

ROLE OF ORGANIC FARMING IN INDIA: ISSUES AND PROSPECTS**Dr. Renu Tyagi**

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Abstract - All techniques and interventions in natural ecosystems have their own side effects. For half a century we have used pesticides and herbicides indiscriminately to increase crop production, but now we can see their harmful effects. The history of the Marwa region in Punjab (Ganbert) and the tragedy of Endosulfan in Kerala are typical examples. Now, we have achieved our next motto, self-sufficiency in edible grain production, and provide people with a healthy diet. We are looking for alternative nature-based chemical-free agriculture. It's organic farming. Also, as the demand for healthy, residue-free foods around the world and in the country itself is increasing day by day, it is possible to obtain the highest prices by exporting chemical-free agricultural products to developed countries. It will help. People are ready to pay an additional amount if they are guaranteed to buy properly grown food through the natural system. Therefore, it is necessary to strengthen the domestic certification process.

Keywords: Traditional Agriculture, Crop- Production, Organic Farming, Domestic-Certification.

1. INTRODUCTION

“Nature can provide for everyone's need but not for greed”.....Mahatma Gandhi

It is without a doubt authentic that India had witnessed a first-rate boom in agricultural manufacturing within the technology of inexperienced revolution. Food grain manufacturing, which stood at an insignificant 50 million tons on the time of independence, had expanded nearly 5 and 1/2 of instances to 273.38 million tons through (Press Information Bureau, GOI) one fifty nine million hectares of cultivated region in country (Agriculture Census, 2010–11). The technology worried in the course of the inception of inexperienced revolution supported through regulations and in addition propelled through agrochemicals, equipment and irrigation had been the principle using forces for the improved agricultural manufacturing and productiveness (Roychowdhury et al., 2013). Despite the reality that the meals safety of India become without a doubt addressed through those technology (Charyulu and Biswas, 2010), a crucial setback become that the farmers the usage of those technology had been nevertheless needed to rely upon the bought inputs. With production of fertilizers and insecticides as the two fundamental inputs of Green Revolution (GR) technology, an crucial factor of

attention become the want for fossil fuels and steeply-priced strength which might be related to extreme environmental and fitness problems. In remaining 50 years we're the user of heavy quantity of fertilizers and insecticides and we already attain on plateau and diminishing low of go back begin to work (Venkateswarlu et al., 2008), so we want to use extra enter (fertilizer and insecticides) to get small improvement in manufacturing which purpose 2d technology trouble and few of such epitome examples are a few areas of Punjab (most cancers belt of country) and endosulfan tragedy of cashew plantations region in Kerala (proving locating of Rachel Carson's Silent Spring as posted in 1962). Insecticides and herbicides in perfect circumstance deadly for goal institution only, for non-goal institution and human it's far secure however this precept isn't accompanied strictly and indiscriminate use of those chemical substances positioned human lifestyles and surroundings fitness on verge (Aktar et al., 2009). All those factor and unsustainability trouble related to cutting-edge agriculture pressure us to appearance back (Balachandran, 2004) in records to realize both we aren't doing any mistake through relying on off farm inputs due to the fact crop manufacturing is a recycle machine of nature through setting an excessive amount of off farm enter we're making it fragile day to day.

One of such natural, recyclable and sustainable method of farming is Organic farming. It is the powerful and free manner to gain sustainable improvement within side the agriculture sector (IFOAM, 2010). Organic supply of nutrient additionally allows fight with the trouble of multi nutrient deficiency and coffee natural content material in our soil that is affecting productiveness of fundamental meals plants at farmer field.

Organic farming is a technique of farming machine which basically aimed toward cultivating the land and elevating plants in any such manner, as to hold the soil alive and in correct fitness through use of natural wastes (crop, animal and farm wastes, aquatic wastes) and different organic substances in conjunction with useful microbes (bio fertilizers) to launch vitamins to plants for expanded sustainable manufacturing in an green pollutants unfastened environment (Narayanan, 2005; Guruswamy and Gurunathan, 2010).

2. MAIN PRINCIPLES OF ORGANIC FARMING

The main principles of organic farming by (Chandrashekar, 2010) are:

- Work as much as possible in a closed system and use local resources.
- To maintain soil fertility over the long term.
- Avoid all forms of pollution that can result from agricultural technology.
- Produce a sufficient amount of nutritious food.
- Minimize the use of fossil energy in agricultural practices.
- To provide animals with living conditions that meet their physiological needs.
- Enable farmers to earn a living and develop human potential through their work.

All of the above principles are based on four ethical principles (health, diligence, impartiality, and ecology) IFOAM, 2005.

