



Prospects, strategies and constraints of organic farming in Jharkhand

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Abstract

Organic Farming may be defined as the cultivation of crops with the use of bio or green manure for plant growth and nourishment, and the protection of the same by use of bio-insecticides and pesticides, and rodenticides, instead of harmful synthetic chemicals. The rampant use of synthetic chemicals as fertilizers, and protective elements have had adverse effects on health of human beings, soil, flora and fauna and to the biological cycle as a whole. The literate portion of the world is fully aware of the health hazards of conventionally grown food crops, due to presence of higher pesticides, heavy metals, antibiotics, and hormone stimulating growth of vegetables, milk and meat. With the awareness among the people, the demand for such organic food stuff is far more than its supply. In spite of the fact that people are ready to pay more for nutrient rich organic food, they have no option as there is a wide gap in between the demand and supply of organic food products.

Jharkhand State has a very strong potential of becoming the leading producer hub of organic food. Its rich bio-diversity, presence of minor forest produce, cheap labour availability and the strong affinity of the tribals towards forest and its products, etc. offer a favourable ecosystem to Jharkhand to earmark itself as the leader of organic food products in India and world. What is needed is the genuine honest sprint towards this direction.

Keywords: organic farming, cultivation, green manure, bio-insecticides, pesticides, rodenticides, bio-diversity, nutrient

Introduction

Jharkhand state of India falls under the agro-climate zone VII (Eastern Plateau and Hilly region), which is further divided into three subzones. The state receives 120-160 cm of annual rainfall which is almost double the national average of annual rainfall. The climate varies from dry semi humid to humid semi-arid types. About 327, of annual rainfall occur in the monsoon season of June to September. In general, the soils of Jharkhand ranges from low to very low phosphorus and sulphur availability, nitrogen content is at medium level, potassium is also in the medium range with deficiency of boron. About 1.6 million hectares is acidic in nature. The sloping areas make it vulnerable to soil erosion due to rainfall, or foods. In spite of being bestowed with good rainfall, due to poor technology and obsolete farming techniques, out of the estimated cultivable area of around 3.8 million hectares, only 2.56 million hectares is net sown area. The Cultivable land in the state is 52% but only 43% area of this is net sown area. This exposes the inefficiency and inadequate steps taken towards the recovery of sick status of agriculture. These circumstances, and natural gifts endowed to it, Jharkhand State has a huge potential to become the leading organic farm product state. Organic farm produce are rich in antioxidants and nutrients. The original genetic qualities are also preserved in organic farm produce. The world today is fully aware of the ill-effects of rampant use of synthetic fertilizers and pesticides, growth stimulating hormones, etc. The credit for rising cases of cancer, ulcers, diabetes, nervous disorders and deficiency diseases etc. goes to the food items consumed by us, which are poor in nutrient content but rich in harmful synthetic chemical. In spite of being aware about the demerits of conventionally grown food with synthetic chemicals, the people have no other option but to consume such food as the availability of organic food item is quite meagre. There is a

huge gap in the demand for and supply of organic food items. There are quite a few challenges in shifting from conventional to organic farming but they can be overcome with proper strategy. Impetus on organic farming can come as a boon for the poverty struck marginal tribal farmers of Jharkhand. This article aims to highlight the constraints and prospects of organic farming in Jharkhand, with the hope that it will help the policy makers to carve out ways in which the downtrodden farmers of Jharkhand may be uplifted.

Literature Review

There is a visible gap in the research area in field of organic farming in Jharkhand state. Yet, some of the literature related to this is as follows:

Organic farming in India: a vision towards a healthy nation.

By Suryatapa Das, Annalaxmi Chatterjee; Tapan Kumar Pal; in food quality and safety, Volume4, Issue2, May 2020.

The article deals with the importance of food quality and safety as consumer priorities. It further explains the adverse effects of chemical fertilizers and pesticides. It stresses the popularity of organic foods among consumers due to its high nutritional value and health benefits. It sums up with the impact of organic farming in ensuring sustainable development in India. But the article is silent on the strategies to do it.

Organic farming: why we don't have more organic farms. National Geographic, Nov 20, 2018.

By Rachel Cernansky

The article opens up with the case study of a farmer of Fort Benton, Montana, who shifts his traditional agriculture to

Organic farming. The challenges he faced until he got an assurance from Annie's, a producer of organic Pasta, to buy his crops, He took a risk and succeeded. This article reflects the socio-economic challenges in huge farms of Montana. But the socio-economic condition of marginal tribal farmers is quite different and their challenges are also quite different in Jharkhand.

Pesticide research must stay transparent and independent.

By Sebastien Savve, University of Montreal, May 7, 2019.

The article is an eye opener, as it rightly points out that getting best scientific information about safety of pesticides is challenging, as it is difficult to navigate the research on pesticides. It puts stress upon unbiased study design to demonstrate chemical's positive and negative effects, and the changing danger of pesticides, the bad impacts of chemical pesticides on human beings, flora and fauna as well. But the article concentrates on pesticides and not much to offer about the possible alternatives to it.

Methodology

Articles and reports from various newspapers, websites, government of India reports etc. have been studied, the data and information from them is collected and Analysed, along with the grass root level presence and observation of the agricultural sector in Jharkhand.

Geographical Location of Jharkhand

Jharkhand State is located in the eastern part of the Indian sub-continent, in between 21^o58'10" to 25^o19'15" North latitudes and 83^o20'50" to 88^o4'40" east longitudes, It extends 380 Km from North to South and 463 km from east to west. With an area of 79,714 km², it is the 15th largest state occupying 2.34% of India.

