



Review article

Sustainable Development and Organic Farming in Indian Context

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Abstract

We know that there is a lot of growth and progress to get food, shelter and energy, but a balance between nature and life is also necessary. Due to our prudence, we have misused a lot of natural resources, as a result, today we are facing various types of crisis in dire forms, some water crisis, some energy crisis, some environment pollution and some other incidents are putting a question mark on our existence. Recycling by reducing the waste products - The recycling of the waste left after using various materials is necessary because it causes pollution of natural resources which makes us prone to various types of diseases and is making us and our coming generation as a time on the existence. By recycling the waste materials, where it is used again, the environment will also be protected. This is necessary to preserve the environment and develop it properly.

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1. Introduction

Freely we have received, freely give. (Bible, Mathew)

This statement of Vedas and Bible is the message received by our ancestors which is the basic basis of sustainable development freely you have received, freely give development. (Maharana, N. 2008)

The term development was first used by IUCN (in international Union for Conservation of Nature & Natural Resources) in its report “World Conservation Strategy” in 1987. Sustainable development is the development under which the needs of the present generation are met without compromising on the ability to meet the needs of future generation. (Ojha, S.k.2004)

In fact, through the above messages, our ancestors tried to make us understand that we should use our natural resources like land, water, air and forest wealth, but the way of use should be such that they are not damaged as well as it is our Be available to future generations, but it did not happen. The purpose of development is not only to increase our standard of living, but also to take care of the quality of life that the environment we are living in is also necessary to protect them so that the availability of what is necessary for a healthy life is maintained.

For the beauty of nature, its purity and its balance, for the necessary sustainable development, some programs and policies should be determined from time to time, in which the following important things should be included. Let us get a brief overview of those things. (Maharana, N. 2008)

By making government programs successful through public awareness, the government determines many types of plans and policies for environmental protection, but those plans and policies do not get success in public awareness.

There are three important components of sustainable development.

1. Protection of the environment
2. Equitable development
3. Family planning

Therefore, it is necessary that the general public should be made aware of the benefits and utility related to the schemes so that they can contribute to environmental protection, to ensure their participation.

2. Objective-

1. To maintain the quality of various components of nature so that ecology can stay Mechanism.
2. To make proper and balanced use of natural resources so that the future generation along with us can get a chance to use it and their life goes on uninterrupted.
3. To try to improve the standard of living of the lower.

3. Methodology -

This study is a descriptive research aligned with the quantitative approach.

4. Organic farming -

Organic farming is that method of agricultural production in which the use of synthetic compounds such as fertilizers, pesticides and growth regulators is completely banned. Under this farming, emphasis is laid on crop rotation, manure made from crop residue animals and mechanical farming techniques. (Maharana, N. 2008)

In other words, it can be said that farming in which chemical fertilizers, insecticides and growth controls are not used, but organic fertilizers (Organic / Bio-manures) and organic pesticides are used to control insect diseases. This Khoti is called organic farming, live farming, also known as sustainable farming.

India with a total area of 142 million hectare under cultivation has 68% area under rainfed cultivation which spreads to 177 districts covering 86 million hectare. (Aulakh, C. S. & Ravishankar, N.2017)

The International Federation of Organic Agriculture Movements (IFOAM) has suggested the basic four principles of organic farming, i.e. the principle of health, ecology, fairness, and care. The main principles and practices of organic food production are to inspire and enhance biological cycles in the farming system, keep and enhance deep-rooted soil fertility, reduce all types of pollution, evade the application of pesticides and synthetic fertilizers, conserve genetic diversity in food, consider the vast socio-ecological impact of food production, and produce high-quality food in sufficient quantity (IFOAM, 1998).

