

Pesticides and You

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

Volume 25, Number 2

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Asthma, Children and Pesticides

What you should know to protect your family

**Bates v. Dow Agrosiences • Organic Land Care and the
Development of National Standards • Children and Lawn
Chemicals Don't Mix • Court Weighs in on Organic Integrity**

Speaking Truth to Power

Speaking truth to power, for justice! The Supreme Court really got it right in its decision April 27, 2005 upholding the right of 29 Texas peanut farmers to sue for crop damage they claimed was caused by Dow Chemical Company's herbicide Strongarm (diclosulam). In a 7-2 decision – Justices Thomas and Scalia dissented – Dow argued that because it registers its products with EPA it is shielded from common tort law.

We urged our colleagues to join together and file a friend of the court brief in the face of nine circuit courts of appeal and numerous state court decisions against the right to seek redress for pesticide-caused damage. It looked bleak. Earthjustice attorney Patti Goldman wrote a spectacular brief. Meanwhile, the Bush administration reversed the government's longstanding position and supported Dow with a brief that challenges the basic right to sue in a democracy. Then the Supreme Court's decision. Attorney Bishop Dansby writes in this issue of PAY, "I do not remember any other example of so much clear precedent being overturned." Then, he writes about the broad legal implications of the case in stopping backdoor attempts to effect tort reform by limiting the public's access to the courts through federal preemption.

The case warrants our attention because it reaffirms a basic democratic right to defend ourselves against toxic chemical abuse. The court found:

The long history of tort litigation against manufacturers of poisonous substances adds force to the basic presumption against preemption. If Congress had intended to deprive injured parties of a long available form of compensation, it surely would have expressed that intent more clearly. Moreover, this history emphasizes the importance of providing incentive to manufacturers to use the utmost care in the business of distributing inherently dangerous items. Particularly given that Congress amended FIFRA to allow EPA to waive efficacy review of newly registered pesticides (and in the course of those amendments made technical changes to §136v(b)), it seems unlikely that Congress considered a relatively obscure provision like §136v(b) to give pesticide manufacturers virtual immunity from certain forms of tort liability. Over-enforcement of FIFRA's misbranding prohibition creates a risk of imposing unnecessary financial burdens on manufacturers; under-enforcement creates not only financial risks for consumers, but risks that affect their safety and the environment as well.

Dow and the United States exaggerate the disruptive effects of using common-law suits to enforce the prohibition on misbranding. FIFRA has prohibited inaccurate representations and inadequate warnings since its enactment in 1947, while tort suits alleging failure-to-warn claims were common well before that date and continued beyond the 1972 amendments. We have been pointed to no evidence that such tort suits led to a "crazy-quilt" of FIFRA standards or otherwise created any real hardship for manufacturers or for EPA. Indeed, for much of this period EPA appears to have welcomed these tort suits.

Now the question is whether there will be an effort in Congress to explicitly preempt the right to sue that has been affirmed by the Supreme Court. It is critical to uphold this right because: (i) Pesticides are registered by EPA under a risk assessment review process that implicitly does not consider all aspects of potential harm; (ii) The potential for court review of cases in which people are harmed creates a strong incentive for the development of safer products; and, (iii) The same companies or their trade associations, including Dow Chemical Company, that have successfully lobbied for weak national laws and standards do not want people who are harmed as a result to seek redress.

The Truth Comes Out

Meanwhile, pesticides continue to leave their mark, literally, on people's bodies. In the *Third National Report on Human Exposure to Environmental Chemicals*, released by the Centers for Disease Control (CDC) on July 21, striking new data shows widespread synthetic pyrethroid pesticide exposure. The report finds that more than 50 percent of the population carries residues of the metabolite (3-Phenoxybenzoic acid) for the pyrethroid insecticides permethrin, cypermethrin and deltamethrin. While permethrin is a possible carcinogen, all the pyrethroids are closely associated with respiratory illness and asthma, an illness of increasing concern affecting growing numbers of people, which we write about in this issue. Sixteen million people suffer from asthma in the U.S. alone, including 1 in 8 school-aged children. Asthma is the leading cause of school absenteeism and the third most common cause for hospitalization in children under 15. Low-income populations, minorities, and children living in inner cities experience disproportionately higher morbidity and mortality due to asthma.

While CDC officials do not link residues in the body to adverse impacts on health, this is yet more evidence that we must, at the community level, adopt practices that eliminate the use of toxic pesticides.

This issue of PAY identifies other battles that must be waged to keep protections from backsliding: Congress is considering legislation to amend the *Clean Water Act* to eliminate the national pollutant discharge elimination system (NPDES) permit

requirement, making it easier to contaminate waterways; and, the Bush administration is proposing to weaken EPA cancer guidelines.

The more the laws are weakened, the greater is the responsibility for local decision makers who can no longer rely on a regulatory system to protect their community's health, water safety, and environment.

—Jay Feldman is executive director of Beyond Pesticides.



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No Need for Weed and Feed

Dear Beyond Pesticides,

I am trying to figure out if *Weed and Feed* will hurt the frogs in my yard. I wrote to the manufacturer and they said it would not hurt wildlife, but my instincts said not to use anything. Can you tell me what it can do to my backyard wildlife?

Denise Arnold

Via e-mail

Dear Denise,

Thank you for your concerns about the environment. *Weed and Feed* products generally contain 2,4-D, a dioxin-contaminated chemical that was a major ingredient in Agent Orange, the biological weapon known for its horrific effects during the Vietnam War. Studies show that 2,4-D is linked to cancer, endocrine disruption, reproductive effects, neurotoxicity, kidney damage, sensitization/irritation, as well as birth defects.

Weed and Feed products are the subject of controversy because of growing concern about problems inherent in the product

design. The product is an herbicide and fertilizer mixture, which requires a broadcast treatment over the entire lawn. The application thus requires unnecessarily large amounts of pesticides, leading to potential harm of non-target organisms, including beneficial microorganisms, and an increased potential to contaminate groundwater. Children are especially at risk for increased exposure to *Weed and Feed* since they play on lawns for extended periods of time and put their hands into their mouths. Beyond Pesticides has also received many reports of people who suspect that their pets have developed tumors or died from the use of these products and scientific studies support their claims. For these reasons, and given the availability of safer products and practices, many communities across the nation and in Canada are calling for a ban of these products.

Specific to amphibians, in *Weed and Feed* studies reviewed by the Environmental Protection Agency (EPA), mortality was a common fate for the test subjects, raising serious concern about its toxicity to frogs, other wildlife, and people. For more information on the toxicity of this product contact us or see our pesticide factsheet, available on our website, www.beyondpesticides.org.

For a safer alternative you can use corn gluten meal, the byproduct of the corn wet milling process. Corn gluten meal products have the natural ability to stop the root formation of weeds and the nitrogen content helps to fertilize the soil, so it has the same benefits as *Weed and Feed* without the hazards.

Currently Beyond Pesticides is involved in a national campaign to educate people about the negative impacts of cosmetic lawn care products and to get more alternatives on the market. If you want to get involved in this project, contact us for more information on what you can do to

make change in your community. Show your support for our national campaign by signing *The National Declaration on the Use of Toxic Lawn Pesticides* on our webpage, www.pesticidefreelawns.org, or contact Shawnee Hoover for more information.

Townhome Takes Out Pesticides

Hello Beyond Pesticides,

I am a resident in a townhome community that sprays multiple insecticides and herbicides. I am in the process of putting together a petition to inform the other residents of the dangers of these products in an attempt to stop the spraying in favor of healthy alternatives. I want to be prepared with very solid evidence and data from specific sources. Do you have any advice for me regarding how to go about this? I am a mother of a five-year old little girl with asthma and I am also pregnant. If I had known about the multiple applications of chemicals, I would never have purchased a home in this neighborhood. Thanks for any help that you can provide.

Kristen Bennett

Via e-mail

Dear Ms. Bennett,

Thank you for being active and trying to educate your community. The efforts of individuals in small communities throughout the country are essential to change on a national level. Your intuition to suspect the hazards of these chemicals is correct. Of 68 commonly used pesticides, 25 are probable or possible carcinogens, 21 are linked with birth defects, 32 with reproductive effects, 38 with liver or kidney damage, 38 with neurotoxicity, and 56 are sensitizers and/or irritants. When attempting to influence policy makers to adopt safer pest management strategies, it is essential to have local support. Informing the public and getting a petition together is a great way to show your local leaders that your community wants to see change.

When informing your community about the hazards of using pesticides, it is best to approach people as a teacher, as you are there to inform people, not to fight them. Unfortunately, you will not be able to reach



Numerous manufacturers produce a wide variety of "weed and feed" products.

and convince every person. Focus on educating mothers, people with pets, and people with compromised health—basically, those people who are more likely to be recognize the effects of pesticide use. Try not to get discouraged if you meet resistance. Cherish the small wins, one person at a time. You are doing a wonderful service for your community and the earth.

Showing people the availability and effectiveness of alternatives is another important part of making a convincing argument. Many alternatives can be found in garden stores, health food markets, or under the kitchen cabinet. For example, table vinegar is a good spot treatment for weed problems and corn gluten is available in garden stores for pre-emergent weed control. Let people know that chemicals are not worth the health risks when there are safer alternatives available to them.

Beyond Pesticides offers a wide range of resources for your informational needs. We have developed materials for educating and organizing, with background pieces containing scientific citations on our website www.beyondpesticides.org through our “issues” pages. Please contact us for specific documents that you would like.

Garden Spoils Spoiled

Hi Beyond Pesticides,

Our school's organic garden was recently polluted by an application of a pesticide containing dicamba next door. The pesticide pellets are only on a portion of the garden, but I am concerned for the children's safety. What precautions should I take to keep them safe? Also, what can I do to clean up the pesticides?

Deb Crocket
Rockford, Illinois

Dear Ms. Crocket,
It is an especially distressing situation when such a positive community project like yours is damaged by a pesticide application; unfortunately, this is not the only circumstance where property owners who use pesticides have induced unwarranted



damage on their neighbors. Beyond Pesticides has received reports of damage due to pesticide drift ranging from crop loss to irreversible health problems.

The pesticide used in your unfortunate circumstances is considered to have low acute toxicity by EPA, but it is an irritant especially to the eyes, skin, and respiratory tract. Long-term exposure can affect the liver. The chemical half-life can range from one to six weeks, but evidence suggests it can persist from one month to a year. One of the problems with dicamba is that it is a highly mobile pesticide, meaning that it easily slips between the soil particles and can contaminate the underlying water table. Due to numerous uncontrollable factors, such as temperature, the amount of light available, whether or not it has rained recently, the soils microbiological content and pH, it is difficult to put an exact date on when the contaminated soil will be safe. Laying down compost rich in bacteria, whose metabolic processes can help expedite the breakdown of most pesticides, might help. However, you can avoid any potential risks posed by remaining pesticide residues by simply closing off this portion of the garden or moving the garden to another part of the property. Contact your state pesticide regulatory/enforcement agency and report the incident. Go to “state pages” on our

website. Also request that they dispose of the remaining pesticide pellets appropriately and decontaminate the site, which may involve removing a certain amount of the topsoil.

