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PROBLEM, CONSTRAINTS AND PROSPECTS OF ORGANIC FARMING

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ABSTRACT

India's traditional and sustainable farming practices were advocated and implied by Sir Albert Howard, British botanistwho is known as father to organic farming. Organic farming implies growing of agriculture and horticultural crops without chemical fertilizer, herbicides and pesticides.Agricultural practices followed in organic farming are governed by the principles of ecology and ecological means. Organic farming has a special significance to us in India because India is a country of fertile agriculture land. Organic farming is based on an analysis of the environment friendly farming practices. However, it is another matter that we lag behind a majority of agriculture based countries in the world in the practice of organic farming system. In last decade, several efforts have been taken by government and nongovernment agencies of India to promote organic farming. There are three categories of farmer opinions about the relevance of organic farming for India. The first one simply dismisses it as a fad or craze. The second category, which includes opinions of many farmers and scientists, that there are merits in the organic farming but we should proceed cautiously considering the national needs and conditions in which Indian agriculture functions. They are fully aware of the environmental problems created by the conventional farming. But many of them believe that yields are lower in organic cultivation during the initial period and also the cost of labour tends to increase therein. The third one is all for organic farming and advocates its adoption wholeheartedly. They think that tomorrow`s ecology is more important than today`s conventional farm benefits. Several NGOs in India are working to produce vegetables, fruits etc using vermicompost and bio-pesticides. In India Sikkim had a resolution in 2003 to shift towards Organic Farming with an aim to stop usage of chemicals and pesticides in farming. As a result it became the first organic state in the world and received an award from Food and Agricultural Organisation (FAO) in Rome. Padma shri awardee SubhashPalekar popularly known as Krishika Rishi is agricultural scientist who pioneered the concept of Natural Farming in our country. The major problem in India is that these products are not directly available in market.

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Instead, they are available in market through different channels, therefore, the cost of product is quite high as compared to traditional products. Thus products are not affordable by medium to below medium class families of India. The objective of this work is to analyze the need for organic farming in India and to analyse the constraints, both political and social, and above all economic, in the introduction of organic farming in India.

KEYWORDS: Organic farming, affordable, constraints.

INTRODUCTION

Organic farming is a unique production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological /microbial activity. Organic farming is a method of farming that works at grass- roots level, preserving the reproductive and regenerative capacity of the soil, good plant nutrition and sound soil management, produces nutritious food, rich in vitality and disease resistance, organic farming system emphasis on the use of organic matter for enhancing soil properties, minimizing food chain associated health hazards and attaining closed nutrient cycles.

Organic farming is increasingly becoming important in agriculture. Active involvement in crops and their diseases, development of organic manure, natural pesticides, training of farmers, and provision of storage and connectivity are all important areas to look into. Organic agriculture is a holistic production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activity. Genetically modified crops may provide an excellent fields but their long term effects are as yet untested and people are not quite ready to trust these foods.Apart from this there has been a significant rise in the demand for organic food all over the world. India has best posed to cash in on the immense export potential of these foods. The overall goal of Organic Agriculture is defined as "The role of organic culture, whether in farming, processing, distribution, or consumption, is to sustain and enhance the health of ecosystem and organisms from the smallest in the soil to human beings." As per Internantional Federation of Organic Agriculture Movement (IFOAM) in the principles of organic agriculture, Aiyar (2007). It is a remarkable thing to note that prior to Green Revolution Agriculture, in India our fore fathers followed organic farming with additional features like Integrated Farming System (IFS), cover cropping, multi-cropping, mulching, green manure, crop rotation, self content with required infrastructure facilities in villages and value addition after harvesting (Zaman, 2012) Many agricultural scientists from developed countries remarked that the farming system followed in India was superior, most efficient and effective one, prior to Green Revolution, an organic farm is the farm whose structure is formed in limitation of the structure of a Rhizosphere, the presence of beneficial root-colonizing bacteria and increased level of vesicular- arbuscularmycorrhizal colonization of roots have all been identified as contributing factors in the control of root diseases. This is an unexplored area where native organisms provide protection against other harmful organisms.

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India is mainly an agricultural country and agriculture contributes to about 14.6% in GDP and support over 58% of Nations population for livelihood (GOI, 2010). The recent economic and trade liberalization are exesting more pressure on India`s land resources such as forestry, agriculture, pasture lands, human settlements and industries. So meeting food demand under limited area and non-toxic agricultural produce have become an important forcing factor for countries like India to explore possibilities for opting conventional agriculture, the dominant farming approach promoted by most government and agri business groups throughout the world or "Organic Agriculture" a holistic production management system which support to environment, health and sustainability.

BASIC APPROACHES OF ORGANIC FARMING

Basic approaches of organic farming involves:

- Management of the entire surrounding system to save biodiversity and sustainability of the ecosystem.
- Conversion of land from conventional management to organic management.
- Crop production with the use of alternatives sources of nutrients such as crop rotation, mixed farming, residue management, organic manures and biological inputs.
- Weeds and pests management by better practices, physical means, culture means and by biological control system.
- Livestock maintenance with organic concept and make them an integral part of the entire system.

