

The very bright spot, exemplifying what is possible to confront the health, biodiversity, and climate crises, is found in the action that is taken in communities and states to eliminate toxic pesticide use. Much of this work is still incident-driven and focused on specific chemical threats, like the neonicotinoid insecticides that kill bees or PFAS—per- and poly-fluoroalkyl substances—that have contaminated farmland, the food chain, and ecosystems. Importantly, communities are phasing out pesticides in their parks and on playing fields and embracing organic land management as a holistic strategy to fight the threats that pesticides pose to health, biodiversity, and climate. Even the U.S. Department of Agriculture is investing more in organic, although it is insufficient relative to what is required. Clearly, the hands-on data finds that organic, climate-friendly agricultural systems work and, in fact, are more profitable for farmers than chemical-intensive agriculture.



On Earth Day, Coalition Calls on NYC Parks Department to Set Up Demonstration Sites

A year after the passage of a landmark New York City law banning the use of toxic pesticides in city parks, playing fields, playgrounds, and open space, the Eco-Friendly Parks for All coalition is calling on the Parks Department to establish organic demonstration sites across the city. The coalition is underwriting the cost of the demonstration sites, which are intended to show how advances in soil technology and modified horticultural techniques can produce lush and resilient landscapes without the use of chemical pesticides.

This call for action comes seven months before a law, passed unanimously by the City Council on Earth Day last year, requires that all public parks in the City are managed only with organic compatible materials defined by federal law. The coalition is urging immediate action so that demonstration sites can be up and running before the fall when the law goes into effect. The professional consulting services required to manage the sites are funded through a donation from Stonyfield Organic, the national yogurt company which has been a pioneer and leader in organic practices since 1983.

Eco-Friendly Parks for All is a coalition of local organizations that seeks to protect all those who use the parks (especially children, pets, older people, those with underlying health conditions and disproportionately at risk, and workers) and ensure the sustainability of New York City's ecosystem. Members include Beyond Pesticides, Grassroots Environmental Education, The Black Institute, Children's Environmental Health Center at the Icahn School of Medicine at Mount Sinai, and Voters for Animal Rights.

"To further the impact of our program, we are thrilled to support Bill #1524 in New York City, by donating \$60,000 toward transitioning NYC parks to organic maintenance," said Gary Hirshberg, Stonyfield cofounder and Chief Organic Optimist. "Our StonyFIELDS PlayFree initiative, launched in 2018, strives to help keep families free from harmful pesticides in parks and playing fields across the country."

"Children are uniquely vulnerable to the harmful effects of chemical exposures. All NYC children deserve access to healthy parks free of synthetic pesticides," says Dr. Sarah Evans, Assistant Professor at Icahn School of Medicine at Mount Sinai.

"This law is a long time coming after the many lives spent in engaging with toxic air and land in parks, most of whom are disproportionately black and brown people," said Adeel Ahmed, Community Organizer of The Black Institute, a Brooklyn-based nonprofit. "As grateful as we are for this law after the energy spent on organizing for it, we are calling on the parks department now to implement this law with urgency through moving towards organic maintenance of the parks while emphasizing racial equity as the center of this law's implementation." "The NYC parks law banning toxic pesticides ensures a legacy of safe public places for people to gather, play, and bring their pets, while at the same time contributing to the safety of NYC air and waterways," said Jay Feldman, Executive Director of Beyond Pesticides, a nonprofit organization based in Washington, DC.

"This law to ban pesticides also addresses the city's stated goals of reducing fossil fuel-based products in an effort to become more sustainable. New York City is leading the way for municipalities all over the world who are seeking to reduce their carbon footprint," says Patti Wood, Executive Director of NY nonprofit Grassroots Environmental Education. "Petroleum and gas are feedstock for pesticides and fertilizers."

"This law fulfills a dream of my former kindergarten students who, while learning about how foods in the school cafeteria are grown, learned about the dangers of pesticides," said Paula Rogovin, NYC public school teacher, now retired, who launched the original effort with her students, parents, and then-NYC Councilmember Ben Kallos. "Then, they learned about pesticide use in the parks. The bill was introduced into the City Council on their behalf. It took a team of individuals and organizations working together to ensure this important legislation was passed. Pesticide-free parks will benefit millions of New Yorkers, visitors, and their pets."

What to do: Talk to elected officials and the parks department in your town/ city/county by using the material provided by Parks for a Sustainable Future. Contact info@beyondpesticides.org for more information and to discuss what help Beyond Pesticides can offer.

SOURCE: Eco-Friendly Parks for All, "On Earth Day, Coalition Calls on NYC Parks Department to Set Up Demonstration Sites." April 20, 2023.



ORGANIC FOOD IN SCHOOLS | MARCH 8, 2022 Covid Leads to Transformational Moment for Launching of School-Based Feeding Programs with Organic Food

silver lining has emerged from the past two devastating Covid years, according to Civil Eats. A large California school district has used pandemic changes—in the regulatory schema of the federal and state governments, in supply chain function, and in

available funding—to catalyze the transition to organic food in school-based feeding programs. For the past decade or so, U.S. school districts have, here and there, been moving gradually in this direction. The West Contra Costa Unified School District (WWCUSD) is robustly making the transition to organic, in no small part through its collaboration with Conscious Kitchen, a local nonprofit that seeks to "break the cycle of conventional, packaged, overly processed food, [and] transitioning to meals based on five foundational attributes: fresh, local, organic, seasonal and nutritious." Beyond Pesticides has long pointed to the importance of shifting school-based meals to organic for multiple reasons, but centrally, because the pesticides with which conventional food is generally contaminated have outsized health and developmental impacts on children.

The WWCUSD, which is northeast of San Francisco, serves 30,000 students -75% of whom come from low-income households. The district's food service director, Barbara Jellison, and other food service leaders in the state have seized the moment of Covid disruption and the "pause" in standard operating procedures to shift toward what she sees as better food for her students. Food service in most schools in the U.S. was turned upside down with the twists and turns of navigating Covid protocols amid remote learning, hybrid learning, and in-person learning, as well as constantly changing attendance patterns, masking requirements, and staffing shortages, among other factors.

In addition, as Civil Eats reports, "numerous disruptions loosened regulations that [have made] it difficult for any supplier other than the largest conventional food companies to get their food into cafeterias. The federal and state government both sent extra funds to California schools to ensure children would not go hungry. And global supply-chain snags gave smaller, local farms a leg up; many of those farms in Northern California are organic."

As Covid arrived, WWCUSD's food service teams first made hot meals available for pick-up by low-income families. That then shifted, because of a U.S. Department of Agriculture (USDA) waiver, to distribution of boxes of raw ingredients—with enough ingredients for a week's worth of three daily meals plus snacks. In the fall of 2020, when the district was in remote mode, Ms. Jellison called Judi Shils of Conscious Kitchen to ask for help. She wanted to shift at least some of the contents of the food boxes to organic.

Ms. Shils contacted some of those local Northern California organic farms

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and food vendors, including Full Belly Farm, Earl's Organic, and Lundberg Family Farms, and the organic transition was soon under way. In short order, Ms. Jellison's team was distributing more than 20,000 boxes each week, and could provide items such as ground beef, beans, grains, fruits, and vegetables. By March 2021, the food boxes were 100% organic, and the district had invested \$17 million in the purchase of 10.7 million pounds of organic food for students' low-income families. The Conscious Kitchen website provides an excellent array of infographics and other information on the program here.

Civil Eats notes Ms. Shils's comment: "It was incredible to see what can happen during a pandemic, when all [the farms] needed was business and when all families needed was food. And then I thought, 'Okay, we're going to go back to school someday. How do we keep the integrity of the supply chain in a district that has never had organic food?" Previously, such small organic producers would have had little chance of participating in the school lunch bid process because USDA regulations made it difficult for suppliers other than large, conventional food processors/companies to get a foot in the cafeteria door. Now, all these small, organic producers had become vendors in the system. This has had knock-on effects on local organic growers and producers, many of whom had lost wholesale restaurant and other accounts because of lowered demand during the pandemic.

Another salutary outcome of the push for organics in schools was their introduction into federal food purchasing programs, and especially into one called "DoD Fresh." With the full and unwieldy moniker, "U.S. Department of Agriculture (USDA) Department of Defense (DoD) Fresh Fruit and Vegetable Program," DoD Fresh had historically had no organics available in the subsidized, bulk food program for schools; policy advocacy by Friends of the Earth and other organizations changed that.

