Songbirds and Chemical Pesticides Can Be A Risky Combination

RCC HOMEOWNER ALERT
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Summary: Residential pesticide use can adversely impact songbirds. Details of the USEPA methods for estimating pesticides' risks to wildlife as well as disclosures from a 2013 Congressional Briefing on birds and insecticides are provided here. This information raises questions about applications of chemical pesticides to places where birds are welcome guests.

Many homeowners care deeply about bird visitors to their feeders, nest boxes, and bird baths. Providing seeds for different species and nectar for hummingbirds are important ways of connecting with wildlife. Homeowners have cultivated winterberry, holly, beautyberry, serviceberry and other plantings for birds, in addition to making available nourishing seeds and fresh water. Concerned residents can further protect feathered guests by ensuring they are not exposed to dangerous chemicals released into the birds' natural environment for weed, insect or even rodent control. *(Note: Certain anticoagulant rodenticides sold as granules are potentially hazardous since birds may mistake them for grit or food)*

Enforcement of federal legislation provides very limited protection of songbirds from chemical pesticide poisoning. In a recent announcement that outraged environmentalists and others , the Scotts Company acknowledged selling seeds intended for wild birds that had been illegally coated with two toxic chemical insecticides (that killed some birds) to keep insects from destroying the seeds. Action taken by the federal government against the company involved a fine (Parsons, S., "Scotts Miracle-Gro Pleads Guilty to Breaking Federal Pesticide Law," Environmental News Service 3-15-12)

In the previous example the law was effective in protecting some birds from pesticide poisoning. It must be recognized, however, that lawful applications of any chemical pesticide can involve hazards to wildlife.[1] Due to the conditions under which pesticides are registered (the so-called risk/benefit evaluation) use of a pesticide can be legal (according to the label) but not safe for songbirds and others.[2]

"The EPA's ecological risk assessments [for wildlife] often show that legal applications of certain pesticides will almost certainly kill non-target species that happen to be nesting, feeding, flying or swimming in and around treated farm fields...in the real world of pesticide regulation, birds, fish, and bees are expendable."

(Dr. C. Benbrook, *Pesticides News* 82, Dec 2008)

Pesticides can be hazardous to birds in ways other than direct killing.

There is the loss of vegetation needed by birds for feeding, nesting and protection from predators. These benefits have been reduced by use of chemical herbicides.

Use of chemical insecticides has resulted in the loss of the diverse insect population needed as food for young birds.

No matter what they consume as adults all birds need to have a diet rich in insects while they are developing. If these are not readily available to the parents the young birds will not thrive.

One third of our nation's 800 bird species are endangered, threatened or in significant decline, according to the 2010 "State of the Birds Report." Secretary of the Interior Salazar remarked in his announcement of the Report, "Just as they did in 1962 when Rachel Carson published *Silent Spring*, our migratory birds are sending us a message about the health of our planet."

Where are the data showing that pesticides harm birds?

A 2013 study by prominent wildlife toxicologist, Dr. Pierre Mineau (presented at a Congressional Briefing) identified pesticides as the most likely leading cause of the widespread decline in grassland bird numbers challenging the widely held assumption that loss of habitat is the primary cause of population declines.

His study further suggests that we need to rein in the use of lethal pesticides...and that we need to be especially careful about any new pesticide we introduce into these ecosystems such as the neonicotinoid insecticides. Why? "...Neonicotinoids are lethal to birds as well as to the aquatic ecosystems on which they depend".[3]

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"A single corn kernel coated with a neonicotinoid can kill a songbird."

Even a tiny grain of wheat or canola treated with the oldest neonicotinoid, imidacloprid, can poison a bird.

