Abstract
The organic sector for developing countries is still small and typically a niche market. The inherited tradition of organic farming is an added advantage for India. India can emerge as a major exporter of organic produce. Global trade in organic products is growing phenomenally as consumption of organic food has grown annually at more than 25 per cent over the last ten years, and is expected to touch 25 per cent of total food consumption by 2010. Greatly increasing numbers of organic product consumers around the world result in a supply-demand gap that auger will for producers, processors and distributors of organic products. Global consumption growth rates over the next 3–5 years will be fairly high (25–30 per cent), particularly when compared to most other categories of foodstuff. Organic farming and agribusiness in the organic products from India is likely to receive a boost when the regulatory framework for proper certification and export promotion is put in place by the government. The government and the exporters should take up this task of locating organic farms in the country and encourage them to continue with organic farming.

Introduction
More and more people are shifting to organic food because of better taste and more nutrition that contributes to a healthier diet. Such foods are environment friendly and their consumption is socially responsible. Increased consumer awareness of food safety issues also account for the growing interest in organic foods. Organic food is grown with nil or minimal use of chemical fertilizers and pesticides and in its processing no chemical, artificial colour or flavouring is used either as processing aid or as additive. These foods are cultivated using organic manures, bio-fertilizers and biopesticides (like neem, chilli, cow dung, microbial flora and faunaa etc., adopting mechanical weed control and bio-control of pests and diseases and may contain colours and flavour derived from non-toxic natural plant materials only. Organic agriculture contributes to food security by a combination of many features, like increasing yields in low-input area, conserving bio-diversity and natural resources, increasing income

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and/or reducing costs, producing safe and varied food, being sustainable in the long term, etc.

**Organic Food Labeling**
Recently, the U.S. Department of Agriculture, along with the National Organic Standards Board, has set national standard for how food labeled “Organic” must be produced. The new USDA organic seal, used with the term organic, tells consumers that a food – be it fruit, vegetables, eggs, dairy, meat or processed products – is at least 95 percent organic. Foods labeled “made with organic ingredients” must contain at least 70 percent organic ingredients. Organic foods should not be confused with those carrying other labels such as natural. While no legal definition exists for natural food items, food processors use the term to define products that are minimally processed or have few preservatives. National Organic Standards Board defined “certified organic” products at their meeting in April 1995 as follows: “Organic” is a labeling term that denotes products produced under the authority of the Organic Foods Production Act. The principal guidelines for organic production are to use materials and practices that enhance the ecological balance of natural systems and that integrate the parts of the farming system into an ecological whole.

**Organic Food Quality**

- **Pesticides residues**
  Organic produce is usually found to contain no pesticide residues. When residues are present, they are typically of significantly lower incidence and levels than those found in non-organic produce (MAFF 1999, Schupbach 1986, Reinhardt & Wolf 1986), and result mostly from environmental pollution from non-organic agriculture (Woese et al. 1997, Bitaud 2000). ‘Rigorous safety assessments’ are made of all pesticides and it is asserted that these incidences and levels do not represent a threat to food safety (FSA 2001). Dietary exposure to pesticide residues has been linked to gastrointestinal and neurological complaints (Ratner et al. 1983), breast milk contamination (Aubert 1975) and some sperm quality parameters (Juhler et al. 1999, Abell et al. 1994, Jensen et al. 1996).

- **Food poisoning**
  There is no evidence linking organically produced foods with an increased risk of food poisoning. Methods employed in organic farming such as lower stocking rates and careful composting of manure are designed to minimize pathogenic risks, and investigations have confirmed that organic produce carries no greater risk than non-organic produce (FSA 2000, Williams et al. 2000, PHLS 2001).

- **Phytonutrients**
  Phytonutrients with known beneficial (often antioxidant) effects on human health are expected
to be higher in organic produce for various reasons, including varietal choice, crop maturity and crop protection methods. This has been confirmed for lycopene in tomatoes (Pither & Hall 1990), polyphenols in potatoes (Hamouz et al. 1999), flavonols in apples (Weibel 2000) and resveratrol in red wine (Levite 2000). A recent review (Brandt & Molgaard, 2001) tentatively estimated, based on the currently available evidence that organic produce will tend to contain 10-50% higher phytonutrients than non-organic produce.

**Nutritional value**
Animal feeding trials have consistently demonstrated improved health in animals fed with organically produced food compared to those fed with non-organically produced food (Worthington 1998). Observed benefits have included significantly improved growth rates (Edelmuller 1984), reproductive health (Aehnelt & Hahnn 1978), recovery from illness (Plochberger 1989), and general health (Staiger 1988) in those animals fed organically produced feed. While similar controlled studies in humans are difficult, clinical experience and recorded observations have suggested similar benefits in human reproductive health, recovery from illness (Plaskett 1999) and general health (Daldy 1940) from the consumption of organically produced food.

