



Poisoned Golf

A groundskeeper speaks out on contamination and poisoning

By Steve Herzog

Editor's Note: This is a story about a poisoning on a golf course, a victim who says the years of the course's contamination to local waterways was covered up, and unresponsive environmental enforcers. Unfortunately, this is not an isolated story. At *Beyond Pesticides*, we talk to large numbers of people who have been poisoned by pesticides. Usually they call us years after the poisoning incident(s), as is the case with this story, to tell us about its long-term impact on their health and the community. With these stories, we are inspired daily to advance policies and practices that prevent future harm.

What is most troubling about the damage that is caused by pesticides is the lack of legitimate justification for their widespread use –given the availability of non-toxic methods and products for managing target insects, rodents, and plants (weeds). The voices of those who have fallen victim to the chemicals and the poor regulatory system are critical to our strategic efforts to stop toxic pesticide use and replace it with non-toxic management practices and products. No matter how long ago the poisoning or contamination occurred, they tell us of a system that failed then and continues to fail today. The chemicals may be different, but the process of pesticide registration and enforcement has not yet changed enough to prevent the victimization on a daily basis. The pesticide lobby still influences (or controls) the process. The agriculture committees of Congress maintain their jurisdiction over pesticide law. And “the fox is [still] guarding the hen house,” as GAO found in its 1981 report, *Stronger Enforcement Needed Against the Misuse of Pesticides*, when it concluded that the states’ departments of agriculture are lax on enforcement of pesticide laws because they are the entities advising the use of the poisons. The voices of victims are critical to the dramatic shift to organic practices now taking place, even in the face of all the regulatory risk assessments that proclaim the acceptability of the harm, and yet unknown and unstudied effects, caused by daily and unnecessary use of toxic chemicals. –Jay Feldman

I am Steve Herzog and write this personal account of my experience as a cancer survivor, whistleblower, and a groundskeeper who stopped the Yale University Golf Course (YGC) from using its contaminated drinking well water. For 13 years, from 1983 to 1996, I worked at YGC as a groundskeeper. During my employment there, numerous insecticides, herbicides, and fertilizers were used with no consideration given to the fact that YGC used well water for its drinking water and is adjacent to Maltby Lakes, a recreational area. I became concerned in August of 1989 when a routine water quality test of the cold water from a faucet in the maintenance barn by Yale University’s Office of Environmental Health and Safety found coliform bacteria at 3 per 100ml. At that point, I tried to get YGC to test the well water for specific pesticides and fertilizers, but I was told it was too expensive. Of course, this made me suspicious because obviously YGC had the money to do whatever tests were necessary to ensure the safe water quality of the well water. I also was concerned because a co-worker had “the shakes” (his head and upper body would shake all the time and his skin was yellow). He eventually passed on and I learned much later that excessive coliform exposure causes “the shakes” and yellowing of the skin.

I served on the Safety Committee for YGC and tried with little success over my 13 years of work to get the people in charge to restrict the use of certain pesticides and fertilizers. The one exception was after many years of meetings and research in which I was involved, I was able to get the people in charge at YGC to ban the use of Milorganite, a sewage sludge fertilizer known to contain contaminants including arsenic, mercury and other heavy metals. [*Metals Concentrations of Commercial Fertilizers*, Washington State, 2005] However, the year before I was able to get it banned the superintendent had me apply it to all the greens, tees, and approaches with a walk behind fertilizer spreader. This apparently was my punishment for my efforts at the time.

I subsequently suffered from nose bleeds for weeks as I was given no protection and told that it was “organic and safe.” You may ask

Is Golf Becoming Greener?

Golf courses have always been big pesticide users. In a study in the 1990s, it was found that golf course superintendents have a higher mortality from certain cancers, including lung, brain, non-Hodgkin's lymphoma, large intestine, and prostate. A study by the New York State Attorney General, *Toxic Fairways* (1991, 1995), identifying a particular concern with the potential for groundwater contamination, found that the golf courses studied apply four to seven times the average amount of pesticides used in agriculture, on a pound per acre basis. Environmental and health concerns about pesticide use on golf courses led to the adoption of *Environmental Principles for Golf Courses in the United States* (1996), a collaborative effort by environmental and health groups, including Beyond Pesticides, player organizations, and the Golf Course Superintendents Association. All recognized that golf course management had to step up to address the impact that it was having on the health of players, golf course workers, and the environment. The golf industry also knew that polls were showing that golfers cared about the environment, and developers were experiencing more resistance to golf courses in communities because of the pesticide use, pesticide drift off of the course, and runoff into waterways.

Golf Digest, which recognizes the environmental concerns among its readership, launched a program in 2009, Green Star Awards, in which it annually acknowledges the courses that adopt environmental practices. The applicants show strong awareness of the role that they play in protecting or harming the environment, addressing issues from energy conservation, recycling, green cleaning, serving organic food, and turf management. However, efforts to eliminate a reliance on pesticides still lag behind other environmental action. Most of the awardees are practicing a form of Integrated Pest Management (IPM) that seeks to reduce pesticide use but not move away from pesticide dependency, a growing trend in the industry. This may be because they are not typically defining IPM, but rather suggesting that with better monitoring and the establishment of thresholds they are able to “spot treat” – a fine-tuning of chemical dependent strategies with pesticide reduction efforts. At the same time, many are introducing elements of an organic system, such as beneficial insects, choice of grass varieties (e.g. fescue grasses, native grasses) that do not require pesticides and synthetic fertilizers, and biological approaches (e.g., beneficial insects, bats, carp) that replace some chemical-intensive management approaches. However, more attention is needed to the basic turf management issues related to soil microorganisms and building soil biomass as a tool for enhancing plant health and resistance to diseases.