With... neonicotinoids, as little as 1/10th of a corn seed per day during egg-laying season is all that is needed to affect reproduction

...EPA risk assessments have greatly underestimated this risk..." (Mineau and Palmer, p.3 "The Impact of the Nations' Most Widely Used Insecticides on Birds: Neonicotinoid Insecticides and Birds" ABC, March 2013)

Neonicotinoids have the potential to adversely affect other natural resources, as described by Dr. Mineau, as follows. "The environmental persistence of the neonicotinoids, their propensity for runoff and for groundwater infiltration, and their cumulative and largely irreversible mode of action in invertebrates raise environmental concerns." (Mineau and Palmer, p.3, "The Impact of the Nations' Most Widely Used Insecticides on Birds: Neonicotinoid Insecticides and Birds" ABC, March 2013)

In August 2013, USEPA took limited action to help protect bees from neonicotinoid insecticides.[4]

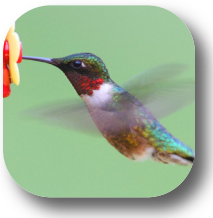
The neonicotinoid insecticide imidacloprid has been widely used on lawns and gardens in 2013. (Other neonicotinoids are: dinotefuran, clothianidin, thiamethoxan)

The herbicide 2,4-D is another widely-used chemical that may be hazardous to birds. For certain birds the 2,4-D is acutely toxic. In addition it has been found to decrease avian egg production. (Briggs, S., *Basic Guide to Pesticides*, 1992)

The pyrethroid insecticide bifenthrin is used on lawns and gardens for mosquito control. It has been associated with bird kills (Post & Schreiber, "35 Insecticides Used Around Dogs and Cats" 2010) although it is considered moderately toxic to birds (Briggs, S., *Basic Guide to Pesticides*, 1992). It is however, highly toxic to fish, crustaceans and other aquatic organisms that birds depend on for food. (Briggs, S., *Basic Guide to Pesticides*, 1992)

What can those who care about birds do to protect them and their habitats from pesticides' hazards?

Avoid using any chemical pesticides where birds are welcomed, since we have shown that adverse effects to birds are not avoidable where such products are applied. Instead homeowners can rely on nature's services such as biologicals and non-chemical practices for cosmetic pest control and preventive maintenance. See RCC website for details. http://www.rachelcarsoncouncil.org/index.php?page=low-risk-pest-management.



To be certain of first doing no harm to wild feathered guests around the home use toxic chemical pesticides only as a last resort or better still avoid them completely.

An Example:

For mosquito control plant lantana around the home, use garlic pellets as an outdoor mosquito repellant, use electric fans as outdoor repellants, use *B.t.* dunks or granules in rain barrel water to keep mosquito larvae from developing into adults. For personal protection from mosquitoes outdoors wear long sleeve shirts, long pants, apply a repellant composed of lemon eucalyptus oil to exposed skin. Avoid having standing water outdoors. See RCC website for details. http://www.rachelcarsoncouncil.org/index.php?page=mosquitoe-breeding-site-prevention.

When considering how to control a pest in the yard or garden be guided by our grandmothers' words: *"Beauty Is as Beauty Does"*

Risking harm to birds is not the best or only way to achieve a blemish-free ornamental plant or a weed-free lawn.

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FOOTNOTES:

1 USEPA policy does not allow pesticide manufacturers to label their products as "safe." "Federal law specifically prohibits manufacturers of pesticides from labeling their products as "safe, non-poisonous, non-injurious, harmless or non-toxic, "even when accompanied by a qualifying phrase such as "when used as directed"'(40CFR:162.10(a)(5)(ix) A 2003 court case brought against Dow Chemical following illegal safety claims for its insecticide, chlorpyrifos was settled for $2 million...(RCC's "Issues & Insights October 2004")

2 A certain level of risk to wildlife is allowed under the legal requirements for registration of a pesticide. The evaluation standard for environmental/wildlife risk used by the USEPA is "[pesticide use] will not pose an unreasonable risk to the environment." Regulators are required to balance the risk to wildlife against the benefits of using the pesticide. (RCC News #92)

3 Rates of pesticide applications for non-agricultural areas can be greater than those for farm fields. A dose of the insecticide imidacloprid for residential use was found over 30 times greater than for agricultural use. (pers. com. Scott Hoffman Black, 3-19-13)

4 Responding to an incident where over 50,000 bumble bees were killed by a the neonicotinoid insecticide, dinotefuran and growing evidence of similar chemicals' dangers to pollinators, the USEPA has required products containing four neonicotinoids (imidacloprid, dinotefuran, clothianidin and thiamethoxam) to include the warning "This product can kill bees and other insect pollinators." Applications of the 4 insecticides are prohibited in non-agricultural settings when bees are foraging and targeted plants are flowering. See RCC website for details. http://www.rachelcarsoncouncil.org/index.php?page=action-to-protect-pollinators.