



# Pesticides and You

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

Volume 35, Number 3

Fall 2015

## Victory in Maryland County

County with One Million Residents Shifts to Organic Lawn Care

### Also in this issue:

Tea Steeped in Toxics

The Case Against Contaminated Compost

An Analysis of Whole Foods' *Responsibly Grown* Rating System



# Letter from Washington

## Celebrating Organic Lawns Policy and Protecting Our Victories

This issue represents a celebration and a warning. First, the celebration. The passage of organic lawn care legislation in Montgomery County, Maryland in October represents a high water mark in the history of pesticide restrictions and the growth in organic land management policy. The Council adopted a law that defines allowable materials in lawn care or turf management on public and private land as organic-compatible. The language bans hazardous pesticides, recognizing that, similar to secondhand smoke, the use of pesticides has community-wide impact—in this case, on the health of children and residents, wildlife (including bees and pollinators), and the protection of waterways (including the Chesapeake Bay and its tributaries). The photos on the front page and the inside article of this issue capture the degree of community involvement, collaboration with legislators, and effectiveness of a community-based organization, Safe Grow Montgomery. The photos also capture the reality that the issue of protection from pesticides and the adoption of policies is a family affair. And, of course, Beyond Pesticides staff is honored to have assisted with information that supported local action.

### Effecting the Transition

We have begun training sessions with the staff of the Montgomery County Parks Department that teaches land managers about the paradigm shift in managing healthy soils, as opposed to current systems which focus on killing insects and weeds. The focus on building soil biology that supports healthier, more resilient plants, and soils that generate nitrogen naturally and retain moisture and atmospheric carbon offers new ways of thinking about not only eliminating toxic inputs, but creating a community that nurtures the local ecology and contributes to reducing the pace of global climate change. On a related note, we released a video, *Making the Switch* (<http://bit.ly/makingtheswitch>), of a local hardware store in York, Maine, Eldredge Lumber and [Ace] Hardware, that has transformed its lawn and garden department to become organic-compatible, helping customers understand the importance of the living soil and ways to build the biomass with soil amendments and compost.

### Industry Pushback

Now, the warning. There is much work ahead. The chemical lawn care industry is not happy about this new law, although a state trade group leader testified that he could offer organic lawn care services if his customers wanted. The Parks Department has been a vociferous opponent of organic management of playing fields and at one point testified that it could not manage its sites without neonicotinoids (the systemic pesticides linked to the decline in bees and other pollinators) and glyphosate (Roundup/classified as a carcinogen by the International Agency for Research on Cancer).

### Maine Bill to Take Away Local Authority

If there was any doubt that our efforts would be challenged, a legislator in Maine, State Rep. Jeff Timberlake, has indicated that he will be introducing in January a bill to take away the authority of (preempt) local

jurisdictions in Maine to restrict pesticides more stringently than the state. This would overturn the landmark ordinance in Ogunquit, passed by 60% on a ballot initiative last year, to allow only organic-compatible products to be used for public and private lawn care in town.

### Keeping Organic Strong and Growing

As concern builds to establish organic management practices in towns and cities across the country, we are faced with a constant challenge to protect the meaning of organic and build the organic marketplace. As an example, we write about our lawsuit in this issue, *The Case Against Contaminated Compost*, to hold USDA accountable to the law, the *Organic Foods Production Act*, by not allowing pesticide contamination of compost permitted in organic production. USDA in 2010 adopted a rule change without public hearing and comment—a serious violation in government decision making. There are numerous process violations that we are working on like this—reversal of the procedures by which allowed synthetic substances in organic are reviewed, and the allowance of hydroponics, as two major examples.

Equally insidious is Whole Foods Market's *Responsibly Grown* rating system, which creates "good, better, best" criteria that does not utilize organic practices, values and principles as its baseline. We ask in this issue, *When Sustainable Is Less than Organic, Is it Responsibly Grown?* So, consumers are faced with a decision at point of purchase—some food grown with chemicals like neurotoxic insecticides (such as chlorpyrifos, diazinon, carbaryl), cancer causing herbicides like glyphosate, and bee killing insecticides in the neonicotinoid family, and others, can be rated "best," and products labeled USDA certified organic, which prohibits all these toxic chemicals in agricultural production, can be rated as "good or better." Similarly, in our piece *Tea Steeped in Toxics*, the Rainforest Alliance certification program allows hazardous pesticides that are prohibited in organic production.

In a perfect synergy, consumers and farmers created the organic market. Congress codified it in law with a magnificent system of review and independent oversight by the National Organic Standards Board, and put the program at USDA. The agency was not friendly to organic when the law was passed and today is undermining its integrity by circumventing public process. Meanwhile, those wanting to get into the organic market because of premium prices are not always on board with the standards and values that gave birth to organic, which are captured in the law. The on-the-ground efforts

to embrace organic in lawn care reinforces consumer demand for organic. Please visit our *Save our Organic* (<http://bit.ly/SaveOurOrganic>) webpage and make your voice heard to demand that organic thrives with integrity.



Jay Feldman is executive director of Beyond Pesticides.

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*Front cover photo: Members of the grassroots network Safe Grow Montgomery gather for a photo with Montgomery County, MD Councilmember Marc Elrich following the passage of the historic measure that bans hazardous lawn pesticides throughout the county. Photo by Safe Grow member Kevin Tan.*

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## Gearing Up For Grub Control

Dear Beyond Pesticides,

*My neighbors are putting down the neonicotinoid imidacloprid to control grubs in their grass. I'm concerned about the effects this chemical has on bees, as well as my own health and the health of my neighbors. Are there alternatives I can suggest to my neighbors to replace these toxins?* Renee D., North Carolina

Renee,

Thanks for your concern about the effects of neonicotinoids on local pollinator populations and your family's health. Imidacloprid is a common choice for grub control because, like all neonicotinoid insecticides, it is systemic and persistent. Its systemic properties allow it to travel into grass roots, and its persistence means that it will remain in the soil for a long period of time. Given imidacloprid's acute toxicity not only to grubs but also pollinators like the honey bee, these properties become a costly liability to the surrounding environment. In humans, it is linked to neurotoxicity, reproductive and mutagenic effects. After an application, any weeds that pop up in the lawn will be toxic to bees, and if any amount runs off the lawn it can contaminate other flowering plants, potentially for years to come. Imidacloprid can also leach into groundwater and contaminate local water bodies. A study released by the U.S. Geological Survey this summer found at least one neonicotinoid pesticide to be present in nearly half of U.S. streams. We recognize that grubs, commonly known as white grubs, can damage lawns if found in high enough numbers.

### Alternative Management

Luckily, there are viable, effective least-toxic alternatives to the use of imidacloprid that achieve the same long-term control of grubs without the long-term risks.

**1. Practice Natural Lawn Care:** Emphasis should first be placed on lawn care management techniques, recognizing that adult beetles prefer to lay their eggs in short grass. Cutting your grass tall—minimum of 2 inches high—may discourage egg laying, and reduce future grub populations. Eggs require moist soil conditions in order to hatch and prevent the larvae from drying out. Therefore, deep periodic soaking of the turf is more beneficial than frequent light watering.

**2. Encourage Natural Parasites and Predators:** Certain species of wasps, such as *Tiphia* spp. and *Scoliids* prey specifically on white grubs. Some birds can consume large number of insects in



## 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](mailto: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.

your yard, including adult beetles and grubs. Attract birds to your property by providing bird feeders, houses and baths.

- 3. Determine the Extent of the Problem:** Pest problems should be addressed based on action levels. While a few grubs per square foot are not considered a problem, generally any more than 10 grubs per square foot will require treatment. Look three inches deep in a one foot square cut out of the lawn.
- 4. Manage Adult Beetles:** While most grubs problems are caused by the Japanese beetle, June beetles, chafers, and others also lay their eggs in lawns. If you notice a number of adult beetles on your property, consider efforts to reduce their population. Handpicking beetles, using mechanical traps and planting plants that repel beetles can effectively minimize adult beetle populations.
- 5. Use biological controls:** If treatment of the lawn is necessary, there are several least-toxic methods for controlling grubs. For these methods to be effective, it is important to plan ahead and follow label directions:

- **Nematodes:** These microscopic worms live and breed in the soil and infect and kill feeding grubs. Commercially available nematodes for grub treatment can be obtained at local supply stores, and the strains *Steinernema carpocapsae* and *Heterorhabdis* spp are the most effective against grubs. When applying nematodes to your lawn, it is important to irrigate before and after application, since nematodes require moist soil conditions.
- ***Bacillus thuringiensis* (Bt):** Bt can also be used to control grubs. Bt is a naturally occurring soil bacterium that, when ingested, acts as a stomach poison that interrupts feeding, and eventually leads to death. Bt is a microbial pesticide and is available at local garden shops. There are several strains of Bt used to control various types of pests, so it is important to use the strains specific to the grub you intend to control.
- **Milky spore:** The milky spore disease is a naturally occurring host specific bacterium (*Bacillus popilliae*-Dutky) that, once



applied to the lawn, releases spores that are eaten by the feeding grubs. The ingested bacterium then begins to cripple and kill the grubs within a period of 7-21 days. The buildup of spores in the grubs causes them to take on a characteristic milky appearance. Once the grubs are dead, new spores are released into the soil, providing years of protection. Milky spore has been effective in the mid-Atlantic region of the U.S., but is generally not as effective in areas below garden zone 5, including New England states and the Midwest, due to low soil temperatures. This treatment is recommended for long-term rather than short-term control. Note: Milky spore targets the Japanese beetle species of grub only.

For more information, read our ManageSafe webpage on grub control ([bit.ly/grubcontrol](http://bit.ly/grubcontrol)). The factsheet goes into detail on the lifecycle of grubs, as well as plants and traps you can use.

We hope that information is helpful to pass along to your neighbor! Please feel free to call or email Beyond Pesticides at 202-543-5450 or [info@beyondpesticides.org](mailto:info@beyondpesticides.org) for more information.

## Bees, Frogs and Butterflies

*Dear Beyond Pesticides,*

*I am alarmed at the lack of bees in my garden and especially in my lavender. Is there a way that gardeners could unite and do a bee and frog count, the way birders do bird counts for the audubon association? What else can we do? Monarchs are also almost*

*non-existent. I have been spreading the milkweed seeds. So sad. Thanks for listening. Let me know what there is to do. Marcie N.*

Marcie,

We share your deep concerns regarding the loss of bees, frogs, and monarch butterflies. It's a great idea to set up a bee and frog count! You could gather friends, neighbors and other gardeners to do this. For a bee count, you can set a timer for two minutes (or any certain period of designated time) and count how many bees you see in that period. A frog count can be tricky, but you may be able to listen for frogs to "see" where their population is the largest. It would be helpful to reach out to your local governmental agency or environmental center to see if they are already doing something like this, or if they would be interested in setting something up. Also, you may want to track losses of honey bees in your state, and publicize that information to support the adoption of organic practices and policies.

There are even more ways that you can help to prevent further declines and protect the bees, frogs and butterflies that are still in your community. As you already know (and are personally experiencing), pesticides can adversely affect the wildlife that make your home their home. You can talk to your neighbors, friends and other gardeners about stopping the use of harmful pesticides on their lawns or in their gardens in order to mitigate the harmful effects that they can have on wildlife. Setting up a count is also a great organizing opportunity to meet other concerned people. By forming a coalition of multiple citizens, you could then bring your concerns to your local government to create meaningful policy changes (see cover story).

