



FRUIT & VEGETABLE
GROWERS
OF CANADA

PRODUCTEURS
DE FRUITS ET LÉGUMES
DU CANADA

GREENHOUSE INVESTMENT ROADMAP





EXECUTIVE SUMMARY

Canadian food security is tied to a strong Canadian economy. Remaining competitive in the North American market remains critical to safeguarding Canada's domestic fresh fruit and vegetable production and growing its greenhouse capacity.

Greenhouse operations are critical to extending Canada's growing season, and enabling reliable access to fresh produce year-round, while reducing import dependency, and expanding the range of Canadian-grown fresh produce options for consumers. Growers invest millions into their growing structures, energy and water infrastructure, digital agriculture, and human resources which are shaping Canada into a global greenhouse leader.

As the government prioritizes investments, enabling policies, programs, and infrastructure, it must reflect this scale of private capital investment and resulting economic contribution of greenhouse businesses.

The Greenhouse Investment Roadmap outlines five key areas for strategic investment to support the sector's demonstrated strengths and opportunities ahead:

1. Support expansion of production capacity and crop diversification
2. Incentivize sustainable, year-round domestic food production and trade
3. Address investment barriers by reducing cumulative red tape
4. Recognize the importance of housing, healthcare, and rural transit
5. Increase funding to advance sector-prioritized research

These recommendations are followed by early policy proposals with more detail and specific examples that connect to the Liberal Platform and its *Fiscal and Costing Plan* to greenhouse sector needs and opportunities.

Supporting legislation, regulatory amendments and enabling tax policy within a food lens are critical to improving food security and affordability, spurring innovation and driving greenhouse investment that remains in Canada.

Roadmap for Food Security: Greenhouse Investment

Canada is the North American leader of greenhouse fruit and vegetable production.

Canada's 920 commercial greenhouse fruit and vegetable operators are at the heart of an economic engine that contributes over \$5.3 billion to the Canadian economy and supports over 37,600 jobs throughout its supply chain while providing food security to Canadians year-round.

- **Greenhouses supply safe, nutritious, high-quality, year-round fruit and vegetables** that offer major expansion in the range and breadth of crops grown and available to Canadians.
- **Greenhouses employ efficient, low-carbon systems** that reuse on-farm carbon emissions as a crop input and have opportunities to add electrification capacity.
- **Greenhouse growers have a proven track record** of steady growth with viable business models and leadership who are investing in their people and communities, capital-intense infrastructure, and cutting-edge technology for sustainable, circular systems.



Competitiveness in the North American market is critical to safeguarding Canada's domestic production and growing its capacity.

To reduce risk, support trade, spur growth, and improve competitiveness, a range of solutions is required as outlined in [FVGC's BRM policy recommendations](#)ⁱ, which highlighted a Snapshot of the Greenhouse Vegetable Sector Risk Profile:

“....With exports representing a significant portion of their business, the threat extends beyond lost international sales to potential devastation of the domestic market...These conditions increase risks to food security and affordability as high-quality fresh produce may need to be discarded... Greenhouse vegetables are categorically ineligible for *AgriInsurance* coverage against crop losses, while *AgriStability* and *AgriInvest* programs lack the scale and responsiveness needed for these operations; *AgriRecovery* is the sector's only disaster backstop, and it has been inaccessible. Adding to these vulnerabilities, greenhouse vegetable growers faced significantly higher carbon pricing costs on unavoidable production inputs like heating and carbon dioxide supplementation. Within the past five years (2020-2024), this added up to a 44% increase in total operating expenses.⁴ In comparison to farming peers,⁵ the discrepancy in cost magnitude has been stark. These financial pressures have been outpacing the sector's ability to reinvest and remain competitive.”

