

Health and Environmental Protection Urgently Requires Precaution

This issue of *Pesticides and You* makes the case for the adoption of the precautionary principle and related law from a medical, policy, and experiential perspective. The call to transform federal and state laws governing pesticide use restrictions is explained by a medical doctor who has studied patterns of environmentally induced diseases through epidemiology, lawmakers in the European Union who, as part of a joint commission, evaluated over several years the current deficiencies in pesticide restrictions, and examples of specific failures to mitigate the hazards of specific pesticides. As we have said so often on these pages, the pesticide threat is real, but so are the solutions. To make the necessary changes in law we must elevate our call for change.

A Call to Action

This is the time to call for urgent action to transform our nation's pesticides law, and state laws that mimic it, as part of a larger movement to transform a pollution-based economic system that drives us toward crises, despite the availability of sustainable and regenerative strategies that are right in front of us. Current law assumes the need for pesticides despite the evidence to the contrary and the robust scientific literature that documents adverse effects, and a high degree of risk uncertainty associated with the complex chemical interactions (from mixtures) that are not studied or evaluated. Current law ignores whole systems—the interrelationship of organisms in the ecosystem, the power and balance of nature, and the nonrenewable fossil fuels and natural gas used to manufacture pesticides.

In this issue, we review the most recent meta-study of catastrophic declines in insect populations. The majority of studies identify chemical-intensive agriculture as driving this unsustainable decline.

A Demand for Transformation

All of this is occurring despite the availability of alternatives that are viable, cost effective, and job-creating. In fact, the solutions are good for the economy, but do not serve the interests of chemical companies wanting to maintain current chemical dependency in pest control. People do increasingly understand the insensitivity to public health and environmental protection of large corporations that are not invested in a sustainable future, but capitalize on approaches that keep society on the pesticide treadmill. More than ever, people understand that the laws and government regulators are not embracing the standards, or do not have the mandate and authorities, necessary to protect health and the environment.

In this issue, we outline the specific failures of current federal and state pesticide law, which feeds the syndrome

of chemical dependence without attention to the value of the ecosystems where the toxic chemicals are used.

We Need Specific Model Language for a Sustainable Future

We only need look to the federal organic law for a model approach to regulating toxics and replacing them with regenerative strategies. Back in 1990 when the legislation was adopted, the values and principles in that law were not viewed as a threat to those profiting from the pesticide treadmill. They never could imagine that the law's standards would enable the growth of a \$50 billion and growing organic sector.

Our experience with organic has taught us that there are processes and procedures that must become central to regulating toxics in land and building management. Critical to the adoption of a new approach to regulating toxics is an understanding of the deficiencies in the risk mitigation approach in current pesticide law. A regenerative organic approach, which must be required, will appreciate and respect complex biological systems in which synthetic chemicals are used. In this process, we must consider the ecosystems that are the environment and the ecosystem within our bodies.

We must move urgently to a systems approach in our regulatory standards governing toxics. We have documented the foundational justification for this in previous pieces published in *Pesticides and You*—"Good Health Harmed by a Cascade of Complex Pesticide Effects" (Winter 2018-2019) and "Thinking Holistically When Making Land Management Decisions" (Spring 2018). No longer can reductionist standards allow one dimensional assessments that ignore the real world complexities of toxic chemical use. Rather, our consideration of biodiversity must extend from the soil microbiota to the gut microbiome. We must determine that there are no adverse effects from manufacture, use, to disposal, or from cradle-to-grave. And, with a needs assessment, we must determine that any material allowed to be used is necessary, or essential. With respect for the importance of science and to incentivize continuous improvement, all synthetic materials must come off an allowed list on a five-year cycle, and only be relisted with a 2/3's vote of a stakeholder board without conflict of interest. If this sounds impossible, it is currently being done under the *Organic Foods Production Act* and it is precautionary.

Now is our time to take action.

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