## 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/dailynewsblog](http://www.beyondpesticides.org/dailynewsblog). Want to get in on the conversation? "Like" us on Facebook, [www.facebook.com/beyondpesticides](http://www.facebook.com/beyondpesticides), or send us a "tweet" on Twitter, @bpncamp!*

EPA Seeks Public Opinion on Continued Use of Neurotoxic Organophosphate Pesticides

*Excerpt from Beyond Pesticides' original blog post (10/9/2015): Last week, the Environmental Protection Agency (EPA) released preliminary human health and ecological risk assessments for seven organophosphate pesticides (OPs) and announced the open public comment period for those chemicals.*

Jeanette M. comments:

"I lost my quality of life due to toxic chemicals and I know I am not alone. Knowing what these chemicals can do to people, especially babies and young children, why would you continue to poison our world? These chemicals are in my body where they have no business. Of course, I am only one person that you do not know and corporate worlds are going to do what their money will buy. But, if this happened to you, your loved ones, your grandchildren or anyone close to you, it would make you stop these chemicals from spreading any more."

Leslie I. comments:

"After finding enough evidence to ban chlorpyrifos from use around residential areas, it seems extremely illogical to consider it safe for use on food. Ban chlorpyrifos completely." (See related story in this issue.)

## Federal Court Overturns Approval of New Bee-Killing Insecticide Sulfoxaflor

On September 10, the Ninth Circuit Court of Appeals unequivocally rejected the U.S. Environmental Protection Agency's (EPA) unconditional registration of the systemic and bee-toxic insecticide sulfoxaflor. The court concluded that EPA violated federal law and its own regulations when it approved sulfoxaflor without reliable studies regarding the impact that the pesticide would have on honey bee colonies.

The court vacated EPA's full registration of the chemical, meaning that sulfoxaflor may no longer be used in the U.S. EPA must now require the testing of sulfoxaflor for effects on honey bees. With more test results, the agency may determine the chemical's future.

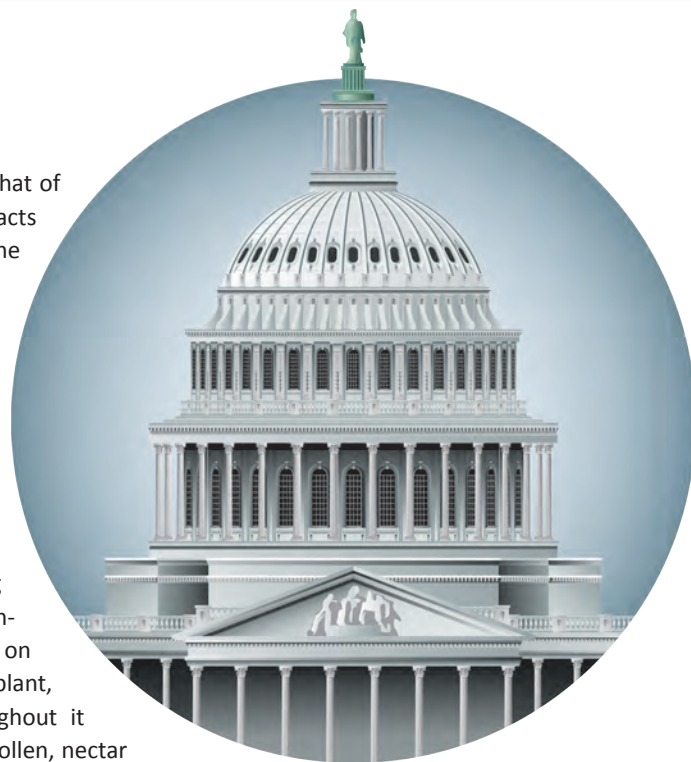
The case is *Pollinator Stewardship Council, American Honey Producers Association, National Honey Bee Advisory Board, American Beekeeping Federation, Thomas Smith, Bret Adee, Jeff Anderson v. U.S. EPA* (9th Circuit U.S. Court of Appeals, No. 13-7234). Sulfoxaflor, registered in 2013, has

a mode of action similar to that of neonicotinoid pesticides—it acts on the nicotinic acetylcholine receptor (nAChR) in insects.

Even though it has not been classified as a neonicotinoid, it elicits similar neurological responses in honey bees, with many citing sulfoxaflor as a new generation neonicotinoid. Neonicotinoids, including sulfoxaflor, are “systemic” insecticides, which are coated on seeds or are applied to the plant, and then translocate throughout it and are expressed through pollen, nectar and guttation droplets.

Several public comments were submitted on sulfoxaflor by concerned beekeepers and environmental groups, including Beyond Pesticides, which stated that approval of a pesticide highly toxic to bees would only exacerbate the problems faced

by an already tenuous honey bee industry and further decimate bee populations. However, EPA dismissed these concerns. Industry and agriculture groups argue that sulfoxaflor is needed to control insects no longer being effectively controlled by older generation pesticides.



## EPA Releases Overdue Revisions to Worker Protection Standards

On September 28, the U.S. Environmental Protection Agency (EPA) finally released its updated regulation regarding farmworker protection from pesticides, revising the *Agricultural Worker Protection Standards* (WPS), which are designed to reduce pesticide exposure to farmworkers and their families. These standards had not been updated for over 20 years, and EPA delayed revisions since the first proposed update in 2010.

Historically, farmworker advocates have criticized these protections as woefully inadequate in protecting the health of agricultural workers, but these new revisions attempt to strengthen the standards through increased training for workers handling pesticides, improved notification of pesticide applications, a higher minimum age requirement (18 years old) for children to work around pesticides, providing multiple ways for farmworkers to gain pesticide safety data sheets, creating anti-retaliation provisions, and making changes in protective equipment requirements.

Farm work is demanding and dangerous. As the scientific literature confirms, farmworkers, their families, and their communities face extraordinary risks from pesticide exposure. As a result of cumulative long-term exposure, farmworkers and their children, who often live on the farm, are at risk of developing serious chronic health problems, such as cancer, neurological impairments, asthma, and learning disabilities. Children, according to an American Academy of Pediatrics (AAP) report (2012), face even greater health risks, compared to adults, when exposed to pesticides. Beyond Pesticides submitted comments to EPA in August 2014, making clear that the exemption for farm owners that allows them to expose their own children of any age to these dangerous chemicals made little sense. Unfortunately, EPA has continued this exemption. For a more complete analysis, see [www.beyondpesticides.org/agjustice](http://www.beyondpesticides.org/agjustice).

## Passage of the DARK Act Sheds Light on Next Steps for Opposition

The *Safe and Accurate Food Labeling Act of 2015*, H.R. 1599, often referred to as the “DARK” Act or Denying Americans the Right to Know (DARK) what is in their food, passed the U.S. House of Representatives in July by a vote of 275-150. Backed largely by House Republicans, the DARK Act makes it harder for the Food and Drug Administration (FDA) to require mandatory national labeling of genetically engineered (GE) organisms and strengthens current policies that allow companies to voluntarily label foods containing GE products, an option they rarely choose to do.

The bill also continues to allow misleading “natural” claims for food that contain GE ingredients. Most concerning is the prohibition that H.R. 1599 would place on states’ authority to require labeling of GE ingredients in food products, instituting federal preemption of state and local authority. Representative John Conyers (D-MI) expressed concerns that H.R. 1599 “would make it impossible for people to be aware of unintended consequences” of GE ingredients and that Congress should not purposely withhold information that consumers across the country have demonstrated they wish to have included on food labels. According to a recent study by Consumer Reports National Research Center, more than 70% of Americans say they do not want GE products in their food, and 92% of consumers believe that foods containing GE ingredients should be labeled. After the bill passed the House, MSNBC polled the public on mandatory GE labeling, and an even higher percentage, 94% of the 125,000 polled, responded in favor of GE product labeling.

Use of GE crops has resulted in weeds and insects that are more resistant to herbicides and insecticides, given their increase in use. Pollen drift from GE crops also poses problems to farmers trying to avoid the use of GE crops, as pollen from GE crops cannot be contained and is often carried beyond property lines by wind, insects or animals. H.R. 1599 still has a long way to go before it becomes law, but Senate Republicans are currently trying to attach the bill as a rider to an omnibus spending bill, which could allow its passage without a full discussion of its impact.

To prevent this from happening, we encourage individuals to take immediate action by telling your Senators that you oppose the Dark Act and support federally mandated GE labeling without preemption of states. Send a letter to your Senators through <http://bit.ly/DARKactLetter>.



## Litigation Sparks EPA Action to Restrict Two Hazardous Pesticides

In August, a federal appeals court judge mandated that the U.S. Environmental Protection Agency (EPA) respond to a petition filed nine years ago that seeks to force the agency to restrict the neurotoxic insecticide chlorpyrifos (an organophosphate also known as Dursban).

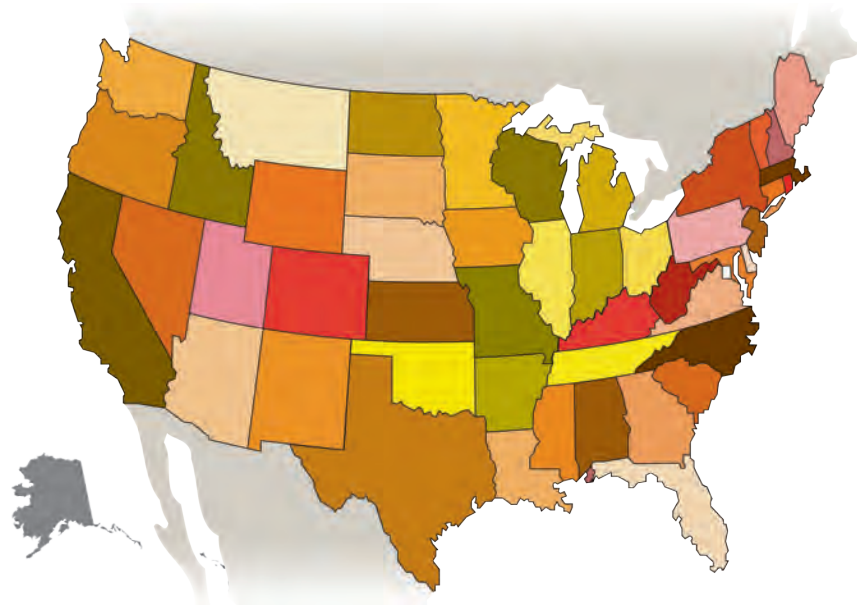
A U.S. Court of Appeals Judge for the Ninth Circuit stated that federal agencies should never practice the “venerable tradition” of putting off statutory requirements when it comes to human health. The court issued the opinion and order in a lawsuit brought by Earthjustice on behalf of Pesticide Action Network North America and Natural Resources Defense Council, and gave EPA until October 31 to respond to the peti-

tion. With the litigation looming, EPA took a step toward further regulating chlorpyrifos in a July proposal to ban remaining agricultural uses by April 2016 date. EPA had announced the removal from the market of all residential uses of chlorpyrifos in 2000, and the continued allowance in agriculture, on golf courses, and for public health mosquito control.

On November 24, EPA revoked the registration of the toxic herbicide “Enlist Duo,” which contains a combination of 2,4-D and glyphosate, classified by the International Agency for Research on Cancer (IARC) as possibly carcinogenic (Group 2B) and probably carcinogenic, (Group 2A) respectively.

EPA stated it is taking this action after realizing that the synergistic effects of the combination of these chemicals is likely to be more harmful than it had initially believed, and that very small buffer zones it had required are not adequate to protect vegetation.

This action resolves a year-long legal challenge filed by a coalition of conservation groups, including Beyond Pesticides, seeking to rescind the approval of the dangerous herbicide blend, and challenging EPA’s failure to consider the impacts of Enlist Duo on threatened and endangered plants and animals protected under the *Endangered Species Act*.



## California to List Glyphosate (Roundup) as Cancer-Causing

In early September, California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHHA) announced that it intended to list glyphosate (Roundup) and three other chemicals as cancer-causing chemicals under *California's Safe Drinking Water and Toxic Enforcement Act of 1986* (Proposition 65). Glyphosate is a phosphanoglycine herbicide that inhibits an enzyme essential to plant growth. Under California law, Proposition 65 requires that substances identified as carcinogenic by the International Agency for Research on Cancer (IARC) be listed by the state as known cancer-causing chemicals.

