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# ORGANIC FARMING FOR NEXT GENERATION

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## ABSTRACT

Agriculture being the basic and natural occupation of human beings has become very important area as survival of human beings is dependent on this sector. Agriculture has pulled us from moving away from nature as ever increasing world population is fed by this sector only even in technologically advanced era. It has become urgent need that production and productivities in agriculture should be further increased globally to ensure food security for all the people. But agriculture is much more than increasing yields rates for food security, its future relates to sustainability in terms of protection of ecological balance, respond to environmental damages i.e. to reduce land degradation. In this context this paper focuses on the new dimension to agriculture techniques which has become very popular now a day and known as organic farming.

**KEY WORDS:** Production, Food security, sustainability, environmental damages.

## INTRODUCTION

Last century had seen wide use of modern agriculture techniques all over the world. The ill effects of modern Agriculture raised environmental concerns in minds of agriculture scientists, environmentalists and general public. Greene revolution technologies of 1960s with wide application of HYV seeds, chemical fertilizers and pesticides brought productivity rise and sufficient food supply. These developments also led to externalities like soil erosion, soil and water contamination affecting long term productivity growth, health hazard to human beings and animals.

Damages done by modern agriculture can be overcome over a period of time. Organic farming is seen as an alternative agriculture system which can regenerate soil productivity and is environment friendly promoting ecological balance. It evolved in 1940's, largely in response to the publications of J.I. Rodale in USA, Lady Eve Bolfour in England and Sir Albert Howard in India.

## REVIEW OF LITERATURE

United Nations Food and Agriculture Organization (FAO) in its report **"Organic agriculture and food security"** explicitly states that organic agriculture can address local and global

food security challenges. All over the world synthetic chemical products are quickly replaced by eco-friendly organic products. Organic farming is developing rapidly and is now practiced in more than 130 countries of the world. Worldwide 30.4 million hectares of land is currently under organic production. The value of world trade today is USD 38.6 billion, while it was only USD 18 million in 2000.

**Norman Borlaug (2009)** writes that if all agriculture were organic, you would have to increase crop land area dramatically and have to cut down millions of acres of forest. Approximate usage of nitrogen each year is 80 million tons. If this nitrogen is to be produced organically wild land has to be sacrificed to produce forage for cows.

**R.P.Dhir (2008)** states that Government of India is possibly aware of the threats to national food security by large scale adoption of organic farming in green revolution areas. Hence it is difficult to understand the relevance of initiating the entire campaign of organic farming by highlighting the adverse effect of modern agriculture. **D. Kumara Charyulu ,Subho Biswas (2010)** writes that Organic farming has the potential to provide benefits in terms of environmental protection, conservation of nonrenewable resources and improved food quality .There is ample scope for increasing the efficiency under organic farms. Exposure to more trainings as well as increase in technical guidance would enhance the productivity and efficiency of organic farms in India.

**P. K. Shetty, M.B.Hiremath and M.Murugan (2013)** evidences empirically that while conventional agriculture goes better with large holdings, organic farming functions better in small farms.**Hanson and co-workers (2005)** compares grain production in organic vis-a-vis conventional methods, observed that as farm size increases, the advantages of organic rotation become less visible. Further, the study reported that on a smaller scale, organic farming was more profitable and productive than conventional farming.

**Jitendra Pandey and Ashima Singh(2012)** States that massive use of these materials although increased agricultural yield by many folds, significantly contributed to environmental degradation including green house forcing. The modern concept of organic farming (OF) emerged in response to the questions raised on health, environment and sustainability issues.

**K. Guruswamy, Dr. K. Balanaga Gurunathan Gurunathan**own indigenous technology is to be reintroduced from the current 1 to 2% to the possible extend to get rid off difficulties in conventional farming. OF will solve the food shortage and crisis in our country permanently and can encash heavily by exporting to needy countries of having severe food shortages.

## DATA SOURCE

This study is based on secondary data from various sources like FAO, iFBL- IFOAM, and National Centre of Organic Farming etc. These surveys depicts the growth of Organic farming world over.Growth momentum of organic farming has realized in India in last 10 years. Government, NGOS, Agriculture scientists, farmers is taking initiatives in this direction. Training of organic farming, policy changes and finance are made available for the development of organic farms.

India has not seen fast growth of organic farming since small and marginal farmers of certain areas are dependent upon financial support of banks & other FIs for inputs. Subsidies widely available for conventional farming are not available for practicing organic farming. Even sustainability and performance of organic farming is questioned by many. It is said that food security is a tough task with organic farming. Still these questions need to be answered. Health hazard and environmental pollution has become sine qua non with conventional agriculture. There is increasing awareness for protecting environment, land fertility and willingness to pay of consumers in metropolitans and big cities. Therefore it is important to examine organic farming in comparison with conventional farming on various aspects.

## RATIONAL FOR ORGANIC FARMING

Agriculture is pillar of our economy. India needs to increase its agriculture output to feed constantly rising population. India achieved self-sufficiency in terms of agriculture production with

the use of modern technology like HYV seeds, fertilizers, pesticides, irrigation etc. Despite this achievement indiscriminate use of fertilizers, pesticides, excess water in farms led to decline in soil productivity and other environmental problems like unsafe food and polluted water, creating threat to human health. Green revolution benefited mostly rich farmers with access to resources and knowledge of application of technology. But large number of poor and marginal farmers did not get benefit of green revolution due to lack of funds, facilities and knowledge. In this condition still many Indian farmers are struggling to increase production and yield rates due to unavailability of resources and technology. Organic farming is the only solution for poor farmers to come out from their poverty and to put their products on world map.

