

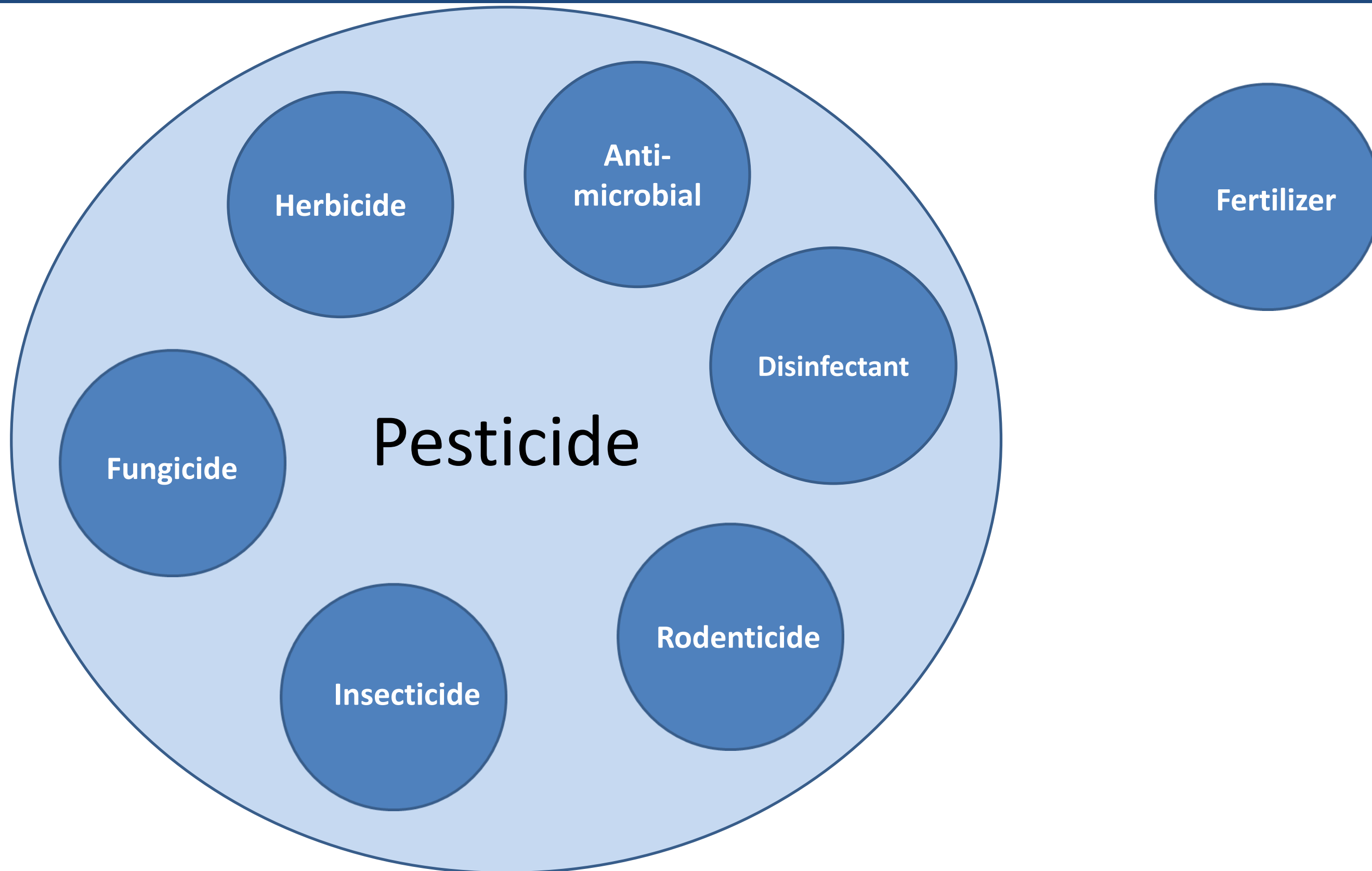
Avoiding Residential Lawn and Garden Chemicals

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New Haven Environmental Advisory Council Meeting

