

National Movement Targets Lawn Care Poisons

Activists declare aesthetic use of pesticides unjustified

By Shawnee Hoover

A rising tide of activism is spreading across the country – in an area the chemical industry thought it had secured. Lawn care poisons. From Wisconsin, Montana and Minnesota to New York, Connecticut and Vermont, municipalities are increasingly seeking to curtail the aesthetic, or cosmetic, use of hazardous lawn pesticides among homeowners that cause involuntary community exposure and environmental pollution. In similar struggles, Canadian municipalities have been successful in outlawing the aesthetic use of toxic lawn chemicals in favor of safe alternatives. Propelling these municipalities and states are educated town and city council members and communities. Community-based groups are working hard to get the word out in their communities that lawn care pesticides are hazardous to health and the environment, are unnecessary for green lawns to flourish, and that non-toxic landscaping is an attractive alternative.

Sixty years ago the use of pesticides on lawns was unknown. Spots of clover were acceptable and dandelions were a source of play for children. Since then people have been sold on the idea

that lawns must be putting-green perfect and that pesticides are a mandatory ingredient.

Everyday, countless children nationwide play on lawns in schools, parks, and at home. Dogs chase balls, kids roll around, and people of all ages picnic on them. Generally, no thought is given to what harmful chemicals might be vaporizing, drifting, rubbing off the blades of grass or lurking in the soil. When lawns, trees, shrubs, and flowers are treated with pesticides, an untold number of people, animals, insects and fish face damage to their health, short and long-term.

The use of toxic pesticides in agriculture is often defended because, it is argued, without pesticides there would not be enough food. Though that argument is debatable (as proven by the ever-expanding organic industry), when those same hazardous agricultural pesticides are brought into homes and communities and used for purely aesthetic reasons, more people are saying there is no justification. The pervasiveness of the use of these poisons for cosmetic purposes and a growing awareness of the viability of safe, alternative methods and products for maintaining green lawns and landscapes is prompting the public to challenge decision makers to better protect communities from unnecessary and involuntary exposure.

Lawn chemical contamination of health and the environment

The latest figures from the U.S. Environmental Protection Agency (EPA) show that the use of pesticides for the non-agricultural sector is around 213 million pounds. That is roughly twenty five percent of all pesticides used in the U.S., including agriculture. Homeowners alone use roughly 90 million pounds of herbicides per year. And the trend is increasing. From 1998 to 2001, home usage of herbicides jumped by 42 percent.¹

People often think that pesticides are safe because they are registered with EPA. However given the economic, political and scientific limitations of the agency to understand the full effects of any given pesticide, let alone multiple or combined exposures, EPA has stated that no pesticide can be considered safe. Concern over pesticide exposure led the American Medical Association's Council on Scientific Affairs to warn, "Particular uncertainty exists regarding the long-term health effects of low-dose pesticide exposure.... Considering these data gaps, it is prudent...to limit pesticides exposures...and to use the least toxic chemical pesticide or non chemical alternative."²

The vast majority of lawn care pesticides on the market today have never been fully tested for the entire range of potential





The friendly ladybug sign reassures parents in Chatham, NC that kids are playing in a Pesticide-Free Zone.

health and environmental effects, such as cancer, birth defects, genetic damage, reproductive damage, neurological disorders, and disruption of the endocrine system. Even when these effects are found, EPA still registers the pesticide for use.

The most popular lawn care chemical used by homeowners today is 2,4-D – a chemical made by Dow Chemical Company that contains half the ingredients in Agent Orange, a dioxin-laden neurotoxicant used in the Vietnam War. 2,4-D is the pesticide found in most “weed and feed” products. Seven to nine million pounds of the chemical are dumped on lawns every year.³ Surveys show most people use “weed and feed” as a regular fertilizer rather than a pesticide and unwittingly spread the chemical over the entire lawn (as directed), rather than separately and selectively treating problem weed areas.⁴ Such overuse has ranked 2,4-D among the top pesticides consistently found polluting streams and shallow ground water from urban and suburban runoff.⁵

Despite numerous epidemiological studies linking 2,4-D to non-Hodgkin's lymphoma and other cancers, EPA is currently proposing to re-register 2,4-D as a “Class D” carcinogen, maintaining that there is a lack of data and that the existing science is conflicting.⁶ Meanwhile, 2,4-D is one of the most studied chemicals by independent scientists. Conflicting data is rare among independent scientists who have no ties to the chemical industry. To date, EPA has not responded to documentation that the weight-of-evidence is being ignored. Studies by the National

Cancer Institute and others also show a distinct association between exposure to 2,4-D and canine malignant lymphoma in household dogs.^{7,8} The latest assessment from EPA acknowledges the susceptibility of dogs to poisoning by the commonly used pesticide, but does not propose any label warnings to users.

