

Protecting Life in Our Waterways

Taking a holistic view of what we don't see

We continue to look holistically at the impact of pesticides in the environment, with a particular focus, in this issue, on aquatic organisms—easy to ignore since we don't see them on a daily basis. We may notice that there are fewer or no bees, butterflies, or birds, but it is unlikely that we will notice that mayflies in their aquatic stage, worms, and other essential aquatic invertebrates are in decline.

A holistic view and response

There is a tendency for environmental regulators and environmental organizations to focus on the threat of individual pesticides and a set of specific endpoints of concern. While it is an understandable approach in the midst of a crisis—decline of the eagle population due to pesticide-caused eggshell thinning associated with DDT use in the 1960's, we tend to see the solution in the regulation of a single chemical (or chemical family) culprit. The takeaway from this issue of PAY is a deeper understanding that while a family of chemicals—in this issue, we focus on neonicotinoid (neonic) insecticides—is linked to adverse impacts on aquatic organisms, the solution requires broader thinking about the systems of pest, landscape, and agricultural management that continue to be dependent on toxic chemicals.

The recognition that we have a neonic problem in waterways has been emerging at the U.S. Environmental Protection Agency (EPA), as the pesticide's residues are now detected in rivers, streams and lakes in 29 states. In a 2017 EPA risk assessment document on one of the most widely used neonics, the agency found, “[C]oncentrations of imidacloprid detected in streams, rivers, lakes and drainage canals routinely exceed acute and chronic toxicity endpoints derived for freshwater invertebrates.”

The independent science makes a good case for banning neonicotinoids—and this issue unveils a body of knowledge that certainly should motivate action in town, city and county councils, state legislatures and agencies, and at the federal level. This issue and the pieces we publish daily on our website's Daily News inform action that supports a shift away from pesticide dependency and to systems that “restore, maintain and enhance ecological harmony,” which is the definition of organic as adopted by the National Organic Standards Board, in implementing the Organic Foods Production Act.

Products Compatible with Organic

We juxtapose the problem with the solution. Check out in this issue our latest information source, *Products Compatible with Organic Landscape Management*, which identifies the

emerging products that are available to lawn and landscape managers and residents managing their land organically. Because the use of toxic materials undermines the organic system by harming the soil microbial life, identifying compatible products is an essential component of the system. While the systems-based approach that we advocate is not product-dependent, products, if essential, may be used that do not harm soil biology and biodiversity.

Communicating Hazard

There is too often a disconnect between our scientific knowledge, or the uncertainties, and governmental support for status quo pesticide-dependency in managing lawns and landscapes, and farm fields. We recently told EPA officials that their current risk communication suggests to the public and state and local decision makers that mosquito adulticides are completely safe, and, as a result, many communities put insufficient emphasis on tools that are essential to an effective mosquito management program (e.g., larviciding, education, source reduction). Same could be said about the neonics. Why bother avoiding neonics or consider transitioning to organic methods if current practices are problem-free? The agency's current risk communication has the effect, in too many cases, of supporting pesticide use that presents a public and environmental harm, is not effective, and leads to insect and weed resistance, which escalates the problem. The cycle of dependency that supports pesticide use gets a boost from EPA every time it states that a pesticide can be used “without posing risks of concern to the general population or to the environment when applied according to the pesticide label.”

Action of the Week

In this time of political change, Beyond Pesticides has added a new weekly campaign, *Action of the Week*, to suggest to public health and environmental advocates one concrete action each week that speaks to governmental action or inaction that are harmful to the environment and public and worker health, increase overall pesticide use, or undermine the advancement of organic, sustainable, and regenerative practices and policies. Topics may include toxic chemical use, pollinator protection, organic agriculture and land use, global climate change, and regulatory or enforcement violations. To see recent actions, go to Beyond Pesticides' website.

We look forward to strengthening our united voice.

Jay Feldman, executive director of Beyond Pesticides

