

ROLE OF EXTENSION IN ORGANIC FARMING

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Jagathjhuti Datta

Department of Agricultural Extension, PalliSiksha Bhavana (Institute of Agriculture).
Visva-Bharati, Srinikethn, West Bengal

E-mail: jagathjyoti@gmail.com

The US Department of Agriculture defines organic farming. “Organic farming is a production system which avoids or largely excludes the use of synthetically compounded fertilizers, pesticides, growth regulators and livestock feed additions.

To the maximum extent feasible, organic farming systems rely on crop rotations, crop residues, animal manures, legumes, green manures, off-farm organic wastes and aspects of biological pest control to maintain soil productivity and tilth, to supply plant nutrients and to control insects, weeds and other pests” (Lampkin, 1990). Organic farming system in India is not new and is being followed from ancient time. It is a method of farming system which primarily aimed at cultivating the land and raising crops in such a way, as to keep the soil alive and in good health by use of organic wastes (crop, animal and farm wastes, aquatic wastes) and other biological materials along with beneficial microbes (biofertilizers) to release nutrients to crops for increased sustainable production in an eco friendly pollution free environment.

Principles of Organic Farming

Health: Organic agriculture should sustain and enhance the health of soil, plant, animal, human and planet as one individual.

Ecology: Organic agriculture should be based on living ecological systems and cycles, work with them and help sustain them.

Fairness: Organic agriculture should be built on relationships that ensure fairness with regard to the common environment and life opportunities.

Care: Organic agriculture should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment

General Principles of Organic Farming

- Conversion of land from conventional management to organic management
- Management of the entire surrounding system to ensure biodiversity and sustainability of the system
- Crop production with the use of alternative sources of nutrients such as crop rotation, residue management, organic manures and biological inputs
- Management of weeds and pests by better management practices, physical and cultural means and by the biological control system and
- Maintenance of livestock in tandem with the organic concept and make them an integral part of the entire system

Why Organic Farming?

The salient features of production in organic farming involves –

1. Minimum tillage,
2. Adoption of integrated agriculture system,
3. Recycling of organic matter,
4. Proper crop rotation,
5. Intercropping, mixed cropping, and poly-cropping,
6. Use of well-decomposed organic manures,
7. Green manure cropping,
8. Use of bio-fertilizers,
9. Mulching of weeds,
10. Integrated pest management and
11. Judicious use of irrigation water.

Organic Farming – World Scenario

- At present, organic farming is practiced in more than 120 countries.
- Globally 30.4 million hectares.
- Constitutes 0.65 % of agricultural land.

Country	Area
Australia	12 m ha
Europe	7 m ha
Latin America	5.8 m ha
Asia	2.9 m ha
North America	2.2 m ha
Africa	0.9 m ha

Source: FiBL

Organic Farming – Indian Scenario

- India ranks 33rd in total land under organic cultivation.
- 88th position for the agricultural area under organic crops.
- The percentage share of organic land to the total agricultural area is 0.3 %.

State	Area
Madhya Pradesh	1.63 lakh ha
Maharashtra	1.15 lakh ha
Orissa	74,585 ha
Jammu and Kashmir	32,541 ha
Rajasthan	24,868 ha
Kerala	14,744 ha

Source: FiBL

Present Status of Organic Products in India

Total production (tones)	5,85,970
Total quantity exported (tones)	19,456
Value of total export (million Rs)	3,012.4
Total area under certified organic cultivation (ha)	3,39,113
Number of farmers	1,41,904

 (Source. www.apeda.com)

Benefits of Organic farming

- ✓ These feature of farming helps in maintaining environment health by reducing the level of pollution,
- ✓ Reduces human and animal health hazards by reducing the level of residue in the products,
- ✓ Helps in keeping agricultural production at a higher level or makes it sustainable,
- ✓ Reduces the cost of production,
- ✓ Ensures optimum utilization of natural resources and also conserve them for the future generation,
- ✓ Saves energy for both animal and machine,

- ✓ Reduces the risk of crop failure,
- ✓ Improves the soil physical properties such as granulation by giving good tilth,
- ✓ Facilitate easy root penetration through proper aeration,
- ✓ Improves water-holding capacity,
- ✓ Improves soil chemical properties such as supply and retention of soil nutrients.

