



Organic Farming: The Way to Sustainability in Agriculture

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Organic farming is now a holistic approach against the contaminated food production, health security, falls in biodiversity, disturbed soil nutrient cycles, soil pollution and degraded agricultural land. Use of natural inputs, neither mining nor lead to degradation of soil nutrients, promotion of soil microbial growth, maintenance of soil from texture to soil ecosystem are today's ethics of organic farming. Promotion of organic farming in India is mainly based on the requirement of huge quantity as well as quality of food for fast-growing population, increased agricultural-based economy, reduced GDP rate due to farming sector, overcoming degraded agricultural land area, requirement of soil sustainability and also saying "NO" to the use of chemicals for crop production.



Keywords: Chemicals, degradation, organic farming

Introduction

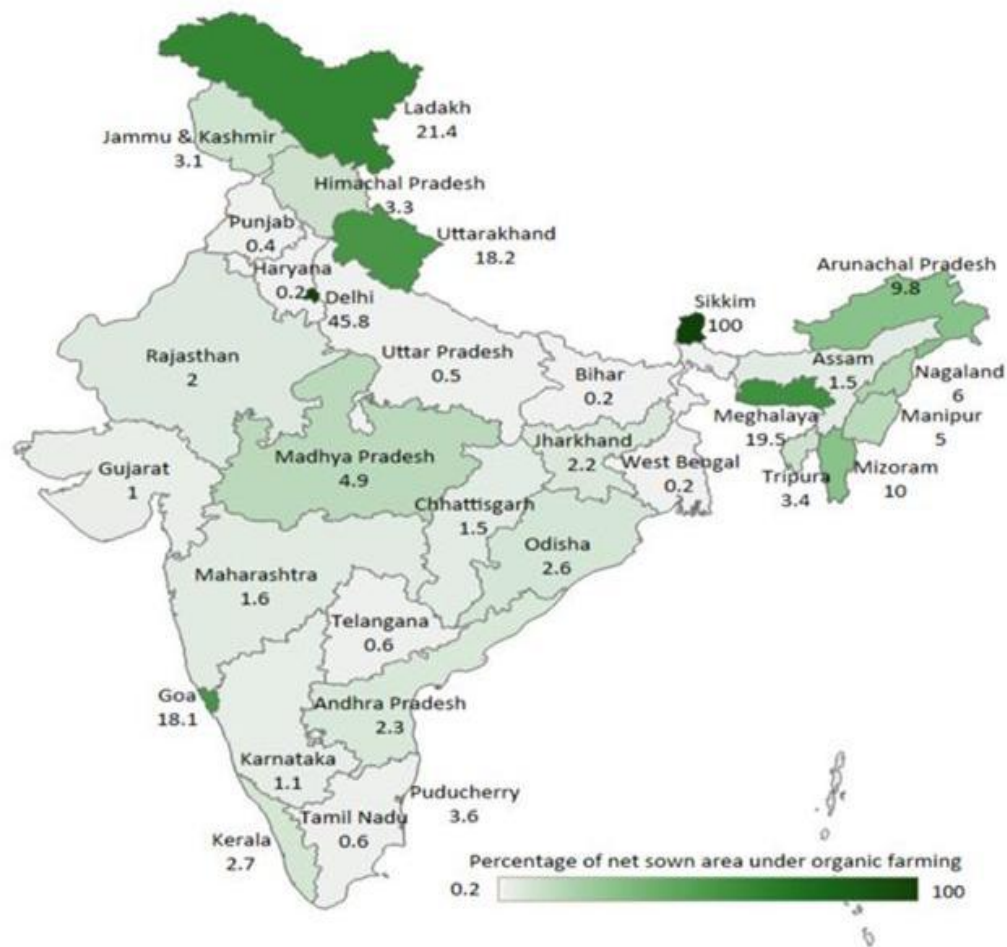
The modern lifestyle of human beings is the foremost basis of deforestation, degraded agricultural land worldwide using overloaded fertilizer application, short irrigation practice, use of harmful chemicals as fertilizer and pesticides, industrialization without using proper norms. Approximately, 40% of the world's agricultural soil is critically degraded and 24% area of productive soil requires attention (Rashid *et al.* 2016). On the basis of the report of ISRO 2016, in India, 30% of the total land was degraded till 2011-2013 with an increment of 0.6% (1.87 million hectare) compared to 2003-2005. Therefore, serious attention is required to overcome the degraded agricultural land in India not only for sustainable agriculture but rather to sustain ecological and economic systems. The use of organic supplements in organic farming is not a recent technique to exploit; it had its scope from a very ancient time when agriculture had started and no compost or any type of fertilizer were in use – only cow dung was in use. That's why it doesn't lose its capacity to maintain the fertility level/health of the soil. Organic supplements are usually the derivative of animals and plant residues such as poultry manure, farmyard manure, vermi compost, hair and wool waste, cow dung with rice, wheat straw, sorghum stalks, pigeon pea, chickpea, sugarcane trash, etc. Organic manure maintains microbial diversity. Thus, they led to developing a nutrient and microbial-rich, structurally maintained, pollution-free soil covered land as the high demand for land reclamation.