Following the cancer classification by IARC, a research study published in the journal *Environmental Health* links long-term, ultra-low dose exposure to glyphosate in drinking water to adverse impacts on the health of liver and kidneys. The study focuses on glyphosate-based herbicides (GBHs), rather than pure glyphosate, unlike many of the studies that preceded it. Joining glyphosate on the Proposition 65 list is malathion, parathion, and tetrachlorvinphos. A California Environmental Health Tracking Program (CEHTP) report, *Agricultural Pesticide Use near Public Schools in California*, finds that 36 percent of public schools in the state have pesticides of public health concern applied within a quarter mile of the school, including malathion and parathion.

Malathion, which is also classified as a Group 2A material by the IARC, is a nonsystemic, wide-spectrum organophosphate nerve poison that causes numbness, tremors, nausea, incoordination, blurred vision, difficulty breathing or respiratory depression, and slow heartbeat, among others. Parathion and tetrachlorvinphos are also organophosphates that attack the nerve system, particularly in young children, causing neurological damage. Currently, the best way to avoid glyphosate and other harmful pesticides is to support organic agriculture and eat organic food. Beyond Pesticides has long advocated for organic management practices as a means to foster biodiversity, and research shows that organic farmers do a better job of protecting biodiversity than their chemically-intensive counterparts.

## City of Lafayette, CO Bans Neonicotinoids

On September 15, the City of Lafayette, Colorado approved a resolution to prohibit neonicotinoid insecticides on city property. The resolution restricts the use of neonicotinoids on any land owned or operated by the city, including public rights-of-way, parks, playing fields, watersheds, ditches, open space lands, and public landscapes. The new resolution is supported by grassroots organizations, including Bee Safe Boulder and Pesticide Free Boulder County Coalition. The resolution affirms that the city will:

- Not purchase or use any neonicotinoid pesticides on city owned or operated land;
- Restrict city and agricultural contractors from using neonicotinoids, including imidacloprid, clothianidin, thiamethoxam, dinotefuran, etc.;
- Provide exceptions only when emergency situations where the life or health of a valuable, important land asset is at risk, such as a valuable tree or golf course, and when the neonicotinoid application is the most effective option;
- Urge all residents and business in Lafayette to suspend neonicotinoids for use in seed treatment, soil application, foliar treatment, and other bee-attractive settings;
- Purchase landscape materials that have not been treated with neonicotinoids and urge all businesses, homeowners, and homeowner associations to enlist the same practices; and,
- Support efforts to educate the broader community about the actions it is taking.

This resolution encourages limiting or restricting the use of neonicotinoids, but does not mandate such practices for private lands due to a state pesticide pre-emption law. Despite these laws, localities have proven that neonicotinoid use can be reduced on public land through city and county resolutions, and grassroots outreach and education can encourage a reduction of pesticides on private land.



## NY Town Tackles Pesticides and GMOs in Non-Binding Resolution

In early August, the City of Plattsburgh, New York, unanimously approved a policy that encourages city departments and city residents to reduce and eventually eliminate their use of toxic pesticides, such as neonicotinoids and glyphosate.

In the same resolution, city residents and department heads are also encouraged to refrain from genetically modified organism (GMO) cultivation, though they recognize there is very little of that taking place within Plattsburgh city limits. While this policy can only be used to discourage the use of pesticides and GMOs, not implement an outright ban, due to preemptive New York state law that occupies the field of pesticide regula-

tion, city officials are hopeful that they will be able to use their influence to implore the state of New York and U.S. legislators to take statewide and nationwide measures on the production of GMO crops and to curb the use of toxic pesticides.

The language of the resolution, sponsored by Councilman Mike Kelly, cites the health of honey bees and other insects as one of the main reasons for encouraging citizens to refrain from the use of pesticides in the practice of lawn care and beautification. It also names neonicotinoids as specific pesticides that should be avoided. Finally, the resolution focuses on the use of GMOs in crops, noting the growing list of na-

tions around the world that have banned GMOs as a strong reason to reduce or eliminate their use within city limits, and it “encourages [...] neighboring jurisdictions to adopt policies discouraging the use of GMO crops.”

This policy is very timely, and indicates that local governments and the people they represent may have very different views on GMO use as compared to those acting at the federal level. As far as creating change on a larger scale, Councilman Kelly believes that, despite its nonbinding nature, the resolution will impact other communities outside the city of Plattsburgh.

## Minneapolis, MN Passes Organic, Pollinator-Friendly Resolution

In August, the City Council of Minneapolis, MN unanimously passed a resolution declaring Minneapolis a pollinator-friendly community, urging city residents to take steps to protect dwindling pollinator populations. A groundswell of public support from a wide range of local and national groups, including Beyond Pesticides, resulted in swift passage of the resolution, the latest in a long string of local government action to safeguard pollinators from harmful pesticides, as federal proposals fail to address the magnitude of the crisis.

The resolution, introduced and written by Councilmember Cam Gordon, assigns a number of bee safe actions to various city departments. While the Health Department’s Environmental Services Unit will maintain a list of pollinator-friendly plants, the Community Planning and Economic Development Department and Property Services Division of the City Coordinator’s office will create habitat for local pollinators. The Minneapolis Public Works Department will pursue both increased bee habitat and adopt clear guidelines against the use of pesticides, including but not limited to systemic neonicotinoid insecticides, and pesticide treated plants. In addition to policies that apply to government-owned property, the city also urges private residents and businesses to forgo the use of toxic pesticides, plant more pollinator forage on their property, and use organic or chemical-free lawn and landscaping practices.

Similar to most local jurisdictions, Minneapolis is preempted from enacting an ordinance that restricts the private use of harmful pesticides. However, the city’s resolution addresses this, stating “the City of Minneapolis will continue to advocate at the State and Federal level for increased authority to address the non-agricultural use of pesticides, and for other pollinator friendly practices.” A bill (SF 358) currently in the Minnesota State Legislature would exempt Minnesota’s “first class cities” (including Duluth, Minneapolis, Rochester, and St. Paul) from state preemption.



*Photo by Delbert Contival, Kauai, HI, grand prize winner of the 2015 Pollinator Photo Contest.*

## Reno, Nevada Kick-Starts Pesticide-Free Parks Program

In September, the City of Reno, Nevada officially approved a Pesticide-Free Parks program aimed at protecting the health of its residents and the local environment. In addition to two downtown parks, Neighborhood Advisory Boards within each of City's five wards chose two parks to join the program, bringing the total to 12 pesticide-free parks.

The program is an outgrowth of resident concern over the use of pesticides linked to cancer, asthma, and learning disabilities, as well as impacts to local water quality. Beyond Pesticides worked to support the pesticide-free parks effort by sponsoring a training session taught by nationally renowned turfgrass expert Chip Osborne on how to transition to organic practices. According to a staff report released by the Reno Department of Parks, Recreation and Community Services, there is not expected to be any burdensome financial implications put upon the City as a result of the program.

"There will be no cost implications as staff will implement changes within its adopted budget," the report indicates. Herbicides are currently used in Reno parks to control weeds in planter areas, baseball infields and decomposed granite areas, and around fence lines, trees, signs, and other similar installations.

Beyond Pesticides is working with the city to provide guidance on transitioning parks to organic practices. Soil samples at local parks were taken prior to the Reno training session, which will provide a baseline to implement cultural and product changes that will improve the biological health of the soil, making turf areas more resistant to weed and insect pressures.

Reno's pesticide-free parks program highlights the powerful change residents can make when they become engaged with their local elected officials. Large and small, communities throughout the country are determining that the health hazards associated with pesticide use and their effect on pollinators and the wider environment are not justifiable.



## Connecticut Bans Toxic Lawn Pesticides in Municipal Playgrounds

The Connecticut General Assembly passed legislation in July banning toxic lawn pesticides on municipal playgrounds, effective October 1, 2015, in the omnibus budget implementation Bill 1502 at Section 448 (p.563 at line 17579). The bill also improves the existing parents' pesticide notification system by requiring school districts to provide at least 24-hour electronic notification any time a pesticide application is scheduled to occur on school property (Secs. 445 and 446), as well as requiring and tracking the use of pesticides and integrated pest management (IPM) methods to reduce pesticide use on state properties (Sec. 449).

The bill bans lawn pesticides which are defined as "a pesticide registered by the United States Environmental Protection Agency (EPA), and labeled pursuant to the *Federal Insecticide, Fungicide and Rodenticide Act* for use in lawn, garden and ornamental sites or areas."

It continues: "'Lawn care pesticide' does not include (A) a microbial pesticide or biochemical pesticide that is registered with EPA, (B) a horticultural soap or oil that is registered with EPA and does not contain any synthetic pesticide or synergist, or (C) a pesticide classified by EPA as an exempt material pursuant to 40 CFR 152.25, as amended from time to time."

In 2005, Connecticut became the first state in the nation to prohibit the use of lawn care pesticides on school athletic fields serving grades K-6 schools and day-care centers. The original law was expanded in 2009 to include middle school fields (Grades 7 and 8).

Activists and concerned parents have been working for years in Connecticut to extend the current prohibition of pesticide use to include high schools, athletic fields, municipal parks and town land, but have experienced strong industry opposition. Meanwhile, the industry has been seeking to overturn the law with a weak definition of IPM.





# Tea Steeped in Toxics

## Weak regulations and enforcement result in contaminated imported tea in U.S. market

By Nikita Naik

**D**uring the cooler weather months, many will turn to a cup of hot tea as the perfect comfort drink. For the health conscious, tea increasingly has become the preferred beverage choice because of its many health-protective benefits.

### Reason for Concern

Yet, the allowance of hazardous, pesticide import residues – banned, canceled or not registered in the U.S. – raises serious safety questions. One critical concern stems from a U.S. Environmental Protection Agency (EPA) decision in 2013 that allows a banned pesticide in tea imported from China until mid-2016. EPA's decision to provide "additional time to transition to an alternative" to the highly toxic organochlorine insecticide endosulfan<sup>1</sup> puts consumers in harm's way. However, this is only the tip of the iceberg when it comes to hazardous levels of pesticides in tea. Reports from India and China find high levels of banned pesticides and violative residues in tea products, pointing to a lack of enforcement and strong regulations on pesticide use in major tea exporting countries.<sup>2,3</sup> In the U.S., the Food and Drug Administration (FDA) consistently finds high levels of illegal residues on imported

tea that eventually finds its way to the American consumer. This includes permethrin (a synthetic pyrethroid, linked to cancer and endocrine system disruption), DDE (a metabolite of DDT, banned in the U.S. in 1972), heptachlor epoxide (a derivative of the pesticide heptachlor, which was banned in the U.S. for use in agriculture and as a termiticide due to its carcinogenicity and persistence in the environment),<sup>4</sup> and acetamiprid (a bee-toxic neonicotinoid).<sup>5,6</sup> Meanwhile, a 2014 U.S. Government Accountability Office (GAO) report found that FDA now tests less than one-tenth of one percent of all imported foods,<sup>7</sup> which is especially problematic for tropical products such as tea, since the imported share in the U.S. is nearly 100 percent due to a near absence of domestic production.<sup>8</sup> These issues underscore a number of lapses in the journey from tea cultivation to importation, increasing consumer exposure to a dangerous blend of pesticides in conventional tea.

### Large Market, Widespread Exposure

Tea is the most commonly consumed beverage in the world, second only to water.<sup>9</sup> True tea, distinct from herbal tea, is sourced from the leaves of a plant known as *Camellia sinensis* and is processed in different ways to produce varieties like white, yellow, green, oolong, and black tea.

