Definition: **organic food** from *Dictionary of Food: International Food and Cooking Terms from A to Z*

Food which has been grown or reared without synthetic or chemically produced fertilizers, pesticides and herbicides on land which itself has been organic for 2 years.

Summary Article: **Organic Foods**

from *Encyclopedia of Lifestyle Medicine and Health*

There is no one simple definition of organic foods. In the United States, 1 of 90 countries with organic food standards, regulations detailing organic production requirements are hundreds of pages long, and to qualify for the organic label, adherence to every aspect is required. Despite this complexity, most organic standards worldwide share some major requirements: (a) food must be grown and processed without the use of most synthetic chemicals, irradiation, genetically modified seeds, and sewage sludge, and (b) it must be produced in systems that rely on crop rotation to break pest cycles and replenish soil fertility. Livestock must be fed organic feed, and the use of synthetic hormones and routine administration of antibiotics is prohibited.

For many years, the organic market was characterized by small farms, and most trade was local. Today, organic foods are a booming global industry, with major multinational corporations launching organic divisions and worldwide sales estimated at $38 billion in 2006. Demand for organic food is concentrated in North America and Europe, but the estimated 700,000 organic farms are dispersed worldwide. In 2007, the country with the most land under organic management was Australia, followed by China, Argentina, and the United States.

**Organic Labeling in the United States**

Most organic food is certified, meaning that an inspector has determined that the producer or processor is adhering to organic standards. In the United States, certification is mandatory for all but the smallest of producers (those selling less than $10,000 of product directly to consumers). The inspectors are, in turn, accredited by the U.S. Department of Agriculture, which means the government has determined that they have the necessary expertise to make judgments as to what food qualifies for the organic label.

In the United States, the organic label may only be used on products that have been produced and processed in accordance with U.S. organic standards, known as the National Organic Program (NOP). While raw products are entirely organic (or not), multi-ingredient and processed foods may contain various levels of organic content. Soup, for example, could be made with organic carrots and nonorganic peas. For this reason, 3 types of organic labels are allowed to help consumers differentiate between products that are fully organic and those that contain some organic ingredients. The “100% organic” statement may be used on raw products as well as multi-ingredient processed products in which all ingredients, including food additives, are organic. “Organic” may be used on multi-ingredient products in which 95% to 100% of the ingredients are produced in accordance with NOP. In such products, the nonorganic products must be nonagricultural products such as flavoring, coloring, or other food additives.
Nutritional Benefits of Organic Foods

According to numerous surveys, health is the number one reason why people buy organic food. On enactment of the U.S. organic law and regulation, policymakers stressed that all food is safe and wholesome if it meets the requirements set forth in federal laws and regulations. “Organic” does not imply that other food is inferior, policymakers said; rather, it is simply a matter of marketing and personal preference. Yet NOP standards do restrict the use of toxic materials, antibiotics, and animal hormones, all of which raise health concerns.

The clearest and best documented difference between organic and conventionally grown food has to do with pesticide residues. The U.S. Department of Agriculture Pesticide Data Program tests 12,000 to 15,000 food samples each year for pesticide residues. A small number of organic samples have detectable pesticide residues, perhaps because of pesticide drift, mislabeling, and soil contamination and because certain natural and approved pesticides are allowed for use in organic production. But overall, most pesticide residues are found in conventional foods. It has been estimated that, on average, people are exposed to 10 to 13 pesticide residues daily. The exposure to these pesticide residues, while generally within the level deemed safe by the government, has people concerned and has increased the demand for organic food.

The link between health-promoting compounds and organic production is a nascent area of scientific inquiry, and the number of peer-reviewed studies is too small to draw definitive conclusions applicable across all foods and production systems. However, promising correlations between organic production and health from these early studies have generated further study in 3 areas. First, it is hypothesized that organic foods are more nutrient dense than conventionally produced foods, meaning that the milligrams of a given nutrient per kilogram of food is higher in organic food. Synthetic fertilizers, used to generate high yields and jumbo-sized produce, may explain this difference through a process labeled by agronomists as “nutrient dilution.”

The second hypothesis is that organic food contains greater levels of antioxidants, compounds needed by people to reduce inflammation, battle cancer, and slow the progression of many other diseases. Two theories suggest why organic foods contain higher levels. When plants are under pressure from pests, they produce chemicals called secondary plant metabolites, many of which are antioxidants. Plants on organic farms face greater pest pressure due to prohibitions on most pesticide use. Organic plants, forced to fend off pests naturally, produce higher levels of antioxidants. The other theory relates to nutrient density—that is, fruits and vegetables on organic farms grow slower and mature at a smaller size than those on conventional farms, and thus, organic crops contain more antioxidants per pound.

Studies have found that organic dairy and meat have higher levels of conjugated linoleic acids (CLAs), a heart-healthy fat that helps regulate inflammatory processes, enhances immune responses, and may reduce the tendency to store abdominal fat. Ruminants, such as cows, have microorganisms in their stomachs that produce CLAs. The third hypothesis is that ruminants raised on pasture, as required by the NOP, have higher concentrations of CLAs, which make organic milk healthier.

See also

https://search.credoreference.com/content/topic/organic_food
Antioxidants

Further Readings


Merrigan, Kathleen Obadia, Jennifer

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