Amazon and Syngenta Break Pesticide Law, Get Slap on the Wrist

Violations of pesticide law result in a slap on the wrist for giant corporations Amazon and Syngenta. As part of an agreement with EPA, Amazon will pay $1.2 million in administrative penalties for nearly 4,000 violations of the *Federal Insecticide, Fungicide and Rodenticide Act* (FIFRA), including allowing third-party distributors to sell imported pesticide products on Amazon even though the products were not registered in the U.S. Meanwhile, Syngenta will pay a civil penalty of $150,000 after dozens of workers in Kauai, Hawaii were exposed to the neurotoxic pesticide chlorpyrifos in 2016 and 2017. EPA backed away from a $4.8 million settlement that it was initially seeking from the pesticide giant, which is merging with China's state-owned ChemChina to become one of the world's largest pesticide manufacturers.

Farmworkers in Hawaii.

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Amazon Sells Illegal Pesticides

Of greatest concern, among Amazon's sale of illegal pesticide products, are insecticide chalk products imported from Chinese manufacturers. These products contain false and misleading statements of safety on their labels and contain active ingredients, such as pyrethroids, propoxur, and azamethiphos. Azamethiphos is not registered in the U.S. and propoxur has limited uses. The chalk, used by drawing a pesticide-laden barrier on a surface, is often packaged in bright colors that make the product look like sidewalk chalk, toys, or even candy.

According to EPA officials, because of the enormous shift from brick-and-mortar retailers to online commerce, "This is a very difficult avenue of pesticide sales to get our hands around," said Chad Schulze, EPA Region 10 Pesticide Enforcement Team Lead. Amazon said it will develop an online training course about pesticide regulations and policies in an effort to reduce the number of illegal pesticides available through the online marketplace. The training, which will be mandatory for all entities planning to sell pesticides on Amazon, will be available to the public and online marketers in English, Spanish, and Chinese.

Last year, EPA's Office of the Inspector General (OIG) released a report finding low rates of inspection and sampling across the U.S. to stop the importation of pesticide products that violate federal laws. With inspection guidelines being voluntary and set at only two percent of shipments—which is still not being met—advocates say that pesticide products will continue to be sold illegally to unsuspecting U.S. customers. These pesticides may

Saving America's Pollinators Act

On February 14, 2018, U.S. Representatives Earl Blumenauer (D-OR) and Jim McGovern (D-MA) re-introduced the *Saving America's Pollinators Act* (H.R. 5015), which suspends the registration of certain neonicotinoid insecticides until the U.S. Environmental Protection Agency (EPA) conducts a full scientific review that ensures these chemicals do not harm pollinators. As of this writing, 42 members have joined as cosponsors.

Numerous scientific studies implicate neonicotinoid pesticides as key contributors to the global decline of pollinator populations. In addition, EPA's own scientists have found that neonicotinoids pose far-reaching risks to birds and aquatic invertebrates.

"The health of our food system depends on the health of our pollinators. The status quo is like flying blind—we shouldn't be using these pesticides when we don't know their full impact," said Rep. Blumenauer. "The EPA has a responsibility to get to the bottom of this issue and protect pollinators," he said. Europe has instituted a temporary ban on neonicotinoids based on their harm to pollinators, and the European Commission has proposed extending the ban indefinitely and eliminating all agricultural uses of the chemicals. Canada's pesticide regulatory agency has recommended banning the most widely used neonicotinoid, imidacloprid, based on harm to aquatic ecosystems.

contain ingredients banned in the U.S. or be applied in ways that can pose risks to human health.

In March 2017, over 30 environmental and public health groups, joined by several environmentally responsible businesses, sent a letter to Amazon CEO Jeff Bezos, urging him to remove from the retailer's website products linked to pollinator decline. The letter to Amazon was accompanied by a product list identifying over 100 products sold on Amazon's website that contain bee-toxic neonicotinoid pesticides.

Syngenta Poisons Workers

Nineteen workers were exposed to chlorpyrifos after Syngenta sprayed the insecticide on a field of genetically engineered (GE) corn at its Kekaha farm. According to the complaint, the workers were allowed to reenter the field before the reentry period expired and without protective equipment. Ten workers were taken to the hospital and three were held overnight. This incident occurred in 2016, however a second incident occurred in 2017 when Syngenta, after applying chlorpyrifos, failed to post warnings for worker crews containing 42 employees. At the time of the incident, an inspector from the Hawaii Department of Agriculture (HDOA) was present on the Syngenta farm, which triggered an immediate investigation from the state. Consequently, a civil administrative enforcement action was brought against Syngenta seeking $4.8 million for violating multiple federal statutes, including worker protection standards affecting as many as 77 workers and leading to the 388-count complaint—with maximum penalties as high as $19,000 per violation.