Continue to promote positive change through your work to educate and involve youth in such a beneficial community gardening project. Consider using this experience as another opportunity to educate your community to some of the indirect problems associated with pesticide use. Get involved in educating your neighbors about the health and environmental damages associated with pesticides. Perhaps you can influence change in your community to prevent a similar situation in the future. On a national level, Beyond Pesticides will continue to highlight the realities of pesticide drift and work to eradicate these in-

cidences. For more information to share with your community regarding pesticide drift, the chemical dicamba, or ways to get involved in the National Coalition for Pesticide-Free Lawns. See www.pesticide-free-lawns.org or contact us.

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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EPA Sued for Failing to Protect Farm Children

More than a million children of farmworkers live near farms in this country, and more than 300,000 farmers' children under the age of six live on farms. These children are particularly exposed to hazardous pesticides, from their food, the air, soil and water, and even from the clothes of their parents. Kids are especially vulnerable to toxic effects of pesticides on their developing brains and bodies. The Environmental Protection Agency (EPA) has this information, yet has failed to set standards that reflect the risk of these children, according to a coalition of farmworkers, environmental and public health groups that filed a lawsuit (*PANNA v. EPA*) on June 7, 2005 against EPA. "Children of farmworkers breathe pesticides that drift from the fields, and they often live, play, and go to school right next to pesticide-treated orchards," said Erik Nicholson of the United Farm Workers of America, AFL-CIO, which represents tens of thousands of farmworkers whose families can be exposed to pesticides. "It's common sense to protect our kids, but EPA is ignoring them." Under the 1996 *Food Quality Protection Act* (FQPA), EPA is required to account for specific factors when setting tolerance levels for chemical pesticide residues that consumers and "major identifiable subgroups" of consumers may be exposed to. In October 1998, the plaintiffs petitioned EPA to identify farm children as meriting special protection. The groups are suing EPA for failing to respond to the petition within a reasonable amount of time.



EPA Cancels Study That Encouraged Children's Exposure to Pesticides

In a defensively worded statement on April 8, 2005, EPA Administrator Stephen Johnson announced the end of the Children's Environmental Exposure Research Study (CHEERS), which would have encouraged children's exposure to pesticides. According to the Public Employees for Environmental Responsibility (PEER), Mr. Johnson did not admit any ethical problems with the study, which paid parents to use pes-



ticides in the rooms occupied by their infant children under age three. Instead, he concluded without explanation that the study could not "go forward...in an

CDC Releases Third Report on Chemical Contamination in Humans

On July 21, 2005, the Centers for Disease Control and Prevention (CDC) released its *Third National Report on Human Exposure to Environmental Chemicals*, detailing the latest data on the "body burden" of chemicals carried by U.S. residents. The chemicals measured in the Third Report include pesticides, metals, dioxins, PCBs, phytoestrogens, tobacco smoke and more. This is the first CDC report to track levels of pyrethroid pesticides, now the most widely used class of insecticides. During a press conference, CDC director Julie L. Gerberding, MD, stated that she was not surprised at the levels at which pyrethroids were detected in the study given that they are used so ubiquitously in the U.S. Dr. Gerberding did not link the exposure to any specific health effects, but said the data would be used in further studies to track the adverse effects of these chemicals. The report finds the following pesticide metabolites in greater than 50% of the subjects tested: permethrin, cypermethrin, deltamethrin, chlorpyrifos, methyl and ethyl parathion, 2,4-D, lindane, chlordane, 2,5-dichlorophenol (moth balls) and DDT. Metabolites of the insect repellent DEET was detected in about 10% of subjects. Environmentalists point out that the same time that scientists are detecting these toxic chemicals in the body, environmental illnesses such as cancer and asthma are on the rise. "We know these chemicals are in our bodies, and we know they cause harm. The CDC report reinforces the need to reduce and eliminate exposure to these chemicals in our homes, schools and workplaces, on our lawns and in our food system," said Jay Feldman, executive director at Beyond Pesticides. For more information, including the latest analysis of the CDC data, visit the Beyond Pesticides website at www.beyondpesticides.org.

atmosphere absent of gross misrepresentation and controversy.” U.S. Senators Barbara Boxer (D-CA) and Bill Nelson (D-FL) had previously announced that they would hold Mr. Johnson’s confirmation as EPA Administrator unless he cancelled CHEERS. PEER reported that while CHEERS will not go forward with EPA funding, the exact same study could proceed with private sponsors. The American Chemistry Council, which represents 135 chemical companies, had already pledged \$2 million toward the study’s \$9 million overall cost. Congress has since negotiated a provision passed by the House and Senate on its Interior Appropriations bill, which has restrictions on human testing of pesticides. *For more information on human testing or CHEERS, contact Beyond Pesticides.*

Bush Weakens EPA Cancer Guidelines Putting Children at Greater Risk

Same news, different day. Once again, the Bush Administration has made the decision to put industry profits before the protection of public health. This time, the issue at hand is the Environmental Protection Agency’s (EPA) new cancer guidelines, which according to the Natural Resources Defense Council (NRDC), make it harder for the agency to categorize carcinogens through its chemical review process. While the agency’s guidelines acknowledge for the first time that children under two years of age are 10 times more likely to get cancer from certain chemicals than adults who are similarly exposed, the White House Office of Management and Budget (OMB) undermined that acknowledgment by inserting language allowing “expert elicitation” in the guidelines. This makes it easy for industry to block EPA from following the guidelines when assessing cancer-causing chemicals, and requires compliance with the *Data Quality Act*, a law designed by tobacco industry consultants to quash protective regulations.

Legislation Would Allow More Pesticide Poisoning of Water

Thirty-four members of the U.S. House of Representatives on April 21, 2005 introduced the *Pest Management and Fire Suppression Flexibility Act* (H.R. 1749), sponsored by Reps. Ofter (R-ID) and Cardozo (D-CA), which amends the *Clean Water Act* to eliminate the law’s provision that requires permits to discharge several contaminants, including pesticides, into bodies of water. If passed, national pollutant discharge elimination system (NPDES) permits would not be required for pesticides; fire retardants and other chemicals used for fire suppression, control, or prevention; silvicultural (logging) activities except for specified point source activities; and, the use of biological control organisms for the prevention, control, or eradication of plant pests or noxious weeds. The legislation follows on the heels of an EPA proposal to achieve the same end through an administrative maneuver. A companion bill in the Senate (S.1264) has been introduced by Senator Inhofe (R-OK). Responsible Industry for a Sound Environment (RISE), the pro-pesticide lobby, hailed the legislation. The *Pest Management and Fire Suppression Flexibility Act* affirms that pesticide applicators do not need a National Pollutant Discharge Elimination System (NPDES) permit to apply product directly to or over bodies of water.” *Contact your Congressional representatives and let them know what you think about this legislation.*

Federal Court Dismisses Toxic Wood Preservatives Lawsuit

After months of delay in ruling, on March 21, 2005, the Bush-appointed Judge Richard Leon, dismissed a federal lawsuit brought by Beyond Pesticides and others in December 2002 in U.S. District Court to force the Bush EPA to end its delay and act on the highly toxic wood preservatives, pentachlorophenol, creosote and

chromated copper arsenate (CCA). Beyond Pesticides was joined in the case by the Communication Workers of America (AFL-CIO), the Center for Environmental Health (Oakland, CA), and the Prager family from Gainesville, Florida. Despite numerous requests by Beyond Pesticides and scientists, going back to 1997, which urged EPA to cancel the “heavy duty” wood preservatives, the judge found that, “Beyond Pesticides did not make formal requests to cancel and suspend the wood preservative pesticides registrations until late 2001 and early 2002.” Beyond Pesticides believes that the judge’s ruling makes a mockery of public interest communication with a federal agency and embraces EPA’s argument that it can hide behind the use of the words “formal petition” to ignore for decades sound science crying out for regulatory action. EPA has been reviewing these three wood preservatives since the late 1970’s and has found that they exceed acceptable risk factors established by the agency. “The ruling dramatically points out the failure of the nation’s pesticide control law, the *Federal Insecticide Fungicide, and Rodenticide Act* (FIFRA),” said Jay Feldman, executive director of Beyond Pesticides. “We have tried to make it work, bringing science, health effects information, and data on alternatives to the agency, and EPA has repeatedly ignored data, missed its own deadlines to complete full reviews, and shown that the statute is a public policy failure.”





Largest U.S. City to Phase-Out Pesticides, Adopt Alternatives

By the end of 2006, there will be less toxic pesticide use in the Big Apple. On May 9, 2005, New York City Mayor Michael Bloomberg signed the *Pesticide Reduction Act* (Intro 329A) into law requiring the city to phase out acutely toxic pesticides and those that are known or suspected to cause cancer or developmental disorders by November 2006, and develop a strategy to utilize less toxic methods in the future on city property. The mayor also signed the *Neighbor Notification Law* (Intro 328A), requiring notification when pesticides are applied. As the largest city in the U.S., New York City's decisions will protect more people from the harmful impact of pesticides than any previous municipal legislation. The City of New York has nearly 100 different agencies, 300,000 employees, thousands of contracts, and owns and manages a great deal of real estate, including over 28,000 acres of parkland. Environmentalists applauded the New York City Council and Mayor Bloomberg for making public health a priority for the city. "These bills put New York City at the forefront of the national effort to move pest control in a new direction, away from poisons

and towards prevention," said Laura Haight, senior environmental associate for NYPIRG, a New York State environmental and consumer advocacy group that promoted the ordinance. "Whole generations of children in New York City have been exposed to pesticides that the EPA subsequently banned because they were unsafe. Fortunately, there are safer and smarter ways of controlling pests that are more effective and far less harmful than using toxic chemicals." City Council Members James Gennaro and Christine Quinn introduced both bills.



