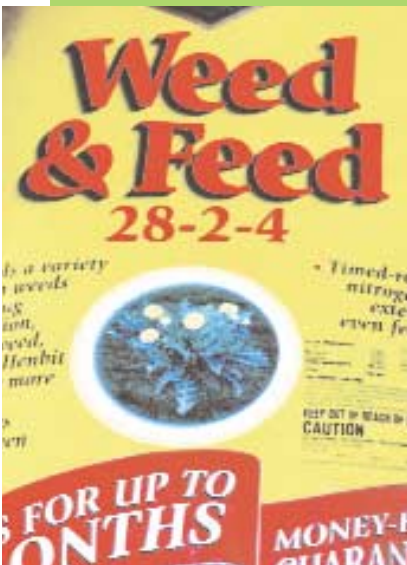


1.



“Homeowners use up to 10 times more chemical pesticides per acre on their lawns than farmers use on crops.”⁴
— U.S. Fish and Wildlife Service



Summary of Findings

PESTICIDE USE

- EPA permits over 200 different pesticides to be used for lawn care, and these are often mixed together and sold as chemical combinations.
- Approximately 35 pesticides are used in over 90 percent of lawn treatments.¹
- Nearly 80 million pounds of pesticide active ingredients are used on U.S. lawns annually.²
- Lawns cover 30 million acres of the U.S. and the industry that has evolved to take care of lawns is now a multibillion-dollar business.³
- The U.S. Fish and Wildlife Service reported that “homeowners use up to 10 times more chemical pesticides per acre on their lawns than farmers use on crops.”⁴ Homeowners applying their own pesticides may be directly exposed to the chemicals through inhalation, dermal (skin) exposure, and/or ingestion.
- Statistics on the amount of lawn-care chemicals used in Connecticut are not available. Environment & Human Health, Inc. found in an earlier study that among homeowners interviewed, 72 percent used pesticides on their lawns and/or trees.⁵

PESTICIDE HEALTH EFFECTS

- Pesticides are intentionally toxic substances. Some chemicals commonly used on lawns and gardens have been associated with birth defects, mutations, adverse reproductive effects, and cancer in laboratory animals.
- Children, infants, and fetuses may be especially vulnerable to the health effects of pesticides before the age of five, when their cells are normally reproducing most rapidly.

RISKS FROM LAWN-CARE PESTICIDES

- Children may be more susceptible to loss of brain function if exposed to neurotoxins, and may be more susceptible to damage to their reproductive systems.⁶
- Lawn-care pesticides are not tested for their chronic health effects, unless they are also licensed for food uses.⁷ The third most heavily used herbicide in the U. S., MCPP, has not been fully tested for chronic health effects since it is not allowed for use on foods. MCPP is commonly found in weed and feed products.
- EPA has tested only nine of 750 registered pesticides for their effects on the developing nervous system; six of the nine tested were more harmful to young animals than adults.⁸
- Pesticides are composed of active ingredients and inert ingredients. Some inert ingredients may be more toxic than active ingredients and can comprise 90 to 95 percent of the product. Some inert ingredients are suspected carcinogens, while others have been linked to central nervous system disorders, liver and kidney damage, birth defects, and some short-term health effects.⁹
- Increased odds of childhood leukemia, brain cancer and soft tissue sarcoma have been associated with children living in households where pesticides are used.¹⁰ Other childhood malignancies associated with pesticide exposures include neuroblastoma, Wilms' tumor, Ewing's sarcoma, non-Hodgkin's lymphoma, and cancers of the brain, colorectum, and testes.¹¹
- Nearly 100,000 accidental pesticide exposures are reported to poison control centers each year. Many of these exposures involve children, providing clear evidence that current efforts to protect children by manufacturers and others are inadequate.
- By-products of the insecticide chlorpyrifos were found in 93 percent of urine samples taken from children ages three to 13.¹² In a separate study, 99 percent of 110 Seattle area children ages two to five had detectable levels of organophosphate residues in their urine.¹³



Increased odds of childhood leukemia, brain cancer and soft tissue sarcoma have been associated with children living in households where pesticides are used.¹⁰





96 percent of all fish analyzed in major rivers and streams contained residues of one or more pesticides at detectable levels.
—*United States Geological Survey*



