



the food we eat

AN INTERNATIONAL COMPARISON OF PESTICIDE REGULATIONS

PESTICIDES AND HUMAN HEALTH

Pesticides are among the most widely used chemicals in the world and all Canadians carry pesticide residues in their bodies. Based on information compiled by provincial poison control centres, thousands of Canadians, predominantly children, are acutely poisoned by pesticides each year.

The health concerns associated with chronic exposure to pesticides include increased risk of cancer, organ damage, birth defects, and neurological impairments such as Alzheimer's disease. In July 2006, a study published in the *Annals of Neurology* looked at the relationship between pesticide exposure and Parkinson's disease in more than 140,000 people. Exposure to pesticides – even at low levels – increased the likelihood that an individual would suffer from Parkinson's disease by 70 per cent compared to individuals not exposed to pesticides.

A COMPARISON OF PESTICIDE REGULATIONS

This report compares Canada's pesticide regulations with similar standards in the United States, Europe, and Australia, as well as the recommendations published by the *Codex Alimentarius Commission* – the single most important international reference point for developments associated with food standards.

The report evaluates three areas of government activity related to pesticide use: registering pesticides for specific uses; setting maximum residue limits (MRLs) for pesticides on food; and monitoring the food supply for pesticide residues.

- Registration data provide information on pesticides that are eligible for legal use in a given jurisdiction. If the government does not register a pesticide, it cannot be used legally. Registration data from Canada, the U.S., and Europe were analyzed to determine how many pesticides banned by other nations for health and environmental reasons are still registered and used in Canada.
- Maximum residue limits regulate the amounts of specific pesticides that are allowed to contaminate particular foods. Canadian MRLs were compared with MRLs established by the U.S., the European Union, and Australia, as well as recommendations made by *Codex*.



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- Finally, Canadian data on the levels of pesticide residues found on food products, particularly fresh fruit and vegetables, were compared with the U.S. and the United Kingdom.

FALLING BEHIND THE PACK

This report provides compelling evidence that Canadian regulations governing the use of pesticides and the potential impact of pesticides on food and health are among the weakest in the industrialized world. At least 60 active ingredients, used in 1,130 pesticide products available in Canada, have been banned in other western industrialized nations. Among these pesticide products are some of the most heavily used agricultural and home and garden pesticides in Canada (e.g. atrazine and 2,4-D). In addition, pesticides such as imidacloprid, which are not banned but are subject to severe restrictions in other nations (e.g. France), continue to be widely used in Canada.

Maximum residue limits for pesticides on food are generally weaker in Canada than the standards established by the U.S., the European Union, and Australia. Maximum residue limits in Canada are significantly weaker than the European Union standards in 30 out of 32 cases examined. For pesticides containing permethrin – used on leaf lettuce and spinach – the Canadian limit is 400 times higher (i.e. weaker) than the European limit.

Canadian authorities report that they detect pesticide residues on 10 per cent of fresh fruit and vegetables, whereas American and British governments report detecting pesticides on 76 per cent and 40 per cent respectively. It is difficult to believe that fruits and vegetables in Canada are so much cleaner than produce in the U.S. or the U.K., especially when a substantial proportion of Canadian produce is imported from the U.S. Although beyond the scope of this report, this inconsistency merits further investigation.

LEADING THE WAY IN THE FUTURE

The David Suzuki Foundation believes that Canadians should enjoy a level of protection from environmental threats that is equal to or better than the highest standard enjoyed by the citizens of other industrialized nations.

Reducing the use of the most hazardous pesticides will reduce the risks to both human health and the environment, and reduce health care expenses and other societal costs.

In order to close the gap between Canadian pesticide regulations and the standards in the U.S., the E.U., and Australia, and to reduce the adverse effects on human health and the environment, the David Suzuki Foundation offers eight key recommendations to the federal government, summarized below and explained in more detail in the report:

RECOMMENDATION 1: Terminate the registration of pesticide products where the active ingredient has been banned in another OECD nation because of health or environmental concerns.

RECOMMENDATION 2: Review all maximum residue limits for pesticides on food to ensure that Canadian standards are equal to or higher than the strongest protection enjoyed by citizens of another OECD nation.

RECOMMENDATION 3: Remove the GST exemption for agricultural pesticides and impose a special charge on pesticides to finance programs that assist farmers in reducing pesticide use.

RECOMMENDATION 4: Ban the use of pesticides for cosmetic purposes (e.g. on lawns and playgrounds).

RECOMMENDATION 5: The Auditor General of Canada should conduct an investigation into Canadian reporting of detectable pesticide residues.

RECOMMENDATION 6: Establish a national environmental health tracking system that includes pesticide poisonings.

RECOMMENDATION 7: Address knowledge gaps by investing in research programs and bio-monitoring of the Canadian population

RECOMMENDATION 8: Recognize that Canadians have the right to live in a healthy environment.



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