There are reasons for the need of the Organic Farming in India

- The organic food industry is rising and is growing very fast ensuring high profitability.

- Food security needs to be addressed with the growing population and decreasing supply of resources which is why there is a need to increase the production but in a feasible and sustainable manner.
- Maintaining a clean and green environment is equally important, thus environmental sustainability needs to be maintained which can be achieved through organic farming.
- There needs to be an improvement in the health as the consumption can lead to many diseases such as cancer, infertility which happens when the toxic residue remains in the body, thus the safety of humans and animals are of utmost priority.
- The strike of balance between the environment and the livelihood becomes immensely important due to the risks caused by conventional agriculture practices.

Where in India is organic farming prevalent



Source: Lok Sabha 2019; Ministry of Agriculture & Farmers Welfare 2019.

Organic farming is practiced across almost all states in India (Figure 1), with Sikkim formally declared a 100 percent organic state in 2016. The top three states, accounting for almost half of the area under organic cultivation, are Madhya Pradesh, Rajasthan, and Maharashtra. A recently published report by the Centre of Science and Environment highlights how only a small fraction of most states are under organic farming. The top three states that account for the largest area under organic cultivation i.e., Madhya Pradesh, Rajasthan, and Maharashtra have only 4.9, 2.0, and 1.6 percent of their net sown area under organic farming, respectively. Other states, such as Meghalaya, Mizoram, Uttarakhand, Goa, and Sikkim, have 10 percent or more of their net sown area under organic.

How much area in India is under organic farming

As of March 2020, 2,780,000 hectares were under certified organic farming in India, about 2 percent of India's 140.1 million hectares net sown area. Of this, 1,940,000 hectares were under the National Programme for Organic Production-APEDA (NPOP), 590,000 hectares under PKVY, and 170,000 hectares under state schemes. In addition to this, under the NPOP, 1,490,000 hectares are designated as wild harvest areas for medicinal plants and aromatic plants, fruits, nuts, gums, honey, and marine and aquatic plants across 21 states. The top five states with the largest certified wild harvest area (80 percent of the total area) are Rajasthan, Madhya Pradesh, Himachal Pradesh, Chhattisgarh, and Jammu & Kashmir.

Major Schemes for Organic Farming

Government has been promoting organic farming across the country through various schemes. Some of the main schemes are as follows:

1. Paramparagat Krishi Vikas Yojana (PKVY): The Parampragat Krishi Vikas Yojana (PKVY), launched in 2015, is the first comprehensive scheme launched by the Central Government as a centrally sponsored programme.
2. Mission Organic Value Chain Development for North-Eastern Regions (MOVCDNER)
3. Food Safety and Standard Authority of India (FSSAI)

Principles of Organic farming

1. Principle of Health
2. Principle of Care
3. Principle of Ecology
4. Principle of Fairness

Components of Organic farming

1. Green manures
2. Biological management
3. Bio fertilizers
4. Organic manures
5. Crop rotation
6. Animal husbandry

Recommendations/Suggestions and Follow-Up

- Focus on proper irrigation technology, promotion of afforesting process, to maintain the soil moisture, to maintain the vegetative cover as well as prevent soil, water, and other land degradation.
- If land becomes adequately moist, land should be prepared and allowed for grazing, which promotes the nutrient cycle efficiently.
- Recommended management practices should be used to prepare the land for farming using the organic supplement, no-tillage practice but after properly investigating the basic need of that particular land.
- Government organized seed banks should use to start farming because, initially the main focus should be on land regeneration, not food production.
- When the land physicochemical and biological properties can be maintained, the land takes under proper farming. These steps are not possible without the financial support of the government and their implementation schemes and local bodies. Some NGOs should also come in front of this demanding issue. Organic farming is the earliest government-authorized and government-supported farming technology. The higher profitability of organic farming was due to minor labour requirement and to a greater market appreciation for organic products that granted a premium price respect to conventional

prices (Akshu and Hooda 2017). The demand for Indian organic food products is on the constant increase worldwide as India exported organic products worth \$ 515 million in the financial year 2017–2018, from \$ 370 million in 2016–2017, by officials from Agricultural and Processed Food Products Export Development Authority (APEDA). Registering an increase of 39%, the total volume of export during 2017–18 was 4.58 lakh tones, they added.

Conclusion

This established agriculture technology plays a vital role not only in improving and maintaining the soil fertility stability, sustainable agriculture, food demand, and security but also in increasing the value of organic export, certified organic farms, use of livestock population, the human population as workers and reforming land as well as the country economy

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