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Domestic herbicides detected in water

Pesticides are known to be found in streams and rivers near farms, but could they also be in urban waterways? An Environment Canada study on the surveillance of the water quality conducted in 2007 reveals the presence of herbicides in the water of Canadian aquatic ecosystems located in urban areas. The most frequently detected herbicides are 2,4-D, mecoprop, dicamba, glyphosate and AMPA. Where do they come from?

These products, which are available in Canada, are widely used for lawn care and weed control. In urban aquatic ecosystems, the concentrations measured do not vary in spring, summer or autumn. This is not the case for the concentrations measured in agricultural environments, where the levels of pesticides vary according to manuring periods.

Although the highest concentrations were measured by scientists during or after rainfall, these concentrations do not exceed Canada's quality criteria for the protection of aquatic life. It is difficult, however, to assess the impact of a combination of pesticides with other types of substances such as nutrients and metals.

The provinces of Quebec and Ontario, as well as municipalities in Nova Scotia and British Columbia, have recently regulated their use of pesticides, including the herbicides targeted in the study.

Reference: Glozier, Nancy E., John Struger, Allan J. Cessna, Melissa Gledhill, Myriam Rondeau, William R. Ernst, Mark A. Sekela, Steve J. Cagampan, Ed Sverko, Clair Murphy, Janine L. Murray and David B. Donald. 2012. Occurrence of glyphosate and acidic herbicides in select urban rivers and streams in Canada, 2007. Environ Sci Pollut Res 19:821–834.

Date Modified: 2012-05-17