

Pesticides and You

News from Beyond Pesticides, formerly the National Coalition Against the Misuse of Pesticides

Volume 25, Number 4

Winter 2005-2006



Threatened Waters

Turning the tide on pesticide contamination

Open Letter to the Organic Community

On passage of changes to organic law and organic integrity

Pesticide Poisoning in a Normal Day • Taking Off the Blindfold
2,4-D Escapes Federal Axe... For Now • Spreading the Word, Not Chemicals



Letter from Washington

Organic Healing

Let the organic healing begin. This issue of *PAY* contains an *Open Letter To The Organic Community*. Joining with hundreds of our sister organizations, we issue the letter in an effort to both set the record straight on amendments to the *Organic Foods Production Act (OFPA)*, which we reported in the Fall issue of this newsletter, and bridge differences as we move ahead together to strengthen the partnership between consumers, farmers and food processors that will grow the organic marketplace.

Reality vs. fiction

If healing begins with acceptance of reality, it is our hope that this issue can make a contribution. This issue contains excerpts from a piece written by the man behind the lawsuit against USDA, Maine organic blueberry farmer and processor Arthur Harvey. Mr. Harvey's victory in court set off an Organic Trade Association (OTA) firestorm, which led to the adoption of a Congressional rider on an agriculture appropriations bill that amends OFPA. And now, Mr. Harvey and organizations that supported parts of his lawsuit (including Beyond Pesticides) are under attack. The Organic Consumers Association has called the OTA rider a "sneak attack" because the trade group used methods on Capitol Hill, such as closed door meetings that locked out Democratic staff and a refusal to negotiate a legislative agreement, that are decried as undemocratic. In return, OTA and its supporters criticize Mr. Harvey and his supporters for participating in an undemocratic sneak attack by using the courts to change a policy that was vetted through the rulemaking process.

Using the democratic process and the courts

Mr. Harvey and numerous groups have put years of statements on the record warning USDA that its regulations were not in compliance with the law. Because he believes deeply in the importance of healthy organic standards, Mr. Harvey at considerable personal expense and time participated in National Organic Standards Board meetings as a member of the public and, when his efforts failed in that arena, he dug deep into his family's savings to file his lawsuit. OTA and USDA chose to ignore these concerns in the public process.

It is simply fiction to suggest, as OTA supporters have, that negotiations broke down between OTA and those supporting Mr. Harvey's lawsuit. One only need ask members of Congress, who tried fruitlessly to facilitate negotiations, whether any talks on the legislation ever got started.

Supporters of the Harvey lawsuit took the approach that the issues could be resolved with all stakeholders and therefore eschewed a public fight, assuming that agreements would be hammered out. When it became clear that OTA had no interest in such a process and was moving against legislative protocol,

the groups had no choice but to air the disagreement and fully engage their constituents.

Looking to the future

That is all in the past. It remains to be seen how the marketplace will respond to the changes in law. Do consumers want to know what synthetic ingredients are in their food labeled organic? Will companies differentiate their products in the marketplace with labeling that carries a "no synthetics" disclosure? Will the media, which engaged on this issue, and in its editorials called for strong, clear standards, continue to track this issue? Are consumers engaged and seeking to strengthen standards? As *The New York Times* said in its November 4, 2005 editorial on the subject, "Unless consumers can be certain that those standards are strictly upheld, "organic" will become meaningless." The key is what "those" standards are as we now move into USDA rulemaking on the new law. This assumes the law is not repealed by a Congress that is increasingly uncomfortable with an administration and a Congressional leadership that have diminished respect for the legislative process and enforcement of laws.

Why organic integrity is critical

The rest of this issue of *PAY* expressly illustrates why a strong organic standard with integrity is so important. It must be held up as the solution to the pesticide problem. For example, if the two victims of pesticide poisoning, described in this issue, were living in communities where organic is the norm, they probably would not have been poisoned. Similarly, as the debate over the safety of 2,4-D continues and the regulatory risk assessment and risk management processes continue to be politicized (both the subject of articles), it is clear that the real solution is the widespread adoption of organic practices.

This issue also contains a special focus on pesticides and water, and the widespread failures to protect the nation's waterways from pesticide contamination. As one solution, we launch our campaign to prepare for a Spring campaign to stop the use of hazardous lawn chemicals and introduce a new door hang (*Want a Green Lawn Safe for Children and Pets?*) to warn people about the dangers and the availability of safe practices and products. This is part of a broad campaign, coordinated by the National Coalition for Pesticide-Free Lawns, with groups in over 20 states.

I am optimistic about the possibility for change in the new year as communities adopt policies and practices that protect human health and the environment. *Best wishes for the new year!*

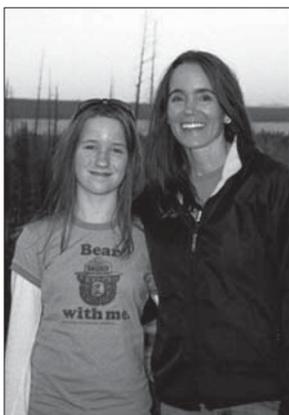
—Jay Feldman is executive director of Beyond Pesticides.



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Pesticides Cause Reactive Airway Disease

Dear Beyond Pesticides,

Your Summer 2005 article on "Asthma, Children and Pesticides" was wonderful; I would like to obtain it with references.

You may be interested to know that what some call "asthma" is reactive airway disease: caused and exacerbated by irritant exposure, with exacerbation at "low" levels. I have more detailed information on reactive airway disease on my new website: www.chemicalinjury.net.

The entire Summer '05 issue was GREAT: you and others you coordinate with/assist have made wonderful progress; truly making advances toward less toxic.

Sincerely,

Grace Ziem, M.D.
Emmitsburg, MD

Dear Dr. Ziem,

Thank you for the positive feedback! We value your opinion and appreciate all of the work you do; your new website is a great resource. The cited version of our brochure, Asthma, Pesticides and Children: What

you should know to protect your family, can be found on our website (www.beyondpesticides.org) at the Children and Schools link from the Issues tab, or type the address <http://www.beyondpesticides.org/children/asthma/AsthmaBrochure-Cited.pdf>.

Kids Take on Pesticides at Science Fair

Dear Beyond Pesticides,

I'm working with a team of third, fourth, and fifth graders at St. Thomas Moore School in Appleton, Wisconsin. The group is competing in the FIRST (For Inspiration and Recognition of Science and Technology) Lego League competition (<http://www.usfirst.org/jrobotcs/flego.htm>).

The tournament's theme this year is Ocean Odyssey, so our team researched how pesticides and fertilizers contribute to ocean pollution. In our presentation, the team encouraged people to join the National Coalition for Pesticide-Free Lawns. The judges asked the students what ingredients are found in organic products and what makes organic products better than non-organic products, implying that there is a debate among experts as to how beneficial organic products are to our ecosystem. Is that the case? Well, at any rate, the kids didn't have a real good answer. Regardless, the judges were impressed with their presentation and we will be competing in the state tournament in a month or two.

Can you provide us with further resources to help us answer the questions posed by the judges? They also asked what we could do to educate the rest of the world, so if you can point us to other websites that address this, we would be grateful.

The judges like to see teams take a proactive role in the project, and not just research it to death. So, we'd also like to purchase some *Is Your Lawn Toxic Green?* bumper stickers to hand out at the competition. Any chance we can get a good deal on the stickers? There will be 48 teams competing, and probably close to a thousand people at the competition,

so we could use a lot! Time permitting; we'd also like to get the kids involved in a letter-writing campaign. We've already contacted five lawn care services in our area, but we could do more.

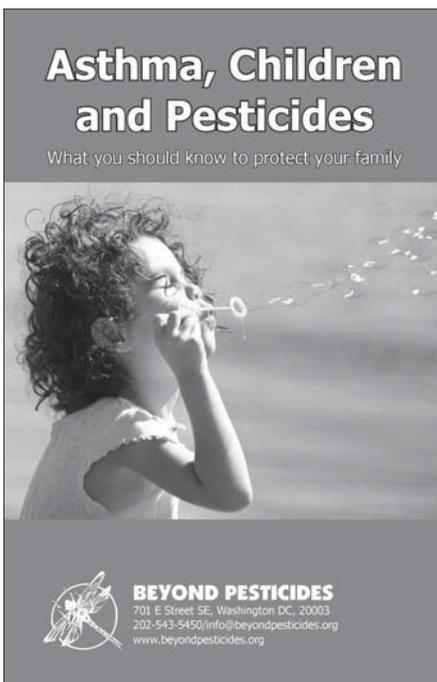
Thanks for taking the time to read this e-mail. We'd appreciate hearing back from you!

Cindy
Appleton, Wisconsin

Dear Cindy,

Thank you for contacting Beyond Pesticides with the questions you and your students have regarding organic lawn care. First, I would like to commend you and your students for doing such an important and creative science project. Natural/organic materials are those made from plants and animals without synthetic toxic chemicals. Examples include corn gluten, botanicals, biological controls, and least-toxic materials like fatty-acid or insecticidal soaps. Of concern are toxic pesticides, sold commercially and used by homeowners or commercial applicators, that scientific studies have linked to cancer, developmental and learning disabilities, nerve and immune system damage, liver or kidney damage, reproductive impairment, birth defects, or disruption of the endocrine (hormonal) system in humans and animals, as well as pollution of our drinking water, streams, natural habitats and ecosystems. Concern extends to the environmental impacts of these chemicals, which are often shown to contaminate water and kill wildlife and aquatic organisms.

There are many reasons not to use synthetic and toxic lawn care chemicals, based on their human health and environmental impacts. Perhaps equally troubling as the information on the toxic effects of lawn care chemicals is the lack of complete safety reviews. While enough studies have been done to set off major warnings, there are still many questions left unanswered. For example, many of the studies focus on how relatively large one-time doses of certain pesticides affect people, however there is very little information known about how small but chronic exposure can affect people over time.



Asthma, Children and Pesticides
What you should know to protect your family

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The judges have asked about the benefit of using natural/organic lawn care over chemical-intensive practices. There are many benefits for people, animals, the land, air, and water. Using natural/organic lawn care methods and products means choosing not to use many pesticides that have been proven to have harmful consequences or are not fully tested. Please note that in this issue of PAY, there is a piece, Taking off The Blindfold (see page 15), which describes deficiencies in the EPA registration of pesticides. Unfortunately, just because EPA allows a product to be marketed does not mean it is safe. Detailed information is found on our fact sheets Health Effects of 30 Commonly Used Lawn Pesticides and Environmental Effects of 30 Commonly Used Lawn Pesticides. Go to our website; select **Lawns and Landscapes** from the **Issues** tab, or go directly to www.beyondpesticides.org/lawn/factsheets/30health.pdf and www.beyondpesticides.org/lawn/factsheets/30enviro.pdf. Not only are harmful chemicals avoided by using natural/organic lawn care, but non-chemical lawn care also facilitates a healthier lawn and environment. Using natural/organic fertilizers and lawn care products can put much needed nutrients back in the earth, while composting and planting native plant species and grass allows for the land, and organisms that inhabit it to thrive.

For more information on the benefits of natural/organic lawn care and the hazards of chemical lawn care, you can visit the National Coalition for Pesticide-Free Lawns webpage (<http://www.beyondpesticides.org/pesticidefreelawns/index.htm>). You should also read the Spring 2005 issue of PAY.

Good luck to you and your students.

Getting Involved in Florida

Hello Beyond Pesticides,

I am very interested in becoming involved. Is there any work I could do for you in Florida? The pesticide spraying is all over, inside work areas as well. I know because someone comes in once a



month (at least) with a hose and sprays everywhere!! Also, what information do you have about the hazards of pesticides indoors (especially the workplace where one has limited control over this)? I'm very concerned about this.

Thank you!

Ellen
Via e-mail

Dear Ellen,

Thank you for all of your enthusiasm and commitment to stopping toxic pesticide use. There is so much work to be done, and your involvement would be a great contribution. Just educating your community and helping other people understand the hazards of using toxic pesticides is a great help. If you are interested in getting involved, I would recommend picking one or two specific issues that you are passionate about, or are particularly relevant in your community. For example, we have a very strong lawn campaign and schools campaign already going on across the country. But there are many other issues that you may want to organize around. In some areas mosquito spraying is a continuing problem. Because of your concern about pesticide use in the workplace, you may want to educate and organize on this issue.

Once you have determined your focus, you need to begin to spread the word and find other people who will join you. Then you have to begin to get a campaign underway. There are many steps to starting a campaign, including gathering information,

creating goals or a mission, community outreach, and eventually media outreach.

On our website (www.beyondpesticides.org) we have a wealth of information about organizing. Click on the blue button labeled **Tools for Change** or go directly to: <http://www.beyondpesticides.org/how-to/index.htm>. This page contains general and campaign-specific organizing information. In addition to our on-line resources, we can help you find information you need, and put you in contact with experts and activists.

