RETROSPECTIVE 2021: A CALL TO URGENT ACTION

By Jay Feldman

This issue of *Pesticides and You*, *Retrospective 2021: A Call to Urgent Action*, gives us an opportunity to reflect on a year's work of engaging with science, policy, and action to fight the public health, biodiversity, and climate crises that challenge our very existence. This issue is both a jarring documentation of the threats that we face from toxic, fossil fuel based pesticides and the uplifting opportunities that we have available to transition society to sustainable practices. This recounting of one year provides a framework for moving ahead with scientific analysis of the problem, oversight of regulatory failure to address the seriousness of the threats, and effective action that is critical to a livable future.

Like many, our last year was filled with zoom meetings that gave us an opportunity to participate in local meetings, city/county/town council hearings and strategy sessions that inform the changes that are required to meet the crises. We held a five-part National Forum with top scientists, medical practitioners, land managers, elected officials, and activists from across the country and have created a series of short talks (now housed on our National Forum webpage) that form the foundation for action. With this focus, we keep the information and strategic thinking flowing through our *Daily News*, *Weekly News update*, and *Action of Week*. Now, *Retrospective 2021* is a critical look back at a pivotal time to inform the path forward. *Retrospective 2021* is an empowerment tool to both scientifically and analytically define the problem and point to solutions that are already in motion, but need to increase exponentially.

Retrospective 2021 does not reflect the full body of science, but is a snapshot that should awaken those

who think we can plod along with reform proposals, regulatory restrictions, and more study, as we tweak approaches that have failed. In reading the pages of this issue, recognize that it is just one year, but is reflective of every year, which is filled with facts that make urgent change an imperative, beginning in our communities and spreading throughout the country and globe. We track all the science and regulation through the several databases on our website—*Gateway on Pesticide Hazards and Safe Pest Management*, *Pesticide Induced Diseases Database*, and *ManageSafe*.

Advocacy Backed by Science

We include hyperlinked text highlighted in the electronic edition (also noted in the print edition) so that readers can delve deeper into the referenced, independent peer reviewed scientific articles and documents. The message here is that change is grassroots generated from the bottom up; that facts are most powerful closest to the ground where neighbors talk to neighbors and local elected officials can consider the implications of toxic practices on families and communities, where individuals can make decisions that affect their family's and community's health. When we cite studies on learning disabilities and autism or the disappearing bees and butterflies, polluted recreational lakes, contaminated school yards and playing fields, pesticide-tainted food and drinking water, they support the experiences that touch people directly. When we point to the connection between pesticides and our cancer rates, diabetes, Parkinson's, Alzheimer's, and asthma, these are illnesses we see in our families and friends. As we see global catastrophes of climate events and biodiversity collapse, the science connects these to chemical-intensive practices for which fossil fuel based pesticides and fertilizers are integral.

Will Local Action Make a Difference?

Not all the problems in this issue that challenge our very existence can be solved at the local level certainly. Change in our communities does improve human and ecosystem health and charts a course for broader change statewide, nationwide, and globally. Having participated in the evolution of the organic market and then the institutionalization of organic standards in law, we know that solutions are being adopted in households, schools, food production, parks, and our communities generally. Since Beyond Pesticides' founding in 1981, organic has grown exponentially to a $60 billion industry that was unthinkable those decades ago. Now it must grow even faster with the principles and values that are codified in law. But, we don't have 40 years to meet the urgent health and environmental challenges.

Ending Toxic, Fossil Fuel Based Pesticide and Fertilizer Use by 2035

Let's take a cue from the sense of urgency behind legislation in Congress to end sales of gas powered vehicles by 2035. We can and must do the same with fossil fuel based pesticides and fertilizers. *Retrospective 2021* includes references to the viability of organic systems and the myth of pesticide benefits in chemical-intensive management systems that do not offer the return (or benefits) that their advocates profess—as alternatives do better, especially when the cost of externalities (pollution, clean-up, end of ecosystem services, sickness, etc.) are considered. We have the tools to make this change nationally and globally. It is already happening.

