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Organic Farming in Telangana - Scope and Opportunities

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Abstract

The modern Agricultural practices led by green revolution technologies helped the country to achieve self sufficiency in food production, but, left with innumerable no. of problems like decline in factor productivity, environmental pollution and degradation, depletion of natural resources, emergence of micronutrient deficiencies and super weeds, increased cost of production, loss of biodiversity, increased emission of green house gases and climate change. Organic farming was found to be an eco-friendly practice to reverse the ill effects of modern Agriculture. The state of Telangana has formulated a favourable organic farming policy. In this article, the problems with modern Agriculture, scope and opportunities for organic farming in the Telangana were discussed.

Introduction

Indiscriminate use of synthetic chemicals without addition of organic manures and secondary and micronutrients and cultivation of legumes led to-

- Emergence of soil nutrient disorders especially micronutrient deficiencies (*e.g.*, Zinc and Iron deficiency in rice, Iron chlorosis in jowar and groundnut).
 - Decline in soil fertility due to loss of organic matter.
 - Imbalance nutrition.
 - Contamination of soil and water bodies leading to human and animal health hazards.
 - Increase in soil, water and air pollution.
 - Soil and water erosion.
 - Soil and water salinity.
 - Decline in beneficial insects.
 - Pest resurgence.
 - Pesticide residue beyond maximum residue limit (MRL) in food.
 - Increased green house gas emissions and climate change.
- Organic farming was found to be a sustainable and viable option in order to counter the adverse effects of modern Agriculture.

Adoption of Organic Farming helps in-

- Improvement in soil health and quality and food and nutritional quality.
- Increased microbial diversity and microbial activity.
- Better soil and water conservation.
- Production of foods rich in antioxidants and with meagre pesticide residues and free food.
- Onpar or higher yield in the long run over chemical farming.

- Less pest and disease incidence.
- Improved soil physical, chemical and biological properties.
- Less N₂O emissions and N losses.
- Reducing GHG (green house gas) emissions and mitigating global climate change.

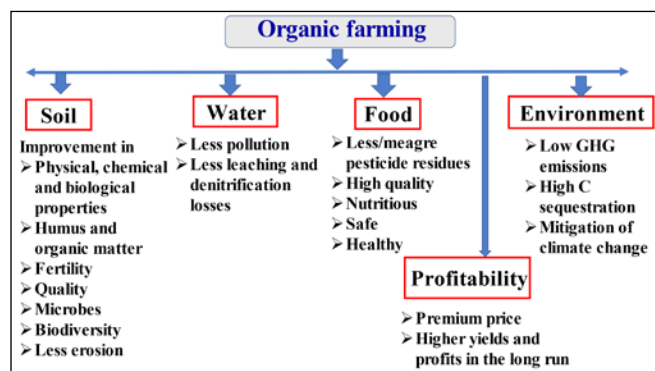


Figure 1: Benefits of Organic Farming

Scope and Opportunities in Telangana

The state has vast potential to adopt and promote organic farming because of-

- Diverse agro-climatic conditions with varied agricultural production systems, different types of soils, livestock, forest coverage, natural vegetation and hard working and innovative farmers.
- Nil to low fertilizer consumption areas, default organic areas (certain pockets of Khammam, Warangal, Adilabad and Mahabubnagar) rainfed areas, tribal areas, inaccessible areas have to be identified and promoted for organic farming.
- The resource poor rainfed farmers who mainly depend on on-farm sources of inputs can be earmarked for organic farming through proper education and capacity building.
- Separate strategies or models have to be developed for areas with high, medium and low external chemical use.
- No. of organic stores, markets and shops and ways of marketing including online have increased enormously in the state. This shows that organic farming has huge potential.
- Possibility for export due to presence of an International Airport in Hyderabad.
- Annually, more than 290 lakh tonnes of crop residue (Agricultural field crops) is being generated in Telangana. Approximately, 30-40% of rice and 90-95% of cotton residues are being burnt in the state. Hence, farmers need to be educated to incorporate crop residues *in situ* with the help of multi crop shredders, rotary mulchers, rotavators, slashers etc., It helps in avoiding burning, improving organic matter thus soil fertility. Further, they can also be subjected to decomposition

using waste decomposer or spraying consortium of micro-organisms @ 1% of the volume of crop residue or it can be utilized for production of compost, vermicompost and Biochar.

- Lot of waste is being generated in cities in the state, but, it is mismanaged. Hence, it should be properly collected, composted and made available to the farmers. For e.g., Telangana State Agro Industries Development Corporation (TS-Agros) in Hyderabad, India has come out with a brand name 'Telangana Siri' for city compost duly utilizing urban waste generated in Hyderabad and selling the same to farmers at all 600 AgroRythuSeva outlets across the states. Such success stories can be upscaled and outscaled in rest of the cities too. This further augments organic farming in the state.

- Creation of community cattle and goat/ sheep hostels in the villages help to take better care of their feeding, collection of wastes of these ruminants and composting and then usage of the same for organic crop production. The successful implementation of Ibrahimpur (village in Telangana) model can be upscaled in rest of the villages. Further, the government of Telangana has distributed sheep and goat freely to certain category of farmers. This is a positive step towards organic farming.

- Setting up of vermicompost units at farmer/ village level will help to produce required quantity of vermicompost duly utilizing locally produced crop residues and dung.

- Growing green manures crops (*Dhiancha*, sunhemp, pillipesara, mungbean, cowpea, etc.) well ahead of rainy season and incorporation at 50% flowering *in situ* 10-15 days before sowing of crops in the monsoon season, will be of great help in sustaining soil fertility and supplementing the crop nutrition. The government of Telangana has taken step to promote green manuring in the state. However, seed production of green manures has to be promoted in the vacant lands of research farms, seed farms and farmers fields from September onwards every year, in order to produce sufficient seed to meet the ever growing demand. Further, it helps in promoting organic farming.