Prospects and Strategies of Organic farming in Jharkhand

Jharkhand State has a natural advantage in the sector of organic farming, as the tribal rural cultivators who comprise a bulk of the agrarian farming class, have still stuck to their age old custom of being in proximity with nature. This quality of being in propinquity with nature and natural life style of respecting nature in its as it is form is the essence of organic farming. The very grounds upon which agriculture in Jharkhand was deplored, such as use of obsolete farm techniques, less use of chemical fertilizers and pesticides, which led to poor yield per hectare, ignorance of the farmers etc. can be successfully converted into merits as all these demerits can come handy in the direction of shifting towards organic farming. What is needed is the genuine effort an part of the government machinery towards successfully implementing the plans and policies, along with the genuine effort on ground by the concerned government, towards establishing the required infrastructure right from inputs of organic farming to marketing the produce. Some of the incandescent prospects of organic farming in Jharkhand are:

1. The tribal peasant folk of Jharkhand are still in contiguity with nature, they still resort to cowdung manure, tilling of land for cultivation, using herbs like neem as insecticides etc. which are all the requirements of organic farming, what is needed to be done is to help them Publicise their practices, recognize their effort

with economical support and helping them to refine their practices in a more organised manner, by means of training programmes for farming. The blend of traditional knowledge and scientific acquaintance of organic farming can revolutionise, the mode of agriculture in Jharkhand.

2. In Jharkhand, the government has significantly mismanaged cow and cattle as well as livestock breeding. The dairy policy and outlook is highly outdated and hardly match the ground realities, and requirements. Over the past few decades, both the Indian and Jharkhand governments have a relied upon foreign varieties of cattle for increasing milk production. The upkeep of such cattle need state of the art dairy farms, which is negligible in number. What is needed is the distribution of and rearing of indigineous breeds of cattle, whose milk is quite rich in nutrition, can survive the local condition, and food habits, moreover they can also be used for tilling the land, which is required for organic farming. What needs to be done on part of the government is to brand, publicise it, and market the milk of local breed of cattle, so that the farmers can get proper prices for it.
3. On a pilot project basis, financial aids and subsidies must be given to each and every farmer to construct biogas plants in their respective villages, or even in individual houses. It will serve, three purposes: vig, clean fuel for cooking and lighting, maintaing cleanliness around the households and produce organic fertilizers for farms.
4. Organic farming Authority of Jharkhand is doing a spectacular work in the direction of promoting organic farming in Jharkhand. Its strategies like extensive technology training of farmers, demonstration of technology training of farmers, demonstration of technology, production of high quality organic products in sufficient quantity, increase soil-biological activity, maintaining long-term soil fertility, recycling of waste etc. are outstanding. What needs to be done is further strengthen it with adequate funds, so that it can smoothly conduct this uphill task. The provision of one crore per annum in this field is like bits of cumin in camel's mouth. Practice of organic farming and keeping the practice continued, needs a huge investment in building the necessary infrastructure for organic farming.
5. Jharkhand has the advantage of the availability of cheap labour force in sufficient numbers. Migration of labours to other states in search of jobs can be easily mitigated by developing the organic farming. In the initial stage job will be provided in building the necessary infrastructure, and in the long-run follow and uncultivated land could be leased to them for organic farming purposes.
6. In the absence of proper ecosystem for organic farming, the farmers are not able to exploit maximum benefits of animal and plant waste products, most of which are either dried or burnt. This mitigates their income and most of the farmers sell their cattle and livestock to the middlemen, who smuggle the cattle to Bangladesh. Organic farming will help to boost the demand for animal and plants wastes for manures, and will be a source of additional income for farmers. At least their own requirement of organic manure will easily be

- fulfilled.
7. Establishment of supply chains and export promotion zone for organic food products in Jharkhand will serve the twin purposes of marketing the organic produce to the farmer's benefit and creating employment opportunities for the unemployed.
 8. Jharkhand is very rich in Minor Forest Produce (MFP) varieties, as it is naturally gifted with 175+ minor forest produce, and medicinal plants such as Amla, Harad, Bahera, Karanj, Aloe-Vera, Giloy etc. These can help attract foreign investment in the Ayurvedic medicine sector, cheap availability of labour and proximity to the source of raw material can be a strong attraction for investors.
 9. Forest waste products like leaves, dried fallen flowers and seeds can be collected and used for production of green manure to be used as input in organic farming.
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Constraints of Organic farming in Jharkhand

Shifting of farming practices from traditional to organic farming is not an easy task. There are many constraints in its path. They need to be addressed for making organic farming practices in Jharkhand a success. Some of the constraints are as follows:

1. Smuggling of cattle and livestock to Bangladesh is a big challenge in the path of organic farming as well as achieving self-reliance in production of milk and meat. If smuggling continues at this pace, very soon Jharkhand will have to face the crisis of cattle and livestock products like milk and meat forget about organic farming.
2. Research and Development facilities are poorly developed in Jharkhand, most of which are paper elephants. Even after the 50 years of the launching of Green Revolution, agriculture in Jharkhand has not been revolutionised to the expected potential level. There still exists a gap between the potentials of the state and its production achievements.
3. Developing the necessary infrastructure for the organic farming practices require huge amount of funds for provisions of inputs and subsidies for farmers.
4. Jharkhand lacks a supply chain infrastructure to pipeline agricultural products to international markets.
5. Storage and Transportation facilities are also not state of the art to boost international trading of organic food products.
6. Low per capita income of the people of Jharkhand will abstain them from purchasing costly organic farming products.

Conclusion

As the world is becoming conscious towards the ill-effects of the use of synthetic chemicals used in contemporary farming, the demand for organic food products is increasing. The deficit between the demand and its supply can be fulfilled with economic advantage in Jharkhand as it is endowed with some natural advantages towards organic farming. If the constraints in its path are effectively weeded out Jharkhand will be a leading producer of organic food product in India and even globally.

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