# Pesticides and You

News from Beyond Pesticides: Protecting Health and the Environment with Science, Policy & Action

Volume 33, Number 4

Winter 2013-14

## Protecting Water Quality

**Through organic land management**

Also in this issue:

**Bees, Birds and Beneficials**

**Consumer Victory on Triclosan!**

**Care About Kids**


**The "Age of Organics"**

Advocates want the public to take back organic and build trust in the organic label

# Letter from Washington

## The Time to Act Is Now. . .Like Never Before; Stop the Attack on Organic

Your voice is needed now like never before! We and other organizations are launching a campaign to raise awareness and take action to protect the integrity of the organic food label. I'm hoping that you are as outraged as I am and will join me in defending organic against a shocking attack by the U.S. Department of Agriculture that threatens the value of the organic label and the future of organic. Ironically, this comes just as we enter what I believe is the Age of Organics, when more and more people are recognizing that chemical-intensive practices in agriculture and our communities is not sustainable and are moving in larger and larger numbers to embrace organic practices and products. If you eat organic food and understand what it means to your health and the health of the environment, I know you'll want to join me.

### Save Our Organic

I'm asking you as a member or friend of Beyond Pesticides to think about how you can help: voice your concern to your U.S. Representative and Senators, the companies whose organic products you buy, the places where you shop for organic products, and President Obama that they need to stand up and protect the transparent process that has built organic for over two decades.

Here is the simple and immediate action you can take. Go to the webpage *Save Our Organic* at www.beyondpesticides.org/SaveOurOrganic. Then, please read on, get the details, and become an activist with me in your community.

### What the USDA Takeover Means for Organic

The organic label and standards that support it are being threatened by a **USDA takeover and undermining** of the: (i) **independent public board** (National Organic Standards Board/NOSB) that was set up by Congress to oversee the setting of organic standards, (ii) **transparent and democratic public participation policies** and procedures in decision making, and (iii) **historical decisions that have limited synthetic materials** in organic production and food products, **protected biodiversity, and improved water quality and food safety.** USDA wants to control decisions on all organic standards, ignore core values and principles that ensure rigorous public review of any synthetics that are permitted, and put economic interests ahead of health and environmental values that protect biodiversity. If public trust in the organic label is undermined, so is the incredibly important transition to organic nationwide that you and I have supported and want to see grow to become the norm.

It is not an accident that this issue of *Pesticides and You* extols the virtues of organic production and warning of its possible demise. The data is clear. Organic does offer us a cleaner environment, safer and more nutritious food supply, less dependency on fossil fuels and water, and increased carbon sequestration in slowing global climate change. However, this USDA takeover of the standard-setting process could, if successful, reverse decades of work to build a credible, respected, and accountable organic label.

### Keep Organic Continuously Improving

As I begin my fifth and final year as an environmental and conservation representative on the National Organic Standards Board, I am honored to be a part of an independent board, reliant on public, farmer, and scientific input to recommend policies that set a moratorium on nanotechnology, prohibit soil-less hydroponics, keep synthetics out of infant formula, require organic hops in organic beer, take antibiotics out of organic apple and pear production, advance organic beekeeping, allow greater limitations on synthetics deemed unnecessary, take hazardous secret inert ingredients out of allowed materials, and advance organic systems management practices. As the NOSB and public began to advance recommendations that asked USDA to stop allowing genetic drift from genetically engineered crops onto organic lands, and increase standards to keep contaminants out of compost, the public minutes of meetings reveal that USDA began to curtail the independence of the NOSB – removing from the workplan issues the public asked the NOSB to address. This is being done without public discussion and established published criteria or standards of review.

In an interview with the Burlington Free Press (VT), an NOSB consumer representative, Jean Richardson, emeritus professor of environmental studies and environmental law at the University of Vermont, said, "We're there to provide checks and balances. . .We're the voice of the people." According to the Free Press, which cited a USDA-called NOSB meeting in February, "[S]he said administrators at the National Organic Program 'thoroughly lectured' the 15-member advisory board for acting with too much independence. . .[and she] found the NOP's dressing-down disconcerting."

### The Time to Act Is Now

The agenda for the upcoming NOSB meeting in San Antonio Texas on April 29 – May 2 has been severely restricted by USDA action, but it will be an opportunity, through comments to the *Federal Register* at www.regulations.gov and at the meeting, to voice your concerns about the government takeover of organic standards.

If you feel, as I do, that organic offers us a way forward to define a sustainable future and say no to toxic chemicals that invade our lives, please join me in telling USDA to restore the independence of the NOSB, the public participation process in standard setting, and the integrity of the organic label to one that is trusted by a growing number of organic consumers.

Beyond Pesticides' members supported the core values and principles that we wrote into the organic law and its implementation. Now we must protect the organic label. Let's make our voices heard!

Jay Feldman is Executive Director of Beyond Pesticides.

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**Pesticides and You** © 2014 (ISSN 0896-7253) is published 4 times a year by Beyond Pesticides. Beyond Pesticides, founded in 1981 as the National Coalition Against the Misuse of Pesticides (NCAMP), is a voice for health and the environment, promoting protection from pesticides and safe alternatives; donations are tax-deductible.



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## Managing Mold Safely

*I've got what is turning out to be a significant mold problem in my house. Some of the companies I've contacted mentioned using chemicals, including bleach, to clean up the mold. I'm sensitive to chemicals and would prefer some alternative or least-toxic solutions. Do you have any ideas?*
*-Megan*

Megan,
Excess moisture is the main cause of mold problems in homes, so your first step is to identify the source of this moisture. Molds can grow just about anywhere, but places to look include, for example, leaky faucets or bathtubs, cracked chimneys, loose windows or door frames, or clogged gutters. Be aware, though, that mold can also hide behind drywall or wallpaper, on furniture, inside duct work, or in between the shingles on your roof.

*This photo of a bedroom after a roof leak during a minor storm shows significant mold damage that likely requires structural fixes, such as roof repair and replacing damaged materials. Photo by Infrogmation.*

Once you identify the source, minimize exposure by beginning the clean-up process as soon as possible. Many people are allergic to mold, so exposure can cause runny nose and irritation of the eyes, skin, or throat, or even trigger asthma attacks in asthmatics.

The U.S. Environmental Protection Agency (EPA) states that moldy areas less than 10 square feet can generally be handled by homeowners, but larger mold problems should be discussed with an expert. If your mold problem is manageable, cleaning up as much as possible and eliminating the source of moisture should yield good results. When cleaning, take protective measures to avoid exposure by suiting up in goggles, mid-arm length gloves, long sleeves and pants. To avoid inhaling spores, you can find respirators designed to protect against mold at most hardware stores for under $20. And, to avoid spreading the mold to other areas, hang up some plastic sheeting to contain the spores.

Then, break out the elbow grease, grab a non-toxic detergent (Seventh Generation) and a stiff brush and get cleaning! EPA doesn't recommend using biocides such as chlorine bleach for routine mold clean-up, and you should surely avoid using any fungicides as they are dangerous and not necessary. Continue to check back after cleaning to make sure there is not additional mold growth. You'll never get every last mold spore, but if you've cleaned thoroughly and eliminated the moisture source, the musty smell, and ill health effects should fade away.

Now, if your mold problem is too large to handle on your own, or might require construction, make sure to find an experienced professional to address the problem. Experts advise homeowners to ask for five references from any company you hire, and make sure they have professional certifications that you can verify. We hope that helps you get started. More information on mold remediation can be found on Beyond Pesticides' "When Mold Attacks" fact sheet http://bit.ly/MoldAttacks.

## BEE Compassionate

*Hello,*
*This is the first day of my declaration to use my semi-retirement status to do what I can to save the bees. I am planning on putting together a group of like-minded people to help me do flash mob type stuff in front of retailers who are selling pesticides. I want to create a post card that on one side has the facts regarding pesticide use and on the other side what the normal person can do to help save the bees. I feel that if we have no bees that we as a species may be done for. Please let me know if there is something already in existence like the handout I have described.*
*-Kathleen*

## Share With Us!

Beyond Pesticides welcomes your questions, comments or concerns. Have something you'd like to share or ask us? We'd like to know! If we think something might be particularly useful for others, we will print your comments in this section. Mail will be edited for length and clarity, and we will not publish your contact information. There are many ways you can contact us: Send us an email at info@beyondpesticides.org; give us a call at 202-543-5450, or simply send questions and comments to: 701 E Street SE, Washington, DC 20003.

Kathleen,
That is a great idea! Thank you for contacting us and sharing your concern about pollinators. We hope you'll take videos/pictures of your flash mob and share them with us via Twitter (@bpncamp) or Facebook (www.facebook.com/beyondpesticides)!

We have a number of handouts that are similar to what you're describing on our BEE Protective (bit.ly/BEEProtective) webpage. Our bi-fold "Pollinators and Pesticides" handout (bit.ly/pollinatorspesticides) should be an excellent resource for you, as it provides an overview of the devastating ways pesticides affect these important beneficial species. For example, while bee decline has been linked to the application of neonicotinoid insecticides, the decline of monarch butterflies has been associated with widespread use of the herbicide glyphosate, the active ingredient in Roundup, in and around crops that are genetically modified to withstand the chemical.

As the handout discusses, in order to ensure a healthy and diverse pollinator community, we must take a multifaceted approach. Beyond Pesticides encourages the adoption of organic agriculture and pest management as the only long-term solution to the pollinator crisis. Supporting and strengthening organic practices is an answer that individuals, communities, and government officials at every level can rally behind and move toward today.

Individuals can buy organic produce and plant backyard gardens that increase pollinator habitat and food, communities can sponsor local gardening and beekeeping workshops, educate their residents, and support ordinances that ban unnecessary pesticide use, and government officials can ensure pollinator safety by adopting laws that focus on a precautionary approach to pest management.

Organic practices emphasize natural systems, so every 'input' (product) added into the system must take into account any possible adverse impacts on the environment, and the potential to use least-toxic alternatives. We can turn the tide on the crisis with honey bees and other pollinators not only by banning certain chemicals, but also strengthening systems that do not rely on their use.

## From the Web

*Beyond Pesticides' Daily News Blog features a post each weekday on the health and environmental hazards of pesticides, pesticide regulation and policy, pesticide alternatives and cutting-edge science, www.beyondpesticides.org/daily news blog. Want to get in on the conversation? Become a "fan" by "liking" us on Facebook, www.facebook.com/beyondpesticides, or send us a "tweet" on Twitter, @bpncamp!*

### Fed To Require Strengthened State Protection from Non-point Pesticide Pollution

*Excerpt from Beyond Pesticides' original blog post (1/2/2014): The Environmental Protection Agency (EPA) and the National Oceanic and Atmospheric Administration (NOAA) in a Federal Register notice have found that the state of Oregon's program to reduce non-point coastal pollution is inadequate.*

**Lisa Arkin, Executive Director of Beyond Toxics, comments:**

"Thank you so much for writing this in-depth blog about the report recently released by Beyond Toxics on forestry practices and the harmful use of aerial pesticide sprays. It is time to end the Vietnam-style practice of using helicopters to spray 2,4-D and atrazine over the entire commercial forest landscape.

Bravo to Beyond Pesticides for seeing the connection between the EPA's disapproval of Oregon's non-point pollution programs and the conclusions of the Beyond Toxics report!"

### Flight Attendant Links Airline Insecticide Use to His Parkinson's

*Excerpt from Beyond Pesticides' original blog post (12/11/2013): A former flight attendant for Australian-based Quantas airlines is suing the Australian government, claiming that frequent insecticide use in airplane cabins resulted in his Parkinson's disease diagnosis.*

**Stacie O. comments via Facebook:**

"They did this on the international flights between U.S. and Brazil. Also, they said it was an air freshener, but I had my doubts... The spray would land in our drinks and food as the flight attendant walked by spraying it."

## USDA Calls for Deregulation of 2,4-D Tolerant GE Crops

The U.S. Department of Agriculture (USDA) announced a January 3–March 11 public comment period on its Draft Environmental Impact Statement (DEIS), which calls for the deregulation of corn and soybeans that are genetically engineered (GE) to be tolerant to the toxic herbicide 2,4-D. The GE crops are being produced by Dow AgroSciences under the brand name "Enlist." According to environmental scientists, these new varieties of GE corn and soybeans are set to usher in dramatic increases in the use of 2,4-D, with associated health and environmental hazards.