Deputy director of food and agriculture at Friends of the Earth (FOE), Kari Hamerschlag, commented, "Until recently there was no organic available [in the program]. So we worked with the suppliers in both Northern California and Southern California . . . and we got them to add a whole slew of different organic products." Civil Eats reports FOE's estimate that, in a threemonth period in late 2021, that change resulted in 80,000 pounds of organic food (worth \$100,000) showing up in California school-based meals.

So, though further progress will not be free of challenges, the two women believe they have sufficient sourcing and coordination infrastructure and protocols in place so that what they have accomplished can be replicated in other districts. Ms. Shils notes that already, they can see ripple effects: "Those companies that we were connected to and supported us and we supported them through the majority of the pandemic . . . they're learning how to work with schools and how to reformulate some of their items to meet our requirements, and hopefully will be able to support other school districts in time."

One example of that ripple was the work Ms. Shils and Ms. Jellison did with Mindful Meats (purveyor of organic, grass-fed beef from retired dairy cows) to develop a pre-cooked burger patty that would work once students returned to in-person school. That burger was then added to the repertoire of food service in the San Francisco Unified school district, which lacks "from scratch" cooking facilities. Then came sourcing of organic burger buns from Alvarado Bakery. Item by item, districts are ratcheting up the organic content of school meals. Ms. Jellison "is checking off each organic box," according to Civil Eats; she adds, "Since we've gone back into the schools, we've made tremendous gains that we weren't able to do during that pilot year."

The women believe that the best path for districts in this pursuit is to partner with nonprofits working in the sector. For WWCUSD, the partnership with Conscious Kitchen was transformative, allowing an already stressed and challenged food service system to make significant headway. Ms. Shils commented, "Most food service directors are up to their eyeballs, especially now, in regulations and they don't have time to think. Every community I believe could have a partner. There are lots of nonprofits out there."

A focus on getting organics into school feeding programs has been afoot for years, and has proponents in multiple places, including in Congress and in state houses. A 2020 study out of the University of California Berkeley found that roughly 30% of school districts in the state are purchasing some organic food items. Farm-to-School nonprofits and programs have sprouted up in many states, and USDA's Food and Nutrition Service conducts a grant program for such initiatives. The California Department of Food and Agriculture recently published its report on the farmto-school movement, Planting the Seed, which provides guidance on how to expand, support, and strengthen such programs in the state.

The report emphasizes the potential for such programs to address multiple critical issues, noting that farm-to-school programs "serve as a powerful tool to build demand and expand markets for producers that use . . . verified climate smart agriculture production systems, including certified organic and transitioning to organic certification systems." Civil Eats notes that one of the report's working groups recommended that building relationships between organic producers and schools should be a top priority.

Multiple school districts across the nation-in Boston, New York City, Buffalo, Washington, DC, Los Angeles, Denver, Austin, Chicago, Cincinnati, Pittsburgh, and a few others-are working with the nonprofit Center for Good Food Purchasing to move the needle on organic purchasing. The center "uses the power of procurement to create a transparent and equitable food system that prioritizes the health and well-being of people, animals, and the environment. We do this through the nationally networked adoption and implementation of the Good Food Purchasing Program by major institutions."

The mission is shared and is being advanced by many advocacy organizations, as well—including Beyond Pesticides. Ms. Hamerschlag of FOE, who has worked for half a decade on getting more organic food into schools, comments, "The benefits of organic are significant in terms of climate, soil health, and reducing toxic pesticide exposure."

Beyond Pesticides has written often about the many upsides of organic food production and consumption, which advance multiple health and environmental goals: reduced health harms to children and farmworkers from synthetic pesticide and fertilizer use, improved health outcomes for children and adults (including lowered obesity rates), reduction of environmental/ecosystem and biodiversity degradation, and greater equity for environmental justice communities and populations.

Indeed, the whole Conscious Kitchen model is based on getting "all-organic, scratch-cooked, plant-forward meals to districts that serve a large proportion of low-income students." Ms. Shils notes that because organic food often costs more than conventional food (i.e., food raised with synthetic pesticides and fertilizers), it can be economically infeasible for some students' families to purchase organic. Thus, school lunch is an opportunity to provide the most healthful fare for students.

She emphasizes that this helps rebalance the equity scales and shifts

the local food system in a more sustainable direction. "When you have hundreds of thousands of children needing to be fed, it creates a lot of leverage, and food prices go down, our land is healthy, the agricultural practices [are better for the workers], and we mitigate climate change," Ms. Shils commented. Conscious Kitchen generated a case study of the WWCUSD initiative— Organic, Plant-Forward, Scratch-Cooked School Meals: A California Case Study.

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Lena Brook of the Natural Resources Defense Council (NRDC), which has advocated with California state government agencies to integrate more organicspecific incentives into their grants programs, notes: "We can't afford to be solving one problem at a time anymore. We have a climate crisis, various public health crises, biodiversity [loss], drought, wildfires, etc. Where do we put our investments in order to tackle more than one at a time? For me, organic sits at the center of this."

What to do: Beyond Pesticides concurs. To learn more about the harms of pesticides in children's diets, and the benefits of organic foods, see the Factsheet, *Children Need Organic Food*, and these webpages: Kids Who Eat Organic Food Score Higher on Cognitive Tests, Health Benefits of Organic Agriculture, Study Shows Organic Food Diet Reduces Residues of Glyphosate in Body, and Hazards of Pesticides for Children's Health, among others.

SOURCE: Held, Lisa. "Pandemic Disruptions Created an Opportunity for Organic School Meals in California." Civil Eats. February 28, 2022



EUROPEAN UNION BANS PESTICIDES IN PARKS | JULY 1, 2022 EU Bans Pesticides in Parks, Playgrounds, and Playing Fields; Fails to Set Organic Transition Goals in Ag

he European Commission (EC) introduced on June 22 new rules that ban all pesticides in "public parks or gardens, playgrounds, recreation or sports grounds, public paths, as well as ecologically sensitive areas." In agriculture, the policy adopts strategies for achieving the pesticide use- and riskreduction goals of its Farm to Fork initiative. The EC-the European Union's (EU's) politically independent executive arm-proffered new rules that are binding on all EU Member States. Those states must, in turn, adopt their own binding targets to help meet the overall EU targets—a 50% reduction in use and risk of chemical pesticides, and a 50% reduction in use of more-hazardous pesticides, by 2030. Beyond Pesticides has covered the shortcomings of the EU's previous approach, the Common Agricultural Policy (CAP), the Farm to Fork (F2F) strategy and its 2021 disparagement by U.S. Department of Agriculture (USDA) Secretary Tom Vilsack, and

his apparent turnaround in the large and recently announced USDA investment in the U.S. transition to organic agriculture (albeit without metrics or acreage goals), a transition F2F seeks to advance for the EU.

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The EC—the EU's politically independent executive arm proffered new rules that are binding on all EU Member States. Those states must, in turn, adopt their own binding targets to help meet the overall EU targets—a 50% reduction in use and risk of chemical pesticides, and a 50% reduction in use of more-hazardous pesticides, by 2030. protection products may have particularly negative impacts in certain areas that are frequently used by the general public or by vulnerable groups, communities in which people live and work and ecologically sensitive areas, such as Natura 2000 sites protected in accordance with Directive 2009/147/EC of the European Parliament and of the Council and Council Directive 92/43/ EEC34. If plant protection products are used in areas used by the public, the possibility of exposure of humans to such plant protection products is high. To protect human health and the environment, the use of plant protection products in sensitive areas and within 3 metres of such areas, should therefore be prohibited. Derogations from the prohibition should only be allowed under certain conditions and on a case by-case basis."

[According to the policy: "sensitive area" means any of the following: (a) an area used by the general public, such as a public park or garden, recreation or sports grounds, or a public path; (b) an area used predominantly by a vulnerable group as defined in Article 3(14) of Regulation (EC) No 1107/ 2009. . .] The policy goes into effect on 20th day following its publication in the Official Journal of the European Union.

The EC says, "We need to redesign our food systems, which today account for nearly one-third of global GHG emissions, consume large amounts of natural resources, result in biodiversity loss and negative health impacts . . . and do not allow fair economic returns and livelihoods for all actors, in particular for primary producers." F2F is one major component of the European Green Deal-a plan to make Europe the first climate-neutral continent and "transform the EU into a modern, resource-efficient and competitive economy, ensuring (1) no net emissions of greenhouse gases by 2050, (2) economic growth decoupled from resource use, [and] (3) no person and no place left behind."