As for indoor use of pesticides, enclosed spaces with poor ventilation and recirculation exacerbate pesticide exposure problems. Low levels of light and poor airflow can slow down the degradation process of certain pesticides. It also contains the pesticides in one space, creating more of a hazard for organisms. If you do a search on our website for "pesticides indoors" or variations of that, you can find some articles that will be of interest. You can search our website by typing in phrases in the Google box located on our homepage.

I hope you find this information helpful.

Write Us!

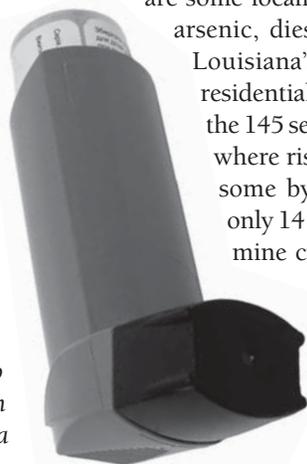
Whether you love us, disagree with us or just want to speak your mind, we want to hear from you. All mail must have a day time phone and verifiable address. Space is limited so some mail may not be printed. Mail that is printed will be edited for length and clarity. Please address your mail to:

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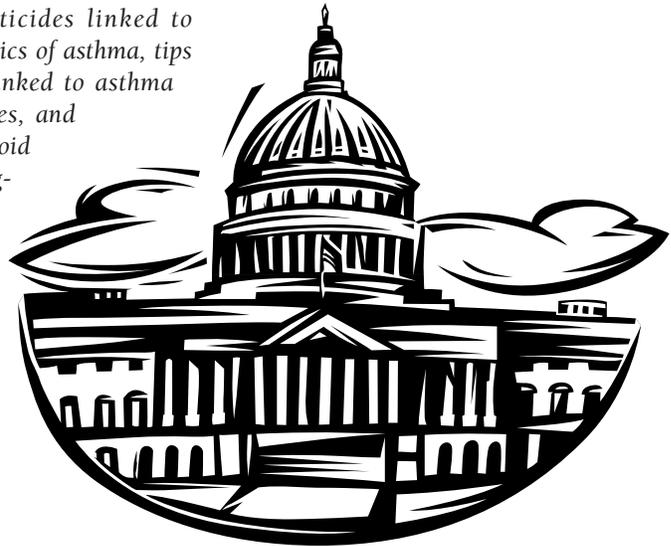
New Asthma Guidelines for Medical Providers Released

New research is telling us that most physicians receive surprisingly little training in environmental health, including asthma prevention. Responding to this need, the National Environmental Education & Training Foundation (NEETF) developed *Environmental Management of Pediatric Asthma: Guidelines for Health Care Providers*. The guidelines, released November 7, 2005, are designed to help pediatric primary care providers advise families about environmental interventions to help reduce or eliminate triggers for children diagnosed with asthma, the nation's leading pediatric chronic illness. "In many cases, controlling a child's exposure to environmental triggers is critical to managing asthma," said James R. Roberts, M.D., an associate professor in the Department of General Pediatrics at the Medical University of South Carolina, and the primary author of the guidelines. "But today's physicians and nurses haven't been sufficiently trained to help families understand environmental asthma triggers and how to limit their children's exposure to specific triggers outdoors and indoors at home, school, or their day care setting." The guidelines were developed and peer-reviewed by expert panels and are founded on the principles established by the National Asthma Education and Prevention Program (NAEPP). *Guidelines for the Diagnosis and Management of Asthma* are intended to be used in conjunction with its clinical and pharmacological components, as part of a child's comprehensive asthma management plan.

Take Action: Learn about the link between pesticides and asthma by checking out *Beyond Pesticides'* brochure, *Asthma, Children and Pesticides: What you should know to protect your family. The booklet examines children's susceptibility to asthma, the differences between the causes of asthma and asthma*



triggers, specific pesticides linked to asthma, the demographics of asthma, tips for controlling pests linked to asthma without using pesticides, and steps you can take to avoid asthma causes and triggers. The brochure is available at www.beyondpesticides.org/children/asthma or by calling *Beyond Pesticides* at 202-543-5450 for hardcopies. The complete NEETF guidelines are available at www.neetf.org/Health/asthma.htm.



Controversy Over Needed Cleanup in New Orleans

Attention in New Orleans naturally turns to "clean-up" of toxic chemical contamination in the aftermath of Katrina. However, the widespread environmental and public health threat there raises to a higher pitch the national debate on our country's over-reliance on pesticides and other toxic substances and the urgent need to adopt sustainable practices. In early December 2005, after testing hundreds of soil and air samples for toxic levels of arsenic, petroleum, pesticides and other contaminants, federal and state government officials declared the majority of New Orleans safe to live in. EPA and Louisiana's Department of Environmental Quality noted that there are some localized areas with levels of arsenic, diesel and oil that exceed Louisiana's and EPA's allowable residential risk exposure limits. Of the 145 sediment sample locations where risk levels were exceeded, some by as much as 30 times, only 14 were resampled to determine current conditions. Four continue to exceed acceptable levels. EPA told the *Times-Picayune*, "[A]lthough the levels in these four samples exceed

RECAP values, they fall within a risk range of one in 1,000,000 and one in 10,000 of an individual developing cancer over a lifetime of exposure to those concentrations, which EPA has found acceptable in other contexts." Several environmental groups, including the Louisiana Environmental Action Network (LEAN), Natural Resources Defense Council (NRDC), Louisiana Bucket Brigade and others, criticize the officials for having insufficient information to make such wide claims of safety. By claiming the area safe, EPA will not likely plan or schedule clean up of the contaminated sediment. LEAN analyzed EPA's sediment sample results for heavy metals, pesticides and others contaminants. In Louisiana, 92 percent exceeded EPA's residential allowable limits, with even greater contamination in the Ninth Ward. *To get involved or find out ways you or your organization can get involved, contact LEAN, 225-928-1315, or Beyond Pesticides, 202-543-5450.*

European Union Parliament Reaches for Compromise on Chemicals Policy

On November 17, 2005, the European Parliament passed a compromised version of the toxic chemicals policy, *Registration, Evaluation and Authorization of*

Chemicals (REACH), by a vote of 407-155. The law creates a central agency to register all 30,000 or more chemicals found in everything from cleaning products and cosmetics to computers and carpets (including pesticides), produced or imported within any of the 25 countries in the European Union (EU). In addition, the reform law mandates higher volume chemicals and chemicals of concern to be evaluated for safety data and replaced by safer chemicals if they are determined to be of "very high concern," as opposed to the U.S. system which determines acceptable levels of harm. Without the law, only 140 of the 30,000 chemicals have been adequately evaluated in the past decade. Chemicals considered "of highest concern" include carcinogenic, mutagenic or reproductive toxins and persistent, bioaccumulative and toxic chemicals. The compromises made, according to environmental groups, include a reduction in the number of chemicals grouped into the categories of highest concern that will allow some persistent, bioaccumulative and endocrine disrupting chemicals to avoid the new law.

In December 2005, the EU's Competitiveness Ministers had an opportunity to strengthen the law, however, they voted to weaken it by rejecting requirement to substitute hazardous chemicals with safer alternatives in all cases. Colin Butfield, head of the World Wildlife Fund – UK Chemicals and Health Campaign said, "This failure has been driven by the German government's protectionist policy toward its chemicals industry, and though other governments – including Britain's – lobbied hard in the last few weeks for genuine environmental concessions, these were sadly not achieved. We hope the damage can be undone before REACH becomes law." The U.S. weighed in saying REACH would disrupt trade and hurt its industries. The Bush Administration has sided with the U.S. and European chemical industry that claims the regulations are too burdensome and would devastate the industry's competitiveness, international trade, and result in a loss of thousands of jobs. For more information, contact Daryl Ditz at

the Center for International Environmental Law, 202-785-8700.

Scientists Examine Link Between Endocrine Disruptors and Genetic Diseases

Scientists have found that endocrine disrupting chemicals can trigger genetic diseases and disorders that are commonly believed to be hereditary, most recently, obesity. These new findings are changing the way that scientists view genetic diseases. New studies are revealing that endocrine disruptors, chemicals that effect important hormones that control such things as reproduction and parts of development, can cause genetic diseases. Research out of the Institute of Bioengineering at Miguel Hernández University in Spain, published in the August 2005 issue of *Environmental Health Perspectives* (Vol. 113, No. 8), links endocrine disruptors with impaired glucose metabolism in the liver. Endocrine disrupting chemicals mimic naturally occurring hormones such as estrogen by occupying hormone receptors and triggering a reaction in the body. Interactions of these chemicals with the classical (nuclear) estrogen receptors have been well-characterized, and there is also growing knowledge regarding interactions with non-classical receptors (found elsewhere, as on the cell membrane). Problems with glucose production, as observed in this recent study, can lead to Type 2 diabetes and obesity. According to experts in the field, endocrine disruptors can also cause attention hyperactivity disorder syndrome, autism and various immune system deficiencies. Many pesticides have been identified as either known or probable endocrine disruptors. For example, synthetic pyrethroids, a popular and widely used type of pesticide, have often been linked with endocrine disruption. For more information, contact *Beyond Pesticides*.

Judge Orders Better Public Education To Protect Endangered Salmon

As part of a January 2004 ruling in the case *Washington Toxics Coalition, et al. v. EPA*, protecting endangered and threatened species from pesticides, U.S. District Judge John Coughenour (Seattle, WA) ordered the pesticide industry group CropLife to post signs in stores and on a website explaining the dangers certain pesticides pose to salmon and steelhead.



What CropLife delivered was a website that was difficult to navigate and directed visitors to the information through a path of promotional materials, while less than 13% of retailers had posted signs.

On October 17, 2005, Judge Coughenour returned the responsibility to the Environmental Protection Agency (EPA) and told it to do a better job of informing the public. The original ruling required EPA to review the impact of various popular pesticides, including 2,4-D, diuron, triclopyr, trifluralin, carbaryl and malathion, on endangered and threatened salmon and steelhead. While the review is being completed, use of the pesticides has been curtailed, and buffer zones along waterways have been established for farmers, orchardists and golf course managers. Now EPA must "send letters about the policy to retailers in urban areas with more than 50,000 people, and provide the stores with a list of the chemicals and the products that contain them." Additionally, EPA must consult with the plaintiffs (the Washington Toxics Coalition, the Northwest Coalition for Alternatives to Pesticides, and the Pacific Coast Federation of Fishermen's Associations and the Institute for Fisheries Resources) regarding the development of notices to retailers. For a copy of the court rulings, see www.pesticide.org/9th_Opinion.pdf.



Nicaraguan Government Supports Poisoned Banana Workers

In September 2005, the Nicaraguan National Assembly approved a law that will provide farmworkers poisoned by the pesticide dibromochloropropane (DBCP), trade name Nemagon, with legal advice for lawsuits they have filed against transnational companies that used or produced this toxic substance, including Dole Fruit, Dow Chemical, Occidental, Shell Chemical and Standard Fruit, according to the *Latin America Press*. Several courts have ruled in favor of Nemagon victims, but few have received money from the liable chemical companies. Dow Chemical has refused to pay its share of damages in at least one case, calling the judgment “unenforceable” and asked that the case be tried in a U.S. court. Because compensation by chemical companies is unreliable, Nicaraguan lawmakers are also considering another law that could possibly provide victims of Nemagon use with lifelong compensation. Nemagon has been banned in the U.S. since 1977. Despite the U.S. ban, it was exported to Nicaragua and other developing countries and

used during the 1980s. Studies of workers have shown that exposure to DBCP causes men to produce fewer sperm and eventually become sterile. Other symptoms of exposure include headaches, nausea, lightheadedness, and weakness. There is also evidence that DBCP causes cancer in animals and humans. Organizations representing those adversely affected by Nemagon have been camping out in the capital, Managua, since March 2005, denouncing the chemical’s deadly effects that advocates say have already killed 966 people and damaged the health of at least 20,000 farmworkers.



Court Allows Class Action Lawsuit Against Dow for Dioxin Contamination

In November 2005, Michigan families whose homes are contaminated by dioxin saw their first glimmer of hope when Saginaw County Circuit Court Judge Leopold Borrello granted class action status to their long-running litigation against Dow Chemical. “We feel something finally is going our way,” Gloria Taylor told the *Midland Daily News*. Ms. Taylor and her husband have been involved in the suit since its inception in March 2003. About 170 property owners originally signed onto the suit after being notified by the state that their Tittabawassee River-area homes are contaminated with dioxin above levels deemed “acceptable.” A warning was issued for residents to limit contact with contaminated soil and dust that could cause a variety of ailments, including cancer. The MI Department of Environmental Quality issued a wild game consumption advisory due to contamination of the entire food web in the area. After a year and a half of legal maneuvering by Dow, the Judge in the case ruled that the lawsuit should move forward all-inclusively because the residents of the flood plain all complain that Dow contaminated their property. Judge Borrello wrote in his order, “To deny a class action in this case and allow the plaintiffs to pursue individual claims would result in up to 2,000 individual claims being filed in this court. Such a result would impede the convenient administration of justice.” Dow Chemical is appealing the decision.

