

# *Sustainable Agriculture*

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## **There's a lot of miles on the food we eat**

When far-flung families get together for holiday meals, much of their food will have logged more miles than their relatives and friends around the table, finds a new study by the Worldwatch Institute, an environmental and social policy research organization based in Washington, D.C. In the United States, food now travels between 1,500 and 2,500 miles from farm to table, as much as 25 percent farther than two decades ago.

"The farther we ship food, the more vulnerable our food system becomes," says Worldwatch Research Associate Brian Halweil, author of "Home Grown: The Case for Local Food in a Global Market." He says many major cities in the U.S. have a limited supply of food on hand. "That makes those cities highly vulnerable to anything that suddenly restricts transportation, such as oil shortages or acts of terrorism," Halweil says.

This vulnerability is not limited to the U.S. The tonnage of food shipped between countries has grown fourfold over the last four decades. In the United Kingdom, for example, food travels 50 percent farther than it did two decades ago.

This reliance on long-distance food damages rural economies, as farmers and small food businesses become the most marginal link in the sprawling food chain. This trend also creates numerous opportunities along the way for contamination, while contributing to global warming, because of the huge quantities of fuel used for transportation.

"We are spending far more energy to get food to the table than the energy we get from eating the food. A head of lettuce grown in the Salinas Valley of California and shipped nearly 3,000 miles to Washington, D.C., requires about 36 times as much fossil fuel energy in transport as it provides in food energy when it arrives," Halweil says.

Surveys have shown that a typical meal -- some meat, grain, fruits, and vegetables -- using local ingredients entails four to 17 times less petroleum consumption in transport than the same meal bought from the conventional food chain.

While most economists believe that long-distance food trade is efficient because communities and nations can buy their food from the lowest-cost provider, studies from North America, Asia, and Africa show farm communities reap little benefit, and often suffer as a result of freer trade in agricultural goods.

"The economic benefits of food trade are a myth. The big winners are agribusiness monopolies that ship, trade, and process food," Halweil says. "Agricultural policies, including the new Farm Bill, tend to favor

factory farms, giant supermarkets, and long-distance trade, and cheap, subsidized fossil fuels encourage long-distance shipping. The big losers are the world's poor."

Farmers producing for export often go hungry as they sacrifice the use of their land to feed foreign mouths, Halweil says. Poor urbanites in both the First and Third Worlds find themselves living in neighborhoods without supermarkets, green grocers, and healthy food choices.

Halweil points to a vigorous, emerging local food movement that is challenging both the wisdom and practice of long-distance food shipping. "Massive meat recalls, the advent of genetically engineered food, and other food safety crises have built interest in local food," he says. "Rebuilding local food economies is the first genuine profit-making opportunity in farm country in years."

In the U.S., the number of registered farmers' markets has jumped from 300 in the mid-1970s and 1,755 in 1994 to more than 3,100 today. Approximately three million people visit these markets each week and spend over \$1 billion each year. Innovative restaurants, school cafeterias, caterers, hospitals, and even supermarkets are beginning to offer fresh, seasonal foods from local farmers and food businesses.

"Locally grown food served fresh and in season has a definite taste advantage," says Halweil, "It's harvested at the peak of ripeness and doesn't have to be fumigated, refrigerated, or packaged for long-distance hauling and long shelf-life." In the U.S., more than half of all tomatoes are harvested and shipped green, and then artificially ripened upon arrival at their final destination.

"Of course, a certain amount of food trade is natural and beneficial," says Halweil. "But money spent on locally produced foods stays in the community longer, creating jobs, supporting farmers, and preserving local cuisines and crop varieties against the steamroller of culinary imperialism. And developing nations that emphasize greater food self-reliance can retain precious foreign exchange and avoid the instability of international markets."

Halweil may be reached at (202) 452-1992, ext. 538, [halweil@worldwatch.org](mailto:halweil@worldwatch.org). "Home Grown: The Case for Local Food in a Global Market" costs \$5 plus shipping and handling, and can be purchased through the Worldwatch website: [www.worldwatch.org](http://www.worldwatch.org).

In future issues of the Sustainable Agriculture newsletter we'll have more information on local food system efforts in Minnesota.

### **Shopping for organic certifiers in Minnesota just got easier**

Need an organic certifier and can't bear the thought of any more shopping this season? As a service to citizens, the Minnesota Department of Agriculture (MDA) has compiled a list of USDA-accredited certifiers that should make finding the right organic certifier a little easier for Minnesotans.

As of Oct. 21, 2002, growers and processors must be inspected by an accredited, third-party organic certification agency in order to use the word "organic." There are a few certification exceptions for smaller growers.

"Under the new federal organic guidelines, organic growers and processors are entitled to use the service of any USDA-accredited certifier," said MDA agricultural diversification specialist Meg Moynihan. "But we knew that some certifiers would not operate in Minnesota. We felt it would be a public service to the Minnesota agricultural and organic business communities to whittle down the list so producers don't waste time and resources calling companies who will not serve Minnesota clients," she adds.

The MDA sent surveys to all the 137 organizations that applied for USDA accreditation. So far, 71 have earned full accreditation. Currently, 19 appear on the Minnesota list, along with information about what they certify: crops, livestock, wild harvested products and/or handling (processing). That number may grow as more organizations become accredited.

Moynihan says the agency has plans to update the list at least annually. You can find the list at the MDA organic web page [www.mda.state.mn.us/esap/organic](http://www.mda.state.mn.us/esap/organic). For more information, to get a copy by mail or fax, or to provide feedback about this service and how to make it better, contact Moynihan at (651) 297-8916 or [meg.moynihan@state.mn.us](mailto:meg.moynihan@state.mn.us).