Asthma has become a major concern for millions of households and is the number one chronic illness among children. It affects more than six million, or one in twelve, children nationwide and 14.3 million adults.^{9,10} Exposure to pesticides, indoor and outdoor, are known triggers for asthma. Studies have also shown that exposure to herbicides before the age of one increases the risk of asthma by more than four and a half times.¹¹ While a household with asthma sufferers may or may not be wise enough to use the myriad non-toxic alternatives to pesticides, when their children leave the house and pass by a neighbor's yard where weed killers and insecticides are used, that child may be involuntarily exposed.

Exposure to lawn chemicals is also hazardous for children and adults who do not have asthma. Studies have shown that lawn chemicals drift and are tracked indoors where they may remain in carpets and on surfaces for up to a year when not exposed to direct sunlight. A single turf application of 2,4-D can remain inside the home at exposure levels ten times higher than pre-application exposures.¹² These studies are cautionary tales not just for 2,4-D but for all toxic lawn pesticides.

Vulnerable population groups such as the elderly, children, fetuses, people with respiratory conditions, immune deficiencies or chemical sensitivities are at greater risk of pesticide poisoning and suffer disproportionately from the widescale cosmetic use of lawn pesticides. Of the 30 commonly used lawn pesticides, 13 are ‘probable’ or ‘possible’ carcinogens, which means either animal studies or human epidemiological studies or both have associated exposure with cancer. 14 are associated with birth defects, 18 with reproductive effects such as reduced sperm counts or fertility, and 20 with liver or kidney damage. 18 can cause neurotoxicity, which impairs the central and/or peripheral nervous system and can affect a range of things from the ability to learn to chronic fatigue. Almost all (28) are considered sensitizers and/or irritants, which means exposure may cause inflammation on contact or cause a person or animal to develop an allergic reaction to that chemical or others.¹³

Synthetic fertilizer use, which requires the use of pesticides due to a corruption of soil microbiology, is also an environmental problem. Aside from causing phosphorus pollution to waterways, a recent University of Florida study identified lead and arsenic contamination from a common plant fertilizer called Ironite[®], which is used on lawns, gardens, playing fields and golf courses. The researchers concluded that the fertilizer can release enough lead and arsenic to be classified as hazardous waste.¹⁴

All these studies, coupled with a failure of the federal regulatory system to adequately protect the public and environment from the effects of toxic lawn pesticides, have provided a critical incentive for communities to take a stand against involuntary exposure to pesticides, especially when used for aesthetic purposes. Like second hand smoke, people are exerting their right to walk down the street or play in the park or

at school without being exposed to harmful lawn chemicals whose use is unnecessary.

State preemption treads on democratic rights

In the last few years, reform has swept through 70 cities, towns and municipalities in Canada that restricts or bans the cosmetic use of pesticides on private lawns through local by-laws and ordinances. After watching this movement grow, Project Evergreen, a new representative of the lawn pesticide industry, or “the green industry,” as it calls itself, launched a million dollar public relations campaign with the message that “activists, extremists, and misinformed politicians” are questioning whether lawn products might harm the environment. “If the services our industry professionals offer are restricted, regulated or made illegal, everyone will lose revenue and customers,” claims Project Evergreen. To date, there is no evidence that either has happened in Canada. Instead, demands for organic and natural lawn services are growing with landscaper training programs on the rise in both Canada and the U.S.

In 1991, after the U.S. Supreme Court affirmed the right of local governments to restrict pesticides under federal pesticide law, chemical manufacturers descended upon states and successfully lobbied most of them to pass legislation that prohibits municipalities from passing local pesticide ordinances or laws that are stricter than state policy.¹⁵ Industry thought that would forever be the end of the lawn pesticide debate. These laws, called state preemption, effectively deny local residents and decision makers their democratic right to better protection where it is concluded that minimum standards set by state law are insufficiently protective of public and environmental health. Today however, states and municipalities are fighting to overturn preemption laws and bring power back to the local level.

