Why Soil Health Matters: The Hidden Foundation of Our Food

By: Senator Rob Black



Cover crop in Greenwich, Nova Scotia.

Every summer, Canadians across the country spend time in their backyards, tending to their gardens, harvesting fresh fruits, vegetables and spices and learning about the time and care it takes to grow food. They learn the importance of spacing out seeds, preventing weed growth and the need for frequent waterings and constant care. However, how often do Canadians consider the health of their soil in this equation? After all, soil provides key nutrients to plants, and the quality of the soil used directly affects the food produced.

Thankfully, backyard gardeners can buy soil from their local hardware store to support their needs, but these practices do not translate as easily to large scale farms that work every day to feed our country. In the agriculture and agri-food sectors, farmers and producers recognize healthy soil as a vital element in farming that requires conscious efforts and planning to mitigate the loss of soil function and quality. They know that when soil degradation occurs, it significantly loses its ability to grow food, hold water, support ecosystems, and perform other environmental functions such as creating optimal growing conditions for our food, fibre and fuel from biomass. Farmers also know that we are losing prime farmland, and our rich, healthy soils are being lost across our country to soil degradation, urbanization, poor land use planning and lack of awareness of soil's importance, putting our food security, and our food sovereignty, at risk.

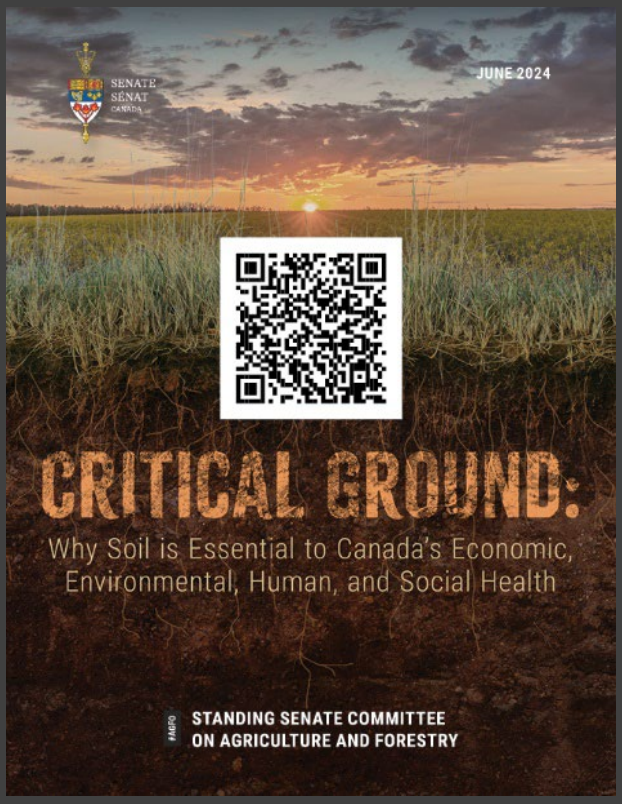
In 2021, the Food and Agriculture Organization of the United Nations (FAO-UN) found that 33% of the world's soil was already degraded, and they estimate that this number could be as high as 90% by 2050.[1] Our soil is at risk, yet every day Canadians overlook the critical ground under our feet and forget the importance of this non-renewable resource.

Between May 2022 and February 2024, the Senate Standing Committee on Agriculture and Forestry (AGFO) conducted a study on the current state of soil health in Canada; something that had not been studied since 1984 in the Senate of Canada.

---

[1] Food and Agriculture Organization of the United Nations. Key Messages – Global Symposium on Soil Erosion. FAO, 2019. https://www.fao.org/about/meetings/soil-erosion-symposium/key-messages/en/

The committee heard from 153 witnesses, consulted 74 written briefs and participated in fact-finding missions across the country, visiting various farms and research facilities to engage with key stakeholders in the industry. This wealth of knowledge produced the report *Critical Ground: Why Soil is Essential to Canada's Economic, Environmental, Human and Social Health*, which was tabled in the Senate of Canada on June 6, 2024.[2]



The committee learned a lot about soil, including the benefits of healthy soil, the effects of soil pollution and contamination, the loss of healthy soil throughout Canada and how innovative farmers are helping to combat these issues. The report was written for the federal government, but it can also serve as a valuable tool for all levels of government and all Canadians across the country.

