

**A REVIEW:**

## Organic farming a tool for sustainable agriculture

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The strides made by Indian agriculture in the past four decades have been impressive food grain production which increased synchronizing with the growth rate of population. However, the main spurt in production has been in rice and wheat crops. In contrast pulses, oilseeds, coarse cereals which are cultivated mainly in the rainfed sector pushed at marginal areas. The second green revolution should include sustainable agriculture with a spectrum of farming systems that attempt to eliminate the use of synthetic chemical inputs to those involving proper use of pesticides to control specific pests and diseases. The ultimate objective is to maximize the treats to the environment from current practices of intensive agriculture. At this juncture organic farming is a necessary tool for second green revolution (Swaminadhan, 1995).

The growing concern about environmental degradation, dwindling natural resources and urgency to meet the food needs of the increasing population are compelling farm Scientists to examine the alternatives to second green revolution in India. A sustainable agriculture backed up by green technologies in an integrated farming system has been considered a promising and potential pathway (Sandhya Rani, 1996). The twin problems confronting agricultural production are all pervasive erosion of natural resources such as land, water and biodiversity and fast declining soil fertility and use efficiency of inputs such as water, fertilizer and energy.

***Aims of organic farming:***

- To work within a closed system and draw upon local resources.
- To maintain long term fertility of the soil and avoid all forms of pollution caused by agricultural techniques.
- To provide a food stuff of high nutritional quality in sufficiency and to reduce the use of fossil energy in agricultural practices to the minimum tending zero.

- To give to all the livestock the condition of life that conform to their physiological needs and to make it possible for agricultural families to earn a living through their work and to develop their potentials as human beings.
- To maintain the rural environment and also to preserve non-agricultural ecological habits and to use conventional agriculture.
- Organic agriculture systems include approaches and methods like organic, biodynamic, regenerative, nature farming and perm culture.

***The key characterization of organic farming in relation to sustainability in agriculture includes:***

Protecting the long term fertility of the soil by maintaining organic matter levels, fostering soil biological activity and careful mechanical intervention

- Providing crop nutrients indirectly by using relatively insoluble nutrient sources which are made available to the plants by the action of soil micro organisms.
- Nitrogen self sufficiency through use of legumes and biological nitrogen fixation as well as effective recycling of organic materials, including crop residues and livestock wastes.
- Weed, disease and pest control relying primarily on crop rotations, natural predators, diversity, organic maturity resistant varieties and limited thermal, biological and chemical intervention.
- Excessive management of livestock, paying full regard to their evolutionary adaptations, behavioural needs and animal welfare issues with respect to nutrition, housing health, breeding and rearing.
- Careful attention to the impact of farming system on the wider environment and the conservation of wild life and natural habits.
- Organic agriculture is viable alternative to conventional agriculture and essential elements of organic quality assurance are development of standards, inspection and

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