Take Action: To help fight Dow Chemical’s toxic legacy in communities across the country, *Beyond Pesticides* has released a Dow consumer brochure, *The Safer Choice*, along with supplemental in-depth information including chemical factsheets, scientific studies, alternatives information and more. Both the brochure and in-depth packet are available on *Beyond Pesticides’ Dow Consumer Campaign* webpage at www.beyondpesticides.org/dow.

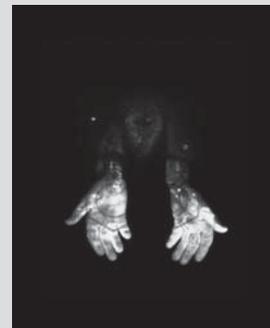
Seattle School Board Adopts Strong Pesticide Reduction Policy

As Seattle children were preparing for a new school year, the city's school board unanimously adopted a district-wide policy to eliminate the use of the most toxic pesticides – products linked to cancer, nervous system damage, hormone disruption and more. The policy responds to growing evidence that pesticides can interfere with children's ability to learn and cause other serious health problems. "Seattle Public Schools takes our commitment to the health of our students, staff, and the planet very seriously," said district Board President Dr. Brita Butler-Wall, who pushed for adoption of the policy. "We have embraced the concept of healthy learning environments through a strong policy preventing possible exposure to toxic chemicals such as pesticides." A community advisory committee, including district staff members, parents, doctors, and experts, drafted the policy recommendations over the past several years. "The Seattle School District has taken a tremendous step forward by drawing the line and saying toxic pesticides don't belong in our schools," said Angela Storey, healthy schools coordinator for the Washington Toxics Coalition, and chair of the Community Advisory Committee that drafted the policy proposal. "Pest problems can be prevented and solved without compromising the health of our children or our environment."

Take Action: *To ensure that children across the country are protected from pesticides in school, ask your U.S. Senators and U.S. Representatives to support and co-sponsor the School Environment Protection Act (SEPA), S.1619 and H.R. 110. See www.senate.gov and www.house.gov/writerep/ for the contact information of your Senator or Member of Congress. For information on organizing your community, see *Beyond Pesticides Healthy Schools* webpage at www.beyondpesticides.org/schools. For the Seattle policy, visit www.seattleschools.org/area/policies/h/H12.00.pdf.*

Photographer Shows the Hidden Paths of Pesticides

Photographer Laurie Tümer's work offers a snapshot of the ubiquitous presence of pesticides in our daily lives. Ms. Tümer has been making images that expose the presence of pesticides since 1998, when she suffered near-fatal poisoning after her New Mexico home was sprayed with pesticides. While recovering, Ms. Tümer discovered the work of Richard Fenske, Ph.D., a professor of environmental health at the University of Washington's School of Public Health and Community Medicine. Dr. Fenske uses fluorescent tracer dyes and ultraviolet light to demonstrate how pesticides can spread to agricultural workers' skin, even when protective gear is worn. By spraying tracers on her shoes and walking through her garden, or superimposing dyes onto landscape-scale canvases, Ms. Tümer uses a similar technique to illustrate how and where pesticides travel. The result of her work, a growing collection she calls "Glowing Evidence," is at once startling and stunning. Critics who have seen her images exhibited in Santa Fe have called them eerie, compelling, ingenious, and haunting. Ms. Tümer traces her "political art" to cave drawings. Like that ancient art form, she says, her photographs are "a forum for processing information, conveying dismay, and warning others." To view the photos, visit www.laurietumer.com.



Toxic Levels of Pyrethroids in Streams Defy Safety Assumptions

Once touted for its low toxicity and low persistence, synthetic pyrethroid insecticides were marketed as safer replacements for highly acutely toxic organophosphates and carbamates. However, research has begun to show that these pesticides, while less acutely toxic, are linked to long-term endocrine disrupting effects and chronic diseases such as asthma. Now researchers have published data debunking the low persistence claims as well, showing that sediment from California streams contains pyrethroids at levels toxic to sediment dwelling organisms. The study, "Aquatic Toxicity Due to Residential Use of Pyrethroid Insecticides" was published October 19, 2005 in the online issue of *Environmental Science & Technology*. Pyrethroids are

used on a variety of crops, including cotton, fruits, and lettuce, as well as on residential lawns, in homes and for mosquito control. Promoters of pyrethroids have cited the fact that they bind with sediment as an attribute. "The presumption was that if it binds to sediment, that substance becomes unavailable to organisms and, from a toxicity standpoint, irrelevant. And we're showing that not to be a fair assumption," explains Donald Weston, adjunct professor of integrative biology at UC Berkeley and study leader. "If binding to sediment was a solution, we wouldn't be worried about DDT, we wouldn't be worried about PCBs, and we wouldn't be worried about a half dozen other organochlorine pesticides now banned." The study is a follow-up to one conducted in 2004, which focused on the presence of pyrethroids in creek sediment in agricultural areas. The findings show that a problem thought to be restricted to agricultural communities is also occurring in residential communities and causing environmental contamination.

Studies Find 1 in 5 Wells in Minnesota County Contaminated

One in five wells in Dakota County, Minnesota has tested positive for unsafe levels of pesticides and other harmful chemicals. Researchers found levels of nitrates and pesticides that exceed state safety standards for drinking water in 14 of the 68 wells tested. Forty-two of the wells tested show lower levels of the chemicals, while only 12 wells show no contamination at all. The wells tested are part of a voluntary multi-year study to track underground water quality in the area. Several pesticides are found in the water, including alachlor, atrazine, metolachlor and cyanazine. These pesticides, used on everything from food crops and cotton to turf and Christmas trees, are linked to cancer, birth defects, endocrine disruption and neurotoxicity. Dakota County Commissioner Joe Harris commented that enough wells contain chemicals that it is necessary to inform all households in the county with private wells – about 8,000 total – that their drinking water may be risky to consume. Mr. Harris said the county recommends that these residents drink bottled water, or install a reverse osmosis filtering system. The county environmental management supervisor, David Swenson, acknowledged that the county had found high cyanazine levels in one in five municipal wells in the city of Hastings. According to the *Star-Tri-*

bune, wells were shut down in the city as a result of the contamination.

Organic Lunch Now Served at Some Schools

Although fried chicken nuggets and cheeseburgers still reign supreme in most school cafeterias, a small but growing number of schools are turning to organic food as a way to improve children's health and fight obesity. In 2004, the Seattle school district adopted a policy banning junk food and encouraging organic food in school cafeterias. California school districts in Berkeley, Santa Monica, and Palo Alto also have organic food programs. Due to a program sponsored by the organic yogurt company Stonyfield Farm, schools in Rhode Island, California, Massachusetts, New York, New Hampshire and Connecticut have vending machines stocked with all-organic treats. According to the Associated Press (AP), an organic salad bar in Lincoln Elementary School in Olympia, WA has proven so popular and economical that all Olympia grade schools now have one.

"This is the beginning of the sea change," predicted Ronnie Cummins, director of the Organic Consumers Association. "Unfortunately, it's coming at the same time school districts all over the country are squeezed by a fiscal crisis." While cost is considered the biggest hurdle to getting organic food in schools, Lincoln Elementary has managed to cut its lunch costs, by two cents per meal, while offering a full organic menu. Eliminating dessert, though initially unpopular with students, covered most of the added cost of organic meals. According to the AP, the Olympia parent who sparked Lincoln's meal makeover is becoming something of a Johnny Appleseed for organic school lunches. Vanessa Ruddy, who first proposed organic menus when her son was at Lincoln elementary, has spoken to parents and school officials from around the country about the idea. "The desire is there," she said. "It's something for the whole country to follow."

Canadian Supreme Court Backs Toronto Pesticide Ban

On November 17, 2005, the Canadian Supreme Court rejected the pesticide industry's appeal of a Toronto pesticide ban bylaw, upholding the prohibition on the use of aesthetic pesticides. "It's an enormous victory," Gideon Forman, of the Canadian Association of Physicians for the Environment, told the *Toronto Star*. "We hope other cities take strength from it and pass their own bylaws." The decision means the pesticide industry has exhausted all legal avenues in its attempts to strike down the city's bylaw, which restricts the use of pesticides on lawns and gardens. It also means that starting Sept. 1, 2007, Toronto homeowners who break the bylaw will face fines. The pesticide industry, represented by CropLife Canada and the Urban Pest Management Council, had previously challenged the bylaw unsuccessfully in Ontario's Superior Court of Justice and the Ontario Court of Appeal.

Toronto's bylaw, which the Board of Health approved by a vote of 26-16 on May 22, 2003, does not allow private use of cosmetic pesticides except when used for the control of human health hazards and infestations. According to the Canadian Association of Physicians for the Environment, 70 communities across Canada have similar laws in place but municipalities often face tough battles getting them passed – the city of Ottawa failed just last month to pass a pesticide ban. In the U.S. 40 states have "preemption laws," which prevent local communities from passing such local pesticide bans on private land. While local governments once had the ability to restrict the use, sales and distribution of pesticides, pressure from the chemical industry led many states to pass preemption legislation. These laws effectively deny local residents and decision makers their democratic right to better protection when the community decides that minimum standards set by state and federal law are insufficient.



Open Letter to the Organic Community

On passage of changes to organic law and organic integrity

Eds. Note. The following letter is circulating in the organic community to set the record straight on amendments to the Organic Foods Production Act, passed by Congress in November 2005, and seeks to bridge differences as we move ahead together to strengthen the partnership between consumers, farmers and food processors that will grow the organic marketplace. At press time, over 200 organizations are signed on. If you would like to join this effort by signing on your organization, please contact Beyond Pesticides, at jfeldman@beyondpesticides.org or by calling Jay Feldman at 202-543-5450. In the coming months, USDA will be conducting rulemaking on the amendment. We will alert you to the opportunity to submit public comments.

In late October 2005, the Organic Trade Association (OTA) successfully lobbied for a significant change to the *Organic Foods Production Act* (OFPA). We, the undersigned are very disappointed in the process used to achieve this change and concerned about the outcome of this action.

OTA took this action after a U.S. Court of Appeals ruled in agreement with a lawsuit filed by Arthur Harvey, an organic blueberry grower, that the USDA organic regulations were inconsistent with the OFPA on several counts. Specifically, the court ruled that OFPA did not permit synthetic substances in processed foods that all non-organic agricultural ingredients used because of commercial availability issues must appear on the National List, and that dairy farms must feed their cows organic feed for a minimum of 12 months prior to sale of organic milk.

The following letter provides analysis of these actions and begins to identify the challenges that lay ahead for all stakeholders in the organic community.

OTA's decision to seek amendment to the OFPA was taken without consultation with OTA members (including many of us) and without consultation with other vital stakeholders in

the organic community. Amendments to the OFPA were accomplished through closed-door deliberations, through efforts funded by a small number of OTA member corporations. Republican members of the House-Senate Agriculture Appropriations Conference Committee inserted the OTA amendment language after the full conference committee had adjourned. The process allowed no input from Democratic members who had objections to the amendment and had drafted compromise language.

What the changes do, and why some object

1. Synthetics in processing: The OTA-sponsored amendment will preserve use of all synthetics now used in organic processing. Before the Harvey ruling, the "status quo" NOSB-supported position was that all ingredients and minor processing aids must be reviewed by NOSB, using established criteria, and included on the National List in order to be used "in or on" organic food.

The OTA amendment leaves the door open, however, as to which new synthetic substances can be considered and added to the National List. The amendment places no restrictions on the types of synthetics (while crop and livestock materials are now restricted to certain limited categories) and does not expressly include the criteria adopted by NOSB for reviewing these materials.

OTA also refused to incorporate a suggested change to its amendment that would have required all "substances" used in processing to appear on the National List. The OTA amendment refers to "ingredients" that must be on the National List, as opposed to the language struck from OFPA that referred to all "substances." The change is important because the term "substances" would have ensured that the category of "process-





ing aids” (materials used during processing that do not have to appear on the final label) would still have been subject to NOSB review and the National List process. The USDA has issued a policy statement that permits indirect additives and processing aids to be used in processing that do not appear on the National List by declaring that they are not “ingredients,” and OTA’s amendment reinforces this viewpoint, weakening the original OFPA.