F2F aims to accelerate the transition to what it calls a "sustainable food system"—one that would:

- ensure food security, nutrition, and public health, ensuring that everyone can access sufficient safe, nutritious food
- have a neutral or positive environmental impact
- help mitigate climate change and adapt to its impacts
- reverse biodiversity loss
- preserve affordability of food while generating fairer economic returns, fostering competitiveness of the EU supply sector, and promoting fair trade

The new rules proposed by the EC introduce several provisions in pursuit of such a sustainable food system, including:

- legally binding pesticide-use-reduction targets
- strict enforcement of "environmentally friendly" pest control, i.e., ensuring that all farmers practice Integrated Pest Management (IPM), in which all

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alternative methods of pest control are considered first, before chemical pesticides can be used as a last resort; Beyond Pesticides notes that this is not the same as organic production, wherein (in the U.S.) nearly no chemical pesticides are permitted

- a ban on the use of *all* pesticides in sensitive areas (such as ecologically vulnerable areas, public parks and gardens, recreational/sports fields, playgrounds, and public paths)
- EU financial support for farmers ("for 5 years, Member States can use the CAP to cover the costs of the new requirements for farmers")

The EC rationale for these new rules rests on its recent evaluation of the previous iteration of the Sustainable Use of Pesticides Directive, and the commission's subsequent conclusion that existing rules have been both far too anemic and implemented unevenly. The EC evaluation, as well as conclusions from the European Court of Auditors (the EU's independent financial oversight body) and the European Parliament, demonstrated insufficient progress on the reduction of the risks and impacts of pesticide use on human health and the environment. (It should be noted that the F2F strategy strives for what it defines as "sustainable" use of pesticides, rather than "zero" use.)

The EC announcement added that those bodies identified "insufficient

progress in promoting the use of Integrated Pest Management and alternative approaches or techniques, such as nonchemical alternatives to pesticides, in part, because already now chemical pesticides can harm human health and continue to contribute to biodiversity decline in agricultural areas, contaminate the air, the water and the wider environment."

The EC cited several catalytic factors driving these new strategies: (1) major health risks from chemical pesticide exposure; (2) detection of pesticides above their effect threshold at 13–30% of all surface water monitoring sites in lakes and rivers across the EU; and (3) the pollinator and insect decimation, particularly as Europe already faces a pollination deficit. It also noted, "In case of inaction, the outlook for all environmental indicators is bleak with further declines in biodiversity."

The announcement included this: "Our food production systems need to reduce their negative impact on climate change and biodiversity loss. The costs of inaction hugely outweigh the costs related to the transition towards sustainable food systems. The new rules will ensure that farmers and consumers can benefit from sustainable food systems and that our long-term food security is safeguarded."

The EC offered information on how the outcomes of the new rules, once active (in a couple of years), will be monitored and measured. Data on the use and risks of pesticides will be ascertained annually through data on the sale of pesticides (or PPPs, Plant Protection Products), as reported to the EC by EU Member States. The baseline from which to calculate reductions will be the average pesticide sales in 2015, 2016, and 2017. All PPPs on the market will be assigned to one of four groups, each of which is assigned a "weighted" significance in terms of the compounds' inherent risks; higher weightings reflect higher risk. The system encourages the use of PPPs containing low-risk active substances (many of which are nonchemical), and to discourage the use of PPPs containing more-hazardous substances.

The focus on high-hazard compounds is well placed. Recent research, published in *Environment International*, concludes: all of the current 230 active EU-approved, synthetic, open-field-use herbicides, fungicides, and insecticides are hazardous to humans and/or ecosystems; none of those 230 has a completed hazard profile; and 124 of them are "top hazard" compounds.

The researchers investigated the potential ability of seven different pesticide-use reduction scenarios to achieve the 50% reduction goals and concluded that the 50% use and risk reduction target will be achieved only if the number ("pool") of pesticide compounds available on the EU market is significantly reduced, or their uses strongly restricted. The study coauthors asserted that "strong restrictions are needed to match the Farm to Fork pesticide reduction goals."

Environment and public health advocates across the EU are largely in support of F2F. Back in March, when pushback emerged in some other quarters (related to food supply chain issues in light of the Russian war on Ukraine), entities such as Friends of the Earth, Greenpeace, Compassion in World Farming, Climate Justice, and the Pesticide Action Network wrote a letter to the President of the European Commission, Ursula von der Leyen, and other EU officials, saying: "We ask you to address this immediate crisis without undermining the environmental and social progress to which you committed in the European Green Deal."

Pushback came from producer associations, but also, from government officials. The NGO's concern, as reported by *Agri-Pulse*, arose specifically in response to a comment by European Agriculture Commissioner Janusz Wojciechowski, who said, "If food security is in danger, then we need to have another look at the objectives (of Farm to Fork) and possibly correct them." The trade association Copa-Cocega chimed in with a comment asserting that European farmers need to concentrate on producing more corn, wheat, sunflower, and other crops to make up for the gap caused by Ukraine's current inability to export crops.

In early June, Czech Director General for European Affairs Štěpán Černý told *EURACTIV*, "Let's maybe forget for a while on [the] Farm to Fork strategy [...] for a couple of months, and let's mobilize the foodstuff production as much as we can." He added, wrongly, that "The ambition of Farm to Fork . . . is to reduce the amount of food we are producing. And I don't think that's the wise thing to do only this right now when you're being threatened by hunger."

These kinds of comments trot out tired and short-sighted (and arguably,

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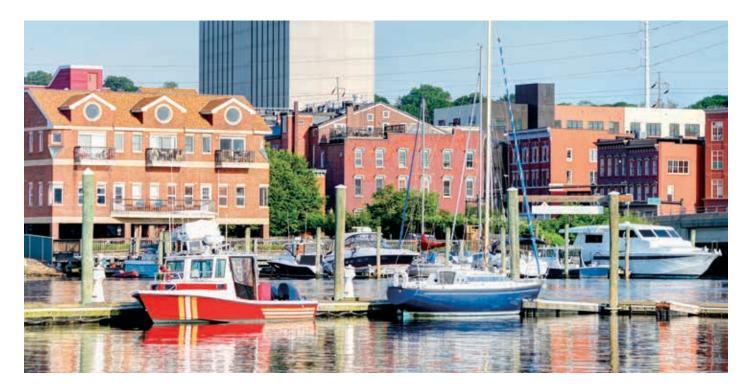
incorrect) arguments that serve profit and/or political ends. Food supply issues during the Ukraine crisis are real and important; yet, they can be dealt with as noted by the United States Institute of Peace and CGIAR (the Consultative Group on International Agricultural Research), without sacrificing the critical long-term strategies of F2F. The agrochemical industry, producers who have become dependent on chemicalintensive production practices, politicians and officials who may fear the power of industry and/or trade groups, andindirectly-consumers who are accustomed to unreasonably cheap food, may resist the "strictures" of F2F.

But such attitudes fail to see the longterm forest for the cheap and immediate trees: conventional chemical agriculture damages everything that humans care about—health, natural resources and ecosystems, pollinators, economic wellbeing, and climate chief among them. Organic regenerative agriculture obviates the needs for these chemical inputs and would slash the damage they cause across the globe. F2F rarely uses the term "organic" in its frameworks and rules; nevertheless, they approximates many of the tenets of what the National Organic Standards set out here in the U.S. Further, F2F includes actions aimed to increase organic farming in the EU—to 25% of the EU agricultural land use by 2030.

On this side of the pond, USDA recently announced significantly greater funding for the transition of U.S. agricultural acres to organic production. The agency's early June press release echoed some of F2F's goal language; USDA asserted that this and other newly directed funding aim "to transform the food system to benefit consumers, producers and rural communities by providing more options, increasing access, and creating new, more, and better markets for small and mid-size producers." As Beyond Pesticides wrote then, "It will be critical that this [USDA framework] result in concrete goals that set out specific metrics and timelinesparticularly around the magnitude of acres shifted to organic production and the pace of the phaseout of non-organic substances and protocols."

What to do: Whether the enactment of F2F strategies "on and in the ground" ends up comporting with top-level goals of F2F-to transition the agricultural and food sector to one that is "fair, healthy, and environmentally friendly"is TBD (to be determined). What is clear is that the U.S. would do well to create a paradigm-shifting framework, analogous to what the European Green Deal and F2F have set out, for its domestic agricultural sector. USDA's National Organic Program is a robust toolkit already in place; what is required next is legislative and executive action to bring conventional producers into a "big organic tent" that would benefit everyone (save for the pesticide industry) and all of Nature.

