POTENTIALITY OF ORGANIC AGRICULTURE IN ASSAM

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Abstract

Organic agriculture is an eco-friendly Agriculture that largely avoids the use of chemical fertilizers, pesticides, growth regulators etc. It is a holistic production and management system which is supportive of the environment, health and sustainability. Now a day's food consumption practice is changing among the consumers and now they want to choose food which is free of all synthetic chemicals, fertilizers, and pesticide. They want to consume organic food which is not only sustainable for health but also environmental friendly. Along with other North- Eastern states, Assam is blessed with diverse and favourable agro-climate conditions and with rich fertile land. Assam has a strong potentiality for Organic Agriculture due to its natural suitability, low chemical fertilizer use and growing global and national demand for organic products. In this paper an attempt has been made to find out the potentiality of Organic Agriculture in Assam and the Constraints of Organic Farming in the state of Assam.

Keywords: Organic agriculture, fertilizers, pesticides, sustainability, environmental friendly.

Introduction:

` Organic agriculture is a farming practice where only organic inputs like organic fertilizers and pesticides are used without affecting the natural character of land and ecology. It avoids the use of synthetically produced fertilizers, pesticides, and growth regulators and livestock additives. It is the ecological production management system that promotes and enhances biodiversity, biological cycles and biological activity of the soil. The essence of organic farming is to feed the soil rather than the crops to maintain optimum soil health with its vibrancy and resilience. Organic farming aims at sustaining and increasing the productivity by improving the soil health and overall improvement of agro- ecosystem.. Sustainable agriculture is a type of agriculture that focuses on producing long-term crops and livestock having minimal effects on the environment. Though there are many goals of organic farming the two widely accepted are i) to achieve sustainable farming system that preserves the environment as well as the soil fertility without disturbing the rules of nature, ii) to obtain toxin free agriculture produce for long-term safety to human health. Organic farming is based on "biological driven nutrients" and helps to attain a closed nutrient cycle, a key factor to achieve sustainable agriculture.

Assam is blessed with diverse and favourable agro-climate conditions and with rich fertile land. Assam has a strong potentiality for Organic Agriculture due to its natural suitability, low chemical fertilizer use and growing global and national demand for organic products. Assam has tremendous potential for organic farming due to its low consumption of chemical fertilizers, making it "naturally organic" In this paper an attempt has been made to find out the potentiality of Organic Agriculture in Assam and the Constraints of Organic Farming in the state of Assam.

OBJECTIVES :

This paper is concern with the following objectives-

- To study the potentiality of organic Agriculture in Assam
- To analyse the Constraints of organic Agriculture in the state of Assam.

Need of Organic Agriculture:

With the development of agriculture and unsystematic use of chemical fertilizers and pesticides are creating several negative impact on the environment. The use of pesticides and other chemicals are reducing the quality of food and causing various diseases and reducing body immunity. So organic farming has the capability to take care of all such problems. Besides these organic farming is eco- friendly and health friendly.

On the basis of scientific research it is being proved that the indigenous practices in the traditional farming system were good in respect to maintenance of ecological balance through nutrient management and plant protection measures.

Basic Requirements of Organic Agriculture:

To term as an organic agriculture there are some requirements-

Conversion:- Organic crop production system and building up of soil fertility requires an interim period called the conversion period. It is the period in which the whole farm including the livestock is converted into organic. The beginning of the conversion period is calculated from the date of application for certification or the last date of application of unapproved farm inputs.

Mixed farming:- Along with agricultural farming animal husbandry, poultry, fisheries etc. can be practiced.

Cropping Pattern:- Rotation of crops with any leguminous crops to be practiced. Sufficient diversification should be obtained to take care of the post and disease pressure and to improve soil fertility, microbial activity and general soil health.

Planting:- Planting or seed material should be procured from organic source. In absence of organic source chemically planting materials or seeds can be used for one time.

Manuring:- Soil fertility need to be maintained through raising green manure crops or leguminous crops etc. Bio-fertilizers like Azolla, Azosirillium, Azobecter, Rhzobium culture, PSB etc. are to be used. Saw dust from untreated wood, calcified seaweed, limestone, gypsum, chalk, magnesium rock and rock phosphate can be used. Various sprays like vermin wash and liquid manures etc. can be used in crops for nourishing the soil and plant.

Advantages of Organic Agriculture:

Organic Agriculture has some definite advantages-

Environmental Sustainability: Organic farming benefits food production without destroying soil nutrients and environmental resources and thus helps in attaining sustainable development of agriculture

Reduced Chemical Exposure: A major advantage of organic food is that it is free of contamination with health harming chemicals such as pesticides, fungicides and herbicides.

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Generate More Revenue: Organic farming can generate more revenue. As the demand for organic food is more than that of its supply thus it can fetch a higher remunerative price of its product.

Improved Soil Health: Organic Farming Practices like Crop rotation and composting enhance soil fertility and structure.

Increased Crop Nutritional Value: Organic produce often has higher nutritional value due to the use of natural farming practices.