The industry-EPA exclusion axis

Under the auspices of the Utah-based Center for Resource Management, the lawn pesticide industry has joined with government to sell the public on the safety of lawn pesticides by producing the *Environmental Guidelines for Responsible Lawn Care and Landscaping*. Despite industry lobbying, environmental groups have so far refused to endorse the initiative. The guidelines urge consumers to follow the pesticide label but remain silent, or at best conflicted, on disclosure of unknown and potential pesticide hazards. Though refusing to officially participate, Beyond Pesticides sent comments on the guidelines with several other organizations. A copy is available at <http://www.beyondpesticides.org/watchdog/comments/>.

Municipalities fight for democratic rights

This year Dane County officials in Wisconsin, who oversee 61 municipalities including Madison, passed a local County-wide ban on the use of synthetic lawn fertilizers that contain

phosphorus due to its pollution of local lakes. The industry trade group Responsible Industry for a Sound Environment (RISE) is currently suing the County under preemption law. Similar legislation has been introduced in Minnesota. Other legislative bills that would allow municipalities to prohibit or restrict the use of lawn pesticides and synthetic fertilizers (that lead to the use of pesticides) under a number of circumstances have also been introduced in Suffolk County and Long Island, New York and the states of Montana, Vermont, Rhode Island and Connecticut. Only nine states and Washington DC uphold the rights of localities to restrict pesticides.

In a quintessential statement in the *Detroit News* in February of this year, Allen James, president of RISE, opined that, “Local communities generally do not have the expertise on issues about pesticides to make responsible decisions. Decisions are made much more carefully and the train moves much more slowly” at the state level. The reality is that local communities often have more in-depth information on local pesticide pollution than the state. Critics also argue that such demands interfere with private property rights. But as Beyond Pesticides executive director told a trade magazine reporter, “We don’t disagree that people have the right to do whatever they want on their own land. It’s when their activities result in involuntary exposures to people and wildlife that this issue intersects with the broader, social and environmental concerns that extend beyond property lines.”¹⁶

All activity is not relying on legislation however. In order to foster a shift in cultural thinking about the viability of growing and maintaining healthy non-toxic lawns, it will take more than a law – it takes widespread education. Across the



country groups like Washington Toxics Coalition, New Jersey Environmental Federation, Madison Healthy Lawns Team in Wisconsin, Safer Pest Control Project in Illinois, Northwest Coalition for Alternatives to Pesticides in Oregon, Environment and Human Health, Inc. in Connecticut, and Facts about Alternatives to Chemical Trespassing in Florida are helping to educate decision makers and community members on creating pesticide-free lawns as well as parks, playing fields and schools. Other groups, like Grassroots Environmental Education in New York and the Northeast Organic Farming Association, are helping to train landscapers to make the switch so they can meet the public demand for pesticide-free lawns. And still others, like Toxics Action Center in Massachusetts, are starting boycott campaigns that target certain lawn care companies like TrueGreen ChemLawn in order to educate consumers about what they are actually getting when they hire conventional lawn services.

Whether the campaign is community-based or state-based, taking a legislative approach, a soft educational approach, or using hard-hitting tactics, the message is the same. Aesthetic use of lawn pesticides is hazardous to human health, wildlife, and the environment and is unnecessary to creating a pleasant and aesthetically pleasing green space.

Activists unite to protect from lawn care pesticides

In response to the widespread activity and demands from

grassroots communities, in April 2005 Beyond Pesticides together with grassroots organizations launched a coordinated effort to create a united voice for the national movement against the aesthetic use of lawn pesticides and counterbalance industry propaganda. *The National Coalition for Pesticide-Free Lawns* advocates the use of organic and least toxic practices and products that nurture healthy lawns and landscapes and protect the health of children and their families, pets, wildlife and the environment from unnecessary exposure to toxic pesticides. The symbol of the Coalition is the Pesticide-Free Zone Sign available on all Coalition member websites. The Coalition has also created a declaration that everyone is invited to sign and use.