3. THE MAIN PILLARS OF ORGANIC FARMING

The main pillars of organic farming (Roychowdhury et al., 2013) are as below-

- Organic threshold standards.
- Reliable mechanisms regarding certification and regulatory affairs.

- Technology packages.
- Efficient and feasible market network.

4. PROSPECTS OF ORGANIC FARMING

4.1 Area affected by intensive agriculture (to reduce ill effect)

In this, we include North India (Punjab, Haryana and Western UP) and South India (Kerala, Tamil Nadu, Karnataka and costal Andhra Pradesh) which might be suffering from in depth agriculture, indiscriminate use of off farm inputs (insecticides and fertilizer). Main goal with the aid of using selling natural farming we lessen sick impact of in depth agriculture.

4.1.1. No more cancer belt and cancer train

The Malwa region of Punjab, India, faces an unprecedented environmental crisis caused by pesticides, fertilizer indiscriminate, excessive, unsafe use and poor groundwater quality. The region is known as India's "cancer capital" because of the unusually high number of cancer cases that have tripled in the last decade. Studies in the region have shown that many other pesticide-related diseases, such as intellectual and reproductive disorders, are also on the rise. Most affected are agricultural workers who are directly exposed to pesticides. The Malwa region of Punjab, India, occupies less than 15% of the total area of Punjab (only 0.5% of India's total geographic area), but accounts for nearly 75% of all pesticides used in Punjab. I'm consuming. According to the 2007 Environmental Situation Report prepared by the Punjab State Science and Technology Council. Second, the state uses 17 percent of all pesticides used in India. Heavy use of pesticides and ecological and social factors contribute to high concentrations of pesticide residues in the region's food chain. In addition, many banned and restricted pesticides are still in use in the area and require rigorous regular health checks and other interventions. Several studies over the last decade have shown that Punjab is more likely to develop cancer than other countries, but the state government has conducted a comprehensive visit to quantify the problem. It was the first time to carry out. The study emphasizes that the Malwa region, already known as Ganbert, has the highest number of

cancer patients at 107 out of 100,000 inhabitants. The four counties at the top of the cancer incidence list come from this region. With 136 cancer cases per 100,000 inhabitants, the Muktosar district is the worst. This is followed by Mansa, Bathinda and Ferrozpur. The Than Thalang district in the Majha region has the lowest number of cancer patients, 41 per 100,000 population (Singh J., 2013).

4.1.2. No more Kerala's Endosulfan Tragedy

What is Endosulfan?

Endosulfan is a pesticide belonging to the organochlorine pesticide group belonging to the cyclodiene subgroup. Introduced in the 1950s, it has become a major chemical against various insects and mites in agriculture and related fields. Used in vegetables, fruits, rice, cotton, cashew nuts, tea, coffee, tobacco and wood. It is also used as a wood preservative to combat glossinidae and termites. This chemical is not patented and is used by various companies such as Agrosulfan, Aginarosulfan, Banagesulfan, Cyclodan, Endocel, Endoson, Endonit, Endomil, Endosol, Endostar, Endodaf, Endosulfer, Esulfan, Endorifan, Hildan and Redsun. It has been. We sell Seosulfan and Thiodan. Endosulfan is a highly toxic and ubiquitous environmental pollutant that causes long-term damage to people and wildlife. It is commonly considered a persistent organic pollutant (POP) and is easily absorbed through the stomach, lungs and skin. It is banned in more than 68 countries. Banned areas include Belize, Singapore, Tonga, Syria, Germany, the United States, Brazil's Rondonia, United Kingdom, Sweden, the Netherlands, Colombia and Kerala, India. There are severe restrictions in Australia, Bangladesh, Indonesia, Cambodia, Japan, South Korea, Kazakhstan, Kuwait, Philippines, Lithuania, Sri Lanka, Taiwan, Thailand, Denmark, Yugoslavia, Norway, Finland, Russia, Venezuela, Dominica and Canada. This pesticide is a moderately dangerous Category II chemical by the World Health Organization as a highly dangerous chemical by the United States Environmental Protection Agency (EPA) and the United Nations, as a persistent toxic substance by the United Nations

Environment Program (UNEP). It is classified as. It is classified as a very dangerous chemical by (WHO) and the Industrial Toxicological Research Center (ITRC) in India. However, India is the largest producer, consumer and exporter of endosulfan.

5. CHALLENGES OF INDIAN ORGANIC FARMING

Organic farming in the Indian context has to resolve several issues at both micro and macro level.

