ORGANIC FARMING

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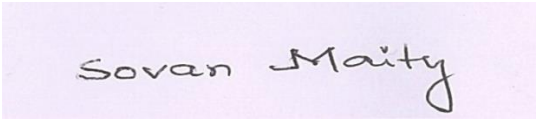

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INTRODUCTION

Organic farming is a production management system excluding of all synthetic off-farm inputs but rely upon on-farm agronomic, biological and mechanical methods like crop rotations, crop residues, animal manures, off-farm organic waste, mineral grade rock additives and biological system of nutrient mobilization and plant protection etc. which promotes and enhances biodiversity, biological cycles and agro-ecosystem health.

As per the definition of the USDA study team on organic farming “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 maximum extent feasible rely upon crop rotations, crop residues, animal manures, off-farm organic waste, mineral grade rock additives and biological system of nutrient mobilization and plant protection”.

In another definition FAO suggested that “Organic agriculture is a unique production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activity, and this is accomplished by using on-farm agronomic, biological and mechanical methods in exclusion of all synthetic off-farm inputs.

BASIC STEPS AND COMPONENTS OF ORGANIC FARMING

Organic farming approach involves steps like:(i)conversion of land from conventional management to organic management,(ii) management of the entire surrounding system to ensure biodiversity and sustainability of the system (iii)crop production with the use of alternative sources of nutrients such as crop rotation, residue management, organic manures, and biological inputs (iv) management of weeds and pests by better management practices, physical and cultural means and by biological control system ,and (v)maintenance of livestock in tandem with organic concept and make them an integral part of the entire system.

❖ Principles of Organic Farming

These are the four principles of organic farming are mentioned below.

(A).Principle of Health:

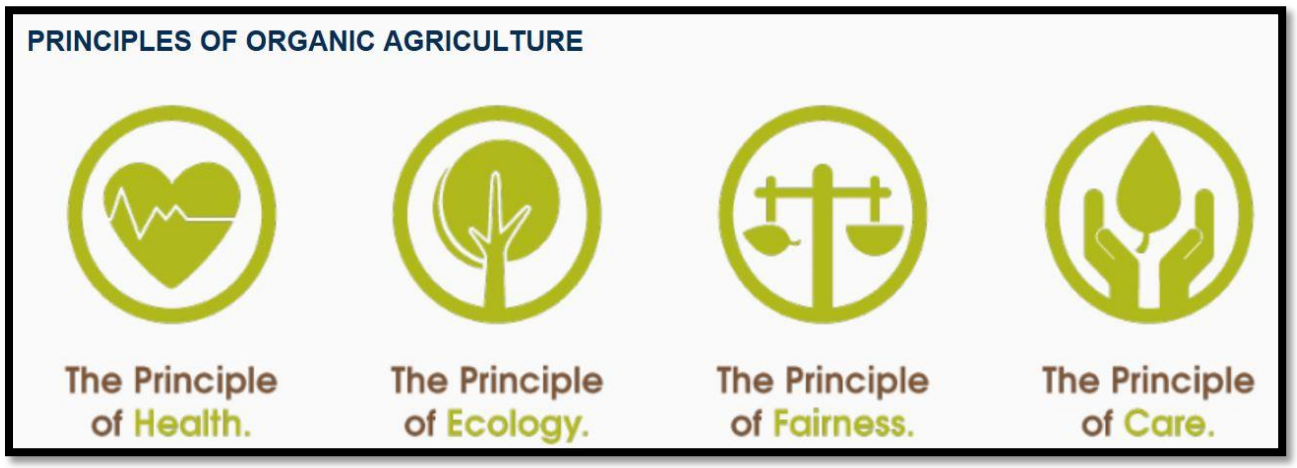
Organic agriculture should sustain and enhance the health of soil, plant, animal, human and planet as one and indivisible. Healthy soils produce healthy crops that
foster the health of animals and people. Health is the wholeness and integrity of living systems. The role of organic agriculture, whether in farming, processing, distribution, or
consumption, is to sustain and enhance the health of ecosystems and organisms from the smallest in the soil to human beings.

(B).Principle of Ecology:

Organic agriculture should be based on living ecological systems and cycles, work with them, emulate them and help sustain them. This principle roots organic agriculture within living ecological systems. It states that production is to be based on ecological processes, and recycling. Nourishment and well-being are achieved through the ecology of the specific production environment. Organic management must be adapted to local conditions, ecology, culture and scale. Inputs should be reduced by reuse, recycling and efficient management of materials and energy in order to maintain and improve environmental quality and conserve resources. It should attain ecological balance through the design of farming systems, establishment of habitats and maintenance of genetic and agricultural diversity.