Federal Judge Upholds Local Weed and Feed Ban, Preemption Laws Do Not Apply

On June 14, 2005, Judge Barbara Crabb, of the Western District of United States Federal Court (Madison, WI), issued an order upholding a local ban of "weed and feed" products. The lawsuit, brought by the chemical lawn industry, unsuccessfully argued that state preemption law precludes Dane County and the City of Madison from restricting herbicide-based products that contain phosphorus fertilizers. Activists applaud the decision and encourage municipalities across the country to follow Madison's lead in passing fertilizer-pesticide product bans in order to protect local water supplies. The lawsuit was filed in December of 2004 by CropLife America and Responsible Industry for a Sound Environment (RISE), two Washington, DC-based trade organizations with a record of promoting industry interests and profits over public health and safety. The court held that the county and city of Madison may legally ban phosphorus, even when it is mixed with pesticides in "weed and feed" products. She stated that because the ordinances were created to "maintain and improve the water quality in the area's lakes and rivers" and will keep additional phosphorus from entering the county's rivers and lakes by diminishing manufacturers' incentive to add phosphorus to their products, they do not violate any constitutional rights held by the fertilizer industry. In general terms, preemption refers to the ability of one level of government to override laws of a lower level. Preemption laws effectively deny local residents and decision makers their democratic right to better protection. The Madison, WI case was a major victory against preemption laws. "Healthy lakes are vital to making Madison a healthy city," said Mayor Cieslewicz. "This ruling is a major victory for our regional efforts to improve the quality of our lakes, and protect the health of our citizens."

Organic Farm Labor Practices Evaluated in University Study

Because organic agriculture rules prohibit many toxic pesticides, and organic producers are perceived as social activists, consumers may assume that farmworkers get more benefits from organic production than conventional, pesticide-intensive agriculture. However, other than major workplace safety improvements resulting from the elimination of hazardous pesticides, a recent University of California study shows that farm labor practices are no better on California organic farms than on conventional farms. This finding is based on survey responses from 188 California organic growers. While organic standards have established improved workplace and environmental benefits, current organic certification does not contain a "social certification" that evaluates overall workplace practices to ensure that they are fair, safe, healthy, and equitable for farmworkers. Less than half the surveyed growers wanted fair, safe, healthy and equitable working conditions to be required. "We asked about specific areas that could be adopted by organic certifiers, such as a requirement to provide health insurance or pay living wages," said Aimee Shreck, a Sustainable Agriculture Research and Education Program (SAREP) researcher. Most respondents felt that such measures would be too hard on them financially."



The study also revealed that about 40 percent "strongly disagree" with the proposed requirement to "respect farmworkers' right to bargain collectively." The majority of those responding to the survey were small and mid-sized growers who farm 50 acres or less and report

less than \$50,000 in annual sales. A representative of the California Certified Organic Farmers Foundation summed up the current situation, "You go organic and get there and you're still in a system set up for failure. It's failing the farms, and it's failing the farmworkers, and it's failing the farm communities."

Rural Drinking Water Contaminated With Pesticides

Test results from an ongoing drinking water study in Minnesota show levels of pesticides in private drinking water wells, reported the *Minneapolis Star Tribune* on May 10, 2006. According to the report, more than 60 percent of the two dozen private wells tested for pesticides in Dakota County contain traces of more than one pesticide, and some have as many as five, including alachlor, metolachlor and atrazine. Six of the wells contain levels of the highly tetratogenic herbicide cyanazine, which the manufacturer, DuPont, agreed to stop selling in 2002, but supplies can continue to be used - as is typical in EPA-negotiated pesticide cancellations. County officials have requested that all 66 wells tested be checked again this spring to verify the results and will probably prepare a list of recommendations for all of the county's estimated 35,000 private wells, if the contamination is still present. For now, people have been informed of the test results and given information about bottled water, filters and other options. The Minnesota study is a response to the 1996 amendments to the federal *Safe Drinking Water Act*, which requires states to have wellhead protection programs. This is a critical opportunity for Minnesota, as well as state and local governments across the country, to advance less toxic and organic practices for agriculture, lawn care, parks, golf courses, rights-of-way, and forestry. To find out whether there are plans to stop groundwater and drinking water contamination in your area, visit EPA's Source Water Assessment Program website at www.epa.gov/OGWDW/source/contacts.html.

Carbaryl Replaces OPS, Contaminates Salmon Streams

The good news is that residential sales of the neurotoxic insecticides chlorpyrifos (Dursban) and diazinon are way down since EPA-industry phase-outs began in 2001. The bad news is that residential sales of the neurotoxic insecticide carbaryl have skyrocketed, increasing ten-fold in the past four years, according to a new analysis of urban pesticide sales by the Northwest Coalition for Alternatives to Pesticides (NCAP) and the Washington Toxics Coalition. The report, *Toxic Tradeoff*, also reports that levels of carbaryl in endangered salmon streams also show a significant increase. According to EPA, carbaryl is acutely toxic and a likely carcinogen. It is also linked to birth defects and is toxic to pollinators and aquatic life. When it pollutes streams, it can harm salmon directly, and is highly toxic to animals that are food for salmon. Carbaryl is currently under scrutiny by federal regulators and wildlife agencies. EPA is responding to a petition sent by NRDC, Beyond Pesticides and others on January 10, 2005. The agency is also revisiting its assessments of whether carbaryl and other pesticides harm threatened salmon, as part of a pledge to improve its scientific methods. EPA has been reprimanded by the U.S. Federal District Court for using outdated and inadequate science to assess the impacts of pesticides on endangered species.

Common Pesticides Damage Aquatic Communities

A recent study published in the April 2005 issue of *Ecological Applications* confirms that the commonly used pesticides carbaryl (Sevin), malathion and glyphosate (RoundUp) are harmful to aquatic populations. Lead researcher Rick Relyea, Ph.D., a professor of biology

at the University of Pittsburgh, studied the impact of typical dosages on ecologically relevant aquatic species and found that malathion reduced species richness, a measure of population size and interactions, by 30 percent, RoundUp by 22 percent and Sevin by 15 percent. Dr. Relyea found that RoundUp is particularly toxic to amphibians, confirming a recent trend in scientific literature linking pesticides to developmental effects in frogs (see "Wreaking Havoc with Life" in the Summer 2004 issue of *Pesticides and You*, Vol. 24, No. 2). However, in this study, death occurred, completely eliminating two species of tadpoles and a 70 percent decrease in the entire tadpole population. The study was initially designed to see whether the RoundUp would have an indirect effect on the frogs by killing their food source, algae. However, Dr. Relyea found that since it killed the frogs, the algae populations increased with no predators available to control it. According to the study, the most lethal ingredient in RoundUp is its surfactant (considered an "inert" ingredient by EPA and therefore not even listed on the product label), which allows the pesticide to penetrate the outer waxy layer of weeds, rather than its active ingredient glyphosate. The other pesticides in the study have less potent surfactants, which Dr. Relyea says explains RoundUp's greater impact in this study. 2,4-D was also studied, but had no impact on species richness, although in separate studies it has been linked to cancer, endocrine disruption, kidney and liver damage and adverse impacts on dogs, fish, birds and beneficial insects.

Antibacterial Agent Reacts With Tap Water to Form Carcinogen

It looks like there's more bad news regarding the antibacterial agent triclosan, which is found in soap, dental and deodorant products. In addition to resistance concerns and health and

environmental effects reported in two recent issues of *Pesticides and You* (see "Triclosan ChemicalWATCH factsheet," Vol. 24, No. 3, and "Triclosan Hazards... Continued," Vol. 24, No. 4), researchers at Virginia Polytechnic Institute and State University have found that triclosan, the active ingredient in many antibacterial soaps, reacts with chlorine in tap water to form significant quantities of chloroform, which is classified by EPA as a probable human carcinogen. The study, "Formation of Chloroform and Chlorinated Organics by Free-Chlorine-Mediated Oxidation of Triclosan," published in April in the online journal *Environmental Science and Technology*, also suggests that the reaction of triclosan with chlorine could produce highly chlorinated, and thus dangerous, dioxins in the presence of sunlight. The researchers looked specifically at triclosan in dishwashing liquid. When the researchers simulated home dishwashing conditions, they found that triclosan reacts with free chlorine in tap water to generate levels of chloroform in dishwater as high or higher than EPA's maximum allowable amount. In addition to being a human bladder carcinogen, chloroform has been linked to miscarriages. Dioxins are a class of chemicals that in small doses are highly carcinogenic and act as endocrine disruptors. Triclosan is found in hundreds of common everyday products, including nearly half of all commercial soaps. In addition to soaps, toothpastes and deodorants, triclosan is found in cosmetics, fabrics and plastics. For more information on triclosan, see "The Ubiquitous Triclosan: A common anti-bacterial agent exposed" in the Fall 2004 issue of *Pesticides and You* (Vol. 24, No. 3).



Ex-Dow Chemical Workers Seek Compensation Over Herbicide Exposure

Former Dow Chemical employees and families of deceased employees sued the company for health problems including liver disease, diabetes and respiratory cancer, which they believe to be linked to exposure to the herbicide Tordon. The suit (*Buckingham v. Dow*) was filed in June 2005 in Contra Costa County, CA Superior Court. The lawsuit claims that Dow concealed from employees the risks of manufacturing the herbicide. Evidence in the complaint states that Tordon "was known to cause illness and disease to humans, and that airborne contaminants were being released into the air and exposed to plaintiffs." Exposure to the chemical occurred during employment 25 to 55 years ago. Tordon contains the active ingredient picloram. Dow used picloram and 2,4-D to make Agent White, which the U.S. military sprayed to clear jungles and forests during the Vietnam War similar to Agent Orange, which contained 2,4-D and 2,4,5-T. The herbicide is currently used for general woody plant control, broad-leaf weed control, and range management. A handful of Tordon products remain registered with the EPA, most of which are approved for restricted use only. Dow is currently pushing these chemicals to be used for invasive plant control on federal lands (see "Montana's War on Weeds" in the Fall 2004 issue of *Pesticides and You*, Vol. 24, No. 3). While picloram alone has been linked to liver, kidney and spleen damage, it is often formulated with 2,4-D, which is linked to cancer, endocrine disruption and neurotoxicity, among other health effects.

Bates v. Dow Agrosciences

U.S. Supreme Court restores sanity in products liability law

by H. Bishop Dansby, Esq.

In *Bates v. Dow Agrosciences LLC*, decided by the U.S. Supreme Court April 27, 2005, petitioners were 29 Texas peanut farmers who alleged that in the 2000 growing season their crops were severely damaged by the application of Dow's newly marketed pesticide named "Strongarm." The question presented was whether the *Federal Insecticide, Fungicide, and Rodenticide Act* (FIFRA), 7 U. S. C. §136 *et seq.* (2000 ed. and Supp. II), pre-empted their state-law claims for damages, denying those hurt by pesticides the right to compensation. The victims' rights court upheld the basic right to sue.

Victims' Rights

For a long time, the air has been filled with conservative chants for "tort reform." To accomplish tort reform, one must confront principles used and developed by thousands of actual cases where courts attempted to balance the rights of plaintiffs and defendants. One can nibble around the edges of tort law, such as eliminating joint and several liability (right to full compensation from liable parties). Another approach is to legislate caps on damages, such as has been done in medical malpractice cases.¹ A cruder approach is the appointment of conservative trial and appellate judges. Finally, one of the most promising approaches would have seemed to be federal preemption.