Market diversification mitigates trade exposure risks, but given the perishability of fresh produce it is not a question of whether Canada will have a relationship with the US, but what Canada can do to support those relationships within CUSMA negotiations. Canadian and U.S. retailers are increasingly demanding consistent, year-round volumes from their suppliers to meet steady and growing demand for greenhouse product. Diversification will require renewed commitments by all governments to increase and recalibrate current resources and programs to recognize the need for simultaneous strategic exploration of potential markets across East/West and North/South axes options.

Canadian Greenhouse Growth Strategy (2025-2028)

Canadian greenhouse growers are early adopters of innovation and leading practices to maximize energy efficiency within the limitations of current technology. The next stage of Canada's energy transition must build on conventional energy resources, tap into the unlimited potential for Canada as an energy superpower, and take advantage of new opportunities in the global marketplace.

Greenhouse growers need enabling policies, programs, and infrastructure that understand their business.

- 1. Support expansion of production capacity and crop diversification** of commercial-scale greenhouse crops within an agile, well-resourced, and supportive regulatory environment in critical areas including:
 - Crop protection tools: conventional, biopesticides, disinfectants, certified organic
 - Grade standards, packaging, and labelling of fresh fruit and vegetables
 - Plant breeding innovation for disease-resistant varieties
 - Economic development: infrastructure, innovation, sustainability, free trade and market development
- 2. Incentivize sustainable, year-round domestic food production and trade** with enabling energy policy, regional energy reliability, and energy affordability:
 - Policy recognition for the use of carbon emissions (CO₂, heat) as crop inputs.
 - Support for greenhouse energy investments that are economically viable for efficient, low-carbon greenhouse production systems (new build, retrofits, direct-air capture, energy storage, dehumidification), and in electrification capacity (CHP).



- Feasibility and adoption of alternative, future options such as clean hydrogen, renewables, modular nuclear power and off-grid clean energy systems.
- 3. **Address investment barriers by reducing cumulative red tape** from federal, provincial, and municipal jurisdictions including:
 - Consolidated third-party audit requirements within a Grocery Code of Conduct.
 - Limit unfair municipal/provincial tax increases e.g., storm-water infrastructure taxes, development fees applicable to greenhouse operations, worker housing.
 - Improve development and building approval processing timelines.
- 4. **Recognize the importance of housing, healthcare, and rural transit** to greenhouse employers, workers, and their communities.
 - Provide incentives for employers who demonstrate long-term compliance through the Recognized Employer Program.
 - Enable worker housing improvements and building (planning, services).
- 5. **Increase funding to advance sector-prioritized research**, innovation, data collection and security, knowledge sharing and extension services.
 - Develop a new national greenhouse agriculture-focused program or stream of the Agricultural Clean Technology Program, modelled after the ISED Net Zero Accelerator initiative, to support research, innovation and technology, emission reduction pathways, and decarbonization projects, at the scope and scale required by the greenhouse sector.

Early Policy Proposals for Implementation

Prioritize legislation, regulatory amendments, and tax policy within a food lens that improves food security and affordability, spurs innovation, and drives modern agriculturalⁱⁱ business investment in Canada.

Infrastructure – Protect and prioritize access to critical infrastructure such as affordable energy, water, waste management, and labour to support energy-intensive, trade-exposed agricultural sectors. Invest in regionalized renewable natural gas, hydrogen production, and reliable, clean electricity options.

- Safeguard Canada's critical infrastructure including reliable access to agricultural workers within the made-in Canada programs (SAWP, TFW Ag-Stream) who are essential to support food security, supply chain stability, and sustainable agriculture solutions.
- Conduct an independent, costed review of the National Building Code requirements for commercial greenhouse agriculture buildings to recommend programming supports.
- Add support to build or renovate housing (Build Canada Homes), provide tax credits (Multi-Unit Rental Building), improve public transit access (Rural Transit Fund), and community infrastructure (Nation Building Project Fund).
- Improve transportation corridors with reliable cold-chain capabilities to key international markets (Trade Diversification Corridors Fund).
- Protect critical infrastructure including access to water, municipal waste water systems, from climate-change risks (Disaster Mitigation and Adaptation Fund).

