



Soil Health, Pesticides & Climate

Soil scientists often marvel at the rich, biological complexity of healthy soil, every handful teeming with literally hundreds of millions of microbes and other beneficial organisms that cycle nutrients to plants and strengthen resistance to pests and diseases. Many farmers also have deep respect for the soil, and do all they can to nurture the health of this mysterious medium they depend on to grow their crops year after year.

PAN Communications Associate Rob Faux, an Iowa farmer, knows that doing this well means thinking beyond annual profits:

“In its best form, farming couches the success of one season within a system that ensures success over time...Rather than measuring success only in our monetary balance sheet, we should also be investing in our future by building up our soils and limiting practices that we know will harm them.”

It also means shifting away from chemical-intensive farming — a fact that’s critical to remember as politicians look to carbon sequestration in agriculture as a climate change solution.

Yes, pesticides harm the soil

Researchers recently reviewed data from nearly 400 studies and found that pesticides significantly harmed soil-dwelling organisms, including earthworms, ants, beetles, and ground-nesting bees. Impacts ranged from reduced reproduction and increased mortality, to reduced overall species diversity.

These effects on soil organisms damage the complex soil ecosystem that cycles nutrients and water critical for plant growth, undermining both carbon sequestration and agricultural productivity. We need healthy soils for farms to be climate resilient — and to grow food.

Without a healthy soil ecosystem, farmers must often turn to synthetic inputs, including pesticides and fertilizers, to maintain yields. Rob Faux again:

“Research and generations of farming experience tell us that the more persistent we are in using a practice that harms the soil, the more damage we cause. This cumulative effect applies to tillage, it applies to pesticide use, and it applies to monocropping.

“Unfortunately, this is exactly what corporate agriculture is pushing — and it is the last thing we need if we want to maintain healthy soils for future generations.”

Again and again, industry’s answer to problems caused by pesticides is more pesticides — including promotion of so-called

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Kick Corporations Out, EPA!

by Kristin S. Schafer

Though the chemical industry likes to complain about regulation, the fact is that the regulatory process in the U.S. is captured by corporate interests. As those of us who work on pesticide issues know well, industry's influence at EPA's Office of Pesticide Programs (OPP) is an extreme case in point.

For years, we've been highlighting the outrageous access and influence pesticide corporations have at EPA — documenting the agency's behind-closed-door meetings with agrichemical companies that yield gratifying results (e.g., years of continued profits) for these industry giants.



The resulting impacts on public health and the environment are staggering. Every year, millions of people across this country—especially children, farmworkers, farmers, and rural families—are exposed to hundreds of millions of pounds of pesticides that have been deemed unsafe and banned in other countries, but are still widely used here.

It's time to get the pesticide industry out of the driver's seat at OPP. Now.

Not convinced yet?

Investigative reporter Sharon Lerner of *The Intercept* recently interviewed dozens of current and former OPP staffers, and found an office culture so deeply enmeshed with the pesticide industry that the corporations are often calling the shots.

Lerner reported that scientists are regularly told to look the other way if they see problems with studies submitted by agrichemical corporations. In some cases, there are serious flaws—but if the staffer persists in raising concerns, they may be putting their career at risk.

This is exactly what happened with one of the core studies justifying use of chlorpyrifos decades ago. A few more of the eye-opening tidbits from Lerner's reporting:

- Since 1974, all of the OPP leaders who continued their careers after leaving EPA (seven out of seven) went on to make their money from the pesticide industry;
- In 2018, OPP celebrated (with cake!) when they reached the milestone of 1000 scientific study requirements waived;
- OPP staff are regularly treated to industry-sponsored farm tours and Ask a Farmer events, highlighting the “need” for pesticides that are under review.


Time for strong leadership, Mr. Regan

When I worked at EPA headquarters many years ago, I learned there are two things that make decisions move quickly through layers of bureaucracy: a request from Congress (always in a yellow folder) and court-ordered deadlines.

Corporate lobbyists have learned the yellow folder lesson well. They can leverage their campaign gifts by asking members of Congress to “request” that EPA make their product a “yes package” that will sail through with waived study requirements and accelerated review.

Meanwhile, groups like PAN go to court to force EPA to do its job, a strategy that's proven fairly effective — but also very slow. It was 2007 when we petitioned the agency to withdraw all uses of chlorpyrifos, already known back then to harm to children's developing brains. Fourteen years and many court appeals later, EPA just announced a ban on all food uses of chlorpyrifos, finally! But we shouldn't have to sue and send action alerts to force EPA to do its job. It's a public agency, funded by our taxpayer dollars.

Fundamental change is required that centers EPA's actual mission of “protecting public health and the environment,” and moves corporations out of the driver's seat. This shift is crucial to this administration's government-wide goals, announced via Executive Order on January 20, 2021, to “limit exposure to dangerous chemicals and pesticides,” “reduce greenhouse gases” and “bolster resilience to climate change.”

Administrator Regan has a clear leadership opportunity here—and the recent chlorpyrifos decision, though not perfect, has us hopeful he's taking it. We'll continue pushing EPA to do the right thing by following the science and standing up to corporate influence, but our work will go a lot further with an agency leader who is committed to eliminating the “yes package” culture. These corporations have had their way with EPA for much, much too long. —

Meet Lorilani

We are thrilled to share that one of our former Fellows, Lorilani Keohokālole, has joined PAN as a full-time staff member! Lorilani now coordinates our work with partners in Hawai‘i as Organizing Co-Director in the region, transforming the food and farming system and organizing for change. The Hawaiian cultural value of Mālama ‘Āina (care of the Land) is a key value that drives Lorilani’s passion for the protection of the ‘Āina (Land), and she believes that in caring and cultivating a relationship with the land, one ultimately is cultivating and caring for oneself.