5.1. Micro level issues

Micro issues in organic farming include profitability, marketing, etc., especially for small and smallholders. One of the biggest hurdles in organic farming is, for example, the so-called transitional stage with direct and indirect costs. Converting traditional farms to organic farms requires strict adherence to internationally regulated production, processing and labeling rules and standards. During the conversion phase, all criteria required to certify a product as "organic" must be met and verified by a certification body. Conditional costs such as information, marketing, management and certification also increase the cost of organic farming. For example, Rs inspection and certification fees can be exorbitant. 5000, for many smallholders, this is equivalent to the yield from agriculture (Brook and Bhagat, 2004). The often lower yields of organic farming compared to traditional farming are an additional burden for farmers, especially at the transition stage before soil nutrients and organic matter are replenished with organic fertilizers. Especially at the conversion stage, if the product is not certified as organic and cannot be sold at the organic market price. Farmers often spend on agricultural machinery, containment, purchasing bioinputs, etc. to increase soil fertility and yield. In addition, transaction costs (cultivation practices, lack of access to relevant market knowledge), documentation requirements for inspection and certification, lack of demand for domestic markets, restrictions on entry into international markets, and institutional factors, etc. Various barriers are hampered by the spread of organic farming (Das, 2004).

5.2. Macro level issues

Major macro challenges include food security, employment and environmental implications. Food security issues are becoming more important with respect to the potential for lower yields in organic farming compared to traditional farming, especially during the two- to three-year transition period (Pandey and Singh, 2012). Given India's history of inadequate food production, it is necessary to study food security issues, taking into account large numbers of fringe farmers and smallholders, before promoting mass organic farming. Another macro aspect of promoting organic farming is the impact on rural employment. Organic farming is expected to increase employment opportunities as it requires the production of various agricultural inputs such as biofertilizers and pesticides using locally available materials. The scope of more employment opportunities should be assessed at the regional and national levels. From an environmental point of view, concerns have also been expressed that organic farming can lead to unsustainable problems as land and water consumption increases to compensate for yield losses. Given the case of India, water protection should ultimately remain a top priority in ecological practices. Considering the challenges associated with the introduction of organic farming, the Working Group on Organic Farming and Biodynamic Agriculture explores some important questions for the effective promotion and practice of organic farming and sustainable farming. Proposed to the Planning Committee to do (GOI, 2001b). This includes comparative studies of chemical-based and organic farming covering the economics of organic crop production, the economic and ecological externalities associated with the conversion to organic farming, and the social, ecological and economic costs. It will be.

6. RESEARCH FINDING

Organic farming has brought farmers a 21.5% higher net profit than traditional farming, despite reducing crop productivity by 14.6%. This is mainly due to the availability of premium prices (20-40%) for certified organic products and a 15.9% reduction in cultivation costs.

Organic farming proved to be economically infeasible if such premium prices were not available and cultivation costs were high, primarily due to purchased by-products (Dadhwal et al., 2011). But overall, soil quality is improved in terms of various parameters: physical, chemical and biological properties, macronutrient and micronutrient availability, and soil health and crop production in organic farming. It shows that sustainability has improved.

7. CONCLUSION

According to Ramesh P. et al. (2005) the subsequent conclusions may be drawn on vital troubles concerning natural farming:

1. Large-scale conversion to natural agriculture might bring about meals scarcity with the prevailing kingdom of expertise and technology, because the yield discounts of natural structures relative to standard agriculture common 10-15 in line with cent, mainly in in depth farming structures. However, in conventional rainfed agriculture, natural farming has the capability to boom the yield, considering the fact that 70 in line with cent of overall cultivable land falls on this category. Mere five-10 in line with cent boom in farm manufacturing might clearly assist to gain the focused increase price of 4-five in line with cent in agricultural manufacturing within side the Tenth Plan period.
2. Organic manure is an opportunity renewable supply of nutrient supply. A massive hole exists among the to be had capability and usage of natural wastes. However, it isn't feasible to satisfy the nutrient necessities of vegetation totally from natural sources, if one hundred in line with cent cultivable land is transformed to natural farming.
3. Organic farming structures can supply agronomic and environmental blessings each via structural modifications and tactical control of farming structures. The blessings of natural farming are applicable each to advanced nations (environmental protection, biodiversity enhancement, decreased electricity use and CO₂ emission) and to growing international

locations like India (sustainable aid use, multiplied crop yields without over-reliance on highly-priced outside inputs, surroundings and biodiversity protection, etc.).

4. Organic ingredients are proved advanced in phrases of fitness and safety, however there's no medical proof to show their superiority in phrases of flavor and nutrition, as maximum of the research are regularly inconclusive.
5. Combination of decrease enter prices and beneficial charge rates can offset decreased yields and make natural farms similarly and regularly extra worthwhile than traditional farms. However, research that did now no longer encompass natural charge rates have given combined effects on profitability. Thus it's miles the top rate charge at the natural meals which comes to a decision the monetary feasibility of natural farming, at the least on the modern price of improvement in natural agriculture.

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