

Pesticides and Birds

International Migratory Bird Day (IMBD)



Set on the second Saturday in May, IMBD is an invitation to celebrate and support migratory bird conservation.

Despite the ban on notorious insecticides such as DDT and the passage of laws to regulate pesticide production and use, birds still suffer from pesticide exposure in this country. Each year, approximately 672 million birds are directly exposed to pesticides on farmlands in the United States, and of these, about 10 percent, or 67 million birds, are estimated to die immediately as a result. This figure does not include birds that perish after a period of illness, that die after feeding on poisoned insects, rodents, or other prey, or losses due to failed reproduction (eggs left unhatched or nestlings left to starve). The impact on birds from pesticide use in areas other than farmlands is unknown.

Pesticides may be linked to long-term declines in raptors (birds of prey) and other bird species populations. Pesticide-related mortality of raptors has been reported throughout the United States, including that of red-tailed hawks, screech-owls, great horned owls, sharp-shinned hawks, snowy owls, Cooper's hawks, Mississippi kites, and Swainson's hawks. Several species of songbirds have also experienced die-offs. The number of birds lost in a poisoning event can only be estimated; biologists believe that for each bird carcass found and reported, approximately 100 others are never found.

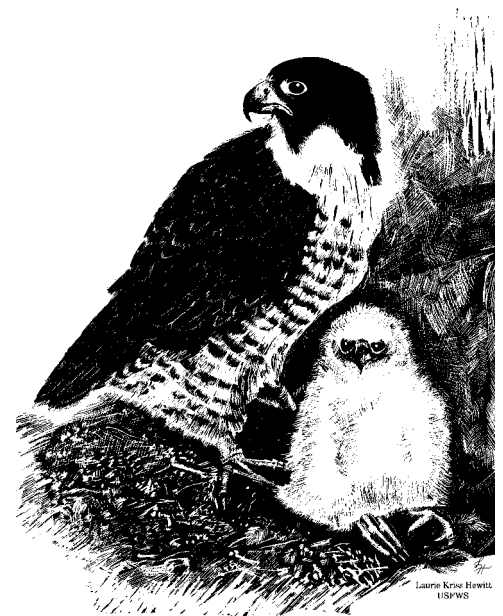
Pesticide exposure can be an even more serious problem in countries where migratory birds spend their winters. Regulations on the types and quantities of pesticides used in Latin American nations are often less strict than those set in the United States by the Environmental Protection Agency. In 1995 and 1996, 20,000 Swainson's hawks, an estimated 5 to 10 percent of the world population, were killed from pesticide poisoning in the agricultural pampas region of Argentina.

Since World War II, the manufacture and use of pesticides in the United States has increased ten-fold. Based on 1997

data, approximately 4.5 billion pounds of chemicals are used as active ingredients in pesticides each year in the United States.

An additional 338 million pounds of pesticides were exported from the United States in 1995 and 1996 alone. Pesticide exports include many chemicals that have been banned, or severely restricted, in the United States, including DDT. Nearly a third of the total exports go to Latin American nations.

Many legal pesticides have been shown to harm birds. About 40 pesticides, most of which can be used in the United States, are known to kill birds even when applied according to label instructions. The chemical compounds most often implicated in bird kills are organophosphorus and carbamate



Raptors are particularly vulnerable to negative impacts from rodenticides (pesticides used to control rodents). Since these birds are opportunistic feeders—they will eat animals found dead or dying—raptors are readily exposed through the ingestion of poisoned rodents.

insecticides (e.g., parathion, diazinon, aldicarb, and carbofuran), which disrupt a bird's nervous system, eventually resulting in respiratory failure and death.

What Can You Do?

Homeowners play a major role in pesticide consumption. In a 1992 National Home and Garden Pesticide Use Survey, more than 63 percent of the households surveyed had 1 to 5 pesticides in storage. Moreover, homeowners use up to 10 times more chemical pesticides per acre on their lawns than farmers and spend more per acre, on average, to maintain their lawns than farmers spend per acre on crops.