OTA claims its intent was to require NOSB review for all synthetics used in processing, yet it refused to make this important change to guarantee this review. Although OTA argues that the basis for its amendment allowing synthetics in processing is “10 years of notice and comment rulemaking,” many organizations and members of the public never did agree or sanction the broad allowance of synthetics in food labeled “organic.” By choosing to change the law in this manner, without any public discussion or consensus building regarding the basis for allowing limited synthetics in organic food, OTA risks alienating and confusing many consumers who do not necessarily expect synthetic ingredients in products labeled “USDA organic.”

2. Commercial availability. Prior to the recent court case, certifiers required processors to justify their need for up to 5% of non-organic ingredients, based on lack of commercial availability of an organic ingredient. The Court struck down this process and ruled that all non-organic ingredients must appear on the National List of Allowed and Prohibited Substances. OTA’s amendment gives the Secretary unprecedented authority to write rules to allow emergency use of non-organic agricultural ingredients, if organic forms are not commercially available. This new approach was suggested

without any explanation or precedent and the Congressional report language provides no detail. Under the OFPA, NOSB has always had the clear authority to develop procedures to expedite review of materials needed on the National List, and authority regarding the National List. OTA claims to support the role of the NOSB, however the amendment does not require a role for NOSB or public participation in this new process.

3. Dairy transition. The OTA’s new amendment allows third year transitional feed produced on farm to be fed as organic to a herd of animals converting with the farm, avoiding a four-year transition (crops and then livestock). This provision is non-controversial, and part of the current regulation. However, it does not return to pre-Harvey “status quo” which allowed the use of up to 20% conventional feed during the first 9 months of the last year of conversion.

Some have questioned why public interest groups have raised the concern that this change will allow cows to be treated with antibiotics and fed genetically engineered feed prior to conversion. Unfortunately, the regulation struck down by the Court allowing the use of non-organic feed is the same section that requires organic management of young dairy stock after conversion. USDA could write the new regulations to eliminate this organic management requirement, and allow all dairy farms to bring in 12-month old heifers that spent their early lives in conventional management. This would allow non-organic animals as replacement stock on a continuing basis; thus allowing the use of non-organic feed and drugs for young animals.

Since May 2003, the NOSB has been on record with a position requiring organic management from last third of gestation once a herd has converted to organic production. The OTA amendment did not address this significant issue, yet an outcome of the Harvey ruling could be a permanent loophole regarding young stock. We hope that the attention and discussion focused on this issue will lead toward the strengthening, and not weakening of this requirement.

In short, these changes have not strengthened or improved the OFPA in any way: they have only retained the allowance for synthetics that previously existed in the regulation, added a potential loophole for non-organic ingredients, added ambiguity on the issue of processing aids, removed authority from the NOSB, and failed to strengthen dairy standards.

Setting the record straight, again

Despite an active attempt by public interest, consumer and retail sector groups to hold discussions and find common ground with the trade, after a few initial meetings, OTA, through its legal counsel, refused to discuss any positions other than law changes, and then refused to discuss the content of proposed

It will take a collaborative public pressure to maintain strong standards at the regulatory level and to require that all substances used in or on processed organic products be subject to NOSB review.

law changes. After OTA sent its OFPA changes to Congress, OTA refused to discuss any compromise language, including a version drafted by Senator Harkin, ranking Democrat on Senate Agriculture Committee. Finding no alternative, the public interest sector activated its membership, and Congress received over 320,000 calls and letters from consumers, farmers, and businesses opposing OTA's amendment. Those concerns were ignored by OTA and the members of Congress who carried their amendment. We find it troubling that many traditional Congressional allies for organic issues were disregarded.

On November 2, Senator Harkin spoke against the conference committee report on the Senate floor:

"Mr. President, I am also concerned about this same quiet back door process used to amend the Organic Foods Production Act. ...I urged the organic community to come together, reach a consensus on what was needed to respond to the court decision, and then come to Congress. Unfortunately, that did not completely happen, and some people were left out of the process.

Again, behind closed doors and without a single debate, the Organic Foods Production Act was amended at the behest of large food processors without the benefit of the organic community reaching a compromise. To rush provisions into the law that have not been properly vetted, that fail to close loopholes, and that do not reflect a consensus, only undermines the integrity of the National Organic Program."

Where do we go from here?

This OTA sponsored law change will require USDA to promulgate new organic regulations to bring the current organic rule into line with OTA's changes to the law. We appreciate OTA's public statements recently made in support of the NOSB process for review of all synthetic substances used in organic processing and production, and expect that it will honor this commitment by advocating for NOP regulations and policy that accomplish this goal.

It will take a collaborative public pressure to maintain strong standards at the regulatory level and to require that all substances used in or on processed organic products be subject to NOSB review. A remedy for the dairy replacement stock issue

is long overdue (as are clarifications of pasture requirements, which were not part of this amendment).

The organic movement was founded on the principle that we all are stakeholders in the organic food system, and promises that we would all have a meaningful say in defining what it means to be organic. Something fundamental has changed when a few large corporations can weaken the law over the protests of the hundreds of thousands of the very community members whose trust is most vital to the integrity of the organic label. The organic industry must do better than this, or risk losing the consumer base that has made organic a viable alternative for producers, processors, and retailers.

Our challenge now is to look forward. We, the undersigned, pledge to demand a public process and public accountability for any future changes to organic standards. We commit to continuing to reach out to all stakeholders in the organic food and farming system. In addition, we will continue to vigorously work for the consumers, farmers and companies whose shared vision in a safe and healthy farming system created and sustains the organic movement.

Respectfully yours,

Kathie & Richard Arnold, Twin Oaks Dairy LLC, Truxton NY; Harriet Behar, farmer, Gays Mills, WI;* Beyond Pesticides, Jay Feldman; Roger Blobaum, Blobaum and Associates;* Cissy Bowman, farmer, CEO of Indiana Certified Organic LLC;* Emily Brown Rosen, Organic Research Associates, Titusville NJ;* California Certified Organic Farmers (CCOF),* Vanessa Bogenholm; Carolina Farm Stewardship Association, Tony Kleese; Center For Food Safety, Joseph Mendelson; Lynn Coody, Organic Agsystems Consulting, Eugene OR;* Ecological Farming Association, Kristin Rosenow; Eden Foods, Inc., Michael J. Potter; Tina Ellor, Kennet Square, Pennsylvania; Joyce Ford, Organic Independents, Winona MN;* Steve Gilman, Ruckytucks Farm, Stillwater, NY; David Gould, Portland, OR; Joan Gussow, Piermont, NY; Elizabeth Henderson, Peacework Organic Farm, Newark, NY; Frederick Kirschenmann, Ames, Iowa; Dave Lively, Organically Grown Company;* Maine Organic Farmers and Gardeners Association, Russell Libby; Ed Maltby, Deerfield MA; Midwest Organic and Sustainable Education Services, Faye Jones; Montana Organic Association, Judy Owsowitz; National Organic Coalition, Steve Etka; New England Small Farm Institute, Judith Gillan; NOFA NY Certified Organic, LLC, Lisa Engelbert; Northeast Organic Dairy Producers Alliance (NODPA);* Northeast Organic Farming Association of New Jersey,* Karen Anderson; Northeast Organic Farming Association of New York,* Sarah Johnston; Northeast Organic Farming Association of Vermont,* Enid Wonnacott; Organic Consumers Association, Ronnie Cummins; Rural Advancement Foundation, International, Michael Sligh; Rick Segalla, Segalla Farm, Canaan CT; Eric Sideman, Greene, ME; Steve Sprinkel, organic farmer, Associate Editor, ACRES, USA; John Stoltzfus, BABlessing Farm, Whitesville NY; Tuscorora Organic Growers Cooperative, Chris Fullerton; Vermont Organic Farmers, John Cleary; Stephen Walker, Certification Program Manager (MOSA), Viroqua, WI; Western Sustainable Agriculture Working Group, Jeff Schahczenski; (as of November 18, 2005)*

* OTA member

In the Words of Arthur Harvey

The farmer who stood up for organic responds to criticism

Eds. Note. In response to criticism that has been lodged at Arthur Harvey, the Maine organic blueberry farmer and processor who sued the U.S. Department of Agriculture for its failure to lawfully implement the federal organic law, we reprint here excerpts of Mr. Harvey's "Reply" in his own words. For a full text of his comments and to read a critical account of his actions and that of the public interest community, please see www.beyondpesticides.org or contact Beyond Pesticides.

■ **The effect of the court ruling would "remove the organic label from up to 90% of current organic processed products."**

[S]uppose we re-phrase it to "up to 90% of organic products contain synthetic ingredients that have no natural substitutes." I don't think that could be true, and if it has any degree of truth, then consumers are being hoodwinked wholesale, because they are not being told what goes into their "organic" products.

In my own blueberry and apple products, four out of nine are affected. Two blueberry jams with organic sugar will probably be re-labeled "made with organic blueberries" unless the sugar manufacturers eliminate the synthetic processing aids. Two other products were formerly thickened with the synthetic form of pectin, but we have switched to using organic apple pectin and pulp. This actually costs less than the synthetic. It also expands the market for organic cider producers who used to discard their pomace.

■ **The 'made with organic ingredients' label allows "almost any non-organic agricultural ingredients, commercially available in organic form or not, to be used in up to 30% of the product."**

[Critics] might do well to read the organic regulation at 205.105: "To be sold or labeled as '100 percent organic', 'organic', or 'made with organic (specified ingredients or food group(s))', the product must be produced and handled without the use of: (a) Synthetic substances and ingredients, except as provided in 205.601 or 205.603; . . . (e) Excluded methods. . . ; (f) Ionizing radiation. . . ; and (g) Sewage sludge."

If the [USDA National Organic Program] NOP would get busy and implement this more fully, the "made with" label might deserve more respect than it currently gets from some of the captains of industry.

■ **Switching some products to the 'made with organic' label "translates into a diminished market for a bunch of those organic minor ingredients – why buy expensive organic blueberries for that 'made with' pancake mix if you don't have to?"**

Consider the pancake mix labeled "made with organic flour" at \$2 a box, competing with another brand labeled "made with organic flour and organic blueberries" at \$2.50. Or, Stonyfield raspberry yogurt labeled "made with organic milk" at 79 cents,

next to Horizon yogurt labeled "made with organic milk and organic raspberries" at 89 cents. I don't think any of these brands would even try to market the cheaper label.

■ **"Changing the rules (which were extensively publicly vetted) through a lawsuit is a decidedly undemocratic approach."**

This one takes my breath away. Do we not live in a nation of laws, passed by the Congress and protected by the courts against abuses by the executive? [D]oes anyone seriously propose that the OTA rider, which tries to rip the heart out of an act of Congress that was developed through many hearings and debates in both houses, is somehow more democratic?

■ **"This is the crux of the debate that was raging in the organic community when the [Organic Foods Production Act] OFPA was being drafted. As [the critics] argued then, and believe now more strongly than ever, the distinction between 'synthetic' (bad) and 'natural' (good) is the wrong place to hang the whole definition of what is organic."**

But that distinction is exactly what OFPA is built upon, starting with [Section] 6504: "To be sold or labeled as an organically produced agricultural product under this chapter, an agricultural product shall (1) have been produced and handled without the use of synthetic chemicals, except as otherwise provided in this chapter". . .

■ **"One accusation made is that the amendment would allow hundreds of synthetic substances, known to the cognoscenti as 'food contact substances,' to be used in organic processing. . . such as sanitizers and boiler chemicals. . . having the NOSB spend its time reviewing each of these materials, which are already scrutinized by FDA, would be pointless."**

"[F]ood contact substances" is not a term of "cognoscenti" (whoever they might be) – it is used by the Food and Drug Administration (FDA) to describe their list of chemicals allowed in processing and packaging without being mentioned on the food labels. [I]f consumers want to know about them, they can dig through the list of 300+ and try to figure out which ones might be in their food.

FDA reviewed all these chemicals, but not for consistency with organic standards. The issue is chemicals . . . which certainly violate OFPA 6510(a), which says: "shall not. . . use any packaging materials, storage containers or bins that contain synthetic fungicides, preservatives or fumigants." Or, 6510(b): "use any bag or container that had been previously in contact with any substance in such a manner as to compromise the organic quality of such product." Funny thing, though – this part of OFPA was never translated into detailed regulations.

Read more Arthur Harvey in his own words, go to www.restoreorganiclaw.org.

Pesticide Poisoning in a Normal Day

Victims tell experiences to stop practices that poison

Exposure to pesticides can happen almost anywhere. Many times people are exposed to pesticides during the most routine and seemingly harmless activities, such as playing in the park or picking up the kids from school. Pesticide poisoning is not only a risk for people who apply pesticides. The prevalent and poorly regulated use of pesticides in our society means that everyone is at risk. Beyond Pesticides urges those who are involuntarily exposed and/or poisoned by pesticides to report these incidents to state authorities, EPA, elected officials, and the local media. (See below for more information.) Beyond Pesticides works with people at the community level to stop the poisoning and promote safe solutions.

