



by pediatrician Dr. Alan Greene

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When farmland goes from conventional to organic, it's a reason for us to celebrate. This year Horizon Organic celebrates its 20th anniversary, marking two decades of advancing organic farming. This is good news for us and even better news for our children.

Kids and the Environment

What kids eat and drink is perhaps their most direct connection with the environment, where what is 'out there' becomes part of their bodies.

This matters because children are more vulnerable to environmental influences than adults are, even when they are exposed to the same

things. Pound for pound, children eat more, drink more, and breathe more than adults, so their environmental exposure is greater. Choosing organic foods can benefit all of us, but I'm most excited about the benefits for children. Consider the following facts about organic foods:



It's Not Just Pesticides

One of the benefits of organic food is that it is grown without persistent pesticides. Exposure to some of these pesticides has been linked to developmental and learning problems such as ADHD.¹ Choosing organic food has been shown to decrease exposure to these same pesticides.² This has captured parents' attention, and is reflected in some consumer guides to choosing organics. But organic agriculture is about more than just avoiding pesticides.

It's Not Just Hormones

Another advantage of organic food is that it is produced without the use of artificial growth hormones.

This is a big reason that many parents choose organic milk, organic snacks, and other organic food for their children. In fact, this has been such a popular reason that much conventional milk and meat is now produced without these hormones. But organic agriculture is about more than just avoiding artificial growth hormones.

Antibiotics Overused

In 2008, we crossed a new threshold when scientists discovered bacteria that had learned not only to resist antibiotics but that had become able to live on antibiotics as their only food!³ These bacteria were found not in hospitals but in soil samples from across the United States. Far more antibiotics are used to grow our conventional livestock — when they are not sick! — than are used to treat all human illnesses combined.^{4,5}

The use of antibiotics is not allowed in the production of organic milk, meat, poultry and eggs. By itself, this is a strong reason to choose organic.



Genetically Modified Foods Proliferate

Another advantage of choosing organic food is that it is grown without the use of genetic modification. When my 16-year-old was born, genetically modified organisms (GMOs) were not part of our food supply. Today, more than 30 percent of our cropland has been taken over by GMO crops.⁶ During the same time, food allergies have increased rapidly, and I'm concerned that GMO foods may be one of the reasons. GMO corn and soy are the dominant foods fed to most of the animals we use for conventional meat, milk, poultry, and eggs. They are what they eat.

Organic Agriculture: A Virtuous Circle

Chemical agriculture depends on using chemicals to kill and to fertilize, thereby growing plants on supplements. The nutrient quality of our foods has fallen dramatically since chemical agriculture took hold after World War II.⁷ Additionally, it has polluted the soil, the water and the air that our children will inherit. Organic agriculture is a simple but powerful idea: living, complex soil produces healthy, complex plants that produce healthy animals and people. We are what we eat. That's why I choose organic food for my family whenever I can.

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2. Lu C et al. Organic Diets Significantly Lower Children's Dietary Exposure to Organophosphorus Pesticides. *Environ Health Perspect* 2006; 114:260-263. <http://dx.doi.org/10.1289/ehp.8418>
3. Dantas G et al. Bacteria Subsisting on Antibiotics. *Science*. 4 Apr 2008; 320:100-103.
4. Silbergeld EK, et al. One Reservoir: Redefining the Community Origins of Antimicrobial-resistant Infections. *Medical Clinics of North America* 2008 Nov; 92(6): 1391-1407.
5. Florini K, et al. Resistant Bugs and Antibiotic Drugs: State and County Estimates of Antibiotics in Agricultural Feed and Animal Waste. Washington, DC: Environmental Defense; 2005.
6. USDA Economic Research Service Data Sets. Adoption of Genetically Engineered Crops in the U.S. <http://www.ers.usda.gov/Data/BiotechCrops/>
7. Davis D et al. Changes in USDA Food Composition Data for 43 Garden Crops, 1950 to 1999. *Journal of the American College of Nutrition* 2005 Dec; 23(6).