



3rd National Workshop
**Organic Food and Health:
Avenues of Innovation and Entrepreneurship**
November 30, 2017, UET, Peshawar
Pakistan Council for Science and Technology



Organic food contributes to better health through reduced pesticide exposure and increased nutritional quality

Organic—The Core Concept

The term organic refers to the practices involved in the growing and processing of agricultural products. For a product to be classified as organic, it needs to meet and maintain specific requirements. The organic methods involve safe soil without any alteration such as introduction of synthetic pesticides, bioengineered genes (GMOs) and petroleum based or sewage sludge-based fertilizers. In case of organic life stocks, the livestock must have provisions for open and outdoor environment and organic feeds. Further they may not be given any sort of antibiotics, growth hormones or any animal-by-products.

Changing Life Style and the Health Challenges

Health is wealth but we realize it only when we lose it. The changing lifestyle and growing stress of modern competitive life has resulted in many health challenges to mankind and in a shift of disease pattern from infectious diseases to non-communicable diseases such as diabetes, raised blood pressure and

cholesterol, Ischemic Heart disease and cancer, which are considered to be a major threat to global health and economy. Incidentally, estimated burden of non-communicable diseases is highest in South Asia and Middle East, as compared to US, Europe and other Asian countries. Unfortunately, pharmaceutical medicines do not provide a cure for these chronic diseases as the treatment requires a lifelong use of expensive medicines, thus providing a symptomatic relief and bears multiple adverse effects. The scientific evidence is accumulating to claim that mild to moderate such chronic diseases can be cured with lifestyle and dietary modifications. But sustaining good and healthy life is strongly reliant on both our access to healthier products and commitment to healthy eating practices. This not only depends on eating good portion of fruits, vegetables, whole grain, nuts, lean protein and good fats in our daily routine but also involves considerations for food safety, security and sustainability. Organic farming is good not only for human health but also preserves soil health and nutrition.

Islam and Healthy Food Practices

Islam's holistic approach to health includes treating our bodies with respect and nourishing them with, not only faith, but also with lawful, nutritious food. Wasting a part of food is forbidden in Islam as each part of food has so much of nutritional value and when others might be dying of hunger. Choosing wholesome food and avoiding the unwholesome is essential to good health. Allah says in the Quran,

“Eat of the good and wholesome things but indulge in NO excess therein”
Quran [20:81]

Health Benefits

Practices involved in the agricultural production highly impact our health and environment and bring us to basic question of importance of organic method of food production over the conventional methods. Studies have shown that organic foods are healthier compared to conventionally grown counterparts. Organic fruit and vegetables bears 50% more antioxidants, which scientists believe can reduce the risk of cancer, diabetes

and heart diseases. They also retain more contents of vitamins and minerals such as iron and zinc. Research has proved that diet rich in fruits and vegetables, cereals, fish, olive oil along with nuts prevent or delay the onset of many chronic diseases. Organic foods are also considered better for fighting against cancer. People having intake of organic food in their daily routine have proven improved immune system, better sleeping habits and are less likely to be overweight than when eating conventionally grown foods.

Farmers - reduced pesticide exposure in organic farming.
Consumers - increased nutrition and reduced pesticide contamination
Children - less susceptible to effects of pesticide exposure

Organic farming or method of food cultivation is not a new concept for the country but this was the normal practice followed by our farmers traditionally such as relying on natural fertilizers and pest controls.

Entrepreneurial Prospect in Organic Farming

During the recent past there is renewal of demand for the organic products. This is evident from the fact that the global sale in organic food during last two decades has noticed six-fold increase while the production in organic products has only double during this period. This entails that there will continue to widening of gap between demand and supply of the organic products, providing opportunities for entrepreneurs to cater this increased demand. This is wonderful opportunity for Pakistan, an Agro based economy to tap its due share in the global market and

earn billions in terms of foreign exchange through the export of organic products, in addition to addressing health challenges of its own people.

Workshop Motivation

Realizing the importance of organic food for health and its huge global market, PCST has planned to organize a series of workshops in all the major cities of the countries on the importance of organic foods and value attached to it. The basic motivation is to help in creating awareness regarding organic food, its importance for a healthy life and more importantly to explore new avenues of entrepreneurship and value addition. Based on the recommendations retrieved from these workshops, policy measures will be taken by PCST. Two workshops on the subject have already been organized in 2016 at Islamabad and Lahore. Considering the significance of topic the workshop attracted a large number of dignitaries including Heads of R&D organizations, VC's of universities, eminent scientists, representatives of foreign missions, international donors, representatives of private sector/industry & civil society and chaired by the Federal Minister with wide coverage in the media.

Basic Objectives

- To create awareness on the health benefits of organic foods
- To discuss the potential of organic food and organic waste towards value addition
- To assess the challenges faced by entrepreneurs in Organic Food Sector in Pakistan
- To discuss the potential funding opportunities and way forwards for rapid growth of organic food sector

- To discuss mechanism of certification for quality assurance, thus to help promote export.

Some popular articles of PCST staff on health benefits of some herbs listed here; copy can be provided on request.

1. Moringa oleifera: a food plant with multiple medicinal uses. *Phytotherapy Research*, 2007; 21:17-25.
2. Coriander (*Coriandrum sativum* L.): A Potential Source of High-Value Components for Functional Foods and Nutraceuticals - A Review. *Phytotherapy Research*, 2013;27(10):1439-56.
3. Valuable Nutrients and Functional Bioactives in Different Parts of Olive (*Olea europaea* L.) – A Review. *Int J Molecular Science*, 2012; 13(3):3291-3340;
4. Medicinal value of ginger with focus on its use in nausea and vomiting of pregnancy. *Int. J. Food Properties*, 2007; 10: 269-278.
5. Antioxidants: their role in health and disease. *Int J Pharmacol*, 2005; 1: 210-21
6. A review of medicinal uses and pharmacological activities of *Nigella sativa* seeds (Kalonji). *Pak J Biol Sci*, 2004; 7: 441-451.
7. Dietary Almonds Increase Serum HDL Cholesterol in Coronary Artery Disease Patients in a Randomized Controlled Trial. *Journal of Nutrition*, 2015; 145: 2287-92
8. Therapeutic potential of Turmeric in Alzheimer's disease: curcumin or curcuminoids? *Phytotherapy Research*, 28 (4) 517-25
9. Clinical efficacy of the co-administration of turmeric and black seeds (Kalongi) in metabolic syndrome - A double blind randomized controlled trial. *Complementary Therapies in Medicine*, 2015; 23: 165-174
For details, please see PCST website www.pcst.org.pk/chairmanprofile.php

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