



Article 133

Technical Note #57 from *Watershed Protection Techniques*. 1(5): 278-281

Insecticide Impact on Urban and Suburban Wildlife

Homeowners tend to have two conflicting goals. On the one hand, they want to attract wildlife to their property. At the same time, they take great pains to kill bugs that may be eating their lawns and gardens. What many homeowners don't realize is that insecticides can have a serious, even fatal effect on wildlife, especially birds. Insecticides also harm beneficial insects and worms.

The damage is bound to be variable, depending on the kinds of birds and insects involved and the application rate. This variability, rather than reassuring us, calls for much more conservative use of lawn chemicals and some consideration by homeowners about whether insecticides should be used if they also want to prevent wildlife from being poisoned. We have seen how lawn chemicals in runoff impact water quality. The effect of

these chemicals on local wildlife is another reason for reducing their use.

Residual amounts of insecticides that were once thought to be "safe" but have since been discontinued continue to pose a threat to local ecology. Until and unless studies show that pesticides currently in use have little effect on "desired" turf insects and the animals that feed on them, a less chemically dependent approach to landscaping is warranted.

What Chemical Insecticides Do

The insecticides examined here fall into two basic categories (Table 1). Organochlorines—such as chlordane and dieldrin—have various lethal and sublethal effects on animals. Organophosphates—such as diazinon and chlorpyrifos—inhibit the brain enzymes

Table 1: Some Chemical Insecticides

Chemical	Trade Names	In Use?	Toxicity
<i>Organophosphates</i>			
diazinon	Basudin, Diazol, Garden Tox, Sarolex, Spectracide	Banned on golf courses but permissible on residential turf. Pooling, spillage, overapplication occurs	Paralysis or death from depressed ChE activity; toxic to humans
chlorpyrifos	Dursban, Lorsban, Pyrinex	Yes	Moderate toxicity
acephate	Orhtene	Yes	Contact and systemic
<i>Organochlorines</i>			
dieldrin	Octalox	Discontinued in US	Toxic to humans, absorbed through skin
heptachlor (component of chlordane)	Velsicol, Drinox, Heptamul	Discontinued except as subsurface termeticide	Toxic to humans, poisoning from ingestion, inhalation, skin contact
chlordane	Toxichlor, Octachlor, Synklor, Corodane, Niran	Discontinued except as termeticide	Poisoning from ingestion, inhalation, skin contact