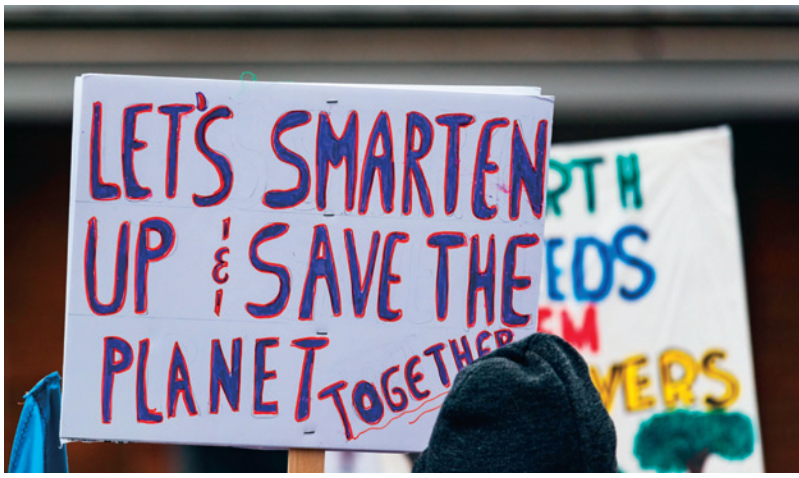
Organization of this Issue

Our approach in *Retrospective 2021* reflects the way that Beyond Pesticides takes on the daily task of empowering grassroots people and organizations to act. The issue is divided into nine categories (see table of contents) that inform strategic action—from human to environmental health, disproportionate risk and environmental justice, to local action, and sustainable organic practices and policy.

2021 as a Reset for the Future?

The inauguration of President Joe Biden in 2021 has been embraced as a critical opportunity to reverse some of the atrocities against public health and the environment by focusing the highest levels of government to take on the critical issues that go to our existence. President Biden issued an executive memorandum, *Modernizing Regulatory Review*, with the stated goal of promoting public health and safety, economic growth, social welfare, racial justice, environmental stewardship, human dignity, equity, and the interests of future generations. This Presidential order sets the stage for the adoption of agency policy to seriously and with urgency confront the climate crisis, biodiversity collapse, and disproportionate harm to people of color communities (environmental racism). We said at the time that these were meaningful words on a page that needed to be urgently put into action. 2021 provided an opportunity for a reset, a recognition that we needed to join together as a nation and as a part of the world community to take action.

A look back at 2021 shows that we have not yet met the moment, unfortunately. It is only one year, and there are a



lot of complex factors, but we have learned again about the culture of government and the inertia of bureaucracies, that the influence and economic interest of polluting industries is embedded in the decision-making institutions at the highest levels. We saw exposes about this and Office of Inspector General and General Accountability Office reports about this in 2021, some calling the governmental decisions outright corruption. We heard whistleblowers in 2021 telling the public that science was being ignored or manipulated at the highest levels. The pieces are referenced in this issue.

Crisis Oriented vs. Precautionary

2021 exemplifies what advocates see as irresponsible federal agencies, including the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Agriculture (USDA), falling far short, as the nation and the world sit on the brink of biodiversity collapse and deadly pesticide-induced diseases. The science shows us and decision makers in our communities that the regulations governing use of toxic chemicals harmful to people and the environment are unprotective. The findings in this issue, for just one year, show that EPA misrepresents the truth when evaluating what is known, with false assumptions in the agency's risk assessments, and misleads the public on the high degree of uncertainty in the potential harm that pesticides cause. USDA promotes industrial agriculture to the detriment of farmers, farmworkers, health and the environment.

Adopting a Holistic Response with Systemic Change

We are not asking for the elimination of one pesticide, a few pesticides, or the adoption of undefined "sustainable" or "regenerative" practices. These changes will not meet the challenges. What is needed is the adoption of whole systems changes that work with nature and effectively ban all toxic materials, under a definition of allowed materials that are compatible with ecosystem land management and is currently defined in federal organic law. We start with the understanding that soil health is foundational to healthy plants; that holistic systems cycle nutrients naturally and support balanced ecosystems that prevent the kinds of pest (insect, weed, and fungal) problems that are endemic to chemical-intensive land management.

We have learned that exclaiming the viability of alternative practices is not sufficient when we are fighting the vested economic interests of pesticide and fertilizer companies, agribusiness, and the chemical landscape and chemical pest control industry. We have to consistently bring the science to our community and marketplace conversations and decisions, as we confront the misleading positions of industry groups that hide behind a weak and unprotective EPA and state regulatory systems that, for the most part, rubberstamp EPA's failures. And we need to fight in state legislatures that have preempted the right of local governments to restrict pesticides on private property in 44 states. So, we start with public community and state lands, show that these holistic systems work better than chemical-intensive approaches in reducing costs, retaining water and moisture, and sequestering carbon over time.