- Soil is restored to its natural porous state.
- Organic manures improve physical, chemical and biological perspective of the soil. Additions of organic manures improve structure, aeration, water holding capacity of soils.
- It reduces water use and water contamination. Many of the indigenous species are draught resistant and best suited for the land and will give farmers good yield.
- Draught resisted seeds are available to overcome irregular seasonal rain and considerably more climate friendly.
- Multi cropping system is followed in organic farming which involves integrated nutrient management and integrated pest management.
- It generates full time employment for farmers and agricultural labourers since Organic farming uses less technology and crop rotation and other farm jobs require more labour force.
- Organic food is superior in terms of its mineral content compared to that is grown by Conventional Farming.

## Constraints:-

- Lack of Transition support: When farmers adopt organic to conventional farming, initially farmers get less produce ranging between 5 to 30%. In this case they need financial support for sustaining themselves. Also they need to maintain the land which requires money.
- Certification Cost: Farmers need certification for their output to be sold under the Organic label. Very high certification cost and unavailability of certification agencies, shortages of certifying inspectors are the major issues in country.
- Neglect of Poor farmers: Government of India provides huge amount of subsidies to farmers. But subsidies are directed towards large scale and chemical intensive farming. Majority of Indian farmers are poor and government needs to provide financial assistance to them.
- Lack of Infrastructure: Due to adoption of mechanized farming practices, conversion to organic farming leads to shortage of organic manures, pesticides etc. Even these ingredients are available at very high cost in the market which poor farmers can not afford.
- For plant protection, the organic sources and biological methods that have been tried so far have not met with considerable success in the country.

## Measures or suggestions for increasing Organic production:-

Following measures should be adopted to ensure organic agriculture in the country:

- **Research and extension services**: Setting up of research institutes for new developments and to provide farmers all the relevant informa tion on organic farming, in general, and its specific technical details, in particular. Conducting workshops, studies, seminars, training programmes for awareness and development of organic farming.

- **Certification and label-ing capacities:** Government urgently needs to develop more number of certification agencies within the country so as to overcome the higher costs involved in get ting certification done by external agencies and also certification processes need to be simplified and made accessible to farmers
- **Farm inputs:** Bio-fertilizers, bio-agents, bio-pes ticides and other organic inputs need be made available to the small and marginal farmers at sufficient quanti ties and reasonable prices;
- **Developing domestic market:** To increase domestic sales for organic produces, which is still at a stage of infancy in this country, need to be encouraged and developed;
- **Marketing link-ages:** Domestic and international linkages need to be ensured for resource-poor small farmers. Subsidies and other financial support schemes need to be undertaken to help the small and poor farmers to bear the initial expenses for converting to 'certified organic' farms.
- **Export promotion**: An aggressive strategy with strict quality control and maintaining international standards needs to be adopted.
- **Awareness programmes:** A campaign to highlight the benefits of organic farming against the conventional system is essential to increase the aware ness of farmers to reduce pollution and consumers to improve health and nutritional standards.

## CONCLUSION

With the increasing awareness about the safety and quality of foods from health point of view, long term sustainability of the system and accumulating evidences of being equally productive, employment generator, low cost of production, better efficiencies observed at farm levels, self-reliance in terms of food availability, protecting environment, the organic farming has emerged as an alternative system of farming. Major reservation is about profitability of organic farming which is of prominent importance for India.

**Area of Research:** Profitibility and sustainability needs to be checked for small farmers.

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# APPENDIX

**Table – 1 Growth of area under organic management**

| S.No. | Years | Area under Organic management in Ha |
|---|---|---|
| 1. | 2003-04 | 42,000 |
| 2. | 2004-05 | 76,000 |
| 3. | 2005-06 | 1,73,000 |
| 4. | 2006-07 | 5,38,000 |
| 5. | 2007-08 | 8,65,000 |
| 6. | 2008-09 | 12,07,000 |
| 7. | 2009-10 | 10,85,648 |

*Source: National Centre of Organic Farming, Government of India.*

**Table 2: The ten countries with the most organic producers, 2010**

| Country | No. of Organic producers |
|---|---|
| India | 400551 |
| Uganda | 188625 |
| Mexico | 128862 |
| Ethiopia | 123062 |
| Tanzania | 85366 |
| Peru | 44827 |
| Turkey | 43096 |
| Italy | 41807 |
| Spain | 27877 |

*Source: FiBL-IFOAM Survey 2012, based on data from governments, the private sector and certifiers.*

**Table 3 Estimates of area covered by different crops under organic management in India (Year 2008-09)**

| S.No. | Commodities | Area in ha | | |
|---|---|---|---|---|
| | | Organic | In-conversion | Total |
| 1 | Paddy | 18134.00 | 9766.00 | 27900.00 |
| 2 | Wheat | 4056.00 | 7192.00 | 11248.00 |
| 3 | Other cereals/ millets | 26184.00 | 37678.00 | 63862.00 |
| 4 | Pulses | 12023.00 | 17617.00 | 29640.00 |
| 5 | Oil seeds including Soybean | 91849.00 | 87307.00 | 179156.00 |
| 6 | Cotton | 259699.00 | 93299.00 | 352998.00 |
| 7 | Spices | 6507.00 | 23291.00 | 29798.00 |
| 8 | Tea/ coffee | 12711.00 | 12465.00 | 25176.00 |
| 9 | Fruits and Vegetables | 128879.00 | 41176.00 | 170055.00 |
| 10 | Herbal/ medicinal plants | 32313.00 | 10690.00 | 43003.00 |
| 11 | Other miscellaneous crops | 27995.00 | 28306.00 | 56301.00 |
| 12 | Crop details not available | 19812.00 | 198110.00 | 217922.00 |
| | Total area | 640162 | 566897 | 1207059 |

*Source: National Centre of Organic Farming, Department of Agriculture and Cooperation, Government of India.*