

Environmental Effects of 30 Commonly Used Lawn Pesticides

A Beyond Pesticides/NCAMP Fact Sheet

Pesticide	Detected in Groundwater	Potential Leacher	Toxic to Birds	Toxic to Fish/Aquatic Organisms	Toxic to Bees	Endocrine Disruptor
Insecticides						
Acephate		X ¹	X ²		X ²	
Carbaryl*	X ¹	X ¹		X ²	X ²	X ³
Chlorpyrifos [^]	X ⁴	X ⁴	X ²	X ²	X ¹	
Dichlorvos (DDVP)		X ¹	X ¹	X ²	X ¹	
Malathion*	X ¹	X ¹	X ¹	X ¹	X ¹	SUSPECT ⁵
Trichlorfon		X ²	X ²	X ¹		
Herbicides						
Atrazine	X ¹	X ²		X ²		KNOWN ⁵
Benfluralin* (Benefin)	X ⁶		X ²	X ²		
Bensulide			X ²	X ¹	X ¹	PROBABLE ⁵
2,4-D*	X ⁶	X ⁷	X ¹	X ¹	X ¹	X ³
DSMA (Disodium Methanearsonate)			X ⁸	X ⁸	X ⁸	
Dacthal (DCPA)*	X ⁴	X ²		X ²	X ⁹	
Dicamba*	X ⁴	X ¹⁰	X ¹¹	X ⁴		
Endothall		X ¹		X ¹		
Glyphosate*				X ¹		
Isoxaben		X ¹²	X ¹¹			
MCPA	X ⁷	X ¹	X ²		X ¹¹	
MCPP (Mecoprop)*	X ⁷	X ¹		X ⁴		
MSMA		X ⁷	X ⁸	X ⁸	X ⁸	
Pendimethalin*	X ²			X ²		X ¹³
Pronamide	X ⁶	X ²		X ²		X ^{1, 2}
Siduron						
Triclopyr	X ⁴	X ²		X ²		
Trifluralin	X ¹			X ²		PROBABLE ⁵ , X ³
Fungicides						
Chlorothalonil	X ⁴	X ²		X ²		
Maneb		X ⁷		X ¹		PROBABLE ⁵ , X ¹³
PCNB (Quintozene)	X ¹	X ¹	X ¹¹	X ¹		
Sulfur		X ¹				
Triadimefon	X ⁷	X ¹	X ¹¹			X ¹³
Ziram		X ⁷	X ¹	X ¹¹		SUSPECT ⁵ , X ¹³
TOTAL	17	23	16	24	11	11

X = Adverse effect demonstrated.



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Source: List of chemicals compiled by Beyond Pesticides from information provided by the General Accounting Office 1990 Report, "Lawn Care Pesticides: Risks Remain Uncertain While Prohibited Safety Claims Continue," U.S. Environmental Protection Agency (EPA) National Pesticide Survey (1990), *Farm Chemicals Handbook* (1989), The National Home and Garden Pesticide Use Survey by Research Triangle Institute, NC (1992), multiple state reports, current EPA Environmental Impact Statements and Risk Assessments, and EPA national sales and usage data.

^ Banned for residential use in 2001, still permitted for use on golf courses and for public mosquito control.

* These pesticides are among the top 10 most heavily used pesticides in the home and garden sector, according to the latest sales and usage data available from EPA (2001).

¹ Extension Toxicology Network (EXTOXNET) Pesticide Information Profiles, <http://ace.orst.edu/info/extoxnet/ghindex.html>.

² U.S. EPA. Office of Pesticide Program Reregistration Eligibility Decisions (REDs), Interim REDs (iREDs), and RED factsheets. <http://www.epa.gov/pesticides/reregistration/>.

³ Colborn, T, et al., 1994. "Developmental Effects of Endocrine-Disrupting Chemicals in Wildlife and Humans," *Environmental Impact Assessment Review*, vol. 14, pp. 469-489.

⁴ Northwest Coalition for Alternatives to Pesticides. Pesticides Factsheets. <http://www.pesticide.org/factsheets.html>.

⁵ Illinois Environmental Protection Agency. *Endocrine Disruptors Strategy*. February 1997.

⁶ USGS, 1998. Pesticides in Surface and Ground Water of the United States: Summary of Results of the National Water Quality Assessment Program (NAWQA). NAWQA Pesticide National Synthesis Project. <http://ca.water.usgs.gov/pnsp/allsum/#gw>.

⁷ National Library of Medicine, TOXNET, Hazardous Substances Database, <http://toxnet.nlm.nih.gov/>.

⁸ U.S. EPA. 1995. Monosodium Methanearsonate and Disodium Methanearsonate; Toxic Chemical Release Reporting; Community Right-to-Know. Federal Register Environmental Documents. <http://www.epa.gov/fedrgstr/EPA-TRI/1995/April/Day-20/pr-13.html>.

⁹ Tew, JE, 1996. Protecting Honeybees from Pesticides. Ohio State University Cooperative Extension. <http://beelab.osu.edu/factsheets/sheets/2161.html>.

¹⁰ Beyond Pesticides ChemWatch Factsheets, <http://www.beyondpesticides.org/pesticides/factsheets/index.htm>.

¹¹ Briggs, S.A. 1992. *Basic Guide to Pesticides: Their Characteristics and Hazards*. Washington, Dc: The Rachel Carson Council, 98.

¹² The Pesticide Management Education Program at Cornell University. Pesticide Active Ingredient Information. <http://pmep.cce.cornell.edu/profiles/index.html>.

¹³ Colborn, T, D Dumanoski, and JP Myers, 1996. *Our Stolen Future: Are We Threatening Our Fertility, Intelligence and Survival?* New York: Dutton. <http://www.ourstolenfuture.org/Basics/chemlist.htm>.