

ORGANIC FARMING

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Abstract

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.

Introduction

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. Simply put, organic products are those grown or made without the use of artificial chemicals. Organic farming should be done without the use of chemically formulated fertilizers, growth stimulants, antibiotics or pesticides. It follows the principle of living organism in which all elements of farming – soil, plants, insects, farm animals and farmers – are closely linked with each other.

United States Department of Agriculture defines organic farming as a system, which “avoids or largely excludes the use of synthetic inputs (such as fertilizers, pesticides, hormones, feed

additives etc) and to the maximum extent feasible rely upon crop rotations, crop residues, animal manures, off-farm organic waste, mineral grade rock additives and biological system of nutrient mobilisation and plant protection”.

The United Nations’ Food and Agriculture Organisation (FAO) defines it: “Organic agriculture is a holistic production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity. It emphasises the use of management practices in preference to the use of off-farm inputs, taking into account that regional conditions require locally adapted systems. This is accomplished by using, where possible, agronomic, biological and mechanical methods, as opposed to using synthetic materials, to fulfill any specific function within the system.

Why Farm Organically?

The main reasons farmers state for wanting to farm organically are their concerns for the environment and about working with agricultural chemicals in conventional farming systems. There is also an issue with the amount of energy used in agriculture, since many farm chemicals require energy intensive manufacturing processes that rely heavily on fossil fuels. Organic farmers find their method of farming to be profitable and personally rewarding.

Why Buy Organic?

Consumers purchase organic foods for many different reasons. Many want to buy food products that are free of chemical pesticides or grown without conventional fertilizers. Some simply like to try new and different products. Product taste, concerns for the environment and the desire to avoid foods from genetically engineered organisms are among the many other reasons some consumers prefer to buy organic food products.

Successful Organic Farming

In organic production, farmers choose not to use some of the convenient chemical tools available to other farmers. Design and management of the production system are critical to the success of the farm. Select enterprises that complement each other and choose crop rotation and tillage practices to avoid or reduce crop problems.

Yields of each organic crop vary, depending on the success of the manager. During the transition from conventional to organic, production yields are lower than conventional levels, but after a three to five year transition period the organic yields typically increase.

Cereal and forage crops can be grown organically relatively easily to due to relatively low pest pressures and nutrient requirements. Soybeans also perform well but weeds can be a challenge. Corn is being grown more frequently on organic farms but careful management of weed control and fertility is needed. Meeting nitrogen requirements is particularly challenging. Corn can be successfully grown after forage legumes or if manure has been applied. Markets for organic feed grains have been strong in recent years.

The adoption of genetically engineered (GMO) corn and canola varieties on conventional farms has created the issue of buffer zones or isolation distance for organic corn and canola crops. Farmers producing corn and canola organically are required to manage the risks of GMO contamination in order to produce a “GMO-free” product. The main strategy to manage this risk is through appropriate buffer distances between organic and genetically engineered crops. Cross-pollinated crops such as corn and canola require much greater isolation distance than self-pollinated crops such as soybeans or cereals.

Fruit and vegetable crops present greater challenges depending on the crop. Some managers have been very successful, while other farms with the same crop have had significant problems. Certain insect or disease pests are more serious in some regions than in others. Some pest problems are difficult to manage with organic methods. This is less of an issue as more organically approved biopesticides become available. Marketable yields of organic horticultural crops are usually below non-organic crop yields. The yield reduction varies by crop and farm. Some organic producers have added value to their products with on-farm processing. An example is to make jams, jellies, juice, etc. using products that do not meet fresh market standards.

Livestock products can also be produced organically. In recent years, organic dairy products have become popular. There is an expanding market for organic meat products. Animals must be fed only organic feeds (except under exceptional circumstances). Feed must not contain mammalian, avian or fish by-products. All genetically engineered organisms and substances are prohibited. Antibiotics, growth hormones and insecticides are generally prohibited. If an animal becomes ill and antibiotics are necessary for recovery, they should be administered. The animal must then be segregated from the organic livestock herd and cannot be sold for organic meat products. Vaccinations are permitted when diseases cannot be controlled by other means. Artificial insemination is permitted. Always check with your certification body to determine if a product or technique is allowed in the Permitted Substances List and the organic standards. Organic production must also respect all other federal, provincial and municipal regulations.

Organic produce can usually qualify for higher prices than non-organic products. These premiums vary with the crop and may depend on whether you are dealing with a processor, wholesaler, retailer or directly with the consumer. Prices and premiums are negotiated between buyer and seller and will fluctuate with local and global supply and demand.

Higher prices offset the higher production costs (per unit of production) of management, labour, and for lower farm yields. These differences vary with commodity. Some experienced field crop producers, particularly of cereals and forages, report very little change in yield while in some horticultural crops such as tree fruits, significant differences in marketable yield have been observed. There may also be higher marketing costs to develop markets where there is less infrastructure than for conventional commodities. Currently, demand is greater than supply for most organic products.

What Needs To Be Done?

Growing organic products in patches won't solve the problem. Efforts should be made to gradually shift to healthy, environment friendly and sustainable way of farming. This should be done at broader level and not in patches. Several pesticides, which have been banned or restricted in other countries, are used extensively in India. Strict steps should be taken to curb the use of such pesticides. Such toxic chemicals endanger the lives of the rich and the poor alike. We can't afford to have a situation where those who could pay premium get toxic chemical-free produce, while the rest suffer.

Instead of running after the "organic" label farming the focus should be on ensuring sustainable farming. Although, the term "organic farming" has gained currency in the last one decade, it is not new to India. Even today in several parts of the country people practice organic farming as a tradition but it mostly goes unnoticed. Certification is too costly. A system should be devised where the poor farmers are not required to pay for such certification. Corporate lobbies must be kept at bay. Farmers are today victim of the lobby of chemical fertiliser and pesticides producers and dealers. Organic fertiliser and pesticide producers should not be allowed to create similar situation. Just adding the name "organic" does not guarantee that everything is well. Proper

checks and balances are required. This is needed for the ingredients used in the production like organic pesticides and organic fertilisers as well as for the produce.

Organic could be a way of sustainability and self-sufficiency in farming. Farmers should be compensated for the losses they could incur in the form of lower production due to relinquishing the use of pesticides and chemical fertilisers.

Farming at terrace and other unused spaces should be encouraged. There are several unused plots in the city. People just buy it and leave it in hope of price appreciation. Such unused plots should be utilised for organic farming. In fact, municipalities or the other local bodies could consider some sort of taxes or penalty on the owner if the plots remain unused.

CONCLUSION

Organic farming can be a viable alternative production method for farmers, but there are many challenges. One key to success is being open to alternative organic approaches to solving production problems. Determine the cause of the problem, and assess strategies to avoid or reduce the long term problem rather than a short term fix for it.

REFERENCES

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