SOURCE: European Commission. "Farm to Fork: New rules to reduce the risk and use of pesticides in the EU." Press release, June 22, 2022



LOCAL ORDINANCE BANS PESTICIDES ON PUBLIC LAND | JULY 6, 2022 Norwalk, Connecticut Passes Ordinance Embracing Organic Land Management

orwalk, Connecticut last week passed an ambitious ordinance banning toxic pesticides and implementing pesticide-free management on all public spaces throughout the city. The move, championed by Common Council member Lisa Shanahan with strong support from other city leaders, as well as public health and conservation organizations, follows nearby Stamford, CT's organic community ordinance passed last September.

"It's high time that we connected people and conscientious lawmakers linking municipal pesticide bans to the interests of animal advocates, gardeners and conservationists, so that the hazards and risks of using pesticides both informs residents and changes public policies and practices," said Priscilla Feral, president of the Connecticut-based animal advocacy organization Friends of Animal and founder of Pesticide Free Rowayton, organizations which both worked to gather public support for the ordinance. Prior to the passage of the ordinance, Norwalk land managers were embracing the need to move toward safer approaches to land care and responded to public requests to move in this direction. Pesticide Free Rowayton secured a pesticide-free lawn care program on six public parks, and city staff began phasing out glyphosate use. "Three years now we stopped using Roundup on our property," Superintendent of Parks and Public Property (Recreation and Parks) Ken Hughes told the CTbased news site The Hour. "We never mass treated for weeds or insects."

The ordinance prohibits all pesticides on all Norwalk city property unless use is addressing poison ivy or specified in a Land Management Plan required to be developed by the director of recreation and parks and the city's chief of operations. The land management plan must embrace an organic systems approach to land care, including regular soil testing, the use of only organic fertilizers, careful plant selection, physical and biological controls, consideration of pest biology, and preventive practices that eliminate pest-conducive conditions.

If a situation arises where a city department wants to use a pesticide not specified in the land management plan, the ordinance establishes an interdepartmental pest management team to evaluate exemption requests. Allowances are approved only if there is an imminent threat to health, environment, or public safety, reasonable attempts have been made to address the problem without pesticide use, the pesticide will not impact water quality, and there is evidence the product in question has been proven effective against the pest or weed condition present. If an exemption is granted, the application must include a pest management plan to prevent reoccurrence of the condition using organic land management practices.

Local public golf courses are exempt from pesticide restrictions if they commit to following the Environmental Principles for Golf Courses in the United States. Both public golf courses and city land managers must deliver monthly reports to the Norwalk Common Council regarding pesticide use during the preceding month.

Norwalk's ordinance does not allow exemptions for invasive species and does not differentiate between organic or non-organic pesticides, referring all exemption requests to an interdepartmental pest management team. The team is comprised of city staff and does not include any members of the public. However, through the monthly reports transmitted to the Common Council, both lawmakers and the public can maintain a close watch of pesticide use to ensure that the spirit and intent of the ordinance is fulfilled, and exemptions do not result in the regular use of toxic pesticides.

Along with nearby Stamford, Norwalk's ordinance is critical to safeguarding Connecticut's unique coastal environment and protecting water quality throughout the region. "It's in the best interest of the city and its residents to protect the ecological integrity of the Long Island Sound, Norwalk's River and streams, and improve and protect water quality throughout our region," Council member Lisa Shanahan told The Hour. "These lethal chemicals blindly kill and make no distinction between pests and beneficial insects and healthy organisms."

These sentiments were echoed by others on the Common Council, including member David Heuvelman, who called the ordinance "a first big step for the city... I personally think this is one of the most important things that we as a community can do, especially a community geographically located where we are. The water is important, we need to preserve it, we need to make sure that we are shepherding our water supplies," he said.

To discuss the importance of passing a strong city ordinance around pesticide use, Beyond Pesticides Community Resource and Policy Director Drew Toher joined with Sarah Evans, PhD, of the Ichan School of Medicine at Mt Sinai, and Richard Harris, of the CT-based conservation group Harbor Watch in a series of presentations to city leaders. According to local Norwalk news site, Nancy on Norwalk, Common Council member Nora Niedzielski-Eichner indicated the "quite comprehensive" presentations "changed my views about how our family does pest control."

While many advocates wanted the Council to go further and extend the pesticide ban to private property, the Common Council is prohibited from doing so due to anti-democratic provisions in Connecticut state law known as pesticide preemption. However, as Norwalk is showing, public land care practices set an important example for city residents. The passage of local policies on public lands shows a strong desire for communities to reclaim the authority to regulate toxic chemicals wherever they may cause unnecessary harm.

What to do: Norwalk's strong pesticide ordinance brings it in league with the nearly 200 other local policies recorded on Beyond Pesticides' Map of U.S. Pesticide Reform Policies. If you are interested in joining communities like Norwalk and organizing your city, town, or county towards a similar goal, reach out to Beyond Pesticides by sending an email to info@beyondpesticides. org for one on one assistance and strategies you can use to eliminate unnecessary pesticide use where you live.

SOURCE: Brone, Aigail. "Norwalk bans pesticides on public land—with a few exceptions." *The Hour.* July 1, 2022; Guenther Chapman, Nancy. "Norwalk Council passes pesticide ban." *Nancy on Norwalk.* June 30, 2022

ORGANIC TRANSITION ELEVATED | JUNE 10, 2022 USDA Announces Dramatic Increases in Support for Organic Agriculture without Call for Total Transition

he U.S. Department of Agriculture (USDA) announced on June 1 that it will provide a potential 15-fold increase in funding aimed at organic food production—up to \$300 million. The subject Organic Transition Initiative provision is embedded in a new USDA Food System Transformation framework (FSTF), whose raison d'être is captured in the press release: "to transform the food system to benefit consumers, producers and rural communities by providing more options, increasing access, and creating new, more, and better markets for small and mid-size producers." That funding for organic transition, the invocation of climate as a significant driver of multiple features of the initiative, and a focus on equity concerns are all welcome news. Beyond Pesticides maintains that it will be critical that this FSTF result in concrete goals that set out specific metrics and timelines—particularly around the magnitude of acres shifted to organic production and the pace of the phaseout of nonorganic substances and protocols.

The headline of the press release bespeaks the rationale: "Shoring Up the Food Supply Chain and Transforming the Food System to Be Fairer, More Competitive, More Resilient." Broadly, the initiative addresses four sectors of agricultural activity: production, processing, aggregation/distribution, and markets/consumers.



The FSTF sets out four top-level goals; the appendix to the announcement includes more-detailed sections on each of these:

- building a more resilient food supply chain that provides more and better market options for consumers and producers while reducing carbon pollution; the press release notes that the increase in funding is geared to providing comprehensive supports for farm transition to organic production, including mentoring, comprehensive, wraparound technical assistance, direct funding through conservation financial assistance and additional crop insurance assistance, and support for developing product markets in targeted areas
- 2. creating a fairer food system that combats market dominance and helps producers and consumers gain more power in the marketplace by creating new, more, and better local market options; this section points to the huge reduction in producers' power in the marketplace during the past five decades, due to massive consolidation in the food system, and to the "perils of a food system dominated by a few corporate players"; this initiative, USDA asserts, will "deliver

a better deal for farmers, ranchers, growers and consumers"

- making nutritious food more accessible and affordable for consumers; in this section, USDA emphasizes the unacceptability of food and nutrition insecurity, and commits to its elimination
- 4. emphasizing equity; here, the agency says that "rural communities, underserved communities, communities that experience persistent poverty, and the people who live there have been left behind"; it further asserts that the FSTF will create more economic opportunities in such communities and help them keep more of the food system dollar—accelerating more-equitable growth, and helping more of the created wealth remain in small towns and underserved communities

USDA's press release notes that the effort "supports the Biden-Harris Administration's broader work to strengthen critical supply chains as directed by *Executive Order 14017 America's Supply Chains.*" Funding for the initiative will come from the *American Rescue Plan Act* (and other pandemic relief legislation), and a good number of the features address "lessons learned from the Covid-19 pandemic and supply chain disruptions caused by Russia's war in Ukraine." USDA has emphasized that this new initiative builds on its 2021 provision of pandemic assistance to cover certification and education expenses for certified organic producers and those making the transition to organic. (See more about pandemic support for farmers here.)

