

Alternatives to the Use of Roundup and Glyphosate-containing products for Weed Control

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We compiled information from 6 science based articles. And we used the Grow Smart Grow Safe web site, <https://www.growsmartgrowsafe.org/>, to find examples of products containing glyphosate.



Reasons to avoid Roundup/Glyphosate	Science-Based Sources of Information
It probably causes cancer in humans	1. World Health Organization, https://www.scientificamerican.com/article/widely-used-herbicide-linked-to-cancer/
Endocrine disrupter, reproductive effects, kidney and liver damage, sensitizer/irritant	2. Web site of Beyond Pesticides, http://www.beyondpesticides.org/assets/media/documents/Health%20Effects%2030%20Lawn%20Pesticides.pdf
High human toxicity hazard, moderate bird and aquatic toxicity	3. Public Health and Social Services web site of Thurston County, Washington, http://www.co.thurston.wa.us/health/ehipm/terrestrialreview.html
Glyphosate enhances the damaging effects of other food-borne chemical residues and environmental toxins in humans. Consequences are most of the diseases and conditions associated with a Western diet, which include gastrointestinal disorders, obesity, diabetes, heart disease, depression, autism, infertility, cancer and Alzheimer's disease.	4. Scientists Anthony Samsel and Stephanie Seneff, in an article in the science journal Entropy, April 18, 2013, http://www.mdpi.com/1099-4300/15/4/1416
Toxic to frogs	5. Scientists R. M. Mann and J. R. Bidwell in the Archives of Environmental Contamination and Toxicology, 1999, https://link.springer.com/article/10.1007/s002449900460
Moderate to highly toxic to amphibians	6. Ministry of Environment, British Columbia, June 2008 http://a100.gov.bc.ca/pub/eirs/finishDownloadDocument.do;jsessionid=XZKgZtvRfHMH04L1szxDgppj1Pv8Lp6wI5X1hP59vZ0rnJ19h01Q!1516634674?subdocumentId=4840
Methods and Products to Use	Products to Avoid: commonly available in Western Washington Data from www.GrowSmartGrowSafe.org
Black Plastic – double layer laid over gravel driveways for a couple of weeks in spring or summer	Green Thumb Weed and Grass Killer RTU
Boiling Water poured on weeds in sidewalk cracks. Best if a hot sunny day.	Ortho Ground Clear Vegetation Killer Concentrate
Concern® Weed Prevention Plus®* (Corn Gluten Meal) Use BEFORE weed seeds sprout, to prevent them from sprouting	Ortho Ground Clear Vegetation Killer RTU
Flame Weeders for patios, paths, and emerging weeds prior to planting your veggies. Best when weeds are well-watered, not wilted.	Hi-Yield Kill-Zall II Weed & Grass Killer Concentrate
Goats and Sheep can be hired to eat blackberries, ivy, holly, etc.	Hi-Yield Kill-Zall II Weed & Grass Killer RTU
Grow a Multi-Layered garden which will shade out some weeds	Roundup Extended Control Weed & Grass Killer Plus Weed Preventer Concentrate
Hand Weeding tools. Have salesperson show you their latest and most effective; long handled hori-hori, etc.	Roundup Extended Control Weed & Grass Killer Plus Weed Preventer II
Hire Teenagers to hand weed	Roundup Max Control 365 Concentrate
Mulch: Bark, wood chips, other mulch	Roundup Max Control 365 RTU
Preen® Organic Vegetable Garden Weed Preventer (Corn Gluten Meal) a pre-emergent Use BEFORE weed seeds sprout, to prevent them from sprouting	Roundup Weed & Grass Killer Concentrate Plus
Vinegar Spray, 20% or more acetic acid, on seedlings and new growth. Please use eye protection.	Roundup Weed & Grass Killer III RTU
Water deeply but infrequently, if your soil is at least 4 inches deep	Roundup Weed & Grass Killer Super Concentrate
Water with drip irrigation to stop watering weeds	Roundup Wild Blackberry Plus Vine & Brush Killer Concentrate
	Roundup Wild Blackberry Plus Vine & Brush Killer RTU
	Winfield Cornerstone Plus Herbicide

For more information on safe pesticides, see <http://gardengreen.webs.com/>