(C). Principle of fairness:

Organic Agriculture should build on relationships that ensure fairness with regard to the common environment and life opportunities. This principle emphasizes that those involved in organic agriculture should conduct human relationships in a manner that ensures fairness at all levels and to all parties-farmers, workers , processors ,distributors ,traders and consumers. It aims to produce a sufficient supply of good quality food and other products. Natural and environmental resources that are used for production and consumption should be managed in a way that is socially and ecologically just and should be held in trust for future generations. Fairness requires systems of production, distribution and trade that are open and equitable and account for real environmental and social costs.



(D) . Principle of care:

Organic Agriculture should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment. Organic agriculture is a living and dynamic system that responds to internal and external demands and conditions. This principle states

that precaution and responsibility are the key concerns in management, development and technology choices in organic agriculture.

❖ THE IMPORTANT GOALS OF ORGANIC FARMING ARE:

- A sufficiently high level of productivity
- Compatibility of cultivation with the natural cycles of the production system as a whole
- Maintaining and increasing the long-term fertility and biological activity of the soil

- Maintaining and increasing natural diversity and agro-biodiversity
- Maximum possible use of renewable resources
- Creation of a harmonic balance between crops and animal husbandry

Creation of conditions in which animals are kept that correspond to their Natural behavior.

- Protection of, and learning from, indigenous knowledge and traditional management

❖ ADVANTAGES OF ORGANIC FARMING :

(A) NUTRITIONAL, POISON-FREE AND TASTY FOOD:

The nutritional value of food is largely a function of its vitamin and mineral content. In this regard, organically grown food is dramatically superior in mineral content to that grown by modern conventional methods. A major benefit to consumers of organic food is that it is free of contamination with health harming chemicals such as pesticides, fungicides and herbicides. Several studies indicate that 10-60 percent more healthy fatty acids (like CLA's) and omega-3 fatty acids occur in organic dairy (Butler et al., 2008). In crops, vitamin C ranges 5-90 percent more and secondary metabolites 10-50 percent more in organic. Also , less residues of pesticides and antibiotics are present. Organically grown food tastes better than that conventionally grown. The tastiness of fruit and vegetables is directly related to its sugar content, which in turn is a function of the quality of nutrition that the plant itself as enjoyed.

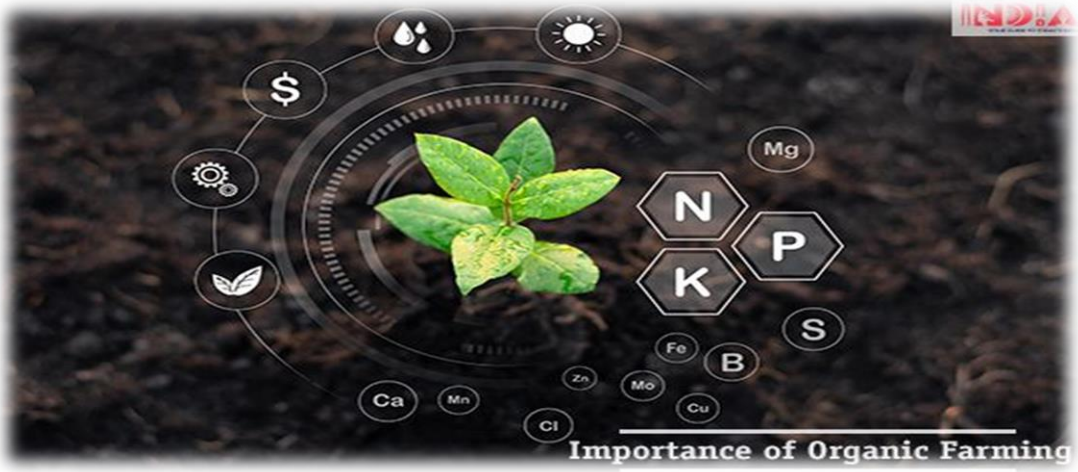
Organically grown plants are nourished naturally, rendering the structural and metabolic integrity of their cellular structure superior to those conventionally grown. As a result, organically grown foods can be stored longer and do not show the latter's susceptibility to rapid mold and rotting.

(B) Lower Growing Cost :

The economics of organic farming is characterized by increasing profits via reduced water use, lower expenditure on fertilizer and energy, and increased retention of topsoil. To add to this the increased demand for organic produce makes organic farming a profitable option for farmers.

(C).Enhances soil nourishment:

Organic farming effectively addresses soil management. Even damaged soil, subject to erosion and salinity, are able to feed on micro-nutrients via crop rotation, inter-cropping techniques and the extensive use of green manure. The absence of chemicals in organic farming does not kill microbes which increase nourishment of the soil. Biodynamic farms had better soil quality: greater in organic matter, content and microbial activity, more earthworms, better soil structure, lower bulk density, easier penetrability, and thicker topsoil (Reganold et al., 1993); agricultural productivity doubled with soil fertility techniques: compost application and introduction of leguminous plants into the crop sequence .



