

Nutritional quality and safety of organic foods

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Apprehensions about negative environmental impacts of conventional farming techniques, coupled with positive consumer perceptions of the safety and quality of organic foods have contributed to growth in their demand. It has been demonstrated that organically produced foods have lower levels of pesticides and veterinary drug residues, and in many cases, lower nitrate contents. Organic production methods lead to increases in nutrient content, particularly organic acids and polyphenolic compounds, many of which are considered to have potential human health benefits as antioxidants. Organic crops tend to have more vitamin C, sugars and phenolics and fewer nitrates than conventionally grown produce. It has been estimated that organic crops, overall, contain 21% more iron and 29% more magnesium than their conventional counterparts. Organic crops showed higher phosphorus and dry matter content and lower nitrogen content than conventional crops. The quality of amino acids was higher in organic products indicating that more essential amino acids were available. Increased amounts of omega-3 fatty acids and conjugated linoleic acid in organic dairy were noted. Consumption of organic foods provides protection against exposure to organophosphorus pesticides commonly used in agricultural practices. Organic fruits and vegetables appear to have the potential to diminish the mutagenic action of toxic compounds and inhibit the proliferation of certain cancer cell lines. For prevention of allergic dermatitis, the consumption of organic dairy and meats can make a significant difference in health outcomes. This review discusses the differences between organic foods and conventional foods on the parameters of food safety and nutritional composition.

Biography

Uma Chitra is Head, Department of Nutrition and Dietetics, Kasturba Gandhi College for Women, Secunderabad, AP, India. She was affiliated to Kansas State University, Manhattan, Kansas, USA as a Fulbright Visiting Lecturer in 2009. She is the recipient of the AP State Teacher Award for Meritorious teachers from the Govt. of Andhra Pradesh. She is also the Vice-President of the Indian Dietetic Association, Andhra Pradesh chapter. She has 12 publications in peer reviewed journals to her credit.

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