ECOLOGICAL EFFECTS

- Nearly 30 million acres of lawn are routinely treated with lawn-care chemicals. Some of these treated lawns may be toxic to birds. Recent Canadian studies found that between three and 14 bird deaths may occur due to pesticides per acre of farmland. It only takes one granule of diazinon to kill a bird.¹⁴ Recent testing of dead birds for the West Nile virus by the State of New York found that birds had commonly died from pesticide poisoning. Lawn-care pesticides were found to be among the most common causes of death among the birds tested.¹⁵
- The U.S. Geological Survey found that 96 percent of all fish analyzed in major rivers and streams contained residues of one or more pesticides at detectable levels.¹⁶
- Pesticides have been identified as a potential cause of amphibian declines and deformities and have been implicated as one of the reasons that wild and managed pollinators are disappearing at alarming rates.¹⁷

PESTICIDES IN WATER

- Most lawn-care chemicals have the potential to contaminate underlying groundwater. The top five selling lawn-care pesticides, 2,4-D, glyphosate, MCPP, dicamba, and diazinon, are all listed by the State of California as having the potential to contaminate groundwater based on their physical and chemical characteristics.¹⁸
- Studies of major rivers and streams have documented that 100 percent of all surface water samples contained one or more pesticides at detectable levels.¹⁹
- While pesticides are heavily used in Connecticut, neither groundwater nor surface water monitoring is routinely conducted by the State of Connecticut to detect contamination.
- Homeowners may unknowingly contaminate their own well water by using pesticides on their lawns. Factors that influence a pesticide's potential to contaminate water include physio-chemical factors, environmental factors, application methods and other practices associated with the pesticide use.

RISKS FROM LAWN-CARE PESTICIDES

- Only two of the top five lawn-care pesticides, 2,4-D and glyphosate, are regulated under the Safe Drinking Water Act, despite governmental acknowledgement of the intensity of effects of their release on the environment, and their potential to leach into groundwater supplies.
- Pesticides—especially herbicides—have contaminated drinking water throughout the country. Removing pesticides from contaminated water supplies is difficult, expensive, and not always successful. A California study found that among 600 water suppliers that have detected pesticides in their water sources, only 40 use treatment facilities that effectively reduce concentrations of pesticides.²⁰ Another expert estimated that it cost an average of \$3,000 per well to rid it of pesticide contamination using filtration.²¹

PESTICIDE PACKAGING, LABELING AND SALES

- EHHI surveyed 18 stores in Connecticut and found that most stores displayed pesticide packages with visible tears or rips. Their contents had visibly contaminated store shelves, floors, and storage areas.
- The packaging of many lawn-care chemicals is porous, releasing vapors from the chemicals into nearby air. These vapors are easily detected by sense of smell, and often contaminate indoor air where sold.
- The risks of long-term health effects, such as cancer and neurotoxicity, are not reported on product labels. Only summaries of acute toxicity are required on labels.
- Pesticide labels do not provide the consumer with sufficient warning and instruction regarding the toxicity of contents, pesticide potential to contaminate water supplies, effects on fish and wildlife, and proper handling and disposal.
- Pesticide labels claim product benefits in multicolored letters often several inches high. Warning information, directions for safe use and disposal are commonly displayed in minute type on the backs of 25-pound packages.



EHHI surveyed 18 stores in Connecticut and found that most stores displayed pesticide packages with visible tears or rips.



RISKS FROM LAWN-CARE PESTICIDES



Some pesticides commonly used on lawns and gardens in Connecticut...have been banned or restricted in other countries because of concerns about health effects. Many Canadian municipalities have banned or severely restricted the use of lawn-care pesticides.



- Some lawn and garden packages require you to remove a plastic wrapping to access multi-paged warnings about product ingredients, often printed in minute type.
- Pesticides are commonly sold in stores that also sell food and other consumer products.

PESTICIDE REGULATIONS

- Current laws and regulations do not demand safe and effective pesticide packaging that ensures proper containment of the product throughout the process of shipping, storage, sale, and disposal.
- The Connecticut Commissioner of Environmental Protection holds the exclusive authority to regulate “pesticide spraying” on private lands in the state, depriving local governments of the right to restrict pesticide use on private property.²²
- Local governments do have the legal authority to limit the use of pesticides on public lands, such as parks, highway rights-of-way, schools and other grounds.
- Some pesticides commonly used on lawns and gardens in Connecticut, including 2,4-D, MCP, dicamba, and diazinon, have been banned or restricted in other countries because of concerns about health effects.
- A number of cities in North America have restricted pesticide use on public lands or limited the uses and types of pesticides.
- Many Canadian municipalities have banned or severely restricted the use of lawn-care pesticides. The Province of Quebec recently set “the highest standards in North America to decrease exposure to pesticides”²³ when it prohibited some commonly used lawn care pesticides (including 2,4-D and MCP) from use on public lawns. These pesticides will be prohibited from use on private and commercial lawns in 2006.²⁴