Taking a walk in Dallas, Texas

A pesticide poisoning incident occurred on a warm July, 2005 summer morning in Dallas, Texas when Cynthia Brast was taking a walk with her daughter in their neighborhood and they were involuntarily exposed to lawn chemicals. Without warning, they were sprayed with a sticky wet substance that rained down on them. The spray covered their skin and got into their eyes, nose and mouth. Immediately their skin began to sting and they noticed a bad taste in their mouths. Ms. Brast went to investigate where the spray had come from and what it was.

Across the street Ms. Brast saw a TruGreen ChemLawn truck. Upon further inspection she noticed an applicator for the company spraying something over a house and into the trees. The spray extended all the way across the street to the sidewalk where she and her daughter had been standing.

Immediately, Ms. Brast called the police. She told them an unknown chemical had been sprayed on her and her daughter, and they sent a fire/EMS unit over to them immediately. They were taken to the hospital where the doctors informed them that not much could be done due to the fact that the chemical to which they were exposed was unknown. The doctors then advised that Ms. Brast and her daughter shower and wash off the chemicals as best they could and then contact TruGreen ChemLawn to find out what the chemical was.

Ms. Brast and her daughter followed the doctor's instructions. They took special care to save their clothes in a plastic



Cynthia Brast and her daughter in Jackson, WY.

bag in case they were needed as samples for later testing. After cleaning themselves off, they contacted TruGreen ChemLawn. Ms. Brast was told that the pesticide products were Orthene and Banner Maxx, along with an unnamed oil.

Upon finding out what she had been sprayed with, Ms. Brast contacted her physician and shared the information.

Her physician spoke with poison control and after administering blood tests and various other medical examinations, told Ms. Brast that she was wheezing and gave her new asthma medication. Ms. Brast was instructed to use her inhaler if she continued to experience trouble breathing. Ms. Brast's daughter complained of a headache and soar throat after the exposure. Ms. Brast also experienced these symptoms, as well as difficulty breathing and an upset stomach.

The symptoms that Ms. Brast and her daughter exhibited are not surprising considering the pesticides they were exposed to. The active ingredient in Orthene is acephate. Exposure to acephate can cause convulsions, dizziness, sweating, labored breathing, nausea, pupillary constriction, muscle cramps, and excessive salivation. Acephate is a cholinesterase inhibitor as well as a possible carcinogen.

The other pesticide Ms. Brast was exposed to, Banner Maxx, is just as dangerous. The Material Safety Data Sheet (MSDS) states, under symptoms of acute exposure, that it "may be irritating to eyes and respiratory tract. Exposure to high va-

Beyond Pesticides urges those who are involuntarily exposed and/or poisoned by pesticides to report these incidents to state authorities, EPA, elected officials, and the local media.



Elaine Smith of West Townshead, VT.

por levels may cause headache, dizziness, numbness, nausea, incoordination, or other central nervous system effects.” The active ingredient in Banner Maxx is identified as propiconazole. Propiconazole is a reproductive and developmental toxin and a possible carcinogen.

When Ms. Brast contacted Tru-Green ChemLawn and notified them of the incident the company’s insurance paid for some related doctor bills and new clothes to replace the ones saturated with pesticides. While many

of the immediate symptoms have gone away, Ms. Brast is now experiencing joint pains, particularly in the knees.

Grocery shopping in West Townshead, Vermont

Elaine Smith of West Townshead, Vermont became an unwilling victim of pesticide poisoning in July 2005 when she went to her local supermarket to buy groceries. While she was waiting in line to pay she began to feel dizzy and her eyes, throat, nose, mouth, tongue, upper lip, and lungs began to burn. She also began to experience pain in the right side of her nose and across her right cheek.

Immediately after Ms. Smith began to experience pain, she saw a man cross in front of the open front doors of the supermarket. The man was spraying a liquid from a long hose along the side of the building. Ms. Smith asked the woman behind the checkout counter what the man outside was spraying, and the woman replied that he was spraying for bugs. When Ms. Smith told the woman she health reactions from pesticides, the woman assured her that it was safe and would not hurt her and that it was legal in Vermont.

Ms. Smith left the supermarket as quickly as possible and got into her truck to drive home. She continued to react to the pesticides once inside her truck, since her truck had been parked only a few feet from where the pesticides were being sprayed. As she drove home, Ms. Smith’s symptoms began to worsen. The burning and pain she had been feeling in the store had amplified, and she began to feel nauseous. At this point

she also began to have difficulty concentrating and became very short of breath.

When Ms. Smith arrived home she realized that, not only did her eyes burn very badly, but they had also become extremely bloodshot. She began to develop a very painful migraine headache and could smell the pesticides on her skin. Ms. Smith wanted to go to her doctor and have him examine her, however she was unable to get to his office due to the overwhelming presence of the pesticides in her car. She immediately called her doctor and after speaking with his nurse, it was agreed that she should take extra doses of her usual asthma medicine.

Over the next several days, some of her symptoms began to disappear, however some got worse. Ms. Smith’s left eye became more red and painful, and she was finally forced to go to the emergency room because of all of the pain it was causing her. The doctor at the emergency room told Ms. Smith that she had a hemorrhage in her eye, and it would resolve itself over time.

Ms. Smith was able to find out the name of the pesticide she was exposed to, as well as the active and inert ingredients. The pesticide used at the supermarket was Demand CS, manufactured by the Syngenta Corporation. The active ingredient in Demand CS is the synthetic pyrethroid Lambda-cyhalothrin. The MSDS for Demand CS lists various symptoms of exposure that are the same as those Ms. Smith experienced, including eye and skin irritation, tingling, numbness and burning of skin, headache, and nausea.

Three weeks after the poisoning, Ms. Smith continued to feel ill. In particular, her asthma became much worse than it had been before the time of exposure, and the hemorrhage in her eye was not completely healed. Currently, she has found that she is much more chemically sensitized than she was before, and she reacts severely to such things as exhaust fumes and chemicals used for printing on paper.

Editors note. *Pesticide poisoning and contamination stories like those described above must be told and documented. We urge poisoning victims to complete a Pesticide Incident Report that can be printed off our website at www.beyondpesticides.org/emergencies/pir_form.pdf, or mailed to you upon request. The incident should also be reported to the state pesticide law enforcement agency (see our website, www.beyondpesticides.org, to identify the appropriate contact in your state.) If you call to report the incident, request an investigation, and follow up with a written request and letter that documents the conversation and any agreements. Copy your letter to the EPA Administrator Stephen Johnson (Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue, N.W., Washington, DC 20460. Phone: 202-564-4700) and to your elected officials, U.S. Representatives (www.house.gov/writerep) and U.S. Senators (www.senate.gov). Reporting the incident to local media will help to identify others who have been poisoned, and inform the community of this public health and environmental threat. Ultimately, documentation and raised awareness will help curtail practices that are causing poisonings and contamination. For more assistance, contact Beyond Pesticides.*

Commentary

Taking Off the Blindfold

EPA ignores toxic exposures in risk assessment

By John Kepner and Jay Feldman

Even when risk assessment is working “properly,” increasing numbers of environmentalists and public health advocates say it is not really working. To make matters worse, the questionable numbers spit out of risk assessments are typically mismanaged by risk management decisions that accept a certain amount of harm and a high degree of uncertainty.

Risk assessment calculations under the *Federal Insecticide, Fungicide and Rodenticide Act* (FIFRA) and the *Food Quality Protection Act* (FQPA) – the federal pesticide registration and tolerance laws, respectively – evaluate harm based on false realities about daily toxic exposure and individual sensitivities. Risk management decisions under these laws assume the benefits of toxic pesticide products to society or to various sectors of users, then make a determination that the risks are “reasonable.” Even under FQPA, which has been touted for its health-based standard, there is an inherent assumption that if a pesticide meets a highly questionable “acceptable” risk threshold, it has value or benefit. This is the practice even though there are typically less or non-toxic methods or products available. Absent altogether is any analysis of whether the so-called “pest” (insect or plant) has been accurately defined. EPA does not regularly consider non-chemical alternatives (such as organic agricultural methods), nor does it evaluate the need for or the benefit provided to society (do we need to use toxic chemicals to kill clover in our yards?). The agency assumes 100 percent compliance with pesticide product labels, ignoring real world violations or accidents, which are widespread.

The interpretation of “reasonable” risk varies. EPA sometimes allows a cancer risk, for example, of one in a million (risking 280 people nationwide for cancer from exposure to a single pesticide) and other times accepts one in 10,000. Other environmental laws such as the *Clean Air Act* and *Clean Water Act*, while arguably more protective than FIFRA, also assume a certain amount of pollution is acceptable. At the same time, environmental illnesses, such as cancer and asthma, are on the rise.

While everyone is exposed on some level to pesticides, the harm to society is not spread across society equally. Pesticide exposure harms certain population groups more than others, a

fact that is not fully accounted for in the registration and reregistration of pesticides. The risks inherent in the mathematical risk calculations fail to take into account the numerous circumstances and realities that make some population groups more vulnerable to daily pesticide exposures than others – including children, farmworkers and their families and communities, the elderly, those with compromised immune systems and the chemically sensitive. Those living in poverty are the hardest hit with poor nutrition and weakened respiratory and immune systems, inadequate health care, lack of information on

pesticide hazards and non-toxic alternatives to pesticides, and contaminated air and water from chemical manufacturing plants and waste sites located in their communities. People of color are disproportionately represented in these impoverished areas.

And remember, all these inherent deficiencies arise when risk assessment is working “properly.”

So what happens when risk assessments are actually manipulated, altering the risk management decisions and skewing calculations to meet acceptable risk standards?

What happens when EPA picks and chooses between which environmental laws it wants to enforce, or trumps stronger laws with weaker ones? What follows are just three examples of EPA's flawed assumptions that lead to hundreds of thousands of people being unfairly, unacceptably, and unnecessarily poisoned by toxic pesticides.

Pentachlorophenol: The missing risk

On November 30, 2004, thousands of pentachlorophenol (PCP)-treated wooden utility poles mysteriously disappeared from backyards, schoolyards, parks and street corners around the country. Hundreds of poles previously used by neighborhood kids as “bases” for tag, a place to rest one's forehead and count for hide and seek, and backstops for wiffleball were gone forever. Actually, they didn't really go anywhere. The risk scenario simply disappeared from EPA's PCP risk assessment without an adequate explanation!

**The questionable numbers spit out
of risk assessments are typically
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degree of uncertainty.**

In its preliminary analysis of pentachlorophenol in 1999, EPA estimated that children's residential post-application exposure resulting from widespread use of PCP-treated utility poles poses an unacceptable cancer risk (2.2 cancer cases in 10,000). This was more than 200 times above EPA's acceptable threshold. However, instead of addressing the need to protect children in 2004, this risk miraculously disappeared with a simple unsubstantiated statement that this exposure does not occur, a claim provided to EPA by the Penta Council, a pro-chemical industry lobby. EPA states, "Where utility poles are installed on home/school or other residential sites, child contact via the dermal or oral routes is not anticipated since play activities with or around these pole structures would not normally occur." Poof, it's gone!

EPA does not regularly consider non-chemical alternatives (such as organic agricultural methods), nor does it evaluate the need for or the benefit provided to society (do we need to use toxic chemicals to kill clover in our yards?).

While it is important to protect public health, it is inappropriate to simply ignore pesticide exposure when a product is used for public health threats. All exposures are significant to a cumulative risk assessment, regardless of the purpose of the application. In theory, other OP uses may have to be restricted to make way for public health uses. It cannot be assumed that *any* pesticide broadcast throughout communities presents zero risk. In its *Revised OP Cumulative Risk Assessment*, EPA ignores widespread public exposures for: naled (black fly control), phosmet (fire ant mound treatment), chlorpyrifos (mosquito, black fly and fire ant mound treatment), and temephos (all registered uses).

While the agency considered the impacts of four OPs in the golf course section of its risk assessment, it chose to ignore chlorpyrifos (Dursban) because *most* residential uses were phased out in 2000...but not golf course uses! EPA explains that use on golf courses is allowed to continue because, "children will not be exposed." Children have been determined to be at high risk to chlorpyrifos and other OPs. By the way, the National Golf Foundation reported that in 2000 children, ages 12-17, played 33.8 million rounds of golf, with a 35% annual increase in junior golfers in recent years.

CWA vs. FIFRA: Pesticide registrations trump clean water

Imagine being pulled over by a police officer for driving at a normal speed in a school zone during school hours, disobeying a local crossing guard. You argue that because you were driving safely under the normal speed limit, you should not have to obey a local decision that you find arbitrary. This may seem ridiculous, but the pesticide industry and EPA make a similar argument regarding FIFRA and the *Clean Water Act* (CWA).

