



## Nurturing a Truly Healthy Lawn

Ah, a soft green expanse of lush lawn, inviting you to sit and chat with friends, maybe even lie down and relax, smelling the freshly-cut grass, soaking up the bright sky, seeing your children run and roll, watching your dogs get caught up in the glee.

Sounds idyllic indeed. And you can keep it that way by avoiding the use of toxics on your lawn that can hurt you, your children, and your pets as they play – and even harm your lawn!

**Surprisingly, lawns and gardens can have more pesticide applied per acre than farms.** People and pets come in such close contact with their lawns that any toxics used can significantly impact their health. A National Cancer Institute study found that children in households where outdoor pesticides were used were six to nine times more likely to develop childhood leukemia. Lawn pesticides can also be tracked indoors, hurt nontarget plants and wildlife, and travel off-site to harm neighbors and pollute water supplies.

**You might be using toxics and not even know it!** Not all lawn care

products are clearly marked as pesticides, **so read the label to identify the active ingredients.** Then get more information about the health and environmental risks of those materials. If you have a lawn care service, request an MSDS for all products they're using at your site. Your reward will be a healthier experience for everyone!

### What toxic ingredients are in lawn products?

■ **Glyphosate** (in products like Roundup). In search of the perfectly consistent lawn, people can use herbicides like Roundup to strike out at broad-leafed plants like dandelions. Unfortunately, Roundup can cause serious eye and skin damage, and long-term problems like miscarriages and non-Hodgkin's lymphoma. It can also kill beneficial insects (including beautiful butterflies) and the earthworms essential to soil health and vitality. (For more on Roundup, see *TNS*, Vol. I, No. 4.)

■ **2,4-D** (in various products). 2,4-D was a key component of the defoliant Agent Orange and is known to be highly toxic. Yet it can sneak its way onto your lawn in what you think is just a fertilizer (for instance, "weed-and-feed" products). If a product mentions killing or "controlling" weeds, see if the ingredients include 2,4-D.

Studies have shown that 2,4-D increases rates of lymphatic cancer and non-Hodgkin's lymphoma (NHL). NHL is the sixth most common cancer in the U.S., and rates are rising. 2,4-D disrupts nervous system chemicals (like se-

rotonin) and can cause serious neurological effects – especially to children's maturing nervous systems. Studies have shown that exposure doubles the lymphoma rates in dogs, and harms wildlife, including earthworms and beneficial insects. (More on 2,4-D is in *TNS*, Vol. I, No. 5.)

Other ingredients with key health and environmental risks include **dicamba**, **triclopyr**, **imidacloprid**, and **mecoprop** (MCPP).

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**Luckily, you can create a beautiful lawn easily** – without exposing yourself and your family to these toxic materials. Here's how:

■ **Set yourself up for success.** If you're starting a new lawn, put it where there's good sun and drainage. **Choose lawn grasses wisely.** Native grasses are adapted to local ecosystems, but can be tough to sit on. Kate Burroughs at Harmony Farm Supply likes the drought-tolerant Bonsai dwarf fescue, indicating that "it needs less water, fertilizer, and mowing (40% less mowing than the turf type tall fescues)!" She suggests caution in adding clover to lawns. Although clover fixes nitrogen in the soil (like a built-in fertilizer), it's not ideal if people will be on the lawn, because it can attract bees. If your lawn has unwanted clover, fertilize more to strengthen the grasses.

■ **Increase organic matter** in your soil, to help hold water and nutrients, and to avoid compaction that prevents proper drainage. To do this, add **compost** before planting your lawn. For an existing lawn, add finely-screened compost using a spreader. You can also **mow fallen leaves** to chop them up. They quickly break down and disappear. And you can **leave grass clippings on the lawn.** When they decompose, they also add nitrogen to the soil, which makes grass grow thicker (and reduces your need for fertilizer). Clippings also stimulate earthworm activity, which breaks down thatch. A University of Connecticut study showed that lawns with clippings had 45% less crabgrass, 66% less disease, up to 45% more earthworms, 60% more water reaching plant roots, and 50% reduced need for fertilizer.

*See Lawns, over ...*



## Managing Weeds: A Report from the Salt & Vinegar Mines

It's great to see less and less herbicide being used around town these days. Once in a while I am walking down the street and am mildly alarmed to see a homeowner or city employee waving a flame-thrower-type device over the sidewalk cracks. I remind myself that this is indeed much better than a toxic herbicide (well, anything is better than that), but depending upon the weed and site, there can be gentler alternatives.

