

Health Facts



NRDC Pesticides Team: Protecting Against Chemicals Designed to Kill

“Organic.” Long before it became a buzzword or a staple product line for major grocers, the Natural Resources Defense Council (NRDC) was an advocate of pesticide-free products and dedicated itself to eliminating the unseen dangers of chemicals in our food.

PROTECTING KIDS FROM PESTICIDES: THE FOOD QUALITY PROTECTION ACT

In the mid-1990s, against overwhelming odds in an intransigent Congress, NRDC led a successful effort to pass a landmark pesticide law, the Food Quality Protection Act (FQPA), which significantly strengthened legal protections against the dangers of pesticides. Although not the first law that governed pesticides, the FQPA broke new ground by:

- Requiring safety levels that protected children as well as adults, which acknowledged that children are more vulnerable to pesticides.
- Requiring that the U.S. Environmental Protection Agency (EPA) consider all sources of exposure—such as what we spray in our homes and gardens, and the cumulative exposures from food and water—when it set

limits on pesticide levels. (Before the legislation passed, assessments included only risks from one chemical and one food at a time.)

- Requiring EPA to apply the tighter safety standard to all pesticides that had been previously registered by EPA and were already on the market.

Five years after FQPA passed, NRDC successfully sued EPA for missing key deadlines specified in the new law. During the settlement process, we demanded that EPA assess first the most dangerous pesticides still on the market: organophosphates (OPs), an outdated class of pesticides that cause permanent neurological damage and were in widespread use.



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NRDC's efforts to hold EPA accountable had a big impact: EPA eliminated numerous high-risk products from home use and many growers successfully switched to safer alternatives. Uses of OPs are now down by more than a third, from 90 million pounds to less than 60 million pounds annually. Residues from OPs in the top 10 most popular children's foods with the highest pesticide residues have been cut nearly 60 percent, and 75 percent of the OPs that were used in homes and that caused the highest exposures to children have been pulled from the market.

Natural Resources Defense Council Pesticides Highlights

- Nine of the twelve worst organophosphates were completely eliminated.
- The cancellation or phase-out of 57 organophosphate pesticides used in children's foods was achieved.
- The amount of residues on kids' foods dropped almost 60 percent between 1994 and 2004.
- Of 49 original organophosphate pesticides, 18 have either been phased-out or banned.

Because pesticides must be registered by EPA before they can be sold in the United States, and to ensure that EPA has the funds to accomplish its pesticide registration work, NRDC teamed up with pesticide manufacturers to pass the Pesticide Registration Improvement Act (PRIA) in 2003 and reauthorize it in 2008. This legislation established fees that manufacturers pay to help run the EPA pesticide program—an innovative initiative that reduced costs to the public for funding this critical government program.

TIGHTENING GOVERNMENT CONTROLS

Simply meeting deadlines to register pesticides is not enough; NRDC also scrutinizes every EPA decision to ensure that the government provides adequate protections for public health. We often find major problems and fight to strengthen the rules, such as in the case of:

Endosulfan

This toxic, long-lasting pesticide travels around the globe, reaching diverse destinations far from its original use, as well as ending up in human breast milk and human fetal placenta. Backed by a coalition of scientists, Arctic tribal governments and indigenous peoples, and worker protection groups, NRDC sued EPA in 2008 to ban this hazardous pesticide. In 2010, EPA agreed to cancel all uses of this toxin.

Carbaryl

Since 2004, NRDC has demanded that EPA eliminate the use of this chemical in pet flea collars, because very high exposures result when children play or sleep with their pets. Less toxic or non-toxic alternatives are available. In 2010, EPA canceled the last remaining pet collar uses of this toxic pesticide.

Dichlorvos

This pesticide, developed from nerve warfare agents after World War II, has been in widespread use in homes, restaurants, theaters, and farm buildings since 1948. Particularly dangerous for kids, this toxin can cause severe nervous system problems, ranging from vomiting, diarrhea, sweating, and muscle twitching, to seizures, loss of consciousness, and death. NRDC petitioned EPA to ban the chemical in 2006, which the agency refused to do. In 2011, NRDC won a lawsuit in which the court found that EPA had unlawfully re-registered dichlorvos.

Rat poisons

Millions of pounds of these toxins are used all over the country annually; as a result, tens of thousands of children are accidentally poisoned every year and several hundred require hospitalization. Children poisoned by the chemicals suffer from internal bleeding, bleeding gums, and anemia, and can lapse into a coma in extreme cases.

Low-income black and Latino children suffer a disproportionate risk of rat poisoning. Safety measures can prevent such accidents without undermining the effectiveness of rat poisons. NRDC successfully sued EPA for failing to protect children from exposure to rat poisons, which forced the agency to strengthen safeguards with the use of protective measure such as bittering agents.



