TEN REASONS NOT TO USE PESTICIDES

1. **Pesticides don't solve pest problems.**
2. **Pesticides are hazardous to human health.**
3. **Pesticides cause special problems for children.**
4. **Pesticides often contaminate food.**
5. **Pesticides are particularly hazardous for farmers and farmworkers.**
6. **Pesticides are hazardous to pets.**
7. **Pesticides contaminate water and air.**
8. **Pesticides are hazardous to fish and birds.**
9. **Pesticide health and safety testing is conducted by pesticide manufacturers.**
10. **Pesticides have too many secrets.**

BY CAROLINE COX

1. Pesticides don't solve pest problems. They don't change the conditions that encourage pests.

Some pesticides are remarkably efficient tools for killing pests, but almost all do nothing to solve pest problems. To solve a pest problem, it's necessary to change the conditions that have allowed the pest to thrive. Simply killing the pest is not enough. As the U.S. Environmental Protection Agency (EPA) wrote in its *Citizen's Guide to Pest Control and Pesticide Safety*, "Pests seek places to live that satisfy basic needs for air, moisture, food, and shelter. The best way to control pests is to try to prevent them from entering your home or garden in the first place. You can do this by removing the elements that they need to survive."[1] This concept is true for agriculture, forestry, and commercial pest management as well as for homeowners.

Simply killing pests, instead of solving pest problems, leads to routine and repeated use of pesticides. Almost a billion pounds of conventional pesticides are used in the U.S. every year, and this use has continued for decades.[2] This enormous quantity would have decreased if pesticide use was truly solving pest problems.

2. Pesticides are hazardous to human health. Every year, enormous quantities of pesticides known to cause significant health problems are used in the U.S.

Pesticides cause a wide variety of health problems; as Mt. Sinai School of Medicine physician Philip Landrigan has written, "the range of these adverse health effects includes acute and persistent injury to the nervous system, lung damage, injury to reproductive organs, dysfunction of the immune and endocrine [hormone] systems, birth defects, and cancer."[3]

Making these problems even more significant, pesticides that are hazardous to our health are used in enormous quantities. Consider just two of the many types of pesticide-related health hazards: cancer and problems with reproduction. Also consider the 28 conventional pesticides that, according to EPA estimates, are the most widely used in U.S. agriculture, in and around U.S. homes, and by commercial pesticide applicators.[4] Even though 7 of these 28 pesticides have not yet been evaluated by EPA, over 40 percent are classified by the agency as carcinogens (able to cause cancer).[5] Total use of the pesticides classified as carcinogens is a staggering 350 million pounds per year.[4,5]

EPA does not formally classify pesticides according to their hazards for reproduction, but according to an EPA risk information database that summarizes studies about 19 of the 28 commonly used pesticides, almost all (18 out of these 19) have caused reproductive problems in laboratory tests, including miscarriages, birth defects, and testicular

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atrophy.[6] Total use of these 18 pesticides is almost 550 million pounds per year.[4,6]

If they were to accurately reflect pesticide hazards, these enormous numbers should be even larger, since not all evidence of health hazards is reflected in EPA's analysis. For example, studies of Kentuckians[7] and Californians[8] found that exposure to the commonly used herbicide atrazine is associated with increased risks of cancer, but EPA classifies atrazine as "not likely to be carcinogenic in humans."[9] The widely used fumigant metam sodium is not included in EPA's risk information database, but has caused pregnancy problems in laboratory tests.[10]

3. Pesticides cause special problems for children. For their size, they consume more food and drink than adults, and both of these can be contaminated with pesticides. They play in ways that increase their potential exposure. Also, their growing and developing bodies can be particularly sensitive.