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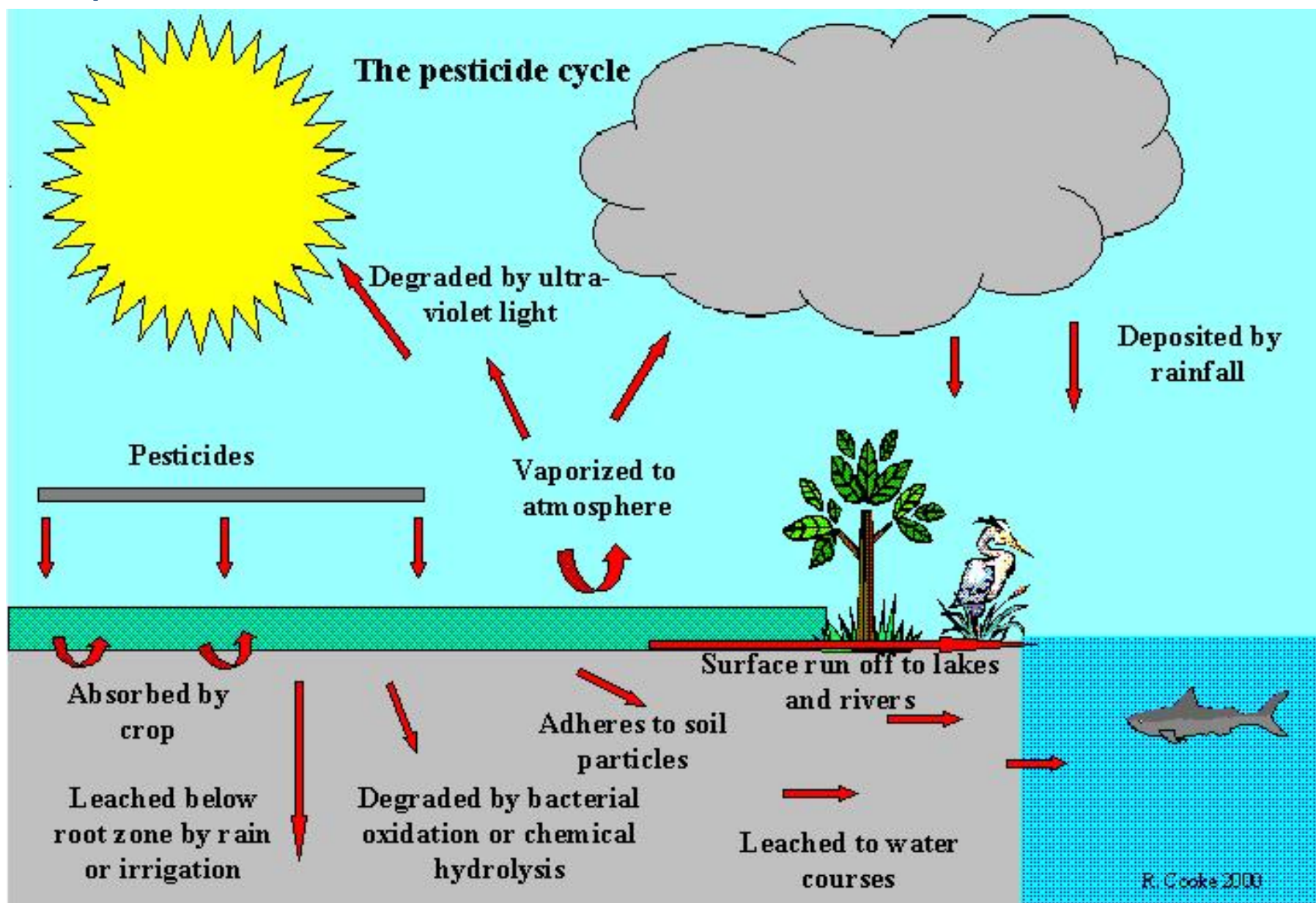