Other Natural Resources Defense Council Victories

- The elimination of all residential uses of chlorpyrifos—more than 6 million pounds annually—resulted in a 66 percent reduction in poisonings from chlorpyrifos since 1995.
- The phase-out of over 11 million pounds annually of non-agricultural uses of diazinon took three-quarters of the pesticide off the market, leading to a 20 to 40 percent reduction of the toxin in streams in the United States.
- The elimination of acephate uses in and around homes, lawns, and gardens removed almost 1 million pounds annually of this toxic chemical from dwellings.

TOXINS ON PETS

Americans spend more than \$1 billion each year on products designed to kill fleas and ticks on household pets. While some of these products are safe, others leave harmful chemical residues on pets' fur and in our homes. These chemicals are highly hazardous to both animals and humans, can damage the nervous system (including the brain), and can cause cancer. Children are particularly at risk from these pesticides because their neurological and metabolic systems are still developing. Kids also spend more time with pets than adults and are more likely to put their hands in their mouths after petting an animal, leading to ingestion of hazardous residues.

NRDC's 2000 *Poisons on Pets* report (available online at nrdc.org/health/poisonsonpets/) led to the ban of six pesticides in pet products. Products containing two other poisons (tetrachlorvinphos and propoxur), are still legal and among the most dangerous pesticides on the market, yet they remain on store shelves. In 2009 NRDC took matters into our own hands, conducting a first-of-its-kind study of our own pets fitted with flea collars. We found residues of both pesticides on the pets at levels as much as 1,000 times higher than the EPA's acceptable levels.

NRDC submitted these data to EPA, along with a petition to cancel pet collar uses for both of these pesticides; we are waiting for the agency's response.



POLLINATOR PROTECTIONS



Bees, birds, bats, beetles, and butterflies are all pollinators, and maintain at least 30 percent of the world's crops and 90 percent of wild plants. Bees alone

annually pollinate more than \$15 billion in U.S. crops and produce about \$150 million in honey.

In 2006, U.S. beekeepers first sounded the alarm about disappearing bees. Seemingly healthy bees were abandoning their hives en masse, never to return—a phenomena since dubbed Colony Collapse Disorder. Researchers estimate that nearly one-third of all honey bee colonies in the United States have vanished and the number of hives in the country is now at its lowest point in the past 50 years. The global economic cost of bee decline, including lower crop yields and increased production costs, has been estimated to be as high as \$5.7 billion per year.

NRDC has been instrumental in pushing the EPA on pollinator protection, insisting that the agency investigate and improve existing management practices, establish a national incident reporting database, upgrade label language, and generate better technical information on the toxicity and effect of pesticides on bees. We sued EPA over its approval of one pesticide particularly hazardous to bees, Movento, and a federal court recently agreed with us and invalidated EPA's decision.

NEXT STEPS

Despite our successes, there is more work ahead. NRDC continues to push EPA to remove the most dangerous pesticides from the market, including agricultural uses of organophosphates still used on corn, in orchards, and on other vegetable row crops. They are used at levels that contaminate our food and soil, and they are drifting into rural schoolyards and homes. NRDC has demanded, and is awaiting, EPA action to cancel chlorpyrifos and other pesticides, including 2, 4-D, carbaryl, and atrazine.

HARNESSING CONSUMER POWER

Government regulations can only go so far. The surge of consumer interest in green products and services, combined with the lack of information available to consumers and businesses, is a pathway for NRDC to promote more sustainable pest control.

MAKING PLACES WE LIVE, WORK, AND PLAY SAFER

In 2007, NRDC helped to launch Green Shield Certified, a seal of approval for eco-friendly pest control professionals who service homes, institutions, and commercial buildings. In 2009, to take green pest control to the mainstream, NRDC helped the industry's national trade association launch Green Pro. Together, Green Shield and Green Pro have helped industry leaders reduce pesticide use and avoid other high-risk materials.

NRDC also successfully advocated for improving the U.S. Green Building Council's LEED standards for existing buildings, with the goal of including Integrated Pest Management (IPM), an environmentally sensitive approach to pest management. The new standard requires that, to be LEED-certified green, buildings must use IPM, including preventative practices, record keeping, and the use of the least-toxic pesticides, if pesticides are necessary.

PESTICIDE RISK MITIGATION ENGINE

NRDC played a catalyzing role in launching a new tool, Pesticide Risk Mitigation Engine (PRiME), to help growers, crop advisors, and food industry leaders assess pesticide risks on their farms. Through a USDA-funded initiative involving several universities, scientists developed a user-friendly, online calculator that estimates the risk associated with growers' pest management practices. PRiME also allows major buyers and cooperatives to identify and select growers who use less toxic pesticides.



NRDC's Growing Green Awards

Innovative farmers across the country are "growing green" by adopting more sustainable practices, such as producing energy from farm waste and using beneficial insects to replace toxic pesticides. Through this national award, NRDC recognizes these innovators. NRDC recently honored Dr. Pam Marrone, an inventor of biologically-derived pesticide alternatives.