

Creating Health & Nutrition

Organic Foods

In today's ever-changing marketplace, choosing foods to nourish your family while maintaining a budget can be both difficult and confusing. It seems there are so many foods touting health claims these days, which makes it harder to decode what will be a good choice for your family's dinner table. "Organic," "all-natural," "fresh," "antibiotic-free," "cage-free," "free-range," what does all this mean and is it worth the price?

What Does "Organic" Mean?

The term "organic" refers to foods that have been farmed and produced according to the standards of the United States Department of Agriculture's (USDA) National Organic Program (NOP). Organic farms cannot use synthetic fertilizers and pesticides, sewage sludge fertilizers, genet-

ically modified seeds, growth hormones, or antibiotics or drugs (except in the case of illness). Animals being raised organically must have access to the outdoors, ingest organic feed, and live in nonstressful settings. Organic food processing cannot use nonorganic ingredients, irradiation, genetically engineered ingredients, or solvents to extract oil. Farmers must demonstrate these characteristics for three years prior to becoming a certified organic farm.

One cannot assume any food that uses the term "organic" is 100 percent organic. There are four types of organic labels: "100% organic," "organic," "made with organic ingredients," and others. Foods labeled "100% organic" with the USDA organic seal are the only foods guaranteed to be 100 percent organic. Foods labeled "organic" must contain

at least 95 percent organic ingredients and have the USDA organic seal. Foods labeled "made with organic ingredients" may not use the USDA organic seal, but must contain at least 70 percent organic ingredients. Other foods containing organic ingredients may not use the USDA organic seal and may only list the organic ingredients in the ingredient list. Food labeled with "natural," "fresh," "cage-free," and other labels cannot be assumed to be organic as these terms do not share the same definition.

Are Organic Foods Worth the Price?

Some might say yes, citing an array of health claims from preventing cancer to autism, while others state that you can get all of the benefits of fruits and vegetables from conventionally farmed foods—often for half the price of organic produce.

Some advantages of organic foods can include fresh taste, support of local industry, and less environmental impact. However, organic foods can often be costly, less convenient to purchase, and misleading as to whether or not they are truly organic. A systematic review of 240 studies from 1966 to 2011 by Stanford University researchers concluded that organic foods cannot be assumed to have more nutrients than conventionally farmed produce.

In addition to the Stanford study, new research has revealed that certain organic foods may contain higher amounts of beneficial nutrients. For example, a 2013 study published in the journal



USDA Organic Seal



PLoS ONE demonstrated that organic milk contained higher ratios of beneficial omega-3 fatty acids than their non-organic counterparts. Regarding produce, a study published in the *British Journal of Nutrition* in 2014 also found certain crops demonstrated higher ratios of antioxidant concentrations due to the plants having to "defend" themselves from pests and other factors that caused them "stress," where more polyacetylene compounds (beneficial to human health) were produced as a result of not applying pesticides or fertilizers, which are administered to conventionally farmed crops. If consumers are looking to make the freshest choice with their produce dollars, they should remember that purchasing local (organic or not) is a great way to ensure produce is traveling a smaller distance to arrive from field to dinner plate, which keeps vitamin and nutrient content high while also reducing its carbon footprint.

Questions about Pesticides

Organic foods have been found to contain less pesticide residue, but the amount of pesticide residue found in conventionally farmed produce is at acceptable levels and is not known to harm

humans (Spangler et al., 2012; USDA 2016).

In spite of assurances that levels of pesticide residue on market-ready produce fall into an acceptable range, it is always best practice to wash fruits and vegetables before consuming, whether conventionally grown or organic. Penn State Extension recommends all produce that is not sold labeled as being "prewashed" be washed thoroughly under running water prior to consumption. For products with heavy soil residue or rough skins (such as potatoes or cantaloupes), a vegetable brush should be used as well.

Deciding to buy organic foods is really a personal choice to be made by each consumer, weighing the pros and cons. If it comes to decreasing the quantity of fruits and vegetables you consume due to the price of purchasing organic foods, the smart choice should be obvious. The U.S. Dietary Guidelines encourages Americans to make half their plate fruits and vegetables, whether these are grown conventionally or organically. When shopping for organic foods, it is important to remember to look for the USDA organic seal and check the label to see if what you are buying is actually organic. Happy shopping!

Sources

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