Federal Pre-emption

Federal pre-emption has the potential for effecting the aims of conservative tort reformers because it transfers responsibility for safety of products from the courts to administrative agencies. In a complex world, we do, in fact, need "pre-emptive" action to protect the American public. Potentially dangerous products such as drugs, medical devices, automobiles, and pesticides should meet threshold *a priori* standards before they are placed in commerce. The alternative would be experimentation with *ex post facto* remedies by the courts that could have the effect of counting the dead and wounded. However, the legal concept of federal pre-emption means that federal law and regulation takes the place of state law.

Pre-emption and "implied pre-emption" were being thrown up by defendants for many other products that were regulated by federal agencies, such as air bags, automobile tires, medical devices, and tobacco. The irony is that the most success with this approach had been achieved with *pesticides*, a product specifically designed to kill, and to target the hardest, most resilient

creature on earth—insects. Their application runs the greatest risk of abuse and overuse by naïve consumers and under trained, lowly paid pesticide applicators. The mistakes we have made with pesticides in the past are mind-boggling. The pesticide DDT nearly wiped out the national symbol, the American bald eagle. Persistent organic pesticides (POPs) are found in the tissue of sea animals and human breast milk around the world. Tens of millions of American homes are contaminated with pesticides.² Pesticides have been strongly implicated in childhood cancer.³

The defense of pre-emption in the context of FIFRA began with a major tobacco case, *Cipollone v. Liggett Group, Inc.*⁴ Although *Cipollone* did not involve FIFRA, the *Public Health Cigarette Smoking Act of 1969* used similar terminology in the federal regulation of the label warnings. Both the Cigarette Smoking act and FIFRA forbade states from imposing "requirements" on the labels or warnings on the products. The Supreme Court distinguished between the two pre-emption clauses:

While the courts of appeal have rightly found guidance in Cipollone's interpretation of "requirements," some of those courts too quickly concluded that failure-to-warn claims were pre-empted under FIFRA, as they were in Cipollone, without paying attention to the rather obvious textual differences between the two pre-emption clauses. Unlike the pre-emption clause at issue in Cipollone, §136v(b) prohibits only state-law labeling and packaging requirements that are "in addition to or different from" the labeling and packaging requirements under FIFRA. Thus, a state-law



labeling requirement is not pre-empted by §136v(b) if it is equivalent to, and fully consistent with, FIFRA's misbranding provisions.

The bottom line of this double talk is that state tort actions are once again allowed against pesticide manufacturers. FIFRA pre-emption is to be interpreted narrowly as affecting only the regulation by states of the wording of the label. Even failure to warn causes of action are allowed, on the theory that state actions can run in parallel with FIFRA regulation. Before *Cipollone*, this is the way claims against pesticide manufacturers did proceed, and this is how products liability, in general, functioned. The mere fact that a product was regulated and the mere fact that the product complied with that regulation did not protect the manufacturer from a common law tort action. Compliance with regulations was considered a minimum requirement of manufacturers.

On the authority of *Cipollone*, the lower courts had developed the principle that any cause of action that might induce a pesticide manufacturer to change its label was pre-empted. This had the effect of total pre-emption, as even a jury verdict could be said to have that effect. If a plaintiff alleged that a pesticide product was negligently designed because it harmed a person even when applied according to the label, the court would rule that such a cause of action was really a "failure to warn" disguised as "design defect." In other words, if EPA had decreed that the product was a good product when used according to the label, the judgment about whether it was properly designed had already been made. This created the anomalous situation that products could be legal and harmful even when used as directed. Indeed, this is exactly the situation with cigarettes. But, after *Bates*, this is not the law as to pesticides and is less likely to be the law for other dangerous products.

The *Bates* court was clear that it intended to allow state common law torts to be a parallel remedy to FIFRA regulation:

Private remedies that enforce federal misbranding requirements would seem to aid, rather than hinder, the functioning of FIFRA. Unlike the cigarette labeling law at issue in Cipollone, which prescribed certain immutable warning statements, FIFRA contemplates that pesticide labels will evolve over time, as manufacturers gain more information about their products' performance in diverse settings. As one court explained, tort suits can serve as a catalyst in this process:

"By encouraging plaintiffs to bring suit for injuries not previously recognized as traceable to pesticides such as [the pesticide there at issue], a state tort action of the kind under review may aid in the exposure of new dangers associated with pesticides. Successful actions of this sort may lead manufacturers to petition EPA to allow more detailed

labeling of their products; alternatively, EPA itself may decide that revised labels are required in light of the new information that has been brought to its attention through common law suits. In addition, the specter of damage actions may provide manufacturers with added dynamic incentives to continue to keep abreast of all possible injuries stemming from use of their product so as to forestall such actions through product improvement." Ferebee, 736

So, were nine circuit courts of appeal and innumerable state courts wrong in their interpretation of *Cipollone*?⁵ I do not remember any other example of so much clear precedent being overturned. The *Bates* court, apparently recognizing how thin the difference between its interpretation of the FIFRA pre-emption provision and that of the circuit courts of appeal, proposed an alternative rationale:

Even if Dow had offered us a plausible alternative reading of §136v(b)—indeed, even if its alternative were just

**The long history of tort litigation
against manufacturers of poisonous
substances adds force to the basic
presumption against pre-emption.**

— From *Bates vs. Dow*

*as plausible as our reading of that text—we would nevertheless have a duty to accept the reading that disfavors pre-emption. "[B]ecause the States are independent sovereigns in our federal system, we have long presumed that Congress does not cavalierly pre-empt state-law causes of action." *Medtronic*, 518 U. S., at 485. In areas of traditional state*

regulation, we assume that a federal statute has not supplanted state law unless Congress has made such an intention "clear and manifest."

While resort to the states' rights mantra is a bit weak, the Court's argument that follows is more convincing:

*The long history of tort litigation against manufacturers of poisonous substances adds force to the basic presumption against pre-emption. If Congress had intended to deprive injured parties of a long available form of compensation, it surely would have expressed that intent more clearly. See *Silkwood v. Kerr-McGee Corp.*, 464 U. S. 238, 251 (1984). Moreover, this history emphasizes the importance of providing an incentive to manufacturers to use the utmost care in the business of distributing inherently dangerous items. See *Mortier*, 501 U. S., at 613 (stating that the 1972 amendments' goal was to "strengthen existing labeling requirements and ensure that these requirements were followed in practice").*

Supreme Court affirms right to sue

Because of the distortion caused by *Cipollone*, we have had fifteen years of FIFRA pre-emption. Among farmers' claims alone, it is documented that 100 claims against pesticide manufacturers filed in the last 15 years were dismissed, while

only three have prevailed. We had reached the point where pesticide claims against the manufacturer were no longer a viable cause of action. The Supreme Court chose to hear this case and has not only clarified federal pre-emption in the area of products liability, I believe it has also signaled a return to sanity in tort reform. Although necessarily speculative to say so, the court may well have been influenced by recent highly publicized product liability cases. The Firestone and Ford Explorer tire cases made its way into Congressional hearings, as did Vioxx and other drug cases. If industry had wanted to avoid common law product liability, it should have made better tires, better drugs.

If doctors and huge drug companies occupy a place of privilege, pesticides surely do not. *Bates* was a golden opportunity to return the civil litigation system to its traditional role of responding to societal needs in a complex, rapacious, and competitive world. This case not only clears the way for protection against dangerous pesticides, but also deals a lethal blow to tort reform through the back door of federal pre-emption. The real importance of *Bates* is that it may mark the end of the use of pre-emption for tort reform.

Beyond Pesticides, Defenders of Wildlife, Farmworker Justice Fund, Natural Resources Defense Council, Physicians for Social Responsibility, Public Citizen and Sierra Club

This case not only clears the way for protection against dangerous pesticides, but also deals a lethal blow to tort reform through the back door of federal pre-emption.

joined in *Bates v. Dow* with an amicus brief. Earthjustice and Trial Lawyers for Public Justice served as legal counsel. The Bush Administration filed a brief in support of Dow Chemical Company.

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Endnotes

¹ While such legislation has been found to be constitutional, it is ostensibly an encroachment on the right to jury trial. Further, it is ostensibly unnecessary, given the common law procedures of remittitur and right of appeal.

² Americans put an estimated 62.7 million pounds (28.5 million kilograms) of pesticides and 278.5 million pounds (126.6 million kilograms) of antimicrobials (disinfectants) into their homes each year. Somia Gurunathan and others, "Accumulation of Chlorpyrifos on Residential Surfaces and Toys Accessible to Children," *Environmental Health Perspectives* Vol. 106, No. 1 (January 1998), pgs. 9-16.

Recent studies estimate that between 78% and 97% of families in the midwestern U.S. use pesticides in and around the home. Julie L. Daniels and others, "Pesticides and Childhood Cancers," *Environmental Health Perspectives* Vol. 105, No. 10 (October 1997), pgs. 1068-1077.

A study of indoor air in homes in Jacksonville, Florida detected pesticides in the air in 100% of the homes. Janice M. Pogoda and Susan Pres-

ton-Martin, "Household Pesticides and Risk of Pediatric Brain Tumors," *Environmental Health Perspectives* Vol. 105, No. 11 (November 1997), pgs. 1214-1220.

³ Zahm, Shelia Hoar and Mary H. Ward, "Pesticides and Childhood Cancer," *Environmental Health Perspectives* 106, Supp.3, Jun98.

⁴ *Cipollone v. Liggett Group, Inc.*, 505 U. S. 504 (1992).

⁵ Finally, it bears emphasis that all nine federal courts of appeals that have addressed FIFRA pre-emption since *Cipollone* and *Medtronic* have concluded that § 136v(b) preempts common-law labeling claims. The highest courts of at least 18 states have agreed... In another nine States, intermediate courts of appeal have also adopted this construction. Only one state supreme court and one state intermediate appellate court have disagreed... "The very strength of this consensus is enough to rule out any serious claim of ambiguity." *General Dynamics Land Sys., Inc. v. Cline*, 124 S. Ct. 1236, 1244-1245 (2004). Brief for Respondent, *Bates v. Dow Agrosciences LLC*, page 27-28.

⁶ David Frederick, who represented the farmers in oral arguments before the Supreme Court, in a statement to BNA.



Organic Land Care and the Development of National Standards

By Shawnee Hoover

Throughout the U.S. and Canada, there is a growing movement toward fostering naturally balanced and ecologically sustainable lawns and landscapes. Yet, with all the “green” advertising by the chemical lawn industry, how do people know what they are really getting when they hire a professional lawn service? Unlike organic food, there are no federally monitored standards that define the term *organic* in the lawn and land care industry. Beginning to fill this gap is an organic land care program, complete with strong standards that can be shared nationally, developed by the Northeast Organic Farming Association (NOFA). This article provides a peek into the acceptable and prohibited materials under the model NOFA standards for two of the most commonly discussed lawn issues – Fertilizers and Weeds (or undesired plants).

