

WHAT'S IN YOUR LUNCH?

How a harmful weed killer finds its way into your children's food

Every day, Canadians are exposed to many chemicals that are linked to health conditions such as cancer, asthma, diabetes and behavioural problems like ADHD. Food products that we eat regularly have become a significant contributor to harmful chemical exposure due to the extensive use of pesticides in agriculture. Glyphosate, Canada's top-selling weed killer, is of particular concern because of its presence in common foods that children eat.

Glyphosate is everywhere

Roughly 826 million kilograms of glyphosate are used every year around the world. It is found in our food, soil, water, air and even rainfall.

Glyphosate is an organophosphate chemical that inhibits photosynthesis (the process of making new tissue) in plants, making it a very effective weed killer. Monsanto (now owned by Bayer) first introduced glyphosate to the market as Roundup in 1974. The introduction of Roundup Ready crops, which are genetically modified (GM) to withstand the effects of glyphosate, in 1996, resulted in a nearly 15-fold increase in the use of this pesticide.¹

These pesticides are sprayed on GM fields throughout the season to clear out weeds, and are also applied just before harvest on GM and non-GM crops like wheat, barley, oats, chickpeas and other pulses in order to expedite and improve harvest. It is this last application, late in the growing season, that may result in higher levels of contamination in the foods we eat.² The vast majority of corn, soy and canola farming in Canada is now dependent on glyphosate-based pesticides.³



Glyphosate and our health

The World Health Organization's International Agency for Research on Cancer declared glyphosate a "probable carcinogen" in 2015.⁴

In particular, glyphosate has been shown to contribute to non-Hodgkin's lymphoma, an aggressive form of blood cancer. Scientific studies on animals have also demonstrated that exposure to glyphosate is linked to endocrine or hormone disruption, can adversely impact the digestive system by harming healthy gut bacteria and may be linked to birth defects and reproductive health issues.



Monsanto covered up cancer risks and was sued for \$289 million

In August 2018, a California court ruled that glyphosate-based pesticides contributed to an American citizen's cancer, and that Monsanto knowingly covered up the risks. This case was the first of over 5,000 lawsuits on this matter to go to trial in the U.S. **The court case revealed documents that show Monsanto manipulated scientific research and downplayed the cancer risk of its products for decades.**

Monsanto also negotiated directly with the U.S. Environmental Protection Agency (EPA) to downplay the agency's cancer risk assessment, and the EPA went out of its way to gain approval for Monsanto.

In Canada, the Pest Management Regulatory Agency (a department of Health Canada) worked cooperatively with the EPA in Canada's evaluation of glyphosate, choosing to re-authorize glyphosate in Canada for another 15 years.⁵

This raises concerns about the credibility of Canada's evaluation of scientific evidence and decision to continue allowing the use of this pesticide.



Glyphosate and our environment

Glyphosate is found in our surface water, groundwater and drinking water.

Some studies have shown that glyphosate causes harm to aquatic life even at levels below the Canadian Water Quality Guideline (CWQG).⁶⁷ Glyphosate also poses risks to terrestrial wildlife and ecosystems, and is suspected to have contributed significantly to the decline of the monarch butterfly, now listed as endangered in Canada.⁸

Because glyphosate is used so extensively in Canada, some weed species have now developed a resistance to it, which is a troubling trend that is leading to the increased use of harmful pesticides.⁹



Status of glyphosate in Canada

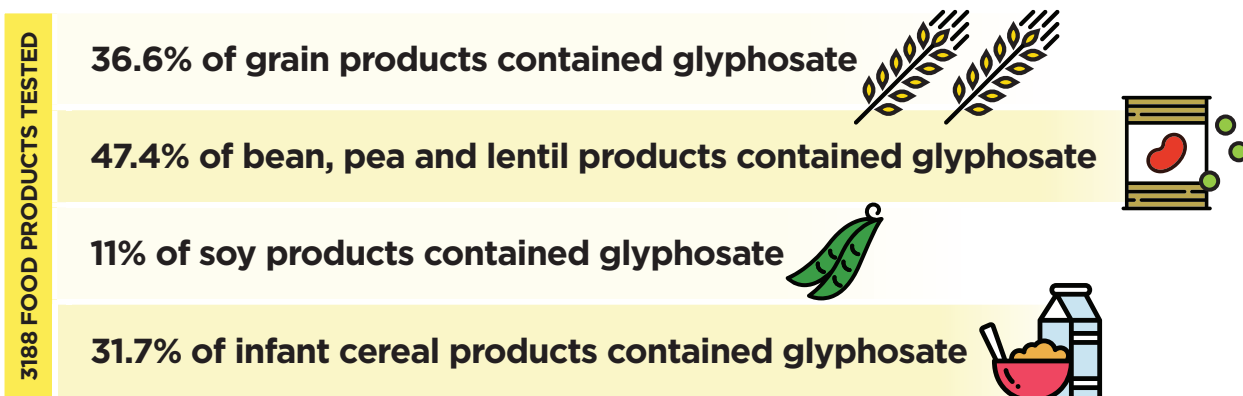
Health Canada sets limits for the amount of pesticide residue that is expected to remain in or on a food product when a pesticide is used according to the label directions in the field. The limits often vary for different foods (e.g. beans, lentils, wheat, barley, etc.) and are calculated to establish levels of exposure that are considered safe for human health.