Risk Management and Mitigation – Safeguard Canada's plant resources and food security by building risk mitigation into the existing BRM program to transform the paradigm and respond to geo-political and climate risks. Enable federal legislation to extend financial coverage for plant health emergencies.



- Establish a Sector-Specific Market Stabilization Fund with tailored support mechanisms to address direct compensation for greenhouse operators in the immediate term.
- Support the expansion of AgriInsurance to include greenhouse crops. With the exception of whole-farm insurance and highly expensive private sector insurance options (mainly for business interruption coverage, structure, boilers), greenhouse vegetable growers have no opportunity to insure for pest outbreaks and crop loss events.
- Provide top-ups to existing AgriInvest accounts (e.g. Ontario's SDRM).
- Amend the AAFC *AgriRecovery* program eligibility requirements to ensure it is responsive, predictable, and accessible as to its criteria that triggers an *AgriRecovery* assessment.
- Extend financial coverage for plant health emergencies where crop-destructs – either as ordered by CFIA for quarantine pests, or in emergency response by the sector for regulated, non-quarantine pests – are an important tool to incentivize early pest reporting with predictable compensation, to limit the risks from emerging global pests, economically devastating pests, and to mitigate against non-tariff trade barriers.
- Implement the *Perimeter Strategy* approach to protect its domestic production base, limit unforeseen risks from emerging global pests, and mitigate against non-tariff trade barriers.
- Work with FVGC to establish a National Surplus Product Removal Program to address domestic market oversupply of perishable food resulting from geo-political or trade disruptions.
- Prioritize Canadian-grown produce in the School Foods program.

International and domestic trade, market access and diversification – Build increased capacity, analysis, and expertise at Market Access Secretariate and the Trade Commissioner Service for fruit and vegetable exports.

- Remove Canadian 25% retaliatory tariffs applied on fresh fruit and vegetables, i.e., tomatoes, imported from the U.S. to mitigate further risks of future U.S. tariffs and/or non-tariff barriers.
- Support from the Canadian CUSMA negotiation team to oppose any U.S. proposed trade remedy tool that has separate provisions for perishable and seasonal products in AD/CV proceedings, as this could result in Canadian fruit and vegetable growers being exposed to numerous regional trade injury complaints.
- Actively monitor U.S.-Mexico Suspension Agreement termination and/or its modernization for unintended injury to Canada including market disruption and/or dumping of Mexican product.
- Build concrete areas of alignment and regulatory cooperation that recognizes the Canadian economy relies on a strong North American trade relationship.
- Ensure fair market rules that create market stability and prevent interprovincial dumping or other anti-competitive business practices, and limit food waste of perishable goods, as interprovincial barriers are reviewed.
- Support from the Canadian CUSMA negotiation team for representation and engagement within an industry advisory committee to build concrete areas of access, alignment and regulatory cooperation.



- Increase and recalibrate international market development, and business development activities that support multi-crop shipments of greenhouse tomatoes, peppers, and cucumbers.
- Explore expanded domestic markets including options for high-value processed products.
- Improve Canada's domestic processing capacity to address the structural gap that limits Canadian producers' ability to pivot in response to economic shocks and exacerbates supply chain vulnerabilities.

Modernize federal policy frameworks to recognize greenhouse agriculture and its defining features.ⁱⁱⁱ

Currently, greenhouse agriculture must navigate a “regulatory no-man’s land” that limits the growth and competitiveness of the sector^{iv}.