A person might ask for a natural program but what does *natural* or *organic* truly mean? What the landscaper (or lawn service provider) considers as natural may differ greatly from the client’s idea of natural. If a company does not advertise a “natural” or “organic” program then chances are high that the service provider is steeped in the conventional pesticide paradigm and may not think twice about applying toxic pesticides. They may not realize the extent to which synthetic lawn chemicals and pesticides damage soil microorganisms, contaminate local water sources, poison wildlife and its habitat, and expose people, pets and workers to dangerous toxins. They may even incorrectly and illegally tell the client that the toxic pesticides they use are safe. If a provider does advertise a natural or organic program, what materials and methods is it based on? Do those methods avoid or eliminate the use of toxic pesticides? Standards on organic land care would be useful in answering these types of questions.

There are plenty of organic lawn and land care providers out there, and their numbers are increasing daily. This is a good

thing. For the most part, if a landscaper advertises an organic program it is likely that he or she is interested in providing organic. Training programs are continuing to arise and new certifications will be developed, and with them comes a need for a systems-approach model that sets a strong standard for what constitutes *real* organic land and turf care.

A number of organizations have sought to fill the gap in national organic land care standards by forming associations or by simply abiding by their own belief that pesticides are both harmful and unnecessary. Associations geared toward landscapers like the Organic Landscape Alliance, Ecological Landscaping Association, Biological Urban Gardening Services and a small handful of others, have filled an important niche by teaching techniques that will produce beautiful pesticide-free lawns and landscapes. Members of the National Coalition for Pesticide-Free Lawns have further helped to educate on non-toxic methods and materials.

A model in the works

For guidelines on sustainable and ecological turf and land care, we turn to horticultural experts on organic production practices in the NOFA. The Association has been involved in certifying organic methods on farms since long before the passage of the *Organic Foods Production Act* in 1990. The step from organic farming to landscapes is not that far. In recent years, the Connecticut and Massachusetts chapters of NOFA developed a landscaper-training accreditation program and the only known comprehensive set of organic land care standards in the U.S. The standards are strong and address some of the most important organic issues, such as the use of sewage sludge in fertilizers, genetically modified seeds and plants, mandatory soil testing, and the use of synthetic chemicals. Moreover, they

lay out lists of preferable, allowable and prohibited practices and materials that lay the foundation of a model the rest of the country can adopt, from municipalities that go pesticide-free to landscapers that advertise organic. The NOFA standards are already being used as a baseline by organizations like Grassroots Environmental Education in New York who are developing their own organic landscaper-training programs.

NOFA standards for organic land care

The NOFA Organic Land Care program is more in-depth than described here. The standards, like those used in USDA organic food production, represent a systems-approach to ecological turf and land care. A systems-approach means that the health of the whole system is represented by the health and balance of each of its individual parts. For turf, this includes developing healthy soil, maintaining a proper pH balance, selection of appropriate grasses and other plants, aeration of compacted soil, timely thatch removal, and proper mowing and watering methods.

The NOFA standards will continue to develop. As they are adopted nationwide, suggested land care techniques will vary by region, but the list of preferred and prohibited materials should not vary.

NOFA states that the intent of the standards is to provide the fundamentals of organic land care and currently accepted practices and materials. The intent is not to provide all the possible techniques available for successful organic land care, which can vary by region, climate and landscape and which is better covered in the accreditation courses.

Most importantly, all service providers who get accredited through the NOFA program sign a pledge agreeing to provide organic services in accordance with the standards to clients who request organic land care. Such a pledge is of utmost importance in lieu of a rigorous monitoring system that ensures compliance. Any provider who breaks his/her pledge should be reported to NOFA. The pledge is an especially crucial tool for clients who hire providers that offer both organic and conventional services.

Below are excerpts from the NOFA book, *Standards for Organic Land Care: Practices for Design and Maintenance of Ecological Landscapes*. The excerpts address two of the most commonly discussed areas of land care: Fertilizers and Weeds (undesired plants).

Fertilizers and soil amendments

Overview: Fertilizers and soil amendments are tools that enable us to modify existing soil conditions. The “feed the soil” principle is used to benefit plant health, not artificially stimulate plant growth. Unnecessary applications of any fertilizer or soil amendment can cause mineral nutrients to build up to excessive levels in the soil. At these levels, nutrients may run off into local water resources. Nitrogen and phosphorus are the nutrients most involved in eutrophication of water bodies [stimulation of aquatic plant growth that depletes oxygen], and

are thus of major concern as pollutants. Nitrogen can also be a health hazard when it pollutes drinking water supplies.

Many potential nutrients in soils are not readily available to plants. Proper management of soils can free these nutrients for uptake. The rate of release of mineral elements depends on environmental factors specific to each site. Therefore, the use of any amendment must reflect soil test results and good stewardship of the environment. It is preferred to use renewable materials that are sustainably harvested. Many nutrient amendments are mined or harvested from natural sources which are not renewable. We do not want to waste these resources for our short-term benefit.

Preferred (*Ecologically appropriate practices and materials.*)

- Compost yard waste on-site, and use the compost in beds or gardens. Locate compost piles where they will not be susceptible to runoff.
- Monitor phosphorus levels with soil tests so that repeated compost application does not result in build up of excess phosphorus over time.
- Use compost that is well-decomposed.
- Compost should be applied to soil surface as a 1-2 inch layer (approximately 3-6 cubic yards per 1,000 sq. ft.), then incorporated into the soil to a depth of 4-6 inches.
- Make sure compost is thoroughly mixed with soil. A one-inch layer is better suited for marginally good soils, and a two-inch layer is better suited for very sandy or low organic matter soils.
- Compost from local sources using local materials to reduce transport of bulk materials.

Allowed (*Practices and materials that are acceptable when needed, but should be reduced in favor of the preferred alternatives where possible.*)

- Top Dressing/Surface Application
 - On turf: 1/4 inch or less, no more than two times per year for no more than three years unless a soil test shows organic matter less than 4% and phosphorus below “medium.”
 - Around perennials: 2 inches or less.
 - Around ornamentals and shade trees: 3 inches or less.
 - In sandy or low organic matter soils: 6 inches or less for one-time planting or new bed.
- Any compost that appears adequately decomposed, does not contain sewage sludge, industrial toxic wastes, large stones, trash or other prohibited materials, and is made from at least two different raw materials.
- Sheet composting (turning under organic material to compost in place) in establishing gardens and beds.

Prohibited (*Practices and materials not acceptable in organic land care.*)

- Sewage sludge (biosolids), municipal solid waste, paper mill by-products as raw materials of compost. (Current EPA standards are not adequate to protect the public from contamination of biosolids from heavy metals, industrial toxins, pharmaceuticals, and radioactive materials.)
- Compost with undesirable objects or offensive odors.
- Compost with large amounts of weed seed.
- Planting human food crops in sheet composting systems that use animal manure within 120 days before harvest.
- Using more than the amounts specified under Allowed.
- Overloading compost, which results in exceeding the limits for nitrogen and/or phosphorus.
- Compost that has gone anaerobic.

Weeds (undesired plants)

Overview: A weed has been defined as a plant out of place, whose attributes perhaps have not yet been discovered. It is important to distinguish between “weeds” in the yard and invasive plants causing havoc in natural ecosystems. Preventive measures can eliminate many weed problems before the weeds become established. The choice of methods for weed control should be made carefully to reduce the number of trips over the landscape, save fossil fuels and avoid soil compaction. Overuse of a rototiller can burn up organic matter quickly and reduce the soil to powder. All machinery and equipment should be in good condition to prevent contamination of soil, edible crops or plants. Hand tools should be sharpened and well maintained for efficient action. Careful cleaning of tools and equipment after working in weedy areas is highly recommended.

The key to weed control is timing. Careful observation of weed populations and weed seedling emergence patterns after disturbance will help the landscaper develop an appropriate weed control program. Careful cultivation prevents the formation of large weed populations.

Preferred

- Avoid conditions that favor weeds: compacted soils or overtillage; overwatering and excessive nitrogen.
- Adjust soil biology or chemistry to favor desired plants over weeds.
- Covering the ground with desired plants that out-compete weeds.
- Weeds in beds containing woody and/or perennial plants are hand weeded, spot sprayed with organic herbicides, smothered with mulch, or cultivated by hand.
- Weed-free mulches to suppress weeds.

- Vertical edging or repeated hand edging between lawn and garden bed areas to prevent grass from infiltrating.
- Overseeding cover crops such as annual ryegrass into bare spots on lawns or white clover or buckwheat into vegetable garden row crops.
- Timely mechanical or hand cultivation.
- Shallow cultivation to avoid bringing more weed seeds to the surface.
- Boiling water poured slowly and directly over the weed root.

Allowed

- Plastic mulches that do not contain polyvinyl chloride (PVC), including landscape fabric.
- Paper mulch beneath an organic mulch.
- Flame weeders.
- Hot water weed burners.
- Vinegar or salt if used only on walkways or terraces where weeds emerge between cracks.
- Corn gluten - only one application per year of 20 pounds per 1,000 square feet. (Note that corn gluten may contain genetically modified organisms, and that it contains approximately 10 percent organic nitrogen, which should be considered in planning fertilization for the year.)
- Organically approved herbicides based on ethenoic and acetic acid or potassium salts of fatty acids.

Prohibited

- All synthetic herbicides, arsenates, and caustic acids or salts.
- Synthetic growth regulators.
- Diesel products.
- Petroleum distillates.
- Micronutrients in toxic quantities.
- Synthetic transpiration repressants.

For a copy of the NOFA Standards for Organic Land Care: Practices for Design and Maintenance of Ecological Landscapes or to find an accredited land care provider in one of eight Northeastern states, visit <http://www.organiclandcare.net/> or contact NOFA at (203) 888-5146. Beyond Pesticides also maintains a database of service providers by state who have disclosed the types of methods and materials they use. See www.safetysource.org. For more information on the National Coalition for Pesticide-Free lawns, visit www.pesticidefreelawns.org or contact Beyond Pesticides.

Children and Lawn Chemicals

Don't Mix

Lawns and landscapes can be effectively managed without toxic chemicals that are harmful to human health and the environment. This fact sheet on children's vulnerability to lawn pesticides provides the documented science on the hazards of lawn pesticides.