The appendix section (of the USDA press release) on Food Production spotlights two initiatives: the increased funding (up to \$300 million) for the new Organic Transition Initiative, and up to \$75 million to support urban agriculture. Roughly \$20 million for the latter will go to processing a backlog of applications from a 2018 grant program to support urban agriculture; in 2020 and 2021, a mere 6% of applications were processed. Another \$40 million will help fund outreach and training programs for urban farmers, which USDA says will "expand access to nutritious foods, foster community engagement, increase awareness of climate change and mitigate the effects within urban areas, provide jobs, educate communities about farming, and expand green spaces." The People's Garden Initiative, recently revived, will get an infusion of

\$5 million for 18 flagship gardens across the country, which are used to "grow fresh, healthy food and support resilient, local food systems; teach people how to garden using conservation practices; nurture habitat for pollinators and wildlife; and create greenspace for neighbors."

Other noteworthy features of the initiative include:

- \$40 million to support doctors' ability to prescribe fresh—and ideally organic and local/regional—produce, aka, food as medicine for patients who have poor access to proper nutrition
- advancement of economic equity and environmental justice
- \$375 million to catalyze more independent poultry and meat processing enterprises (because currently, there are four multinational companies doing all of this in the U.S.)
- a food supply chain loan guarantee program to shore up independent investment in mid-chain operations (e.g., rucking, cold storage, and processing) for meat and poultry
- up to \$600 million to support supply chain infrastructure beyond the meat and poultry sector
- funds for food safety certification training for specialty crops
- funds to levy commodity purchasing through the Farm-to-School program and other procurement programs, increasing markets for local/regional farms
- additional support for the Community Compost and Food Waste Reduction Program, and a feasibility study (and corresponding actions) for a National Food Loss and Waste Strategy
- increased funding to a variety of programs focused on access to healthful food—for seniors, those who live in so-called "food deserts," patients with inadequate food and nutrition security (via the "food as medicine" or food prescription initiative mentioned above), students who participate in school feeding programs, and others; also, \$25 million to support SNAP (Supplemental Nutrition Assistance Program) technology improvements

There is a big focus on animal food processing in the FSTF, as a response to the pandemic experiences related to this industry. This is hardly an ideal focus in terms of climate impacts because the consumption of animal products represents a significant contribution to greenhouse gas emissions. This is especially true of the giant CAFO (concentrated animal feeding operations) sector and conventional dairy sector, from which most "industrial" meat and dairy products come. This may (or may not) be offset by the multiple other aspects of the FSTF that support local small- and mid-sized, as well as organic and regenerative, farms whose practices have a far smaller climate and environmental footprint.

As the organization Moms Across America points out in its coverage of the FSTF, the initiative may have the additional impact of reducing "the dependency on GMO mono-crops that have been the reason for the destruction of rainforests and sacred lands." The organization could be speaking for Beyond Pesticides when it writes, "Are we naive to the corruption that could result from these hundreds of millions of dollars being doled out to organizations and companies? No. Are we skeptical if the money will merely line the pockets of more Fat Cats? Yes. But is there also a possibility that we have made progress?" But the organization also asks, "Has the food movement educated Tom Vilsack and his team that regenerative organic farming and access to organic food are essential?"

On that last question, Beyond Pesticides must return to its earlier coverage of Secretary Vilsack's unhelpful behavior in 2020, when he used a G20 summit to diss the European Union's Farm to Fork strategy, a primary goal of which is to reduce damaging climate, environmental, and health impacts of agricultural activities, and indirectly, its overall aim to create a "fair, healthy and environmentally friendly food system." At the time, Beyond Pesticides wrote, Secretary Vilsack "chose to counter the F2F efforts by promoting an 'alternative strategy' – under the moniker 'Coalition for Productivity Growth'—through which 'other nations pledge *not* to follow the European path on farm policy.' He has described this alternative, U.S.-led strategy as 'a market-oriented, incentivebased, voluntary system [that] is effective' at slashing agricultural carbon emissions."

This corporate-friendly approach rankled the health and environment advocacy community, but the criticism was not confined to those circles. The staid outlet Forbes magazine published an article titled, "Why Tom Vilsack Is Wrong About Farm To Fork and What We Can Do About It." The piece included this: "USDA Secretary of Agriculture Tom Vilsack has recently downplayed the European Union's ambitious Farm To Fork strategy. Farm To Fork [F2F] is the cornerstone of the European Green Deal, and puts sustainability at the heart of the world's largest food import and export market. But Vilsack's dismissal of the E.U. are [sic] out of step with consumer sentiments, food justice advocacy and the latest cutting edge research on agroecology. . . . Vilsack's alignment with agribusiness downplays the vast inequities at the heart of the U.S. food system."

It continued, "The USDA secretary is promoting an alternative strategy called the Coalition for Productivity Growth, based on market-oriented, incentivebased systems.... The Vilsack approach is music to the ears of Big Food conglomerates like Bayer, Syngenta, Corteva (Dow/Dupont), Cargill and JBS, as well as trade groups such as Vilsack's former employers at the Dairy Export Council."

Forbes continued to surprise with these comments: "The grassroots sustainability momentum in the U.S. is consistent with recent scientific studies that expose the yield/productivity myth of chemical intensive agribusiness. . . . The European Union Farm To Fork plan is not perfect, but shows that public food system governance is possible and that a sustainable food system is already busy being born. And grassroots efforts in the U.S. are already building such a foundation domestically. A U.S. Farm To Fork strategy based on good food purchasing principles could ensure that healthy, fresh, affordable food grown and processed with justice, transparency and equity are available to all. Now that would be the way to go."

In a Civil Eats interview that challenged some of the Secretary's previous positions, he said, "This announcement is designed to do is to say, 'We'd like to see that higher-value opportunity [that farmers access through the organic premium] more available and even more easily obtainable.' We know it's a problem: [organic certification is] complicated. It is expensive. It is tough. And they need help. So, here's money to get a mentoring program in place. Here's money to potentially look at ways in which we can either right-size the market where there's too much supply and not enough market or right-size the demand where there's a lot of market but not enough demand, not enough supply. That's what we're trying to do with the \$300 million. I think it is a very important signal about the significance and importance we place on organic as part of the overall system." Civil Eats coverage calls the FSTF emphases on regionalism, support for organic and urban farming, and nutrition "a significant shift for the agency, which has historically prioritized efficiency over all else."

Response from elsewhere in the nonprofit world has included this from the Organic Farming Research Foundation's Gordon Merrick, Policy & Programs Manager: "In the past year, OFRF has had numerous meetings with USDA officials and provided in-depth written comments on how the agency can best support farmers and ranchers transitioning to organic production systems. . . . This is a meaningful first step to truly working towards a just and equitable food system. We at OFRF are excited to see the details of this historic investment into the National Organic Program."

Beyond Pesticides advises that, in its development of specific goal metrics and plans, USDA look to the example of EU's F2F plan, particularly in regard to such metrics on transition to organic production and reduction of the use of synthetic inputs (pesticides and fertilizers) on a specified timetable. For example, F2F:

- sets out an objective of moving at least 25% of the EU's agricultural land to organic farming by 2030
- directs major funding to boosting sustainable practices, such as precision agriculture, agroecology (including organic farming), carbon farming, and agroforestry
- establishes the goal of reducing, by 2030, overall use and risk of chemical pesticides by 50%, and the use of more-hazardous pesticides by 50%
- makes changes to outdated regulations governing sourcing and use of pesticide data in order to address data gaps and promote evidencebased policymaking

What to make of USDA's (and presumably the Secretary's, given that he is promoting FSTF) apparent shift to greater organic, climate, and equity focus via this initiative? Certainly, the Biden/Harris administration's concerns and priorities about the food system, climate, environment, and equity are a likely and significant impetus. Experiences during the pandemic have clearly been catalysts, as well, including problems such as supply chain issues, transportation problems, staffing shortages, insufficient inventory, and lack of redundancy in systems. Other issues are emerging as a function of the Russian war on Ukraine.

The press release on FSTF concludes with this: "In the Biden-Harris Administration, USDA is transforming America's food system with a greater focus on creating new, more, and better markets to support farmers, ranchers, and consumers. USDA will do this by building more resilient local and regional food production [and] fairer markets for all producers, ensuring access to safe, healthy and nutritious food in all communities, building new markets and streams of income for farmers and producers using climate smart food and forestry practices, making historic investments in infrastructure and clean energy capabilities in rural America, and committing to equity across the Department by removing systemic barriers and building a workforce more representative of America."

Such a values-driven, rather than corporate interest-driven, approach at USDA would be far preferable and appropriate to the needs of people and the planet; perhaps this FSTF signals movement in that direction. Critically, the federal government needs to heed Beyond Pesticides' call for ending our ubiquitous use of toxic pesticides over the next decade, and for protection of strong organic standards and integrity in the National Organic Program and National Organic Standards, with an important feature of those standards being the National List of Allowed and Prohibited Substances, which controls what can and cannot be used in organic crop and livestock production.