In this way, we can understand that agriculture is a priceless gift of nature to us, which our ancestors developed by keeping in the company of nature, till the 10th century the traditions of agricultural work and management of agricultural wealth with other organisms continued, but after that this stage was deeply hurt by the invaders. Such a system was developed by them in which crops like cotton, sugarcane, coffee, rubber and jute were produced for export instead of food, due to which there was a food famine. To increase the yield, instead of the

traditional method of farming being adopted, chemical fertilizers like urea, D.A. P. ammonium solution etc. and insecticides such as metasetan chloropyrophos and weedicides such as atrazine, basaln etc. started being used due to which agricultural production started increasing. For a few decades, various types of fertilizers and insecticides were used in the greed of more production, but later as a result, not only did the productivity decrease but also the depletion of groundwater, the reduction in the fertility of the land and the constant purchase of fertilizers, seeds and insecticides. To meet the expenses, the farmer had to take a loan, due to which the farmer started committing suicide. An ancient saying, best agriculture, medium trade, low job, proved to be untrue. (Maharana, N. 2008)

Whereas in traditional farming, along with agricultural work, cattle were also reared and their excreta and fodder residues were used as manure. For irrigation, water was used only from rain or wells. The people of the whole village worked together. The seeds which were sown in the fields during agricultural work were also stored at the time of production of the crop. But in the pursuit of more production, when the farmer brothers started using sucker seeds, which needed a lot of fertilizer and water, their condition became pathetic.

5. Principle of organic farming -

In the 2005 meeting of the International Organization for Organic Agriculture (IFOAM), Germany, a resolution was passed to promote organic farming on four main principles, which are as follows:

- 1. Health-**Produce high quality nutritious food through organic agriculture. Let us go so that a safe and healthy society is created from disease.
- 2. Ecology -** The organic farming system should be made in such a way that the biodiversity is maintained. In this sequence of production, ecological balance should be maintained.
- 3. Equality and Impartiality -** In organic agriculture, the farmers, pharmacists and distributors should take care of equality and fairness of opportunity in all, that is, all the basic needs of the one who is involved in this work, his safety and health should be taken care of.
- 4. Safe Future-** Efforts should be made to increase production through this agriculture, but resources and environment should be kept in a balanced state for future generations. Thus we see that organic agriculture also plays an important role in ecological balance.

6. Characteristics of organic farming -

1. Seasonal crops in climate change
2. Low cost high profit
3. Your home bread
4. Pollution free farming

5. Healthy food
 7. Self employment
 8. Own owner
 9. Substance village dwelling
 10. Animal husbandry assistant
 11. The ladder of self-reliance
 12. Clean environment happy life
- 7. Merits of organic farming**



Figure 1: Merits of organic farming

8. Organic manure and its source -

Just as we need food every day for our growth and development. We get nutrients, in the same way, trees and plants also need nutrients for growth and nutrients, which are supplied by manure and fertilizers.

Organic matter obtained from the waste of plants and animals such as dung, waste vegetables, fruits and plant residues is called organic manure. The above substances are stored in pits and covered with soil which is decomposed by micro-organisms from complex substances to simpler organic substances. The manure obtained in this way is called. (Maharana, N. 2008)

One of the main sources of preparation of organic manure is cow but the farmer brothers are unaware of their put cow dung once or twice in a year but this method is not right. If it is converted into manure in a scientific way, then the production capacity of the land or if raw dung is put in the fields, then termites get into the field, it is not present in the field. It also absorbs and due to lying in the sun, many of its nutrients are destroyed. The dung remains raw, along with many weed seeds also go to the fields. Let us now use available crop residues, quantity of animal feces and other local items as fertilizers. Let's try to understand briefly the different methods of preparation organic manure.

9. Method of preparing organic manure -

1. Manure prepared from cow dung gas plant- Along with manure, dung gas becomes available in plenty from the dung gas plant. Gas is obtained immediately as fuel and within a month the compost is also ready. This manure is called slurry which is semi-liquid. It can be easily used with irrigation.

