

Organic Vs. Non-Organic Food

Dr. JAMES PROODIAN

The decision whether to eat “organic” or “non-organic” food is an important one.

There is a growing body of evidence that links the consumption of food grown or raised with pesticides and chemicals to a whole host of diseases and negative health effects. I wanted to share with you an excellent 3-part article on this topic that was published by The Center for Food Safety in Washington, DC. With this information, you will become much better educated on the issues surrounding organic vs. non-organic food -- JP.

Walk into any grocery store in America these days and you are likely to find a host of organic foods, from milk and eggs to arugula and oranges to beef and meatless sausage. Organics have become mainstream and big business, claiming two-thirds of U.S. consumers as customers. From 1994 to 1999 organic dairy sales increased five fold, and from 1999 to 2000, sales of organic fresh produce grew by 50 percent. To help matters, organic foods and production methods finally gained a measure of distinction on October 21, 2002, when the national organic standards went into effect, putting an official government imprimatur on foods grown without dangerous chemicals, biotechnology,

sewage sludge or inhumane treatment of livestock.

But these successes have not come without new challenges. The 2002 organic standards, and organic foods themselves, have increasingly come under attack from groups that oppose food regulations, from representatives of corporate food producers and from growers dependent on chemical inputs and/or genetically engineered crops. The U.S. Department of Agriculture (USDA), the federal agency charged with implementing and enforcing the new organic standards, is feared to be leaning toward the interests of corporate food producers in their efforts to weaken those standards.

Clearly, organic methods are a challenge to the status quo as they offer a viable, increasingly popular alternative to chemical-dependent agriculture and the factory farming of livestock. Defenders of technology-driven industrial agriculture address this threat by feeding the public a diet of misleading and inaccurate statements, claiming, among other things, that organic farming offers no real benefits and organic products are no better than industrially produced foods.

But the facts tell a much different story: numerous scientific studies demonstrate that sustainable organic farming is environ-

mentally much sounder than intensive, chemical-dependent industrial agriculture.

Pesticide Residues

The cornerstone of industrial agriculture can be summed up in one word - chemicals. Chemical fertilizers and pesticides pervade our industrial food production system in this country. Many of these chemicals make their way

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from fruit orchards and crop fields to our family's dinner table. Most consumers probably have no understanding of the vast quantities of pesticides we are exposed to through consuming industrial foods - typical American can consume up to 70 pesticide residues a day through their diet. This is a side dish few are expecting.

A study in the peer-reviewed journal Environmental Health Perspectives found that preschool children fed a diet consisting pri-

marily of organic foods had levels of metabolized organophosphate pesticide byproducts in their bodies that were six times lower than in children who had eaten diets of industrially grown foods.

USDA studies have found that 73 percent of industrially grown foods contain at least one pesticide, and many contain multiple pesticides.

Antibiotic-Resistant Bacteria

Antibiotic resistance is a growing problem in this country. What few people realize is that about 70 percent of all antibiotics made in the United States are given to livestock - that's 24.6 million pounds of antibiotics a year. Industrial livestock producers routinely administer antibiotics to cattle, swine, and poultry, even if the animals are not sick. This massive application of antibiotics has resulted in drug-resistant bacteria making their way into the environment and into our food supply, reducing the effectiveness of antibiotics used to treat human afflictions.

Organic farmers, on the other hand, only use antibiotics on animals that develop infections but do not respond to other treatment options. Even then, treated animals must be segregated from the rest of the group and their meat, milk, and eggs may not be sold as organic.

Hormones

If you want to avoid growth hormones in your beef or dairy products, the only sure way to do it is to buy organic. Upwards of 80 percent of non-organic beef cattle raised in the U.S. each year are pumped full of growth hormones. In addition to hormones used to increase milk production, chiefly, recombinant Bovine Growth Hormone, or rBGH, there are six hormones approved for use in beef cattle. Two of these hormones, estradiol and zeranol, are likely to have negative human health effects, including cancer and impacts on child development, when their residues are present in meat. Concerns about these potential health impacts have left many scientists doubtful of the safety of hormone use in meat production.

Nutrition

Organic foods not only protect consumers from harmful pesticides and help reduce the creation of antibiotic-resistant bacteria, but they also provide greater nutritional value than industrially produced foods.

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Organic vs. Non-Organic Food - Part 2



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evidence that links the consumption of food grown or raised with pesticides and chemicals to a whole host of diseases and negative health effects. - JP.