Role of extension

- ✓ Spreading information
- ✓ Changing attitudes
- ✓ Training and capacity building
- ✓ Motivation
- ✓ Front line demonstration
- ✓ Provide Knowledge of pest and disease management.
- ✓ KrishiVigyan Kendra, CAU, Imphal East, Andro is providing technological back up for organic agriculture.
- ✓ Field visits.
- ✓ Farmers training.
- ✓ Transfer of technology.
- ✓ Adoption and Diffusion

Certification of organic products and their production processes (NPOP guidelines)

1. Formation of organic farmers group.
2. Registration of farmer's group with distinct authorities.
3. Documentation of individual farms/farmer's records.
4. Service providers.
5. Accreditation agencies.
6. Certification and inspection agencies.
7. Periodic inspection of organic farms.
8. Organic certification.

Organic Fertility Management

1. Field exercises/demos: - Effects of organic amendments winter cover crop evaluation,
2. Lab/classroom exercises: - Organic nutrient management plan,
3. Evening discussions: - Building soil organic matter and nutrient pools in South-eastern soils
4. Field trips: - Organic farm visit

5. Homework: - Organic nutrient management plan

Information Delivery

Lab/classroom exercises: Working with organic growers Accessing electronic resources

Field trips: Organic farm visits

Homework: Farm visit evaluation

Publicity and Awareness Campaign

National Centre of Organic Farming (NCOF) at Ghaziabad and six Regional Centres for Organic Farming (RCOFs) organize various programs for awareness viz., literature distribution, arranging exhibitions, radio talks in a regional language, TV programs and press releases.

Awareness campaigns involving press, radio, television, etc. should be made for popularising the benefits of consuming organic foods. DD Kisan channel can have dedicated time slots for organic growers.

A Media Plan aimed at spreading awareness about the advantages of organic farming among

Farmers: dissemination through media vehicle having extensive reach in area have to be used for this purpose prominently like DD network, AIR network, FM channel, Community Radio, C&S channel, Digital Cinema, SMS and regional and vernacular print media.

Training

Training on organic farming to encourage and motivate the farmers, on Organic Farming Techniques (giving emphasis on crop residues management and enhancement of organic carbon), input production techniques, Participatory Guarantee System and marketing of produce.

Problem Faced by Organic Farmers	Solution by extension
Paperwork/Bureaucratic red-tape.	Advisory Service
Time constraints.	
Marketing challenges/Low farm prices.	
Organic certification.	Facilitation
Lack of farm management skills	
Access to information.	
Media relations.	
Access to Extension educators.	
Peer support.	Training and capacity building
Low level of operator education	
Computer skills	
Customer relations.	

Conclusion

It is imperative that the impacts of extension programs would be able to increase farm income and productivity, boost food production, enhance food safety assurance, and enable surplus food produced be exported to other countries. In this perspective, planning and executing extension programs must get continuous support from various parties including stakeholders in food production. The current market environment demands agricultural products of a certain level of standards and quality. Consumer's preferences are moving toward safe foods and at the same time convenient of preparation. Good Agriculture Practice which is based on rules and following principles in food production and technological advancement in agriculture should be the guide-post for extension activities to provide food from farm-to-table that is safe for human consumption.

References

- National Programme for Organic Production Guidelines by Department Commerce -New Delhi.
- Lampkin, N. (1990) Organic Farming in U K. *Farming Press*, London. pp. 1-4.
- TNAU Agritech portal. http://agritech.tnau.ac.in/ta/org_farm/orgfarm_basic%20steps.html
- Salleh, S.
- M. (2006) Fokus dan Arah Tuju Sektor Pertanian dan Industri Asas Tani Dalam Pelaksanaan RMK9 Kepentingan Perkhidmatan Pengembangan. Persidangan Pegawai Pertanian, Hotel Zon Regency, Johor Bharu, Johor. 22-25.
- Zimmermann, Karin L. (1997) Organic Farming Research in The Netherlands and Comments on the report of Els Wynen. In: *FAO: Biological farming Research in Europe*. REU Technical Series No. 54. FAO Regional Office for Europe, Rome, 1997, www.fao.org
- FiBL. (2011). *African Organic Agriculture Training Manual – Pest, Disease, and Weeds*. Version 1.0 June 2011. Edited by Gilles Weidmann and Lukas Kilcher. Research Institute of Organic Agriculture FiBL, Frick
- Thilmany, D. (2006). The US organic industry: Important trends and emerging issues for the USDA. *Agribusiness Marketing Report*. Department of Agricultural and Resource Economics, Fort Collins, CO 80523-1172 April 2006-ABMR 06-01. Cooperative Extension, Colorado State University.