- Biofertilizers and biopesticides are low monetary inputs, but, gives better results in terms of saving nutrients/ chemicals and improving yields. However, their availability and quality is meagre. Hence, their production and accessibility for farmers can be enhanced by setting up production units at mandal level in all districts under the control of Agricultural Department.

- The Paramparagat Krishi Vikas Yojana (PKVY) was started in 2015 by the central government for soil health management under National Mission of Sustainable Agriculture (NMSA). It is intended to promote Organic farming through cluster approach and PGS (Participatory Guarantee Scheme) certification. It aims to produce pesticide residue free and healthy food and raise farmer's income. It was planned to form 10,000 clusters in three years which is equivalent to 2.0 lakh ha under organic farming. Under this, each farmer is

provided with financial assistance of Rs. 20,000.00 per acre in a three years period to meet the expenditure from seed upto marketing.

- Organic farming is further encouraged through various schemes like National Project on Organic Farming (NPOF), National Horticulture Mission (NHM), National Project on Management of Soil Health and Fertility (NPMSH and F) and Mission Organic Value Chain Development for North Eastern Region (MOVCD-NER).

- Presence of organic farming certification agencies in the state can make the certification process easier for farmers. Further, TSSOCA (Telangana State Seed and Organic Certification Agency), Hyderabad has initiated Organic Certification by establishing Telangana State Organic Certification Agency (TSOCA) with to render service in inspection and certification of agricultural products and food processing by assessing the conformity of the products with NPOP standards and other International standards.

- Telangana state has formulated a favourable 'Organic farming policy' to promote organic farming in the state. This is aimed at strengthening the production systems, supply chain and marketing systems through development of proper infrastructure, regulation and providing incentives.

- Hence, farmers should be encouraged to take this opportunity to convert their farms into organic. Further, they should continue organic cultivation even after stopping government's financial assistance also.

- An 'Organic mela' is also being conducted during January every year in Public gardens, Hyderabad. It is attracting the attention of public and improving the awareness towards to safe and healthy organic food.

- In Telangana, the practical experience of Pudukula, a small hamlet in Palvancha mandal, Bhadrachari dist. and Enebavi villages (first organic village in India) in Lingala Ghanpur mandal, Jangoan dist. can be taken as models for replicating the organic farming in suitable areas in Telangana.

- Few NGOs (non-governmental organizations) and FPOs (Farmer Producer Organizations) are already promoting organic farming in the state. Their experiences and co-operation can also be taken into consideration while encouraging farmers to adopt organic farming.

- Among horticultural crops, there is a lot of demand for organically produced turmeric, ginger, chillies, mango, grape, pomegranate etc. Hence, they should be produced under pure organic production system and channelised for exporting to other countries. Similarly, there is a scope for production of paddy, millets, pulses, oilseeds, cotton among field crops, vegetables, honey and non-timber forest produce, medicinal and aromatic plants under organic methods in the state.

- Ban the use of ripening chemicals by traders.

- The location specific, problem oriented and profitable

organic packages/ modules for different crops or enterprises are not available. Hence, they should be developed with the help of State Agriculture, Horticulture and Veterinary universities and made available for all the stake holders.

- Organic farming can be made profitable provided-

- ✓ Linking organic farmers to commercial shopping malls (forward linkages). For e.g., 24 mantra etc., who offer premium price.

- ✓ Creation of separate minimum support price (MSP) for organic produce by the government.

- ✓ Self trade of organic products by farmers in the nearby towns or cities based on 'trust'.

- In view of better nutritional benefits of organic foods, it can be served to school going children under mid-day meal scheme across the country. Further, it can also be linked to official meetings, military canteens, restaurants, social welfare hostels and exports (Ramanjaneyulu *et al.*, 2020). It creates demand on one hand and helps to address health issues on the other hand.

The vast area under naturally organic/ default organic farming in the state can be exploited for organic production, processing and export thus Telangana can become a major supplier of organic products in the country.

Problems in Promotion of Organic Farming

- Collection and preparation of bulky organic manures is cumbersome. They need to be applied in large quantity due to low nutrient concentration. Hence, it is possible to adopt organic farming at certain locations where cattle population is large and certain high value crops are grown.

- The present sources of organic materials will not be sufficient to meet the nutrient demand if entire cropped area is brought under organic farming.

- Biological methods of pests, disease and weed control are slow in action and the results are not immediate.

- Organic food products are costly, so, it increases burden on the consumers.

- Needs to adopt cluster approach rather than individual approach which may be difficult to achieve in India.

- Non-availability of premium price for organic products.

- Many farmers are thinking that mere non-application of chemical fertilizers is enough to practice organic farming. Hence, farmers need to be educated in such a way that adoption of non-chemical methods starting from land preparation to marketing to make farming totally organic.

- The state has more than 3.98 crore population and more than 80% of the population depends on Agriculture for livelihood and it contributes 14% towards state GDP. Hence,

the state need to go slowly with organic farming due to possible low yields in crops and animals, which may affect overall production and necessitates intrusion into forest land to produce more to meet the demand.

Conclusion

Organic farming can mitigate the negative effects of climate change, preserve biodiversity, enhances soil health and crop productivity. The initial yield reduction in organic farms must be offset by offering premium price by the government. The organic practices like green manuring,

biofertilizers, compost application, mechanical weed control and non-chemical methods of pest control need to be adopted liberally. The certification process must be made easier and accessible. Organic farming can be upscaled and outscaled in certain crops that have high demand in market.

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