A key impetus behind the development of stacked varieties, such as "Enlist," is the increasing weed resistance resulting from proliferate use of glyphosate (Roundup) on other GE crops. In fact, glyphosate resistance is so widespread that EPA has granted emergency use exemptions for pesticides without registered uses in agriculture, like fluridone. One 2012 report shows that GE crops have been responsible for an increase of 404 million pounds of pesticides, or about 7%, in the U.S. over the first 16 years of commercial use of GE crops (1996-2011), which means that 2,4-D use is expected to increase drastically in GE fields.

The proposed deregulation of these GE crops is being met with criticism from farmers, environmentalists, and other concerned groups. Similar to previous decisions to deregulate other varieties of GE soybeans, alfalfa, and sugar beets, safety advocates charge that USDA fails to take into account several scientifically validated environmental concerns, such as the indiscriminate nature of GE gene flow among crops, a heavy reliance on faulty data, and a high degree of uncertainty in making safety determinations.

Deregulation of 2,4-D GE corn and soybeans also underplays the issue of 2,4-D drift that has been a documented problem to off-site locations, endangered species, and non-target crops, as well as the threat of dioxin contamination.

## FDA Moves to Limit Some Antibiotic Uses in Livestock

A new rule published by the Food and Drug Administration (FDA) will limit the ability of food producers to give livestock antibiotics for subtherapeutic purposes. These new regulations come after decades of pressure from environmental and public health groups to limit the nontherapeutic use of these drugs in animal production, because of a concern that FDA, in not regulating the use of antibiotics, placed the public at risk of increased pools of antibiotic-resistant superbugs.

These resistant superbugs threaten at least two million people each year and at least 23,000 people die annually as a direct result of these infections. Many more people die from other conditions that are complicated by an antibiotic-resistant infection.

FDA's new rules on antibiotics ask drug manufacturers to change the label of antibiotic drugs so that farmers will no longer be able to use them to promote the growth of livestock. Currently, subtherapeutic doses of penicillin and tetracycline are typically added directly into animal feed and water. The new rule also requires that licensed veterinarians supervise the use of antibiotics, meaning farmers and ranchers would have to obtain prescriptions to use the drugs for their animals. Currently, farmers can go to feed stores and buy antibiotics over the counter with no regulatory oversight.

Though these new FDA rules are an important step forward to better regulate the use of antibiotics, critics argue that loopholes within the rules could limit their effectiveness. It's possible that producers could be able to keep using the same low doses of antibiotics and claim they are needed to keep animals from getting sick.

According to U.S. Representative Louise M. Slaughter (D-NY), sponsor of the *Preservation of Antibiotics for Medical Treatment Act,* H.R. 1150, (sponsored by Sen. Diane Feinstein (D-CA) in the U.S. Senate, in S.1256), the European Union tried to stop companies from using antibiotics to make farm animals bigger, and companies continued to use antibiotics for disease prevention. She said antibiotic use only declined in countries like the Netherlands when they instituted limits on total use and fines for noncompliance.

# EPA Appoints Public Interest Scientist to Oversee Scientific Integrity

The U.S. Environmental Protection Agency (EPA) has tapped a senior scientist at a nonprofit watchdog group to head the agency's internal scientific integrity program. Francesca Grifo, PhD, former senior scientist and director of the Union of Concerned Scientists' (UCS) scientific integrity program, is EPA's new scientific integrity official. She is tasked with overseeing the agency's transparency and ethical policy.

In her new post, Dr. Grifo will be working in the agency's Office of Research and Development, where her duties include ensuring that EPA complies with scientific integrity standards and overseeing the agency's scientific integrity committee. EPA recently developed an agency-wide policy that addresses the promotion of scientific ethical standards, including quality standards, public communications, advisory committees and peer review. Many believe this appointment will help EPA stay ahead of the curve in upholding its commitment to science, which plays a critical role in the agency's stewardship of public and environmental health.

Dr. Grifo co-authored a UCS report in 2008, *Interference at EPA: Science and Policies at the U.S. Environmental Protection Agency*, which found that over 50 percent of staff scientists reported that they experienced political interference in their work. This report also revealed that EPA scientists cannot freely communicate their findings to the media, public or colleagues, and that political interference is most pronounced in offices where scientists write regulations and conduct risk assessments that could lead to strengthened regulations.

In 2009, the Obama administration pledged to restore scientific integrity to federal policy making, but UCS and other public interest groups have kept up pressure on the White House and agencies, citing remaining weaknesses in federal programs. Beyond Pesticides' *Transforming Government's Approach to Regulating Pesticides to Protect Public Health and the Environment* urged the Obama administration to increase protections for human health and environment through improved scientific integrity and transparency.

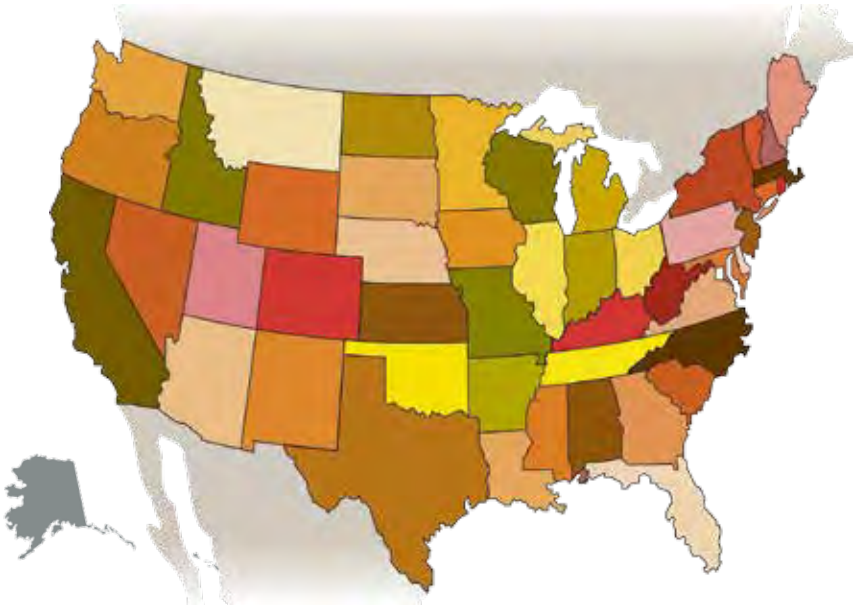
## Unregulated Contaminants Found Widespread in U.S. Drinking Water

A recent survey conducted by researchers at the U.S. Geologic Survey (USGS) and the U.S. Environmental Protection Agency (EPA) found traces of 18 unregulated chemicals in drinking water from more than one-third of U.S. water utilities. Of the 21 total chemicals found, researchers discovered among them 11 perfluorinated chemicals, an herbicide, two solvents, caffeine, an antibacterial chemical, a metal, and an antidepressant. 113 of the 251 chemicals, bacteria, viruses, and microbes measured were detected in drinking water in less than a third of the utilities.

Federal researchers took samples from 25 U.S. utilities from around the nation that voluntarily participated in the study, providing samples of treated and untreated water. Disturbingly, 18 of the chemicals found are not regulated under the *Safe Drinking Water Act*, meaning utility companies are not required to treat, limit, or even monitor for their presence.

"The good news is the concentrations are generally pretty low," said USGS research hydrologist Dana Kolpin, PhD to *Environmental Health News*. "But," he continued, "there's still the unknown. Are there long-term consequences of low-level exposure to these chemicals?"

Unfortunately, regulations that protect U.S. waterways from chemical contamination have been attacked by industry groups and Congress. Under the *Clean Water Act* (CWA), pesticide users who spray over waterways must have a National Pollutant Discharge Elimination System (NPDES) permit. This requirement lets authorities know what and when chemicals are sprayed. However, since the NPDES requirement for pesticide use in 2011, several pieces of legislation have been introduced in Congress that would eliminate these regulations.



## Maine GE Labeling Bill Signed

A requirement to label genetically engineered (GE) foods in the state of Maine is set to become law. The bill, LD718, "An act to protect Maine food consumers' right-to-know about genetically engineered food and seed stock," which was passed by the state legislature in July 2013, was signed into law by Governor Paul LePage (R-ME) on January 8.

The Maine Organic Farmers and Growers Association (MOFGA) praised the Maine law. "We are thrilled that Governor LePage has signed the GMO labeling bill," said MOFGA's executive director Ted Quaday. "The time was right for a diverse and collaborative effort to take hold and move the discussion forward. People want and have the right-to-know what's in their food." Maine is the second state —following the lead of Connecticut— to pass labeling requirements for GE foods.

Like Connecticut's newly passed law, Maine's GE bill contains a "trigger" clause, which means that the bill will only go into effect if five contiguous states, including the neighboring state of New Hampshire, approves a similar measure. The New Hampshire legislature will take up similar legislation this winter.

Governor LePage made a written promise in January 2013 to the people of Maine that he would sign the bill, however, it was unclear whether he would fulfill that commitment. Among his first major initiatives, the governor pledged to roll back stronger state laws on environmental quality to more lenient federal standards and halt the ban on bisphenol-A, an endocrine disruptor in baby bottles.

Mainers have expressed overwhelming support for legislation to label GE foods, with 91% favoring this legislation, according to a scientific Pan-Atlantic Poll conducted in the spring of 2013. Nationwide, 93% of people want foods containing GE ingredients labeled, and around 75% of consumers are worried about the effects of GE food on people's health, according to a *New York Times* poll.

## Protection from Non-point Pollution Weak

The Environmental Protection Agency (EPA) and the National Oceanic and Atmospheric Administration (NOAA) in a *Federal Register* notice have found that the state of Oregon's program to reduce nonpoint coastal pollution is inadequate.

EPA and NOAA's proposed disapproval action of Oregon's Coastal Nonpoint Program finds that the state has failed to adequately protect certain waterways within the state. Under the *Coastal Zone Act Reauthorization Amendments (CZARA) of 1990*, states are required to submit an approvable Costal Nonpoint Pollution Control Program to NOAA and EPA. In 1998, federal agencies approved the Oregon Nonpoint Program with conditions that the state address certain water pollution issues. This proposed disapproval action is part of a settlement of a lawsuit brought by the Northwest Environmental Advocates in 2009, which charged Oregon with failing to meet the conditions of the Oregon Nonpoint Program's approval.

One of the agencies findings is Oregon's forest practice rules, which require buffer zones for most pesticide applications, but do not address aerial applications of herbicides on non-fish bearing streams. These streams comprise a significant portion of the total stream length in the coastal nonpoint management area.

This proposed disapproval action comes just after Beyond Toxics released its report, *Oregon's Industrial Forests and Herbicide Use: A Case Study of Risk to People, Drinking Water and Salmon*, which is an in-depth analysis of industrial forestry pesticide application records for the State of Oregon. The report focuses on the use of herbicides on 184,320 acres of private industrial and state forestlands surrounding Triangle Lake, a rural area in western Lane County, Oregon.

## Two Minnesota Agencies Take Steps to Address Pollinator Decline

The Minnesota Department of Natural Resources (DNR) is developing guidelines to improve habitat for pollinator insects. Recent reports show that the planting of herbicide-resistant genetically engineered (GE) crops is responsible for habitat loss and the decline of native pollinators like the Monarch butterfly. The expansion of GE corn and soybean cropland has resulted in farmers killing milkweed, the primary source of food for Monarchs that historically grew between crop rows in the Midwest. A rapid expansion of farmland —more than 25 million new acres in the U.S. since 2007— has also eaten away grasslands and conservation reserves that supplied the Monarchs with milkweed. DNR officials have indicated this guide could change where grassland is burned or mowed, or add more plants as habitat for pollinators. DNR may also work in the future with the Minnesota Department of Transportation (MnDOT) to plant native wildflowers on roadside rights-of-way to increase pollinator habitat.