**A few months ago we asked readers to try vinegar or salt on "undesirable" plants around the yard.** At the same time my husband and I started the experiment in our own yard. On dormant blackberry vines and ever-burgeoning ivy, we clipped stems to the ground and in some places we doused the stump with salt (not measuring, but about a teaspoon), and in other places sloshed it with vinegar (about 1/4 cup). We marked the spots with popsicle sticks.

After the rains, about two months later, we came out again to check the stumps and put on another dose of our less-toxic herbicide on them, but they all were still dead. **Both the vinegar and salt worked!**

I also poured some vinegar on a crack across our driveway that has weeds and even baby trees from old tree roots growing up through the crack, and they are all dead now. I did this about a month ago, and though it is full-on spring season now, with everything bustin' out, that crack is all dead.

**Because they work so well, be careful using salt or vinegar to kill plants.** Try the vinegar first, as salt can accumulate in soil. Use small amounts, and not on or near places where you have or plan to grow plants. For those places, consider hand pulling, turning the soil, or sheet mulching (see *TNS*, III/2).

Any other reports from the field? Please let us know.

~ Rebecca Dwan

## Second Annual Solar Sebastopol Fair

**This is a good time to go solar!** If you've ever considered solar energy and you own a home or business, now is the time to go solar, while the state rebates last.

Come and learn more at the 2nd Annual Solar Sebastopol Fair & Celebration. It's on **Saturday, June 19** at the Sebastopol Community Center, 11 a.m. to 6 p.m. Admission is free and open to the public. You can:

- See the latest solar equipment and talk to local solar installers.
- Hear government and renewable energy leaders speak.
- Learn what you need to know about going solar.
- Discover how your household or business can cut costs and make money on a solar energy investment.
- Enjoy live music, food, and drink, and the Solar Fun Zone – fun stuff to do all day for kids of all ages!

Sponsorships and vendor space are still available. For more info, contact MartyR@sonic.net or 829-1999.

This Fair is brought to you by the City of Sebastopol and Solar Sebastopol's sponsors. Find out more at <[www.ccenergy.com/news/solar\\_sebastopol.html](http://www.ccenergy.com/news/solar_sebastopol.html)>.

### ABOUT STEP

The Next STEP (TNS) is published six times a year by the **Sebastopol Toxics Education Program (STEP)**. **STEP is a project of the City of Sebastopol**, implemented by local citizen volunteers. **STEP's mission** is to support city residents in reducing their toxic use and exposure, creating a healthier and safer Sebastopol for everyone.

**Past issues of TNS** are at <[www.ci.sebastopol.ca.us](http://www.ci.sebastopol.ca.us)>; look under Programs. **An ongoing index by topic** is at <[www.healthyworld.org/STEPIndex.html](http://www.healthyworld.org/STEPIndex.html)>.

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### Lawns, continued

■ **Use organic fertilizers.** Avoid synthetic fertilizers which can harm beneficial micro-organisms, create stressing growth spurts, cause thatch, and only give narrow nutritional support. Instead, use organic fertilizers that don't harm soil organisms including earthworms, contain more nutrients, release their nutrients over time, and don't "burn" your plants. Ask for advice on products best for your situation. Kate Burroughs likes Lawn Restore to restore a lawn, and Turf and Horticulture Blend to maintain a healthy lawn. Compost also adds nutrients.

■ **Water properly.** Keep your soil moist but not drenched. In the summer heat, set your sprinklers for 10–15 minutes every 2–3 days. When it's not as hot, water less frequently.

■ **Mow high.** Set your mower's cutting height to the highest setting. Taller grass better preserves water (by shading soil), outcompetes weeds, and has better access to sunlight. Don't mow too often – just when turf is 3–4" high. Mow when grass is dry and cool, and keep your blade sharp, to avoid tearing the grass and making it more susceptible to infection.

■ **If you have pest problems**, use organic approaches. Weeds can be managed using corn gluten meal, and some insects can be managed with predatory nematodes. And if you pull weeds when you first see their flowers, they'll spread less and less.

■ **Consider decorating the edges** of your lawn with plants that attract birds and butterflies, for even more beauty to enjoy on your healthy lawn.

For more about this topic (including the toxicity of specific active ingredients), see my lawn information page <[www.healthyworld.org/lawns.html](http://www.healthyworld.org/lawns.html)>. Also, Harmony Farm Supply at 823-9125 has great information and products for organic gardening and landscaping.

~ Patricia Dines

SOURCES: "Love Your Lawn!", *Organic Style*, April 2004 • A big thanks to Kate Burroughs at Harmony Farm Supply for her insights • Northwest Coalition for Alternatives to Pesticides (NCAP)