How protecting plant health is essential to future prosperity and sustainability

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From farms to forests, Canada's plants face increasingly complex threats and protecting them is imperative to sustain the health and wealth they provide, according to *Cultivating Diversity*, a new expert panel report

from the Council of Canadian Academies (CCA). Climate change has exacerbated existing risks, such as extreme weather events, disease, and predators, while the increasing global movement of people and goods, and evolutionary processes add to the threat, demanding a change in Canada's approach to protecting plant health.

Plants contribute nearly 3% to Canada's GDP and are the main sources of economic security for many communities. They are also essential to maintaining food security, environmental sustainability, and public health, and are of cultural, physical, and spiritual importance to people across Canada.

"Plants define our planet and play a crucial role in all our lives, but I don't think many people are aware of the extent to which they support us and other life on Earth," said Deborah Buszard, Ph.D., Chair of the Expert Panel. "They supply oxygen we breathe, make up the food we eat, help to generate soil, filter water, and are extensively used for medicines. Unless threats to plant health are recognized and effectively managed, we face risks that have the potential to be incredibly disruptive of ecosystems and put human and animal health, biodiversity, and food production in jeopardy."

Effectively addressing plant health risks is complicated by Canada's variety of management approaches, its naturally vast and diverse landscape, involvement in international trade systems, and shared responsibilities among various orders of government. While governments have traditionally handled most decisions related to plant health, wider collaboration would help to ensure Canada is better prepared for future risks.

According to the Expert Panel, connecting the research and work of academics, governments, Indigenous Peoples, NGOs, farmers, foresters, citizen scientists, and others can help mitigate and manage emerging

risks. Knowledge created from the Indigenous stewardship of plants, which goes back thousands of years, can offer valuable insights, for example, into how plants adapt to environmental change. Technological innovations, such as breeding for hardier crop varieties, remote sensing, and precision agriculture and forestry, can also help mitigate the impact of climate change and pest outbreaks.

Protecting plant health is complicated by the interconnectedness of risks and a diversity of perspectives. *Cultivating Diversity* explores key areas of risk as well as strategies to reduce vulnerability and increase resilience.

"Plants are indispensable to life on this planet and the risks they face are complex and unprecedented," said Eric M. Meslin, Ph.D., FRSC, FCAHS, President and CEO of the CCA. "*Cultivating Diversity* details how an inclusive, connected, and responsive plant health system is key to addressing plant health risks in Canada."

The Canadian Food Inspection Agency (CFIA) asked the CCA to examine the most significant current and emerging risks to plant health in Canada.

Cultivating Diversity identifies existing and emerging risks to plant health in Canada and offers insights into promising practices that may help to mitigate them.

More information: Report: www.cca-reports.ca/reports/plant-health-risks/

Provided by Council of Canadian Academies