Worldwide tea production has increased significantly over the past 10 years, growing from 3.89 million tons in 2006-2008 to 5.06 million tons in 2013, a 30 percent increase.<sup>10</sup> World tea exports, with China, India, Kenya, and Sri Lanka as the major exporters, reached 1.77 million tons in 2013, a five percent increase over 2012.<sup>11</sup> World tea consumption continues to surge, with Russia, the United Kingdom, Pakistan, and the U.S. as the leading importers in this market.<sup>12,13</sup> Tea imports into the U.S. have nearly tripled over the past 15 years alone, according to the U.S. Department of Agriculture (USDA).<sup>14</sup>

**Degree of Contamination with Pesticide Residues**  
Over the past few years, numerous reports have been published that point to high levels of toxic and illegal pesticide residues contaminating popular tea brands, underscoring the consequences of weak regulations and lack of proper enforcement in countries like India and China that export a large proportion of tea that ends up in the U.S. The presence of these pesticide residues in tea highlights a litany of problems within the industry, with broad implications for the safety of imported food and the adequacy of U.S. enforcement against hazardous and violative pesticide residues in food.

#### **Regulation of Pesticides in Tea in Exporting Countries**

Poor regulations and enforcement in exporting countries can contribute to higher levels of pesticide residues in tea leaves. Developing countries often lack rigorous pesticide laws and training resources for pesticide inspectors and users, and the rapid growth of their agricultural markets outstrip the ability of regulatory and enforcement agencies to keep pesticide use in check.<sup>15</sup> Many developing countries, without internationally sponsored programs, forego or limit such control programs and maintain the use of older, non-patented, cheaper, more toxic, and environmentally persistent chemicals that can be manufactured within the country itself.<sup>16</sup> While many of these chemicals have been banned in “western” countries, they are still freely available elsewhere.<sup>17</sup> For example, in Vietnam, another major exporter, pesticide use

increased from 14,000 tons in 1990 to 50,000 tons in 2008, yet pesticide control laws have not been implemented in a way that reflects this increase, largely due to a lack of resources, and knowledge of the law on the part of regulators, enforcement, and other factors.<sup>18,19</sup> The lack of strong regulations governing pesticide use in countries like India and China has far reaching implications.

#### **Contamination of Tea from India and China**

In 2014, a Greenpeace India investigation, *Trouble Brewing: Pesticide residues in tea samples from India*, found that nearly 94% of the tea samples tested in India contained at least one of 34 different pesticides, while over half contained a toxic cocktail of more than 10 different pesticides.<sup>20</sup> The report relied on tests of 49 branded and packaged teas. Eight of the top 11 companies that make up a large part of the tea market in India were represented, including Hindustan Unilever Limited, a subsidiary of the global multinational company Unilever. Popular brands included in the study are Twinings and Lipton.

The residues found include DDT, which has been banned for use in agriculture in India since 1989, and endosulfan, which was banned in India in 2011. Over half of the samples tested contained illegal residues—either those that are not approved for use in tea cultivation or exceed allowed limits.<sup>21</sup> In addition to registered pesticides that have been long banned from agricultural use in tea cultivation in India (DDT, and triazophos), also found were (i) suspected mutagens and neurotoxins (monocrotophos), and (ii) insecticides associated with the global decline in bee populations (neonicotinoids like thiacloprid and thiamethoxam). Some of the most frequently detected pesticides include thiamethoxam (78%), cypermethrin (73%), acetamiprid (67%), thiacloprid (67%), DDT (67%), deltamethrin (67%), dicofol (61%), imidacloprid (61%), and monocrotophos (55%).<sup>22</sup>

The Greenpeace India report also provides several concrete examples of tea with residues of pesticides that are not registered for use in India. According to the report, 68% of the 34 detected pesticides were not registered at the time of publication for use

#### **Not Just Pesticides – Other Contaminants Found in Tea**

Heavy metal contamination in tea leaves has been documented. Lead concentrations in Chinese tea were found in a study with 32% of samples exceeding the national maximum permissible concentration (MPC) of 2.0 mg/kg. An increasing trend in lead concentration on tea leaves was documented from 1989 to 2000. Proximity to highway and surface dust contamination was found to cause these elevated concentrations, as well as uptake of lead in soil by the roots of the tea plant.<sup>44</sup> Up to 83% of teas have lead levels considered unsafe for consumption during pregnancy and lactation, as well as excessive levels of manganese and aluminum.<sup>45,46</sup>



Photo by André Karwath via Wikimedia



Disclosure of pesticides found in tea leaves in violative samples – what are they?

Under FDA's Pesticide Monitoring Program (PMP), imported samples, like that of tea, are collected at the point of entry into U.S. commerce. Illegal residues are defined as residues that are found at a level above EPA tolerance or FDA Action Levels (guideline levels for unavoidable residues of canceled pesticides that persist in the environment), or residues at a level of regulatory significance for which EPA has established no tolerance.

An analysis of the most recently published FDA data on residue levels in tea (black, green, and oolong) from 2008 to 2012 reveals a high rate of violations. Out of the 65 samples of tea analyzed over these five years, nearly 30 percent had two or more illegal residues, with one sample from 2012 containing up to 14 violations. Of the 94 violations found in these samples, 76 were listed as “no registration” and 18 as “excess of tolerance.” Many of these violations are for pesticides that are currently used in U.S. agriculture, but lack a tolerance and presumably exposure data for use in tea, such as acetamiprid (a neonicotinoid), or permethrin (a pyrethroid). Other chemicals that were found to be in violation have been long banned from use in the U.S., including DDE (a DDT metabolite), carbendazim (MBC) (not allowed for use in agriculture),<sup>47</sup> and heptachlor epoxide (a derivative of the pesticide heptachlor, which was banned in the U.S. for use in agriculture and home use due to its carcinogenicity and persistence in the environment).<sup>48</sup>

### Violative Pesticides Found in Tea and Their Health Effects

(Source: U.S. Food and Drug Administration, Pesticide Monitoring Program, 2008-2012)

Pesticide	Adverse Health Effects*
3-HYDROXYCARBOFURAN**	Endocrine Disruptor, Reproductive/Developmental Effects, Possible Cholinesterase Inhibitor, Possible Neurotoxicant
ACETAMIPRID	(Insufficient Data)
BIFENTHRIN	Endocrine Disrupter, Neurotoxicant, Possible Reproductive/Developmental Effects
BIPHENYL	Neurotoxicant
BUPROFEZIN	Possible Reproductive/Developmental Effects
CARBENDAZIM (MBC)	Possible Carcinogen, Mutagen, Possible Endocrine Disrupter, Reproductive/Developmental Effects
CHLORPYRIFOS	Possible Endocrine Disrupter, Reproductive/Developmental Effects, Cholinesterase Inhibitor, Neurotoxicant
CYPERMETHRIN	Possible Carcinogen, Possible Mutagen, Possible Reproductive/Developmental Effects
DCPA (CHLORTHAL-DIMETHYL)	Possible Carcinogen, Possible Reproductive/Developmental Effects
DDE, P,P'- (DDT)	Carcinogen, Mutagen, Endocrine Disruptor, Cholinesterase Inhibitor, Possible Neurotoxicant
DICOFOL	Possible Carcinogen, Possible Endocrine Disrupter, Neurotoxicant
DIFENOCONAZOLE	Carcinogen, Possible Reproductive/Developmental Effects
DINOTEFURAN	Possible Reproductive/Developmental Effects
FENHEXAMID	Possible Endocrine Disrupter
FENPROPATHRIN	(Insufficient Data)
FENVALERATE	Endocrine Disrupter, Possible Neurotoxicant
FLONICAMID	Possible Carcinogen, Reproductive/Developmental Effects
FLUCYTHRINATE	Possible Reproductive/Developmental Effects, Neurotoxicant
FLUDIOXONIL	Possible Carcinogen, Possible Reproductive/Developmental Effects
FLUFENOXURON	Possible Carcinogen, Endocrine Disrupter, Possible Reproductive/Developmental Effects
HEPTACHLOR EPOXIDE (HEPTACHLOR)	Carcinogen, Possible Endocrine Disrupter, Reproductive/Developmental Effects, Neurotoxicant
IMIDACLOPRID	Mutagen, Possible Reproductive/Developmental Effects, Possible Neurotoxicant
LAMBDA-CYHALOTHRIN	Possible Reproductive/Developmental Effects, Possible Neurotoxicant
OMETHOATE	Cholinesterase Inhibitor, Neurotoxicant
PERMETHRIN	Possible Carcinogen, Endocrine Disrupter, Reproductive/Developmental Effects, Possible Cholinesterase Inhibitor, Neurotoxicant
PHOXIM	Cholinesterase Inhibitor, Neurotoxicant
RESMETHRIN	Possible Carcinogen, Endocrine Disrupter, Reproductive/Developmental Effects, Neurotoxicant
TEBUCONAZOLE	Possible Carcinogen, Reproductive/Developmental Effects
TRIAZOPHOS	Cholinesterase Inhibitor, Neurotoxicant

\*These pesticides focus solely on those in violation of U.S. law, and thus represent only a small percentage of all pesticides found in U.S. tea imports, which result in human exposure.

\*\* Health effects of parent chemical carbofuran

on tea by the CIBRC (Central Insecticides Board and Registration Committee), although some appeared on lists of pesticides recommended for use on tea at the state level, indicating inconsistencies in regulations or recommendations at the regional and national levels. Of the neonicotinoid insecticides detected in the samples, only thiacloprid and thiamethoxam are registered for use on tea production in India.<sup>23</sup> Two neonicotinoids, acetamiprid and imidacloprid, not approved for use in tea cultivation, are among the most commonly found residues in the report. Other illegal pesticide residues detected include the insecticide tebufenpyrad, a pyrazole miticide/insecticide, which is not registered for use in India.<sup>24</sup> Endosulfan was found in about 8% of tea samples in the Greenpeace India investigation, despite being banned for production, use, and sale throughout India following a 2011 Supreme Court decision, although the chemical is still registered for use by CIBRC.

Other unapproved pesticides found in the report include monocrotophos, classified by the World Health Organization (WHO) as a Class Ib (highly hazardous) pesticide that has not been registered for use in tea production at the government level due to its WHO designation. Methamidophos, found in two samples, is another WHO Class Ib pesticide and is not registered in India for any use; its parent compound,

acephate, is not approved for use on tea crops, either.<sup>25</sup> Triazophos is also a WHO Class Ib pesticide that is not approved for use on tea in India, although it is registered.<sup>26</sup>

Rampant contamination of tea leaves with pesticides has also been found in China. In April 2012, Greenpeace China released a report, *Pesticides: Hidden Ingredients in Chinese Tea*, which found evidence of pesticide residues in popular tea brands. The report found that all of the 18 samples tested had traces of at least three different pesticides.<sup>27</sup> In total, 29 different pesticides were detected, including reproductive and developmental toxicants (carbendazim, benomyl, myclobutanil, and flusilazole) and bee-killing chemicals (imidacloprid and acetamiprid).<sup>28</sup> Twelve of the samples had traces of pesticides banned for use on tea by China's Ministry of Agriculture (including methomyl and fenvalerate).<sup>29</sup> Six samples contained a mix of over 10 pesticides, with one sample containing up to 17 different pesticides.<sup>30</sup>

#### U.S. Regulations of Tea Imports:

##### High Violations and Little Monitoring

With the exception of meat, poultry, and certain egg products, for which USDA is responsible, FDA is charged with enforcing EPA toler-

