

# Striving for transparency: Why Canada's pesticide regulations need an overhaul

November 29 2023, by Valérie S. Langlois, Christy Morrissey, Eric Liberda and Sean Prager

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[In 2021, Health Canada announced a freeze on changing maximum residue limits \(MRLs\)](#)—the maximum allowable pesticide residues acceptable under Canadian law. This decision followed substantial public outcry following Canada's most widely used weed killer [glyphosate's proposed MRL increase](#).

This year, three ministries (including Health Canada) [unpaused](#) the comparatively less complex residue limit adjustments and [sought to transform](#) the [Pest Management Regulatory Agency \(PMRA\)](#).

The move was aimed to enhance transparency, modernize their [business practices](#), improve access to information related to pesticide decision-making, and increase the use of real world data and independent advice.

However, trust in the agency remains an issue; only [60 percent of Canadians believe the regulatory system is keeping pace with scientific advancements in pesticide assessment](#), adding further pressure to Canadian's eroding trust in science.

## Challenges and controversies

In spite of ongoing concerns over risks to human and environmental health, global pesticide use has been [increasing over the past 30 years](#).

In Canada, increased reliance on pesticides has been largely tied to the intensity of agricultural use in the main crop growing regions of [the Canadian Prairies, Southern Ontario and Québec](#).

Advancing pesticide regulation to meet the needs of Canada's agricultural sector, while protecting human and environmental health, is a growing challenge.

There are [more than 600 registered active ingredients in more than 7,600 registered pesticide products](#)—a staggering number that continues to rise.

From 2011 to 2021, the PMRA registered between seven and 27 new active pesticide ingredients each year. Meanwhile, it has only [banned 32 of 531 prohibited active pesticide ingredients regulated in 168 other](#)

[countries](#).

This influx puts added pressure on the agency to review volumes of scientific data produced by both the registrant and independent scientists, while continuously assessing the growing list of existing products for their safety to humans and risks to [environmental health](#).

Some chemical registration decisions, including [conditional registrations](#), have been highly controversial, highlighting the lack of transparency or perceived industry bias.

In the case of glyphosate, sales in Canada have topped nearly 470 million kilograms from 2007 to 2018. Public concerns over human health risks and regulated uses have led to [legal challenges](#).

Similarly, the proposed 2018 decision to phase out three of the most widely used, environmentally persistent and toxic neuro-active [neonicotinoid insecticides](#) was later [reversed in 2021](#). Citizens and scientists were left seeking answers on whether industry influence caused the [flip-flop](#).

## **Evolving roles**

Last year, as part of the transformation agenda, Health Canada aimed to fortify its pesticide review processes by establishing an [independent Science Advisory Committee](#).

Currently comprising eight [academic experts](#), whose backgrounds were screened for conflict of interest, the [committee](#) has been tasked to provide objective, science-based advice to inform regulatory decisions on pest control products. We are four of them.

Since its creation in July 2022, the committee has met five times with

Health Canada's PMRA in a [public forum](#).

The committee has been tasked with providing input on diverse issues such as communication of MRLs, use of independent data sources, creation of open source toxicity databases, and access to registrant data used in decision-making.

As a positive early sign, the PMRA has been responsive to the [committee's advice and recommendations](#), which is anticipated to reinforce public trust and ensure science-based decision-making is at the core of its processes.

## **Informing new policies**

Canada is long overdue in establishing a [co-ordinated water monitoring program](#) to systematically measure pesticide levels nationally.

The committee is providing external scientific advice on the new pilot [Water Monitoring Framework Initiative](#).

Committee experts are giving input on guidance for site selection, monitoring frequency in different types of surface waters and analytical measurement of current use compounds and their degradation products.

The goal is to ensure this much-needed water quality data is rigorous and usable for future risk assessment and independent scientific research.

Recently, the PMRA has an added responsibility to enhance broader Canadian biodiversity goals and environmental protections by aligning its regulatory work with the [2022 Kunming-Montreal Global Biodiversity Framework—aiming to reduce pesticide risk by at least 50 percent by 2030](#)—alongside the enactment of [Bill S-5, updating the Canadian Environmental Protection Act of 1999](#), to consider cumulative

pesticide exposure in risk assessments. The committee is currently developing recommendations to inform approaches to best address these significant policy initiatives.

## **Towards a pesticide-safe Canada**

The journey to more transparent and scientifically robust pesticide regulation in Canada is long overdue, yet essential.

A greater emphasis on transparency and communication of the science that underpins regulatory decision-making is urgently needed. A lack of access to data and information used in risk assessment undermines the public trust.

An over-reliance on industry supplied confidential studies, limited application of data from independent scientists, a lack of publicly available data on active ingredient pesticide sales, use and environmental monitoring, are all contributing to skepticism.

As the PMRA transitions to more transparency and reaffirms its evidence-based decision-making for pesticide regulation, insight from independent scientific researchers as part of the committee will play a critical role.

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