Alexis Strauss, acting regional administrator for EPA region 9, acknowledged that the settlement was far less than the maximum allowed under the *Federal Insecticide, Fungicide, and Rodenticide Act* (FIFRA) and its regulations designed to protect workers. In addition, EPA found that Syngenta failed to provide both adequate decontamination supplies on-site and prompt transportation to a medical facility for exposed workers.

EPA Administrator Scott Pruitt has made it clear he intends to severely limit the agency's regulation and enforcement. One of his first acts in office was to rescind the proposal to ban the insecticide chlorpyrifos in agriculture.

Trump Administration Set to Slash EPA Staff in Half

EPA scientists, public health managers, and others charged with protecting the health of the public and the environment are being encouraged to exit the agency. This, as EPA Administrator Scott Pruitt plans to meet his goal of cutting agency staff and programs by 50 percent. According to the *Washington Examiner*, by early 2021, Mr. Pruitt and his team are aiming to reduce the staff of what was nearly 15,000 to below 8,000. Among the people who are being encouraged to "retire" are more than 200 scientists and nearly 100 environmental protection specialists.

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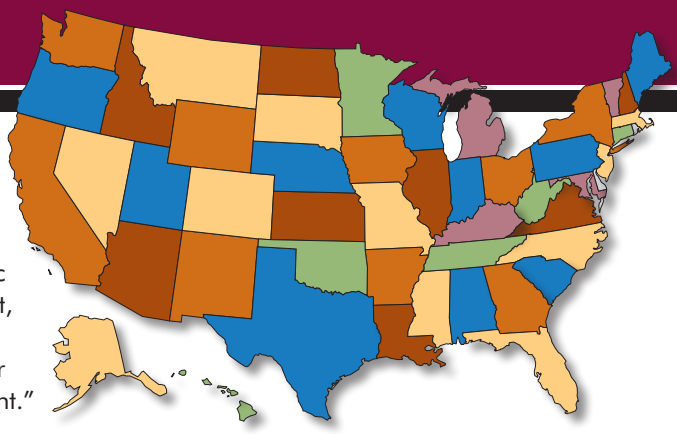
Younger Farmworker Children To Apply Toxic Pesticides

In two related actions, EPA is proposing to remove age requirements for application of pesticides by farmworkers. The actions involve changes to the Agricultural Worker Protection Standard (WPS) which went into effect this January and covers farmworkers hired to apply pesticides, and the Certification of Applicators (CA) rule, which will go into effect May 22 and covers those allowed to apply restricted use pesticides (RUPs), the most acutely toxic pesticides. The proposals to remove the age requirements present hazards to teenagers, who "are still developing in critical physical and emotional areas, with particular regard to their brains and reproductive systems," according to the American Academy of Pediatrics (AAP).

The removal of the age requirement is opposed by farmworker and children's health advocates. AAP points out that dangers of pesticide exposures to teens include long-term damage to nervous and reproductive systems. It also points out that 16- to17-year-old workers in other industries are prohibited from working with hazardous chemicals.

At a U.S. Senate oversight hearing in January, U.S. Senator Cory Booker (D-NJ) blasted EPA Administrator Scott Pruitt for his lack of concern for environmental justice issues. In particular, Sen. Booker noted the proposal to drop the minimum age requirement for agricultural workers who can use pesticides. Many of these workers, Sen. Booker noted, come from "communities of color, indigenous communities, and low income communities." When Sen. Booker asked, "Do you think that children handling dangerous pesticides is a good idea?," Mr. Pruitt did not respond.



Dover, NH Passes Organic Land Care Ordinance Unanimously

The City of Dover, NH in February unanimously adopted an ordinance that requires that its property is managed with organic practices. Spearheaded by the grassroots organization Non Toxic Dover, NH, the resolution requires the management of city land with "sound land management practices, and the use of least toxic compounds only when necessary, . . . thereby eliminating exposure to toxic pesticides on the part of our citizens and the environment." The ordinance also instructs the city manager to "develop and execute a plan to transition the City to eliminate the use of synthetic fertilizers on City property."

The resolution states: "There are numerous resources that tabulate lists of least toxic products, (e.g., the United States Environmental Protection Agency's minimum risk products list or materials listed as organic by non-profit organizations such as the Organic Materials Review Institute) to facilitate the choice of materials. Organic land management is an effective and environmentally sensitive approach to pest and turf management that relies on a combination of common-sense best management practices without the use of toxic pesticides. Organic land management uses current, comprehensive information on the life cycles of pests and their interaction with the environment."

