Benefits of Organic Foods: A Review

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Abstract: With emerging trends in adaption to new farming techniques which results in extensive and massive yields by using artificial modern techniques also led to various ethical issues and concerns to health and retrogression of the environment. Subsequently, organically produced products are gaining fame and familiarities in the global food markets. Organic foods produce wide ranges of benefits to health as well as environment. They are grown without any artificial inputs leading a path to the roots of ancient agricultural farming practices. This analyses the emerging trends in the significantly growing organic market in India in addition to the global rise of market and benefits of organic foods. Along with the rise of market, the motivations towards the consumption and barriers of organic products are analysed. The motivations and barriers need to be addressed more significantly as they directly influence the market rise and growth. Consumers are drawn towards the organic food because of health motives, psychological perceptions, concerns towards environmental sustainability. We recognize several aspects that are barring consumers from the potential buying of organic products. The prospective growth of Indian organic market can upsurge with creating abundancies and variety in foodstuffs and imparting knowledge and information through various platforms with encouragement of governmental and non-governmental bodies.

Keywords: Organic foods, Health and Environmental Benefits, Organic Market, Purchase Motivation, Consumer Attitude.

I. Introduction

The emerging notion of organic food market is flourishing rapidly with course of time making India to be the foremost producer of organic products in the world. The term “organic” was first used by Lord Northbourne, an Oxford University agriculturist in his book “Look to the Land”, in 1940. The book was based on the idea of “the farm as an organism”, which designates that the “the farm itself must have biological completeness; it must be a living entity, it must be a unit which has within itself a balanced organic life” [1].

Organic products are grown under approaches of agriculture without the use of chemical fertilizers and pesticides with environmentally and socially responsible perspectives. “Organic food encompasses natural food items which are free from artificial chemicals such as fertilizers, herbicides, pesticides, antibiotics, and genetically modified organisms. Additionally, organic food is not subjected to irradiation” [2].

In another definition FAO suggested that “Organic agriculture is a unique production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activity, and this is accomplished by using on-farm agronomic, biological and mechanical methods in exclusion of all synthetic off-farm inputs” [3].

Organic agriculture infers farm designing and management to generate an eco-system, which can procure viable productivity unaccompanied by the use of unnatural exterior additions such as chemicals, fertilizers and pesticides [4]. The rapid expansion organic market is the result of progression from the ideology of mass production to sustainable production. The driving forces behind the global acclimatisation for the organic goods are awareness and concerns towards health and global environmental insinuations.

Organic culture is not new to India but it has been practised since centuries as directly or indirectly approximately 60% of the Indian population is based on agriculture. In rural land forms of India most of the economy is based on the agriculture [5]. The concept of organic farming is succeeded in India since ancient times. The great Indian civilization bloomed on organic farming, as whole agricultural practices used were organic techniques using the plant and animal-based products as pesticides and fertilizers [6]. There are mentions in ancient scriptures about practices identical to organic conventions. Indications in ancient Indian writings Ramayana, Rigveda, Atharva Veda, of green manure, and returning back of all corpse things to retain and nourish the mother earth by transforming it into a wholesome produce [7].

The process for raising organic products includes plans preliminary action of choosing organic inputs. All the materials used must be certified organic products whether seeds, or any other material used. The cultured varieties and species should be adapted to the climatic conditions and pest resistant. In organic cultivation growth and development shall take place in a natural environment that lessens the loss from the pests, diseases and weeds [8].
II. Benefits of Organic Products

With emerging trends in adaption to new farming techniques which results in extensive and massive yields by using artificial modern techniques also led to various ethical issues and concerns to health and retrogression of the environment [10]. These concerns towards health and ecosystem are rising the consumers inclination towards the organic products as they are providing a sustainable development.

Organic foods are proven to be beneficial in all aspects of life in being valuable to ecology, providing health benefits, as it is apparent from various studies that the potential consumption of organic drops the rate of Cd and higher antioxidant activity due to the non-use of N and P fertilizers [11].

