



Pesticides and Your Food

Most pesticides are
poisons—toxic
chemicals that are
designed to kill.

Pesticides are widely used in food production to kill or otherwise control unwanted diseases, insects, weeds, or other pests.

U.S. agriculture uses over 800 million pounds of pesticides annually, almost four pounds for every American. Per acre of land harvested, pesticide use is at its highest level in history.

Despite these huge quantities, pesticide use is virtually a secret. You don't know which pesticides have been used on your food.

You're probably eating
and drinking
pesticides every day.

Food should be tasty and nutritious. Poisons don't fit well with this image, but their presence in food is pervasive.

The U.S. Department of Agriculture looked at pesticide residues on twelve commonly-eaten produce items. They found that almost **three-quarters** of the samples tested were contaminated with pesticides, even after washing and peeling the produce.

The U.S. Environmental Protection Agency (EPA) estimates that 15 million Americans drink water contaminated with pesticides.

They're unnecessary!
We don't need these
poisons.

An increasing number of farmers are economically and efficiently growing food without poisons. Organic agriculture is booming.

It's easy to put your money where your mouth is! Support a transition to a less chemically-reliant agricultural system with your food dollars. Buy organically-grown, locally-produced food whenever possible. Encourage your grocery store to sell more organically grown produce. Shop at farmers markets or become a member of a community-supported-agriculture farm.



PESTICIDES ON YOUR FOOD CAN HURT YOU

There can be no question that hazardous pesticides are used on our food. Of the 25 most commonly-used agricultural pesticides, 5 are toxic to the nervous system, and 18 can damage skin, eyes, and lungs. Long-term health problems are also a concern. About half of these commonly-used pesticides have been classified as cancer-causing chemicals by EPA. Seventeen of these 25 pesticides cause genetic damage in laboratory tests, and 10 of them cause reproductive problems. Six of them have been shown to disrupt the normal function of hormone systems.



In 1993, the National Research Council looked at the hazards to infants and children posed by pesticides in 11 fruits, vegetables, and juices frequently eaten by children. The researchers used an innovative statistical technique that enabled them to calculate individual rather than average exposures. The study found that **every day** an estimated **1,300** American two-year-olds are consuming organophosphate insecticides in amounts that are over ten times the level that EPA believes is acceptable. Most of these pesticide poisonings will

not be diagnosed because the symptoms are similar to that of a mild cold or flu.



Pesticide contamination of food makes headlines only occasionally. Many of us remember, for example, when thousands of people were acutely poisoned by aldicarb-contaminated watermelons in 1985. Long-term health problems, and frequent low-intensity poisoning of children are no less important.

LABORATORY TESTS USE HIGH DOSES, BUT THEY'RE ALL WE'VE GOT

When scientists use laboratory animals to study the health effects of a particular pesticide, they typically use high doses. This is because they use only a small number of animals and must document rare health problems.



These test procedures are designed to save pesticide manufacturers money. Since they are the best data we have, and often the only data we have, it's important to take them seriously.

REGULATION OF PESTICIDES

DOESN'T PROTECT US

Our national pesticide law is not designed to protect public health. Instead, the law requires that economic benefits to pesticide users be weighed against health or environmental hazards.



There are other problems with regulation of pesticide use. Many of the pesticides we use today were registered using outdated health and safety tests. While the law requires that they be brought up to current standards, EPA has only re-evaluated a quarter of these chemicals. Even when the evaluation is complete, hazardous chemicals remain in use. For example, four of the chemicals re-evaluated by EPA in 1995 cause cancer in laboratory tests.



Many pesticide ingredients are called trade secrets by pesticide manufacturers. These ingredients, the so-called "inerts," are not subject to most health and safety testing requirements.



We need new laws guaranteeing that all hazardous pesticides will be removed from our food production system.



