



Organic vs. Conventional foods: a bit of dilemma for you?

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You're standing in front of the fruit and vegetables section in your local market, and you have the option of choosing between organic and non-organic products. Which would you pick?

Over the last years, there has been a considerable increase in the market for organic foods. "Modern" consumers, interested in health and wellbeing (might be your case), are demanding more "natural" and less processed foods ([Winter and Davis, 2006](#)). Probably, you have decided to buy organic fruits, vegetables, milk, poultry or meat because you are concerned about the environment and the immeasurable use of pesticides, severe farming methods or believe that organic foods are safer or more nutritious than conventional ones. Although these alternative foods tend to be pretty higher in price, they appear to have become increasingly popular; it's like a "fashion".

Whether you're already a fan of organic foods, you want to buy wisely or are just interested in the topic, here are some facts about organic foods that can help in order to stop the dilemma you might face while going through your shopping list at the supermarket.

The opening inevitable question is: what are organic foods? According to [Williamson \(2007\)](#) the term "organic" is used to describe the food grown without the use of artificial fertilizers or pesticides, in a way based on crop rotation and assuring the soil's fertility. The name also refers to animal welfare and no use of antibiotics. Organic products sold as such must be produced according to organic food production laws or regulations, as registered and approved by organic certification bodies like: USDA Organic (United States) or Soil Association (UK), between others. These bodies are responsible of appointing inspectors to visit farms and check, for example, that land has been farmed organically for a determined conversion period (normally of 2-3 years) before the food is sold as organic ([Winter and Davis, 2006](#)).

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Recent research has centered on investigating the effects of motives, beliefs and values on attitudes towards organic produce, purchase intentions and/or purchase frequency, reporting mixed results. What is more, these reasons have often been separated into two categories consisting of egoistic (individual or health) and altruistic motives (environmental or animal welfare) as indicated by [Michaelidou and Hassan \(2008\)](#).

For example, consumers like you may expect that organic fruits and vegetables should contain less agrochemical residues than conventionally grown crops. However, the significance of this difference is a bit questionable, as levels of contamination in both types of foods are generally well below the existing acceptable limits. Regarding other food safety issues about organic foods, such as pathogenic microorganisms, a small amount of information is available. Thus, additional research is needed; but so far there is little evidence to suggest that organic foods are any “safer” than non-organic ([Williamson, 2007](#)).

Do you think there are nutritional differences between organic and non-organic foods? There seems to be a perception that organic foods are more nutritious and healthier, but there is limited data to support this view. Since all foods show natural variation in nutrient levels and depend on other factors including soil, climate, crop variety, degree of ripeness, freshness or the way animals are fed, it is difficult to carry a well-controlled study comparing both food alternatives. Even processed foods show differences because of their ingredients composition, processing treatments, storage conditions and packaging ([Williamson, 2007](#)).

Valid comparison studies should deal with plants cultivated in similar soils and climate conditions, sampled at the same time

and analyzed using the same validated method. Though, moderately evidence exists for lower levels of vitamin C in conventionally produced potatoes and studies analyzing leafy vegetables have showed higher levels of vitamin C and lower nitrate levels in organically produced vegetables. It has also been found lower protein content, but higher quality protein in some organically produced legumes and cereal crops like wheat, rye and corn. But, this is not valid to all nutrients or crops and more research is required to corroborate these findings ([Williamson, 2007](#)).

With regard to animal-derived foods, a study demonstrated significantly higher levels of alpha-tocopherol in 7 out of 10 samples of organic milk; beta-carotene levels were also observed higher and differences were thought to be mainly due to the animal's diets, as species differences or genetic variations between animals of the same species. Despite other many findings regarding organic milk, reports of differences in important nutrients like calcium, zinc or vitamin B₁₂ lack ([Williamson, 2007](#)).

Moreover, organic farming represents a sustainable method of agriculture. Nevertheless, with respect to safety and nutrient composition, it is premature to conclude that either food system is superior to the other or to recommend organic over non-organic foods ([Winter and Davis, 2006](#)). It's clear that qualitative differences can exist, but in terms of maintaining good health, in agreement with [Williamson \(2007\)](#), it's more important to follow a balanced and healthy diet, regardless of whether the foods are organic or not. It's your choice as a well-informed consumer.

References

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