**Safety**
Organic food is as safe to consumer as any other kind of food. Just as with any kind of produce, consumers should wash before consuming to ensure maximum cleanliness. As cited above, organic produce contains significantly lower levels of pesticide residues than conventional produce. It is common misconception that organic food could be at greater risk of *E. coli* contamination because of raw manure application although conventional farmers commonly apply tons of raw manure as well with no regulation whatsoever. Organic standards set strict guidelines on manure use in organic farming either it must be first composted, or it must be applied at least 90 days before harvest, which allows ample time for microbial breakdown of any pathogens.

**Organic Vs GMO Food**
GMO crops are particularly inappropriate of developing countries like India and marginalized farmers. The development of GMO crops requires massive investment in research. Consequently, it drains resources from much needed research in the development of low cost alternatives. Poor countries do not have the capacity to carry out the impact assessment, testing and monitoring that growing GMO crops will necessarily entail. Because of the high costs, GMO crops will be more expensive. Farmers cannot afford to buy new seeds every year. Their production system depends on saving their own seeds with occasional exchange.
or renewal not on yearly purchase of expensive patented seeds.

**Global Market**

Global trade in organic products is growing phenomenally as consumption of organic food has grown annually at more than 25 per cent over the last ten years, and is expected to touch 15 per cent of totals food consumption by 2005 (websites cited). Greatly increasing numbers of organic product consumers around the world result in a supply - demand gap that auger will for producers, processors and distributors of organic products. Global consumption growth rates over the next 3 – 5 years are fairly high (from 10 – 15 per cent to 25 – 30 per cent), particularly when compared to most other categories of foodstuff.

The growth in sales of organic products, particularly in Oceania (Australia & New Zealand) and in Asia is projected to be the highest at approximately 25 per cent annually over the next few years. Most experts agree to the fact that the industry is growing by about 20 percent a year. In the short term, this 20 percent rate will continue to exceed the 10 percent rate of natural foods and the 2 to 2.5 percent rate of conventional food.

At present, Germany consumes about 50% of the organic foods produced indigenously and meets its 50% of the demand for such foods through imports. The annual growth rate in the demand for organic food and beverages in the world is about 20 per cent. The retail sales of organic food and beverages in select markets like the USA, the EU, Japan etc. was estimated at around $20 billion in 2002 and was likely to go up by 2010. In 2002, the size of organic produce market in US was at around $9.5 billion and in the EU, the organic food accounted for about 3 per cent of all food sales. About 70 percent of the organic food/produce consumed in the EU is imported.

**Why Does Organic Food Cost More?**

The cost of organic food is higher than that of conventional food because the organic price tag more closely reflects the true cost of growing the food, substituting labour and intensive management for chemicals, the health and environmental costs of which are borne by the society. These costs include clean-up of polluted water and remediation of pesticide contamination. Prices for organic foods include costs of growing, harvesting, transportation and storage. In case of processed foods, processing and packaging costs are also included. Organically produced foods must meet stricter regulations governing all these steps than conventional foods. The intensive management and labour used in organic production are frequently (though not always) more expensive than the chemicals routinely used on conventional farms. There is mounting evidence that if all the indirect costs of conventional food production were factored into the price of food, organic foods would cost the same, or, more likely, be
cheaper than conventional food.

**Price Premium**

Price premiums for organic products range from 10 to 100 per cent although 20 percent seems more typical. However, these can disappear when supply increases especially in the countries with policies to encourage organic farming. At the same time, liberalization of international trade in agriculture, in particular the elimination of port subsidies and reduction of domestic support could shift the comparative advantage to countries like India.

**Market Potential for India:**

The organic sector for developing countries is still small and typically a niche market. The inherited tradition of organic farming is an added advantage for India. Efforts are required, however, to establish marketing channels for organic produce to provide a stable, predictable source of supply. The economic structure of organic farming is characterized by three types of farming. The first category is that of traditional farmers who are using organic methods but are not aware of it. This applies to many parts of farming in India. The second category is of traditional organic farmers generally supplying to the domestic market and likely to be of mixed farming type. In India, as in other countries, many of these producers adopted organic production techniques largely because of a philosophical viewpoint. Their motivation is based on concern for the environment or because of a lifestyle decision, and certainly not because of strong financial incentives. The third type of farming is generally aiming at production for the export sector. The number of these farms has grown since early 1990 with a number of processing companies such as Sampad Vikas Ltd., Mikaal Fibers Ltd., Bombay Burma Trading Corporation, etc. marketing organic produce in India. These farms are of two kinds; those producing permanent crops and those on broad acre production systems where the export crops are rotated with other crops. A main limitation for these farms is finding organic markets for the other crops to complete their rotations. However, we have been slow to cash in on the global situation. We have so far certified only 1,426 farms as organic. We have never encouraged farmers practicing traditional agriculture to remain organic and they are gradually trying to switch over to using chemical fertilizers and pesticides. The FAO basing on the Indian government’s figures of certified organic farms has estimated that the country produces only 14,000 tons of organic produces. But the fact is that the country has more areas of organic farms than officially certified and produces more organic food than estimated by FAO. (*Financial Express*, July 21, 2003).

