

Are YOU a responsible user?

Answer honestly and find out:

- Do pests even exist?
- Do you try non-toxic solutions first?
- Do you use the least amount of the correct product?
- Do you read and follow all label instructions?
- Do you protect yourself, family, neighbors, and pets?
- Do you understand the dangers to pregnant women and young children?
- Do you understand the connection between applying pesticides and contaminating air, soil or water?
- Do you know where to dispose of unused pesticides safely?
- Do you know the signs of pesticide poisoning?
- Do you know when and where others use pesticides?



It's unbelievable that...

67 million lbs. of synthetic pesticides are applied annually to home lawns; add school and golf turf and the amount rises to 73 million lbs. That equals .26 pounds of pesticide for every man, woman and child in the U.S. or 8 pounds per acre. That is three times more pesticide than farmers use!

5 billion pounds of pesticides are applied annually worldwide, 20% of them in the United States.

672 million birds are exposed annually; 67 million birds die. This is a conservative estimate.

50 pesticide active ingredients currently used in the U.S. have caused documented bird kills.

The EPA registers 890 active ingredients as pesticides, but this does not mean that they are safe or that they were tested in combinations.

103,046 cases of human pesticide exposure were reported in U.S. certified regional poison control centers in 1998. But these centers serve less than half the population and many cases are not reported since symptoms mimic flu.

Learn more about pesticides

- "The Audubon Guide To Home Pesticides" (www.audubon.org/bird/pesticides/index.html)
- The "Citizen's Guide to Pest Control and Pesticide Safety", EPA Office of Pesticide Programs, 1200 Pennsylvania Avenue NW, Mailbox 7506c, Washington DC 20460, call 703-305-5017 (www.epa.gov/pesticides)
- National Coalition Against Misuse of Pesticides (www.beyondpesticides.org/)
- The Extension Toxicology Network is science based pesticide information written for the non-expert. (www.ace.orst.edu/info/extoxnet)
- The National Pesticides Telecommunications Network, call 800-858-7378 for information, safety practices and incident investigation. (ace.orst.edu/info/nptn/index.html)

Learn more about how to reduce the use of pesticides, find alternatives, and create a healthy backyard

- Pesticide and garden tips (www.birdsource.org/GBBC/spring/garden.html)
- The Environmental Protection Agency's Biopesticides site (www.epa.gov/pesticides/biopesticides)
- Backyard Conservation 1-888-LANDCARE (www.nhq.nrcs.usda.gov/CCS/Backyard.html)
- Landscaping with native plants (www.epa.gov/greenacres)
- Native plants and gardening links (plants.usda.gov/plants/links.html)
- Native plant societies by region (www.nanps.org/associations/frame.shtml)



Hang this chart near your garden supplies as a reminder to make kinder choices.

Audubon Guide for a Healthy Yard and Beyond

More Native Plants! Less Lawn!



10 Commandments for a Healthy Yard

Think, plan and plant around the 10 Commandments. Choosing strong native trees, shrubs, and grasses is your best defense against pests and weeds. Test your soil before planting. Adjust nutrients and pH accordingly. Post a sign designating your property a Wildlife Sanctuary.

1 Go Organic

- Just say NO or limit exposure to toxic chemicals.
- Nourish with "brown gold" (compost), slow release organic rock fertilizers or limestone.

2 Make Your Turf Tough

- Use grass varieties developed for your area.
- Use sharp blades to mow 3 to 4 inches high. Short clippings decompose fast to add nitrogen instead of thatch.
- Water deeply only when needed and aerate for dense, deep roots.

3 Go Native!

- Native plants mean less care, less time, less expense.
- The more native plants in your yard, the more healthy habitats for birds and other wildlife.
- Challenge—REDUCE LAWN AREA by 25% this season.

4 Know Your Enemies

- Get a field guide to identify insects.
- Match control to pest.
- Use control only if a high number of insects exist.
- Learn life cycles so that you do not treat unnecessarily.

5 Treat Only When Necessary

- Use nontoxic methods first.
- Pick off and dispose of insects, vacuum, prune out infestations, or hose off garden plants.

6 Pick Your Pesticides

- Not all chemicals are created equal.
- "Shotgun" killers harm beneficial insects.
- Ask your lawn-care service to list pesticides used.
- Look for EPA toxicity ratings: caution (least toxic), warning, poison (most toxic).

7 Use Biological Controls or Biopesticides

- Most have very little environmental impact.
- Most decompose quickly and affect only the target pest.

What is the Stuff on Your Shelves?

Be safe. DO AN INVENTORY NOW, before you tackle pests and weeds in your yard! Pesticides create risks for birds and other wildlife. Your CHILDREN AND PETS are exposed similarly. The more commonly used pesticides listed below carry the EPA toxicity rating of caution or warning. Why risk pesticide exposure when you can try safer alternatives?

