



Organic farming: An eco-friendly technology

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During the era of Green Revolution, introduction of high-yielding varieties, extension of irrigated areas, use of high analysis NPK fertilizers and increase in cropping intensity, propelled India towards self-sufficiency in food production. In the process, relative contribution of organic manures as a source of plant nutrients *vis-à-vis* chemical fertilizers declined substantially. An increase in resistance of insect pests to chemical pesticides has also been noticed. Health hazards associated with intensive modern agriculture, such as pesticides residues in food products and groundwater contamination are matter of concern. The occurrence of multi-nutrient deficiencies and overall decline in the productive capacity of the soil due to no judicious fertilizer use, have been widely reported. Such concerns and problems posed by modern-day agriculture gave birth to new concepts in farming, such as organic farming, natural farming, biodynamic agriculture, donothing agriculture, eco-farming, etc. The essential feature of such farming practices imply, *i.e.*, back to nature.

What is organic farming : Organic farming is a method of crop and livestock production that involves much more than choosing not to use pesticides, fertilizers, genetically modified organisms, antibiotics and growth hormones.

Organic production is a holistic system designed to optimize the productivity and fitness of diverse communities within the agro-ecosystem, including soil organisms, plants, livestock and people. The principal goal of organic production is to develop enterprises that are sustainable and harmonious with the environment.

Principles of organic farming :

– **Principle of health:** Organic agriculture must contribute to the health and well being of soil, plants, animals, humans and the earth. It is the sustenance of mental, physical, ecological and social well being. For instance, it provides pollution and chemical free, nutritious food items for humans.

– **Principle of fairness:** Fairness is evident in maintaining equity and justice of the shared planet both among humans and other living beings. Organic farming provides good quality of life and helps in reducing poverty. Natural resources must be judiciously used and preserved for future generations.

– **Principle of ecological balance:** Organic

farming must be modeled on living ecological systems. Organic farming methods must fit the ecological balances and cycles in nature.

– **Principle of care:** Organic agriculture should be practiced in a careful and responsible manner to benefit the present and future generations and the environment.

In contrast, organic farming tends to tolerate some pest populations while taking a longer-term approach. Organic farming, organic pest control involves techniques like encouraging predatory beneficial insects and micro-organisms, careful crop selection and crop rotation. Each of these techniques also provides other benefits- soil protection, fertilization, pollination, water conservation etc. These benefits are both complementary and cumulative in overall effect on farm health.

Need of organic farming : The population of the planet is skyrocketing and providing food for the world is becoming extremely difficult. The need of the hour is sustainable cultivation and production of food for all. The Green Revolution and its chemical based technology are losing its appeal as dividends are falling and returns are unsustainable. Pollution and climate change are other negative externalities caused by use of fossil fuel based chemicals. In spite of our diet choices, organic food is the best choice you'll ever make, and this means embracing organic farming methods. Here are the reasons why we need to take up organic farming methods:

To accrue the benefits of nutrients : Foods from organic farms are loaded with nutrients such as vitamins, enzymes, minerals and other micro-nutrients compared to those from conventional farms. This is because organic farms are managed and nourished using sustainable practices. In fact, some past researchers collected and tested vegetables, fruits, and grains from both organic farms and conventional farms. The conclusion was that food items from organic farms had way more nutrients than those sourced from commercial or conventional farms. The study went further to substantiate that five servings of these fruits and vegetables from organic farms offered sufficient allowance of vitamin C. However, the same quantity of fruits and vegetable did not offer the same sufficient allowance.

Stay away from GMOs : Statistics show that genetically

modified foods (GMOs) are contaminating natural foods sources at real scary pace, manifesting grave effects beyond our comprehension. What makes them a great threat is they are not even labeled. So, sticking to organic foods sourced from veritable sources is the only way to mitigate these grave effects of GMOs.

Natural and better taste : Those that have tasted organically farmed foods would attest to the fact that they have a natural and better taste. The natural and superior taste stems from the well balanced and nourished soil. Organic farmers always prioritize quality over quantity.

Direct support to farming : Purchasing foods items from organic farmers is a surefire investment in a cost-effective future. Conventional farming methods have enjoyed great subsidies and tax cuts from most governments over the past years. This has led to the proliferation of commercially produced foods that have increased dangerous diseases like cancer. It's time governments invested in organic farming technologies to mitigate these problems and secure the future. It all starts with you buying food items from known organic sources.

To conserve agricultural diversity : These days, it normal to hear news about extinct species and this should be a major concern. In the last century alone, it is approximated that 75 per cent of agricultural diversity of crops has been wiped out. Slanting towards one form of farming is a recipe for disaster in the future. A classic example is a potato. There were different varieties available in the marketplace. Today, only one species of potato dominate. This is a dangerous situation because if pests knock out the remaining potato specie available today, we will not have potatoes anymore. This is why we need organic farming methods that produce disease and pest resistant crops to guarantee a sustainable future.

To prevent antibiotics, drugs, and hormones in animal products : Commercial dairy and meat are highly susceptible to contamination by dangerous substances. A statistic in an American journal revealed that over 90% of chemicals the population consumes emanate from meat tissue and dairy products. According to a report by Environmental Protection Agency (EPA), a vast majority of pesticides are consumed by the population stem from poultry, meat, eggs, fish and dairy product since animals and birds that produce these products sit on top of the food chain.

Benefits of organically grown good items and agricultural produce :

- **Better nutrition:** As compared to a longer time conventionally grown food, organic food is much richer in nutrients. Nutritional value of a food item is determined by its mineral and vitamin content. Organic farming enhances the nutrients of the soil which is passed on to

the plants and animals.

- **Helps us stay healthy:** Organic foods do not contain any chemical. This is because organic farmers don't use chemicals at any stage of the food-growing process like their commercial counterparts. Organic farmers use natural farming techniques that don't harm humans and environment. These foods keep dangerous diseases like cancer and diabetes at bay.

Free of poison: Organic farming does not make use of poisonous chemicals, pesticides and weedicides. Studies reveal that a large section of the population fed on toxic substances used in conventional agriculture have fallen prey to diseases like cancer. As organic farming avoids these toxins, it reduces the sickness and diseases due to them. It reduces food contamination and increased food equality. Conventional agricultural practices based on chemical fertilizer causing greater contamination of food in absence certification and in the wake of unhygienic handling.

- **Organic foods are highly authenticated:** For any produce to qualify as organic food, it must undergo quality checks and the creation process rigorously investigated. The same rule applies to international markets. This is a great victory for consumers because they are getting the real organic foods. These quality checks and investigations weed out quacks who want to benefit from the organic food label by delivering commercially produced foods instead.

- **Lower prices:** There is a big misconception that organic foods are relatively expensive. The truth is they are actually cheaper because they don't require application of expensive pesticides, insecticides, and weedicides. In fact, you can get organic foods direct from the source at really reasonable prices.

- **Enhanced taste:** The quality of food is also determined by its taste. Organic food often tastes better than other food. The sugar content in organically grown fruits and vegetables provides them with extra taste. The quality of fruits and vegetables can be measured using Brix analysis.

- **Organic farming methods are eco-friendly:** In commercial farms, the chemicals applied infiltrate into the soil and severely contaminate it and nearby water sources. Plant life, animals, and humans are all impacted by this phenomenon. Organic farming does not utilize these harsh chemicals so; the environment remains protected.

- **Longer shelf-life:** Organic plants have greater metabolic and structural integrity in their cellular structure than conventional crops. This enables storage of organic food for a longer time.

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