Children are especially vulnerable to pesticides

- The National Academy of Sciences reports that children are more susceptible to chemicals than adults and estimates that 50% of lifetime pesticide exposure occurs during the first five years of life.¹
- EPA concurs that children take in more pesticides relative to body weight than adults and have developing organ systems that are more vulnerable and less able to detoxify toxic chemicals.²
- Infants crawling behavior accounts for a greater potential than adults for dermal exposure to contaminants on carpets, floors, lawns, and soil.³
- Children with developmental delays and those younger than six years are at increased risk of ingesting pesticides

through nonfood items, such as soil.⁴

- Studies find that pesticides such as the weedkiller 2,4-D pass from mother to child through umbilical cord blood and breast milk.⁵
- Consistent observations have led investigators to conclude that chronic low-dose exposure to certain pesticides might pose a hazard to the health and development of children.⁶

Children, cancer and pesticides

- The probability of an effect such as cancer, which requires a period of time to develop after exposure, is enhanced if exposure occurs early in life.⁷
- A study published in the *Journal of the National Cancer Institute* finds that household and garden pesticide use can increase the risk of childhood leukemia as much as seven-fold.⁸
- Studies show that children living in households where pesticides are used suffer elevated rates of leukemia, brain cancer and soft tissue sarcoma.⁹
- Pesticides can increase susceptibility to certain cancers by breaking down the immune system's surveillance against cancer cells. Infants and children, the aged and the chronically ill are at greatest risk from chemically induced immune-suppression.¹⁰
- The most commonly used nonagricultural herbicide, 2,4-D, has been linked to Non-Hodgkin's lymphoma in scientific studies.¹¹
- A study published by the American Cancer Society finds an increased risk for Non-Hodgkin's lymphoma (NHL) for people exposed to common herbicides and fungicides, particularly the weedkiller mecoprop (MCP). People exposed to glyphosate (found in Roundup®) are 2.7 times more likely to develop NHL.¹²
- 75 out of all 99 human studies done on lymphoma and pesticides find a link between the two.¹³
- Four peer-reviewed studies demonstrate the ability of glyphosate-containing herbicides to cause genetic damage to DNA (mutagenicity), even at very low concentration levels.¹⁴

Common Home and Garden Weedkillers

Lawn Chemical	Pounds Per Year*
2,4-D	8-11 million
Glyphosate	5-8 million
MCP (Mecoprop)	4-6 million
Pendimethalin	3-6 million
Dicamba	2-4 million

* EPA Pesticide Sales and Usage Report for 2000/2001.

Alternatives

Develop healthy soil with the use of a slow-release natural organic fertilizer to avoid weed problems. Corn gluten is an effective natural pre-emergent. Safe spot treatments include fatty-acid soaps and botanicals such as vinegar or citrus-based products.

Studies show children's developing organs create "early windows of great vulnerability" during which exposure to lawn pesticides can cause great damage.



Children, asthma and pesticides

- A 2004 peer-reviewed study finds that young infants and toddlers exposed to herbicides (weedkillers) within their first year of life are four and a half times more likely to develop asthma by the age of five, and almost two and a half times more likely when exposed to insecticides.¹⁷
- EPA material safety data sheets for the common herbicides 2,4-D, mecoprop, dicamba, (often combined as Trimec®) and glyphosate (Roundup®) list them as respiratory irritants that can cause irritation to skin and mucous membranes, chest burning, coughing, nausea and vomiting.

Children, learning and developmental disorders and pesticides

- Roughly one in six children in the U.S. has one or more developmental disability, ranging from a learning disability to a serious behavioral or emotional disorder.²⁰
- Scientists believe that the amount of toxic chemicals in the environment that cause developmental and neurological damage are contributing to the rise of physical and mental effects being found in children.²²
- Studies show children's developing organs create "early windows of great vulnerability" during which exposure to lawn pesticides can cause great damage.²³
- Lawn pesticide products containing herbicides and fertilizers (such as "weed and feed" products) tested on mice show increased risk of infertility, miscarriage and birth defects at very low dosages.²⁴

- Additional studies on lawn pesticide product formulations show effects on learning ability, aggressiveness, memory, motor skills and immune system function.²⁵
- A 2002 peer-reviewed study finds children born to parents exposed to glyphosate (Roundup®) show a higher incidence of attention deficit disorder and hyperactivity.²⁶
- A study of 210,723 live births in Minnesota farming communities finds children of pesticide applicators have significantly higher rates of birth defects than the average population.²⁷
- In a 2004/2005 review of 2,4-D, EPA concurs that, "there is a concern for endocrine disruption."²⁸

Pesticide accumulation and drift

- Children ages 6-11 nationwide have significantly higher levels of lawn pesticide residues in their bodies than all other age categories.²⁹
- Biomonitoring testing in Canada finds residues of lawn pesticides, such as 2,4-D and mecoprop, in 15 percent of children tested, ages three to seven, whose parents had recently applied the lawn chemicals. Breakdown products of organophosphate pesticides are present in 98.7 percent of children tested.³⁰
- Scientific studies show that 2,4-D applied to lawns drifts and is tracked indoors where it settles in dust, air and surfaces and may remain for up to a year in carpets.³¹
- Samples from 120 Cape Cod homes, where elevated incidence of breast, colorectal, lung, and prostate cancers are reported, find high indoor air and dust concentrations of carbaryl, permethrin, and 2,4-D.³²

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Asthma, Children and Pesticides

What You Need to Know

By Aviva Glaser

Since the mid-1980s, asthma rates in the United States have skyrocketed to epidemic levels, particularly among young children. In the U.S. alone, around 16 million people suffer from asthma. Asthma is a serious chronic disorder of the lungs characterized by recurrent attacks of bronchial constriction, which cause breathlessness, wheezing, and coughing. Asthma is a dangerous, and in some cases life-threatening disease. Researchers have found that pesticide exposure can induce a poisoning response linked to asthma. Yet, the U.S. uses millions of pounds of these pesticides, which the Centers for Disease Control finds are among the most common toxic chemicals found in the body.

Children are more susceptible to asthma

Asthma is much more common in children than adults. Asthma is the most common long-term childhood disease; an estimated nine million children under the age 18 have been diagnosed with asthma at some point in their lives.

Children are more susceptible to asthma and other respiratory problems for a number of reasons. The National Academy of Sciences has found that in general, children are more susceptible to environmental toxins than adults. This is because pound for pound, children eat more food and drink more water than adults, and thus they take in more pesticides and toxic chemicals relative to body weight. Children also have a more rapid respiratory rate and take in a greater volume of air per unit of body weight than adults. At the same time, children's organ systems are still developing and therefore are more vulnerable and less able to detoxify hazardous chemicals. Children's developing organs create "early windows of great

vulnerability" during which exposure to toxins can cause great damage. For example, human lungs and airways do not fully develop until the sixth to eighth year of life, making a young child more vulnerable to the effects of pesticides and other pollutants on the respiratory system. During these early years, exposure to even mild chemical irritants can have significant effects on respiratory development.

Did You Know?

- Nearly one in eight school-aged children have asthma. This rate is rising most rapidly in pre-school aged children.
- Asthma is the leading cause of school absenteeism due to chronic illness. Every year, asthma accounts for 14 million lost days of school.
- Asthma is the third-ranking cause of hospitalization among those younger than 15 years of age.
- The number of children dying from asthma increased almost threefold from 1979 to 1996.
- The estimated cost of treating asthma in those younger than 18 years of age is \$3.2 billion per year.
- Low-income populations, minorities, and children living in inner cities experience disproportionately higher morbidity and mortality due to asthma.

Cause vs. Trigger

A good way to understand why people get asthma and sudden asthma attacks is to think in terms of causes and triggers. A *cause* is an underlying reason why a person gets asthma or other disease. The exact causes of asthma are unknown, but experts have shown that exposure to cigarette smoke, air pollution, and allergens can cause increased levels of asthma in populations. A *trigger*, on the other hand, is something that causes an asthma attack to occur in someone already suffering from the disease. There are many known triggers of asthma attacks, including cigarette smoke, perfume, air pollution, pet dander, and allergens from dust mites and cockroaches. Like cigarette smoke, pesticides have been shown to both *cause* asthma and *trigger* asthma attacks.

Environmental exposures during pregnancy may also be significant for children later in life; researchers discovered that fetuses can become sensitized to environmental contaminants while still in the womb, resulting in a child born with a strong predisposition to asthma and allergies.

Pesticides can cause asthma

Determining the causes of a disease as common as asthma is no easy task, especially since there are so many factors to consider and so many potential pollutants that people are exposed to on a daily basis. Asthma has both genetic and environmental components. Certain people are genetically predisposed to asthma and allergies. However, the rapid increase in asthma rates in recent years cannot be explained by genetic causes alone, as genetic changes require many generations for population-wide effects to occur, and because asthma rates are increasing among people without family histories of asthma and allergies. There is clearly a significant environmental component to the rise in asthma rate.

Although no single study can conclusively prove that a certain pesticide causes asthma, numerous studies have found compelling evidence that exposure to pesticides is correlated with higher rates of asthma. One research focus has been on farmers and pesticide applicators, groups typically exposed to higher levels of pesticides than the average population. Many studies have shown that this population has higher rates of asthma and other respiratory problems due to their use of pesticides. Yet occupational pesticide exposure is only one piece of the puzzle—household and community exposure to pesticides can also lead to respiratory problems. An early study done in the 1960s in Hawaii found that frequent household use of insecticides is correlated with an increased prevalence of respiratory disorders, including asthma and chronic bronchitis. The majority of the pesticides used were bug sprays for mosquitoes, flies, and cockroaches.

“Epidemiologic studies suggest that children with asthma may breathe easier if they are exposed to fewer pesticides at home and at school. And parents and school administrators may breathe easier knowing that they are not harming the children’s developing nervous systems.”

Dr. Ruth Etzel, MD, PhD, George Washington University School of Public Health and Health Services.

A 2003 study of over 3,000 Lebanese children similarly found that pesticide exposures—including home and garden pesticide use, occupational use by a household member, and living in proximity to a treated field—were correlated with chronic respiratory disease and symptoms, and particularly with asthma. The researchers hypothesized that exposure to pesticides, which are often small, irritating molecules, aggravate the airways of those with hypersensitized lungs (such as people with asthma). In children without previous respiratory problems, pesticides overwhelm the cells’ ability to detoxify chemicals, or cause immune and muscular effects, all of which can lead to respiratory problems.

A landmark study done in 2004 shows that not only do environmental exposures lead to above-average asthma rates among children, but that timing of exposure is crucial. The researchers studied over 4000 school-aged children in California and discovered that children exposed to herbicides during their first year of life are four and a half times more likely to be diagnosed with asthma before the age of five; toddlers exposed to insecticides are more than twice as likely to get asthma. This study further clarifies the fact that young infants and toddlers are most susceptible to the harmful effects of pesticides on the respiratory system.