Meanwhile, the Minnesota Department of Agriculture (MDA) is developing a plan to study the impacts of neonicotinoid pesticides on pollinators. The specific risk that neonicotinoids pose to pollinators will be the focus of the review, which will include a summary of research into neonicotinoid hazards to a variety of pollinator species in crop production and garden/landscape settings, and the related risks to biodiversity maintenance and ecological balance in natural ecosystems. The review will also include an overview of the effects of residue accumulation in pollen, nectar, guttation droplets, and other pollinator exposure pathways associated with treated plants. According to MDA, special chemical reviews can take six months or more.

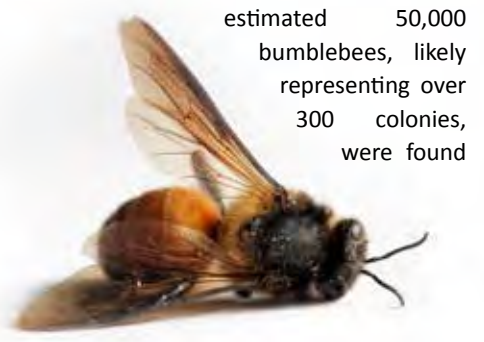
Critics of MDA's plan say that there is no more need to study the effects of neonicotinoids because the negative impacts they have on pollinators has already been studied extensively. Steve Ellis, owner of Old Mill Honey Co. in Minnesota, expressed his frustration in a *Public News Service* article: "We've already got 150 scientific papers that implicate the neonicotinoids in the bee decline. I'm not really sure we need more than that. It's time in the United States that we took action, and I would hope that the [MDA] would step up to the plate and become proactive."

## Oregon Bill To Restrict Home Use of Bee-Killing Pesticides Gutted

Legislation in Oregon that would have banned the use of four neonicotinoid pesticides for home and garden uses has been severely gutted, following push back from agricultural and nursery interests. Oregon state Representative Jeff Reardon (D-Portland) in early February introduced H.B. 4139, which would have added the neonicotinoid pesticides dinotefuran, imidacloprid, clothianidin and thiamethoxam to Oregon's restricted pesticide use list. Under Oregon's pesticide administrative rules, restricted use pesticides can only be applied by licensed pesticide applicators, and pesticide dealers are required to keep records of product sales of these pesticides and maintain sales records for at least three years.

The legislative panel has instead proposed an amendment that sets up a task force to examine the possibility of future restrictions, and requires Oregon State University, in collaboration with Oregon's Department of Agriculture (ODA), to develop best practices for chemical usage to minimize pollinator harm. The 10-member Task Force on Pollinator Health would examine current and potential pesticide regulations. The bill's stipulations fall short of strong legislation that would protect bees, receiving harsh criticism from beekeepers. The measure passed in the House February 14, and at the time of press is waiting on its third reading in the Senate.

The legislation comes after two massive bee deaths were recorded in two different Oregon towns in June. An estimated 50,000 bumblebees, likely representing over 300 colonies, were found dead or dying in Wilsonville –the largest known incident of bumblebee deaths recorded in the U.S. After a preliminary investigation, the Oregon Department of Agriculture (ODA) confirmed that the massive bee die-off was caused by the use of the insecticide dinotefuran. Then, it was reported by *The Oregonian* that hundreds of bees were found dead after the same pesticide was used in the neighboring town of Hillsboro.



After these massive bee die-offs, ODA placed temporary restrictions on the use of pesticides that contained dinotefuran. The rule applied to licensed applicators, making an application of dinotefuran a violation that could result in the revocation of an applicator's license or the imposition of a civil penalty. However, this past November ODA removed these temporary restrictions and limited the ban on the use of dinotefuran and clothianidin specifically to linden trees, basswood, and other trees of the *Tilia* genus.

## Agrichemical Companies Sue to Halt Kauai Restrictions of GE Crops

Agrichemical companies filed a lawsuit to stop Kauai County from moving ahead with its new law to restrict genetically engineered (GE) agriculture and toxic pesticide applications near schools, hospitals, homes, and shorelines. The lawsuit, which attempts to block implementation of Bill 2491 (it is currently set to go into effect mid-July), was filed in U.S. District Court on January 11 by agrichemical company giants DuPont, Syngenta, and Agrigenetics Inc., an affiliate of Dow Agrosciences. BASF joined the lawsuit February 7. The suit does not come as a complete surprise to concerned residents on the island because agrichemical companies threatened litigation as soon as the bill was introduced.

"The ordinance is invalid," Syngenta spokesman Paul Minehart told *Reuters*. "It arbitrarily targets our industry with burdensome and baseless restrictions on farming operations by attempting to regulate activities over which counties in Hawaii have no jurisdiction."

Bill 2491 mandates companies to establish reasonable buffer zones around sensitive sites in order to protect residents against the adverse impacts of pesticide drift.

These protections are intended to prevent incidents like the ones that occurred at Waimea Canyon Middle School in 2006 and 2007. After a number of complaints that pesticide sprayings were occurring while students were still in class, administrators and teachers sat down with Syngenta and secured an agreement from the company not to spray before school was out at 3:30 pm. Syngenta broke that promise, according to Maluhia Group, a coalition of Waimea Canyon Middle School staff, parents and community members. Hawaii's Department of Agriculture investigated the incidents, but came to the conclusion that *Cleome gynandra*, known on the islands as "stinkweed," was the main culprit. However, concerned residents are not convinced, as there have never been any recorded medical incidents associated with widespread poisoning by stinkweed.

As the first Hawaiian Island to pass restrictions on pesticides and GE agriculture, Kauai County saw an unprecedented outpouring of public support for Bill 2491. Despite numerous attempts by agrichemical companies to derail the bill, including personal attacks on council members, and in the face of a veto by Mayor Bernard Carvalho, the residents of Kauai prevailed when the County Council chose to override the Mayor's veto. Kauai's action for a safe and healthy community was followed in Hawaii County by Bill 113, which bans the planting of GE crops, with the exception of papaya. Efforts in Maui County are now underway to enact protections similar to Kauai's.

## Illinois Ramps Up Efforts to Enforce IPM in Public Schools

The Illinois Department of Public Health (IDPH) announced in November that it is ramping up its efforts to educate day care centers and schools about the rules aimed at reducing and managing pests in light of widespread non-compliance with integrated pest management (IPM) regulations in public schools and day care centers. Illinois public health officials say that more than 200 Illinois schools and day care centers have failed to comply with the most basic of the state's pest management regulations, and for the first time could face fines if they do not comply. A total of 295 school districts and day care centers are cited by the state, with 242 in the greater Chicago area. The agency is now geared up to work to ensure that schools and day care centers comply by sending mass mailings, holding seminars, and working with the Illinois Department of Children and Family Services, which licenses Illinois day cares.

The state's IPM regulations, including the requirements for reporting how pests are managed, are designed to protect children in day care centers and schools from unnecessary applications of pesticides. State law requires public schools and licensed day care centers to file an IPM form with the department to document how school officials plan to implement IPM, and resubmit their plans every five years. Additionally, all parents, guardians, and employees must be notified at least once each school year that requirements have been met.

According to IDPH, an IPM program "greatly reduces the chance of accidental exposure of pesticides to children and staff," and can help reduce the use of pesticides overall by promoting nonchemical methods –like better sanitation– to control insects and rodents. In addition to reducing health risks, IDPH says that over time an IPM program can also cost less than chemical-intensive pest management practices by reducing the school's or day care center's dependency on pesticides.

# Consumer Victory!

## As manufacturers remove triclosan from consumer goods, FDA requires data on product effectiveness

After a decade of consumer and environmental advocacy and with many manufacturers taking the hazardous ingredient triclosan out of their soap and cosmetic products, an announcement was made by the U.S. Food and Drug Administration (FDA) in December that it will now require manufacturers to prove that their antibacterial soaps are safe and more effective than soap and water. Groups have called on FDA and its counterpart, the U.S. Environmental Protection Agency (EPA) –which regulates non-cosmetic products with triclosan– to immediately ban triclosan from consumer products.

"Given the marketplace shift away from triclosan, regulators should take note and immediately act to remove this toxic material from consumer products. While we are pleased that FDA recognizes the triclosan problem, the time for action has long passed and the threat to consumers and the environment should end today," said Jay Feldman, executive director, Beyond Pesticides.

Due to growing public pressure, several major manufacturers have already quietly reformulated their products to exclude triclosan, while others have announced that they will no longer use the chemical. Johnson and Johnson and Proctor and Gamble have both publicly stated that they will phase out triclosan from their line of products, while Colgate-Palmolive has reformulated its popular line of liquid soaps. There has also been local action around the procurement of triclosan. For instance, Minnesota announced that all state-run agencies would stop purchasing products that contain triclosan.

Since 2004, Beyond Pesticides has worked to bring public attention to the dangers surrounding the proliferate use of triclosan in consumer goods. A petition submitted to both FDA and EPA by Beyond Pesticides in 2010 calls for the ban of triclosan based on the unnecessary health and environmental risks involved with its use, given the availability of safer alternatives. With growing public awareness and the market shift away from triclosan, Beyond Pesticides has called for a federal ban of this unnecessary chemical.

Over the last decade, triclosan exploded onto the marketplace in hundreds of consumer products, ranging from antibacterial soaps, deodorants, toothpastes, cosmetics, fabrics, toys, and other household and personal care products. While antibacterial products are marketed as agents that protect and safeguard against potential harmful bacteria, studies conclude that antibacterial soaps show no health benefits over plain soaps and contribute to bacterial resistance to antimicrobials and antibiotics.

Studies find that triclosan persists in the environment, has endocrine disrupting properties, may interfere with fetal development, and accumulates in breast milk and fatty tissue.

## Triclosan Timeline

**1960s—**The first patent for triclosan is issued in 1966 to the chemical company Ciba.

**1972—**By 1972 triclosan, although initially restricted to medical settings, makes its way into the consumer market.

**1974—**FDA first proposes rulemaking to establish a monograph for over the counter (OTC) topical antimicrobial drug products, including triclosan. The rulemaking was never finalized.

[Over the next several decades triclosan is allowed to permeate the consumer market in deodorants, toys, plastics and textiles, soaps, toothpastes, kitchen utensils, etc, with essentially no government oversight.]

**1997—**In 1997, EPA acts to prevent the manufacturer of Playskool toys, Hasbro, Inc., from making false claims about protecting children from microbial infections. Hasbro could no longer claim that toys treated with triclosan protect children from infectious diseases caused by bacteria because it did not prove efficacy to EPA.

**2000—**The American Medical Association's Council on Scientific Affairs states that no data exist to support the efficacy of antimicrobial ingredients when used in such products or any need for them.

**2004—**Beyond Pesticides publishes *The Ubiquitous Triclosan*, detailing the potential human and environmental dangers associated with its use.

**2005—**The FDA's Nonprescription Drugs Advisory Committee votes 11-1 that antibacterial soaps and washes are no more effective than regular soap and water in fighting infections.

Beyond Pesticides submits the first citizen petition requesting FDA to ban all non-medical uses of triclosan.

Researchers at Virginia Tech report that triclosan reacts with chlorine in tap water to form significant quantities of chloroform -a probable human carcinogen.

**2008—**Results from a study by EPA scientists show a dramatic decrease in the thyroid hormone –thyroxine in rats exposed to increasing concentrations of triclosan. This thyroid hormone is critical for normal development and to a properly functioning metabolism, indicating that triclosan exposure significantly impacts thyroid hormone concentration.

*Continued on next page...*

A published Swedish study finds triclosan in plasma and breast milk of nursing mothers.

EPA's registration review finds that triclosan presents no unreasonable risks to human and environmental health. However, based on concerns raised by Beyond Pesticides and others, the agency agrees to review the chemical again in 2013, ten years earlier than required.

**2009**—CDC's Fourth National Report on Human Exposure to Environmental Chemicals finds significant levels of triclosan in the urine of 75% of the U.S. population during 2003-2004.

Beyond Pesticides, in partnership with Food and Water Watch and 80 other groups, submits an amended petition to FDA calling for a ban on the non-medical uses of triclosan.

**2010**—Soon after the FDA petition is submitted, EPA is petitioned to ban triclosan, citing violations of numerous federal statutes.