Mad Cow Disease

Did you know that organically raised cattle are much less likely to be exposed to bovine spongiform encephalopathy (BSE), or mad cow disease, than cattle raised in factory farms? Animals bred for food under the 2002 organic standards cannot be fed material containing products from rendered animals. In fact, their feed must be 100 percent organic itself. This requirement virtually eliminates the danger of organic beef containing BSE.

Mad cow disease can spread through cattle herds by feeding infected nervous system tissue to other animals. Beginning in the 1970s, the meat rendering industry began processing dead, dying, disabled, and diseased animals for use in livestock feed—and pet feed—as a way to increase the protein consumption of cattle, pigs, sheep, and poultry

(cattle can get the disease by eating less than one gram of diseased meat and bone meal fed to them as a protein source).

Humans who eat contaminated beef products are at risk of contracting the human version of mad cow disease known as new variant Creutzfeldt-Jakob disease (vCJD). The disease deteriorates the brain and is invariably fatal. There is no known cure, treatment, or vaccine for TSE diseases.

Despite the adoption of additional safeguards following the discovery of mad cow in the United States, the FDA still allows the risky practice of recycling animal offal into feed: ruminant animals (cattle, sheep, goats, deer) are fed to non-ruminants (pigs and poultry), and these non-ruminants are rendered and fed back to ruminants. Such practices are banned in Britain and Europe.

Sewage Sludge

Every time you flush your toilet or clean a paintbrush in your sink, you may be unwittingly contributing to the fertilizer used to grow the food in your pantry—unless your pantry is stocked with organic food. Independent research shows that sewage sludge contains numerous hazardous materials, including but not limited to, the toxic heavy metals lead and arsenic,

PCBs, dioxins, and other hazardous organic materials. Beginning in the early 1990s, millions of tons of potentially toxic sewage sludge have been applied to millions of acres of America’s farmland as food crop fertilizer, but not on organic farms. The practice has resulted in over three million dry tons of this hazardous material being spread on American soil and cropland each year, causing untold harm to public health, livestock, and the environment.

Organic farming standards bar the use of municipal sewage sludge to fertilize organic crops. These standards are much tougher than the lax federal regulations governing the use of sludge in non-organic food production.

Despite the apparent danger of producing food using a vast, toxic mix of wastes collected from homes, chemical industries, hospitals and other sources, the EPA monitors only nine of the thousands of pathogens commonly found in sludge, and it almost never inspects the farms that use sludge fertilizer.

Health and Safety on the Farm

The methods used in organic agriculture protect farmers and farm workers from some of the gravest threats to their health and safety. Farming is the most dan-

gerous occupation in the United States, and industrial agriculture’s reliance on potent chemical toxins accounts for a significant portion of the risk. The EPA estimates that 10,000 to 20,000 physician-diagnosed pesticide illnesses and injuries occur among farm workers each year. These pesticide exposures result in a range of symptoms, including headaches, nausea, and fatigue, and may lead to more severe conditions such as cancer and neurological disorders. A recent paper published by the National Cancer Institute found that male farmers who work with common synthetic pesticides have a 14 percent greater chance than the general population of developing prostate cancer.

One recent report concludes, “Only elimination of hazardous pesticides and their replacement with safer, less toxic pest management tools is a sustainable solution to exposure to agricultural chemicals.” Of course, these ideals have served as cornerstones of organic farming for decades.

Environment

By design, organic methods drastically reduce or eliminate the severe environmental damage typically caused by industrial agriculture practices. The destructive practices of industrial farming degrade the very land

and water needed to sustain farming for future generations. Rather than eliminating the natural environment for agriculture purposes, organic food production is built on a belief in the necessity of farming with the wild.

Biodiversity

The world is on the brink of an extinction crisis, with some scientists projecting that up to 20 percent of all plant and animal species could be gone within 30 years. The majority of these extinctions are being caused by habitat destruction, much of it due to agriculture. In the United States, an analysis completed by the federal government in the mid 1990s found industrial farming to be a contributing factor in the plight of 42 percent of 631 threatened or endangered plants and animals. Heavy pesticide use and the destruction of native habitats are prime culprits.

For more information on organic food and farming, visit the Center for Food Safety’s website at www.centerforfoodsafety.org, or contact them at 202-547-9359.

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Organic Vs. Non-Organic Food - Part 3



By **DR. JAMES PROODIAN**

The decision whether to eat "organic" or "non-organic" food is an important one.