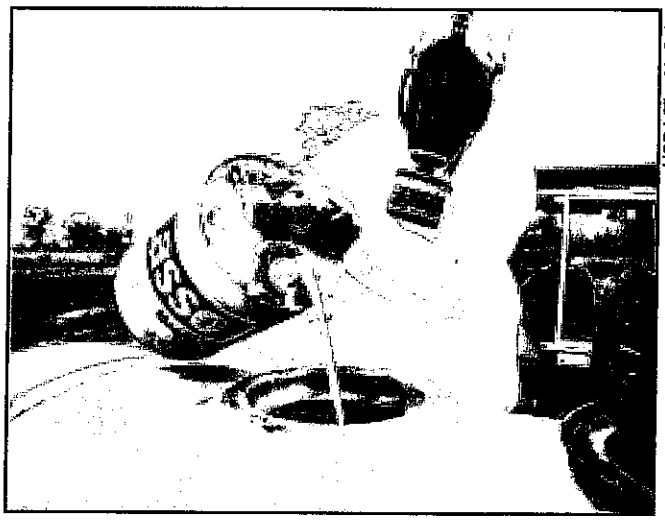
USDA/Ken Hammond

Children are more exposed and more susceptible to pesticides than are adults. As Dr. Lynn Goldman wrote while she was the assistant administrator of EPA's Office of Prevention, Pesticides, and Toxic Substances, "As a pediatrician, I know that children can be more vulnerable to environmental contaminants. Their systems are growing. Compared to adults, children eat proportionally more fruits and vegetables and drink proportionately more water. Their behavior patterns — crawling on the floor and putting things in their mouths — cause them to be more exposed to contaminants."[11]

Pesticides can cause short-term illnesses in children, but also more lasting problems. "There is evidence, for example," explained Dr. Philip Landrigan, "that pre- and postnatal exposures to pesticides increase the risk of childhood cancer, and concern has arisen that early exposure to neurotoxic pesticides may increase risk later in life of chronic neurologic diseases."[3]

4. Pesticides often contaminate food. The widespread use of pesticides in agriculture means that pesticides are frequently found on a variety of common foods.

Recent monitoring by the U.S. Dept. of Agriculture's (USDA's) Pesticide Data Program showed that 67 percent of the fresh fruits and vegetable samples that the agency tested were contaminated with at least one pesticide. Almost 40 percent of the samples were contaminated with more than one pesticide. Certain fruits are contaminated even more frequently, including over 90 percent of the samples of both strawberries and pears.[12] USDA found pesticide contamination of wheat, a staple of many American diets, in 80 percent of the samples tested. Almost 90 percent of the samples that USDA tested of soybeans, a significant part of many infant formulas, were contaminated.[13]



USDA/Tim McCabe

5. Pesticides are particularly hazardous for farmers and farmworkers. There are no comprehensive systems for keeping track of the number and type of pesticide illnesses in the U.S., but research shows that farmers and farmworkers face risks of both acute pesticide poisoning and long-term illness.

Because agricultural pesticides account for over 75 percent of total U.S. pesticide use,[2] farmers and farmworkers are often exposed to larger amounts of pesticides more frequently than other people. EPA has estimated that between 10 and 20 thousand pesticide-related illnesses and injuries occur among farmers and farmworkers every year, but the agency believes that these large numbers are actually serious underestimates.[14]

There are no national systems to track acute pesticide illnesses, and information about chronic effects, like cancer or birth defects, is even more limited. However, many studies indicate that the hazards of pesticides are significant. For example, studies of farmers have shown that use of phenoxy herbicides and organophosphate insecticides is associated with an increased risk of a variety of cancers, including lymphoma, leukemia, and prostate cancer.[15] In California farmworker populations, pesticide use is associated with leukemia, brain cancer, and testicular cancer.[8]

6. Pesticides are hazardous to pets. Pet poisonings occur frequently, and exposure to a widely used lawn herbicide is associated with a higher risk of cancer in dogs.

