%)

Growth of the organic agricultural land and organic share 1999-2017

Source: FiBL-IFOAM-SOEL-Surveys 1999-2019

FiBL



Sikkim Model

- ❖ On 9 January 2016 Honorable prime minister declared Sikkim as First Organic State in India
- ❖ Sikkim win the Future Policy Award, a prize given to the best global policies in the field of agroecology, organised by the FAO together with the World Future Council and IFOAM Organics International

- ❖ The State was awarded with a citation from Agriculture Today in the year 2009 for 'Outstanding Performance in Horticulture
- ❖ Sikkim received Development received UN word for becoming world's first Organic State, Beats 25 countries.

The process of converting into a 100% organic state was fast-tracked in 2010 with the launch of the Organic Mission.

YEAR	EVENT OCCURED
2003	Sikkim begins discouraging use of chemicals. reduces fertilizer subsidy by 10%.
2003-2009	State adopts 396 villages as bio-villages to test organic input.
2008-2009	About 8000 land is certified as organic. ..vermi culture hatcheries and krishi vigyan Kendra was established.
2010	Sikkim organic mission is launched to fast track conversion of Sikkim in to 100% organic sale.
2010-2011	More than 18,234 ha of land is certified . Automated green house was established.
2011-2012	19,188 ha land is certified.
2015	Entire agriculture area in the states converted in to certified organic.
2016	Sikkim is formally declared a 100% Organic state
Now Sikkim is a organic model of India	

GOVERNMENT INITIATIVE FOR ORGANIC FARMING:-

- 1. MOVCDNER(Mission Organic Value Chain Development for North Eastern Region)**
- 2. MIDH (Mission for integrated development of Horticulture)**
- 3. PKVY(arampragat krishi vikash yojana)**
- 4. National project of organic farming**
- 5. state adopting organic farming**
- 6. National centre of organic farming**
- 7. ICAR contribution in promoting organic farming**
- 8. Promotion of the use of Biofertilizer**
- 9. Soil Health Card**
- 10. National Agriculture market**
- 11. National Mission for sustainable Agriculture**
- 12. Pradhanmantri fasal Bima yojana**
- 13. Gramin Bhandaran yojana**

BENEFIT: ECOLOGICAL

- Produces healthy soil
- Fight against effect of global warming
- Combat erosion
- Water Health
- Discourage algal bloom
- Animals health
- Encourage Biodiversity

BENEFIT: ECONOMICAL

- Reduction in production cost
- Increased farmers Income
- . Better purchasing power
- Access to Organic markets with premium prices Higher bargaining power
- . High exports Meaning
- Stabilization in financial ret with crop diversification as the risk of main crop failure is reduced
- Poverty eradication

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