2. Preparation of manure with the mixture of cow dung and crop residue- Under this method, by making separate layers of residue and cow dung, making a pit inside the ground and making a wall on all four sides, compost is made by Nadep method. This method was discovered by Shri Narayan Rao Padri Pandey (Nadep Kaka), a farmer living in Yavatmal district. Therefore, by this method the fertilizer is called NADEP method. (Maharana, N. 2008)

Indore and Bangalore method is also to be used in preparing this type of manure. Under the second method, four pits or ditches are made around the field so that there is continuous manure from rain's garbage and dung, but in this care is taken that the manure is made, there is no accumulation of water, the place is shady. Yes, and the temperature should not be too high. If the residues and residues of different types of crops are used in the compost made in this way, then the amount of nutrients in the manure is balanced.

3. Vermi Compost- Vermi compost is also known as Panchu's manure. We all know that earthworm is called a farmer's friend because it does well to make manure in the field.

25-30 degree Celsius temperature is suitable for making Vermi compost. For this, a thatch of height of 6-8 feet is prepared so that suitable temperature and shade remain. Some special species of earthworms eat dung and other organic matter rapidly and make their manure. For this, manure is made by making a pucca pit in the ground or by making four walls of bricks two feet high outside the ground. Earthworms that make compost get Rs 100-500 a kg in the

market. The cooled cow dung is kept in the pit for 5-7 days so that its heat ends and the cow dung rots a bit, after that its number increases rapidly when earthworms are kept in it. By keeping earthworms in fresh dung, earthworms can also die, it should be taken care of. Earthworm makes half rotten cow dung crop residue into manure in 1 to 1½ months while compost manure is made in 3-4 months. This type of manure is best for fruit vegetable. (Maharana, N. 2008)

10. Future of organic farming in India -

India is an agriculture based country with 67% of its population and 55% of manpower depending on farming and related activities agriculture fulfills the basic needs of India's fastest growing population accounted for 30% of total income or organic farming has been found to be an indigenous practice of India that practice size is in countless rural and farming communities over the millennium. (Das, S., Chatterjee, A., Pal, T.K., 2020)

But the production of organic manure is not possible due to the lack of organic wastes and animals in the countries. While there is no shortage of cattle in our country, as a result there is no problem in the supply of organic manures. Due to its abundance, organic manure is easily available here for organic agriculture. One cow can make enough fertilizers and pesticides for 5 acres of farmland. It is estimated that 22 lack tons of cow dung is received daily in our India. If used properly, tomorrow 12 million 95 to 80 thousand hectare land can be made fertile and about 300 million tons of organic manure can be obtained for agricultural land. In this context we can say that organic farming. (Narayanan, Dr. S., 2005)

In the case of India, the future of the country is bright but in this field we all have to be a concerted effort and a public awareness has to be spread about crops obtained from organic farming.

11. Conclusion-

It was the dream of Mahatma Gandhi that every person of our country should be self-sufficient, organic fertilizer can prove to be a milestone in this. About 2.78 million hectare of farmland was under organic cultivation as of March 2020, according to the Union Ministry of Agriculture and Farmers' Welfare. This is two per cent of the 140.1 million ha net sown area in the country.

Different types of organic fertilizers like vermin-compost name compost.

Organic production methods play a double social role; on the one hand, they deliver

Good's to a specific market driven by demand for organic products; on the other, they ensure access to public goods, which contributes to environmental protection, animal

welfare and rural development. (Wladyslawa,L., Kalinowski,S., Shmygol., 2021)

The production of crops can be increased by using vermin-wash, organic pesticides etc. Apart from farming, there are some other ways of farming. Let's get some brief information about them. (H, P. et al., 2020)

- **Natural farming** - It is similar to organic farming but it does not correspond to the productivity of the soil.
- **Resurgence of agriculture**- nature itself has the characteristics of pest control, increased productivity and has the ability to increase fertility.
- **Farm Promotion**- It is a form of sustainable agriculture. In this, cultivation according to a directed method
- **Production of alternative agro-** crops is a complex process that occurs between different organisms is performed depends on the interaction. There are different forms of alternative agriculture-
 1. Use of plants with genetic similarity.
 2. Use of inorganic fertilizer
 3. Use of weedicides and insecticides
 4. Utilization of large agricultural area
 5. Crop Rotation ecological

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