Pesticide poisoning of pets is unfortunately common. For example, in 1990 the American Association of Poison Control Centers received over 11,000 calls regarding pesticide-poisoned pets.[16,17] Only antifreeze causes more pet poisoning deaths than two types of pesticides: rodent control pesticides and organophosphate insecticides.[16]

Pesticides can also cause long-term health problems for pets. For example, the National Cancer Institute found that companion dogs with canine malignant lymphoma (a cancer) were more likely than healthy dogs to live in households where owners applied the herbicide 2,4-D to their lawn or used lawn care companies to treat their yard.[18]

7. Pesticides contaminate water and air. Monitoring studies find pesticides in almost every sample that is tested.

Pesticides are widespread contaminants of rivers and streams. The U.S. Geological Survey's (USGS's) national water quality monitoring program found that all of the samples the agency analyzed from major rivers were contaminated with at least one pesticide. Smaller streams were almost as frequently contaminated: 99 percent of the urban stream samples and 92 percent of the agricultural stream samples tested by USGS contained at least one pesticide. Wells are also often contaminated: The USGS found at least one pesticide in almost 60 percent of the wells in agricultural areas that the agency tested and in almost 50 percent of the wells in urban areas.[19]

Pesticides are similarly widespread in air. In a USGS compilation of local, state, multistate and national air monitoring studies, the insecticide diazinon contaminated almost 90 percent of the samples tested, and the insecticide chlorpyrifos almost 70 percent. The two most common herbicide contaminants were 2,4-D (in almost 60 percent of the samples) and trifluralin (in almost 50 percent of the samples). DDT, the notorious insecticide whose U.S. uses were cancelled over thirty years ago, contaminated over 90 percent of the samples.[20]

8. Pesticides are hazardous to fish and birds. Enormous quantities of pesticides already known to EPA to cause problems for fish and birds are used in the U.S. every year.

EPA assessments demonstrate that pesticides often harm living things other than the pests that they target, including fish and birds.

Current EPA regulations require testing for some of these kinds of effects, but testing of pesticides first registered before requirements were updated in 1984 is incomplete. Almost all of EPA's list of 28 commonly used pesticides fall into this category. However, EPA has reevaluated, completely or partially, 13 of these commonly used pesticides to bring them up to current standards. In looking at hazards to fish and birds, EPA estimates exposures (or uses data from monitoring studies) and compares them to amounts that have caused harm in laboratory tests. Of the 13 pesticides mentioned above, EPA's exposure calculations for 10 exceeded potentially harmful levels for fish, birds, or both.[21] Use of these 10 pesticides totals over 300 million pounds per year,[4,21] even though less than half of the commonly used pesticides have been evaluated.

USDA/ARS/Scott Bauer

9. Pesticides are immensely profitable for the corporations who manufacture them, yet these corporations conduct or sponsor the tests used to determine their safety.

Pesticides are enormously profitable for the companies who make and sell them. The two largest pesticide companies in the world during 2000, Syngenta and Monsanto Company,[22] each made over a billion dollars in profits in 2000 from the sale of pesticides and related products.[23,24]

These immense profits create an inevitable conflict of interest because, under the U.S. pesticide law (the Federal Insecticide, Fungicide and Rodenticide Act; FIFRA) pesticide manufacturers themselves provide the data showing that their product "will perform its intended function without unreasonable adverse effects on the environment."[25]

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As stated in the *Code of Federal Regulations*, a company that wishes to register a pesticide "must furnish any data ... which are required by the Agency [EPA] to determine that the product meets the registration standards of FIFRA."[26] The result is that independent health and safety testing of pesticides is virtually nonexistent.

10. Pesticides have too many secrets. Where are pesticides used in our communities? When? How much? What's in them? We almost never have good answers to these questions.

While EPA requires that signs be posted on farms to notify workers about applications of agricultural pesticides,[27] in general there are no federal posting requirements for pesticides used on other kinds of sites.[28] Only about half of the states have enacted such laws[28] and only a handful of states have laws to comprehensively track pesticide use and make the data publicly available.

Even if we can get some of this kind of information about the pesticides being used in our communities, we are still left with important unanswered questions because many pesticide ingredients are both untested and unidentified. The so-called "inert" ingredients in pesticide products are rarely listed on product labels,[29] and are excluded from most of the toxicology tests required by EPA.[30]

In her classic book *Silent Spring*, author and biologist Rachel Carson eloquently describes the end result of all this secrecy. "When the public protests," she wrote, "confronted with some obvious evidence of damaging results of pesticide applications, it is fed tranquilizing pills of half truth. We urgently need an end to these false assurances, to the sugar coating of unpalatable facts."[31] Her words are no less true today than they were forty years ago.

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