## **Organic foods may reduce children's exposure to organophosphorus pesticides**

Pre-school children who eat organic produce appear to have less exposure to organophosphorus pesticides, according to University of Washington research. Consumption of organic fruits, vegetables and juice can reduce children's exposure levels from above to below the U.S. Environmental Protection Agency's current guidelines, the study concluded.

Researchers Cynthia L. Curl, R.A Fenske and K. Elgethun had this to say about their study: "This study demonstrates that dietary choice can have a significant effect on children's pesticide exposure. To our knowledge, no other studies have tested this hypothesis. 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, since organic foods are grown without pesticides.

"Consumption of organic produce represents a relatively simple means for parents to reduce their children's pesticide exposure," they conclude.

A synopsis of the study can be found at [www.ourstolenfuture.org/NewScience/oncompounds/OPs/2002/2002-1031curlletal.htm](http://www.ourstolenfuture.org/NewScience/oncompounds/OPs/2002/2002-1031curlletal.htm).

## **SARE producer grant applications available in early 2003**

The USDA's Sustainable Agriculture Research and Education (SARE) program in the North Central Region invites producers to apply for competitive grants to research demonstrate or educate others about profitable, environmentally sound and socially responsible agricultural systems.

This year marks the 13th cycle of producer grants awarded by the NCR SARE program. Farmers and ranchers can apply for grants of up to \$6,000 for individuals and up to \$18,000 for groups of three or more interested in investigating any sustainable practice or concept. A total of \$400,000 is available for grants.

"The Producer Grant Program allows farmers and ranchers to identify specific obstacles to more economical, environmentally friendly production, and then address them," says Ken Schneider, former farmer/rancher and NCR SARE's producer liaison. "We take pride in funding producer-initiated projects that can be transferred to other farmers as they strive to remain viable.

More than 430 producer projects in 12 NCR states have been awarded at a total of more than \$2.4 million since 1992. Projects cover a variety of topics, such as reducing off-farm inputs, testing technologies, improving water quality, educating young people or consumers about agriculture, managing weeds and pests, recycling wastes and creating viable markets for sustainable products, among a host of other issues.

Applications are available from the North Central Region office beginning Feb. 3, 2003. Producers must reside in the 12-state North Central Region: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota and Wisconsin.

The national SARE Program began with the 1985 Farm Bill. Congress appropriated initial funds in 1988 for grants in sustainable agriculture research, education and demonstration. Funding goes to producers, scientists, educators and public and private institutions and organizations in three grant programs. The North Central Region, managed by a diverse administrative council and directed by a regional coordinator, is one of four regions in the SARE Program. The regional coordinator is Bill Wilcke, also an engineer with the U of M Extension Service.

For applications (after Feb. 3), contact North Central Region SARE at (402) 472-7081, or [ncrsare@unl.edu](mailto:ncrsare@unl.edu), or [www.sare.org/ncrsare](http://www.sare.org/ncrsare). Applications are due March 28, 2003. Funding decisions will be made in late June 2003, and funds will be available in fall, 2003.

### **Minnesota Report Card on Environmental Literacy**

The Minnesota Report Card on Environmental Literacy documents the results of the first statewide survey concerning environmental literacy of adults in Minnesota. During July through September 2001, a random sample of 1,000 Minnesota adults was surveyed for knowledge, attitudes and behaviors related to the environment. This report describes the environmental literacy of Minnesotans and compares their literacy on related survey questions to that of citizens of Pennsylvania and the United States as a whole. It's available at [www.moea.state.mn.us/ee/reportcard.cfm](http://www.moea.state.mn.us/ee/reportcard.cfm).

### **Rural men may have lower sperm count**

Sperm concentration and motility (movement) may be reduced in men living in agricultural and semi-rural areas compared to men living in more urban areas, according to a new study that included University of Minnesota researchers.

Researchers from the U of M and the University of Missouri-Columbia, which led the study, analyzed sperm samples from 512 male partners of pregnant women (an indicator of fertility) in Minneapolis; Columbia, Missouri; New York City; and Los Angeles, California, between September 1999 and November 2001.

The results, say the study authors, suggest that agricultural practices may be contributing to a reduction in semen quality. Semen quality among fertile men in semi-rural Columbia was significantly different than samples collected in New York, Minneapolis, and Los Angeles. Sperm concentrations were 38, 75, and 67 percent higher in Los Angeles, New York, and Minneapolis, respectively, than in Columbia. Sperm movement (motility) was higher in all the urban centers than in the Columbia center, but was particularly higher in New York and Minneapolis. Compared to Columbia, sperm motility in New York and Minneapolis was 74 and 77 percent higher, respectively. "We feel the differences we observed among the various geographic areas represented by this study raise concerns that environmental or other factors may be adversely affecting male fertility," says Bruce Redmon, associate clinical professor of medicine and urologic surgery at the U of M.

"We hope to further analyze information collected by the study as well as collect additional data to try to identify specific factors which may be involved."

More information is available online at [www.ehponline.org](http://www.ehponline.org).

## What we're about

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Also check MISA's home page at [www.misa.umn.edu](http://www.misa.umn.edu).

Our mission statement: **To help bring people together to influence the future of agriculture and rural communities to achieve socially, environmentally, and economically sustainable farms and communities.**

To stimulate thinking and discussion about sustainability, we try to present items that reflect different points of view. This being the case, we aren't promoting and don't necessarily agree with everything we publish.