Beyond Pesticides launches a grassroots triclosan campaign urging consumers to pledge not to buy triclosan products, pass local policies and educate their communities on the dangers of triclosan's use.

Rep. Ed Markey (D-MA) submits letters of concern to both EPA and FDA. In FDA's response, the agency acknowledges that soaps containing triclosan offer no additional benefit over regular soap and water. FDA states that "existing data raise valid concerns about the [health] effects of repetitive daily human exposure to these antiseptic ingredients" and announced plans to address the use of triclosan in cosmetics and other products. FDA also expresses concern about the development of antibiotic resistance from using antibacterial products and about triclosan's potential long-term health effects. EPA responds that the agency will review the chemical in 2013.

A study by U.S. Department of Agriculture (USDA) scientists provides details on fertilizing soils with biosolids and the introduction of triclosan into the environment. Results show that triclosan in biosolids is only slowly degraded and persists at low levels in the environment for long periods of time.

Another study shows that triclosan from sewage sludge can be taken up by soybean plants and translocated into the beans themselves.

Updated CDC data reports that levels of triclosan in humans have increased by over 40% since 2004.

A University of Florida, Gainesville study reports that triclosan can interfere with estrogen metabolism in women and can disrupt a vital enzyme during pregnancy.

EPA publishes Beyond Pesticides' petition for public comment. Over 10,000 individuals supported a ban on triclosan. (75 FR 76461, December 8, 2010.)

**2011**—Colgate-Palmolive states it is reformulating its popular soap products to exclude triclosan.

An Italian National Institute for Infectious Diseases study reports that triclosan is ineffective against bacteria in hospital settings. The study finds the underlying cause of a fatal outbreak of *P. aeruginosa* in a hospital came from the contamination of triclosan soap dispensers, which acted as a continuous source of the bacterium. The contaminated triclosan soap infected the hands of health care workers and then patients, since triclosan is shown to have no effect on *P. aeruginosa,* a bacterium frequently associated with hospital-acquired infections.

GlaxoSmithKline announces it will remove triclosan from its Aquafresh and Sensodyne toothpastes, as well as its Corsodyl mouthwash.

**2012**—The Canadian government declares triclosan toxic to the environment, a move that curtails the use of the chemical sharply in Canada. A toxic designation under the Canadian Environmental Protection Act triggers a process to further curtail the chemical's use, including a possible ban in a range of personal-care products.

The University of Texas (UT) Student Government unanimously passes a resolution to ban soap containing triclosan throughout campus.

Scientists at the University of California (UC) Davis, and the University of Colorado find that triclosan hinders muscle contractions at a cellular level, slows swimming in fish, and reduces muscular strength in mice. The authors note that the chemical's effects are so striking that the study "provides strong evidence that triclosan could have effects on animal and human health at current levels of exposure."

Johnson and Johnson announces that it will begin phasing out a number of potentially dangerous chemicals from its personal care brands, including triclosan.

**2013**—The Minnesota Pollution Control Agency announces that state agencies have been ordered by Governor Mark Dayton to stop buying products that contain triclosan.

EPA initiates triclosan's registration review. FDA announces that it will now require manufacturers to prove that their antibacterial soaps are safe and are more effective than soap and water.

Multinational manufacturer Procter and Gamble (P&G) announces that it will eliminate triclosan from its products by 2014.

*See Beyond Pesticides' webpage on triclosan, bit.ly/BPTriclosan, for more details, action steps, and list of products to avoid.*

# Organic Land Management and the Protection of Water Quality

Organic land management, including agriculture and the production of organic food, utilizes a system that seeks to maintain and improve the environment. Organic standards, codified in the *Organic Food Productions Act* (OFPA), are subject to independent public review and oversight of practices and allowed inputs, assuring that toxic, synthetic pesticides used in conventional, chemical-intensive agriculture are replaced by methods focused on soil biology, biodiversity, and plant health. This ensures that pesticides that contaminate our water and air, hurt biodiversity, harm farmworkers, and kill bees, birds, fish and other wildlife are reduced or eliminated completely.

Current laws to protect water quality under the *Clean Water Act* (CWA) are limited by risk calculations that offer limited public health and environmental protection. Meanwhile, the nation as a whole still relies on toxic inputs to grow food and manage landscapes. These chemicals, like atrazine, 2,4-D, and glyphosate, are linked to a myriad of human and environmental health concerns, including cancer, birth defects, reproductive and sexual dysfunction, and neurological/learning problems. The high rates of cancer, learning and behavioral effects, and infertility call for a serious reevaluation of the way food is grown and waterways protected. Organic farming and landscape management provide the model for transitioning from chemical-dependent to sustainable practices.

## Conventional Farming Threatens Waterways

Conventional, chemical-intensive agriculture in the U.S. and its reliance of toxic, synthetic inputs, such as insecticides, herbicides, and synthetic nitrogen and phosphorus fertilizers, have affected the quality of surface and groundwater for decades. According to data from the U.S. Geological Survey (USGS) and the Environmental Protection Agency (EPA), of the over 300 food production pesticides with tolerances registered –allowable levels of pesticide residue on food– 52 are known surface or groundwater contaminants. (See Beyond Pesticides' *Eating with a Conscience* (EWAC) at www.eatingwithaconscience.org.) The overwhelming majority of the most popular pesticides used in the U.S. have been detected in surface and groundwaters, including the popular herbicides atrazine, glyphosate, and 2,4-D. (See Table 1.)

## Ten Most Toxic Crops to Produce

Corn and soybeans are the most widely grown crops in the U.S. and as such contribute overwhelmingly to pesticide contamination, especially in the Midwest where these crops are predominantly grown, and pollution of the Mississippi River watershed and the Gulf of Mexico. Ninety percent of corn and soybeans are genetically engineered, which also correlates to an increase in herbicide use. The EWAC database indicates that of the 84 pesticides with established tolerances for corn, 22 are known to contaminate streams or groundwater. Of the 83 pesticides registered for use on soybeans, 26 contaminate streams or groundwater.

Conventional, chemical-intensive farming of bell peppers, potatoes, tomatoes, and wheat are the biggest contributors to water contamination after corn and soybeans. Asparagus, peaches, pears,

**Table 1.**
**Most Used Pesticides in the United States by Poundage**

| Chemical | Millions of Pounds Used Annually | Identified as a Surface/ Groundwater Contaminant |
|---|---|---|
| Glyphosate | 180-185 | ✓ |
| Atrazine | 73-78 | ✓ |
| Meta Sodium | 50-55 | ✓ |
| Metolachlor | 30-35 | ✓ |
| Acetochlor | 28-33 | ✓ |
| Dichlopropene | 27-32 | ✓ |
| 2,4-D | 25-29 | ✓ |
| Methyl Bromide | 11-15 | No |
| Chloropicrin | 9-11 | ✓ |
| Chlorphyrifos | 7-9 | ✓ |
| Chlorothalonil | 7-9 | ✓ |
| Ethephon | 7-9 | No |
| Metam Potassium | 7-9 | ✓ |
| Pendimenthalin | 7-9 | ✓ |
| Copper Hydroxide | 6-8 | ✓ |
| Simazine | 5-7 | ✓ |
| Trifluralin | 5-7 | ✓ |
| Mancozeb | 4-6 | No |
| Propanil | 4-6 | No |
| Aldicarb | 3-4 | ✓ |
| Acepahte | 2-4 | ✓ |
| Dimethenamid | 2-4 | No |
| Diuron | 2-4 | No |
| MCPA | 2-4 | ✓ |
| Paraquat | 2-4 | ✓ |

and hot peppers round off the top 10 dirty crops that are grown with the most water contaminating pesticides. (See Tables 2 and 3 for foods with most toxic production practices.)

## Pesticides Most Frequently Detected

### *Urban vs. Agricultural*

According to USGS' *Pesticides in the Nation's Streams and Ground Water,* the herbicide atrazine is the most frequently detected pesticide in surface and groundwater. The others most frequently detected nationwide are the herbicides metolachlor, simazine, prometon, and the insecticide diazinon. For insecticides, the most frequently detected are chlorpyrifos, carbaryl, malathion, diazinon, and carbofuran. For herbicides, atrazine, metolachlor, acetochlor, trifluralin and cyanazine are the five most frequently detected. These pesticides are registered for use mostly on agricultural sites, but trifluralin, simazine, and prometon also have residential uses, while cyanazine's uses have been cancelled since 1999. 2,4-D is overwhelmingly detected in urban areas, due to its prevalence in lawn care products. Simazine and diuron are also detected in urban areas.

While the vast volume of pesticide runoff comes from agricultural areas, urban uses of pesticide products contribute to water contamination. Lawn applications, uses on rights-of-way, and mosquito control applications lead to pesticide runoff into streams and rivers. One California monitoring study of urban creeks (2009) found pyrethroid insecticides in every sample collected. Bifenthrin is identified as the pyrethroid of greatest toxicological concern, followed by cypermethrin and cyfluthrin. Pyrethroids are commonly formulated in over-the-counter pesticide products for consumers or professional pest control operators. However, seasonal patterns of discharge of these chemicals into waterways are more consistent with professional use as the dominant source of bifenthrin.

## Water Monitoring Continually Detects Pesticides

According to USGS, 56 percent of streams sampled have one or more pesticides in water that exceed at least one aquatic-life benchmark set by EPA. Benchmarks, developed by EPA through baseline risk assessments, are estimates of the chemical concentrations that establish "acceptable" risks associated with harm to aquatic life. Urban streams have concentrations that exceed one or more benchmarks at 83 percent of sampled sites –mostly by the insecticides diazinon, chlorpyrifos, and malathion. Agricultural streams have concentrations that exceed one or more benchmarks at 57 percent of sites –most frequently by chlorpyrifos, azinphos-methyl, atrazine, p,p'-DDE, and alachlor. Pesticide compounds analyzed in most water by USGS include many of the most heavily used herbicides and insecticides, and one or more pesticides or their degradates are detected in water more than 90 percent of the time during the year in agricultural streams, urban streams, and mixed-land-use streams.

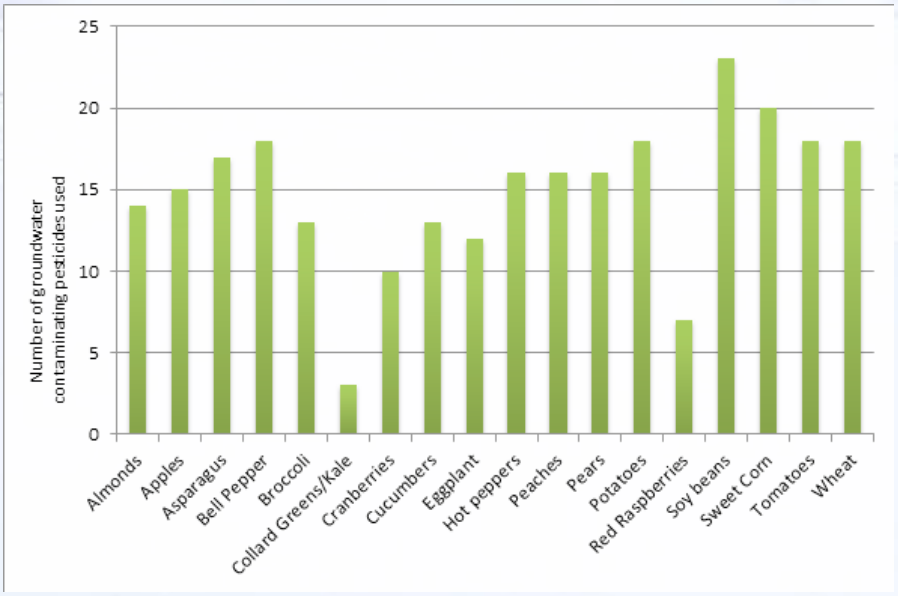
Atrazine shows consistent patterns of high levels in U.S. waterways,

**Table 2.**
**Ten Most Toxic Crops to Produce**

| Crops | 2,4-D | Atrazine | Carbaryl | Chlorothalonil | Glyphosate | Malathion | Metolachlor | Paraquat | Pendimethalin | Permethrin |
|---|---|---|---|---|---|---|---|---|---|---|
| Soybeans | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Sweet Corn | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Bell Peppers | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Potatoes | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Tomatoes | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wheat | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Asparagus | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Peaches | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |
| Pears | ✓ | | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ |
| Hot Peppers | | | ✓ | | ✓ | ✓ | | ✓ | ✓ | |

*Top ten most toxic crops to produce based on number of allowed pesticides. Source: Eating with a Conscience Database, Beyond Pesticides.*

**Table 3.**
**Crops Associated with Surface and Groundwater Contamination**




*Source: Eating with a Conscience Database, Beyond Pesticides.*

especially in the Northeast (2000–2008), South (1996–2004 and 2000–2008), and Midwest (1996–2004 and 2000–2008) regions of the U.S., demonstrating the prevalence of the herbicide in surface waters. Agricultural streams located in the Corn Belt (Illinois, Indiana, Iowa, Nebraska, Ohio, and parts of adjoining states) and the Mississippi River Valley account for most concentrations that exceed benchmarks for atrazine. The likelihood of pesticide concentrations exceeding a human-health benchmark is greatest for those streams draining agricultural or urban watersheds.