There is a growing body of evidence that links the consumption of food grown or raised with pesticides and chemicals to a whole host of diseases and negative health effects. This week's article is the last of a 3-part article on this topic that was published by The Center for Food Safety in Washington, DC (www.CenterForFoodSafety.org) With this information, you will become much better educated on the issues surrounding organic vs. non-organic food -- JP.

Soil Considerations

Organic farming enhances soil structure and reduces the rate of soil degradation through sustainable land management practices. By contrast, conventional farming practices have increased the rate at which soil is lost, allowing nearly 40 percent of the world's agricultural land to become seriously degraded. Approximately 25 million acres of land are lost each year due to degradation, many of which are attributed to erosion at a loss of 1.9 billion tons. Even though erosion drives up agricultural production costs by approximately 25 percent each

year, conventional farming methods continue to deplete soil activity through the use of chemical inputs.

Climate Change/Global Warming

The greatest environmental challenge of the current century will be limiting emissions of greenhouse gases responsible for global climate change. In the United States, agriculture produces 8 percent of the country's greenhouse gas emissions each year. Given that a typical organic farm uses 50 percent less energy than its industrial counterpart, a large-scale switch to organic farming would cut agriculture's greenhouse gas emissions significantly.

Nitrous oxide makes up the lion's share of agricultural greenhouse gas emissions and results from the use of man-made nitrogen fertilizers and the cultivation of nitrogen-rich soils. By rejecting industrial fertilizers and encouraging the widespread use of cover-crops that prevent greenhouse gas from escaping the soil, organic farming practices have the potential to significantly reduce nitrous oxide emissions.

Additionally, scientists have discovered that organic soils absorb and retain more carbon than conventional soils. Much of the carbon held in organic soils would otherwise exist in the atmosphere as carbon dioxide, a

potent greenhouse gas. No-till farming, a practice commonly used by some organic farmers, further reduces the carbon released back into the atmosphere when soil is turned over during tillage.

Genetic Engineering

The genetic engineering of plants and animals is rapidly changing the ingredients of our nation's food supply. Already, this novel technology has invaded upwards of 70 percent of the processed foods in our grocery stores and our kitchen pantries, from soda to soup, crackers to condiments. Because determining what products do and do not contain genetically engineered ingredients is extremely difficult, if not impossible, about the only way to be sure you are not consuming them is by eating organic or whole foods.

Despite long-term and wide-ranging risks from agricultural biotechnology, Congress has yet to pass a single law intended to manage it responsibly; this despite the fact that our regulatory agencies have failed to adequately address the human health or environmental impacts of genetic engineering. On the federal level, eight agencies attempt to regulate biotechnology using 12 different statutes or laws that were written long before genetically engineered food, animals and insects became a reality.

Family vs. Corporate Farms

Organic farming is not just better for the environment and consumers, it's better for communities as well. The ethic behind organic food production is much more likely to ensure the economic and social health of rural farming communities. Rather than forcing people to relinquish their food independence to corporate middlemen, localized organic farming tends to rebuild the lost connections between consumers and farmers.

While scientists have linked industrial agriculture to dramatic reductions in biodiversity, sociologists and economists have correlated corporate control of agriculture to the decline of rural communities and the disappearance of the family farm. Approximately 2 percent of farms account for over half of all crop sales. From 1978 to 1997, the number of corporate-owned farms in the United States increased by 67.2 percent, while the number of individual - and family-owned farms declined by 16.4 percent.

Industrial Economics

Industrial farming's reliance on chemicals and genetically engineered seeds has similarly proven costly to family farmers and farm communities. U.S. farmers spend over \$8.5 billion on pesticides every year and apply more than 700 million pounds of the toxins

to their fields. Yet, insect pests now cause crop losses of about 13 percent annually, up from 7 percent in 1945. Meanwhile, commodity prices remain stagnant and depressed, near all-time lows. Farmers working at the industrial level receive 20 cents out of every food dollar spent, while some organic farmers selling at the local level can receive more than four times that amount.

Conclusion

The environmental, human health and animal welfare benefits of organic food production and products are numerous and growing in importance. Organic farming protects biodiversity and the environment, produces more healthful foods for consumers, and provides farmers with better economic opportunities and less hazardous working conditions.

Small-scale, localized food production that is humane, promotes social justice, and respects nature directly challenges the destructive and unsustainable industrial agriculture model.

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