Supports Local Economies: Organic agriculture often promotes local food systems, supporting local economies and communities.

Improved Livelihoods for Farmers: Organic farming can provide a premium price for farmers, improving their livelihoods and contributing to local economies.

Biodiversity Conservation: Organic agriculture promotes biodiversity by using diverse crop and animal species, and conserving ecosystem services.

Climate Change Mitigation: Organic agriculture practices like agro forestry and permaculture can help mitigate climate change by sequestering carbon.

Improved Rural Development: Organic agriculture can contribute to rural development by providing employment opportunities and improving livelihoods.

POTENTIALITY OF ORGANIC AGRICULTURE IN ASSAM

Considering eco-friendly and environmental safeguard of organic farming emphasis has been laid on promotion of it by using green manure adopting crop rotation management and ecologically sound plant protection measures.

Assam is blessed with diverse and favourable agro-climate conditions and with rich fertile land. Assam is a state where the cultivation is done depending on monsoon and traditional equipments. The use of chemical fertilizers and pesticides is very less. Of the net cultivated area of Assam and North-East out of 4.3 million hectare approximately 30.92 hectares is never using to inorganic and chemical fertilizers. The farmers of Assam has been found to use only 40.46grams of chemicals in per hectare land as against 0.448 kg. in all India level.

As a result of globalization, the market preference for organic good has been increasing tremendously at present. Assam which has conducive geo-physical conditions for organic farming has the potential to emerge as a leader of the sector.

The state government plan to undertake organic farming in a big way is a timely move in the right direction. Increasing use of chemical fertilizers and pesticides in recent years for raising yield and agricultural output is gradually turning out to be a grave ecological and health hazard. In 2004 the State Agricultural Department along with Government of India initiated a scheme for organic farming in three districts of Assam including Udalguri, Sonitpur and North Lakhimpur covering an area of 191 hectare sand involving 154 farmers. This scheme lead to the production of 133 metric ton of joha rice in the year 2007. Since it is possible to maintain optimum levels of production by adopting organic farming, such kind of farming holds the key to a sustainable growth of agriculture sector without compromising on health, soil nutrient and environmental concerns.

Considering the advantage of organic farming the state is trying to increase its coverage. The products covered under this organic farming in the state include joha rice, pine apple, ginger, turmeric and orange papaya. It is expected that once the organic farming gain its momentum it would enhance the prospects manifold in exporting organic products under brand Assam.

Constraints of Organic Farming:

Lower Yields: Organic agriculture often results in lower crop yields compared to conventional farming methods.

Higher Labor Costs: Organic farming requires more labor-intensive practices, increasing costs.

Limited Availability of Organic Inputs: Limited availability and high cost of organic inputs, such as organic seeds and fertilizers.

Market Fluctuations: Fluctuations in market demand and prices for organic produce can make it challenging for farmers to adopt organic agriculture practices.

Certification and Regulatory Compliance: Organic agriculture requires certification and compliance with strict regulations, which can be time-consuming and costly.

Pest and Disease Management: Organic agriculture can be more vulnerable to pests and diseases, and managing them without synthetic chemicals can be challenging.

Soil Degradation: Organic agriculture can be more susceptible to soil degradation if not managed properly.

Limited Access to Credit and Insurance: Organic farmers may face challenges in accessing credit and insurance due to the perceived risks associated with organic agriculture.

Knowledge and Training: Organic agriculture requires specialized knowledge and training, which can be a constraint for farmers who are new to organic agriculture.

Limited Infrastructure: Limited infrastructure, such as storage and transportation facilities, can make it challenging for organic farmers to market their produce.

Policy and Regulatory Framework: Inadequate policy and regulatory frameworks can hinder the development of organic agriculture.

By addressing these constraints, organic agriculture can become a more viable and sustainable option for farmers and consumers.

Suggestions and Recommendations:

- The government should formulate and implement proper policies to encourage organic farming.
- Awareness programme should be organized with scientific information about organic agriculture.
- There should be provision for subsidized plant and seed of organic products.
- The government should determine higher price of organic product than conventional product to encourage the farmers.
- Research of organic agriculture should be organized by Agricultural Universities.
- There should be creating broad infrastructure with the development of export zones, packing houses with facilities of grading and packaging.
- Logistic and transport facilities are also need to be import for early and timely access to the market.

Conclusion:

Organic farming holds the key to a sustainable growth of agriculture without compromising on health and environmental concerns. Thus all efforts should be made to popularize the concept of organic farming so as to reap maximize benefit out of it and to make the agriculture sector a sustainable one. The farmers who are outside the ambit of organic farming should be encouraged to switch over to organic method of farming and the government should encourage the farmers to find out cost-effective techniques so that the poor farmers can adopt organic methods without depending on the harmful chemical fertilizers and pesticides. In order to reap maximum benefit from organic farming it is important to put in place a mechanism that can mitigate the adverse

impacts on agriculture on a large scale. Thus in order to harness the tremendous possibilities available in India and Assam, it is important to ensure that the fruits of agricultural research should reach the grass root level farmers at the earliest.

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