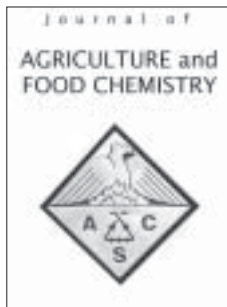


Studies Show Benefits of Eating Organic

Science has proven what we've known for a long time: Eating organic food is healthier than eating food grown in a concoction of toxic chemicals. Although the conventional farming industry has done its best to prove the opposite, and the government has always steered clear of endorsing organic agriculture, health-conscious shoppers around the country have always known that buying organic is better for their families, farmworkers and the environment. Two new studies, one out of the University of Washington and one out of University of California-Davis, prove that organic is actually healthier.

Organic More Nutritious

Comparison of the Total Phenolic and Ascorbic Acid Content of Freeze-Dried and Air-Dried Marionberry, Strawberry, and Corn Grown Using Conventional, Organic, and Sustainable Agricultural Practices, Asami, D. K., et al.



(Journal of Agricultural and Food Chemistry February 2003, Vol. 51, No. 5) Researchers at the University of California-Davis have found that organically or sustainably grown berries and corn contain up to 58 percent more polyphenolics (natural antioxidants that may help prevent heart disease and cancer) than their conventional counterparts grown in neighboring plots. The work suggests that insecticides and herbicides may actually reduce the production of polyphenolics by plants. The study also shows that the organically or sustainably grown crops also had more ascorbic acid, which the body converts to vitamin C. The organic foods were grown according to the definition set by the U.S. Department of Agriculture, without artificial pesticides or fertilizers used in conventional farming. Sustainably grown produce was grown with artificial fertilizers, but without pesticides. Polyphenolics are natural chemicals a plant produces in response to pest presence, their bitter taste acting to drive pests away. This new research suggests that when pesticides are used, the plant is not required to make as much of these chemicals. Alyson Mitchell, an assistant professor of food science at the University of California, Davis, who led the study, stated that crops grown without using insecticides

or herbicides might make more polyphenolics because they are more likely to be stressed by insects or other pests. "This may reflect the balance between adequate nutrition in the form of fertilizers and external pest pressures because of the lack of pesticides and herbicides," she said.

Organic Food Safer

Organophosphorus Pesticide Exposure of Urban and Suburban Preschool Children with Organic and Conventional Diets, Curl, C.L. et al. (Environmental Health Perspectives, March 2003, Vol. 111, No. 3) According to the results of this University of Washington study, children who eat a diet of organic food show a level of pesticides in their body that is six times lower than children who eat a diet of conventionally produced food. To acquire the data, researchers collected 24-hour urine samples from 18 children with organic diets and 21 children with conventional diets and analyzed them for five organophosphate (OP) pesticide metabolites. The children were recruited from the entryways of two grocery stores in the Seattle-metropolitan area: a local consumer cooperative selling a large variety of organic foods and a large retail chain supermarket selling mostly conventional foods. Parents kept food diaries for three days before urine collection, and they distinguished organic and conventional foods based on label information. Children were then classified as having consumed either organic or conventional diets based on analysis of the diary data. Residential pes-

ticide use was also recorded for each home. Significantly higher concentrations of OP (dimethyl alkyl-phosphate) metabolites were found in the children with conventional diets. The researchers found that some of the levels exceed EPA's acceptable threshold exposure for no likelihood of "appreciable" effects, known as the reference dose (RfD).

The researchers chose OP pesticides for analysis because of their widespread use, their reported presence as residues on foods frequently consumed by children, and their acute toxicity. Studies in animals show that even a single, low-level exposure to certain OP pesticides during particular times of early brain development can cause permanent changes in brain chemistry, as well as changes in behavior, such as hyperactivity. This may mean that early childhood exposure to such chemicals can lead to lasting effects on learning, attention, and behavior, just like the environmental neurotoxin lead. The researchers state, "Our finding that children who consume primarily organic produce exhibit lower pesticide metabolite levels in their urine than children who consume conventional produce is consistent with known agricultural practice, because organic foods are grown without pesticides. Consumption of organic produce appears to provide a relatively simple way for parents to reduce their children's exposure to OP pesticides."

For more information or a copy of either of the studies, see www.beyondpesticides.org/organicfood. To maximize reduced pesticide exposure from your food, look for the USDA Organic label that says "100% organic" when you are food shopping.

