

ORGANIC AGRICULTURE –A KEY TO PROMOTE CIRCULAR ECONOMY

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Conventional agriculture expeditiously promotes productivity and yield but for the time being, it shows its consequences such as over usage of natural resources and disturbs the agricultural environment. Stepping towards the sustainable development goals, circular economy has become the most efficient way all over the world, as it establishes the importance of sustainable agriculture and food production systems constantly by providing various possible solutions and use of nominal additional inputs.

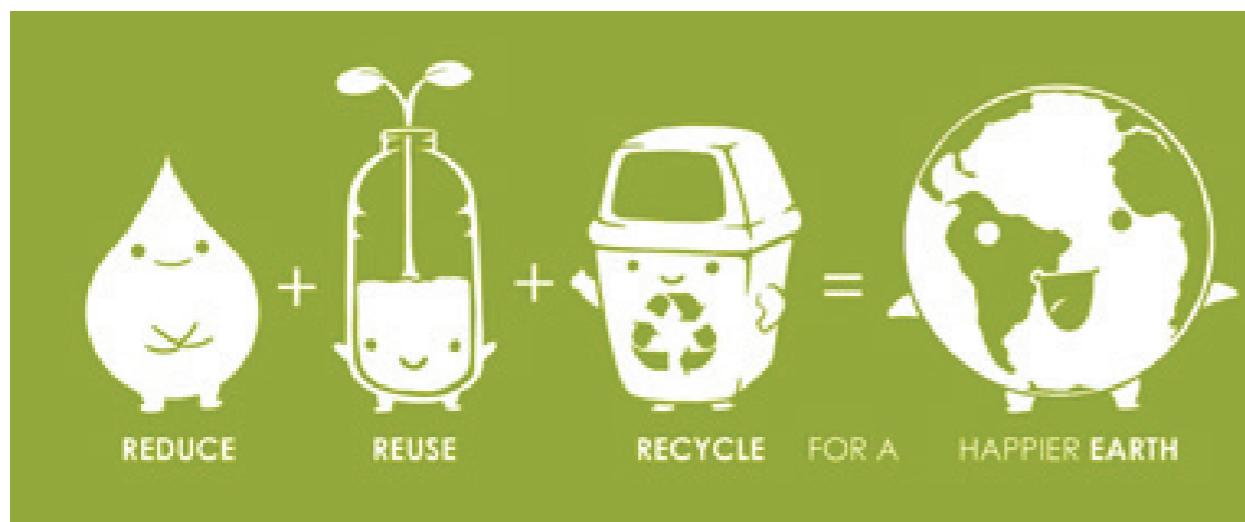
CIRCULAR ECONOMY AND ITS RELATION TO AGRICULTURE

A circular economy is based on the principles of eliminating waste and pollution, keeping products and materials in use, and regenerating natural systems. It is a resource-efficient economy that focuses on the sustainable and inclusive growth of the systems. The 3 principles which play a major role in the success of circular economy are 1) Reduce 2) Reuse and 3) Recycle

Reduce: To attain sustainability and to maintain a healthy environment in the long run, it is very important to bring down the extensively used agricultural inputs which cause soil and water pollution and other environmental degradation. This should be replaced with the incorporation of minimal inputs which are eco-friendly i.e., biofertilizers.

Reuse: Some non-renewable resources like water can be used multiple times. Water used for domestic and industrial purposes is subjected to different types of treatments and can be reused for crop irrigation in fields. Water used for washing livestock can be used for irrigation as well. This practice helps in watering and fertilizing the crop and avoids the release of sewage to water bodies.

Recycle: Recycling is the reusing of a particular product after completing its primary function. Recycling happens at various places including fields, homes, communities, etc.



WHAT IS ORGANIC AGRICULTURE?

According to IFOAM (International Federation of Organic Agriculture Movements), “Organic agriculture is a production system that sustains the health of soils, ecosystems, 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 good quality of life for all involved.”

ORGANIC FARMING IN INDIA

Interest in organic farming in India is mainly because of the following reasons i.e., decrease in agricultural yield, excess use of chemical inputs viz., artificial fertilizers and pesticides, decreased soil fertility, and ecological concern. In India, during the 10th five-year plan, there is the promotion of organic farming practices using organic wastes, and integrated practices like Integrated Nutrient Management (INM) and Integrated Pest Management (IPM). 9th five-year plan also emphasized the promotion of organic agriculture, but only confined to some crops like spices and condiments. Currently, many states and organizations have been involved in organic agricultural practices for the promotion of fresh and healthy produce to be available throughout the country.

The growth graph of organic agriculture is increasing as the years passing by, not only in India but also globally. India ranks ninth (9th) in terms of area under organic farming and first (1st) in the number of organic farmers. In the year 2015, the Government of India initiated programs like MOVCD (Mission Organic Value Chain Development) for the North East region and PKVY (Paramparagat Krishi Vikas Yojana) to uplift chemical free farming. It also trains and serves farmers to initiate organic agriculture and improve their income with premium prices.

BENEFITS OF ORGANIC AGRICULTURE

1) Less or no exposure to harsh chemicals

- Spraying pesticides and chemical fertilizers pollute the soil, water, and air and show a severe effect on the environment in the long run.
- In organic agriculture, there will be no exposure of plants to such harsh chemicals. Hence, it improves the product quality and maintains soil fertility.

2) Improves soil health

- Organic farming builds up soil organic matter better than conventional agriculture.
- According to an American microbiologist, Dr. Elaine Ingham, one teaspoon of compost-rich soil may host as many as 600 million to 1 billion helpful bacteria from 15,000 species.



3) Avoids soil erosion

- Organic agricultural practices discourage soil erosion.

4) Promotes animal health

- Organic agriculture encourages birds and natural predators to live happily on the farm which helps in pest control, naturally.
- Apart from pest control, cattle that live on organic farms are exposed to fresh, organic grazing that keeps them healthy.

PROBLEMS IN ORGANIC AGRICULTURE

Apart from the various benefits of organic farming, it also has many problems associated with it, which are mentioned below.

1) Shortage of organic seeds

- Due to less availability of certified organic seeds, many farmers are forced towards buying conventional seeds.

2) Economic constraints

- Initially, fewer yields and low returns may discourage farmers. But in the long run, yield and income increase.

3) Marketing problems

4) Lack of awareness

- Organic farming requires proper knowledge to efficiently use the resources like biofertilizers and biopesticides.
- Governments should provide awareness camps and programs to train the farmers in such aspects, but there are no such initiatives by the government as it requires a lot of manpower and resources.

5) Inability to meet export demands

- Consumers in well-developed countries like the USA, Japan, and Canada are ready to pay the premium prices but the farmers are not able to meet the standards due to a lack of knowledge and guidance.

Notwithstanding the constraints, organic agriculture is developing as a fruitful initiative in some rural areas and showcasing its potential to come up with sustainable development with the applications of circular economy principles.

CONCLUSION

There are various contrasting perceptions towards organic agriculture, but there is a vigorous unanimity on its eco-friendly nature and ability to maintain human health. Also, many studies have disclosed that organic agriculture is productive and, as it puts the accent on wise use of resources, ecological protection, health, and safety to the greatest extent and acknowledges the concept of the circular economy. Hence, there is a need in spreading awareness about various organic farming practices among farmers and the government should take up initiatives to train and inculcate knowledge and awareness to attain a circular agricultural economy.