In 2017, Health Canada decided to continue the registration of glyphosate for another 15 years.

This decision has been critiqued by many groups because the evaluation failed to comprehensively consider evidence of risk and relied heavily on outdated and unpublished data provided by the pesticide industry.¹⁰

The bigger picture

In 2015-2016, the Canadian Food Inspection Agency (CFIA) tested food products for glyphosate and the results were disconcerting:



Some samples, predominantly associated with grain products, were found to contain levels above Health Canada's "safe" limits.

Glyphosate in common children's food products

To raise awareness about our potential daily exposure to glyphosate, ENVIRONMENTAL DEFENCE and ÉQUITERRE commissioned the testing of common food products that children eat regularly.¹¹

The results: 80 per cent of the food products tested contained glyphosate.

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Glyphosate
level



Product	Main Ingredient(s)	Glyphosate level detected (ppb*)	AMPA** level detected (ppb)
Catelli Healthy Harvest Multigrain Spaghetti	wheat	231	ND***
Cheerios cereal	oat	577	29
Country Harvest 12 Grains bread	wheat, corn, oat	ND	ND
Doritos Nacho Cheese chips	corn	ND	ND
Fontaine Santé Roasted Garlic Hummus	chickpea	760	11
Kelloggs Froot Loops Cereal	corn, wheat	161	ND
Kraft Dinner Original Mac & Cheese	wheat	521	40
Mr. Christie's Arrowroot cookies	wheat	ND	ND

*ppb = parts per billion

**AMPA is a toxic breakdown product of glyphosate

***ND = not detected

Product	Main Ingredient(s)	Glyphosate level detected (ppb*)	AMPA** level detected (ppb)
PC Blue Menu Tortillas 100% Whole Grain	wheat	744	16
Pogo Original (breeding only)	corn, wheat	53	16
Quaker Large Flake Oats	oat	135	ND***
Ritz Original crackers	wheat	569	16
Sabra Classic Hummus	chickpea	506	ND
The Original Oreo cookie	wheat	19	ND
Tim Hortons Chocolate Glazed Timbit	wheat	209	11
Tim Hortons Chocolate Glazed Donut	wheat	ND	ND
Tim Hortons Sesame Seed Bagel	wheat	233	14
Unico Chickpeas	chickpea	284	ND

*ppb = parts per billion

**AMPA is a toxic breakdown product of glyphosate

***ND = not detected



What's in your hummus?

Chickpeas, right? In 2015-2016, the CFIA food testing found that 26 out of 71 chickpea samples exceeded Health Canada's "safe" limits.¹² Chickpeas are often highly contaminated because crops are sprayed with glyphosate just weeks before they are harvested. **In our testing, both hummus samples and canned chickpeas contained glyphosate.**

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Can Tim Hortons do better?

Tim Hortons is the spot to go after a soccer game with the team. A box of Timbits and all the kids are smiling. Don't want glyphosate on your timbits? Ben and Jerry's didn't want glyphosate in their ice cream, so they developed an organic line and changed where they source their ingredients so that they eliminate or reduce glyphosate contamination.¹³ **Canadians should challenge Tim Hortons to be leaders in Canada, not only to remove toxics from their popular lunches and baked goods but also to inspire farmers to minimize the use of harmful pesticides.**

Italians won't eat it so why should we?

Canada exports over 20 per cent of its durum wheat, the staple ingredient in pasta, to Italy. However, in 2017, Canadian exports of durum wheat to Italy were significantly impacted due to higher levels of glyphosate contamination compared to Italian wheat.¹⁴ That's not good news for our farmers, our economy or our environment. But that's not all. France¹⁵, Germany¹⁶ and Austria¹⁷ are all making moves to severely restrict or ban glyphosate within the next 3-5 years. **Canada needs to step up in order to stay competitive as more and more global citizens are demanding a glyphosate-free environment.**

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Children don't just eat one of these foods daily. Glyphosate exposure and associated risks add up. So, what can we really consider safe?



Recommendations

For government:

Stronger laws are needed — It is the government's responsibility to protect us from the risks posed by harmful pesticides. The federal government has not thoroughly reviewed Canada's main pesticide law, the *Pest Control Products Act* (PCPA), in over a decade.¹⁸ Within that period, from 2001-2013, pesticide sales increased by 73 per cent.¹⁹ A thorough review and update is needed so that Canadians can be confident that they are safe from pesticide exposure.

For companies:

Eliminate glyphosate contamination in food — Food manufacturers and restaurants can encourage a shift in agricultural practices by demanding products that are not contaminated with glyphosate. When possible, companies should source from producers who do not use glyphosate-based pesticides.

For consumers:

Demand stronger restrictions — Glyphosate contamination is so pervasive in our food, water, air, rain and soil that we really can't completely avoid it with our own consumer choices. We need government action. Urge the Canadian government to protect us from harmful pesticides like glyphosate through stronger laws.

Take action at whatsinyourlunch.ca

In the meantime, reduce your exposure to glyphosate and other harmful chemicals by selecting products, such as certified organic products, that are likely to contain less or no harmful chemicals.



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