As irradiation is the process of ionising treatment of foods to kill harmful bacteria as they can also produce complex chemical changes in the food as they can be carcinogenic [12].

III. Health benefits of Organic foods

1. **Toxins and GMOs free**- Organic products are processed in a controlled environment with prohibited use of artificial pesticides, antibiotics, GMOs, or irradiation, which drops the potentiality of toxins in the food products [9].
2. **Pesticide Cutback**- There are studies that approve that the concentrations are found to appear lower in organic foods than the conventionally grown foods [13][11].
3. **Higher Nutritional Content**- Higher nutritional values of organically produced products can be evident from the fact that organically produced milk have higher concentrations of n-3 fatty acids primarily contributed from αLNA [15].
4. **No Preservatives or Artificial additives**- The principal aim of the organic research is to produce goods without the use of any chemical fertilizers, pesticides the quality and safety are ensured as the residual volume of the chemical toxins is minimum. It restores the satisfaction and motivation to buy organic food in consumers [16]. Organic farming has a smaller carbon footprint, preserves and builds soil well-being, replenishes natural environments for cleaner water and air, all lacking in toxic pesticide residues [3].

IV. **Environmental benefits of Organic Foods**

![Figure 3: Environmental benefits of Organic Foods](image)

1. **Soil fertility**- The practices and techniques involved in the organic farming such as crop rotations, symbiotic associations, inter-cropping, organic fertilisers and minimum tillage are proven to be beneficial for the building up of the soil fertility [3].
2. **Plant Nutrient uptake**- Organically produced are sourced by insoluble nutrient sources by the action of soil microorganisms [9].
3. **Bio-fertilizers**- Organic farming does not use synthetic fertilizers so, potential use of organic or natural fertilizers increases earth’s effective recycling of organic nutrients.
4. **Integrated Pest Management**- Integrated Pest Management in Organic farming is established on the biologically based adaptations such as mechanical or physical methods or biological pest control deprived of the use of insistent use of synthetic pesticides [9].
5. **GMOs Free**- The potential use of GMOs is harmful for the health and environment as they hamper the natural development and sustainability [3].
6. **Integrated Livestock Farming**- Organically raised animal are not raised on antibiotics as well as animal cruelty is abolished [9].
7. **Biodiversity Conservation**- As the organic farming is based on the use of the natural products and techniques it creates suitable habitats for the wildlife and creates reduction of the erosion of the agro-biodiversity [3].

V. **Organic Food Market**

The spread of the organic movement globally has ensured the significant growth in the production of the organic foods and beverages showing the CAGR of about 10% from 15.2 million ha in 1999 to 43.7 million ha in 2013-14 [18]. The global composition of world’s agricultural land is recently under organic cultivation at about 1.4%. The factors like the continually increasing demands and better surcharges in organic cultivation is drawing cultivators to practice organic farming. As per FiBL-IFOAM-SOEL-Surveys 1999-2007, Countries with data on organic agriculture has more than doubled from 77 in 1999 to 172 in 2014 [14][17].

Australia is the country with the most organic agricultural land, 97 percent of which is estimated to be extensive grazing area trailed by Argentina and China. The ten countries with the most organically managed agricultural land have a combined total of 55 million hectares and constitute threequarters of the world’s organic agricultural land [17][8].

India tops in the rank of the total numbers of producers and ranks 9th in the World’s Organic Agricultural land [17]. The certified organic foods are exported from India are about 1.35 million tonnes. India produced around 1.70 million MT (2017-18) of certified organic products [4].

There has been increased export in recent years, the total volume of export during 2017-18 was 4.58 lakh million tonnes and in this regard, organic food export comprehension was around INR 3453.48 crore (515.44 million USD). Organic products are exported
globally to countries like the USA, European Union, Canada, Switzerland, Australia, Israel, South Korea, Vietnam, New Zealand, Japan, etc [4].