Glyphosate has also been detected at significant levels in rain and rivers in agricultural areas across the Mississippi River watershed. 60-100 percent of air and rain samples are contaminated with glyphosate.

## Downstream Impacts on Human and Environmental Health

Pesticides and nutrients from fertilizers can find their way into finished drinking water and well water. This is especially true for rural and agricultural communities. One USGS survey (2008) analyzed water from nine selected rivers, which are used as a source for public water systems, and found that low levels of certain synthetic chemicals remain in the finished drinking after being subject to treatment by community water facilities. Nearly 10 percent of the 2.6 million people living in California's Tulare Lake Basin and Salinas Valley are drinking nitrate-contaminated water, as a result of nitrate contamination in groundwater from fertilizer (weed and feed products) and animal manure, according to a study by researchers at University of California Davis (2012). Additionally, a study (2010) in Iowa shows a nearly three-fold increase in thyroid cancer risk for women with more than five year's use of public water supplies contaminated with nitrates at levels of five milligrams per liter (mg/L) or above.

The emerging presence of synthetic pyrethroid pesticides (permethrin, bifenthrin, and resmethrin) in waterways can now be attributed to the home use of these popular products. Pyrethroid insecticides have been found in street runoff and in the outflow from sewage treatment plants in urban creeks at low levels –exposure around 10-20 parts per trillion, but high enough to kill standard test organisms. A report released in 2012 by the California Surface Water Ambient Monitoring Program (SWAP) found a 55 percent increase in statewide pyrethroid detections in sediment from samples in 2008 to 2010. Pyrethroids are highly toxic to aquatic organisms and can damage the gills of fish.

Newer pesticide technologies, like systemic neonicotinoid pesticides, are now showing that they can contaminate surface waters at concentrations that harm aquatic organisms. Work by the California Department of Pesticide Regulation finds that imidacloprid, a neonicotinoid, is detected in water samples at a frequency of 89 percent at concentrations that exceed EPA's chronic aquatic benchmarks. Concentrations are also frequently greater than similar toxicity guidelines developed for use in Europe and Canada.

Studies link increased seasonal concentrations of pesticides in surface water with a peak in birth defects in infants conceived during the spring and summer months, when pesticide use increases and high concentrations of pesticides are found in surface waters. Prenatal exposure to atrazine is linked to small head circumference and fetal growth restriction. Similarly, studies by Paul Winchester, M.D., et al., (2009) report a strong correlation between the month of conception and likelihood of premature birth, certain birth defects, and lower IQs.

### Non-Point Pesticide Sources Trouble the Nation's Largest Estuary

When we purchase over-the-counter pesticide products, we may be contributing to water contamination and the degradation of unique aquatic ecosystems. One prime example is the Chesapeake Bay, where toxic contamination remains widespread, with severe impacts in some places, despite federal mandates for cleanup. A 2013 report, *Technical Report on Toxic Contaminants in the Chesapeake Bay and its Watershed: Extent and Severity of Occurrence and Potential Biological Effects,* finds that nearly three-fourths of the Bay's tidal waters are "fully or partially impaired" by toxic chemicals, with people warned to limit fish consumption from certain areas. Contamination is severe in a handful of "hot spots" around the Bay, including Baltimore's harbor, also related to a legacy of past industrial and shipping activity.

Atrazine has been found to act as an endocrine disruptor that can cause complete sex reversal in male frogs. In fact, research led by Tyrone Hayes, PhD at the University of California, Berkeley finds that male frogs exposed to atrazine can become so completely female that they can mate and lay viable eggs. In 2008, atrazine, along with chlorpyrifos, endosulfan, and metolachlor, were identified by USGS, with other contaminants, as possible suspects in the alarming discovery of "intersex" fish –male fish producing eggs– in the Potomac River, which flows through downtown Washington, DC. These pesticides are noted endocrine disruptors capable of affecting hormones in wildlife. Alarmingly, research (2011) shows that women who drink water containing low levels of atrazine, which has been detected in drinking water, may be more likely to have irregular menstrual cycles and low estrogen levels, even at concentrations far below federal drinking water standards considered safe by the EPA.

In Connecticut, a state-sponsored study (2012) detected residues of mosquito control pesticides in lobsters pulled from Long Island Sound. Three common mosquito control chemicals –malathion, methoprene, and resmethrin– were found in the lobsters tested. These chemicals, and their chemical classes, organophosphates, insect growth regulators, and synthetic pyrethroids, respectively, are frequently used for mosquito control, and are known to be toxic to many aquatic species, including crustaceans.

## Conclusion

Growing food with a reliance on toxic pesticides has resulted in the nation's waterways being heavily contaminated with toxic chemicals. Organic farming demonstrates clearly that relying on toxic chemical inputs for crop yields is not only unnecessary, but serves to protect waterways and public health from chemical pollution. Creating healthy soils, which is the foundation of organic systems, conserves water, nurtures fertility, leads to less surface runoff, and reduces the need for nutrient input. With less toxic pesticide use, organic farming helps to protect the quality of the nation's waterways.

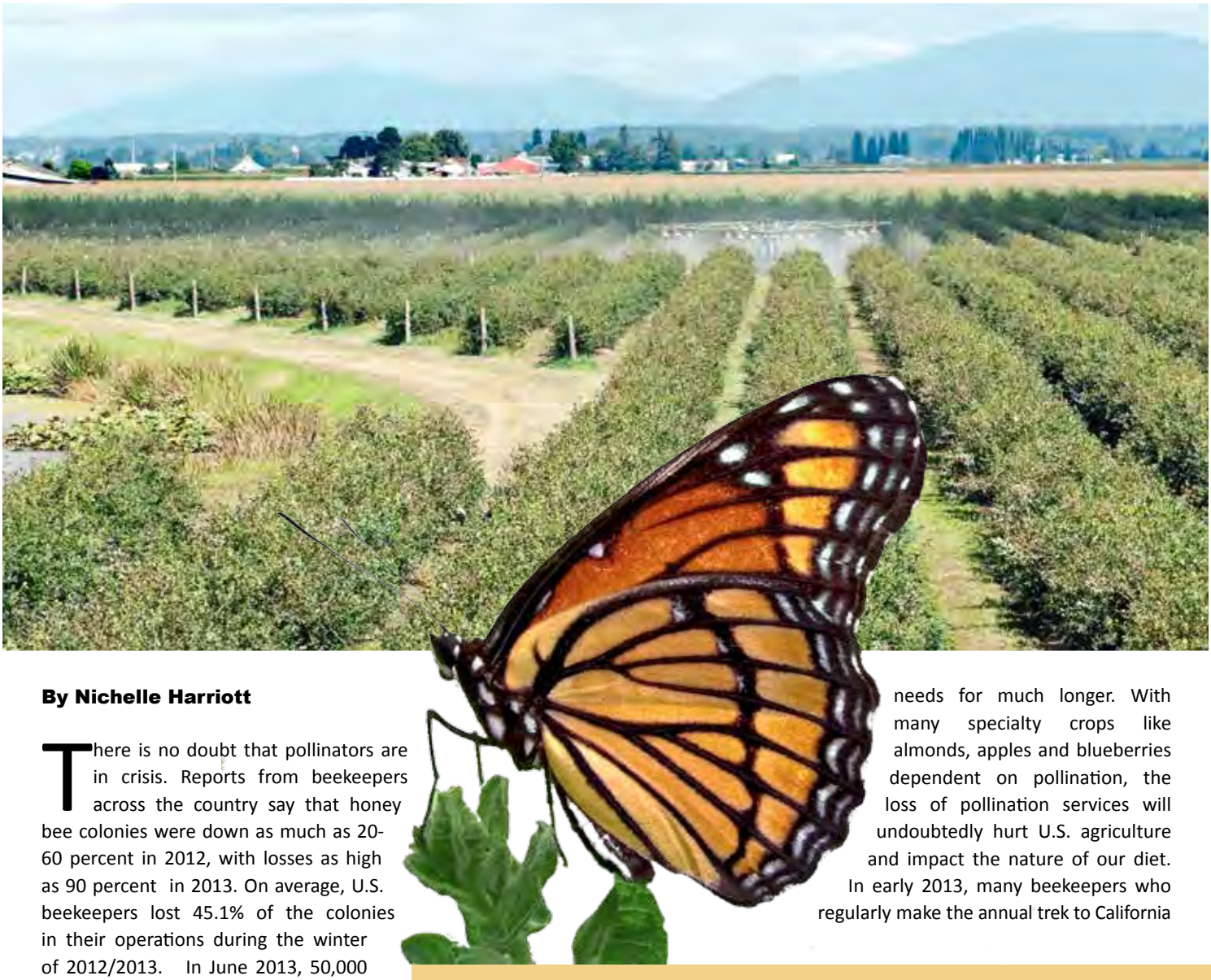
### How Does Organic Farming Protect Water Quality?

- ***Reduces/Eliminates Pesticide Runoff–*** Organic farming and land management reduces or eliminates water pollution and helps conserve water and soil. According to the Food and Agriculture Organization (FAO), several countries in Europe compel or subsidize organic farmers to use organic techniques specifically to combat water pollution problems.
- ***Reduces Nutrient Runoff–*** Organic standards stipulate that soil fertility and crop nutrients can be managed through tillage and other cultivation practices, such as crop rotation, which preserve and maintain the fertility of the soil so that synthetic inputs become unnecessary. Organic therefore eliminates the need and use of synthetic nitrogen/phosphorus-based fertilizers, thereby significantly reducing the threats that nitrogen and phosphorus runoff have on aquatic ecosystems and the prevalence of algal blooms and eutrophication.
- ***Prohibits the Use of Sewage Sludge/Biosolids–*** Organic does not allow the use of sewage sludge, which is often contaminated with a host of chemicals, including heavy metals, pharmaceuticals, and pesticides. These can all re-enter the aquatic environment once the sludge is recycled on land.
- ***Prohibits Genetic Engineering–*** Genetic engineering that incorporates the popular herbicide-tolerant, Roundup Ready corn and soybeans, or insecticidal genes into plants, is prohibited in organic. Genetically engineered (GE) crops have led to an increase in herbicide use, as farmers are able to apply these chemicals without killing their crop, and weed and insect resistance.