It is easy to think of the importance of soil for growing food, but healthy soil has benefits beyond the agriculture and agri-food sectors. Did you know that one tablespoon of soil contains more living organisms than there are people on Earth?[3] Soil is the foundation of a living ecosystem, delivering a variety of services to the environment and all living things. It is a non-renewable resource that can help mitigate climate change, address biodiversity loss, and ensure food security for our country but only if we take the steps needed now to help protect this finite resource!

For instance, healthy soils are resilient and can act as a barrier, preventing harmful pollutants and pathogens from spreading to plants, animals and our food. Soil also directly influences the quality of our water by actively storing and filtering water. Soil also helps mitigate climate change however, when our soil is degraded, polluted or contaminated, these abilities are weakened, thereby impacting our environment, food and ultimately, our health.

---

[2] Standing Senate Committee on Agriculture and Forestry. *Critical Ground: Why Soil is Essential to Canada's Economic, Environmental, Human, and Social Health*. Parliament of Canada, 2023. https://sencanada.ca/en/info-page/parl-44-1/agfo-critical-ground

[3] Ibid.

In every region of our country, Canadian soil is being affected by climate change, extreme weather events, pollution and urbanization. Soil pollution is a far bigger problem than most Canadians realize with 20 million contaminated sites around the world[4], in addition to mining, oil and gas industries putting additional stress on soil health.

Canadian farmers and producers are on the front lines facing the realities of soil degradation in their daily work. We are fortunate to be home to countless farmers who commit their time, energy, resources and funds to protecting the quality of our farmland and soil. Regenerative farming techniques, like no-till or low-till, cover cropping or diversification of crops, are examples of some of the ways our farmers and producers are working to enhance soil health on farms. These practices not only boost the beneficial properties of soil, but they help farmers and producers improve crop yields, increase their profitability, and protect Canada's food sovereignty.



Senator Rob Black speaks with Bill Newton at Mr. Newton's South Porcupine Ranch in Willow Creek, Alberta.

The AGFO committee learned that soil is a critical natural resource that is as important as the air we breathe and the water we drink, but it is being faced with unprecedented challenges that are putting our food security at risk. In the report, the committee made 25 recommendations to the federal government that will help ensure our soils are protected, preserved and enhanced for the health and well-being of our nation.

Of these recommendations, one of the most important changes that we need to see is the recognition of soil as a strategic national asset and a vital natural resource. Soil is more than 'just dirt', it is an essential mineral that supports all life on Earth, and it should be recognized as such.

[4] Ibid.

In June 2025, I am proud to have tabled Bill S-230, *An Act respecting the development of a national strategy for soil health protection, conservation and enhancement*.[5] It is my hope that this national strategy, combined with continued discussions about the importance of soil health will raise the profile of soil, giving it the recognition, attention and protection it needs and deserves. For more information, visit www.parl.ca/LegisInfo/en/bill/45-1/S-230



Senators Rob Black, Paula Simons and Patt Duncan examining a slake test at the University of Guelph's Soils at Guelph Research Lab.

Soil is a vital, non-renewable natural resource that is at risk around the world. It requires immediate and ongoing action to protect, conserve and enhance it now and for generations to come. It is not the responsibility of one level of government, one industry, one organization or one farmer. It is the responsibility of all of us to be stewards of the land. To understand that soil is finite, and we must take action to protect it now.

Reach out to your government representatives - federal, provincial, and municipal. Ask what they are doing to protect the soil under our feet in your communities. Ask how they are protecting prime farmland from being removed from production. Ask how they intend to ensure their children and grandchildren will continue to have healthy food to eat. Ask what they are doing to protect our food security and food sovereignty now and into the future. I know this question keeps me up at night!

Let's hope we can all sleep better knowing our governments, our industries and our neighbours better understand the importance of the soil under our feet. We are on critical ground. Let's make sure that ground is strong and has all the building blocks needed to thrive, survive and produce.

The Honourable Robert Black, P. Ag. (Hon) is a Canadian senator representing Ontario and is Chair of the Senate Standing Committee on Agriculture and Forestry.
Robert.Black@sen.parl.gc.ca

[5] Parliament of Canada. *Bill S-230: National Strategy for Soil Health Act*, 45th Parliament, 1st Session. Sponsored by Hon. Sen. Robert Black. https://www.parl.ca/legisinfo/en/bill/45-1/s-230