The course that attracts national attention for its organic practices is The Vineyard Golf Club in Edgartown, MA, which has been free of pesticides and synthetic fertilizers since 2002. Jeff Carlson, the superintendent, uses a mixture of different techniques such as proper grass varieties, introducing beneficial bacteria and nematodes, as well as pheromone traps in the management of the greens and fairways. Key to the success of the program is the level of involvement among the club members, who are concerned about protecting the environment and the local drinking water aquifer that the course sites on. *For more information, see www.beyondpesticides.org/golf. –Editor*



why I did not refuse to do it. In the back of my mind, I would say to myself, this is Yale University, one of the top universities in the world. It must be safe to apply it.

Around October 1995, during a meeting of the Safety Committee, which was held at the YGC clubhouse, I remember getting very angry and loud during a discussion regarding the use of Calo-Chlor, a mercury-based fungicide (since phased out), to control snow mold on the greens in the winter time. YGC had recently hired a

new Superintendent who had promised during his interview for the job to be safety conscious regarding the use of chemicals and would welcome any concerns of workers. During this meeting, he said, “I am the superintendent and I will use whatever I want to,” I expressed by concerns, loudly!

A few weeks after this meeting, I felt extremely tired and discovered a lump on my neck. It turned out to be cancer. I originally was

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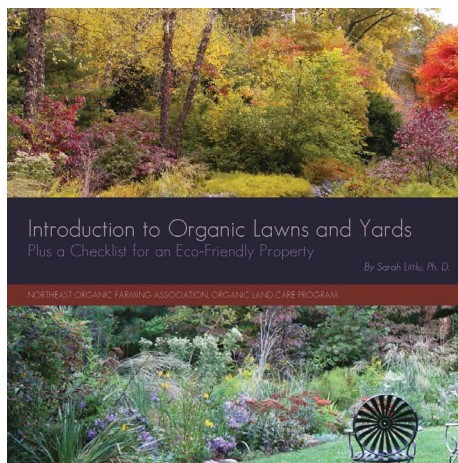
Introduction to Organic Lawns and Yards

Plus a checklist for an eco-friendly property

by Sarah Little, PhD, Northeast Organic Farming Association Organic Land Care Program, Stevenson CT. 2011. 53pp. \$5 print copy, free PDF online: www.organiclandcare.net.

Maybe you've been meaning to take care of your dandelion covered yard, but you don't know where to start; or you're a first time homeowner and you're presented with the daunting task of maintaining a yard for the first time; or your want to convince your golf course to go organic. You're in luck: Northeast Organic Farming Association Organic Land Care Program (NOFA OLC) has created a handy quick-start guide to help get you on your way. The colorful, easy-to-read booklet introduces the reader to the concepts of ecological, sustainable and organic, landscaping.

It is intended for people new to organic landscaping, but anyone who is looking to implement more ecological practices into their yard will also find this booklet useful. Each chapter includes a checklist enabling homeowners to grasp and implement some organic practices right away. There are plenty of links to free



resources in each section for those who want to go into more depth or have specific problems not covered.

Though the guide is geared toward the climate and soil conditions in the Northeast U.S., it also applies to the mid-Atlantic, Great Lakes region, the Pacific Northwest and most other areas of the U.S., with the exception of the South. The information it contains has been collected from peer-reviewed scientific studies, state agricultural extension services, and organic landscaping professionals.

The guide's goal is to teach basic techniques in organic landscaping; however, NOFA hopes that readers will see how each individual property fits into the bigger ecological picture. Our choice for landscaping has real effects on our local, regional and global environments. The guide also reminds us that, "Nature's beautiful spots are all organic. There is no reason why yours can't be also."

NOFA OLC is a multi-state program of the Connecticut chapter of the NOFA, in partnerships with NOFA state chapters.

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diagnosed by Yale Pathology with anaplastic carcinoma (January 1996), but after new stains were ordered on the original biopsy by my occupational doctor it was determined that I had non-Hodgkins lymphoma (October 1997). This same occupational doctor concluded with a reasonable degree of medical certainty that I got my lymphoma from exposures to multiple pesticides at YGC, including through the well water exposure.

Because my occupational doctor concluded that the well water was contaminated from arsenic-containing pressure treated wooden steps that were in the ground and also chemicals that drained into the well system after being used to wash mowers. I contacted the U.S. Environmental Protection Agency (EPA), which eventually conducted a criminal investigation. The Connecticut Department of Public Health, Water Quality Division found the well water contaminated with p-dichlorobenzene (3.0 ug/l) and

nitrites (12.4 mg/l), both health hazards.

It should be noted that, because EPA's Criminal Investigation Division investigation took so long, I wrote an anonymous letter to Connecticut's then Attorney General Richard Blumenthal – who sped up the process tremendously. Because of the EPA investigation, YGC connected to the City of New Haven municipal water supply as of the end of January 2001. I have recently learned that Maltby Lakes do not meet quality standards and has not been used for drinking water since the early 1980's. However, during my years at YGC, I was always told Maltby Lakes were used as a back-up reservoir for New Haven County.

I hope and pray that my story prevents poisoning and contamination at other golf courses! I am a 15 year cancer survivor and the Yale University Golf course is no longer using its contaminated drinking well water!