#### Import Tolerances on Tea –A Closer Look at Endosulfan

According to EPA, when no U.S. registration for a pesticide exists for a specific commodity, interested persons may submit a petition requesting that EPA establish an import tolerance (or tolerance exemption) for a pesticide residue on a food or feed commodity, which will allow the food or feed treated with the pesticide in foreign countries to be lawfully imported into the U.S.<sup>49</sup> The term “import tolerance” is used as a convenience to refer to a tolerance that exists in the U.S. for which there is no accompanying U.S. registration, but that meets U.S. food safety standards.<sup>50</sup> According to the Global Maximum Residue Limits Database and the Code of Federal Regulations, tea leaves are shown to have 21 pesticide tolerances, of which 11 are import tolerances.<sup>51,52</sup> This is not surprising for a commodity like tea, which is largely imported due to lack of domestic commercial output, but allows for a way in which consumers can be exposed to pesticides that are otherwise not allowed for use in the U.S. Although requesting an import tolerance requires data on product chemistry, residue chemistry, and toxicology so that EPA can assess potential dietary risk and make the required acceptable risk finding, the agency does not require data on worker exposure, residential exposure, or environmental fate and effects, which are required if the pesticide were registered for use in the U.S.<sup>53</sup>

In 2010, EPA proposed to phase out all tolerances for endosulfan during the period 2012 to 2016 based on use, as it “can pose unacceptable neurological and reproductive risks to farmworkers and wildlife and can persist in the environment.”<sup>54</sup> However, in 2013, EPA allowed residues of the cancer-causing insecticide endosulfan on imported Chinese teas until July 31, 2016, in order to provide “additional time to transition to an alternative to endosulfan” and raising serious concerns of further exposure to the toxic carcinogen for farmworkers and consumers.<sup>55</sup> The agency proposed a transition time that would allow growers time to adopt alternatives, with the last four uses ending on July 31, 2016.<sup>56</sup> For tea, EPA proposed an immediate revocation, since there is little, if any, endosulfan used in tea production in the U.S.<sup>57</sup> However, the Chamber of Commerce of the Zhejiang International Tea Industry filed a complaint indicating that it would need five years or less to find feasible alternatives to endosulfan.<sup>58</sup> It also indicated that it was unable to provide comment on the tolerance revocation ruling since EPA did not provide proper notice to the World Trade Organization.<sup>59</sup> In acknowledging this oversight, EPA now allows endosulfan residues of 24 parts per million (ppm) in imported Chinese tea until July 31, 2016.<sup>60</sup> Despite the risks posed by endosulfan residues, EPA sees the decision as “appropriate,” raising questions of whether EPA is putting economic interests ahead of public health.<sup>61</sup>



## A Closer Look into Current Efforts in Tea Sustainability: Rainforest Alliance Certification

The Rainforest Alliance Certified™ (RAC) seal, a little green frog, is found on tea and other products around the world and asserts a certain level of sustainability that aims to protect workers and their families, as well as wildlife and habitat. It does not meet organic standards in prohibiting all hazardous pesticide uses. As of 2012, Rainforest Alliance outpaced organic and Fairtrade certification in countries like Kenya and India (unlike China, in which most of the compliant production was organic certified).<sup>62</sup> RAC standards are set by a coalition of non-profit conservation organizations all over the world, known as the Sustainable Agriculture Network (SAN).

RAC's Sustainable Agriculture Standard includes pesticide use criteria.<sup>63</sup> The standards address worker safety through measures such as education of pesticide labels, storage, protective equipment, and restricted entry intervals. If a consumer is looking to avoid exposure to pesticides in their tea, however, RAC does not ensure that a labeled product is free of residues. Unlike organic agriculture, which adheres to a default prohibition of synthetic fertilizers and pesticides, which are subject to the National List of Allowed and Prohibited Substances review, SAN's standards allow for the use of some agrochemicals that fall outside the approved organic list.

Certain toxic pesticides are prohibited from use under RAC's "critical criteria," including:

- Substances – biological, organic, or agrochemical – that are not legally registered for use in the country.
- Agrochemicals on the List of Banned or Severely Restricted Pesticides in the U.S. by EPA or banned or severely restricted in the European Union.
- Substances banned globally under the Stockholm Convention on Persistent Organic Pollutants (POPs).
- Substances listed in Annex III of the Rotterdam Convention on Prior Informed Consent (PIC).
- All Pesticide Action Network Dirty Dozen substances.

The farm may have a plan for eliminating the use of World Health Organization (WHO) Class Ia (Extremely Hazardous) and Ib (Highly Hazardous) technical grade active ingredients of pesticides and for "reducing the use" of WHO Class II (Moderately Hazardous) technical grade active ingredients. (The farm may choose not to incorporate this criterion as part of RAC's 80% compliance requirement for "applicable criteria.") Farms that comply with this criterion must demonstrate that there are no viable alternatives that exist for a type of pest or infestation, the pest or infestation has or would have resulted in significant economic damage, and measures must be taken to substitute these WHO Class Ia, Ib, and II technical grade active ingredients of pesticides. Additionally, farms must "take steps to avoid introducing, cultivating, or processing" transgenic crops.<sup>64</sup>



ances for imported foods (as well as domestically produced foods shipped in interstate commerce). Due to resource constraints and the sheer volume of U.S. imports, FDA is unable to inspect and test for pesticide residues on all imported foods, using certain tools to allow for a more targeted approach. These tools include an automated screening system called PREDICT (Predictive Risk-based Evaluation for Dynamic Import Compliance Targeting), which utilizes data such as inherent product risk ratings and results of facility inspections to assign a risk score that informs the agency whether a physical examination of the product is warranted.<sup>31,32,33</sup> FDA may issue import alerts, which can result in "detention without physical examination" (DWPE) and refusal of subsequent shipments from the importer.<sup>34</sup>

According to reports from FDA's Pesticide Monitoring Program (PMP), which analyzes and reports on pesticide residue levels in imported and domestic food, tea has been listed multiple times over the past five years as an import commodity that "may warrant special attention," a designation that is triggered for commodities with (i) at least 20 samples analyzed or with a minimum of three violations, and (ii) a violation rate of 10 percent or higher.

Over these five years, tea appeared on this list in 2008 with a 23% violation rate,<sup>35</sup> and again in 2011 with a 26.7% violation rate.<sup>36</sup> In FDA's most recent report for 2012, oolong tea was found to have a 100% violation rate, and an overall 50% violation rate for all tea samples analyzed.<sup>37</sup> While the sample sizes in FDA's analyses are small, they highlight a persistent problem regarding tea imports – imported tea samples contain pesticide residue higher than established tolerances or for which no tolerance has been established, putting American consumers at risk.

There is evidence that FDA's approach to monitoring imported food is insufficient. A 2014 GAO Report, *Food Safety: FDA and USDA Should Strengthen Pesticide Residue Monitoring Programs and Further Disclose Monitoring Limitations*, criticizes FDA for not testing for several commonly used pesticides with established tolerance levels, such as the herbicides glyphosate and 2,4-D, as well as not using statistically valid methods consistent with the Office of Management and Budget (OMB) to collect information on incidence and level of pesticide residues. In 1993, FDA analyzed over 12,000 domestic and imported food samples for pesticide residues, but this number was reduced to a low

of 5,000 in 2008. The report states that FDA now tests less than one-tenth of one percent of all imported fruits and vegetables, equating to about one test out of every 2,100 entry lines.<sup>38</sup> This has major implications for tea because it is primarily imported into the U.S. A 1987 GAO report, *Federal Regulation of Pesticide Residues in Food*, points to a historic inadequacy in FDA's approach to monitoring imported food, singling out the agency's inability to prevent adulterated foods from reaching the marketplace.<sup>39</sup>

The results of FDA's PMP, and the agency's conclusion that pesticide residue levels are "generally in compliance" with EPA's permitted uses and tolerances, are not derived from comprehensive evidence and statistically valid methods. The inadequacies suggest that these violation rates could be severely underreported and highlight major shortcomings in FDA's approach to the monitoring of pesticides on imported produce.

A 2010 report from the National Academies of Sciences, titled *Enhancing Food Safety: The Role of the Food and Drug Administration*, highlights limitations in FDA's domestic and imported food programs. For example, foreign producers may have trouble understanding or even accessing FDA requirements or may be unable to access EPA-approved pesticides. Additionally, when FDA takes action on import shipments, communication of the action may not occur within the country or to other countries.

The international bodies seeking harmonization of standards for pesticide residues are not working to ensure adequate protection of consumers and farmworkers. Standards, such as those in the European Union (EU), have allowable levels that are often lower than many countries, including the Codex Alimentarius (created by the Food and Agriculture Organization [FAO] and the World Health Organization of the United Nations to develop harmonized

international food standards).<sup>40</sup> The reduction of pesticide use should be accomplished on both sides of the import/export equation. Importing countries like the U.S. and EU, must continue to monitor imports and reduce Maximum Residue Limits (MRL) and tolerance levels for hazardous pesticides. Exporting countries like China and India can maintain their economic edge in the tea industry by implementing stronger regulations and enforcement of pesticide use and by bolstering their organic tea output.<sup>41</sup>



Photo by Haneburger via Wikimedia.

Other efforts to increase sustainability include standards developed by organizations including Fairtrade International, IFOAM Organic International (formerly International Federation of Organic Agriculture Movements), and Rainforest Alliance (see box), the Ethical Tea Partnership (ETP), and UTZ Certified, which together have certified or verified 12 percent of global tea production as of 2011/2012.<sup>42</sup> According to the International Institute for Sustainable Development, one-third of production is subject to voluntary sustainability standards on the international market (or 4% of global tea production and 9% of exports).<sup>43</sup>

## Conclusion

The presence of pesticide residues in tea leaves may undermine the popular beverage's status as a health tonic. The U.S. primarily imports its tea from China, India, and Sri Lanka, where regulations on pesticide use, worker protection, and environmental contamination oftentimes do not measure up to U.S. and international standards. Additionally, FDA's failure to properly monitor imports, including that of tea, means that certain illegal pesticides are ending up in the food supply of U.S. consumers. Given these problems, consumers should choose products certified and labeled organic, which prohibits the pesticides that are found in residue surveys and verifies that growers are in compliance with organic systems management plans and allowed substances.



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# The Case Against Contaminated Compost

Court rejects USDA motion to dismiss lawsuit on allowed contaminants in compost in organic production

Photo by Ckgurney via Wikimedia.

By Annie D'Amato, JD and Jay Feldman

The Center for Environmental Health, Beyond Pesticides, and Center for Food Safety (CFS) appeared at a hearing in federal court in September, 2015, represented by CFS, to fend off a U.S. Department of Agriculture (USDA) challenge of the groups' right to sue the agency on its allowance of contaminated compost in organic production. USDA lost its argument. The court decision may begin to unravel a series of actions by USDA that many have challenged as process violations on decisions related to organic standards and allowed synthetic substances in organic production. Consumer and farm advocates argue that the growth of the organic market relies on public trust in the organic label. Critical to this is the public's belief in the integrity of the USDA decision making process with clear opportunities for public review and comment. Unilateral action by USDA without public input, it is argued, will erode public confidence in the value of the USDA organic label.

## Preserving Public Voice in Organic Policy

The case, *Center for Environmental Health et al. v. Vilsack, USDA* (Case3:15-cv-01690), filed in April, 2015 in the U.S. District Court for the Northern District of California, points to the National Organic Program's (NOP) failure to follow proper legal procedures in making a substantial rule change to the organic standard through its contaminated compost guidance.

The new amended rule, which was adopted by the agency without notice and comment, weakens the long-standing prohibition of synthetic pesticide contaminants in organic production. Plaintiffs allege that the USDA's decision weakens the integrity of organic food production, not only by creating inconsistent organic production standards, but by undermining the essential public participation function of organic policy making. Since USDA never subjected the contaminated-compost decision to formal notice and public comment rulemaking, plaintiffs argue USDA failed in its duty to ensure that its regulation is consistent with the *Organic Food Productions Act* (OFPA) and the standards set forth for approving the use of synthetic substances.