Through rulemaking, EPA decided that registered pesticides "applied" to waters of the U.S. do not require the CWA's *National Pollutant Discharge Elimination System* (NPDES) permits. The pesticide industry argues that because pesticides, especially those used to control mosquitoes, are evaluated through the FIFRA risk assessment process, they should not be subject to the CWA as well. Environmentalists maintain that FIFRA and CWA have fundamental differences and distinct purposes, that general FIFRA label requirements do not automatically satisfy the requirements of CWA, which are intended to address local conditions and situations relative to use patterns, deposition of pesticides into water, protection of water sources and ultimately public health.

Cumulative risk assessment... almost

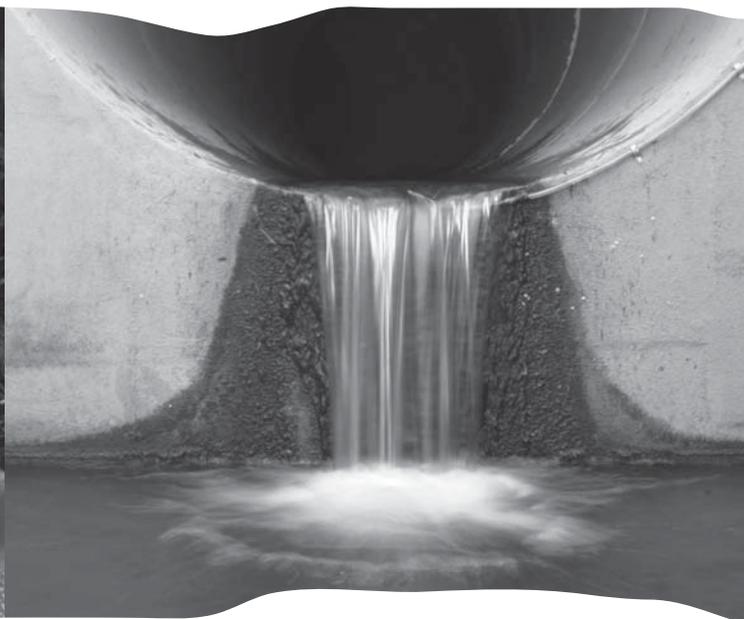
Under FQPA, EPA is required to evaluate the cumulative effects of pesticides with a common mechanism of exposure, such as organophosphate (OP) insecticides. All OPs inhibit the body's production of the enzyme cholinesterase in the same way. When EPA completed the *Revised Organophosphate Cumulative Risk Assessment*, environmentalists saw this as a positive step towards this goal. Unfortunately, the report is sloppy, excluding several pesticide uses and specific vulnerable populations.

EPA excludes public health uses in its revised assessment.

The argument for precaution

Whether or not our system of pesticide regulation is broken, and it clearly is, many believe that risk assessment will never adequately protect human health and the environment. The current system does not consider the necessity of the product. If a pesticide manufacturer wants to make an herbicide to kill clover, there is no "use screen" to weigh the need for the product before the risks are assessed. While some may accept a one in 1,000,000 (sometimes greater) cancer risk for a public health pesticide, the public might have a harder time accepting a similar risk from an aesthetic lawn pesticide. But the system has no mechanism to screen out unnecessary use. The "benefit" side of the coin is largely left up to the marketplace.

There is a growing movement for safety from highly toxic chemicals based on the common sense principle of precaution. In registering pesticides, the *Precautionary Principle* flips the burden of proof to the chemical industry to prove safety and address uncertainties before the product is allowed on the market. Even then, the principle requires a showing of need and a finding that less or non-toxic approaches are not acceptable. Polls show that many Americans think such an approach is already in use in the U.S. Of course, it is not. Under our current regulatory system, by the time we have undeniable scientific proof of harm - the damage is often too severe to correct. By using the *Precautionary Principle*, advocates seek to prevent chemical exposure and utilize known non-harmful, or least-toxic alternative techniques and products.



Threatened Waters

Turning the tide on pesticide contamination

By Aviva Glaser

Eds. Note. With mounting data documenting the increasing problem of water contamination and an inadequate federal regulatory response, it is urgent that policy makers (especially at the local level) and community members refocus on the threat that pesticides pose to the nation's waterways and community health.

This literature and regulatory review identifies serious threats from pesticides that cannot be ignored:

- Frogs exhibit hermaphroditism when exposed to below below-legal allowable levels of the herbicide atrazine in waterways;
- Human health effects, including low birth weights, increased numbers of breast cancer cases, and low sperm counts are linked to herbicide-contaminated water;
- Dozens of pesticides and their degradation products contaminate waterways and escape regulatory oversight;
- Runoff from urban lawn pesticide use contaminates local watersheds and stresses municipal water treatment plants; and,
- Children are not adequately protected by federal allowances of pesticides in water.

This review brings together the current state of knowledge, while documenting the critical deficiencies in understanding the implications for human health and the environment. The data shows that concern is warranted, and that an urgent response is

demanding. With a crisis in safety looming, steps can and must be taken to curtail pesticide uses and adopt alternative practices and products that do not end up in the nation's waterways.

Water is the most basic building block of life. Clean water is essential for human health, wildlife protection, and a balanced environment. Yet, water is being polluted at unprecedented rates, with chemicals, nutrients metals, pesticides, and other contaminants. The U.S. Environmental Protection Agency (EPA) states that, "By their very nature, most pesticides create some risk of harm to humans, animals, or the environment because they are designed to kill or otherwise adversely affect living organisms." Studies of major rivers and streams document that 96% of all fish, 100% of all surface water samples and 33% of major aquifers contain one or more pesticides at detectable levels.

How do pesticides get into water?

Around one billion pounds of pesticides are used each year in the U.S. alone. When pesticides are applied to fields, gardens, parks, and other places, a percentage of the chemicals end up as runoff. This runoff moves in streams, rivers, and lakes. Similarly, when pesticides are applied to lawns in urban and suburban areas, rain washes some of the pesticides into street gutters, where the pesticide-contaminated water goes through storm drains and pipes and eventually flows into nearby creeks and rivers. Some of the pesticides also end up in groundwater systems by leaching down through the soil. Small amounts also volatilize into

the atmosphere, and then later fall back to land as precipitation. As a result of all these pathways, pesticides are widely found in rivers, streams, lakes, and even in drinking water.

Pesticide contamination of water

Results of the United States Geological Survey's (USGS) National Water-Quality Assessment (NAWQA) studies show that pesticides are widespread in streams and groundwater sampled throughout the country. USGS found that 90% of water and fish samples from all streams sampled in the U.S. contain at least one pesticide. Not surprisingly, USGS also found that the most heavily used pesticides are the ones found most often in streams and groundwater. The top 15 pesticides found in water are among those with the highest current usage today.

The amount of pesticides in water varies both geographically and seasonally, based on land use and pesticide use patterns. Pesticide concentrations also vary yearly, based on variations in rainfall, and seasonally, based on agricultural practices. A 1991 study of watersheds in the cornbelt region found that concentrations of herbicides in May and June, the planting period, were 10 times higher than levels before planting (March and April) and after harvest (October and November).

Surface water

Surface water, which is water that sits above the surface of the earth, includes lakes, rivers, streams, ponds, and wetlands. Surface water supplies drinking water to around 47% of the U.S. population. Low levels of pesticides have been widespread in the nation's surface waters for several decades. In a large sampling of streams throughout the country, USGS found 46 pesticides and pesticide degradation products in one or more samples. In the Midwest especially, seasonal variations account for strong differences in amount of pesticide residues in surface water—in the summer, pesticides have been detected in concentrations above allowable levels set by EPA.

A number of studies show that pesticides applied to lawns and gardens contaminate local streams. In a King County, Washington study, USGS compared types of pesticides found in urban streams during rainstorms (times of high runoff) to sales data from nearby home and garden stores. The three most frequently purchased pesticides—diazinon, 2,4-D, and MCPP—were detected in water samples from all study sites. USGS also found that four of the five pesticides that exceeded recommended maximum concentrations were purchased by residents and applied in homes and gardens. A recent Canadian study reveals that the most frequently detected pesticides in Toronto streams are also diazinon, 2,4-D, and MCPP, prompting the authors to conclude, "... Stormwater drainage systems may be conveying nutrients and pesticides used on lawns in urban areas to the Don River and Humber River watersheds and ultimately, into Lake Ontario."

Groundwater

Over 50% of the U.S. population draws its drinking water supply from groundwater, which includes sources below the earth's surface, including springs, wells, and aquifers. In general, groundwater has a lower incidence of pesticide con-

tamination than streams because the water gets filtered slowly through soil and rock, allowing for degradation and sorption of the chemicals out of the water and into soil. However, once groundwater has been contaminated, it takes many years or even decades to recover, while streams and shallow water sources can recover much more rapidly. Herbicides are found more often in groundwater than insecticides, but insecticides in groundwater exceed drinking water standards more often than herbicides. A 1989 study found residues of 39 pesticides and their degradation products in the groundwater of 34 states and Canadian provinces. The pesticides were mainly herbicides used in agriculture and insecticides and nematicides used in soil treatments.

Wells

Privately or publicly owned wells draw their water from groundwater sources. USGS found that around 50% of well samples contain one or more pesticides. Those wells that tap shallow groundwater beneath agricultural and urban areas have the highest detection frequencies of pesticides. A study in the mid-1980s of well water by Monsanto, a chemical manufacturer, found the chemical alachlor in wells affecting 100,000 people in the sample area, some of whom were exposed to levels above maximum contaminant levels set by the EPA. It also found that 12.95% of the wells sampled contained detectable residues of herbicides. The herbicide atrazine was found in the highest percentage of wells and in the highest amounts, often over the EPA allowable level. A 1990 EPA survey found that over 10% of community water system wells and almost 5% of rural domestic wells contain more than one pesticide.

Human exposure through water

More water is consumed per kilogram of body weight than any other item in the diet. Drinking water comes from a variety of water sources, including surface water and groundwater, as well as public water and private well systems. There are also vast geographic and seasonal variations in quality of drinking water and amount of pesticide residues. Because of these factors and a limited amount of available information, risk estimates on exposure to pesticides from water intake and the health effects of that exposure are currently unavailable. Despite unknown information about exposure and hazards, the National Academy of Sciences (NAS), in its 1993 review *Pesticides in the Diets of Infants and Children*, noted that since pesticide residues in water generally tend to be low, the contribution in ingested food prepared by using water is expected to be low, except in areas where the water is contaminated at above-average levels. A number of pesticides have been found in drinking water sources at concentrations above EPA limits and of potential concern to human health. In that same report, NAS recommended that pesticide exposure through drinking water be evaluated along with other dietary exposures to determine exposure risks.

According to USGS, insecticides in urban streams are a concern for downstream water suppliers and possibly for recreational users. Similarly, the high levels of herbicides in



water in agricultural areas are of concern to residents drinking the contaminated water, and have already caused health problems for some communities. For example, in Kentucky, researchers discovered that in counties where drinking water is contaminated with triazine herbicides, such as atrazine, there are increased numbers of breast cancer cases. In southern Iowa, researchers found that the number of babies with low birth weights is linked to herbicide-contaminated drinking water. Additionally, a study in Missouri found that men in rural areas have lower sperm counts and quality than men in urban areas. The men with lower sperm counts and quality have higher concentrations of pesticide metabolites in their urine, and the researchers believe that "...it is likely that men are ingesting these chemicals through their drinking water."

Environmental problems

In addition to threatening human health, the widespread contamination of the nation's waterways with pesticides has pervasive environmental effects, some of which are only beginning to be understood. The following are a sampling of some of the documented detrimental effects that pesticides are having on aquatic ecosystems.

Aquatic Microorganisms: Herbicides have been shown to be especially toxic to certain aquatic microorganisms, disrupting the photosynthesis process. Microorganisms are very important in aquatic ecosystems, as they are primary producers, they cycle nutrients, and aid in decomposition. By negatively affecting microorganisms, pesticides in aquatic systems may have detrimental effects on higher trophic levels and disrupt the balance and the ecosystem.

Pyrethroids and Stream Sediments: A recent study of pesticides in bodies of water in the agriculture-dominated Central Valley in California found high levels of synthetic pyrethroids in stream sediments—levels high enough that they are toxic to freshwater bottom dwellers in almost 50% of the

sampled locations. A follow-up study found that high levels of pyrethroids are also in stream sediments in urban areas in California, resulting from residential use of pyrethroids. In the residential study, pyrethroids are found in every sediment sample. In half of the samples, they caused total or near-total mortality to *Hyalella azteca*, a small bottom-dwelling crustacean that is generally regarded a sensitive "warning" species.