*A fully cited version of this factsheet is available at www.beyondpesticides.org/water.*

# Bees, Birds and Beneficials

## How fields of poison adversely affect non-target organisms



**By Nichelle Harriott**

There is no doubt that pollinators are in crisis. Reports from beekeepers across the country say that honey bee colonies were down as much as 20-60 percent in 2012, with losses as high as 90 percent in 2013. On average, U.S. beekeepers lost 45.1% of the colonies in their operations during the winter of 2012/2013. In June 2013, 50,000 bumblebees, likely representing over 300 colonies, were found dead or dying in Oregon. Authorities confirmed that this massive bee die-off was indeed caused by the use of a neonicotinoid pesticide, dinotefuran, on nearby trees. Similarly, recent surveys of Monarch butterflies saw a 59 percent decline in populations, corresponding to the lowest numbers in 20 years, due in part to habitat loss. Judging from current trends, pollinators may not be able to support our growing agricultural needs for much longer. With many specialty crops like almonds, apples and blueberries dependent on pollination, the loss of pollination services will undoubtedly hurt U.S. agriculture and impact the nature of our diet. In early 2013, many beekeepers who regularly make the annual trek to California

### Systemic Pesticides: The Pervasive Presence

Systemic pesticides, like the neonicotinoid class of pesticides, are insecticides that, when taken up by the plant, translocate to, and remain in, every part of the plant for the life of the organism. This means that seeds treated with systemic pesticides, like clothianidin, retain residues from the chemical in the pollen, nectar, leaves, and stem of the plant. The entire plant becomes poisonous. Systemic pesticides are used on over 90 percent of corn grown in the U.S., and since corn is the cornerstone of the American diet, residues can be found in many of the foods we eat. Unfortunately, the effects of these pervasive poisons have been underestimated by regulators. The impacts of residues in pollen and nectar, for instance, have not been sufficiently evaluated for their impacts on the organisms that forage pollen and nectar –bees and birds.

to bring their bees to pollinate thousands of acres of almond fields struggled to meet the demand for healthy, viable bee colonies for almond pollination. Wild bees and other pollinators are not faring any better, but data on these are harder to come by.

So why have these important organisms taken such a turn for the worse? Our dependency on toxic chemicals is a major cause. Within the last 20 years, U.S. agriculture replaced management strategies, such as crop rotation, with a growing reliance on chemical inputs, producing crops laden with toxic chemical residues that contaminate the environment. This shift away from sustainable practices is characterized by the widespread application of chemicals before pest damage has occurred, and often in the absence of any pest monitoring data. Reliance on chemical inputs and its far-reaching impacts threatens ecosystem fitness and biodiversity. Losses of biodiversity caused by anthropogenic activities during the past 50 years are unprecedented in human history. Data shows that diverse pollinator communities, comprising honey bees and other wild insect pollinators, synergistically increase pollination services through species interactions and pollination effectiveness. A loss of biodiversity is particularly poignant for pollinators and the services they provide.

Over five billion pounds of pesticides are used in the U.S. each year. This, coupled with the increase in the use of systemic pesticides, like the neonicotinoids clothianidin and thiamethoxam, and genetically engineered (GE) material in major crops like corn and soybeans, ensures that thousands of acres of land across the U.S. have become fields of poison.

### Systemic Contamination

As a result of the systemic nature of the pesticides, pollinators, especially bees, are being exposed to lethal and sublethal doses of pesticide every time they forage for food, or take poisoned pollen back to the hive where the next generation becomes exposed even before they are hatched. A March 2013 report by Pierre Mineau, PhD and Cynthia Palmer, American Bird Conservancy, shows that it only takes a single corn kernel to kill a song bird and about 1/10th of a corn seed per day to impact avian reproduction. But neonicotinoid pesticides have broad ranging negative impacts not only on beneficial pollinators, but on overall biodiversity and ecosystem health. According to a June 2013 review conducted by David Goulson, PhD of the University of Sussex, concentrations of neonicotinoids in soils, waterways, field margin plants, and floral resources overlap substantially with concentrations that control pests in crops, and commonly exceed levels that are known to kill beneficial organisms. As such, soil dwelling insects, benthic aquatic insects, grain-eating vertebrates, along with pollinators are victims of these systemic chemicals. Other work by Dr. Goulson reports that exposed bee colonies have a significantly reduced growth rate and reduced production of new queens. In all, bees, butterflies, moths, carabid beetles, and birds (the groups for which good data are available) have all shown significant overall declines in recent years since the introduction of these chemicals.

Research by Christian Krupke, PhD finds that during the spring foraging period pollinators are exposed via multiple pathways to high levels of systemic chemicals from field dust and nearby contaminated flowering plants. How does this happen? When treated seeds are planted, usually by large multi-row farming

*Song Sparrow (Melospiza melodia),Photo by Wikipedia user MDF, 2005.*

### Threats to Birds Go Underestimated

While the acute toxicity of neonicotinoids in birds is lower than the acute toxicity of many of the insecticides they have replaced, notably organophosphate and carbamate insecticides, they still pose risks to birds. According to *The Impact of the Nation's Most Widely Used Insecticides on Birds*, by Pierre Mineau, PhD and Cynthia Palmer, American Bird Conservancy, neonicotinoids are lethal to birds and the aquatic systems on which they depend. A single corn kernel coated with a neonicotinoid can kill a songbird. Even a tiny grain of wheat or canola treated with one of the oldest neonicotinoid, imidacloprid, can poison a bird. As little as 1/10th of a corn seed per day during egg-laying season is all that is needed to affect reproduction with any of the neonicotinoids registered to date. Some researchers have suggested that birds may already be affected by neonicotinoids and that, based on data in Europe, bird population declines can be blamed on these popular insecticides.

equipment, residues from the seed coatings are ejected into the dust and air. These toxic dust plumes can travel long distances off site, encountering bees, birds and other organisms along the way. After treated seeds are planted, beneficial microorganisms in the soil, necessary for releasing vital nutrients, maintaining fertility, structure, and aeration of the soil, are also destroyed. Without these beneficial organisms, the functional services they provide is lost and soil fertility decreases, leading to a need for more artificial inputs, thus continuing the cycle of toxic dependency.

*Hedgerows planted along agricultural fields to attract and protect beneficials. Photo taken by Jay Feldman at Live Earth Farm in Watsonville, CA.*

Preliminary studies have also observed adverse impacts of neonicotinoids in aquatic systems, with high toxicity in aquatic invertebrates. Systemic pesticides persist in the environment for long periods of time as well, ensuring that successive generations of beneficial organisms bear this chemical burden. If the use of systemic pesticides continues, environmental degradation can only worsen, wreaking havoc with pollinators.

## GE Domination of the Heartland Destroys Essential Natural Habitat

Along with systemic pesticides, GE crops, with escalating pesticide use and loss of habitat, are a growing threat. Corn, soybeans, sugar beets, and alfalfa, to name a few, are now being genetically engineered to incorporate genes that would allow these plants to become tolerant to chemical applications of glyphosate (Roundup), 2,4-D, dicamba and many others. Industry promises that this technology will reduce total pesticide applications has turned out to be false. In fact, applications of these herbicides have continually increased, despite industry assurances to the contrary, with increasing prevalence of these GE crops. Cropland across the Midwest, which has historically provided feeding areas of milkweed for butterflies, has now been replaced with GE fields. Species like the Monarch butterfly are no longer finding sources of food in these areas, resulting in alarming population declines. Increased use of pesticides on GE-tolerant crops means increased surface water contamination, an increase in herbicide resistant weeds and insecticide resistant insects (which leads to more toxic pesticide applications), and the poisoning of beneficial organisms, including fish, birds and mammals.

## Putting the Horse Back in the Barn

The U.S. Environmental Protection Agency (EPA) is tasked with safeguarding the environment, but has nevertheless allowed numerous chemicals into the environment unchecked. The agency fails in its duty to fully review and assess these technologies and their impact on pollinators and other beneficial organisms before they are allowed to contaminate the environment. Now that the dangers of systemic pesticides have come to light, the agency is attempting to mitigate risks by reducing fugitive field dust and improving farming equipment, instead of addressing the prime cause of pollinator decline: toxic pesticides. Similarly, the U.S. Department of Agriculture (USDA) turns a blind eye to the full breadth of hazards associated with introducing GE material into the environment. Rising incidents of resistant weeds and insects are reported with increased regularity –a consequence not fully considered. As a result of GE-mediated weed and insect resistance, farmers now find themselves applying even more pesticides in order to control these new threats to their crop.

The federal regulatory system is inadequate in its assessment of impacts on beneficial organisms. Pesticide labels go unenforced, adverse incidents go underreported, scientific uncertainties are ignored, and the philosophy that mitigating risks instead of upholding a precautionary approach ensures that benefits are shifted to industry, and the pesticide burden is borne by the public and the environment. While they do not use it, federal regulators have the discretionary authority under the *Federal Insecticide Fungicide and Rodenticide Act* (FIFRA), *Clean Water Act*, and the *Endangered Species Act* to stem the flow of chemical poisons into the environment, and protect vulnerable species from unreasonable adverse effects.

## A Better Path Forward

Modern agriculture as we know it in the U.S. is intrinsically detrimental to our bees, birds and beneficial organisms. Our way of farming must not put pollinators, other beneficial organisms, and humans at risk. There needs to be a holistic change to our toxic dependency. To do this, we must remember that while certain pesticides can have a place in farming, sustainable, integrated solutions and systems must be reinstituted, where an emphasis on feeding and maintaining healthy soils, respectful of nature, and moving away from toxic chemical inputs is standard. Rigorous science-based decision making that requires precaution on the al-

lowance of chemical products in the face of hazards and scientific uncertainty must be adopted at the regulatory level. One system exists that has already given consideration to sound, integrated farming strategies. The *Organic Foods Production Act* provides the framework for doing this with the independent stakeholder National Organic Standards Board (NOSB) of environmentalists, farmers, consumers and public input providing oversight on allowable synthetic materials in organic production and policies that govern organic systems. Keeping in mind the underlying standards of the organic law, which require that practices "maintain or improve soil organic matter content in a manner that does not contribute to contamination of crops, soil, or water by plant nutrients, pathogenic organisms, heavy metals, or residues of prohibited substances," is the only viable and sustainable path forward that is protective of bees, birds, and other beneficial organisms.

*A fully cited version of this factsheet is available online at www.beeprotective.org.*

## Chemical Industry Blames Beekeepers

***While studies show systemic pesticides create bee hive vulnerability***

Commercial beekeepers are bearing the brunt of the pollinator crisis. Many beekeepers have consistently lost over 25 percent of their operations each year, with loses as high as 90 percent. This translates into a billion dollar loss since 2005. Modern day beekeeping is becoming unsustainable and many beekeepers predict that there will be no commercial beekeeping within two to three years. The chemical industry has accused beekeepers of bad beekeeping practices as the reason for honey bee losses. It points to lack of proper nutrition, stressful conditions, and the prevalence of mites (and use of miticides), bacteria, and other pathogens in hives, as some examples. However, when scientists began testing dead bees and collapsing hives, they found a common theme: high agricultural pesticide residues, along with high virus levels.

***Reduced Immune Functioning in Bees?***

A study (2013) by researchers at USDA finds that infections of *Nosema spp.* increased significantly in the bees from pesticide-contaminated hives when compared to bees from pesticide-free hives, demonstrating an indirect effect of pesticides on pathogen growth in honey bees. This study found 35 pesticides in pollen and high loads of fungicides. Most of the pollen the bees collected were from weeds and wildflowers adjacent to agricultural sites, indicating that foraging exposures are not restricted to agricultural fields. Other studies evaluating interactions between pesticides and pathogens have found similar results of decreased resistance to pathogens. Low doses of pesticides have sublethal effects in bees that lead to impaired foraging, navigation, and learning behavior. One newly released study (2014) finds that the prevalence of deformed wing virus (DWV) and the parasite *Nosema ceranae*, typically observed in managed honey bee populations, have now crossed over to bumblebees, highlighting how declines in native pollinators may be caused by interspecies pathogen transmission. Can low levels of pesticides also be suppressing the immune systems of bees leading to conditions where vulnerable bees are unable to ward off health threats that otherwise healthy bees can? The emerging science seems to say so.

Honey bees work in hazardous environments. Commercial beekeepers zig zag across the country each year with their honey bees to pollinate various crops. Almonds in the West, blueberries, cherries and apples to the North, and pumpkins in the Midwest keep beekeepers and their hives busy for much of the year, fulfilling important pollination services (along with making honey). But the fields in which they work are contaminated with various levels of pesticides. Pesticide drift can expose hives even when bees are not in the fields. Nearby foraging areas, like wildflower beds, prairie, and forestland can also be contaminated with toxic residues, ensuring that bees are unable to find respite from the chemical onslaught. Even in areas where there is little to no agricultural activity, bees may be in danger. No matter what precautions a beekeeper may take to protect his/her bees from pesticides, the odds are that bees will face threats from doing what they naturally do.

