Chapter 13

Food quality

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Abstract

In response to the greatly increased market share of organic food, there is an increasing interest in investigating whether there is any difference in the effects of organic and conventional food on health. Previous studies have not been able to provide definitive proof for differences between these two food production systems in terms of human health. This conclusion mainly suggest that the designs of these studies were neither adequate to provide such proof, nor targeted to those aspects where differences are most likely.

However, there are ample examples that the methods used for food production do make a difference to food composition or other aspects of its quality, and that these differences are large enough to make a real difference for the consumer in terms of health. While these differences may cause yet unproven general differences in food quality between organic and conventional products, many of the methods that benefit food quality are not necessarily restricted to either organic or conventional systems. Understanding the links between production methods and food quality, therefore, allows improvement of the products of any system, whether organic or conventional. However, some of these benefits are linked with what is common practice in organic farming, and for these the main challenge can be to conserve existing quality benefits during further development of the productivity of organic methods.

Introduction

Relationships between organic regulations and food quality

Organic food production is defined by the International Federation of Organic Agriculture Movements (IFOAM) as a set of principles that should be fulfilled as much as possible, and by the European Union (EU), and other international, national or private bodies and certifiers as a legally binding certification standard, defining what is allowed and required in order to qualify for this label (see *Chapter 9*). Although the IFOAM principles do mention quality as a desired aim, none of the specified requirements actually refer to quality or safety, beyond general requirements that need to be observed by all food producers. In a stringent sense, the quality of organic food is thus a process quality rather than a product quality. For the primary production steps in the supply chain, systematic effects on food quality are mainly, or only, indirect, results of the specified farming methods. For example, banning synthetic fertiliser