

Poisoning our Lives with Yard Chemicals. Here's another reason for Soil Secrets and why we need to be known as the National Soil Ecology Company that provides the Next Best Thing. – Michael Martin Melendrez.

The New York Times

[SundayReview](#) | Opinion

The Toxic Brew in Our Yards

By DIANE LEWIS MAY 10, 2014

IN much of the country, it's time to go outside, clean up the ravages of winter and start planting. Many of us will be using chemicals like glyphosate, carbaryl, malathion and 2,4-D. But they can end up in drinking water, and in some cases these compounds or their breakdown products are linked to an increased risk for cancer and hormonal disruption.

Some of those chemicals are also used by farmworkers, and there is a growing recognition that they can be hazardous. The Environmental Protection Agency is proposing regulations that will limit farmworkers' exposure to dangerous pesticides and is accepting comments on these changes through June 17. These new rules are meant to reduce the incidence of diseases associated with pesticide exposure, including non-Hodgkin's lymphoma, prostate cancer, Parkinson's disease and lung cancer.

Homeowners who use these toxins on their yards and gardens are exposing themselves to the same risks. They aren't necessary. We don't need them to have pleasant environments. Together we can make a substantial improvement in our water quality simply by refraining from using synthetic pesticides, weedkillers and fertilizers on a routine basis. Occasional localized use to deal with an otherwise uncontrollable infestation, or to deal mindfully with an invasive species, is not the problem, but routine, frequent and widespread use is.

The United States Fish and Wildlife Service says homeowners use up to 10 times more chemicals per acre than farmers do. Some of these chemicals rub off on children or pets, but most are washed with rainwater into our streams, lakes and rivers or are absorbed into our groundwater. These are the sources of our drinking water, and tests show these chemicals are indeed contaminating our water supply.

A study by the United States Geological Survey released in 1999 found at least one pesticide, and often more than one, in almost every stream and fish sample tested, and in about half of the samples drawn from wells throughout the country. These pesticides are going from our lawns and gardens into our drinking water and into our bodies.

The amounts of these chemicals are small and often considered "acceptable," but scientists now know that they have a cumulative effect. Many chemicals that we use very casually on our lawns cause long-term health problems in ways that have only recently been understood. They "disrupt," or throw out of whack, the endocrine system, made up of glands and hormones that control almost every aspect of our bodies' functions.

In 2009 the Endocrine Society, a group of doctors, researchers and educators who specialize in diseases related to the hormonal system, published a scientific statement based on 485 citations from research papers showing growing evidence that there are significant health threats caused by endocrine-disrupting substances in our environment. In terms of scientific research, 2009 is relatively recent. Epidemiologic studies take decades, and developing a battery of reliable laboratory tests also takes many years. This means that there are more studies implicating older chemicals, many of which are no longer sold because of known toxicities.

But many scientists expect similar chemicals now in widespread use to cause the same problems. Endocrine disrupters are linked to an increased risk for breast and prostate cancer, thyroid abnormalities and infertility. The Endocrine Society paper and others also present evidence that links exposure to chemical contaminants to diabetes and obesity.

These chemicals are not safe just because they are available in stores. Regulations governing the sale of chemicals do not reflect this new scientific information, because scientists are only now working on standardized tests both in laboratory animals and cell cultures to evaluate whether a chemical disrupts the hormonal system, and if so, at what level.

What we put on our lawns and down our drains winds up in our drinking water, and it is not removed by water treatment. Bottled water is not a solution because it comes from the same sources and is susceptible to the same contaminants. But if we don't put these chemicals in our yards, they won't be in our drinking water.

In the last decade or so, plenty of homeowners have been rejecting the emerald green lawn and planting with species that do not demand chemicals and constant watering. But not nearly enough of us have taken that step. We need to see a perfect lawn not as enviable, but a sign of harm.

Natural care of our yards and gardens is surprisingly easy. Increasing diversity in a lawn by adding clover helps supply nutrition naturally because clover fixes nitrogen from the air and makes it available to other plants. Leaving grass clippings not only returns nitrogen to the lawn, but also prevents it from drying out. Letting grass grow to four inches allows the roots to grow long so the grass can absorb more water and excess nutrients during a storm, and withstand a drought. Plants that are native to your region require less water and care and support animals and wildlife, so you will see more birds and butterflies.

In my yard in New York, native Annabelle hydrangeas, echinacea and bee balm take almost no care, are beautiful and provide nectar for bees and butterflies. American elderberry, Carolina rose and bayberry are resilient attractive shrubs that also support our local wildlife. Bats can live under the loose bark of our shagbark hickory, and oaks support woodpeckers, deer, mice and birds. We have learned to appreciate clover and dandelions because they supply sustenance to endangered monarch butterflies until milkweed blooms later in the season.

This is a surprisingly easy way to leave cleaner water and a healthier population.

Diane Lewis is a physician and the founder of [the Great Healthy Yard Project](#).