Assessment Finds Alternatives Negate Any Need to Use Bee-Toxic Neonicotinoids

A comprehensive review of notorious, bee-killing neonicotinoid insecticides finds that crop yields and on-farm profit can be maintained and improved by replacing these toxic chemicals with alternative pest management strategies. The new study is part of an ongoing update to the 2014 Worldwide Integrated Assessment undertaken by an international team of scientists called the Task Force on Systemic Pesticides. The results of this review point to the need for strong action against these chemicals by all levels of government.

"Regulators need to realize that if we want sustainable agricultural practices, we need a more restrictive regulatory framework and programs to support farmers making the switch," said Jean-Marc Bonmatin, PhD, Task Force co-chair and scientist at France's National Scientific Research Centre. "Our findings on the availability of alternatives will be particularly relevant where new restrictions on neonics are being considered," he said.

The Task Force reviewed 200 studies on systemic insecticides, looking at their use and pest resistance in annual and perennial crops, the viability of alternative pest management techniques, and the potential to implement alternative forms of crop insurance to cover risks.

Soybean plants damaged by herbicide.

© iStockphoto/PBoumen

Monsanto Loses Lawsuit to Stop Dicamba Ban in Arkansas

Monsanto has lost its bid to halt a statewide ban on the use of its specialty herbicide dicamba in Arkansas. Arkansas' Plant Board conducted a lengthy process of evaluation and public comment that led to a prohibition on the use of drift-prone dicamba herbicide during the upcoming growing season on Arkansas farms. The state is on track to implement the toughest U.S. restrictions of dicamba, redeveloped to be used in genetically engineered herbicide-tolerant crops that have become resistant to glyphosate.

Monsanto's lawsuit argued against the makeup of the state's Plant Board, which voted to prohibit the company's product last November. Monsanto also made claims that the state did not consider the economic damage that a ban of the herbicide would cause.

Beyond Pesticides led a nationwide campaign supporting the ban. Dicamba

was originally registered for use in 1967 to control broadleaf weeds. Monsanto (with its XTEND herbicide), as well as the companies BASF (Engenia herbicide) and DowDupont (FeXapan herbicide) claim that their new formulations do not volatilize or drift.

Herbicide Paraquat Again Linked to Parkinson's Symptoms in Brain

Scientists at the European Institute for the Biology of Aging have found new information on the development of Parkinson's disease resulting from exposure to the herbicide paraquat, as they seek to find ways to prevent the progression of the disease. Despite a well-established body of scientific literature linking paraquat to Parkinson's, and a ban on the use of the chemical in the European Union that dates back to 2007, its use is still permitted in the U.S. Many health groups, including Beyond Pesticides and organizations like the Michael J Fox Foundation, are calling on EPA to stop the use of paraquat by denying its upcoming reregistration.

Published in the journal *Cell Reports*, this new research on Parkinson's investigates the impact of "senescent" cells in the body. Senescent cells are those which, despite being able to divide, stop doing so in response to stress. This is an anti-cancer mechanism, as stress would otherwise cause the cells to multiply unchecked and create malignancies. Researchers suspect that despite the benefit of stopping cancer, senescent cells may be causing other problems in the body. Rather than dying, these cells can cause inflammation in the area around where the cell became senescent. While paraquat has long been associated with the direct death of these neurons, this new research shows that additional neurological impacts may be at play.

This complex study provides a route to potentially treat not only Parkinson's but other diseases where senescent cells may play a role, such as ALS (amyotrophic lateral sclerosis) and Alzheimer's. Future research will need to uncover how to isolate and remove specific senescent cells while not disturbing others, which may be valuable in other areas, such as healing wounds. "We know the cells we want to target, but at the moment we don't have the therapeutics to do that," said. Demaria, PhD to *The Guardian*. "We cannot yet only target the bad cells."

Whistling Straits Golf Course in Kohler, WI features two miles of Lake Michigan shoreline vulnerable to pesticide runoff.

States Join Monsanto Challenge of California's Cancer Warning for Glyphosate

Attorneys General in Idaho, Indiana, Iowa, Kansas, Louisiana, Michigan, Missouri, North Dakota, Oklahoma, South Dakota and Wisconsin joined Monsanto and the National Wheat Growers Association in January to challenge California's listing of glyphosate as a carcinogen under the state's Proposition 65 law. California added glyphosate to the list of cancer-causing chemicals in July 2017, but has since been attacked by Monsanto and its allies for carrying out state law that requires carcinogens to be labeled and monitored. The case, seeking a stay of the listing, was filed in Federal Court in the Eastern District of California in November, 2017. Earlier last year, Monsanto lost its case before a state Superior Court in which it sought to stay the Prop 65 listing.