The government and the exporters should take up this task of locating organic farms in the country and encourage them to continue with organic farming. India can develop higher SPS
(Sanitary and Phytosanitary measures) norms than EU if organic farming is encouraged and our agricultural exports will not face any problem in the future. Also we will be in a better position to address the health concerns of our people. India has so far allowed only Bt cotton and not any other GM crops. It is, therefore, in a better position to export its agro produces to EU and other countries, which are averse to GM foods.

Export potential
India can emerge as a major exporter of organic products. India has an accreditation system in place that is part of the National Programme for Organic Production (NPOP) released by the then honourable Prime Minister, Shri Atal Behari Vajpayee on 8th May 2000. Organic spices export from India is slowly picking up. More and more organic spices are added every year for export, ever since the country started exporting organic pepper in 1998-99. During 2001-02, total exports of organic spices stood at 98.65 tonne valued at Rs. 2.67 crore as against 37.60 tonnes worth of Rs. 1.26 crore in 2000-01. Spices Board of India expects that the export will further increase in the current fiscal year, as more organic items in more quantity is available for trade. The major exporter of organic spices in India is Peermade Development Society (PDS), Idukki (Kerala), etc. It has, so far, exported 38.55 tonnes of organic white pepper valued at Rs. 1.31 crore and 41.88 tonnes black pepper worth Rs. 0.71 crore. Besides pepper, organic varieties of clove, thyme, chilli powder, dry ginger, turmeric (dry), mustard seed, tamarind (dry) nutmeg and mace were exported in 2001-02. Organic clove and thyme were exported to Switzerland. Clove fetched a unit value of Rs. 673.53/kg, while thyme fetched Rs. 124.78/kg.

To promote organic cultivation, Spices Board had come out with package of practices for organic cultivation of ginger, turmeric, chillies, pepper and vanilla. The farmers would have to ensure the minimum requirements for organic agriculture, which must be fulfilled for certification programmes with regard to conversion, bio-diversity, seeds and planning materials, conversion period, cropping pattern, fertilization policy, soil and water conservation, labelling, food processing and handling, packaging.

Regulations
Organic farming and agribusiness in the organic products from India is likely to receive a boost when the regulatory framework for the proper certification and export promotion is put in place by the government. In 2000, the union government had released a document on ‘National Programme for Organic production’ (NPOP) and in May 2001, a document on National Accreditation Programme (NAP) was notified. In July 2002, the union government also released on ‘Indian organic’ logo, which can be used on the package of, certified organic
Organic Food Marketing

goods. Effective from July 1, 2001, no food item from India can be exported under an ‘organic food’ unless it has been certified as ‘organic food’ by a certifying agency accredited by Agricultural and Processed Food Export Development Authority (APEDA), Spices Board, Coffee Board, Tea Board, Coconut Development Board, etc. The NPOP covers national standards based on guidelines of the International Federation of Organic Agriculture Movement, European Union Standards and Codex Alimentarius standards, APEDA, Spices Board, Coffee Board, Tea Board, Coconut Development Board and Directorate of Cashew and Cocoa have been made the accreditation agencies. Regulations also make a provision for export, import and local trade of organic products. Currently, however, only the export of organic products comes under the government regulation, while imports and local trade do not. Thus, an agricultural product can only be exported as an organic product if a certification body certifies it duly accredited by APEDA as one of the accreditation agencies. The categories of products covered under accreditation are organic crop production, organic animal production, organic processing operations, wild products and forestry.

Some Developments in International Certification for Organic Food

- Development of international standards through Codes Alimentarius on organic food should be supported.
- These international standards are likely to be based on IFOAM (International Federation of Organic Agriculture Movement) that has consultative status with EU and Codes, alimentarius as well as liaison status with FAO.
- Demeter’s certification (international certification from Germany) is a network of 19 certification bodies in Africa, Europe, Australia and North America.
- European Union’s production and certification council regulation governs the basic EU regulation on organic food products, but the basic regulation relies heavily on IFOAM.
- For meeting the requirements for equivalence, the third country may be approved by the European Commission as having standards and inspection measures equivalent to those of E.U. until 31st December 2002, organic products from countries which are not in the approved list under Article 11 can be imported into EU under import permits provided the importer submits documentation to confirm that the products are produced and certified according to the rules of EU. About 60 countries export of this framework to the EU.
Certification in exporting countries can be carried out either by local or international certification bodies under a partnership arrangement.

References


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Organic Food Marketing

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