Take Action

Collect signatures to the **Declaration on the Use of Toxic Lawn Pesticides** in your own community and submit it to your local decision makers so they can see the broad support among their constituency for pesticide-free lawns and landscapes. A copy of the Declaration is available on the Beyond Pesticides Lawns and Landscapes webpage at www.beyondpesticides.org/lawn and printed on page 13 of this issue of *Pesticides and You*. Each member of the Coalition is working to reduce or eliminate the aesthetic use of lawn care pesticides and protect children, families, pets, wildlife and communities from exposure. Contact the group in your area to get involved, or to start your own campaign and join the national movement, contact Beyond Pesticides by phone: 202-543-5450 or email: info@beyondpesticides.org.

Notes

- ¹ EPA Pesticide Sales and Usage Report for 2000/2001.
- ² American Medical Association, Council of Scientific Affairs, "Education and informational strategies to reduce pesticide risk," *Prevention Medicine* 26:191-200, 1997.
- ³ EPA Pesticide Sales and Usage Report for 1998/1999.
- ⁴ Green Gardening Program Final Report 2003. Seattle Tilth Association, Washington Toxics Coalition, and WSU Cooperative Ext. King County.
- ⁵ U.S. Geological Survey (USGS). 1998. Pesticides in Surface and Ground Water of the United States: Summary of Results of the National Water Quality Assessment Program. <http://ca.water.usgs.gov/pnsp/allsum/>.
- ⁶ Zahm SH. 1997. Mortality study of pesticide applicators and other employees of a lawn care service company. *J Occup Environ Medicine*, 39: 1055-67; Fontana A, et al. 1998. Incidence rates of lymphomas and environmental measurements of phenoxy herbicides: ecological analysis and case-control study. *Arch Environ Health*, 53 :384-7; Zahm SH, et al. 1992. Pesticides and non-Hodgkin's lymphoma. *Cancer Res*, 52: 5485s-5488s; Morrison HI, et al. 1992. Herbicides and cancer. *J National Cancer Inst*, 84:1866-74; Hardell L, et a. 1999. A case-control study of non-Hodgkin lymphoma and exposure to pesticides. *Cancer*, 85: 1353-60.
- ⁷ Hayes, T. et al. 1991. Case-control study of canine malignant lymphoma: positive association with dog owner's use of 2,4-dichlorophenoxyacetic acid herbicides. *J National Cancer Inst*. 83(17): 1226-31.
- ⁸ Hayes, T. et al. 1995. On the association between canine malignant lymphoma and opportunity for exposure to 2,4-dichlorophenoxyacetic acid. *Environ Res*, 70: 119-25.
- ⁹ Stanford Hospital & Clinics. Stanford School of Medicine. Lucile Packard Foundation for Children's Health. <http://www.lpch.org/DiseaseHealthInfo/HealthLibrary/respire/abtasth.html> (accessed 3/14/05).
- ¹⁰ 2000. U.S. Census Bureau Special Reports. Children and the Households They Live In. <http://www.census.gov/prod/2004pubs/censr-14.pdf> (accessed 3/14/05).
- ¹¹ Gilliland, FD. et al. 2003. "Early Life Risk Factors for Asthma: Findings from the Children's Health Study," International Conference of the American Thoracic Society. Boise, Phil., et al., 2004. "GreenCare for Children. Measuring Environmental Hazards in the Childcare Industry: Pesticides, Lead, and Indoor Air Quality," *Community Environmental Council*. <http://www.communityenvironmentalcouncil.org/publications/GreenChildcareFull.pdf>.
- ¹² Nishioka, Marcia G., et al. 2001. "Distribution of 2,4-D in Air and on Surfaces inside Residences after Lawn Applications: Comparing Exposure Estimates from Various Media for Young Children," *Environmental Health Perspectives*, 109(11), November.
- ¹³ *Health Effects of 30 Commonly Used Lawn Pesticides*, Beyond Pesticides/NCAMP Factsheet, March 2005.
- ¹⁴ Dubey, B. et al. 2004. *Environmental Science and Technology*, 38(20), 5400-5404.
- ¹⁵ *Wisconsin Public Intervenor v. Ralph Mortier*. 1991.
- ¹⁶ Pesticide.Net Insider Journal, Vol. 2, No. 2. February 1, 2005. p.17.