HEALTH: New Studies Back Benefits of Organic Diet
By Stephen Leahy*

TORONTO, Canada, Mar 4 (Tierramérica) - Organic foods protect children from the toxins in pesticides, while foods grown using modern, intensive agricultural techniques contain fewer nutrients and minerals than they did 60 years ago, according to two new scientific studies.

A U.S. research team from Emory University in Atlanta analysed urine samples from children ages three to 11 who ate only organic foods and found that they contained virtually no metabolites of two common pesticides, malathion and chlorpyrifos.

However, once the children returned to eating conventionally grown foods, concentrations of these pesticide metabolites quickly climbed as high as 263 parts per billion, says the study published Feb. 21.

Organic crops are grown without the chemical pesticides and fertilisers that are common in intensive agriculture.

There was a "dramatic and immediate protective effect" against the pesticides while consuming organically grown foods, said Chensheng Lu, an assistant professor at the Rollins School of Public Health at Emory University.

These findings, in addition to the results of another study published in Britain earlier this month, have fueled the debate about the benefits of organically grown food as compared to conventional, mass-produced foods, involving academics, food and agro-industry executives and activists in the global arena.

According to the new British analysis of government nutrition data on meat and dairy products from the 1930s and from 2002, the mineral content of milk, cheese and beef declined as much as 70 percent in that period.

"These declines are alarming," Ian Tokelove, spokesman for The Food Commission that published the results of the study, told Tierramérica. The Commission is a British non-governmental organisation advocating for healthier, safer food.

The research found that parmesan cheese had 70 percent less magnesium and calcium, beef steaks contained 55 percent less iron, chicken had 31 percent less calcium and 69 percent less iron, while milk also showed a large drop in iron along with a 21 percent decline in magnesium.

Copper, an important trace mineral (an essential nutrient that is consumed in tiny quantities), also declined 60 percent in meats and 90 percent in dairy products.

"It seems likely that intensive farming methods are responsible for this," Tokelove said from his office in London.

Although controversial, a number of other studies have also found differences between conventionally produced foods and foods grown organically or under more natural conditions.

Organic fruits and vegetables had significantly higher levels of cancer-fighting antioxidants, according to a 2003 study in Journal of Agricultural and Food Chemistry.

The organic plants produced these chemical compounds to help fight off insects and competing plants, researchers said.

A 2001 report by Britain's Soil Association looked at 400 nutritional research studies and came to similar conclusions: foods grown organically had more minerals and vitamins.

"Modern plant breeding for quick growth and high yields could also be affecting the nutritional quality," says Katherine Tucker, director of the nutritional epidemiology programme at Tufts University in the northeastern U.S. city of Boston, Massachusetts.

Lower levels of minerals in food we eat is cause for concern, she says, stressing that "magnesium, calcium and other minerals are very important for proper nutrition."

Good nutrition and exercise are the major factors that can make a difference in the incidence of many diseases, including cancer, according to Tucker.

She recommends eating unprocessed foods, meat from free-range animals, and grains, fruits and vegetables grown organically or at least using more natural farming methods.

Farmers in other parts of the world should not adopt the intensive farming practices of North America or Europe, says Ken Warren, a spokesman with The Land Institute, based in the central U.S. state of Kansas.

"It's an unsustainable system that relies heavily on chemical fertilisers... to keep yields high and produces 'hollow food'," Warren told Tierramérica.

"Hollow food" contains insufficient nutrition and is suspected in playing a role in the rapid rise in obesity, as people may be eating more in order to get the nutrition they need, he said.

Crops take minerals, trace elements and other things from the soil every year. All that modern agriculture puts back into the land are some chemical fertilisers which do not replace all that has been lost, Warren said.

Moreover, herbicides and insecticides kill microorganisms in the soil that play an important role in maintaining soil fertility and helping plants grow.

Pesticide residues in modern agriculture are another cause for concern. A 2003

University of Washington study found that children eating organic fruits and vegetables had concentrations of pesticide six times lower than children eating conventional produce.

The Land Institute advocates what it calls "natural systems agriculture." This involves the use of perennial crops in polycultures, that is, planting several different crops together as has been practiced in traditional gardens and farm plots in many parts of the world.

"Farmers in other parts of the world should learn from American agriculture's mistakes. Looking to nature is a better model for farming," Warren said.

(*Stephen Leahy is a Tierramérica contributor. Originally published Feb. 24 by Latin American newspapers that are part of the Tierramérica network. Tierramérica is a specialised news service produced by IPS with the backing of the United Nations Development Programme and the United Nations Environment Programme.)

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