What to do: The devil, as always, will be in the details of this new Organic Transition Initiative. For now, Beyond Pesticides is cautiously hopeful that this new injection of funding, and greater focus on the importance of the organic transition, will bear out on the ground -in more acres under organic production and significant reduction in use of synthetic pesticides and fertilizers, as well as for the other environmental, climate, equity, and economic benefits it may engender. Meanwhile, advocacy to ensure strong organic standards with integrity requires a high degree of public involvement and comments. Use Beyond Pesticides Keeping Organic Strong platform to let the National Organic Standards Board and USDA the importance of strong organic standards and enforcement.

SOURCE: U.S. Department of Agriculture. "USDA Announces Framework for Shoring Up the Food supply Chain and Transforming the Food System to Be Fairer, More Competitive, More Resilient." Press Release No. 0116.22. June 1, 2022



COMPOST OUTPERFORMS CHEMICAL FERTILIZER | MARCH 31, 2022 Traditionally Produced Compost Improves Soil, Outperforms Synthetic Chemical Fertilizers

omposts produced using traditional ecological knowledge create healthier, more fertile soil than industrial, chemical-based fertilizers, according to the findings of a recent study published in PLOS Sustainability and Transformation. As the dangers posed by industrial agriculture become increasingly apparent, organic and traditional practices show a time-tested path toward a sustainable farming future. According to study author Seema Sharma, PhD, "The research was already there because the ancient people did their research long ago," she said to EOS. "But when it comes to the scientific community, you need research that is in a peerreviewed journal and then finally verified."

The study focuses its comparison within the Kachchh district, a semi-arid farming area of Western India that experiences erratic rainfall and has higher salt levels in its soils than much of the rest of the country. Twenty farms were chosen based on their fertilizer management practices, split between farmers employing traditional composting techniques and those using chemical fertilizers. For the chemical farms, an initial application of animal-based manure was applied, and synthetic sources of nitrogen (urea) and phosphorus (ammonium phosphate) were then spread as a top dressing at a rate of roughly 60kg (132lbs)/ha approximately 20 days after sowing. Traditional farms utilized a compost known as Jivamrit-S (Jeevamrutha), comprised of cow manure, cow urine, jaggery (an unrefined cane sugar), gram flower, and soil that is then fermented in a compost pit. This material was applied once a week for the two weeks after planting, and subsequently watered in. Over the course of three years, farm soils were tested before, during, and after harvest.

The study measured five variables of the soils on the 20 farms, including water holding capacity, bulk density (an indication of how compact the soil is), electrical conductivity (a measure of salts in soil), soil organic matter, and pH. The maximum water holding capacity of traditional farms was on average higher (at 47.5%) than soils amended with chemical-based fertilizers (at 38%). Bulk density recorded lower values in traditionally managed soils (1.04 grams per cubic centimeter) than those chemically treated (at 1.31 grams per cubic centimeter). Most unsurprisingly, traditional soils had lower levels of electrical conductivity (at 0.55 deciSiemens per meter) compared to those that applied salt-based, synthetic chemicals (at 0.69 deciSiemens per meter). Soil organic matter was higher in traditional soils (at 0.75% organic matter) than chemical amended soils (at 0.46% organic matter). pH tended to increase in soils that were chemically treated (averaging 8.1), while those amended with traditional composts recorded relatively stable soil pHs (averaging 7.3).

The study notes that traditional soils maintain their advantages over chemically treated throughout the course of the experiment, and even during a drought period in the middle of study period. "In the present scenario—where chemical fertilizers had already shown detrimental effects in the form of longterm soil fertility depletion, health concerns occurring due to chemical inputs to both the growers and consumers, environmental deterioration—ecologically sustainable agri-management systems are not a choice but a necessity," the study reads.

A similar recent review of cropping practices in Chinese rice paddy farms also found a range of benefits conferred by traditional practices that were not seen under an industrialized, monoculture farming approach. By utilizing traditional techniques that integrate animals into rice farms, nutrient cycling improved, the animals reduced on-farm weed pressure, and total economic output increased by up to 7x in certain conditions. This study represented an "enhanced" version of the traditional approach utilized in this region, adding additional nutrients in the form of vegetable manures.

It is critical that more research be done on the current value of traditional cropping systems, so that modern scientific methods can be applied to further improve these approaches, say health and environmental advocates. They say this approach should form the foundation for future farming practices that are truly sustainable, providing an offramp from over-promised "silver bullet" solutions of the agrichemical industry be they synthetic fertilizers, genetic engineering, toxic pesticide use, or the industry's new focus on RNAi.

Dr. Sharma plans to conduct further research comparing the yields between farming utilizing traditional practices and those employing industrial approaches. "The farmers that I work with are now telling me that we have yields that are on par with the common system of chemical farming," she told EOS. "But that study has to be done."

What to do: For more information on the benefits of time-tested, traditional and organic practices, see Beyond Pesticides organic program page. Consider taking action today to ensure that organic maintains its separation from industrialized agriculture and continues its trajectory of continuous improvement.

SOURCE: Sharma, Seema. "Trend setting impacts of organic matter on soil physio-chemical properties in traditional vis-à-vis chemical-based amendment practices." *PLOS Sustainability and Transformation*. March 1, 2022. https://doi.org/10.1371/journal.pstr.0000007; Chapman, Andrew. "Traditional Fertilizers Beat out Industrial Chemicals in Soil Health Test." *EOS*.March 29, 2022

STATE LAWS INCREASE POLLINATOR PROTECTIONS | JANUARY 6, 2022 Officials in New Jersey and New York Act to Protect Pollinators by Restricting Neonic Pesticides

fficials in New Jersey and New York are taking action to protect their states' declining pollinator populations by restricting outdoor uses of neonicotinoid (neonic) insecticides. In New York, the state Department of Environmental Conservation announced it would make these pesticides "restricted use," and only available to state certified applicators. In New Jersey, A2070/S1016, sponsored by state Senator Bob Smith and Assemblyman Clinton Calabrese, was signed by Governor Phil Murphy last week after years of advocacy from national, state, and local pollinator and environmental groups. "The law relies on the most up-to-date science to ban the largest uses of neonics in the state," said Lucas Roads, staff attorney at the Natural Resources Defense Council. "This is great news for not just pollinators that

are poisoned by neonics, but for all the farmers who depend on insect pollination and for all New Jerseyans that value thriving ecosystems."

A2070/S1016 provides for a targeted phaseout of outdoor uses of bee-toxic neonicotinoids, chemicals implicated not only in the decline of pollinators, but also the collapse of entire ecosystems. Beginning 12 months after passage, the bill requires state agencies to classify neonicotinoids as "restricted use." Under this designation, only certified pesticide applicators would be allowed to apply these products, effectively eliminating consumer uses. Then, in late 2023, the bill prohibits all outdoor nonagricultural neonicotinoid uses. Exemptions are limited to veterinarian care, wood preservation, outdoor applications within one foot of a building, and invasive species. The state

agriculture commissioner may grant a time-limited exemption for use if an applicator can show that a "valid environmental emergency exists" and that no other less harmful pesticide is available for the given emergency.

New Jersey and Maine have now passed the strongest state pollinator protection laws in the country. While now, in addition to New York, Connecticut, Maryland, Vermont, and Massachusetts have generally removed consumer neonic uses from the market, the NJ and ME bills represent another step forward by eliminating most outdoor nonagricultural uses.

These changes will have major implications for pollinator and ecosystem health, reducing an even greater proportion of dangerous pesticide use. A report published by the NJ Department of Environmental Protection found that



out of 250 surface water samples collected, at least one neonicotinoid was detected in over half of those tested. With even minute exposures to neonic products likely to kill off wild pollinators, any future uses that can be eliminated are a net positive for wildlife.

Although progress protecting pollinators in the U.S. has been slow in comparison to actions taken in the European Union, which has banned all outdoor neonicotinoid uses, including those in agriculture, the pesticide industry has focused considerable resources on halting U.S. policies. A 2020 report, The Playbook for Poisoning the Earth, published in The Intercept by reporter Lee Fang, details a massive public deception campaign by the pesticide industry, aimed directly at stopping state and federal action to protect pollinators from these highly hazardous insecticides. As part of this playbook, the pesticide industry has worked to cast itself not as promoter of pollution, but as the solution to pollinators' plight. This approach has focused on spinning the science on neonics, diverting attention to preexisting problems in beekeeping, like disease and mites, that are in fact exacerbated by neonic use, and using industry connected farmers, beekeepers, scientists

Meaningful action has been diffuse, and only seven states to date have enacted restrictions on neonicotinoid use.

and other influencers in an attempt to confuse lawmakers and the public on the true cause of pollinator declines.