Fish and Endocrine Disruption: A study of sex hormones in carp indicates that pesticides may be affecting the ratio of estrogen to testosterone in both male and female fish. At stream sites with the highest concentrations of pesticides, the hormone ratio in the carp is significantly lower, indicating potential abnormalities in the endocrine system. The authors of the study conclude, "Reconnaissance assessment of sex steroid hormones in carp from United States streams indicates that fish in some streams within all regions studied may be experiencing some degree of endocrine disruption." According to the U.S. Fish and Wildlife Service (FWS), "Endocrine disruption has the potential to compromise proper development in organisms, leading to reproductive, behavioral, immune system, and neurological problems, as well as the development of cancer. Effects often do not show up until later in life."

Decline of Amphibians: In an alarming trend worldwide, frog and salamander numbers are declining at a rapid pace, and many species are becoming endangered or going extinct. In the U.S. alone, there are currently 21 amphibian species classified as endangered or threatened and 11 species waiting to be listed. Although the causes of the decline are not fully understood, pesticides are believed to play a role in the decline.

One hypothesis for how pesticides are causing this decline in amphibian populations is the possibility that endocrine disruptors have altered reproductive and endocrine systems. Studies by researchers at UC Berkeley on atrazine, the most commonly used herbicide in the U.S., show that exposure to atrazine at levels found in the environment, even at levels far below EPA's drinking water limits, demasculinizes tadpoles

and turns developing frogs into hermaphrodites – having both male and female sexual characteristics.

Another hypothesis is that pesticides reduce the food supply of the amphibians. A 2005 study on pesticides and salamanders finds that the addition of carbaryl, a commonly used insecticide, to water caused reduced survival and affected metamorphosis in two species of salamanders. The effect is likely due to pesticide-induced reductions of food resources such as zooplankton. In the study, zooplankton abundance decreased by up to 97% following carbaryl application.

Fish Kills: Sizeable fish kills have resulted from pesticide use, and have often made sensational news headlines, including the 1991 death of over one million fish in Louisiana after aerial spraying of the insecticide azinphos-methyl (Guthion) on sugarcane fields. In 1995, toxic concentrations of endosulfan and methyl parathion along a 16-mile stretch of the Tennessee River in Alabama resulted in 240,000 fish killed. Most recently, 100,000 to 300,000 black crappie fish died suddenly in Minnesota. Water samples show the presence of permethrin, the pesticide that had been used two days prior for mosquito control.

Failures in the regulatory system

EPA has developed water quality standards and guidelines for pesticides that have been the subject of much criticism. Under the *Safe Drinking Water Act*, EPA establishes maximum contaminant levels (MCLs) for water pollutants. MCLs are the maximum permissible level of a contaminant in water delivered to users of a public water system. In addition to MCLs, EPA also establishes Secondary Maximum Contaminant Levels (SMCLs), Risk-Specific Doses (RSD), and Lifetime Health Advisories (HA-L), all of which are other guidelines for how much of a contaminant is acceptable in water, based on health and environmental data. However, there are many uncertainties and complexities. The following failures in the regulatory system threaten both public health and environmental integrity:

- EPA has not established drinking water standards for all the pesticides found in water. EPA has established MCLs for only 24 pesticides, 10 of which are no longer approved for use. Of 76 pesticides analyzed in NAWQA water samples, human-health criteria (MCLs, RSDs, or HA-Ls) are available for 42 pesticides and four degradation products. Similarly, in USGS's study of pesticides in shallow groundwater, only 25 of the 46 pesticides detected had water quality standards established for them.
- Mixtures, synergisms, and breakdown products are not considered or being studied. Yet, pesticides in water usually occur in mixtures of several compounds rather than individually. More than 50% of all stream samples reviewed by the USGS contained five or more pesticides, and nearly 25% of all groundwater samples contained two or more pesticides. Although unregulated, some studies indicate that combinations of pesticides may exhibit additive or in some cases, synergistic effects, making the combined effect worse than the effect of a single compound.

- Certain effects, such as endocrine disruption and responses of sensitive individuals, have not been considered in the guidelines.
- The effects of seasonally high concentrations have not been evaluated.
- Breakdown products, which are the same as or more toxic than parent compounds, are not regularly factored into safety reviews. Breakdown products are compounds that result from pesticides undergoing changes while in the environment.
- Recent research suggests that some pesticides may cause health and environmental effects at levels considered safe by current standards. For example, when exposed to atrazine at concentrations considered acceptable by EPA, hamster ovary cells exhibit chromosome damage, including at levels commonly found in public water supplies. Additionally, tadpoles exposed to below-allowable levels of atrazine develop sexual abnormalities. EPA testing has failed to detect the significance of sublethal doses and has downplayed and in some cases dismissed studies that look at these impacts.

Conclusion and recommendations

There are a plethora of studies documenting known contamination of waterways with hazardous pesticides linked to serious immediate and chronic health and environmental effects. At the same time, a review of the current situation related to water contamination finds that there is a regulatory failure to account for the *full* environmental and health impact of pesticide use patterns. Finally, as government focuses on mitigation measures that allow uses based on false assumptions, no real effort is being put into curtailing pesticide use and assisting with the adoption of practices that do not pollute.

Key to effecting change in response to water contamination are community-based programs that replace toxic pesticides with alternative non-chemical practices and products.

Communities should adopt no-pesticide policies and launch community education programs. Communities should pass policies and adopt practices that stop toxic pesticide use and outline approaches to land management that are safe for the environment and public health. While government regulatory agencies tinker with acceptable levels of pesticides in water, based on inadequate information, communities can lead the nation in rejecting the ongoing contamination and support environmental and public health protection. Institutions in the community, such as schools, hospitals, and office parks, should adopt similar policies and practices. In addition, local communities should develop outreach and educate community members on the adoption of practices that eliminate toxic chemical use on their property.

For a fully cited version of this article, visit www.beyondpesticides.org/documents/water.pdf or call 202-543-5450. This spring, look for the publication of an in-depth brochure on water and pesticides.

Spreading the Word, Not Chemicals

Door-hanger promotes safe solutions for lawn care

It's not always easy to talk to people about pesticides. It can be especially awkward when the time you think of it most is right at the moment that your neighbor has a sprayer in his hand or a ChemLawn truck in the driveway. The new *Safe Lawn Door-Hanger* can help you spread the word about lawn pesticides and alternatives with minimal confrontation. Use it as an icebreaker for conversation or just hang it on the front door or other visible spot of the homes you know or suspect use pesticides. Let us, or your participating local environmental group, do the rest!

The door-hanger can be the first step to building awareness about the hazards of pesticides in your neighborhood, or a follow-up if you have already been educating your neighbors. Talking with neighbors about natural lawn care or pesticide problems can also be effective.

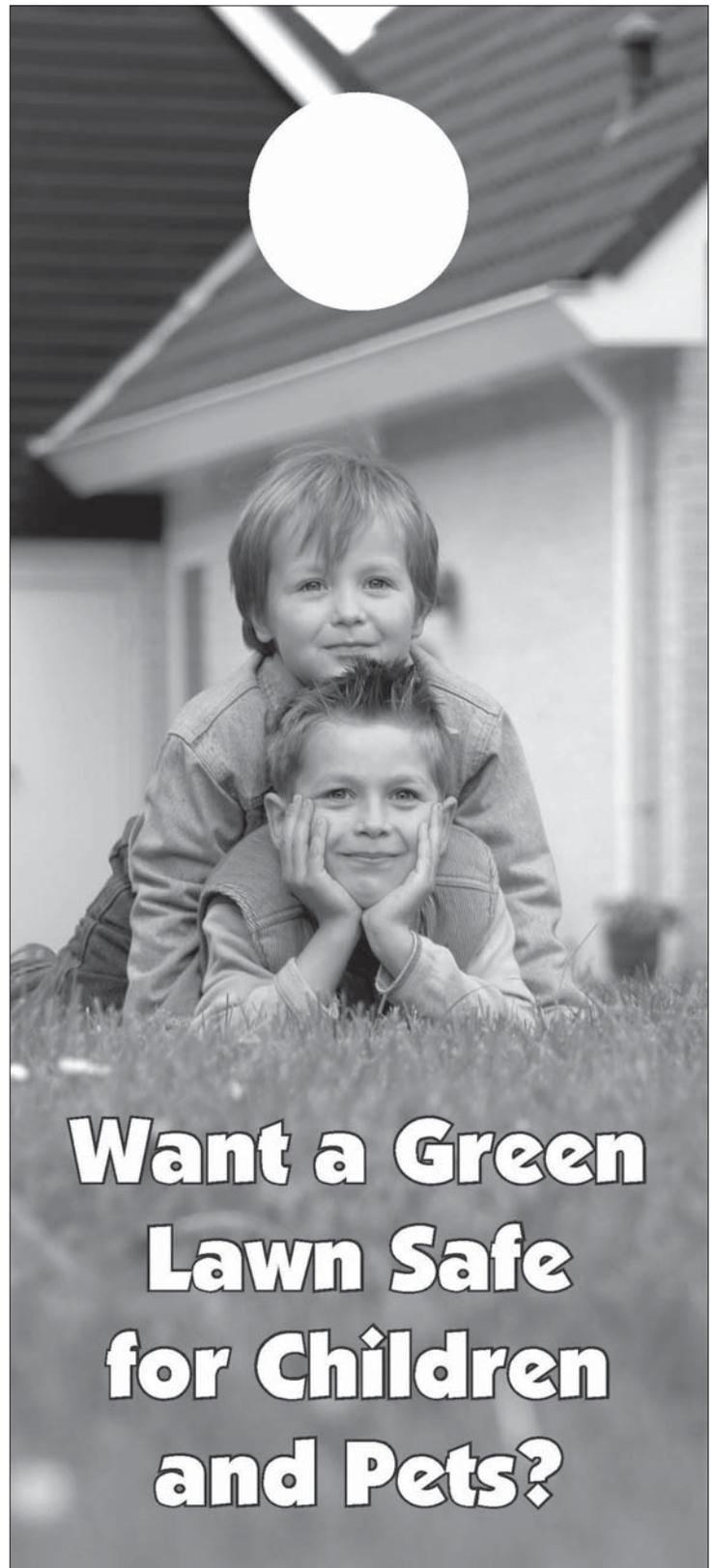
Spread the word

It is safe to assume that most people do not like the idea behind those little yellow flags on lawns indicating that toxic chemicals have been applied. But many shrug with a sense of powerlessness, thinking that it is what they have to do if they want a lush, green lawn. It is precisely this misperception that the chemical industry has been promoting since the 1950's.

What are some reasons people do not make the switch to natural, chemical-free lawn care? The most obvious reason is that most people do not realize the real dangers pesticides pose to children, animals and the environment. Additionally, people do not know that there are viable alternatives and that a green, healthy lawn can be achieved without pesticides.

People place a tremendous amount of faith in the regulatory system. They figure that if pesticides are sold in local stores and registered by the EPA, then they must be safe. Consumer surveys in the U.S. and Canada show that the more people know about the harmful effects of pesticides the less likely they are to use them. But hazard information is not enough. Surveys also reveal that a major factor influencing the purchase of natural products is how convinced a person is that the product actually works.

These surveys affirm that to be most effective in communicating about natural lawn care, the objective should be to: (1) Educate about the health and environmental impacts of pesticides and the limitations of EPA in protecting children, pets or the general public; (2) Offer preventive techniques or natural products and provide contacts where one can get more information; and, (3) Encourage people to believe that their efforts can indeed make a difference.



**Want a Green
Lawn Safe
for Children
and Pets?**

Most people do not realize the real dangers pesticides pose to children, animals and the environment. Additionally, people do not know that there are viable alternatives...

You Don't Need to Use Toxic Lawn Chemicals To Have a Safe and Healthy Green Lawn

It's never too late to have a naturally green lawn. Spring, Summer or Fall, there are simple steps you can take to prevent weeds, nurture soil, and never use dangerous lawn pesticides. It's worth it!

For a FREE packet on Child-Safe Lawn Care call 202-543-540 or visit www.pesticidefreelawns.org

Scientific Studies Show Lawn Pesticides Can:

- ⇒ Increase the risks of cancer and asthma in children.
- ⇒ Poison dogs and increase their risk of cancer.
- ⇒ Kill fish and pollute drinking water.
- ⇒ Be tracked indoors and contaminate homes.

Some helpful tips on talking about lawn pesticides include:

- **Emphasize the human health hazards** such as cancer, asthma, developmental disorders and other problems, particularly to children, the unborn, the elderly and the ill.
- **Stress cost-savings** of employing a few simple prevention techniques coupled with natural remedies that can replace the need for toxic pesticides.
- **Use reasonable language** with an even tone of voice that sounds more informative and solution-oriented than demanding, trying not to put the person on the defensive.
- **Focus your energy** toward those most inclined to show interest, namely women, particularly those with children or pets, and residents that drive hybrid cars, recycle, or exhibit other environmental concerns.
- **Be patient but persistent** with neighbors, as some people need several different types of prompting before they actually begin to change their behavior.