While working as a PAN Fellow in 2020, Lorilani collaborated with the Protect our Keiki Coalition to fight for stronger pesticide-free buffer zones around schools, increased transparency and documentation regarding pesticide drift, and more restrictions on glyphosate. As lead of our new Hawai‘i campaign team, she continues to drive this work, along with other efforts to address excessive pesticide use by agricultural companies and ensure food security, racial equity, and land access for her community. Read on for an introduction from Lorilani in her own words and some reflections on the current landscape in Hawai‘i.

Wēlina mai kākou,

My name is Lorilani Keohokālole, and I am the new PAN Co-Director of Organizing for the Hawai‘i Region. My ‘Ohana is from Wai‘anae and Kāne‘ohe (O‘ahu) Hilo; South Kona and Kā‘ū (Hawai‘i Island); ‘Olowalu and Hāna (Maui) and Kalihiwai (Kaua‘i). I am currently humbled to reside on the island of Kaua‘i in the historically resource-rich community of Anahola.

I am a mother, a wife and a community advocate. My primary work has been in the fields of health, wellness and healing, Native Hawaiian cultural education, and food policy advocacy.

As a descendent of the first people on these islands, I consider it an honor and privilege to work with PAN and to bring the heart and soul of our constituents into the national circle of conversations around pesticide regulation, food safety and security, racial equity, and land access.

At present, post-pandemic resources and employment are being focused on the tourism industry in Hawai‘i, not being used to sustain our fragile ecosystems or to

provide food security. I see the loss of land access, housing and employment having a huge impact on our communities here. Even though our children have been taught to appreciate our culture and value hard work, they struggle to find their place. Hunting, fishing, growing and harvesting food, and managing resources are important to us, but they are taking the largest hits.

For Native people across this planet and here in Hawai‘i, the relationship to land or ‘Āina, is at the core of our being. The food we grow does more for us than sustaining our bodies, it also “feeds” us mentally and spiritually. The work that we do at PAN is to listen to the needs of our constituents: farmworkers, family farmers, rural communities, Indigenous peoples, and children.

My work is to listen and support where and when I am invited to do so. Mahalo nui for the confidence to represent our community of Hawai‘i.

Lorilani Keohokālole
PAN’s Co-Director of Organizing for the Hawai‘i Region

ABOUT PAN PAN works to create a just, thriving food system, working with those on the frontlines to tackle the pesticide problem — and reclaim the future of food and farming. One of five regional centers worldwide, PAN North America links local and international consumer, labor, health, environment and agriculture groups into an international citizens’ action network. Together, we challenge the global proliferation of pesticides, defend basic rights to health and environmental quality, and work to ensure the transition to a just and viable food system.

Join our Heirloom Circle

Legacy giving is an easy and powerful way to support PAN’s work toward healthy, just food and farming systems for many years to come.



You can use the following language to leave a bequest to PAN in your will or trust.

“I bequeath \$_____ or _____% of my estate to Pesticide Action Network North America, 2029 University Ave, Suite 200, Berkeley, CA 94704, to be used for its general purposes.”

We also accept donations via retirement plans, life insurance policies and stock. Our tax ID # is 94-2949686.

If you’d like to discuss ways to give, please email Corrie at giving@panna.org.

“climate-friendly” farming systems that would actually increase use of chemicals. This is the pesticide treadmill, and it’s not sustainable.

Agroecology instead

A healthy soil ecosystem isn’t just good for ground-dwelling earthworms and bees; it’s good for farmers and eaters, too. Cropping systems that cultivate soil health require reduced chemical inputs to fight pests and diseases, resulting in healthier ecosystems, more carbon captured, and reduced input costs for farmers.

The integration of practices such as cover crops, diversified crop rotations, and low- or no-till cultivation practices increase farmer profits and soil ecosystem health. Farmers often save from the sale of cover crops, decreased fertilizer costs, increases in yield, soil nutrient loss savings, and of course reduced pesticide use.

Agroecological farming systems can produce food, jobs, and economic and social well-being while protecting ecosystem and soil

health indicators like pollination, natural pest control, nutrient and water cycling, and erosion control. These benefits all result from healthy soil ecosystems — of which soil-dwelling organisms are a critical component.

Ending reliance on chemical-intensive agriculture is necessary for healthy food and farm systems, and can help farming become a climate solution. By pushing for policies that support farmers who are implementing agroecological practices, we can protect soil health for us all.

We also need policies that recognize the threat pesticides pose to soil health. As a start, we’re urging regulators at the Environmental Protection Agency to consider the risks pesticides pose to soil-dwelling organisms and the broader soil ecosystem in their regulatory decisions. Incredibly, these impacts are currently completely ignored. —

TAKE ACTION Tell EPA to consider pesticide impacts on soil health at bit.ly/healthy-soil!

Agroecology webinars focus on solutions!

In late July, Senior Scientist Marcia Ishii worked with our PAN International partners to highlight on-the-ground policies supporting agroecology in an online event entitled *Agroecology: Policy pathways to a pesticide-free future*. More than 800 participants signed up to watch the webinar, featuring experts and policymakers from around the world.

This was the second in our ongoing series on agroecology. The first, *Agroecology: Farmers’ pathways to liberation from pesticides*, featured farmers from four continents who had transitioned away from chemical-intensive systems.

View the PAN International agroecology webinars in Spanish, English or French on the PAN YouTube channel: bit.ly/PAN-AgroecologyVideos.



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