## Background

Years before *Center for Environmental Health v. Vilsack* was filed, Beyond Pesticides executive director Jay Feldman raised the red flag on USDA's contaminated compost decision. At the April 2010 meeting of the National Organic Standards Board (NOSB), board member Mr. Feldman had an exchange with Deputy Administrator Miles McEvoy about USDA's procedural violations in adopting a new rule, identifying the need for public comment as "critical" and highlighting the "implications for ongoing uses of composted materials" that the new rule would create. At the time, Mr. McEvoy stated, "We will be putting that into the program manual that will be going into a guidance type of document, that there will be the opportunity for public comment." Because that never happened, the groups pursued legal action.

## Pesticide in Compost Triggers Policy

The case points to compost with residues of bifenthrin, a popular and persistent insecticide, to highlight how the rule change affects the organic standard. Bifenthrin is not on the National List of synthetic substances allowed for use in organic crop production, and therefore was prohibited in organic compost in California by agricultural officials when residues were found in 2009. As a result of NOP's contaminated-compost decision in 2010, however, the legal status of bifenthrin, as well as other pesticides, was changed, allowing their presence in green waste used for organic production. Plaintiffs contend that the overall integrity of the organic standard is undermined by the substance and process of the policy determination.

In its motion to dismiss the case, USDA argues that under the Federal Rules of Civil Procedure (FRCP), plaintiffs had both "failed to state a claim upon which relief could be granted" [FRCP 12(b)(6)], and that the plaintiffs lack subject matter jurisdiction to bring the case [FRCP 12(b)(1)]. The specifics of each of these claims, highlights from the judge's dialogue with the parties, along with an explanation of their significance, are addressed below.



**Judge to USDA:** I think we should start with the 12(b)(6), because I think it relates to the 12(b)(1) and your argument is that this wasn't a legislative rule, therefore no notice and comment was required, because it's an interpretive rule, or it's a guidance; correct?

*When USDA was sued, it filed a motion to dismiss the case, citing two reasons under the Federal Rules of Civil Procedure. Under 12(b)(6), it claimed that the plaintiffs had failed "to state a claim upon which relief can be granted," arguing that even if there was a harm, there is nothing the court can do to redress that harm, so the case should be thrown out. USDA also filed a 12(b)(1) defense, claiming that the plaintiffs have a "lack of subject matter jurisdiction," and therefore the court cannot hear the case because the plaintiffs do not have the requisite standing to try a case in this specific court. In this exchange, the judge is trying to summarize the defendant's reasoning as to why she should grant the motion to dismiss.*

**USDA to Judge:** Correct, Your Honor.

*USDA is arguing that it was correct in not providing notice and comment because it was not issuing a legislative rule. A legislative or "substantive" rule issued by an agency has the force of law and is binding on all individuals and courts. Under the Administrative Procedure Act (APA), a legislative rule is required to be subject to public comment, providing the public with an opportunity to weigh in on the rule before it is final. An interpretive rule or guidance, on the other hand, differs in that it does not bind the public or have the force of law because it is viewed as agency interpretation of its existing governing laws or regulations. USDA wants the judge to find that the change to the existing compost regulations was interpretive instead of legislative in nature and therefore not subject to a notice and comment period.*

**Judge:** And on an interpretive rule, it's not interpretive if any of three factors are met, the third one being that it effectively amends a prior legislative rule.

**Judge:** And we would agree that [the original compost rule] is a prior legislative rule that was adopted after notice and comment.

**USDA:** Yes, Your Honor, that's correct.

**Judge:** And that rule says that compost —that a product cannot be labeled as organic if the compost used in the production of that product contains a synthetic substance not included on the National List of permissible synthetic substance... period; right?

**USDA:** Correct.

**Judge:** Now, the [new] guidance actually adds two additional substances... It now reads you cannot use compost that contains a synthetic substance OR in which the synthetic substance is not directly applied during the composting process.

**USDA:** Correct, that's one prong.

**Judge:** But why isn't that amending the rule? I mean, the rule was very clear. You can't use compost that contains a synthetic substance unless it's on this list. Now you've added another exception OR if the synthetic substance isn't applied directly during the composting process. I mean, that's just adding —now it's one, two, three.

*Here the judge points to the heart of the matter. Where USDA is arguing that the change in the rule was merely a result of an agency interpretation, she focuses on the substantive nature of the outcome. She and USDA go back and forth about possible definitions of the word "contained," as USDA is arguing that she should apply neither the dictionary definition or the common sense interpretation of the word "only," but instead a third definition the agency wants her to use. To this she says:*

**Judge:** How does whether something contains a substance, how does that depend on how it gets there? I mean, why [does] how it gets there make a difference as to whether it contains it?

**USDA:** ... The interpretation you're pushing towards with that question is a valid possible interpretation.

**Judge:** Doesn't that mean I have to deny your motion, because this is a 12(b)(6) motion, and the question is whether [the plaintiff's] interpretation is plausible?

*When a defendant makes a motion to dismiss, the judge must look at all the evidence in a light most favorable to the plaintiff, since it is the defendant calling for the dismissal. Here, the judge*





is saying that since the plaintiffs' interpretation of the word "contained" is plausible, the plaintiffs could get relief from the court if it found in favor of their interpretation over USDA's, and therefore the 12(b)(6) motion to dismiss for failure to state a claim upon which relief can be granted must be denied.

**Judge:** I can't grant the 12(b)(6) on either, so let's talk about standing then.

*The judge moves on to address the 12(b)(1) claim by USDA that plaintiffs don't have standing to bring this suit.*

**Judge:** [Plaintiffs] argue that they're harmed by the fact that now... when they go to the store, they have to do additional research if they want to be sure that the product they're buying was not produced with non-organic compost. Why isn't that an injury?

**USDA:** It's not an injury because there's no ability to connect this policy preference of "I don't like the fact that synthetic pesticides are used generally" to an actual effect on the food that's purchased. I don't think that view by itself gives you a right to come into federal court based on a concrete—

**Judge:** Why not?

**USDA:** Because there is no concrete personal harm.

**Judge:** But why doesn't my preference to buy food that's produced in such a way that reduces the amount of pesticides just being introduced into the environment in general, why isn't that a harm?

**USDA:** I think that the argument that, well, there's something about this I don't like, and even though it doesn't actually affect directly the product I'm buying, I have a right to come into court and complain about it, that just becomes a staggeringly broad thing that basically nullifies the injury-in-fact requirement.

*The injury-in-fact requirement mandates that a plaintiff must have suffered or imminently will suffer an injury, economic or*

*otherwise, in order to have the ability to bring a claim (standing) before a court.*

**Judge:** Who would have standing to challenge this action [then]? Who?

**USDA:** Your Honor, as I stand here now, I'm not sure who would.

**Judge:** Of course that's the argument USDA is going to make, that we can do this, and nobody can challenge it.

The problem is, the Department didn't want to open it up to notice and comment so they could actually have a robust discussion about whether that [the degradation of the quality of organic food] would be the case. I mean, why not — that's what I don't get, is why not just do that? What are they afraid of?

*The judge then asked the plaintiff what they believe the injury to be.*

**Plaintiffs:** The fundamental injury here is that a new loophole has been created that previously didn't exist that allows a new source of synthetic substances, including pesticides, into the organic production stream.

**Judge:** You're arguing notice and comment, so really what you're arguing is the injury is...to be denied the opportunity to make your argument to the USDA as to why they should not adopt such a loophole; right?

*Here the judge highlights the importance of process, and how the violation of that process can be, and in this case is, cognizable injury to the plaintiffs.*

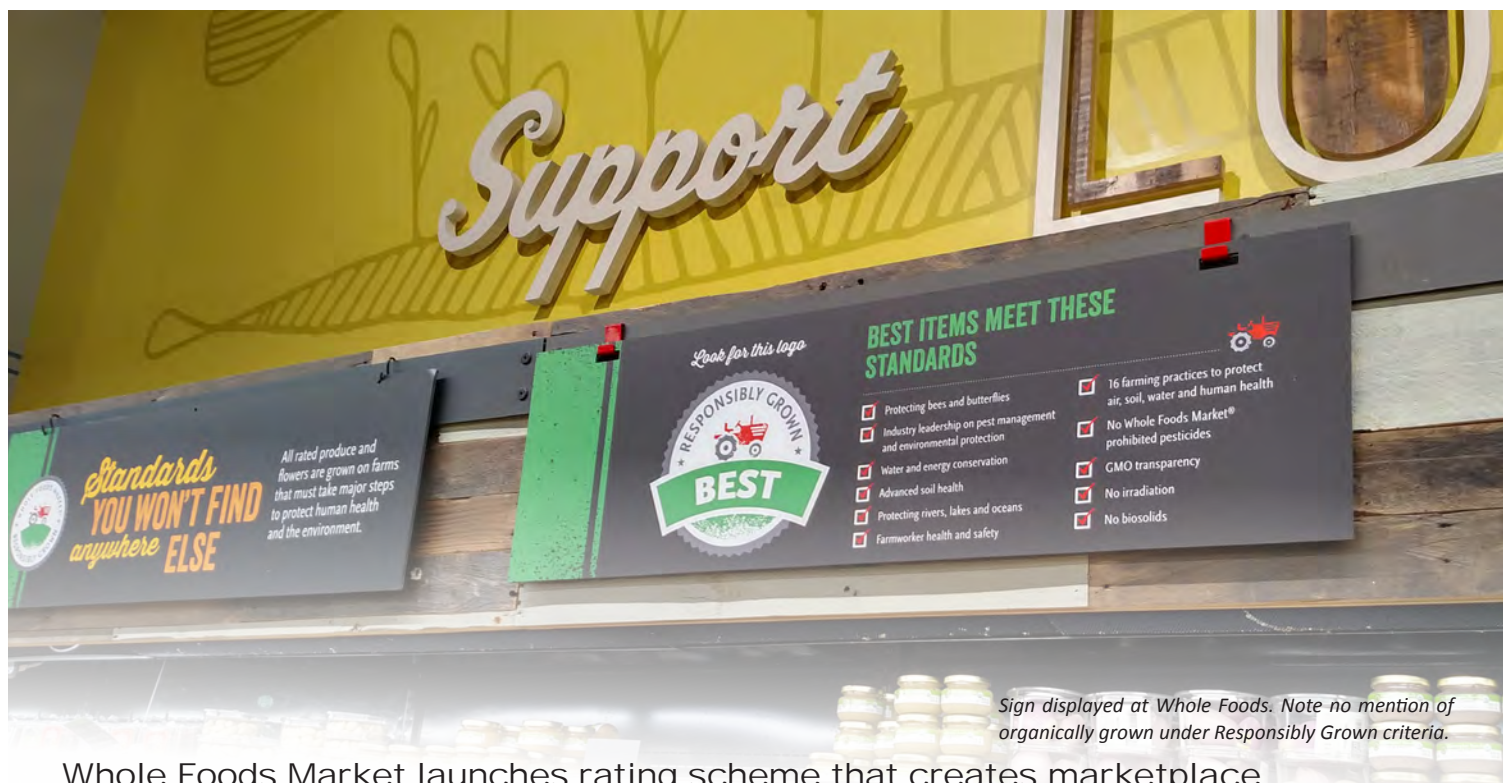
**Judge:** I'm inclined to find standing as well. I mean, standing is not there to protect the government from being sued, but to ensure that those plaintiffs who sue have a concrete interest so they actually represent and have an injury, and that they're pursuing the interests of everyone... so I think I'm inclined to find standing.