Counter Misinformation

Dispelling the myth that pesticides are safe is not done in a vacuum. The chemical industry is stepping up its campaign with misleading information. “Greenwashing,” the act of giving a positive public image to environmentally unsound practices, is more rampant than ever in the chemical lawn industry.

The latest greenwashing campaign of the industry's front group, Project Evergreen, claims “extremists” are trying to take away people's lawns and uses the heart-tugging slogan, “It's more than a landscape – It's a lifescape.” The group even goes as far as saying that lawns treated with pesticides and chemical fertilizers actually make rivers and streams *healthier*. Another popular ad features a photo of two young children sitting on a manicured lawn next to a book entitled “Because Green Matters.” The ad asks, “Who's telling your story?” Free brochures containing this type of propaganda are given to landscapers and may be available soon in most stores where pesticides are sold.

In keeping with its deceptive nature, the “green” industry, as the chemical lawn care industry calls itself, rarely uses the word *pesticides* in its advertising, but words like “green” and “environmental benefits” are plenty.

A similar version of the Safe Lawn Door-Hanger in full color will be available soon. Contact Beyond Pesticides, info@beyondpesticides.org or 202-543-5450, for copies.

2,4-D Escapes Federal Axe...For Now

Two states and Canada pursue restrictions

By Shawnee Hoover

In June 2005, EPA reregistered 2,4-D (2,4-Dichlorophenoxyacetic acid) amid much controversy. Public interest groups argue that EPA should increase the protection of toddlers, designate 2,4-D as a 'possible' carcinogen, and close the gaps of missing information. In the end, EPA reregistered 2,4-D much as the chemical industry, led by Dow Chemical Company, urged. Still missing is data to clarify the chemical's potential impact on the developing brain and nervous system, the endocrine and immune systems, and risks posed by inhalation.

The infamous herbicide 2,4-D, first manufactured in 1947, is one of the most widely used toxic pesticides in the world. Residential use of 2,4-D on lawns, which accounts for 15 to 18 percent of all use in the U.S., is 8-11 million pounds per year – enough to fill some 23,000 18-wheel tanker trucks.

2,4-D gained notoriety as one-half of the formulation of Agent Orange – the pesticide used to defoliate jungles during the Vietnam War and linked to subsequent cases of leukemia, reproductive problems and other health effects. Some chemical lawn companies removed 2,4-D from their arsenal in the 1990's after epidemiological studies by the National Cancer Institute linked 2,4-D to non-Hodgkin's lymphoma.

In 1988, manufacturers of 2,4-D, now just Dow Chemical and a few others, formed the 2,4-D Industry Task Force in response to Congress requirement that old chemicals be reregistered to up-to-date standards. Since then, the Task Force has spent over \$34 million on research and lobbyists to convince the world that 2,4-D is harmless.

The EPA decision

In its 2005 decision, EPA did reduce the *allowed* homeowner application rate by 25 percent, from 2.0 lbs to 1.5 lbs. Even with the reduction however, toddlers are still precariously balanced on EPA's hypothetical line of reasonable risk.



EPA also left 2,4-D's cancer classification as 'nonclassifiable,' or 'Class D,' and sidestepped 2,4-D's contamination with dioxin – a known carcinogen. The 'Class D' descriptor is used when data are judged inadequate or conflicting.

At the urging of public interest groups, EPA finally reviewed scores of independent, peer-reviewed

cancer studies, but was unmoved since none of them "definitively linked" 2,4-D exposure to cancer. Science rarely delivers a definitive link, and regulatory decisions are expected to be based on the weight of evidence.

Though the EPA reregistration of 2,4-D is a victory for the 2,4-D Task Force, controversy still surrounds the herbicide. Two states and a large part of Canada are taking their own measures in response to 2,4-D's potential to cause developmental effects in fetuses, infants and children. Such effects could result in neurological damage, birth defects, immune system damage, or psychological or behavioral deficits.

State and international actions

- The California Environmental Protection Agency (CalEPA) has stated its intention to list 2,4-D as a reproductive/developmental toxicant on its list of chemicals known to cause cancer or reproductive toxicity. The list is influential and used by other states and countries to better interpret chemical toxicity. CalEPA cites the same developmental studies that the federal EPA reviewed, but concludes that more is needed to protect infants and children. The Task Force is wrangling with the agency, but CalEPA is expected to proceed with the listing.
- In Canada, over 70 municipalities, the majority of which are in Quebec, have banned the aesthetic use of toxic lawn pesticides. The provincial government of Quebec, with a population of 7.5 million people, has proposed to ban both the use and the sale of 20 pesticides in 212 pesticide products. On the chopping block is 2,4-D. Reportedly, the Task Force has descended upon Quebec with a vengeance. Public officials will probably withstand the pressure and proceed, particularly if CalEPA moves forward with its listing of 2,4-D as a developmental toxicant.
- The Minnesota Department of Health (MDH) is proposing to increase the protection of infants and children from 2,4-D and 85 other chemicals in drinking water. MDH's changes would lower the maximum contaminant level (MCL) of 2,4-D in drinking water from EPA's 70 parts per billion (ppb) to 7 ppb. The primary justification for the reduction is that the current MCL is based on the daily water intake of an average adult and not that of an infant, which intakes up to six times more than an adult. The 2,4-D Task Force argues that any deviation from EPA methodology is unjustified.

Your letter of support to the states and Canada can help the officials stand up to the 2,4-D Task Force. Contact Beyond Pesticides for more information.

Polluted Promises

Environmental Racism and the Search for Justice in a Southern Town

Melissa Checker (*New York, NY, New York University Press, 2005, 280pp, \$22.00 paperback at www.nyupress.org*).

Melissa Checker, Ph.D. uses ethnographic research to tell the story of the tenacious activist efforts of an African American neighborhood in Augusta, Georgia, known as the Hyde Park/Aragon Park neighborhood. This is a story about the effectiveness of a persistent long-term campaign for environmental justice. At a book reading in Washington, DC, Dr. Checker talked about the community she studied and writes about, which is subject to flooding and evokes images of the flooded 9th Ward in New Orleans. When the area floods, residents use canoes to move through toxic waters. The community that Dr. Checker studied has historic roots that reach back to sharecropping and racial segregation. As a result, this community, as with many others impacted by segregation, is confronted with the ongoing environmental injustice associated with hazardous waste sites and the siting of toxic chemical plants.

Hyde Park is a community that at one time was surrounded by nine polluting industries, which left widespread environmental degradation. The author used a participatory research methodology in her work. She spent 15 months in the community volunteering with the Hyde and Aragon Park Improvement Committee (HAPIC), which organized to combat pollution emitted by ITT-owned Southern Wood Piedmont, which poured PCBs into the Rocky Creek. The book documents a range of tactics used, from law suits to the establishment of a computer center set up to identify and track the activities of polluters. The computer center helped



to create a database of other polluters, such as Thermal Ceramics and Goldberg Brothers scrap metal yard, whose drums of mercury-contaminated debris are pictured in the book. After much struggle, the scrap yard is cleaned up, leveled, and cleaned

out. Dr. Checker concludes, “[P]rogress toward social change might be halting or slow, or sometimes might even take a few steps backward, but there is progress if you look for it.” Dr. Checker is donating the entire proceeds of her book to HAPIC.

Cancer-Gate

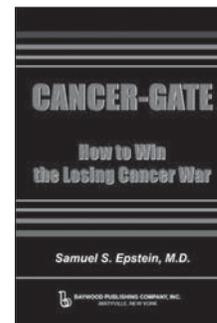
How to Win the Losing Cancer War

Samuel S. Epstein, M.D. (*Amityville, New York, Baywood Publishing Company, Inc., 2005, 396pp, \$24.95 paperback at www.baywood.com*).

The latest book by Samuel Epstein, M.D. provides readers with a searing indictment of how the National Cancer Institute (NCI) and American Cancer Society (ACS) are actually losing the war against cancer launched over 30 years ago by President Nixon. Dr. Epstein alerts readers to how the hand-in-glove generals of the federal National Cancer Institute (NCI) and the private “nonprofit” American Cancer Society (ACS) have betrayed the public interest. This very informative and insightful work has received endorsements by over 100 leading independent scientific experts in cancer prevention and public health, which includes past directors of federal research and regulatory agencies, as well as citizen action groups.

Dr. Epstein makes the case that, despite decades of false assurances, we are actually losing what could be a winnable war against cancer. Cancer has become the “disease of mass destruction,” he says. This book illustrates how institutions such as NCI and ACS have spent tens of billions of taxpayer and charitable dollars to largely promote ineffective drugs for a terminal disease, all the while ignoring strategies available for prevention of cancer that go beyond anti-smoking efforts. The act of ignoring viable alternative strategies has resulted in an escalation of cancer rates to epidemic proportions. Dr. Epstein argues that if the alternative strategies were used it would cost less than cancer treatment. Currently, cancer strikes nearly one in every two men, and more than one in every three women, which translates into 50 percent more cancer in men and 20 percent more in woman over the span of one generation. Since 1971, NCI’s budget has increased 30-fold, from \$150 million to \$4.6 billion. Annual revenues of ACS have now reached \$800 million.

Dr. Epstein outlines a wide range of reforms in the book that could generate a savings of hundreds of thousands if not millions of lives. The strategies outlined on how to win the war include: reforming the NCI and ACS; true right-to-know as required by the 1971 *National Cancer Act*; a wake up call to Congress by getting members to stop shirking their oversight responsibility of the cancer establishment. This book and Dr. Epstein’s earlier books on the subject, including *The Politics of Cancer Revisited* (East Ridge Press, 1998), are must reads, especially for activists in the war against cancer.



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- Safety at Home: A Guide to the Hazards of Lawn and Garden Pesticides and Safer Ways to Manage Pests*. Learn more about: the toxicity of common pesticides; non-toxic lawn care and why current laws offer inadequate protection. \$11.00
- Voices for Pesticide Reform: The Case for Safe Practices and Sound Policy*. A study documenting stories of tragic pesticide poisoning and contamination, and successfully used alternatives that avoid toxic chemicals. \$20.00 *Summary: Voices for Pesticide Reform* \$5.00
- Poison Poles: Their Toxic Trail and the Safer Alternatives*. A study on the largest group of pesticides – wood preservatives, the contamination associated with treated wood utility poles and the available alternatives. \$20.00
- Pole Pollution*. Deals specifically with the wood preservative pentachlorophenol, and the EPA's shocking findings about its toxicity. \$7.00.

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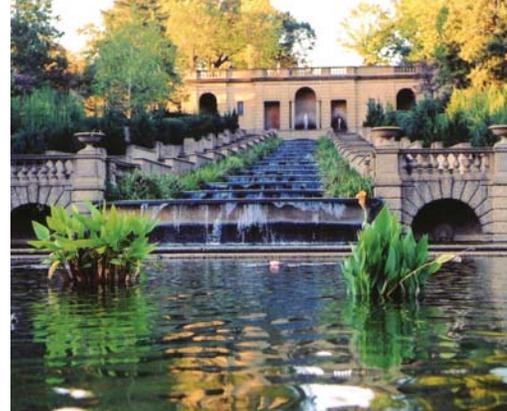
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PLEASE JOIN US FOR:

Beyond Pesticides 25th Anniversary Gala and 24th National Pesticide Forum

May 18-20, 2006 in Washington, DC



On Thursday evening, May 18, 2006, Beyond Pesticides will host its 25th Anniversary Gala Dinner in Washington, DC. The event will feature an evening of organic food and drink, distinguished speakers and honorees, and live music to help us celebrate 25 years of grassroots action. The party will be followed by our 24th National Pesticide Forum, May 19-20, 2006. **Details and registration information at www.beyondpesticides.org/forum.**

GALA EVENT HONOREES INCLUDE:



Theo Colborn is the director of the Endocrine Disruption Exchange and a former senior scientist at the World Wildlife Fund. Her research on endocrine disruptors led

to co-authorship of *Our Stolen Future*. This book shocked the public, providing evidence suggesting that human-made chemicals in the environment, including pesticides, disrupt the endocrine system and lead to serious health impacts.



Norma Grier is the executive director of the Northwest Coalition for Alternatives to Pesticides, an organization that she founded with others in 1977. For more than three

decades she has been a grassroots leader in reducing and eliminating unnecessary pesticide use. Ms. Grier also serves on the board of directors for the Oregon League of Conservation Voters and as an advisor to One Northwest.



Representative Rush Holt* was elected to the U.S. House of Representatives in 1998. He has been a tireless advocate for children's environmental health, an original sponsor

of the School Environment Protection Act. He also focuses his energy on alternative energy, sustainable development, medical research, farmland protection, human rights and more. Prior to serving as a Member of Congress, he was assistant director of the Princeton University's Plasma Physics Laboratory.

*Invited



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