MANAGEMENT IN ORGANIC FARMING

- Organic farming systems depends on the management of soil organic matter to enhance the chemical, biological and physical properties of the soil. One of the basic principles of soil fertility management in organic systems is that plant nutrition depends on "biologically-derived nutrients" instead of using readily soluble forms of nutrients. This requires release of nutrients to the plant via soil microbial and soil animal activity.
- Livestock keeping at farms is an age old practice, livestock play major role in organic agriculture as the intermediary between the utilization of crop residues or fodder at the farm and the back of nutrients as manure.
- Some of the potential sources of nutrients of organic farming are animal dung, crop residues, green manure, bio-fertilizers and bio-residues from agro-industries and food processing wastes. Development of several compost production technologies like vermicomposting, microbe mediated phosphocomposting improves the quality of composts by enrichment with nutrient-bearinig minerals etc.
- Organic farming is often termed as knowledge-based rather than input based agriculture. Crop rotations and varieties are selected to suit local conditions having the potential to sufficiently balance the nitrogen demand of crops.

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- The basic require requirement in organic farming is to increase input use efficiency at each step of the farm operations. This is achieved partly through reducing losses and adoption of new technologies for enrichment of nutrient in manure. According to a conservative estimate around 600 to 700 million tonnes (mt) of agricultural waste is available in the country every year, but most of it is not used properly. We must convent waste into wealth by convering this biomass into bioenergy.
- At present only 30% of total cultivable area in the country have irrigation facilities where agro chemical use is higher as compared to rainfed zones. So efforts are required to increase crop productivity and farm production despite recurrence of environmental constraints of drought and water scarcity.
- Careful management in both time and space of planning not only control pests, but also increase population of natural predators that have natural capability to control insects, diseases and weeds. So pest control in organic farming begins by taking right decisions at right time, such as growing crops that are naturally resistant to diseases and pests or selecting sowing times that prevent pest and disease outbreaks.

CONSTRAINTS IN ORGANIC FARMING

The marketing of organic products is not well popularize or developed in our country. So many firms export organically grown vegetables, fruits, plantation crops, spices and tea to other countries. So big exporters do not worry about the sale of their products but small and marginal farmers worried lot.

- An aggressive and standard strategy demanding free access need to be adopted. Recently under a National Programme for organic production, Ministry of Commerce, Government of India has formulated and circulated National Standards for organic products. But we are still far away from the goal.
- Recognition and marketing is the main problem for organic products. The lack of awareness among people is the main hurdle in selling organic products. Furhter the cost of the organic products is high which only the elite and foreigners can afford. So low cost organic marketing is most important in India.

PROSPECTS OF ORGANIC FARMING

- The compound annual growth rate in yield of important crops in India is going to decline gradually even after use of chemicals. Crop produced with chemicals is not good for health, contains heavy metals that causes many diseases and pollutes environment. The efficiency of fertilizing is not more than 50% and the remaining lost.
- More and indiscrimate use of in organic fertilizer has already deteriorated the soil badly with deficiency of macro and micro nutrients.
- Plants uses nutrients from organic sources through mineralization and many micro organisms are available in the soil for decomposition activities.

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- The quantity of biological nitrogen fixation (BNF) is 175 mt/year, which contributes about 67.3% of the total amount. On the other hand the industrial nitrogen fixation (INF) is around 40mt/year, which contributes only 15.3% of total nitrogen fixation.
- Organic products contains more minerals, enzymes, vitamins, trace elements and even cancer fighting anti oxidants as compared to traditionally grown food crops.
- Many bio-pesticides *TrichodermaViridi*, *Bacillus thurengiensis*Bt, NPV, GV and others like these) botanical pesticides Neem*Azadirachtaindica*, bio- control agents *Trichogramma*, *Cryptolaemus*, *Chrysoperla*etc are capable of controlling pest and diseases.
- The productivity of organic farming may be less in initial years, but the yield increased progressively.

CONCLUSIONS

The historical overview shows that India is among the pioneer civilizations witnessing ancient agriculture and domestication of animals, Indian agriculture evolved principally as an ecologically sustainable approach using natural inputs for enhancing crop yield. Modern innovations and technology diffusion to agriculture coupled with massive demand of food grains by growing human population transformed the agriculture from a circular causation mode to a linear flow model with complete dependence on external inputs of synthetic fertilizers and pesticides.Organic agriculture is a production system that avoids or largely excludes the use of synthetically compounded fertilizers, pesticides, growth regulators, livestock feed addictive and genetically modified organisms. Organic farmers rely on crop rotation, green manures, compost, biological pest control, and mechanical cultivation to maintain soil productivity and control pests as far as possible and practicable.Organic agricultural methods are internationally regulated and legally enforced by many nations, based in large part on the standards set by the International Federation of Organic Agriculture Movements (IFOAM), an international umbrella organization for organic organizations established in 1972. Most of developed countries and few developing countries are returning to harmless Organic Agriculture practice during the last 15 years.

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