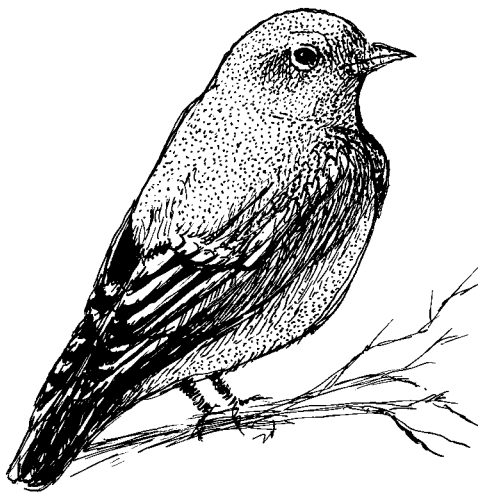
Fortunately, homeowners have many opportunities to lessen the impacts of pesticides on birds and minimize bird deaths.

Reduce your dependence on pesticides. Practice prevention and minimize the build-up of pests, thus reducing the need for pesticides. Move piles of wood away from the house and elevate them off the ground; clear away litter, garbage, and pet droppings; and provide good drainage to prevent standing water that will attract pests such as mosquitoes.

Plant native grasses, shrubs, and trees. This will help decrease the need for fertilizers and watering, as well as pesticides, because native plants are often hardier than non-native plants and less susceptible to pests and disease. Contact your County Cooperative Extension Service for help in identifying native plants for your region.

Put an assortment of plants in your yard to increase biological diversity and encourage a variety of beneficial organisms that provide natural pest control. Also, rotate the plants in your annual garden to reduce pest buildup and maintain soil quality.

Grow plants that are natural insect repellents, such as lemon balm, among your flowers and vegetables to help keep unwanted insects away.



Attracting wild birds is a good, safe way to combat pests.

Attract birds. Birds play an important role in pest control. Even leaf-eating birds prefer nutritious insects when building strength for parenthood. In fact, insects are a major part of many songbirds' diets. Design your yard to provide ample food, cover, and shelter for birds, and place a birdbath in the center of your garden. (Birds can usually find enough food, but adequate water is often hard to come by.)

Choose non-chemical controls whenever possible. In your garden, try mulching to avoid weed growth, and spading, hoeing, or pulling up weeds. For your lawn, mow frequently and set your mower at 2 to 3 inches. This encourages a healthier, thicker lawn better able to survive drought, tolerate insect damage, fend off disease, and shade out weeds that are attempting to germinate and grow.

Use selected pesticides and apply them carefully. If you must use a chemical pesticide, use one that is specifically registered for your needs and has the least environmental impact. Apply it in a controlled and localized manner to help prevent contamination of surrounding areas by aerial drift, runoff, or other means. Contact your County Cooperative Extension Service or local nursery for help in identifying pesticides that most closely meet these criteria. Always closely read and follow the directions on the product label when applying pesticides. Be aware that many "organic" pesticides may be just as toxic as synthetic pesticides.

Properly dispose of surplus pesticides according to product labels or by checking with local solid waste management authorities.

Learn more. Information on least-toxic alternatives to pesticides is widely available in books and magazines on organic gardening, which can be found at local libraries and at home and garden centers. The Internet is also a good source of information. Try these sites:

The U.S. Fish & Wildlife Service's Environmental Contaminants Program at <http://contaminants.fws.gov>.

The Natural Resource Conservation Service's Backyard Conservation at www.nhq.nrcs.usda.gov/CCS/Backyard.html.

The Natural Resource Conservation Service's Lawn and Garden Care at www.ncg.nrcs.usda.gov/lawn.html.

The U.S. Environmental Protection Agency's Office of Pesticide Programs at www.epa.gov/pesticides.

**For more information, contact:
U.S. Fish & Wildlife Service
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