
PESTICIDE FOCUS: Roundup (Herbicide)

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What's the Matter with Roundup?

As the toxicity of herbicides like 2,4D became increasingly clear, some turned to products with the active ingredient glyphosate, like Roundup and Rodeo.

Glyphosate is a broad spectrum post-emergent, systemic, and non-selective herbicide used to kill broad-leaved, grass, and sedge species. It's the nation's second most commonly-used home and garden pesticide, and the third most commonly-used on industrial and commercial land. Each year 38 to 48 million pounds are used in the U.S., with about 25 million applications in U.S. households. [Footnote 1]

Unfortunately, while better than 2,4D, Roundup is not as safe as some believe (or even claim!). Here are some important facts:

*** Harm to Humans and Animals.** Glyphosate products are acutely toxic to humans and animals, with symptoms like eye and skin irritation (lasting up to 7 days), cardiac depression, gastrointestinal pain, vomiting, and accumulation of excess fluid in the lungs.

Glyphosate is the highest cause of pesticide illness for California landscape maintenance workers, and the third most commonly-reported cause of pesticide illness among agricultural workers.

One ingredient in Roundup (POEA) is actually more toxic than glyphosate, with the combination even more toxic. (The testing that allowed Roundup on the market was just for glyphosate, not the full formula, a serious flaw in the pesticide regulation system.)

Even ordinary use of Roundup can cause problems. One user wiped their face with a hand that had contacted leaky Roundup spray equipment – and got a swollen face! Another spilled Roundup and got recurrent eczema of the hands and feet for two months.

And then there's the county highway worker who sprayed thistles which then cut through his overalls. He was hospitalized with severe internal chemical burns and blood infection. The next day, his leg was so swollen that his ankle was the size of his knee and he had a 105° fever. The doctor wanted to amputate his leg because of the threat of gangrene. Luckily, he recovered with his leg intact, but the veins in his leg were permanently clogged and burned. [2]

Glyphosate can cause other long-term damage. Population studies show increased miscarriages and non-Hodgkin's lymphoma. Animal studies show genetic damage, reduced sperm counts, cataracts, and thyroid, pancreas, and liver tumors.

*** Harm to Ecosystems.** Studies have shown that Roundup kills beneficial insects and is hazardous to earthworms, which are vital for soil health and vitality. [3]

- * **Long-lasting.** The manufacturer's own tests show that it takes up to 140 days for half the glyphosate to break down or disappear. Residues were found in lettuce, carrots, and barley planted a year after treatment.
- * **Able to Drift.** Tests conducted by the University of California, Davis, found that glyphosate drifted up to 1,300 feet during ground applications. This increases unintended exposure and harm to humans, animals - and plants you want to keep!

So, what's the alternative? See the article [below] for easy options. Or maybe just see through a child's eyes, where those dandelions are not a problem but a delight!

~ Patricia Dines

Footnotes

1 "Herbicide Fact Sheet: Glyphosate, (Roundup)," Caroline Cox, *Journal of Pesticide Reform*, Volume 18, Number 3, Fall 1998. Northwest Coalition for Alternatives to Pesticides, Eugene, OR. Information from their article has been used throughout this article.

2 "What's the Matter with Roundup?", *NYCAP News*, Early Summer 1994, p. 20.

3 "Ten Reasons To Not Use Roundup," Caroline Cox, Northwest Coalition for Alternatives to Pesticides- (NCAP) For copies of their longer article on Roundup, with complete references for all of the information presented, send \$2 to: NCAP, P.O. Box 1391; Eugene, OR 97440; or call (541) 344-5044. [See updated information below.]

For more information:

- * **For more about Roundup and for alternative treatments for weeds**, NCAP factsheets can now be downloaded at this webpage www.pesticide.org/pesticide_factsheets. Other valuable information can be ordered at BIRC's website www.birc.org. There's more about Roundup at www.environmentalcommons.org/glyphosate.pdf. We also have an article below with some alternative approaches for weeds.
 - * For more about NCAP's **Healthy Kids, Healthy Schols Program**, see www.pesticide.org/healthy_schools.
 - * **For more information about STEP (the Sebastopol Toxics Education Program)**, click [here](#).
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* **In our annual survey of Next STEP readers**, we ask, "Has the newsletter helped you reduce your use of toxics? If so, do any examples come to mind?" Included among the responses were these:

- No longer use Roundup
- Great info on Roundup, keeps me from using it!
- My wife won't let me use Roundup since the town banned it
- I don't kill weeds with weed killer

* **For a 5/5/2003 article about the use of Roundup at Analy High School in Sebastopol**, see this article in the Press Democrat www.healthyworld.org/Roundup-Analy_2003.html. For more information about pesticide use in schools, and how you can use the California Healthy Schools Act to reduce and eliminate their use, click [here](#).

People around the world have shown that we can meet our needs without poisoning ourselves, our families, our communities, animals, and the environment!

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Got Weeds?

What's a weed really? Just a plant growing where you don't want it! So what do you do about unwanted plants if you prefer not to use herbicides but don't have time to weed?

One easy solution is mulching with leaves, grass clippings, wood chips, and other materials that suppress weed growth.

Another creative option is planting stronger plants that keep the unwanted ones at bay -- while also holding the precious soil and nutrients in place.

For instance, you can plant living ground cover around bushes, trees, or along the street for both beauty and easy maintenance. And if you choose native plants, maintenance is even easier and you encourage beneficial local insects and birds.

What to plant? Here are some ideas from local native plant experts:

- * **Native sedum** (low-growing succulents with yellow flowers)
- * **Native oxalis** (redwood sorrel, in white or pink; perfect around redwoods and other shady places!)
- * **Fragaria californica** (woodland strawberry)
- * **Yellow-eyed grass**

To fill in larger areas, consider:

- * **Achillea borealis** (native pink yarrow)
- * **Festuca rubra** (spreading native grass; grows up to 6-12")
- * **Scirpus** ("fiber optics" native grass; grows up to 8")

If you have large areas where you'd like to alleviate high grass or weeds or where you want to keep away invasive alien grasses, star thistle, and burr clovers -- consider planting clover. It helps build up your soil's

health, doesn't grow to a fire hazard, looks good, and helps our struggling honeybee population.

To try different varieties in your spot, first dig or disc away the grass, then try seeding different clover varieties in clearly marked sections. Water as needed until they're established. Then watch them grow to see what works best for you.

These are just a few ideas to get you started! Explore your options and get further advice from books, websites, or a nursery specializing in natives. Find some plants you like and that match the sun, water, and soil type of your growing area. Then spend the time you would've weeded watching your plants grow!

Note: Some plants, such as certain roses, don't like anything growing right under them. Use mulch instead, being careful not to mulch above the crown or graft.

~ Rebecca Dwan

For more about Roundup, see the [STEP newsletter Index](#) under [Roundup/Glyphosate](#).

For more information about organics and other alternatives to toxics, see our [Toxics and Alternatives Resources Page](#).

For information about Sonoma County and area toxics, organics, and environmental and political information and action, see our [Sonoma County Resources Page](#).

Information courtesy of:



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www.healthyworld.org/Roundup.html