There are many political and economic factors that drive pesticide dependency. But, in most cases, toxic pesticide use is not tied to a determination of real need. And the need for pesticides is created by mismanagement or chemical-dependency, which depresses or destroys ecological balance, creates pest resistance, and results in a treadmill effect of ramping up the toxicity of chemicals required. Questions about cost do not typically consider the expense of the climate emergency, the lost ecosystem services that cycle nutrients naturally, pollinate, and depress disease and infestation, and the real harm and cost to people generally and disproportionately to farmworkers and landscapers. A holistic approach builds resiliency into the system so that the vast majority of the problems typical of chemical-dependent systems do not appear.

Organic as the Solution

Too often the question from decision makers is whether a safer pesticide product can replace a hazardous one. Putting an organic compatible product into a chemical-intensive system is doomed to failure. A systems approach respects nature and soil biology with practices and materials that

enhance the natural world, as opposed to creating vulnerabilities to disease and infestation with toxic chemical use. The product substitution approach, common when pesticides are restricted, undermines the delicate balance and interwoven relationships of organisms in nature, which is so critical to the solution.

Entomologist and author David Goulson, PhD explains in his book, *A Sting in the Tale*, "We need worms to create soil; flies and beetles and fungi to break down dung; ladybirds and hoverflies to eat greenfl[ies]; bees and butterflies to pollinate plants to provide food, oxygen, fuel and medicines, and hold the soil together; and bacteria to help plants fix nitrogen and…cows to digest grass.… [Yet] we often choose to squander the irreplaceable, to discard those things that both keep us alive and make life worth living."

Organic consumers and farmers have invested in the value that we care not only about land stewardship and what we feed our children and families, but stopping farmworker exposure to hazardous materials and ending the hazards to the fenceline communities—where the toxic chemicals used in chemical-intensive land and pest management are produced.

It has become increasingly clear that to the extent we disrupt the functioning of nature, we do so at our peril. It is in this spirit, that we must end the use of toxic pesticides, which are developed to purposefully disrupt biological systems. As a part of ecosystems, our actions and policies must protect nature that sustains us, from microbial life in the soil to mayfly nymphs—the keystone species at the bottom of the aquatic food web.

Now Is the Time to Build on This Foundational Change

When we make decisions on allowed materials or substances in organic systems under organic law, we determine the future of agriculture, land management, and nature—do we want industrial agriculture—will we preserve the marine environment and virgin forests—will we stop the use of chlorine-based substances—will we eliminate hazardous inert or undisclosed ingredients. We must protect organic standards against the pressures within and outside of USDA (as discussed in this issue) that seek to weaken organic as the solution. The good news is that we have a solution in organic and we can build on this.

How do we bring all this together to effect change? The examples of local change in 2021 in this issue—from Maui, Hawai'i to Stamford, Connecticut to New York City—represent the elements of change coming together to utilize the power of science to convey the facts on the seriousness of health and ecological problems and the viability of organic solutions, coupled with the building of influence with neighbors, community members, and elected representatives. This is all advanced through a heightened advocacy that includes a respectful outrage and a deep sense of urgency.

Jay Feldman *is the executive director of Beyond Pesticides.*

Elements of an Organic Systems Approach in the Organic Foods Production Act

The law:

1. Establishes a systems approach to protecting and enhancing the environment. *It does not allow determinations based on relative risk.*
2. Sets restrictions that incentivize continuous improvement in organic management. *It incentivizes investment in natural materials and practices.*
3. Maintains criteria and categories of use for evaluating an allowed substance's (i) adverse effects, (ii) compatibility with organic systems, and (iii) essentiality. *It does not envision inputs/substances not required in soil systems.*
4. Evaluates cradle-to-grave effects when considering allowable inputs. *It does not ignore the full range of health and environmental impacts associated with production, use, and disposal.*
5. Identifies soil as the medium for nutrient cycling, supplying the macro and micronutrients through support of the microbiota. *The law's required systems plan does not envision a dependency on synthetic substances.*
6. Requires complete information and precaution. *It does not allow for uncertainty, incomplete information on effects, and arbitrary margins of safety.*
7. Mandates on-farm inspection and certification. *Chemical-intensive agriculture has no similar oversight.*