Pesticides can trigger asthma attacks

In addition to being an underlying cause of asthma, pesticides can also trigger asthma attacks in those who already suffer from the disease. Asthma is characterized by excessive sensitivity of the lungs to various stimuli, which can trigger asthma attacks, also called asthma episodes. The American Lung Association defines an asthma episode as “a series of events that result in narrowed airways,” which lead to breathing problems and the characteristic asthma “wheeze.” The series of events includes swelling of the lining, tightening of the muscle, and increased secretion of mucus in the airway. Asthma attacks are triggered by a number of things, including allergens, irritants, pesticides and other chemicals, air pollution, and vigorous exercise.

People with asthma are especially sensitive to pesticides and at risk of attacks when exposed to even small amounts. Most pesticides are small molecules that can exacerbate or aggravate asthma symptoms. Pesticides can trigger asthma attacks by increasing airway hyper-reactivity, which makes the airway

very sensitive to any allergen or stimulus. Hypersensitive lungs are a trademark feature of asthmatics. Subsequent exposure to a stimulus can cause an extreme reaction in a hyper-reactive airway. In these situations, researchers at Johns Hopkins University believe that pesticides alter the nerve function controlling the smooth muscle lining of the airway, causing the airway to contract and restrain airflow, which is exactly what occurs during an asthma attack. Pesticides can also trigger asthma attacks by damaging lung epithelial cells directly.

Specific pesticides linked to respiratory problems

Not all pesticides are associated with asthma, but many are. Of 30 commonly used lawn pesticides, 27 are sensitizers or irritants, and therefore have the potential to trigger asthma attacks, exacerbate asthma, or lead to a higher risk of developing asthma. Similarly, 39 of the 48 pesticides commonly used in schools are sensitizers or irritants. The following is a list of some commonly used pesticides and how they contribute to asthma:

Insecticides:

- **Pyrethrum and Pyrethrins:** Pyrethrum and pyrethrins are insecticides made from crude extracts from plants in the chrysanthemum family. Crude extracts contain impurities, which can be allergenic or otherwise irritating. Pyrethrum has been known since the 1930s to cause allergies, asthma, sensitization, and respiratory irritation. Pyrethrins are more purified versions of these extracts that still contain small amounts of impurities that may cause allergic reactions, asthma symptoms, and sensitization in individuals exposed. Pyrethrum and pyrethrin products are typically formulated with piperonyl butoxide (PBO), a synergist that reduces the ability of both insects and humans to detoxify pesticides. Inhaling PBO can cause labored breathing and an accumulation of fluids in the lungs.
- **Synthetic pyrethroids (Permethrin, Cypermethrin, Cyfluthrin, Sumithrin, Resmethrin):** Synthetic pyrethroids are synthetic versions of pyrethrum, designed to be more toxic and longer lasting. They are a heavily used class of insecticides for control of cockroaches, termites, mosquitoes, fleas, and scabies. Exposure to synthetic pyrethroids can cause hypersensitization. Material safety data sheets often warn that, “persons with a history of asthma, emphysema, or hyperactive airways disease may be more susceptible to overexposure.” Synthetic pyrethroids are also commonly formulated with PBO.
- **Organophosphates (Chlorpyrifos, Diazinon, Malathion, Methyl Parathion):** Organophosphates (OP) are a widely used class of pesticides, applied in houses for termite control, in communities for mosquito spraying, in agriculture, and lawns and landscapes. Together, this class accounts for approximately half of all insecticides sold in

the U.S. OPs act as cholinesterase inhibitors, which means that exposure to these pesticides can cause weakness of the respiratory muscles, broncho-constriction, bronchial secretions, wheezing, and respiratory distress. Children are especially vulnerable to OPs, and reactions can occur at very low concentrations. Exposure to OPs causes both short and long-term respiratory health effects.

- **Carbamates (Carbaryl, Bendiocarb, Aldicarb, Carbofuran):** Carbamates are another class of insecticides widely used in homes, gardens, and agriculture. Carbaryl (Sevin) is the most common carbamate and one of the most heavily used pesticides in the country. A study on hazardous air pollutants labeled carbaryl as “a compound that evokes asthma symptoms and has documented case reports in the medical literature associating exposure with asthma.” Like OPs, carbamate exposure causes cholinesterase inhibition, which causes airway constriction and respiratory problems.

Herbicides

- **Glyphosate (Round-up):** Glyphosate is one of the most commonly used pesticides on lawns and landscapes. Exposure to glyphosate can cause asthma-like symptoms and breathing difficulty. Studies have linked “inert” ingredients in Round-up, one of the most common formulations of glyphosate, to pneumonia, excess fluid in the lungs, and damage to mucous membrane tissues and the upper respiratory tract.
- **2,4-D and Chlorophenoxy Herbicides:** According to EPA’s latest data, 2,4-D, an herbicide used on lawns and landscapes, is the most commonly used pesticide in homes and gardens in the U.S. Chlorophenoxy compounds such as 2,4-D are moderately irritating to respiratory linings and may cause coughing. Exposure to 2,4-D may aggravate respiratory conditions and trigger an asthma attack. 2,4-D products are often formulated with the herbicides mecoprop and dicamba, which are also chlorophenoxy herbicides, and thus respiratory irritants. Products that use all three of these active ingredients often contain the warning, “Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis.”
- **Atrazine:** Atrazine is used on lawns, landscapes, golf courses, and agriculture. Use of atrazine by a large group of pesticide applicators is correlated with wheezing. Additionally, exposure to atrazine may cause an increased respiratory rate and lung congestion.

Fungicides

- **Fungicides:** A number of different fungicides have been shown to cause cases of occupational asthma among workers, including the fungicides chlorothalonil, fluazinam, and captafol. Researchers found that these fungicides cause hypersensitivity responses in workers, causing their

airways to be highly sensitive and reactive to the inhaled fungicides, resulting in wheezing and breathlessness.

Demographics of asthma

Not all regions of the United States have the same levels of asthma prevalence. For example, while around 12.5% of children nationwide have asthma, in New York City, the number of children who have experienced asthma symptoms is 17%. In Harlem, that number rises to over 30%.

Although rural and agricultural areas are often assumed to have the highest levels of pesticide use, this is not always the case. A 1997 study found that in New York State the heaviest use of pesticides statewide was in the most urban counties—Manhattan and Brooklyn. Urban areas have higher asthma rates for a number of reasons, including higher levels of air pollution, both indoor and outdoor, heavy traffic dust and fumes, indoor pests, and, surprisingly, higher levels of pesticide use. Children who live in poverty in inner cities are the highest at risk, as they live in crowded, inadequate housing where poor conditions lead to a high risk of both exposure to cockroaches and other pests as well as to the chemical pesticides used to control the pests. Anecdotal reports show that as more people have learned of the link between cockroaches and asthma, domestic pesticide use has increased. Additionally, most housing projects are routinely sprayed with insecticides.

The Cockroach Conundrum

High rates of childhood asthma are often attributed to exposure to cockroach allergens. A study of 476 asthmatic children from eight U.S. cities found that 85% of their bedrooms have cockroach allergens. When people learn that cockroaches cause asthma, their first response is often to use toxic pesticides to kill the roaches. However, using pesticides to control cockroach infestations may only make conditions worse for someone suffering from asthma.

Tips for preventing cockroaches and asthma

- Remove all food waste and keep food in airtight containers.
- Limit the spread of food around the house.
- Eliminate potential water sources, such as leaky faucets and pipes.
- Caulk and seal all cracks and crevices.
- Vacuum frequently and intensively.
- Monitor populations using sticky-traps.
- In the event of infestation, use boric acid bait stations.

In addition to being more common in urban areas, asthma rates are also disproportionately high among people-of-color populations, especially in African-American and Latino communities. Studies show that asthma-related hospitalization rates are four times higher and the African-American asthma death rate is double that of Caucasians. Geographic differences also account for variations in asthma rates around the country.

What you can do

Asthma is a serious epidemic that is not going to disappear on its own. Parents with young children, whether they have asthma or not, should limit their exposures to pesticides in the home, school, and community. This is especially imperative for people who have been diagnosed with asthma and other respiratory problems. The following are some of the things you can do to reduce the risk of asthma.

- **Home:** According to an EPA study, around 85% of total daily exposure to airborne pesticides comes from breathing air inside the home. Avoid applying pesticides indoors. If you have a pest problem, try alternative measures such as temperature treatment, biological controls, and least-toxic baits instead of those pesticides. Vacuum carpets frequently and intensively to reduce allergens. Avoid spraying lawns and gardens with pesticides. If you have a house pet, when controlling fleas, steer clear of insecticide sprays and shampoos by requesting injections or pills.
- **Schools:** Children spend an average of 30 hours a week—more than 25 percent of their waking hours—at school. Unfortunately, the use of pesticides in schools is widespread. Pesticides are used throughout schools—in classrooms, cafeterias, playgrounds, playing fields, and school lawns. In order to protect children's health, pesticide use in schools must be reduced. If your child has asthma, request that you be notified whenever pesticides will be applied on school grounds. Encourage your school to adapt management techniques that eliminate pesticide reliance. Students suffering from asthma triggered by pesticides or uncontrolled pest populations may be able to use the *Americans With Disabilities Act* (ADA) to require school to provide reduced-chemical, effective pest control.
- **Office Building:** Children are not the only ones affected by asthma. Adults spend most of their time in office buildings, and surveys indicate that on average, 40-55% of office occupants experience "sick building symptoms" which include headache, cough, wheezing, and fatigue on a weekly basis. Talk to your employer about non-toxic management techniques and reducing pesticide use. A case under ADA may apply if the employer or pest management company is unresponsive to your requests.

For a fully cited version of this article, or to order full-color brochures to distribute, contact Beyond Pesticides.

Court Weighs in on Organic Integrity

The organic label gets a check up

By Jay Feldman

Do organic consumers think there are synthetic ingredients in processed food labeled organic? It turns out, not surprisingly, that an overwhelming majority does not. And, the First Circuit Court of Appeals ruled that the law does not allow it. The ruling came on January 26, 2005, with the final judgment and order on June 9, 2005. Beyond Pesticides and major environmental, consumer and farm groups submitted friend of the court briefs to support Maine blueberry farmer and organic inspector, Arthur Harvey, who filed the lawsuit (*Harvey v. USDA*) in October 2002, just days after the U.S. Department of Agriculture (USDA) issued the final organic rule.

A truth and labeling law

The group of consumers, farmers and processors that sat down to construct the *Organic Foods Production Act* (OFPA), of which I was a part, helped codify the belief that the Act was intended to be a truth and labeling law (in addition to a production standards law), that clearly describes the contents of the product and offers consumers and organic producers an opportunity to support production systems that strive to incorporate the greatest percentage possible of organic ingredients. It was understood at the time that it would be difficult to process many products with all organic ingredients, but if the product was to display the premium “gold standard” USDA organic product seal, its ingredients must be no less than 95% organically produced, allowing 5% to be natural, but not organically produced.