In terms, goods exported the value realization of goods and supplies are led by Oilseeds (47.6%) and Cereals and millets (10.4%), and it has been followed up by Plantation crop products such as Tea and Coffee (8.96%), Dry fruits (8.88%), Spices and condiments (7.76%) and others [4].

The export of organic produce from India has been growing at a CAGR of 34.50 percent from 4161 MT in 2002-03 to 263687 MT in 2015-16 [18].

Largest area covered under organic certification is in Madhya Pradesh, followed by Rajasthan, Maharashtra and Uttar Pradesh [4].

In terms of the commodities, the sugar crop leads the production with 991640.09 tons production in the recent data collected in 2018-19 followed by oil seeds and fibre crops with 727156.19 tons.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Category</th>
<th>Production (in Tons)</th>
<th>Organic</th>
<th>In-Conversion</th>
<th>Total</th>
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<td>2</td>
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<td>6</td>
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<td><strong>Total Certified production</strong></td>
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<td><strong>8297.105</strong></td>
<td><strong>2607396.089</strong></td>
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</table>

VI. Motivations of Organic Consumption

The intensions towards the buying of the organic food products is based on the various factors like heath concerns, environmental concern, safety and quality consciousness, and ethical consumerism.
1. **Health Consciousness**

Numerous studies have been conducted on the reasons and factors driving for the consumption of organic foods. The willingness to buy sustainable health-promoting organic products rise to various studies that support the idea of health consciousness persuades consumers to buy organic food. Health consciousness includes the obligation of keeping the nutritional value intact in the food consumed [19][16].

2. **Psychological Aspects**

Research on factors affecting consumer attitude and demand for organic food as the status of the person in society. Being pricey and high costing, organic food is considered to be the trend in elite societies [20].

Some behavioural aspects also constitute the buying intention of the consumer like some people to choose organically produced goods under the influence of any other individual, marketing processes, advertisements [16].

3. **Quality and Safety**

As the principal aim of the organic research is to produce goods without the use of any chemical fertilizers, pesticides the quality and safety are ensured as the residual volume of the chemical toxins is minimum. It restores the satisfaction and motivation to buy organic food in consumers [21][16].

4. **Environmental and Ethical Consumption**

The uncensored use of pesticides and inorganic fertilizers raises the concerns of various environmental issues like soil washing and erosion, contamination of soil, increasing salinity and nitrogen content in the groundwater which gets traced down in the soil [5][10].

The greenhouses emission is also raised by the rapid urbanisation and industrialisation of agriculture due to the expansive use of modern techniques [10].

To create and promote animal welfare, the population is being drawn towards vegetarianism and veganism. As organic cultivation does not use any chemical it creates a balance and harmony in the ecosystem.

VII. **Barriers of Organic Consumption**

The factors which disrupt or blocks the consumption of organic products are they are more expensive than the conventionally produced products. Not easily available and more easily perishable are certainly other attributes that hinder the consumption of organic products [22].

1. **Negative attitudes**

People’s attitude for the consumption of organic foods is highly influenced by their particular influences based on their experience and situations [23]. Convenience in the availability, affordability, and varieties accessible in conventional products affects the buying of organic foods.

2. **Knowledge Barriers**

Lack of knowledge or awareness for organic products also acts as a barrier in their consumption [24]. As the organic food market is still a small developing space, more encouragement of organic product information will help increment of its consumption.

3. **Willingness to Pay**

Price is one of the main attributes which influence the consumer’s attitude towards the buying of a certain product. Organic products are mostly more expensive than conventional products, so it establishes to be the main hindrance in their purchase and consumption [25].

VIII. **Conclusion**

To conclude this review we can say that, the consumption of organic foods must be increased to utilise its immense benefits to humankind. Also, the awareness regarding these products must be increased through various mediums to make consumer aware about their usage and consumption benefits. To remove barriers of organic consumption it is necessary to make consumer aware about its benefits. The researches on benefits of organic food should give emphasis on its benefits as well as the ways to increase its usage among general public. There is vast scope in research of organic foods.

**REFERENCES**


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