# The "Age of Organics"

## Advocates want the public to take back organic and build trust in the organic label

**Jay Feldman and Terry Shistar, PhD**

Some in the organic industry point to the extraordinary growth of the organic sector –over 10% a year for the last decade to a $30 billion industry– as proof of consumer support. Many consumer advocates say that industry should not confuse current organic demand with long-term trust in the organic label, which requires public faith in the underlying organic standards. Ensuring trust in the process by which standards are developed is central to sustained growth of the organic brand and all it offers for the protection of health and the environment.

When Congress shut down the government in October last year, one of the casualties of the political posturing over the *Affordable Care Act* was the fall meeting of the National Organic Standards Board (NOSB). The meeting was cancelled amid a series of controversial public decisions by the National Organic Program (NOP) that challenge the authority and responsibility of the NOSB and the publicly vetted policy and procedures of the board –which establish the decision making process and opportunities for public involvement in crafting organic standards. NOP announced in a May 3, 2013 *Federal Register* (78 FR 25879) notice that it would not follow a NOSB recommendation to take the digestive irritant and cancer causing carrageean out of soy baby formula. Then, in a September 16 *Federal Register* notice (78 FR 56811), NOP, shocking those long involved in organic standards decision making, reversed the longstanding NOSB synthetic substance review process, known as sunset. To incentivize alternatives to allowed synthetics in organic production, the NOSB process has historically required a decisive two-thirds vote of the NOSB in order to keep synthetic substances on the National List of approved and prohibited materials after five years. Under the NOP edict, it will now require a two-thirds vote to delist a material. In addition, NOP recently told the NOSB that it will be taking over many of the policy decisions heretofore left to the NOSB. This includes taking control of the NOSB workplan, agenda, and meeting gavel, as well as limiting the scope of advice that the board can give to USDA.

These decisions come at a bad time for the organic sector, as public confidence in the value of the organic label seems to be fragile. Environmentalists and public health advocates, not to mention small farmers who have been the backbone of core organic values and principles, fear that an undermining of the public decision making process could hurt the wide scale transition to agricultural management practices that are essential to protecting the safety of air, land, water, food and workers –as chemical-intensive agriculture becomes increasingly reliant on controversial bee-killing pesticides and chemicals like sulfuryl fluoride, which are linked to adverse impacts on brain development in children.

Consumer polling suggests that there is an urgent need to build consumer confidence in the organic label. A recent National Marketing Institute poll found that 63% of consumers are not sure products labeled as organic are actually organic. It is not unusual to walk through a farmers' market and hear comments like, "Organic has been taken over by big government."

### Building Public Trust with Rigorous Standards

Advocates of organic production are steadfast in the belief that if the organic law was followed by USDA –if the NOP and NOSB operate as required by law and decisions on controversial materials are discussed publicly with public input, public investment in the importance of organic methods will grow. One of the organic law's requirements is that all synthetics allowed by regulation as exceptions are subject to a sunset provision. Sunset law, as a matter of definition and history, requires an automatic termination of the decision after a fixed period unless it is extended. In the case of the *Organic Foods Production Act* (OFPA), since 2007, synthetic materials approved by the board remained on the National List only if a decisive two-thirds of the 15-member board voted to retain its use on a five-year cycle.

**Comparison of organic and chemical-intensive agriculture regulation**

| *Organic Agriculture* | *Chemical-intensive Agriculture* |
|---|---|
| Precautionary | Mitigating risk |
| Preventive | Crisis driven |
| Democratic | Autocratic or bureaucratic |
| Stakeholder driven and collaborative | Dominated by industry profits |

## Distinguishing Organic from Chemical-Intensive Agriculture

Organic standards and public procedures for its long-term stewardship were purposefully created by the law's drafters. Organic law was not adopted by accident or as a market niche to carve out a higher price point, like gourmet food. It was established as a commitment to a way of farming that challenges the abuses of chemical-intensive, or "conventional," agriculture, that threaten the biological relationships in nature that are necessary for survival. Yes, there is concern about the ingestion of chemicals through the diet that are known to be hazardous, but there is also an urgent concern about contamination of air, water, soil microbial activity, global climate change, and those who handle deadly pesticides. Organic practices are distinguished from chemical-intensive methods because the drafters of the organic law understood that the system in place that regulates pesticides is biased toward the allowance of toxic chemicals as tools for productivity and profitability. For instance, the U.S. Environmental Protection Agency (EPA) for decades has interpreted the *Federal Insecticide, Fungicide and Rodenticide Act* as prohibiting an assessment of pesticide essentiality. Is the chemical needed to achieve pest management goals? Are there less toxic means of achieving productivity? These essential questions are addressed in organic agriculture.

Organic advocates have urged organic growth with the core values and principles embodied in OFPA. They include:

- **Maintain or improve** the natural resources of the operation, including soil and water quality. [7 CFR §205.200. General]
- **Produced and handled without the use of synthetic chemicals**, except as otherwise provided [7 U.S.C. 6504. National Standards for Organic Production] and subject to sunset [6517(e) Sunset Provision]
- **Compatibility or suitability of synthetics as exception in defined categories** [7 U.S.C. 6517(c)(1)(B). National List, Guidelines for prohibitions or exemption NOSB PPM, Guidance on Compatibility, p32]
- **Not harmful to human health or the environment** [7 U.S.C. 6517(c)(1)(A)(i)
- **Protect from environmental contamination** during manufacture, use, misuse or disposal of such substance [7 U.S.C. 6518(m). Evaluation]
- **Satisfy expectation of consumers** [Policy and Procedures Manual (PPM), p32] "Most consumers believe that absolutely no synthetic substances are used in organic production. For the most part, they are correct and this is the basic tenet of this legislation. But there are a few limited exceptions..." Senate Report, p298]
- **The substance is essential** for the handling of organically produced agricultural products. [7 CFR 205.600(b)(6)]
- **Sunset materials on the National List** [7 U.S.C. 6517(e)] within 5 years of allowance. Allowed materials under §205.601 and §205.603, §205.605, and §205.606 sunset or are removed from the National List unless the Board takes affirmative action to retain their uses. Similarly, prohibited uses under sections §205.602 and §205.604 will sunset unless the Board takes action to relist. [Board adopted policy, October 2010]

The organic law requires that the list of exceptions –that is, allowed synthetic and prohibited natural materials– be based on recommendations of the NOSB. Additionally, the board is empowered to advise the Secretary on any matters related to the implementation of the statute. The law stipulates the following mechanisms through which the organic law is implemented:

- **Independent National Organic Standards Board** [7 U.S.C. 6518]
- **Independence** "not be inappropriately influenced by the appointing authority" [Federal Advisory Committee Act §5(b)(3)]
- **Consultation** [7 U.S.C. 6503(c). National Organic Production Program, Consultation. "The Secretary shall consult with the National Organic Standards Board."]
- **NOSB-National Organic Program Collaboration** [PPM, p25] "Maintaining, enhancing, and promoting integrity of organic products, principles and products is accomplished through team work and collaboration of the NOSB and the NOP, as well as others in the organic community."
- **Public participation** [7 U.S.C. 6517(d)(4) National List, Procedure for Establishing National List, Notice and Comment]
- **Striving for agreement among stakeholders** [7 U.S.C. 6518(i). Decisive Votes]

## Threats to the Organic Label

Recent actions of the USDA, imposed without NOSB consultation and contrary to established procedures, serve to undermine the credibility and integrity of the organic label.

**Annotation, or restrictions at sunset review.** The board policy to allow the adoption of chemical restrictions during the sunset review process was overturned by NOP in the September 16, 2013 *Federal Register*. The board in 2010 found that, "Since the statute subjects the sunset process to the same review standards as the original National List process, it follows that the same tools for restricting the use of those materials should be available to the Board. In an attempt to best protect against disruption in the organic market, annotations rather than complete prohibitions are called for in the face of available data." A procedure was established to ensure that the NOP conducted rulemaking on new chemical use restrictions adopted by the board without interrupting access to the material. (McEvoy, 9-27-12)

**Sunset review.** The NOP in its September 2013 *Federal Register* notice issued a directive changing the sunset process established in 2005, now allowing a synthetic material to remain on the National List unless two-thirds of the board votes to delist. The original sunset process, which embodied the model of many state laws (that declare a provision invalid unless it has been extended by

the same process by which it was originally approved), requires the board to affirm the listing by the same decisive majority that approved it through the original petition process.

The National Organic Coalition, a diverse group of organizations representing farmers, consumers, environmentalists, processors, handlers, and retailers, adopted the following policy statement in January:

"The sunset review by the NOSB should subject the national list material under review to as rigorous an evaluation and standard of allowance as the process used for its initial listing in response to the original petition. This means that since the petition process requires a decisive vote to put a material on the national list, it should take a decisive vote of the board to keep it on the national list at the end of the sunset period."


**Public participation.** Despite a statutory requirement for USDA to consult with the NOSB in implementing OFPA, the decisions on restricting synthetics and the sunset process were made without consulting the NOSB or public notice and comment.

**Advice to the Secretary of Agriculture.** By controlling items that it allows to be placed on the NOSB workplan and its public meetings, the NOP stifles the development of board advice to the Secretary on matters of concern to the organic community –issues directly relevant to the implementation of OFPA, such as the NOSB's effort to provide suggestions on ways to protect organic farmers victimized by genetic drift from genetically engineered crops.

## NOSB Policies and Procedures

In a wide-ranging attack on NOSB authority, the NOP abolished the NOSB Policy Development Subcommittee and took over control of NOSB policies and procedures. Activities affected include the NOSB's vision statement; the NOSB's self-description as a link to the organic community and defender of organic integrity; roles of subcommittee members and decisions within subcommittees; election of officers; criteria for a large number of decisions. The USDA continues a trend of announcing decisions without identifying criteria.

## Conclusion

When USDA proposed undermining the value of organic standards in 1998 by proposing the allowance of genetic engineering, sewage sludge, and irradiation, the public sent 275,000 outraged comments. The established procedures of the NOSB and NOP have historically established organic policy decision making as a transparent process, which has built public trust in the organic label. Recent USDA directives could threaten that trust and undermine the value of the label in the marketplace. It is time for the public to make its voice heard and ensure that organic production grows to replace chemical-intensive practices with those that protect and nurture life. Specifically:

- The NOSB must demand the right to set its agenda and hire a staff director for the board.
- The NOSB must oppose the NOP's unilateral action that reverses the meaning of sunset.
- The NOSB must require that decisions on the classification of materials be made in a transparent manner in accordance with NOSB-adopted criteria.
- The NOSB must demand to be heard on meaningful actions to protect organic producers from contamination by genetically engineered organisms.
- The NOSB must require the NOP to provide public explanations and criteria for its actions.

## Action

Follow Beyond Pesticides' program to protect and strengthen the integrity of the organic label by going to our webpage *Save Our Organic*, www.beyondpesticides.org/SaveOurOrganic. There you will find ways to join the campaign for strong standards based on public participation and effective organic production practices that protect health and the environment.

# Care About Kids

## Campaign encourages major retailers to stop selling d-CON rodenticide products EPA wants banned

At the close of 2013, Beyond Pesticides launched its *Care About Kids* campaign, asking the largest retailers in the nation –Walmart, Target, Home Depot, Lowes, and others– to stop selling dangerous d-CON mouse and rat bait products that EPA is fighting to ban.


Responsible for thousands of poisoning incidents involving young children each year and after over a decade of research and input from scientists, industry, and the public, the U.S. Environmental Protection Agency (EPA) has determined that certain rodenticide products pose an unreasonable risk to the environment and children.

While most of the major manufacturers of rodenticides have voluntarily adopted EPA's risk mitigation standards for rodenticide products to reduce these unreasonable risks, Reckitt Benckiser LLC, the manufacturer of d-CON products, is using legal tactics to delay EPA's ban of 12 of its products. In the meantime, Reckitt Benckiser LLC continues to sell these toxic products to retailers across the nation that can still be found on the shelves of Walmart and several other national retailers.

