Organic Farming for Sustainable Agriculture Development

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Increase in cropping intensity with inefficient and indiscriminate use of agrochemical and counting of crops like wheat, paddy, cotton and sugarcane have resulted in accentuating the area under problematic soils and in disturbing hydrological balance. Natural resource base is continually under a state of stress and degradation due to efforts for boosting agricultural production. Further to increase food and non-food output with mounting pressure of population, we are intending towards unprincipled use of scarce and precious natural resources, which are indispensable for our socio-economic development and environmental soundness. Declining soil fertility, organic matter loss, water induced, land degradation, declining water table, increasing nitrate content in groundwater, hazardous residual content in food and fodder chain, and severe problem of insect-post and decreases caused threat to sustainability of agriculture. This has created a threat to sustainability of agriculture. To find solution of these losses, scientists all over the world are looking for organic farming as a best alternative.

Organic farming avoids largely excludes the use of chemical fertilisers, pesticides, growth regulators and livestock feed additives. To the maximum feasible, organic farming system rely upon crop-rotation, crop diversification, crop residues, animal manure, legumes, green manure, off farm organic wastes, and aspects of biological pest control to maintain the soil fertility, soil productivity and the supply plant nutrients and to control insects, weeds and other pests.

The pollution in general and poisoning of food with harmful chemicals, and their effect on human health and environment is making people to look for organic food. Moreover organic farming is an environment friendly ecological production system that promotes and enhances biodiversity, biological cycles and biological activities based on minimal use of off farm inputs and management practices that restore maintain and enhance ecological balance. Organic farming reduces the cost of cultivation and offers price premium, conservation of soil and water, prevention of soil erosion and biodiversity, generation of rural employment, lowering the urban migration, improved household nutrition, and local food security.

In India, traditionally, organic farming has always been practised since ancient time but no more emphasis to till date, no government support and incentives for promotion. No reward and encouragement for innovative organic farmers. However, India is largest producer of a variety of fruits and vegetable in the world due to its diverse agro-climatic conditions. About 70 per cent area of cultivable land is rain-fed in India, where no fertiliser is used and open for organic farming. Approximately 600-700 million tonnes of agricultural wastes also available per year but most of it is not properly used. Bio fertilizers and bio pesticides not popular in India because of low demand, erratic supply and farmers are ignorant. Another reason is heavy advantage of chemical pesticides and chemical fertilisers in increasing the crop yields.

It is the time to shift for organic farming that enhances the environment balancing, sustainability, diversification, and creates more employment opportunities in rural sector. Also there is people’s demand for quality nutritive added, residue free and diseases free organic agro-products throughout the world. Organic products also promise better prospects for market and trades. There is ever-growing export market for organic products. The domestic market of organic products in India is emerging.

Hence, the expectation that organic farming by reverting the use of manure, green manure carbon wastes can bring sustainability to agriculture with eco-friendliness. It is imperative for researchers and planners to develop an alternative viable strategy to supplant the chemical farming.

Many farmers, researchers and policymakers believe and fear that turning of organic farming would mean lower the yield and lower the profit, consumer on the other and, would not want to pay higher price for organic products, not feasible option to improve food security. It will be difficult to differentiate between the effect of different factors on a farming system, as results are not feasible quickly in organic management, many of changes may be observable only in long-term, such changes as in yield
or soil. It is challenge for researchers and extension functionaries to change the attitude of farmers towards organic farming, while the yield of organic products are low and prices are high.

Also there are many constraints in organic farming in developing countries pertaining to technologies, trade, export, labelling, certification, storage, transportation etc. There are only small research programme and institutional support for organic agriculture, insufficient scientific dialogue, and lack of communication between scientists and organic practitioners in India to date. Hence, the challenge is to develop the system, which will facilitate acceptance of organic cultivation by farmers and the consumers.

However, The World Bank has started a project (India) designed to empower rural communities to export organic spices. But farmers in developed countries like United Kingdom and USA are encouraged to convert their existing farm into organic farms and are often fully supported with financial incentives and technical assistance.