Neonicotinoid Insecticides Threaten Aquatic Life in Great Lakes

New U.S. Geological Survey (USGS) data reveals the year-round presence of neonicotinoids (neonics) in the Great Lakes—the world's largest freshwater ecosystem. Neonics, which are highly toxic to aquatic organisms and pollinators, are prevalent in the tributaries of the Great Lakes, with concentrations and detections increasing during planting season. This data adds to the science supporting a federal ban of these insecticides in order to safeguard vulnerable aquatic ecosystems and pollinators.

The study, *Year-round presence of neonicotinoid insecticides in tributaries to the Great Lakes, USA*, sampled ten major tributaries to the Great Lakes from October 2015 to September 2016. Neonicotinoids were detected in every month sampled. Imidacloprid detections significantly increase as the percent of urbanization increases, where home gardeners and golf courses use neonicotinoid turf and garden products.

Flower strips attract insects that prey on pests.

Matthias Tschumi/Agroscope

Prior to the study, little was known about the chemicals' presence in the Great Lakes region. Michelle Hladik, PhD, lead author of the new study and a research chemist at the USGS, said the major risk of these chemicals is to aquatic insects—an effect that could ripple up the food chain. "If these pesticides are affecting aquatic insects, causing lower populations, it could affect the food chain by removing a food source" for fish, Dr. Hladik said.

Neonicotinoids are the most widely used insecticides in the U.S. and have been linked to neurological and immune system impairment in honey bees and other pollinator declines. In December, EPA released preliminary ecological (non-pollinator) assessments for the neonicotinoids clothianidin, thiamethoxam, dinotefuran and the terrestrial ecological assessment for imidacloprid, finding that these pesticides pose both acute and chronic risks to aquatic life and birds. The aquatic assessment for imidacloprid, released last year, finds that it threatens the health of U.S. waterways with significant risks to aquatic insects and cascading effects on aquatic food webs.

Pesticide Exposure and Poor Nutrition: A One-Two Knockout Punch for Pollinators

Poor nutrition coupled with exposure to neonicotinoids act synergistically to significantly reduce the survival of honey bees and their colonies, according to research published by scientists at the University of California, San Diego (UCSD). This is the first study to delve into the real-world effects that pesticide exposure has on honey bees also subject to nutritional stress, a common occurrence in the wild. The outcome of this research highlights the weaknesses of EPA's testing regime for registering pesticides, which does not account for the complex ecology surrounding catastrophic declines in honey bee and other wild pollinator populations.

UCSD scientists looked at two of the most popular neonicotinoids, chlothianidin and thiamethoxam, to investigate how realistic levels of exposure to the chemicals interacted with varying levels of available food. High and low levels of both chemicals, 1/5 and 1/25 of the LD50 (amount at which 50% of honey bees exposed would die), were added to sugar syrup solution containing a range of different nutrition levels. Sugar syrup, which mimics nectar and honey, is a critical source of carbohydrates for honey bees.

Lead author of the study, Simone Tosi, PhD, notes, "Our results provide the first demonstration that these stressors can synergistically interact and cause significant harm to animal survival."

"These findings should cause us to rethink our current pesticide risk assessment procedures, which, based upon our findings, may underestimate the toxic effects of pesticides on bees," said Dr. Tosi. Co-author James Nieh, PhD, indicates that this research "may have even broader implications beyond honey bees because prior studies have not demonstrated a negative synergistic effect of pesticides and poor nutrition in animals."

Intermediary Strips of Wildflowers Across Fields Reduce Pesticide Use

New trials are being launched in the United Kingdom (UK) to monitor fields that have long strips of wildflowers planted through croplands to boost natural predators and potentially reduce pesticide applications. The field trials, carried out by the Centre for Ecology and Hydrology (CEH), are being conducted on 15 large arable farms in central and eastern England and will be monitored for five years to determine whether in-field strips are feasible tools for practitioners wishing to enhance biological pest control in the field.

Resources provided by in-field strips and normal field margins benefit the greatest diversity of important predators. According to Ben Woodcock, PhD, ecological entomologist at CEH, sowing specific grasses and wildflowers in the field can support predators in the crop canopy or those that target internal pests living in stems or seed pods. Many parasitic wasps, for instance, need access to open flowers so that they can feed on pollen and nectar. Without this resource, the number of eggs they can lay is dramatically reduced.

Similar field trials are underway in other parts of Europe where flowers, such as cornflowers, coriander, buckwheat, poppy and dill, are planted in strips. According to reports, densities of leaf beetle pests in fields of winter wheat were 40 to 53% lower than when no flower strips were sowed. This low pest pressure resulted in a 61% reduction in damage to the wheat plants.

Flower strips are also designed to provide early season pollen and nectar resources for important crop pollinators, such as bumblebees and solitary bees. In this respect, they provide dual benefits—enhanced natural pest control and crop pollination.