

[Science matters: the dark side of spring](#)

by David Suzuki

Spring is a time of rejuvenation and rebirth, but it also has a darker side it's the start of pesticide season in Canada. Every spring, people across the country purchase vast quantities of toxic chemicals and spray them on lawns and gardens to remove undesired insects and weeds like pesky dandelions. In Canada alone, sales of insecticides, herbicides and fungicides top \$1-billion annually.

The federal regulations that govern these chemicals are now under review because they are in desperate need of an overhaul. Nearly a third of the ingredients in common Canadian pesticides were approved before 1960, when little was known about their long-term effects and standards were less strict. Further, the regulations are based on exposures for average-sized adult males and fail to take into account the greater vulnerability of children and women.

Children in particular absorb larger quantities of pesticides for their size. A study last fall by the Ontario College of Family Physicians found that pesticides posed an undeniable risk to Canadian children, particularly to children living near farms that use pesticides, Inuit children, and those living in housing that is sprayed with insecticides to control cockroaches and other pests.

Around the world, use of these chemicals has increased 33 fold since 1942! In Canada, an apple may be sprayed with up to 16 different chemicals before it reaches the consumer. According to government statistics, pesticide residues on Canadian food have doubled since 1994.

Many of these chemicals are linked to cancers such as Non-Hodgkin's lymphoma, which has increased by 73 per cent in the U.S. since 1973. A 1987 study published in the U.S. *Journal of the National Cancer Institute* reported that children whose parents commonly used pesticides in their homes and gardens were seven times more likely to get leukemia.

Some of the more potent of these chemicals also bioaccumulate up the food chain and end up in toxic amounts in marine mammals. And pesticides are thought to play a role in a rash of frog deaths and deformities seen around the globe in recent years.

Some food crops have been genetically modified to have insect resistance built-in and have been touted as effective alternatives to using pesticides. But the fact that these crops can also kill other non-pest organisms has caused concern among ecologists, and there's a good chance insects will develop resistance to them as they have to pesticides. In some cases, crops with built-in herbicide resistance have resulted in an increase in the use of these chemicals.

If you are concerned about pesticides, you can reduce your exposure by buying organic produce and by not using them on your lawn or in your garden. Instead, you can plant low-maintenance native shrubs and flowers, and reduce the size of your lawn. Lawns are vast monoculture crops that require tremendous amounts of water and chemical inputs to stay green and weed-free.

To find out more about common pesticides and herbicides, visit www.scorecard.org, a site administered by the U.S.-based Environmental Defense Fund. There, you can enter the name of virtually any herbicide or pesticide and the site will rank its toxicity and provide a list of potential side-effects. Considering the unnecessary added risk many of these chemicals pose to us and our ecosystems, a few dandelions on the lawn may not be so bad after all.