As far back as 2014, Beyond Pesticides asserted that this ongoing pollinator crisis is No Longer a Big Mystery. But meaningful action has been diffuse, and only seven states to date have enacted restrictions on neonicotinoid use. At the federal level, the U.S. Environmental Protection Agency (EPA) merely required noncommittal "managed pollinator protection plans" from individual states (MP3s). These plans handed off the baton to state pesticide lobby groups to address how to protect pollinators; unsurprisingly, pesticide use was not a major component of most of these plans. In fact, in 2019 the agency was cited for its failure to provide basic oversight for these state MP3s, with the EPA Office of Inspector General noting that the agency had no way to evaluate the impact of MP3s

and that the agency focused too much on acute risks to pollinators and an insufficient amount on chronic impacts. EPA's inaction and inability to stand up to the pesticide industry means that pollinators and ecosystems continue to suffer throughout most of the U.S.

What to do: State action is urgently needed to fill in the gaps left by EPA inaction, and New Jersey and Maine represent a new high bar for neonicotinoid restrictions. But in the long-term, it is critical to stop all neonicotinoid use in the U.S. and prevent the next round of pollinator toxic chemicals from becoming widespread. The Saving America's Pollinators Act (SAPA) would accomplish this goal, side-stepping industryinfluenced EPA and allowing a board of pollinator experts to make decisions around pesticide registrations. Ask your elected representative in Congress to support pollinators by cosponsoring SAPA. If they are already a cosponsor, send a thank you for their leadership.

SOURCE: New York State Department of Environmental Conservation. "DEC Announces Actions to Protect New York's Pollinators by Restricting Use of 'Neonic' Pesticides." Press Release. January 24, 2022



MAINE BANS PFAS-CONTAMINATED PESTICIDES | APRIL 19, 2022 Maine Moves to Ban Pesticides and Fertilizers Contaminated with PFAS

oth houses of Maine's legislature have just approved a bill that would, by 2030, ban pesticides that contain PFAS chemicals-the so-called "forever chemicals." The bill's next stop is the Appropriations Committee, for approval of \$200,000 in annual funding to enact the bill; if successful there, it will move to the desk of Maine Governor Janet Mills for her signature. [The bill was signed into law on April 20, 2022.] The legislation is one of a suite of lawmaker efforts in the state to address the growing PFAS problem with which localities across the U.S. are struggling. Beyond Pesticides continues its coverage of the scourge of PFAS chemicals, particularly as it relates to pesticide use and the use of fertilizers made from PFAS-contaminated "biosludge" from municipal treatment facilities.

PFAS—"per- and poly-fluoroalkyl substances"—are any of a family of more than 9,000 synthetic chemicals, invented in, and widely deployed since, the 1950s in a multitude of industrial and consumer products. PFAS molecules are made up of a chain of linked carbon and fluorine atoms; the carbon–fluorine bond is one of the strongest chemical bonds that exists, which means that these compounds do not break down in the environment. Scientists cannot even estimate the environmental half-life of PFAS (half-life being the amount of time required for 50% of the compound to degrade and "disappear"). Hence, the "forever chemicals" moniker.

NIEHS (the National Institute of Environmental Health Sciences) notes: "Research on two kinds of PFAS forms the basis of our scientific understanding about this group of chemicals. Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) were manufactured for the longest time, are the most widespread in the environment, and are the most well-studied. Although these two compounds are no longer made in the United States, chemical manufacturers have replaced them with alternative PFAS."

PFAS have emerged during the past decade or so as a serious environmental

contaminant and health concern. They represent a scenario characteristic of the poorly regulated use of chemicals in the industrial, military, and commercial materials streams that, ultimately, end up in the environment and human (and other) bodies.

In February 2022, Beyond Pesticides wrote, "There has been precious little activity at the federal level to deal with PFAS.... The U.S. Environmental Protection Agency (EPA) announced in 2019 that a 'Comprehensive Nationwide PFAS Action Plan' would be forthcoming. (It has not yet emerged.) Since 1998, EWG [the Environmental Working Group] notes, 'despite mounting evidence of PFAS' toxicity and contamination, EPA has inexcusably dragged its feet. The [agency] has failed to set a legal limit for any PFAS in tap water, and its nonenforceable health advisory level for PFOA and PFOS is 70 times higher than what independent studies show is needed. In 2019, EPA announced a toothless "action plan" that would do nothing to reduce ongoing PFAS releases or clean

up legacy PFAS pollution.'" [Update: The agency has since announced levels of allowable water contamination.]

These chemicals are contaminating waterways, water bodies, and drinking water sources; the food supply; wastewater and biosolids; soils; and now, the bloodstreams of 97% of the U.S. population. Exposure to these compounds has been linked to a variety of human health anomalies, including cancers, kidney dysfunction, neurodevelopmental compromise in children, immunosuppression, preeclampsia, increased risk of cardiometabolic diseases (via exposure during pregnancy), and respiratory system damage-not to mention that it may increase the risk of Covid infection and severity.

Some states have filled the gap left by federal inaction or limited action. Maine has been a particular hotbed of activity. Media has helped: *The Penobscot Times* coverage of PFAS runoff from a Two Rivers Paper Company landfill into the St. John River; the *Press Herald's* reporting on PFAS contamination of Maine fish stocks and wild deer; and publication about research by Northeastern University and the Penobscot Nation on PFAS-contaminated leachate from the Juniper Ridge Landfill.

The problem extends to PFAS in wastewater and solid waste; a University of Maine Cooperative Extension newsletter, quoting a Penobscot Times issue, writes: "PFAS is flowing into Maine waters, but no one knows the level of contamination. Treatment plants release millions of gallons of wastewater into Maine's waterways each day that could contain elevated levels of so-called forever chemicals." Indeed, from wastewater and solid waste treatment plants, and from septic systems that discharge the PFAS from consumer product use, PFAS is finding its way into myriad water sources.

For several years running, an Arundel dairy farmer testified to Maine legislators about the ruination of his multigenerational dairy operation by the discovery of PFAS in his water and soils, and in his cows' milk. The farmer attributes the wholesale contamination to the "biosolids" (waste sludge) he had used on his silage crop fields for years through a state program, and/or ash from a nearby paper mill.

Early in 2022, Beyond Pesticides wrote about another Maine farming operation, Songbird Farm in Unity, Maine, which is now facing similar issues. The farmers grow diversified, organic grain and vegetable crops and were stunned to learn that their fields were victims to the legacy use, a quarter century before their tenure on the land (starting in 2014), of contaminated sludge. Now, their water, soil, and produce were all likewise contaminated; their well water has tested at 400 times the state limit.

The owner-operators felt they needed to halt sales of their crops. They now await answers from the state and some kind of way forward. One of the farmers said to WBUR Radio. We're just learning about PFAS contamination in Maine. We're just acknowledging it. It's 30 years old, but we're just recognizing it."

The Maine legislature has moved more quickly in response than have many other states; in its 2019–2020 session, it passed An Act To Protect the Environment and Public Health by Further Reducing Toxic Chemicals in Packaging. In 2021, Maine lawmakers passed An Act To Stop Perfluoroalkyl and Polyfluoroalkyl Substances Pollution, which bans (in 2023) the sale or distribution of carpets, rugs, or fabric treatments, and in 2030, use of PFAS in all consumer products in the state.

It also passed, as the *Press Herald* reported last year, "Bills . . . with broad, often-unanimous support . . . sett[ing] among the nation's strictest limits on PFAS pollution in drinking water, prohibit[ing] the uncontrolled testing of PFAS-laced firefighting foam, and provid[ing] millions of dollars to detect and clean up contamination." The drinking water legislation established a limit of 20 ppt (parts per trillion) for the six most common types of PFAS; this more protective than the federal government's current "advisory level" of 70 ppt for two PFAS compounds.