Lawn and Garden Chemicals - Terminology

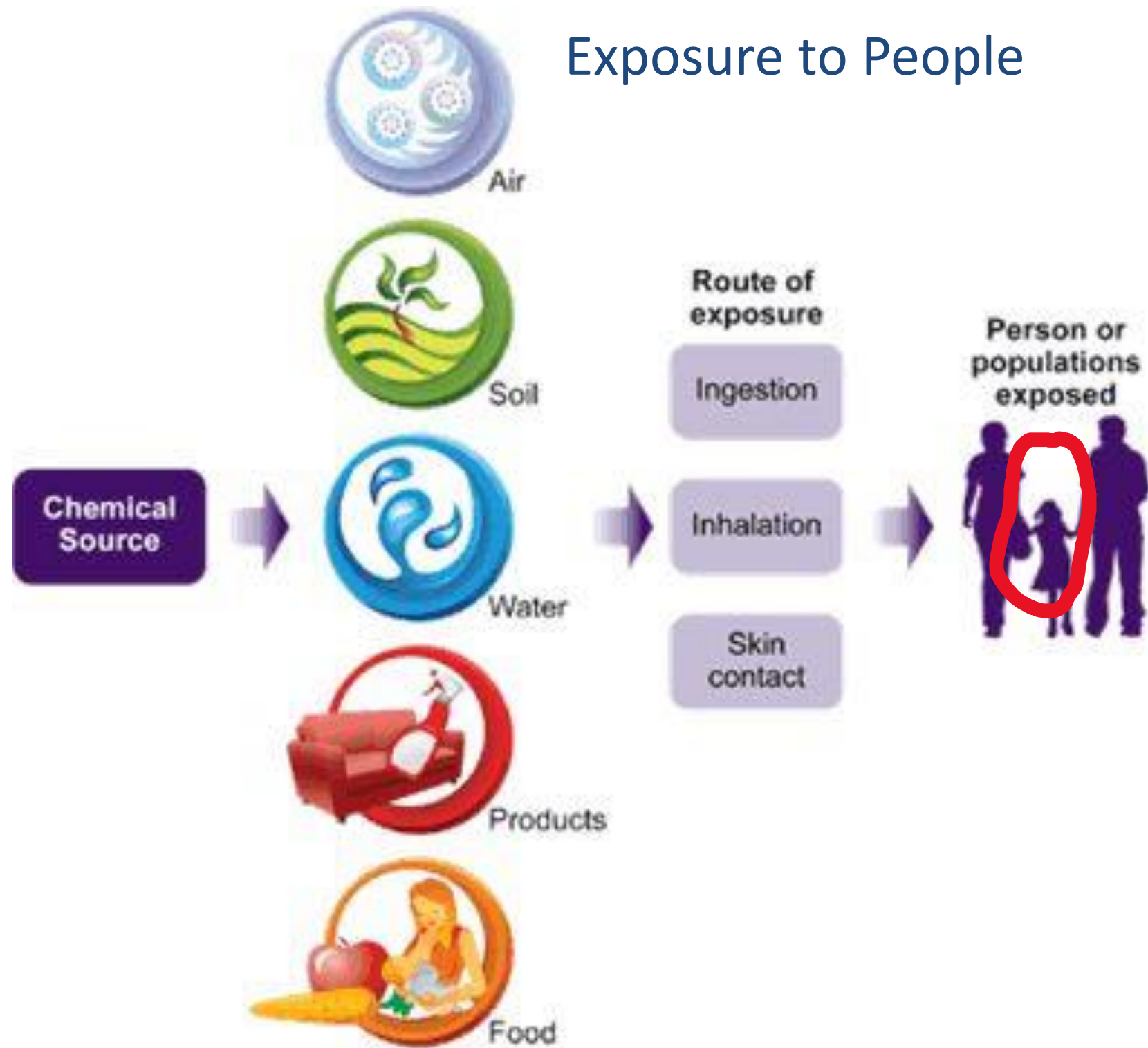


Exposure to Lawn & Garden Chemicals

Exposure to the Environment



Exposure to People



Some Commonly Used Lawn/Garden Herbicides

- Dicamba (Surge, Cool Power, Horse Power, Escalade)
- Glyphosate (Roundup)
- 2,4-D (GroundClear, Escalade)
- Dithiopyr (Dimension)
- Prodiamine (Barricade)
- MCPP, mecoprop (many weed-and-feed lawn fertilizers)
- Atrazine (Image)



Some Commonly Used Lawn/Garden Insecticides

- Malathion (insect control sprays for fruit trees, garden vegetables)
- Permethrin (termite, flea, mosquito, tick control)
- Carbaryl (grub control)
- Bifenthrin (termites, plant insects, ants, ticks)



Why Are We Concerned About Exposure?

- Some Lawn/Garden Chemicals Pose Environmental Concerns
 - Toxicity to beneficial insects (especially bees)
 - Toxicity to wildlife
 - Leaching into soil – toxicity to beneficial soil organisms
 - Runoff into waterways – toxicity to aquatic organisms and aquatic plants
 - Leaching into groundwater used for drinking water
 - Runoff into surface water used for drinking water
 - Fertilizers - Promote algal blooms in waterways
 - Over time, can actually damage lawn

Why Are We Concerned About Exposure?