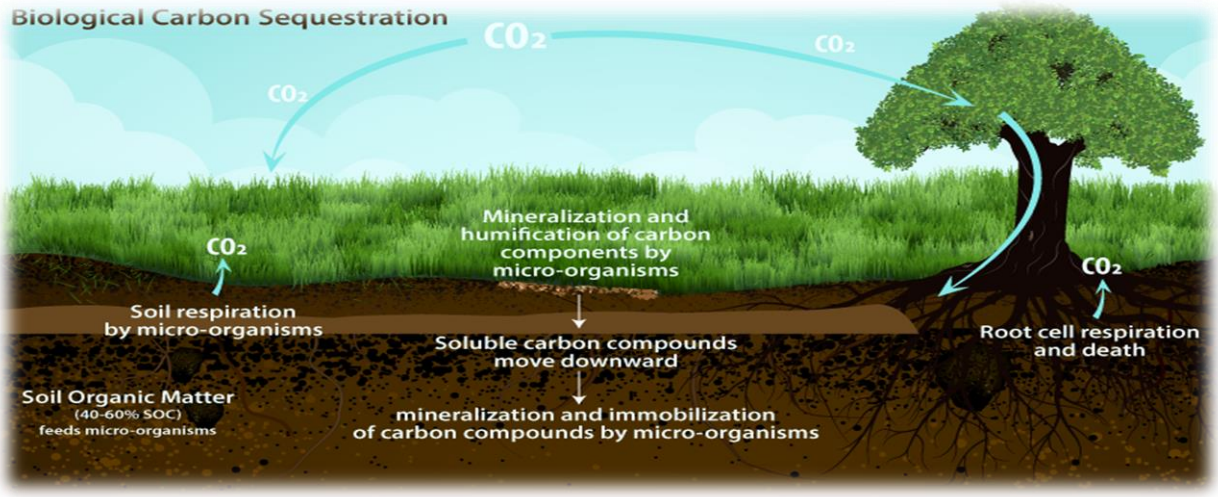
(D). More Energy Efficiency :

Growing organic rice was four times more energy efficient than the conventional method (Mendoza, 2002). Organic agriculture reduces energy

requirements for production systems by 25 to 50 percent compared to conventional chemical-based agriculture.

(E). CARBON SEQUESTRATION:

Organic farming is complimented the Carbon Sequestration because it focus on sustainability without using synthetic fertilizers, pesticides etc. In this farming ,organic mulch play important role in carbon sequestration. German organic farms annually sequester 402 kg Carbon/ha, while conventional farms had losses of 202 kg.



(F).ENVIRONMENT-FRIENDLY PRACTICES:

The use of green pesticides such as neem, compost tea and spinosad is environment friendly and non-toxic. These pesticides help in identifying and removing diseased and dying plants in time and subsequently,

increasing crop defense systems. Organic farms' biodiversity increases

resilience to climate change and weather unpredictability. Organic agriculture reduces erosion caused by wind and water as well as by overgrazing at a rate of 10 million hectare annually (Pimentel et al., 1995).

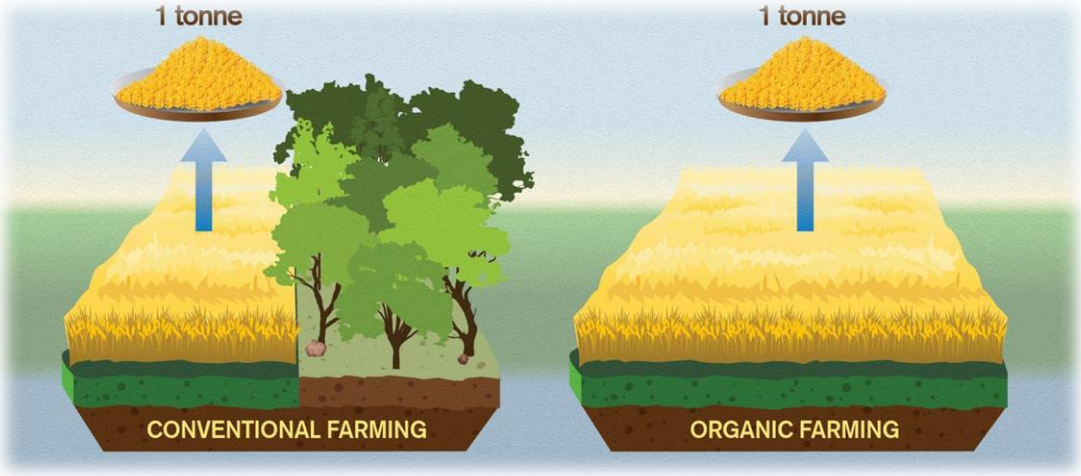
(G).ORGANIC FARMING IS A SOURCE FOR PRODUCTIVE LABOUR:

Agriculture is the main employer in rural areas and wage labour provides an important source of income for the poor. Thus, by being labour intensive, organic agriculture creates not only employment but improves returns on labour, including also fair wages and non-exploitive working conditions. New sources of livelihoods, especially once market opportunities are exploited, in turn revitalize rural economies and facilitate their integration into national economies.