FARMWORKERS AND FARMERS PAY A HIGH PRICE

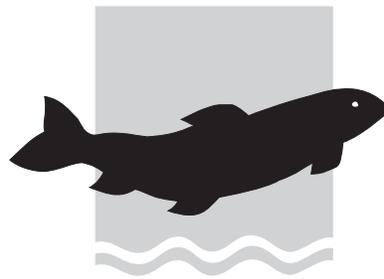
The people who grow our food are probably the people whose health is most affected by the pesticides used in agriculture. They work directly with all of these poisons



The numbers are staggering. EPA estimates that about 300,000 farmworker injuries and illnesses are caused by pesticides each year in the United States. Worldwide, the number is in the millions.



Long-term health problems are also important. The National Cancer Institute has found that farmers have higher than average risks for several types of cancer, including leukemia, lymphoma, brain cancer, and stomach cancer. Recent estimates in California show that farmworkers' exposure exceeded EPA guidelines for all eight cancer-causing pesticides studied, and for most of the seventeen pesticides studied that cause reproductive problems.



PESTICIDES HURT EVERYONE AND EVERY SPECIES

The pesticides used to grow our food cause unexpected problems for our entire ecosystem. A few examples follow.



Strawberry production is destroying the stratospheric ozone layer. The soil fumigant methyl bromide, widely used by strawberry growers, more efficiently destroys the ozone layer than the notorious CFCs (chlorofluorocarbons).



Minute amounts of a sulfonylurea herbicide used to kill unwanted weeds in wheat fields reduce fruit production in other species. The herbicide drifts readily after application. This means small amounts can travel widely, and reduce fruit production on another farm or in natural vegetation that serves as food for wildlife.



Atrazine, an herbicide used in corn production, causes breast cancer in laboratory animals. It is also a ubiquitous contaminant of streams and rivers. It has been found in virtually every water sample tested from the Corn Belt, as well as 90 percent of samples from a Pacific Northwest river basin.

THERE IS A BETTER WAY TO GROW FOOD

Across the country and around the globe farmers are finding that sustainable production practices allow them to be successful farmers and good stewards of their land. These farmers are using innovative practices that prevent pest problems and reduce their pesticide use.



Sales of organically grown food have skyrocketed and now total over \$2 billion per year in the U.S.



Nonchemical techniques are commonly used, even among conventional farmers. For example, a recent U.S. Department of Agriculture survey found that almost 20 percent of fruit and nut growers use beneficial insects to help manage insect pests and 85 percent of vegetable farmers use some alternatives to herbicides for managing weed problems.



With your encouragement, more farmers will use more of these sustainable techniques. Our agricultural system will then reduce its reliance on pesticides.

SOURCES OF INFORMATION

Pesticides are poisons, toxic chemicals that are designed to kill

Aspelin, A.L. 1994. *Pesticide industry sales and usage: 1992 and 1993 market estimates*. U.S. EPA. Office of Prevention, Pesticides and Toxic Substances. Office of Pesticide Programs. Biological and Economic Analysis Division. Washington, D.C. (June.)
 Rosenfeld, A. 1993. *Agrichemicals in America: Farmers' reliance on pesticides and fertilizers*. Washington, D.C.: Public Voice for Food and Health Policy. (May.)

You're probably eating and drinking pesticides every day

U.S. Dept. of Agriculture. Agricultural Marketing Service. 1995. *Pesticide data program : Annual summary calendar year 1993*. Washington, D.C. (June.)
 U.S. EPA. Office of Water. Office of Pesticides and Toxic Substances. 1992. *National survey of pesticides in drinking water wells: Another look*. Washington, D.C.

Pesticides on your food can hurt you

Aspelin, A.L. 1994. *Pesticide industry sales and usage: 1992 and 1993 market estimates*. U.S. EPA. Office of Prevention, Pesticides and Toxic Substances. Office of Pesticide Programs. Biological and Economic Analysis Division. Washington, D.C. (June.)

Morgan, D.P. 1989. *Recognition and management of pesticide poisonings*. Washington, D.C.: U.S. EPA. Office of Pesticide Programs. Health Effects Division.

U.S. EPA. Office of Prevention, Pesticides and Toxic Substances. 1993. List of chemicals evaluated for carcinogenic potential. Memo from Reto Engler, senior science advisor, Health Effects Division to Health Effects Division Branch Chiefs, et al. Washington, D.C. (August 31.)