"We think this is unacceptable. Walmart and other major retailers should immediately discontinue the sale of these toxic mouse and rat poisons. There are effective alternatives available that do not put children, pets, and wildlife at danger of poisoning and even death," said Jay Feldman, executive director of Beyond Pesticides.

### The Road to Reducing Rodenticide Risks

Between 1993 and 2008, the American Association of Poison Control Centers logged somewhere in the range of 12,000 to 15,000 reports of rat and mouse poison exposures each year for children under the age of six. These numbers and other concerns about pet and non-target wildlife exposures spurred EPA to renew its efforts to establish better protections for children and the environment.

In 2008, after extensive scientific investigations and review, EPA issued a risk management decision that established stronger risk mitigation restrictions for the sale and use of 10 active ingredients found in various registered rodenticide products. Some of the strongest protections targeted consumer-use products, those sold for internal, residential use and some outdoor residential uses in stores like Walmart and other major retailers. These restrictions prohibited the sale of "loose" rodenticide bait, such as pellets, powders, and liquids, and required all such consumer-use baits to be sold with protective bait stations. The mitigation measures also prohibited brodifacoum, difethialone, bromadiolone, or difenacoum (otherwise known as second-generation anticoagulants (SGARs)) in any consumer-use products by establishing minimum packaging size standards.

Giving rodenticide manufacturers three years to implement the new protective measures, EPA requested that manufacturers adopt the mitigation measures by June 2011. Rodenticide manufacturers that failed or refused to adopt the standards by that time would face EPA enforcement actions to remove and cancel their products.

### Harmful to Children and the Environment

The rodenticide products slated for cancellation pose significant risks to human health. Children are particularly susceptible to these risks because they play on floors and explore by putting objects in their mouths, which can include loose rat poisons like d-CON. The most recent data from the 2011 Annual Report of the American Association on Poison Control Centers' National Poison Data System indicates a reported total of 12,886 rodenticide exposures, with nearly 80% of those cases involving children five or under.

Children are not the only concern. In EPA's risk mitigation review, it noted poisoning to pets and non-targeted wildlife as well. These rodenticides have been tied to the poisonings of federally listed threatened and endangered species, such as the San Joaquin kit fox and the Northern spotted owl. Rodents can feed on poisoned bait multiple times before death, and as a result their carcasses contain residues that may be many times the lethal dose. Poisonings occur when predators or scavengers feed on these poisoned rodents.

### Disproportionate Impacts on Low-Income Groups

Rickett Benckiser argues that regulation preventing the use of their product could have a significant impact on low-income populations. Certainly, from a poisoning perspective this is true. Children living below the poverty line are disproportionately affected by the risks these dangerous products present. For example, a study in New York found that approximately 17 percent of children hospitalized for eating rat poison from 1990 to 1997 were below the poverty line. However, low-income and minority populations are also the least financially prepared to deal with the unintended consequences of rodenticide poisonings and exposure. In a 2012 letter to Reckitt Benckiser, EPA acknowledged these impacts when it explained that, "[The Agency's] decision to require enhanced safety measures for consumer rodent-control products benefits all communities, but particularly economically-disadvantaged communities that are disproportionately burdened by rodent infestations and whose children are disproportionately exposed to rodenticides."

### Available Consumer and Integrated Pest Management Alternatives

EPA identifies clear and effective alternatives to the use of unsecured bait stations as a part of its risk mitigation measures. Walmart, for example, carries a wide variety of both non-toxic alternatives, such as mechanical and sticky traps, and more protective bait station products. These alternatives make stocking these unsafe canceled products unnecessary for consumers and retailers like Walmart.

### d-CON Products EPA Wants Banned

| EPA Registration Number | Product Name |
|---|---|
| 3282-3 | D-CON CONCENTRATE KILLS RATS & MICE |
| 3282-4 | D-CON READY MIXED KILLS RATS & MICE |
| 3282-9 | D-CON MOUSE PRUFE KILLS MICE |
| 3282-15 | D-CON PELLETS KILLS RATS & MICE |
| 3282-65 | D-CON MOUSE PRUFE II |
| 3282-66 | D-CON PELLETS GENERATION II |
| 3282-74 | D-CON BAIT PELLETS II |
| 3282-81 | D-CON READY MIXED GENERATION II |
| 3282-85 | D-CON MOUSE-PRUFE III |
| 3282-86 | D-CON BAIT PELLETS III |
| 3282-87 | D-CON II READY MIX BAITBITS III |
| 3282-88 | D-CON BAIT PACKS III |

In addition to these consumer-based alternatives, Beyond Pesticides encourages defined integrated pest management (IPM) practices for structural pest management as vital tools that aid in the rediscovery of non-toxic methods to control rodents and help facilitate the transition to a pesticide-free (and healthier) world.

These IPM methods have also proven effective in low-income communities, leading to additional health benefits beyond reduced poisonings. The Boston Housing Authority (BHA) and Boston Public Health Commission's implementation of an IPM program in 2005 in low-income housing reduced the number of cockroaches and rodents without the use of open pellet bait stations. Health officials attribute this program's success to a drop in asthma cases by nearly half since 2005.

See Beyond Pesticides' Factsheet on IPM Methods for Rodent Control at www.beyondpesticides.org/rodenticides/#Alternatives. For more information on IPM, visit Beyond Pesticides' Safer Choice page, www.beyondpesticides.org/saferchoice.

### The Choice: EPA Has Called on Retailers to Stop Carrying These Products

Despite the clear danger these products present to children, pets, and wildlife and the EPA's request to voluntarily stop selling these specific products that present these unreasonable risks, Walmart and other retailers continue to sell the dangerous d-CON products.

According to an EPA webpage containing information on the canceled rodenticides:

"Until EPA completes the administrative cancellation procedures required by law (FIFRA section 6(b)), these products may be legally sold and used according to the terms, conditions, and instructions of their most recent agency approved labels. However, we encourage retailers to stock and consumers to use only those products that meet EPA's safety standard."

EPA's diligent efforts to support its protective standards for these dangerous types of rodenticides should not be ignored. Retailers know that these products are harmful and have a choice to support the safety of children and the environment, over the interests of one rodenticide manufacturer.

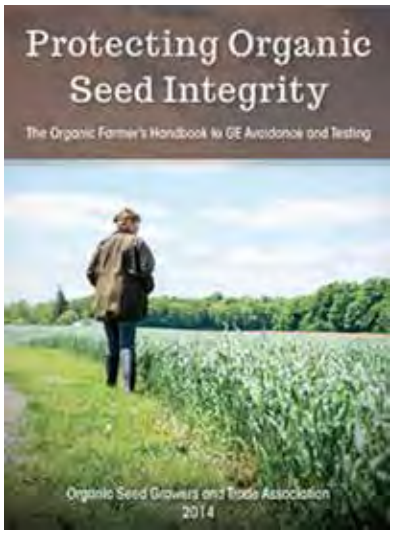
### Take Action: Tell Walmart and Other Major Retailers to Choose Children's Safety

Visit Beyond Pesticides' Rodenticide webpage at www.beyondpesticides.org/rodenticides for information on what you can do to let retailers know they need to *Care About Kids*. In addition to an email action that you can send to retailers, Beyond Pesticides also has a letter you can print and bring in to your local store, and an organizational sign-on letter.

# Protecting Organic Seed Integrity

## The organic farmer's handbook to GE avoidance and testing

*Organic Seed Growers and Trade Association, 2014, 65pp. Free to download at www.osgata.org.*




Organic Seed Growers and Trade Association's (OSGATA) recent publication, *Protecting Organic Seed Integrity*, provides a comprehensive guide of best practices for organic seed farmers to avoid genetically engineered (GE) contamination in organic seeds. The publication comes just weeks after the U.S. Supreme Court ruling to limit the ability of farmers to legally defend themselves against genetic drift in a landmark federal lawsuit *OSGATA et al. vs. Monsanto*. Without legal protections, farmers are left financially liable for GE contamination, putting their organic sales at risk and opening them up to legal challenges.

"The risk to organic farmers by GE contamination is real," said Maine organic seed farmer, Jim Gerritsen, OSGATA President. "Organic farmers continue to be failed by the government. This new handbook is an important tool for farmers to protect themselves and the organic seed supply."

With widespread planting of GE crops, organic farmers are increasingly vulnerable to the problem of GE contamination as pollen can easily drift to neighboring fields. Such contamination has proven extremely costly to farmers raising organic and non-genetically engineered crops whose loads are rejected by buyers when trace levels of contamination are detected. Organic farmers affected by GE trespass are also vulnerable to litigation due to patent enforcement. In June 2013, the U.S. Court of Appeals upheld a district court dismissal in OSGATA. A 2011 lawsuit, *OSGATA et al. v. Monsanto*, sought to protect farmers from GE trespass. A District Court dismissal (2012), followed by a U.S. Court of Appeals decision (2013) upholding the lower court, entered under the rules of evidence an assurance from Monsanto that it would not sue farmers with "trace amounts" (less than 1%) of GE crop contamination for patent infringement. According to *Reuters*, between 1997 and 2010, the agrichemical giant filed 144 patent-infringement lawsuits against farmers that it said made use of its seed without paying royalties. However, as the publication explains, "Biotech seed companies and GE farmers responsible as the source of GE contamination might be liable for damages based on tort claims when genetic drift or outcrossing occurs concerning trespass of land, nuisance, or strict liability."

*Protecting Organic Seed Integrity* is a one-stop resource for farmers seeking to protect themselves from the threat of GE contamination. The resource is split into three major sections: 1. Introducing the risks of GE contamination; 2. Presenting the tools for avoiding and testing at-risk crops, and; 3. Calculating the costs of GE contamination and liability concerns. OSGATA delves into each at-risk crop detailing best management practices and testing practices, taking into consideration currently approved genetic traits and the biological predispositions for drift. For example, for sugar beets –a wind-pollinated crop with very light pollen that can travel up to five miles under the right conditions– OSGATA recommends planting clean seeds in fields at least six miles from GE sugar beets.

More generally, the guidance covers the following topics:

- Threat of genetic drift for the viability of organic farms, the credibility of organic products, the liability for farmers, and the threat of patent litigation;
- The range of GE contamination pathways, from cross pollination of crops in the field to commingling of seeds at planting and harvest;
- Recommendations for testing seed purity down the supply chain with associated testing costs and scale-appropriate strategies for testing;
- A step-by-step guideline to avoid GE contamination, including identification of at-risk crops, testing of at-risk seeds prior to planting, understanding the potential for genetic drift, implementing isolation distances when planting, controlling any wild, volunteers or feral populations, and avoiding seed mixing;
- The risks and best management practices associated with USDA-approved GE crops, alfalfa, canola, corn, cotton, papaya, soybean, squash, and sugar beet, and;
- The costs of GE contamination and farmer liability concerns.

Organic farmers and advocates have argued that non-GE farmers should not bear the brunt of the costs associated with protecting their crops from contamination or ensuring compensation for any loss of crop value in the non-GE market, and are advocating a "polluter pays" compensation program similar to Superfund law for toxic contamination cleanup. The handbook concludes with, "Organic farmers have a right to farm in the way they choose on their farm without threat of intimidation and transgenic trespass. It is also important that recommended and/or required measures are not unnecessarily burdensome to farmers and other members of the organic community."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**Winter 2013-14 ■ Vol. 33, No. 4**



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# Advancing Sustainable Communities:

## People, pollinators and practices

### Beyond Pesticides' 32nd National Pesticide Forum

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**Beyond Pesticides, Northwest Center for Alternatives to Pesticides, and Portland State University Institute for Sustainable Solutions.**

**Co-sponsored by**
**Beyond Toxics, Center for Food Safety, Lewis and Clark Law School, Healthy Bees=Healthy Gardens, Organic Materials Review Institute (OMRI) Oregon Environmental Council, Oregon Physicians for Social Responsibility, Oregon Tilth, Pesticide Action Network North America, PCUN (Pineros y Campesinos Unidos del Noroeste), Portland Urban Beekeepers, University of Portland's Environmental Studies Department, and The Xerces Society.**

**Registration and schedule at: www.beyondpesticides.org/forum**