



# NATURAL LAWN CARE FOR HOMEOWNERS

**T**oo often, typical and joyful childhood pastimes such as running barefoot on the lawn bring children into direct contact with lawn pesticides. These chemicals can be tracked indoors by people and pets, where they adhere to carpets, home furnishings, even house dust.<sup>1</sup> Studies have linked the use of lawn pesticides with a four-fold increase in the risk of children developing cancer of the non-bony tissue (soft tissue sarcoma)<sup>2</sup> and with two- to six-fold increases in childhood brain cancer incidence in homes where pesticides were used.<sup>3</sup> Children have a special vulnerability to pesticides: they breathe the air closer to the ground level where pesticides are applied and are more likely to put their hands in their mouths or rub their eyes without washing their hands. Plus, their bodies – and their defenses against toxins – are still developing.

## AREN'T LAWN PESTICIDES SAFE?

Pesticides are poisons by definition, designed to affect vital biological processes that in most cases are not unique to the intended target pests. They harm beneficial insects (like ladybugs and praying mantises) that are part of your lawn's natural defenses, plants, and microorganisms (like the tiny creatures that break down organic matter and make it available to nourish your lawn). In addition, exposure to many commonly used lawn pesticides has been associated with serious health problems in laboratory animals, including cancer, birth defects, reproductive problems, hormonal imbalance, gene mutations and nervous system, liver and kidney damage.<sup>4</sup> Long term, low dose exposure to herbicide and fertilizer mixtures in drinking water has also been linked to increased aggression and immune system damage in laboratory animals.<sup>5</sup>

Many lawn pesticides on the market today were registered with the US Environmental Protection Agency (EPA) before testing requirements were strengthened in 1978,<sup>6</sup> but even EPA's current pesticide registration process is not designed to consider the myriad of risks pesticides pose to human health and the environment.<sup>7</sup> Furthermore, pesticide registration is not a consumer safety

program, and federal law prohibits pesticide manufacturers and pest control services (including lawn care companies) from making safety claims based on EPA registration of their products.<sup>8</sup>

## PESTICIDES AND YOUR PETS

A study of dogs exposed to the most frequently used lawn chemical, 2,4-D, found that when dog owners applied 2,4-D more than four times a year on their lawn the incidence of common canine cancer (canine malignant lymphoma or CML) doubled. According to the National Cancer Institute, dogs with CML were 30% more likely to have lived in a home where the owners had applied 2,4-D or employed a commercial lawn company to treat their yard.<sup>9</sup>

## DIVERSIFY YOUR LAWN

In Illinois, lawns have displaced the native prairie plants that evolved to the specific demands of our climate. The reason turf grass takes so much work to maintain is because it is not native to our region.

We recommend you diversify your yard to include native grasses, trees, bushes, and flowers. These will enhance the beauty of your home, attract birds and beneficial insects, and free you up from the time and effort of tending the grass. When you do choose to plant grass, choose seed that is adapted to our climate such as rye and fescue varieties.

## MAKING A CHANGE

You will find tips for a great-looking, non-toxic yard outlined on the other side of this page. With safe, effective alternatives to lawn pesticides available, why risk health and environmental problems? For more details and a list of lawn care services in the Chicago area willing to care for your lawn without dangerous chemicals, contact Midwest Pesticide Action Center (MPAC): 773-878-7378 or go to [midwestpesticideaction.org](http://midwestpesticideaction.org).



## NATURAL LAWN CARE BASICS

### Soil Test

Healthy natural lawns thrive in healthy soil, with nutrients properly balanced in the right amounts. Like people, every lawn has different nutrient needs which is why a 'one-size fits all' approach rarely produces good grass. A soil test will help you determine exactly what kind of nutrients and soil amendments to add. It can be done inexpensively and infrequently, every 3 to 5 years, saving you money in the long haul by reducing unnecessary fertilizer.

### Water Correctly

Water deeply and infrequently. Ideally you want one inch of water delivered once a week. Daily and brief watering discourages deep root growth, one of the essentials of healthy turf grass.



Pest fungus can thrive in the damp grass, so give your lawn a chance to dry before nightfall. Water in the early morning to minimize evaporation and safeguard against fungus problems.

### Mow Properly

Tell your lawn care provider that you want to keep your lawn at least three inches high. If you do your own mowing, this makes your task easier. Correct mowing will increase the strength of the root system and naturally shade out some weeds. Don't mow your lawn every week out of habit.



Mow with sharp blades. Sharp mower blades make a clean cut, while dull ones will rip the grass, weakening your lawn's defenses.

### Fertilize Organically

Switch to an organic fertilizer. Most commercial fertilizers have too much nitrogen for your lawn. Since the grass can't use it fast enough, most gets washed away - polluting nearby waterbodies. Organic fertilizer will allow the grass to take what it needs when it needs it. If you can't find it at your local nursery, please ask the manager to stock it. The products are there if the customers show a demand, so you need to make your voice heard. In the meantime, organic fertilizers are

available via mail order. If you live near a feed store, you're in luck since they often carry a wide selection of useful products such as alfalfa meal and corn gluten.



### Reseed and Top Dress Annually

Fifty years ago, most lawn mix had clover in it but broadleaf weed herbicides were introduced and destroyed the clover in lawns. Clover is a great addition to any lawn. Reintroduce it! It is drought tolerant, immune to diseases, and greens up all summer. Rabbits love it, and hopefully will eat the clover instead of your other perennials. Reseed at least once a year with a mix of grass seed and compost. Water slightly each day for two weeks so the seed can get established. This will naturally replenish your lawn and keep your soil healthy.

### Banish Weeds Naturally

Consider using corn gluten (an organic corn by-product that is a natural pre-emergent weed control) to reduce weeds. Apply it early in the season before the soil reaches 55 degrees (usually when the forsythia bloom), and it will, over the course of a few growing seasons, make a big difference. Invest in a sturdy weeding tool and go after weeds for short periods on a regular basis, rather than all at once. Don't be so focused on a perfect green lawn - instead realize that a healthy lawn can naturally resist disease and drought.

#### Sources:

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- 2 Leiss, J.K. and D.A. Savitz (1995): "Home pesticide use and childhood cancer: a case-control study." *Am J of Public Health*, Vol. 85, No. 2, pp. 249-252.
- 3 Davis, J.R., et al. (1993): "Family pesticide use and childhood brain cancer," *Archives of Enviro Contamination and Toxicology*, Vol. 24, pp. 87-92.
- 4 Abrams, R. (1992): "Lawn care pesticides and safety - what you should know," New York State Department of Law Environmental Protection Bureau fact sheet dated 3/92.
- 5 Porter, W.P., J.W. Jaeger, and I.H. Carlson (1999): "Endocrine, immune, and behavioral effects of aldicarb (carbamate), atrazine (triazine) and nitrate (fertilizer) mixtures at groundwater concentrations," *Toxicology and Industrial Health*, Vol. 15(1-2), pp. 133-150.
- 6 Abrams, R., *ibid*.
- 7 Colborn, T. (1995): "Pesticides - how research has succeeded and failed to translate science into policy: endocrinological effects on wildlife," *Enviro Health Perspectives*, Vol. 103, Supplement 6, September 1995, pp. 81-85.
- 8 Abrams, R., *ibid*.
- 9 Hayes, H.M. et al. (1991): "Case control study of canine malignant lymphoma: positive association with dog owner's use of 2,4-D." *J Natl Cancer Inst.*, Vol. 83, pp. 1226-1231.

**Midwest Grows Green accomplishes large scale behavior change by sharing pesticide and fertilizer information at critical places where lawns and landscapes influence our lives**

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