U.S. Dept. of Health and Human Services. Public Health Service. Centers for Disease Control. National Institute for Occupational Safety and Health. 1993. *Registry of toxic effects of chemical substances*. Microfiche edition. Sweet, D.V. (ed.). Cincinnati, OH. (Jan.)

Colborn, T, F.S. vom Saal, and A.M. Soto. 1993. Developmental effects of endocrine-disrupting chemicals in wildlife and humans. *Environ. Health Persp.* 101(5): 378-384.

National Research Council. Committee on Pesticides in the Diets of Infants and Children. Board on Agriculture and Board on Environmental Studies and Toxicology. Commission on Life Sciences. 1993. *Pesticides in the diets of infants and children*. Washington, D.C.: National Academy Press.

Laboratory tests use high doses, but they're all we've got

Huff, J. and J.K. Haseman. 1991. Exposure to certain pesticides may pose real carcinogenic risk. *Chem. Eng. News*: (Jan. 7):33-36.

Regulation of pesticides doesn't protect us

U.S. EPA. Office of Pesticide Programs. 1995. *Pesticide Program Progress Report*. Washington, D.C. (April.)

Federal Insecticide, Fungicide and Rodenticide Act. U.S. EPA. Office of Prevention, Pesticides and Toxic Substances. 1993. List of chemicals evaluated for carcinogenic potential. Memo from Reto Engler, senior science advisor, Health Effects Division to Health Effects Division Branch Chiefs, et al. Washington, D.C. (August 31.)

Farmworkers and farmers pay a high price

U.S. General Accounting Office. 1992. *Hired farmworkers: Health and well-being at risk*. Washington, D.C. (February.)

Pan American Health Organization. 1993. *Pesticides and health in the Americas*. Environmental Series

#12. Washington, D.C.

Blair, A, and S.H. Zahm. 1991. Cancer among farmers. *Occup. Med.: State Art Rev.* 6(3): 335-354.

Woodruff, T.J., A.D. Kyle, and F.Y. Bois. 1994. Evaluating health risks from occupational exposure to pesticides and the regulatory response. *Environ. Health Persp.* 102(12):1088-1096.

Pesticides hurt everyone and every species

U.S. EPA. 1993. Protection of stratospheric ozone. *Federal Register* 58(236): 65018-65082. (Dec. 10.)
 Fletcher, J.S., T.G. Pfeleger, and H.C. Ratsch. 1993. Potential environmental risks associated with the new sulfonylurea herbicides. *Environmental Science and Technology* 27(10):2250-2252.

U.S. EPA. 1994. Atrazine, simazine, and cyanazine; Notice of initiation of special review. *Federal Register* 59(225): 60412-60443. (Nov. 23.)

Goalsby, D.A., L.L. Boyer, and G.E. Mallard. 1993. *Selected papers on agricultural chemicals in water resources of the midcontinental United States*. Open-file Report 93-418. Denver, CO: U.S. Geological Survey.

Harrison, H.E. et al. 1995. *Analytical data from Phases I and II of the Willamette River Basin Water Quality Study, Oregon, 1992-1994*. Open-File Report 95-373. Portland, OR: U.S. Geological Survey.

There is a better way to grow food

Mergentine, K. and M. Emerich. 1994. Organic market overview: Organic sales jump over \$2 billion mark in 1994. *Natural Foods Merchandiser* 16: 74-76.

Vandeman, A. et al. 1994. Adoption of integrated pest management in U.S. agriculture. *Agriculture Information Bulletin No. 707*. Washington, D.C.: U.S. Dept. of Agriculture. Economic Research Service.



FOUR SIMPLE STEPS YOU CAN TAKE TO GET PESTICIDES OUT OF OUR FOOD

1. Buy organically-grown, locally-produced food whenever possible. Spend your food dollars at a farmers market or a community-supported-agriculture farm.
2. Write to your grocery store, or talk to an employee. Ask them to carry more organic produce.
3. Write to your senators and representative. Ask them to support federal laws that keep hazardous pesticides out of our food. Also ask them to support the development and promotion of alternative pest management techniques for farmers.
4. Join NCAP. We'll keep you updated on pesticide and food safety issues.

NCAP

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