

HEALTHY HOMES. HEALTHY FAMILIES.

Grow Smart, Grow Safe



A consumer guide to lawn and garden products

600 pest controls and fertilizers reviewed for health
and environmental hazards

Sixth edition



Metro



Local Hazardous Waste
Management Program
in King County, Washington

Grow Smart, Grow Safe: A Consumer Guide to Lawn and Garden Products, Sixth Edition, is a joint publication of Metro regional government in Portland, Ore., and the Local Hazardous Waste Management Program in King County, Wash. This 2009 publication is based on previous editions written by Philip Dickey in collaboration with King County. For more information, call 503-797-1611 or send e-mail to lisa.heigh@oregonmetro.gov.

Acknowledgements

Many organizations, agencies and individuals collaborated to develop this regional consumer guidebook on pest controls and fertilizers. Thanks to all who contributed their time and invaluable input.

Project Team

Metro: Lisa Heigh (project manager), Shareefah Abdullah, Elizabeth Adams, Rayna Cleland, Sabrina Gogol, Carl Grimm and Nicole West
King County: Lisa Niehaus and Mary Rabourn
Thurston County (Wash.): Jane Mountjoy-Venning and Patrick Soderberg;
Steven Gilbert, Ph.D.; and Nick Thorp, Institute of Neurotoxicology and Neurological Disorders
Annette Frahm, Sage Environmental
Jeanne E. Galick, Graphic Design
Donna Matrazzo, The Writing Works

Electronic copies and alternate formats

For downloadable copies of this guide, visit www.oregonmetro.gov/growsmart or www.govelink.org/hazwaste/house.

For alternate formats, call 206-263-3050 (TTY Relay: 711).

Disclaimer

Disclaimer: The ratings in this publication represent the opinions of the authors, subject to the following conditions: 1. Product ratings are based upon available information. Products may contain ingredients or contaminants unknown to us, whose presence, if known, would change the product's ratings. 2. Safety of a product depends to a great extent upon how it is used. Because individuals may exercise different safety precautions, a lower hazard rating is not a guarantee of a product's safety, just as a higher hazard rating does not necessarily imply that use will cause harm or damage. 3. These ratings are presented as an informational service. A lower hazard rating does not constitute an endorsement of a particular product. Metro regional government and the Local Hazardous Waste Management Program in King County, Wash., make no guarantees as to the safety or efficacy of any product and assume no responsibility or liability for any injury or damage that may result from using any such product. No monetary contributions were solicited or accepted from manufacturers of the products listed in this publication. These ratings may not be used for advertising or any other commercial purpose.

Contents

Introduction	
Gardening with nature	3
Chapter 1	
Insect controls	9
Chapter 2	
Slug and snail controls	19
Chapter 3	
Disease controls	23
Chapter 4	
Weed controls	29
Chapter 5	
Moss controls	41
Chapter 6	
Animal pest controls	45
Chapter 7	
Fertilizers and soil amendments	53
Chapter 8	
Resources	65



Quick reference

Reading pesticide labels	5
Using this guide	6
Understanding the hazard ratings	7
Pesticide disposal information	70
Index of reviewed products	72



Gardening with nature

Like others in your community and beyond, you may enjoy the beauty and bounty that a garden offers but wonder about the effects of garden chemicals. It's a pretty serious issue. Insecticides, herbicides and other such chemicals can harm people and pets and pollute the environment. Many garden products developed in the last 60 years contain toxic ingredients that fight nature rather than work with it, altering a garden's natural balance.

Times are changing. Whether working the land for subsistence, a hobby or a profession, an increasing number of people are seeking ways to grow and maintain their gardens effectively and sustainably. From using compost and mulch to watering wisely and reducing reliance on harmful chemicals, more people are gardening with nature, gaining the benefits of organic practices and getting results.

Grow Smart, Grow Safe can help you garden with nature, too. With ratings of 600 pesticides, fertilizers and soil amendments, this publication offers a comprehensive guide to lawn and garden products. The easy-to-use tables organize entries into categories that help you find lawn and garden products least hazardous to your pets and loved ones, wildlife, lakes, streams and groundwater. In addition, tips from regional experts offer simple ways to reduce pest problems without toxics and safely grow a productive, healthy garden.

Happy gardening, and thank you for choosing this guide.

Take simple steps to prevent garden pest problems

Here are five steps you can take to work with nature in your yard. If you maintain your garden's natural balance, you will have healthier plants and fewer pest problems. This means less time and effort in the long run.

- 1. Build healthy soil with compost and mulch.** Soil is alive, and soil life matters. A teaspoonful of healthy soil contains about 4 billion beneficial soil creatures. They improve soil structure and recycle nutrients. They also store water for plants and protect plants from pests and diseases.
- 2. Plant right for your site.** Get to know your yard. Areas of shade, or wet or dry soil, affect which plants will grow well. Choose plants that are likely to thrive in these different conditions. Pick plants that resist insects and diseases. Group plants by their needs for water, sun and soil. See "Resources" on page 67 for help.
- 3. Practice smart watering.** Many plant problems are caused by overwatering. Water plants deeply to promote deep roots. Then let the surface of the soil partly dry out before watering again.
- 4. Learn to live with a few insects.** Most bugs in your garden are actually helpful. Killing them all would eliminate the beneficial insects too, making the problem worse.
- 5. Practice natural lawn care.** People often use the most chemicals and water on their lawns. Instead, mow high (2 to 3 inches) and mow regularly. Leave the clippings for free fertilizer. Use "natural organic" or "slow-release" fertilizers. Water deeply – 1 inch once a week during the dry season – to moisten the whole root zone, and let the soil dry out between waterings. This prevents lawn disease and saves water.

Take targeted action if pests appear

"Pest" is a broad term that includes problem insects, weeds, slugs and snails, critters such as deer and moles and plant diseases such as black spot.

Get expert help to identify the problem and your options to deal with it. Sometimes simple steps, such as more sunlight or less water, are all the plant needs. Sometimes traps, barriers or other tools may be enough. See each chapter for recommendations from regional experts. Also see "Resources" on page 67.

Use this guide to choose the least-hazardous products. More products are on the market every year that work well and pose less risk. Look for products in the green section of the tables in each chapter. Consider products in the yellow sections carefully, and avoid those in the red sections.

If you buy garden chemicals, buy in small amounts, skipping the large "economy" size. Favor ready-to-use products over concentrates. You will reduce worries about keeping chemicals away from children and pets and disposing of leftovers.

Avoid combination products such as weed and feed. Separate fertilizers from pest controls, so you don't waste your time and money overapplying one or the other.

Spot-spray small amounts – and only on targeted plants – if you spray. The more you spray, the more you throw your garden's natural balance out of whack.