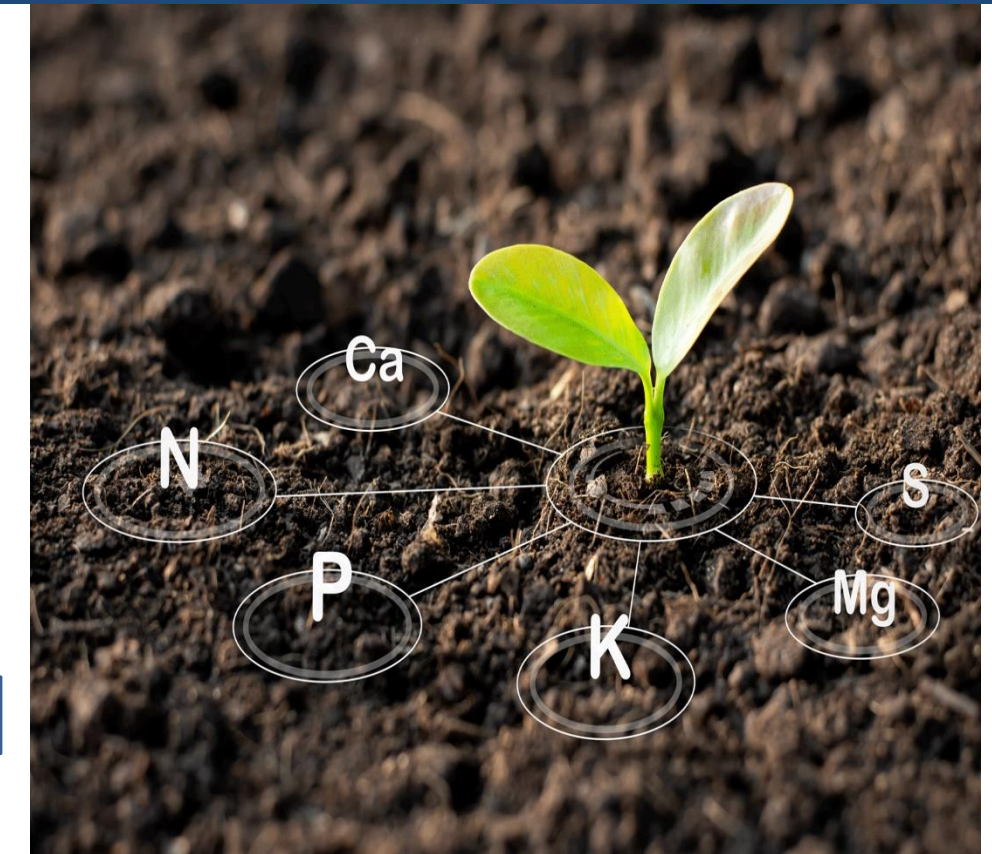
- Some Lawn/Garden Chemicals May Pose Risks to Pets
 - Pets may have greater exposure
 - Pet exposure risks not well studied for many chemicals

Why Are We Concerned About Exposure?

- Some Lawn/Garden Chemicals May Pose Risks to People
 - Toxicity of many chemicals not as well studied as we'd like
 - Biomonitoring data tells us we have measurable levels of many pesticides in our bodies
 - Possible concern for cancer risks for some chemicals
 - Very high levels of exposure to some chemicals could harm immune system, nervous system, liver, reproductive system
 - Fertilizers – nitrogen can contaminate groundwater (nitrate/nitrite) used for drinking water.

Alternatives to Lawn & Garden Chemicals

- Test soil for nutrient deficiencies.
- Plant right for your site, go “native”
- Mow smart (high, sharp blade, leave clippings)
- Use organic fertilizer only if needed, only in fall
- Control grubs and other pests naturally (beneficial nematodes, milky spore, compost tea)
- Use an organic lawn care professional (no synthetic pesticides or fertilizers).



Benefits of Avoiding Lawn & Garden Chemicals

- Reduced Exposure and Risks to Environment, Pets, People
- Promote Healthier Lawn and Garden



Bottom Line

- Adjust your expectations of what a lawn is supposed to look like
- You don't need lawn and garden pesticides or synthetic fertilizers to have a nice looking lawn
- Your soil and plants will be healthier without chemicals
- You, your family and your environment will be healthier too



Resources

- Soil Nutrient Testing:
 - UConn: <https://news.extension.uconn.edu/tag/soil-test/>
 - CT Ag. Station: <https://portal.ct.gov/CAES/Soil-Office/Soil-Office/Soil-Testing-Offices-Instructions>
- CT Dept. of Energy & Env. Protection - Organic Lawn Care Website
 - <https://portal.ct.gov/DEEP/P2/Individual/Organic-Lawn-Care-For-Consumers#Better>
- NE Organic Farming Assoc. - Find an Accredited Land Care Professional
 - <https://nofa.organiclandcare.net/>
- EPA Lawn and Garden Website
 - <https://www.epa.gov/safepestcontrol/lawn-and-garden>
- National Pesticide Info Center-Health Info: <http://npic.orst.edu/health/humhealth.html>
- ATSDR Tox FAQs: <https://wwwn.cdc.gov/TSP/ToxFAQs/ToxFAQsLanding.aspx>