Most recently, the legislature has been considering a group of four bills:

- the subject ban on pesticides containing PFAS, effective in 2030
- a ban, effective immediately, on the spreading on farmland of fertilizers derived from treated human waste (a practice previously promoted by the state); such waste is nearly always contaminated with PFAS
- creation of a fund to compensate farmers; that fund is likely to have a starting appropriation of \$60-\$100 million
- a study of the remediation possibilities for PFAS in landfills

Storage of pesticide compounds in plastic barrels that leach PFAS into the pesticide is one culprit. But as Beyond Pesticides has noted, "Why would PFAS be found in a pesticide formulation? The chemicals can work well as dispersants, surfactants, anti-foaming agents, or other pesticide adjuvants intended to increase the effect of the active ingredient. EPA includes PFAS chemicals in its "Inert Finder" database, and a PEER [Public Employees for Environmental Responsibility] press release indicates that many companies have patents on file for pesticide formulations contain-ing PFAS."

Biosludge products, another culprit, are not only sold to farmers, they are sold as fertilizers for consumer home and garden use. The organization wrote in 2021 that these products not only often contain PFAS, but also, harbor "hazardous pesticides, heavy metals, antibiotics and other pharmaceuticals, personal care products, and a range of other toxicants...."

What to do: Organic practices solve many problems in one fell swoop. Certified organic production and food labeled "USDA Organic" may not be produced with biosolids. Get your locality to act protectively on pesticide use and/or to stop the use of biosolids.

SOURCES: Overton Penelope. "Maine lawmakers approve ban on pesticides containing PFAS by 2030." *Press Herald*. April 12, 2022; Hirschkorn Phil. "Maine legislators move toward final passage of bills restricting PFAS 'forever chemicals.' WMTW. April 13, 2022



CLIMATE FRIENDLY ORGANIC FARMING | DECEMBER 2, 2022 Climate-Friendly Organic Systems Are More Profitable for Farmers than Chemical-Intensive Agriculture

he longest-running – four-decade – investigation comparing organic and conventional grain-cropping approaches in North America is reporting impressive results for organic. Recently announced in the Rodale Institute's Farming Systems Trial-40-Year *Report* are these outcomes: (1) organic systems achieve 3-6 times the profit of conventional production; (2) yields for the organic approach are competitive with those of conventional systems (after a five-year transition period); (3) organic yields during stressful drought periods are 40% higher than conventional yields; (4, 5, and 6) organic systems leach no toxic compounds into nearby waterways (unlike pesticide-intensive conventional farming), use 45% less energy than conventional, and emit 40% less carbon into the atmosphere. Beyond Pesticides reported in 2019 on similar results, from the institute's 30-year project mark, which have been borne out by another three years of the trials.

The current report builds on results from the FST that were shared in the RI's 2020 white paper, *Regenerative Organic Agriculture and Climate Change: A Down-to-Earth Solution to Global Warming,*" which integrated the newest research data and offered action steps for consumers, policymakers, farmers, and others. That report asserted that a global switch to a regenerative food system could not only provide sufficient food for the world's population, reduce chemical exposures, and improve biodiversity, but also, could be key to mitigating the climate crisis.

Through its longitudinal Farming Systems Trial (FST), the Rodale Institute (RI) has collected data that measure differences in soil health, energy efficiency, crop yields, water use and contamination, and nutrient density across test plots of grains grown in organic and conventional systems, and using different levels of tillage. The project focuses on grains (including wheat, corn, soy, and oats) because they represent 70% of U.S. crops.

On its 12-acre Pennsylvania parcel, the institute's FST uses 72 experimental plots, across which are applied three broad approaches:

- organic manure, representing a typical organic dairy or beef operation, featuring long rotations of annual feed grain crops and perennial forage crops, fertilized through legume cover crops and periodic applications of composted manure, and using diverse crop rotations as primary defense against pests
- organic legume, representing a typical cash grain operation, featuring mid-length rotations of annual grain crops and cover crops, deploying leguminous cover crops as the sole fertilizers, and using only crop rotations as pest defense
- conventional synthetic, representing a typical U.S. grain-producing enterprise, using synthetic nitrogen

fertilizer, and controlling weeds with synthetic herbicides (according to recommendations of Penn State University Cooperative Extension)

Each of those three is further divided into "no-till" and "tillage" strategies (tillage being the practice of digging up, turning over, or otherwise agitating the soil with mechanical tools-typically a plow or disc). This yields six different systems in the FST. The RI notes that, "No-till and organic no-till are not created equal. Conventional no-till utilizes herbicides to terminate a cover crop, whereas organic systems use tools like the roller crimper. We have found that organic no-till practices year after year do not yield optimal results, so our organic systems utilize reduced tillage, and the ground is plowed only in alternating years." The RI website adds that, in order to model standard agricultural approaches, GM (genetically modified) crops and no-till were introduced to the conventional plots in 2008 when those techniques became common in the U.S.

Beyond Pesticides has covered the adverse impacts of conventional no-till, which, as noted, generally uses herbicides to knock down cover crops (in addition to using them on the crop plants). This additional herbicide use can actually cancel out any greenhouse gas emissions saved through not tilling, and can accelerate the development of weeds' resistance to the herbicide compounds.

To what to attribute these demonstrated benefits of organic over conventional approaches? All these results, as Beyond Pesticides and the RI have asserted for decades, begin with soil health. "Healthy soil is that which allows plants to grow to their maximum productivity without disease or pests and without a need for off-farm supplements. Healthy soil is teeming with bacteria, fungi, algae, protozoa, nematodes, and other tiny creatures. Those organisms play an important role in plant health [by helping plants fight diseases and pests]. Soil bacteria produce natural antibiotics that help plants resist disease. Fungi assist plants in absorbing water

and nutrients. Together, these bacteria and fungi are known as 'organic matter.' The more organic matter in a sample of soil, the healthier that soil is."

Healthy soil retains more moisture, boosting plants' ability to survive periods of drought; it binds together, supporting soil structure that more successfully wards off soil erosion and runoff into waterways. And because organic systems do not use chemical inputs, toxic compounds are not deployed into the environment, and fewer fossil fuels are used (because synthetic pesticides and fertilizers are derived from petrochemicals).

It is well known that organic practices increase organic matter in soils; but FST data show that organic matter (and thus, soil health) in organic systems increases continuously over time, whereas in conventional agricultural systems, this does not happen, and soil health remains essentially unchanged. According to RI, such healthy, organically managed soils allow "15-20% more water to percolate through soils, replenishing groundwater and helping organic crops perform well in extreme weather. More organic matter also means more total microorganisms that make nutrients available to plants for strong growth." The metrics used to determine a soil's health include: the number of microorganisms present in the soil; the ability of the soil to retain water during drought or dry periods; the number and variety of nutrients present; and the quantity of carbon the soil is able to hold. By contrast, a more conventional view of soil sometimes sees it as little more than an "empty matrix" to which (chemical) inputs are added so that plants can survive, rather than as a living, evolving, and interactive ecosystem that provides a rich growing environment for plants and many other life forms.

The FST stands out as a singular research approach for multiple reasons, but chief among them is its longevity. RI explains that, "Short-term studies that take place over only a few years can't measure longer-term weather effects, like drought, that will inevitably occur, or biological changes to the soil, which can happen slowly. We need long-term studies to find real solutions to problems affecting the future of global food production."

These results were good news three years ago; they emerge as even more important as the world grapples with a constellation of intersecting environmental and health crises. Many of those are related to the use of synthetic pesticides and fertilizers, and are showing up as degraded soils, biodiversity loss, widespread chemical pollution, and compromised human and ecosystem health. These toxic compounds also play a role in exacerbation of the climate crisis. These realities challenge governments, institutions, businesses, and human populations to change "business as usual."

The Rodale Institute posits, in its 2020 report, Regenerative Agriculture and the Soil Carbon Solution, that humans could sequester more than 100% of global, annual, human-caused CO_2 emissions if all global arable and grass lands were transitioned to regenerative systems, and that "stable soil carbon can be built quickly enough to result in a rapid drawdown of atmospheric carbon dioxide." The organization adds to that the importance of shifting to organic regenerative systems.

What to do: Beyond Pesticides is calling for the transition off of petroleumbased pesticides and fertilizers within the next decade, and transition to a society and world committed to organic practices. See Beyond Pesticides' recent seminar, Tackling the Climate Emergency. The presenters included Rodale Institute's Andrew Smith, PhD and coauthor of several landmark reports on soil biology and carbon sequestration-including the just-released Farming Systems Trial -40-Year Report, and Rachel Bezner Kerr, PhD, a Cornell University professor, and a coordinating author of the United Nations report, Climate Change 2022: Impacts, Adaptation and Vulnerability.

SOURCE: Rodale Institute, Farming Systems Trial: 40-Year Report. 2022.