*The judge is essentially denying the 12(b)(1) motion to dismiss for lack of standing, once again touching on the importance of process and allowing the case to move forward to the trial.*

## Conclusion

The decision by the judge to deny USDA's motion to dismiss on both the 12(b)(6) and 12(b)(1) is a decisive process victory for the plaintiffs in this case. After first bringing this procedural violation to light at the 2010 NOSB meeting, Beyond Pesticides believes that the growth of the organic sector is directly related to maintaining an open and transparent standard setting process that seeks public input. With this perspective, the lawsuit becomes necessary to ensure USDA's accountability to public process. The judge acknowledges the important role that proper procedure plays in safeguarding the public from an abuse of power by administrative agencies through their rulemaking authority. This public process, to some degree, serves as a check against undue influence by the regulated industry, and contributes to transparency in government decision making.

# When Sustainable Is Less than Organic, Is it Responsibly Grown?



Whole Foods Market launches rating scheme that creates marketplace confusion and undercuts the organic label with weaker standards on pesticide use

By Nikita Naik and Jay Feldman

Whole Foods Market's *Responsibly Grown* rating system has been criticized as undermining the organic market by creating a set of standards based on criteria that do not utilize organic practices, values, and principles as its baseline. This allows products and commodities rated as "responsibly grown" to utilize a range of toxic inputs, including synthetic pesticides and fertilizers that are not permitted under organic standards as codified in the *Organic Foods Production Act* (OFPA). If the scheme was adding elements that have not yet been embraced by organic certification—such as farmworker protection, humane treatment and pasturing of animals, elevated restrictions of some controversial synthetic substances allowed in organic—then *Responsibly Grown* could have been envisioned as improving elements of sustainability within the organic framework.

In fact, *Responsibly Grown* creates a rating scheme distinct from organic standards and the organic review process that has brought together stakeholder groups (consumers, farmers, environmentalists, certifiers, retailers, processors, and scientists) under the National Organic Standards Board (NOSB), informed by independent Technical Review evaluations of petitioned materi-

als. As Whole Foods explains, its determinations of acceptable chemical use are based on "an assessment of our external team of experts." *Responsibly Grown* rejects the definition of allowed and prohibited substances under OFPA at its foundation. Therefore, with *Responsibly Grown* labeling, consumers and farmers are losing in the Whole Foods' rating some key foundational principles that gave birth to and continue to grow the organic market. The default assumption that synthetics cannot be used in organic unless a transparent public process, with input from all stakeholders, subjects allowed and prohibited substances to a rigorous assessment that (i) protects health and the environment, (ii) is compatible with defined organic standards, and (iii) has been determined to be essential as part of an organic systems plan that is subject to a third-party certification process.

The *Responsibly Grown* system may look attractive at first glance, especially if shoppers do not school themselves in understanding the rating system. When the rating system was unveiled in October of 2014, organic farmers criticized the grocery store chain, maintaining that it undermines organic agriculture and lacks the stringent standards and certification process required by organic law. Additional critiques add that the system places an added burden on small- to medium-sized family farms.



## How the Rating Scheme Works

Fresh fruits and vegetables are categorized according to tiers ("Good," "Better," and "Best") based on a 300-point scoring index awarded according to survey responses from suppliers who must pay a fee to opt in. Suppliers earn points in categories such as farming practices, pesticide use policy, ecosystems and biodiversity, soil health, and farmworker health and safety.

According to a *New York Times* report on the rating system, Whole Foods' associate global produce coordinator Matt Rogers "acknowledged that conventional farmers can get a 'best' rating while continuing to use various pesticides barred for use by organic farmers." Mr. Rogers goes on to describe how a conventional potato grower for Whole Foods might apply the neurotoxic pesticide chlorpropham on potatoes to prevent sprouting, "which is not allowed in organic production but permissible in the *Responsibly Grown* program." When the rating system was first introduced, suppliers who met the third-party certification standard, which includes USDA Organic along with other certifiers, were only allowed a maximum of 10 points out of the total 300 points. Originally, organic suppliers that did not participate in the *Responsibly Grown* program were given an "Unrated" label, even though their product may display the USDA organic label. Some of the products labeled "Best" may allow the use of harmful pesticides and practices, while the organic product receives a lower rating even though the toxic material is not used.

## Burden on Small Farmers

The concerns raised by organic farmers has prompted Whole Foods to make a small adjustment. In a public letter to John Mackey, co-founder and co-chief executive of Whole Foods, organic farmers wrote that the new rating system "is onerous, expensive, and shifts the cost of this marketing initiative to growers, many of whom are family-scale farmers with narrow profit margins." In the letter, farmers specifically cite program fees, required technology, labor necessary to participate in the program, and costs ranging from \$5,000 to \$20,000 as adding extra burden on small- and medium-sized farms. The letter continues, "Whole Foods has done so much to help educate consumers about the advantages of eating an organic diet. This new rating program undermines, to a great degree, that effort." Whole Foods, along with California Certified Organic Farmers (CCOF), issued a joint statement responding to farmers' concerns with some steps that include allowing current organic vendors to suspend enrollment efforts until the end of 2015 in order to relieve pressure for small- and medium-sized producers. Additionally, certified organic producers are automatically granted a baseline "Good" rating with 20 instead of 10 additional points awarded. Ultimately, however, organic is not a baseline requirement for *Responsibly Grown*, allowing operations using hazardous pesticides to rate higher than organic producers.

Fundamental Organic Practices and Materials Lost  
Whole Foods' *Responsibly Grown* rating system fails to match the stringent standards of the USDA organic certification pro-

cess. USDA organic certification requires that a number of criteria are met, including:

- Farms and processors must be certified by a USDA accredited certifying agent to ensure that USDA organic products meet all organic standards. Certifying agents make annual visits to farms and processing plants, and are permitted to make unannounced visits to make sure a facility is in compliance with the standards.
- Any land transitioning to organic production must not have had prohibited substances applied to it for the previous three years.
- Farms are required to submit to the certifier a comprehensive plan that includes information such as the land history of all fields, a fertility and nutrient management plan, a pest, weed, and disease management plan, and the origin, feed and health care of livestock. A grower must report all prod-



Note no mention of organically grown under Responsibly Grown criteria.

ucts used on the farm. If a grower fails to report a product used, even if it is an approved product, s/he will be non-compliant with the organic standards and will receive an appropriate reprimand and/or revocation of certification.

- Only naturally derived pesticides and a relatively small number of synthetic ingredients of low toxicity may be used. Inert ingredients are limited to specific lower toxicity categories with ongoing reviews. Allowed synthetic and prohibited natural materials are subject to a public review and public hearing and comment.

In contrast, *Responsibly Grown*:

- Relies on the word of the supplier and lacks a certification process that ensures that standards are being fully met.
- Allows for the use of toxic pesticides. While the *Responsibly Grown* Rating System prohibits and restricts a set number of pesticides, there are many exceptions that create allowances that by their nature undermine organic systems, soil health, biodiversity, and farmer and farmworker protection. The most recent list of allowed exceptions include among the most hazardous neurotoxic

## Responsibly Grown Pesticides Exempted for Use on Specific Commodities as of June 2, 2015

The rating system allows exemptions for any pesticide use in the U.S. based on a Whole Foods review. Currently, the following time-limited exemptions have been approved and were scheduled for phase out between September and October 2015, depending on the crop. As of this writing, Whole Foods has not published an updated list of exemptions on its website. Regarding imported foods, the rating system leaves allowed pesticide uses to Whole Foods' discretion.

"Good" Only	Use	Health Effects
Carbaryl	Apples, Asparagus, Strawberries, Blackberries, Blueberries, Raspberries, Pineapples	Possible Carcinogen, Endocrine Disruptor, Reproductive/Development Effects, Possible Cholinesterase Inhibitor, Possible Neurotoxicant
Phosmet	Blueberries	Possible Carcinogen, Reproductive/Development Effects, Cholinesterase Inhibitor, Neurotoxicant
Chlorpyrifos	Strawberries, Citrus, Peaches, Pineapples, Floral Products	Possible Endocrine Disruptor, Reproductive/Development Effects, Cholinesterase Inhibitor, Neurotoxicant
Diazinon	Strawberries, Blackberries, Blueberries, Raspberries, Pineapples, Floral Products	Possible Carcinogen, Possible Mutagen, Possible Endocrine Disruptor, Reproductive/Development Effects, Cholinesterase Inhibitor, Neurotoxicant

Eligible for All Ratings	Use	Health Effects
Acibenzolar-S-methyl	Bananas	Reproductive/Development Effects
Difenoconazole	Bananas	Possible Carcinogen, Possible Reproductive/Development Effects
Epoxiconazole	Bananas	Possible Carcinogen, Possible Reproductive/Development Effects
Fenpropimorph	Bananas	Possible Reproductive/Development Effects
Mancozeb	Bananas	Carcinogen, Reproductive/Development Effects
Pyraclostrobin	Bananas	Possible Reproductive/Development Effects
Pyrimethanil	Bananas	Possible Endocrine Disruptor
Thiophanate-methyl	Bananas	Possible Carcinogen, Mutagen, Reproductive/Development Effects
Tridemorph	Bananas	Reproductive/Development Effects
Glyphosate	Bananas, Peppers	Carcinogen
Diquat Dibromide	Bananas	Potential Liver, Kidney, Stomach and Intestine Toxicant
Terbufos	Bananas	Cholinesterase Inhibitor, Neurotoxicant
Boscalid	Peppers	Possible Carcinogen, Possible Reproductive/Development Effects
Chlorfenapyr	Peppers	Possible Carcinogen
Abamectin	Floral Products	Possible Reproductive/Developmental Effects, Possible Neurotoxicant
Linuron	Floral Products	Possible Carcinogen, Possible Endocrine Disruptor, Reproductive/Development Effects
Methiocarb	Floral Products	Cholinesterase Inhibitor, Neurotoxicant





Conventional bell peppers grown in Mexico receive a rating of “Best” at a Whole Foods Market (left), while organic onions grown in California receive only a “Better” rating.

and carcinogenic pesticides, including carbaryl, phosmet, chlorpyrifos, diazinon, glyphosate and more (see tables to the left and below), all of which are banned from use in organic.

## Conclusion

As the organic market continues to grow beyond the \$40 billion mark, the challenge is to build on its sound foundation as a part of a rich history of continuous improvement. The marketplace plays an important role in encouraging public understanding of the value of organic systems in prohibiting substances hazardous to human health, building soil health, protecting land, air, water, and biodiversity, while contributing to carbon sequestration and efforts to dramatically slow global climate change. The elimination of hazardous, petroleum-based toxic materials and practices is a key principle to achieving these goals. At the same time, the regulatory process under organic rules in place is intended to ensure rigorous review of allowed materials on a five-year cycle and incentivize ingenuity, green materials, and new techniques that are compatible with organic systems.

Alternative labeling systems in the marketplace today, including *Responsibly Grown*, do not meet the rigorous standards and criteria, public review and comment, stakeholder collaboration and oversight, certification, and public support that are integral to certified organic practices. There are forces critical of organic that are advancing weaker standards that do not embrace the paradigm shift central to the principles and core values incorporated into the *Organic Foods Production Act*.

Beyond Pesticides seeks to strengthen organic and keep it accountable to the legal standards that are in place (see *The Case Against Contaminated Compost* on p15). This requires working in collaboration with a diverse coalition of stakeholders, including consumers and farmers, to grow agricultural production systems that do not unnecessarily compromise the health of people and the environment. We encourage people to contact USDA and the companies whose products they purchase by going to *Save our Organic* at [www.bit.ly/SaveOurOrganic](http://www.bit.ly/SaveOurOrganic).

## Bees and Pollinators Need Better Protection

With the preponderance of science indicating that honey bees, native bees, and other pollinators suffer devastating losses resulting from the use of bee-toxic pesticides, known as neonicotinoids (neonics), practices that incorporate these systemic and persistent chemicals are not considered responsible or sustainable by conservationists. When applied to the seed or plant, the chemical becomes incorporated throughout the plant and expresses itself through pollen, nectar, and guttation droplets, causing indiscriminate poisoning of organisms throughout the ecosystem. Yet, the “Good” or “Better” *Responsibly Grown* categories allow the use of highly toxic neonics, including clothianidin, imidacloprid, thiamethoxam, and dinotefuran. These toxic substances are not permitted in the production of food labeled organic.