❖ DISADVANTAGES OF ORGANIC FARMING

(A). LOWER PRODUCTIVITY:

An organic farm cannot produce as much yield as a conventional or industrialized farm. A 2008 survey and study conducted by the UN Environmental Program concluded that organic methods of farming result in small yields even in developing areas, compared to conventional farming techniques. Though this point is debatable as the productivity and soil quality of an industrialized farm decreases rapidly over the years.



(B). REQUIRES SKILL:

An organic farmer requires greater understanding of his crop and needs to keep a close watch on his crops as there are no quick fixes involved, like pesticides or chemical fertilizers. Sometimes it can be hard to meet all the strenuous requirements and the experience to carry out organic farming.

(C). TIME-CONSUMING:

Significant amounts of time and energy are required to execute the detailed methods and techniques that are required for a farm to be called an organic

farm. Failure to comply with any of these requirements could result in loss of certification, which the farmer will not be able to regain in up to three years. And it can be more time-consuming. Organic farming increases soil fertility by way of compost, and organic fertilizers and mulch. Organic fertilizers tend to be slow-release. As with control by botanicals, horticultural oils, and insecticidal soaps, organic fertilizers may need several applications before the desired results are brought about.

(D). MORE LABOR INTENSIVE:

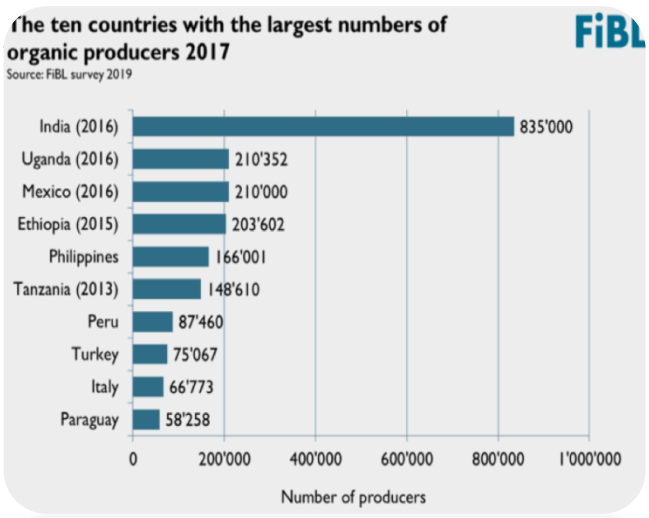
It can be more labor-intensive. For organic farming considers biological, cultural and mechanical responses to production challenges. It focuses on plant and soil health through proper aeration, drainage fertility, structure and , watering. So there's more above and below ground grunt work involved.

(E). Organic farming methods aren't as established and widespread - yet - as conventional production. So organic control by botanicals such as pyrethrin can be more expensive than conventional controls by the longer established, more available, and wider ranging artificial, commercial, synthetic chemical pesticides.

(F). Organic farming also requires a lot more inputs and more red-tape than conventional farming because certain practices must be met in order for a farm to retain the organic label. If anything slips, then the farm looses organic certification just like that.

❖ FUTURE PROSPECTS:

The movement started with developed world is gradually picking up in developing countries. But demand is still concentrated in developed and most affluent countries. Local demand for organic food is growing. India is poised for faster growth with growing domestic market. Success of organic movement in India depends upon the growth of its own domestic markets. India has traditionally been a country of organic agriculture, but the growth of modern scientific, input intensive agriculture has pushed it to wall. But with the increasing awareness about the safety and quality of foods, long term sustainability of the system and accumulating evidences of being equally productive, the organic farming has e merged as an alternative system of farming which not only address the quality and sustainability concerns, but also ensures a debt free, profitable livelihood



Conclusion...

Organic farming works in harmony with nature rather than against it. This involves using techniques to achieve good crop yields without harming the natural environment or the people who live and work in it. An organic farmer produces vegetables, fruit, cereal crops, or livestock without the use of chemical fertilizers, pesticides, or herbicides. In another way organic farming is kind of agricultural that provide the consumers, with fresh, tasty and reliable food while regarding natural life cycle systems. In addition to health benefits of organic products for consumers, there are vital environmental benefits for the earth. An organic farming keeps biodiversity and reduce environmental pollutions such air, water and soil. Organic agriculture has grown out of the conscious efforts by inspired people to create the best possible relationship between the earth and men.