INSECTICIDES cause death by acting on the nervous system of insects. But they also poison birds, fish, and beneficial insects. Residues are left in soil, grass, air, water, and on fruits and vegetables.

| ACTIVE INGREDIENT | PRODUCT and USES | ALTERNATIVES |
|-------------------|---|--|
| Acephate | Orthene for aphids, leafminers, caterpillars, sawflies, thrips | Mail order lacewings and ladybugs for aphids. Hose down plants. Use insecticidal soaps, superior or summer oils, or yellow sticky traps. |
| Bendiocarb | Ficam for mosquitoes, flies, fleas, ants, cockroaches, ticks, silverfish, snails, slugs, wasps | Use pyrethrum for flying insects, boric acid for fleas and cockroaches, parasitic nematodes for fleas, ground level plates with beer, or lettuce leaves picked up in the heat of the day for snails and slugs. |
| *Chlorpyrifos | Dursban, Dragon, Otho-Klor for ants, crickets armyworms, ticks, mites, chinch bugs, roaches, fleas, earwigs, cutworms, grasshoppers, millipedes, sowbugs, white grubs, turf weevils | Use bait stations with diflubenzuron (Siren Termite Bait) or hexaflumeron (Sentricom) for termites, bifentazate (Floramite) for spider mites, milky spore disease for Japanese beetle grubs, <i>Beauveria bassiana</i> fungus for cinch bugs, parasitic nematodes for grubs, beetles and grasshoppers. |
| *Diazinon | Bonide Soil Granules, Knox-Out, Real-Kill for aphids, bagworms, carpenter ants, lacebugs, scale, whiteflies, fire ants, grubs, cockroaches, fleas, termites | See Chlorpyrifos above. Use insecticidal soap for aphids, whiteflies, and mealybugs. |
| Dimethoate | Cygon for caterpillars, mites, aphids, thrips, plant hoppers and whiteflies | Use superior or summer oils for mites, aphids, thrips, and whiteflies. Use <i>Bacillus thuringiensis</i> (Bt) on caterpillars (can kill beneficial insects) and pyrethrum for insects. |

* Products being phased-out and eventually eliminated .

RODENTICIDES kill rats and mice by hindering blood clotting so that internal bleeding leads to death over several days. Brodifacoum can last more than four months and is toxic to wildlife.

| ACTIVE INGREDIENT | PRODUCT and USES | ALTERNATIVES |
|-------------------|----------------------------------|--|
| Brodifacoum | d-CON, Talon-G for rats and mice | Rodent proof your house. Place cotton over peanut butter on traps. |

HERBICIDES such as 2,4-D kill broadleaf plants. Contested studies have linked 2,4-D to cancer. It is moderately toxic to birds and highly toxic to fish and aquatic plants. GLYPHOSATE causes cell death in virtually any plant. Use carefully since toxicity varies depending on formulation and exposure.

| ACTIVE INGREDIENT | PRODUCT and USES | ALTERNATIVES |
|-------------------|---|---|
| Glyphosate | Roundup for killing virtually anything green | Use better mowing techniques, mulching, hand weeding |
| 2,4-D | Scotts Turf Builder Plus 2, Weed-B-Gone for control of many broadleaf weeds | Maintain a healthy lawn by using grasses developed for your area, hand weeding, dethatching, aerating. Add native plants and reduce lawn. |

8 Follow Directions and Protect Yourself

- Read labels before you buy or use a product.
- Always wear protective clothing while mixing and applying.
- Never use more than recommended. Remember—LESS IS BEST for survival of beneficial insects!
- Do not apply pesticides in windy conditions, near water sources, people, pets or wildlife habitat.
- Learn signs of pesticide poisoning.

9 Respect Your Neighbor's "Right to Know"

- Notify your neighbor before using pesticides that could drift, remain active on lawn areas, or settle in water. Children and pets are easily exposed and can take residues into homes.
- Ask neighbors and lawn services to do the same.
- Contact local municipalities to learn what, where, and when chemicals are used.
- Ask decision makers to consider safer alternatives.

10 Teach Tolerance and Be Tolerant

- Create natural yards with a variety of pests, predators, weeds, wildlife and native plant species.
- Plant bird and wildlife habitat.
- Enjoy controlled untidiness, not time-consuming lawn maintenance.
- Show by doing.
- Encourage neighbors to build continuous habitat from yard to yard.

Important Phone Numbers:

Cooperative Extension for safe disposal sites:

Poison Control Center:

Wildlife Rehabilitator:

Native plant retailer: