Organic Food: Food for Thought?

By ACSH Staff — February 17, 2000

Sales of organic foods have soared in recent years. They are touted as cleaner, more nutritious and better for the environment than foods produced by conventional means. But are such claims really true? People are finally starting to examine these questions.

On February 4, 2000, the ABC News show 20/20 presented a report about organic foods by John Stossel a report that asked these questions about cleanliness, nutritional value and environmental impact of organic versus conventionally-grown produce.

The 20/20 investigators examined produce for cleanliness by measuring the bacterial count in water used to wash it, as well as the presence of pesticide residues. They found that only about five percent of all food samples were contaminated with bacteria. But, organic produce had more bacterial contamination than conventional products. Specifically, sprouts and precut salad greens from organic suppliers had more bacteria. One-third of all sprouts sampled had E. coli bacteria on them and organic ones had twice the number of bacteria as the nonorganic vegetables. E. coli bacteria are markers of fecal contamination probably due to the use of manure as fertilizer.

Interestingly, there were not any pesticide residues on any of the produce sampled organic or conventional, collected in two states. This is an important point. Relatively small percentages of produce have detectable levels of pesticides. This same result was found by Consumers Reports in March 1999, but that publication emphasized the presence of the pesticides which came from only a few products.

If we look at these results on cleanliness in terms of current risks, it is important to note that we have an estimated 5,000-10,000 deaths a year in the United States from food-borne bacteria but none from pesticides. Does it make sense to use organic farming methods if it even slightly increases risk of infection? Should we fear pesticides because they are artificial? The science-based answer to both questions seems to be a clear "no." Is it conceivable that there could be long-term risks of harm from pesticides? It is possible, but the data are not consistent and available information on eating lots of fruits and vegetables strongly suggests there is no long-term risk.

One of the more solid findings on the relationship of diet and cancer is that the more fruits and vegetables eaten, the lower the risk of a variety of cancers including stomach, colon, prostate and lung. If artificial pesticide residues on plants are so harmful and carcinogenic, why do the people who eat the most wind up being the healthiest? In fact, Dr. Bruce Ames, a leading biochemist at the University of California at Berkeley, has stated that 99.99% of pesticides in plants are naturally occurring. This is precisely how today's plants have survived and evolved - making their own defenses against being eaten by insects. Commercial quantities of produce need extra protection to reduce crop loss.
What about the nutrition issue? There is no evidence that organic food is more nutritious or healthier for people even though they pay a high premium. Not a single published study has shown any difference in the nutrient content of organic versus conventional farm products. This contradicts the widespread belief that our soils are depleted of nutrients and thus plants grown in them are deficient in a variety of vitamins and minerals. Commercial fertilizers are not simple combinations of the elements nitrogen, potassium and phosphorus - they contain a variety of other minerals that are naturally occurring and taken up by plants. One problem with organic fertilizer (known in polite company as manure) is that it contains heavy metals, bacteria, and viruses. In fact, garden centers sell processed sludge from several cities and labels on the bags warn customers not to use these products on vegetable gardens because of these risks.

Organic farming seems intuitively better for the environment due to the lack of chemicals used, but the reduced yields compared to conventional farming are an important trade-off in deciding if this is really an improvement. Organic farmers justify higher prices because they have lower yields; weeds and insects compete with the crops more effectively. It has been estimated that twice as much land would have to be farmed with organic methods to produce the same amount of food we currently grow. That much farmable land does not exist.

It is self-centered of the better-off to demand all growers adopt organic farming methods. The poor in this country and in most of the developing world would not be able to buy enough of any food if the entire system were changed. Modern agricultural methods provide the only system that can support the current and likely increasing world population. While there is room for organic alternatives, they cannot replace the conventional system. Organic crops do not score better than traditional ones in terms of safety, nutrition, or the environment. In fact, sometimes they may not be as safe and they almost always cost more. This is not usually a sales plus but the average consumer, believing that organic foods are more healthful and better for the environment, seems willing to pay. This is truly food for thought.