Eligible for “Good” Use and “Better” Ratings		Effects
Imidacloprid	Any product other than living garden and floral plants for outdoor use	Toxic to Bees, Fish/Aquatic Organisms, Birds
Clothianidin	Any product other than living garden and floral plants for outdoor use	Toxic to Bees, Fish/Aquatic Organisms
Thiamethoxam	Any product other than living garden and floral plants for outdoor use	Toxic to Bees
Dinotefuran	Any product other than living garden and floral plants for outdoor use	Toxic to Bees

# County with One Million Residents Shifts to Organic Lawn Care



Year-long community debate results in law to phase out hazardous pesticides in turf management on public and private property

Montgomery County, Maryland became the largest county in the country to ban lawn pesticides on public and private land within its jurisdiction in October, 2015. The ban, a historic public health measure, will touch one million people in a county outside Washington, DC. The law allows time for transition, training, a public education program over the next several years, and defines allowed materials that can be used in turf management on public and private land throughout the County. (See definition on next page.) The bill was enacted with the leadership of Council President George Leventhal (the prime sponsor of the original bill), Councilmembers Marc Elrich, Tom Hucker, Nancy Navarro, Hans Riemer and Council Vice President Nancy Floreen.

Maryland is one of seven states that has not taken away (or preempted) local authority to restrict pesticides more stringently than the state. One city within the County, Takoma Park, passed a similar ground breaking ordinance back in 2013. The Town of Ogunquit, Maine also did the same by ballot initiative in November, 2014.

"Today's action is another step in the ongoing effort to make Montgomery County the healthiest, safest county in the country," said Council President Leventhal. "Countless studies have linked pesticides to a wide range of health conditions in children and adults and, since the bill was introduced one year ago, I have received hundreds of reports from constituents of children and pets experiencing adverse effects from the application of pesticides."

"Local government can, and should, step in, in a preventative way, to protect the public's health, even when there is not complete scientific certainty," Council President Leventhal continued. "The science may never be conclusive since it involves complex chemical interactions, but the absence of incontrovertible evidence does not justify inaction."

**Pushback from Pesticide Users**  
The legislation was not without its detractors. The Montgomery County Parks Department opposed the bill, maintaining

that playing fields cannot be managed with organic practices. Substitute legislation was introduced that sought to remove the central portions of the bill intended to transition Montgomery County to non-toxic sustainable management practices. In response, an amendment to the original bill allows the County's Parks Department to continue to use pesticides on playing fields as part of an integrated pest management program and requires the department to develop a plan that leads to organic management of fields by 2020. In the interim, the department will conduct an organic pilot program. In addition, the Department of Environmental Protection will educate the community on organic lawn care, and the Parks Department has committed to managing all playgrounds with organic practices. Extensive testimony from organic turf practitioners educated council members on the viability of organic practices, while the chemical lawn care industry remained adamantly opposed.

**Movement Across the County**  
There is movement across the country to



adopt ordinances that stop pesticide use on public property and, where not preempted by state law, private property. This is now understood to be a community health and environmental issue because, similar to secondhand smoke, pesticides, when used, move through air, water, and land – off the target site through drift and runoff,

exposing non-target sites and people.

#### Providing Technical Assistance

Beyond Pesticides worked closely with Safe Grow Montgomery, a local coalition of individual volunteers, organizations, and businesses, to help educate the public. The coalition works to prevent use of pesticides

that run-off, drift, and volatilize from their application site, causing involuntary poisoning of children and pets, polluting local water bodies, such as the Chesapeake Bay, and widespread declines of honey bees and other wild pollinators. *For more information on organic lawn care policies and practices, see [www.beyondpesticides.org/lawns](http://www.beyondpesticides.org/lawns).*

## The Montgomery County, Maryland Bill 52-14 in Detail

(For the complete bill, go to <http://bit.ly/MoCoBill5214>.)

How are pesticides restricted throughout the County, and when? Use of toxic pesticides will not be allowed on private and public turf areas, including lawns, playgrounds, mulched recreation areas, and children's facilities on County-owned property. The County land transition (not including playing fields) starts in July 2016 and the private land restrictions start in January 2018. Montgomery County's Parks Department will begin a pilot pesticide-free program on recreational sports fields, and must provide a plan by 2019 to the County Council that transitions all playing fields to natural practices with only allowed pesticides by 2020. The Parks Department will submit detailed reports on pesticide use and status of the pesticide-free parks program to the County Council every six months.

What is prohibited and allowed under the legislation?

The legislation defines allowed materials for lawn care on public and private land, taking an affirmative approach. This includes:

- (1) a pesticide the active ingredients of which are recommended by the National Organic Standards Board (NOSB) pursuant to 7 U.S.C. §6518, as amended, and published as the National List at 7 C.F.R. §205.601 and 205.602; or
- (2) a pesticide designated as a "minimum risk pesticide" under the *Federal Insecticide, Fungicide, and Rodenticide Act* (FIFRA) §25(b) and listed in 40 C.F.R. §152.25(f).

**How does the definition translate to allowed products?**

Organic Compatible Materials. (May display USDA Organic or Organic Materials Review Institute seals.)

**Examples:** Avenger Weed Killer, Phydura, Final-San-O, Scythe, Neem Oil, Safer

Brand Products, EcoSmart Products (see [www.omri.org/ubersearch](http://www.omri.org/ubersearch)).

Minimum Risk Pesticides. (Defined as the pesticides that qualify for exemption under federal pesticide law, and disclose on label all active and other ingredients.)

**Examples:** Products containing cedar oil, citric acid, clove oil and other active ingredients listed on this webpage: [bit.ly/minimumrisk](http://bit.ly/minimumrisk).

What products cannot be used on private lawns, and how can they be identified?

Registered pesticides must be compatible with federal organic law or classified as minimum risk; otherwise, conventional pesticides are not allowed to be used unless the site where the pesticide will be applied is exempt from the law. The County Council has determined that the use of these products for cosmetic lawn care puts in harm's way children, pets, water quality, pollinators, and other wildlife. To ensure that residents are aware of the restrictions, retailers will post informational signs where pesticides are sold to explain which pesticides are not allowed to be used on private lawns within the County.

What pesticide use sites are exempt from the law?

Gardens, trees, or shrubs; invasive species\* or "noxious" weeds (poison ivy, kudzu, Canada, musk, bodding, plumeless, and bull thistle); indoor application; biting or stinging insects or plants; public health emergencies or prevent significant economic damage;\*\* indoor pests; golf courses; and, agricultural land.

*[\*The County will make public a list of Invasive Species by March, 1, 2016. \*\*Must notify and provide justification to the Montgomery County Department of Environmental Protection within 7 days after a public health or economic emergency pesticide use.]*

What is the penalty if a non-permitted pesticide is used on a private lawn?

Given that the main focus of the law is to effect a shift in lawn care practices among County residents, there won't be any "pesticide police," but the County will rely on citizen complaints to drive enforcement. Violations of the ordinance are considered a Class C misdemeanor.



Six Councilmembers vote with a veto-proof majority to pass Bill 52-14. Photo by DC Visionaries.

# The Myths of Safe Pesticides

André Leu, *Acres USA*, 2014, 168pp.

Consumers can often be lulled into a false sense of security about the products they use daily. This is particularly true when it comes to pesticides –whether they are used on lawns and gardens or in chemically-intensive fruit and vegetable production. In André Leu’s book, *The Myths of Safe Pesticides*, the author takes a deeper look into five of the most common and oft-repeated myths surrounding pesticide safety, breaking the science down into simple and easy-to-understand terms.

Mr. Leu is the president of IFOAM Organic International (formerly the International Federation of Organic Agricultural Movement), the world umbrella for the organic sector, with over 40 years of experience in organic agriculture, including growing, insect pest control, weed management, marketing, and more in both the U.S. and Australia. He has extensive experience writing and publishing about different areas of organic agriculture in magazines, journals, and websites, and firsthand knowledge about the role pesticides play in agriculture, as well as how to communicate this knowledge.

In *The Myths of Safe Pesticides*, Mr. Leu takes the reader through a journey of nearly a century of pesticide use. He begins by offering up his own experiences as a farmer, revealing that he would “become ill every spraying season even though no sprays are used on [his] farm.” The regulators would maintain that this was not at all related to the pesticides used in agriculture because the science states that they are being used safely. Mr. Leu began to question this assertion by delving into the published, peer-reviewed science on pesticides.

With the strength of this science, the author is able to address these most common pesticide myths:

1. **Myth:** All agricultural poisons are scientifically tested to ensure safe use.
2. **Myth:** The residues are too low to cause any problems.
3. **Myth:** Pesticides breakdown quickly in the environment and so are not very harmful.
4. **Myth:** Regulatory authorities are reliable and look at unbiased evidence before declaring a product safe.
5. **Myth:** Pesticides are essential to farming.

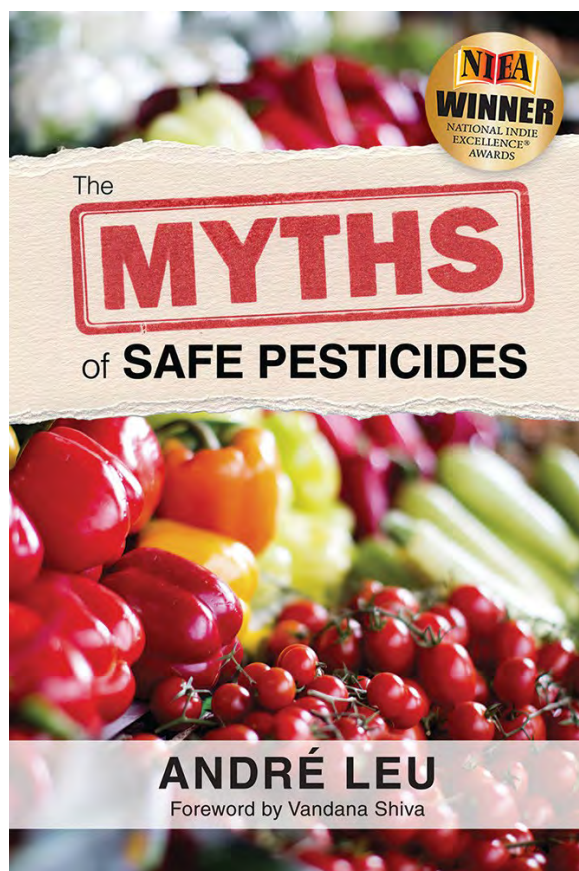
Mr. Leu repudiates all of these myths in a clear and consistent manner. For example, to show how Myth #3 is false, he writes:

*“Studies have shown that many pesticides used in agriculture, such as diazinon, malathion, chlorpyrifos, and dimethoate, become even more dangerous to the environment as they break down into metabolites called oxons. Oxons result when a chemical bond between phosphorous and sulfur is replaced by a bond between phosphorous and oxygen as the pesticide breaks down in the environment. Oxons cause significant damage to animals’ nervous systems.”*

Evidence that “organic farming can yield up to three times more food on individual farms in developing countries, as compared to conventional farms” challenges Myth #5.

*The Myths of Safe Pesticides* is a great resource for those who are just beginning to learn about the dangers of pesticide use and are looking for reliable information that addresses

some of the biggest misconceptions out there about the use of pesticides and their purported safety. The book also provides a unique perspective from an organic grower who understands how these myths and their counter arguments apply to the real world.





**Save the Date!**

# The 34th National Pesticide Forum

**April 15-16, 2016**

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