Recognizing that not all foods could meet this standard, the group created other categories of labeling that would enable consumers to buy the best available, to support organic to the extent or degree that product could be produced organically. So, it created other labeling categories that enable consumers to determine the organic ingredient content of the product.

Through the regulatory process, as the nation focused on the so-call “big three” issues that drew the second highest number of public comments on a federal rulemaking in the government’s history—when USDA proposed allowing sewage sludge, irradiation and genetically engineered ingredients in organic food—the issue of labeling dropped from public attention. The result was a rule that rejected the “big three,” but allowed synthetic ingredients in the 5% portion of products labeled organic.

Consumers Union on synthetics

Consumers Union released in June 2005 its nationwide survey results of 1200 U.S. adults who were queried about their current expectation of whether artificial ingredients (their lay term for “synthetic”) were contained in food labeled as “organic” or “made with organic.” (See <http://www.eco-labels.org>).



The results are instructive.

- 46% of consumers buy “organic” food products, the highest number ever.
- 85% of consumers say they do not expect food labeled as “organic” to contain artificial ingredients.
- 74% of consumers say they do not expect food labeled as “made with organic” to contain artificial ingredients. (The “made with organic” label provision of OFPA allows the use of synthetic ingredients in the 30% non-organic portion of the product, but does not allow the use of the organic seal).

Consumers Union concludes:

- USDA should act swiftly to implement the ruling of the court prohibiting the use of synthetic ingredients in food labeled “organic.”
- The public needs to be better informed about the classes of organic labels.

The organic food production law has been a tremendous success. It helped move organic from being marginalized by proponents of chemical-intensive agriculture to a \$20 billion dollar industry that has rejected toxic chemical use and provided benefits to farmers, farmworkers, consumers and the environment. Groups like Beyond Pesticides point to organic as the solution to the pesticide problem. That is why advocates for organic believe it is so important to maintain the clarity of the label and not muddy the meaning of organic by allowing synthetic ingredients to be added.

Implementing the court decision

On June 23, 2005, six agriculture, retail and food safety groups, including Beyond Pesticides, petitioned USDA for a number of regulatory changes designed to ensure the long-term integrity of the organic label, to create an equitable and consistent standard that aids dairy farmer transition to organic, and to bring the current National Organic Program (NOP) regulations into compliance with the federal court's January 2005 ruling. (To see a copy of the petition, go to www.beyondpesticides.org/organicfood.)

"The *Organic Foods Production Act* is strong as it stands and needs to be defended against weakening through interpretation or unwarranted tinkering," said Joseph Mendelson, legal director for Center for Food Safety. "

Having initially lost on all counts, Mr. Harvey prevailed in January 2005 when the Court of Appeals ruled in his favor on the following three counts:

- Synthetic substances are not permitted in processing of items labeled as "organic," and only allowed in the "made with organic" labeling category.
- Provisions allowing up to 20-percent non-organic feed in the first nine months of a dairy herd's one-year conversion to organic production are not permitted, citing the law's requirement for 100 percent organic feed for one-year.
- All exemptions for the use of non-organic products "not commercially available in organic form" must be reviewed by National Organic Standards Board, and certifiers must review the operator's attempt to source organic.

"Both consumers and retailers whom we represent view the outcome of the Harvey lawsuit as an opportunity to strengthen the regulations within the USDA's National Organic Program and to further differentiate organic products in the marketplace," noted Robynn Shrader of the National Cooperative Grocers Association.

Michael Sligh, from Rural Advancement Foundation International, and founding chair of the USDA's National Organic Standards Board, concluded, "We believe that consumer and farmer rights and expectations under OFPA should be preserved and defended, and that the organic industry must be willing to adopt practices that maintain the integrity, high standards, and market viability of the organic label in the long term."

Under the court order, USDA has two years to bring the regulations into compliance with the law, 12 months to publish a proposed rule change and 12 months to go to final implementation.

The future

The public interest community is united in the position that the existing law can and should work. However, the organic

industry represented by the Organic Trade Association (OTA) has chosen not to join the consumer-farmer petition. OTA's website does not disclose the association's position. When the court decision came down in January, OTA stated that it would continue to help grow the organic market. "The court decision may hamper that growth rate in the short term, but OTA is optimistic that its members and others in the organic community can pull together to maintain the momentum for organic agriculture," said Katherine DiMatteo, OTA's executive director. However, in a piece prepared more recently by OTA

for distribution throughout the organic industry, the association writes, "[The court decision] will result in fewer market opportunities for organic farmers, and consumers will find significantly fewer products with 95 percent or more organic ingredients on store shelves." OTA believes food companies that use synthetic ingredients and lose the use of the USDA organic seal will choose to increase the percentage of non-organic ingredients in their products, rather than continue to use as much organic ingredient as possible and adopt new labeling to notify consumers about the percentage of organic ingredients. Others in the industry are talking about changing the law to allow synthetic materials in processed food labeled organic and have raised the subject with members of Congress.

Those who have worked with organic policy from the Act's inception are hoping that over the long timeframe of the court order, the industry can adjust to the spirit and intent of the statute in a manner that does not cause any economic harm or economic dislocation and that meets consumers' expectations. The beauty of OFPA is that not only do people get food that they want, but they get to support a land production system that incorporates their values. The court decision has provided an opportunity to build on the core values that gave birth to the organic movement and will help it grow into the future.

To support the petition, contact Beyond Pesticides (info@beyondpesticides.org) indicating your support, name, address, email, and organization (if any). Also, contact the OTA and ask the association to support the petition—Katherine DiMatteo, Executive Director, OTA, PO Box 547 Greenfield MA 01302, 413-774-7511, Ext. 17, info@ota.com.

Two amicus briefs were filed in the case: One was filed by Beyond Pesticides, Center for Food Safety (CFS) and Rural Advancement Foundation International USA, with legal representation from the Farmers' Legal Action Group and CSE. The second was filed by Organic Consumer's Association, Public Citizen, Sierra Club, Northeast Organic Farming Association (Massachusetts Chapter), Greenpeace USA, Waterkeeper Alliance, Merrill and John Clark (Roseland Organic Farms) and others, with legal representation from James Handley, Handley Environmental Law.

For more information, contact: Jay Feldman, Beyond Pesticides, jfeldman@beyondpesticides.org, 202-543-5450.



A Worm in the Teacher's Apple: Protecting America's School Children from Pests and Pesticides

Marc L. Lame, Ph.D. (Bloomington, IN: Author House, 2005, 238pp; \$15 paperback at www.authorhouse.com/bookstore, 888-519-5121).

If you run into Marc Lame and describe a school that says it is doing Integrated Pest Management (IPM), his response will probably be "Horse Pucky." He knows from experience that they're probably not doing it correctly. Dr. Lame, an entomologist by training, a professor at Indiana University in Bloomington, and a father, tells it like he sees it. And he just doesn't see a lot of adequately trained practitioners doing real IPM. This book is a gutsy treatise and a serious handbook (divided into four parts—the problem, solutions, implementation and tools) describing how to do Marc Lame's IPM. IPM, according to Dr. Lame, is a cluster of technologies (cultural, mechanical, biological, genetic, and chemical) which is an integrated application (based on biological information) designed to allow humans to compete with other species (pests). While the author wants to assure his readers that he is not against the use of all pesticides, the book is filled with straightforward statements like "[Y]ou don't have to kill pests when you can prevent pests," and "[U]necessary [pesticide] use is in large part due to the fear tactics used by [the] industry to promote pesticide use." Dr. Lame documents his experiences with the development of a model IPM program in Monroe County (IN) Community School Corporation, which resulted in cost savings for the district. Dr. Lame identifies the important roles of those in the school community, the importance of activists, and the need for "demand-side IPM." While this book gives important perspective to the politics of pesticides from the viewpoint of a practitioner and advocates the adoption of practices to manage pests, in this bold book the author shies away from identifying unacceptable pesticides in an IPM system. Dr. Lame tells his

readers the warning signs that an "exterminator" rather than a "pest management professional" is at your door:"(i) They first come to your facility carrying a spray can; (ii) They don't carry or use a flashlight and notebook; (iii) They can't (won't) tell you the name and/or active ingredients of the pesticides they are using; (iv) They don't take the time to point out conducive conditions or give you instructions for their remediation; and, (v) They are working under their manager's pest control operator license." Lucky for us that Marc Lame did not heed the words in 1981 of his first boss, a County Extension Director in Arizona, who said, "Marc, you go out there and tell those boys what insecticide to use, but don't start that IPM crap. IPM is communism." —Jay Feldman



A Poisoning in Eden: The Political and Environmental Terrorism of Our American Government

Toxie Myers. Xlibris Corporation, 2005. 229 pages. \$18.69 paperback www.xlibris.com, orders@xlibris.com, 888-795-4274)

Toxie Myers exposes a web of government malevolence as he passionately details his personal struggle with pesticide reform and regulatory agencies. Mr. Myers' community, Pinole California, was poisoned by an illegal dumping site for wood treated with the deadly pentachlorophenol, a known carcinogen and dioxin. One of the few to even notice and take action, Mr. Myers uses this book to record his numerous encounters with local officials and higher echelons and their underhanded deeds. The reader is caught up in his gripping experiences: encounters with local investigators, police, and the EPA, all of whom respond to his pleas

with lies, apathy, and attempts to cover up the problem. On top of all this Mr. Myers endures several personal assaults. *A Poisoning In Eden* reads like a John Grisham thriller, but the realization that these stories are a horrifying reality hits the reader with immense impact and drives home the desperate need for change. Mr. Myers weaves a web of tragedies, interspersing his story with the experiences of others across the country. Through these experiences, he reveals an overarching problem of inadequate regulatory protection and corrupt practices that permeate the nation. He outlines the problems with the government and shows how they impact not only environmental issues, but how they are interrelated with the other social problems that face the nation. —Mary Ward



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- Beyond Pesticides' Praying Mantis T-shirt. Printed on slate blue, 100% organic cotton with soy ink. Sizes S-XL. \$15 each; 2 for \$25.

Books

- A Failure to Protect*. Landmark study of federal government pesticide use and pest management practices. \$23.00. *Summary and Overview* \$5.00.
- Unnecessary Risks: The Benefit Side of the Risk-Benefit Equation*. Explains how the EPA's Risk-Benefit Analyses falsely assume the need for high-risk pesticides, how "benefits" are inflated, how alternatives might be assessed, and the public's right to ask more from its regulators. \$10.00.
- 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
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