- Retain and modernize the fresh fruit and vegetable grades in the Safe Food for Canadians Act & Regulations, with outcome-based labelling requirements that meet consumer demands and better adapt to rapid product innovation and evolving market conditions;
- Support domestic growth and export capacity within the Canadian Organic Standards and the Canada-U.S. Equivalency Arrangement (i.e., critical variance for hydroponics) by exploring new options, improving accountability to economic and scientific considerations of the decision-making processes, and the representation within the governance bodies.;
- Provide a pathway for the registration of disinfectants and/or additional uses to existing labels that are needed in greenhouse production houses – removing barriers to Pest Control Products Act amendments, and/or inclusion in the Biocides Regulations.
- Modernize Pest Risk Assessments^v on that recognize increased risk of overwintering and establishment of non-native/tropical/invasive pests in major greenhouse-growing regions of Canada; and other pathways including propagative material and plants for planting.
- Leverage a modernized concept of a Canada-U.S. *Perimeter Strategy* within domestic plant health strategies^{vi}, enabling legislation and programming supports, and CUSMA negotiations to take a more ambitious approach to regulatory cooperation and to focus on the shared perimeter that would ensure a mutual commitment to defend our trading partner(s) against the unintentional introduction of emerging plant pests and invasive species, to limit the risks from emerging global pests with economically devastating impacts, and to mitigate against non-tariff trade disruption.
- Include eligibility for greenhouse growers where applicable, within Canada’s six major investment tax credits (ITCs) that support clean energy and technology – the Carbon Capture, Utilization, and Storage ITC, Clean Technology ITC, Clean Electricity ITC, Clean Hydrogen ITC, Clean Technology Manufacturing ITC, and Electric Vehicle Supply Chain ITC.

Research, Innovation, and Promotion – Promote Canada as a global agriculture innovation leader.

Strong collaboration between the sector, industry, academic research, and government is needed to drive generational investment in low-carbon, clean, and affordable energy.

- Provide incentives aimed at meeting science-based targets and climate change strategies that are commensurate with the level of ambition and comparable with the U.S. programming.
- Build decision-making support tools to identify optimum energy alternative(s) including renewables (wind, solar), clean hydrogen blends using existing natural gas infrastructure, and further the exploration of energy options such as geothermal, industrial-sized electric heat



pumps, and Small Modular Reactors (SMRs), as identified in partnership with growers, academia, regional energy providers, and provincial government efforts.

- Support adoption of sustainable energy solutions in greenhouse production systems with increased knowledge transfer, pilot projects and demonstration sites, training, and advisory services to grow and scale.

About the Canadian Greenhouse Vegetable Sector

The Fruit and Vegetable Growers of Canada (FVGC) is an Ottawa-based voluntary, not-for-profit, national association that represents fruit and vegetable growers across Canada. The Greenhouse Vegetable Working Group (GVWG) represents greenhouse growers from British Columbia, Prairies, Ontario, Québec, and Atlantic. Over 920 Canadian greenhouse growers produce fresh tomatoes, peppers, cucumbers and other healthy, high-quality, safe and sustainably-grown produce worth \$2.7 billion in farm gate sales, supports 37,600 jobs, and contributes \$5.3 billion to Canada's GDP annually.

Greenhouse growers offer Canadian solutions: food security, energy resilience, and economic growth.

Food security – Greenhouses supply safe, nutritious, high-quality, year-round fruit and vegetables that offer major expansion in the range and breadth of crops grown and available to Canadians. Sustainable greenhouse practices are minimizing food waste, keeping food production affordable, and tackling the rise in food costs.

- The sector's success is owed to the investment made by growers into their environment-controlled growing technology, robotics and automation, hydroponic systems/closed-loop recirculation systems, and Integrated Pest Management (IPM) programs with preventative biosecurity measures, biological controls, and beneficial insects.
- These approaches confer a range of environmental benefits including energy efficiency, health and safety of workers, 'reduce-reuse-recycle' of irrigation water and fertilizers, and significantly reduced use of traditional pesticides.

Energy resilience – Greenhouses employ efficient, low-carbon systems that reuse on-farm carbon emissions as a crop input and have opportunities to add electrification capacity. On-farm energy resilience is strongly interconnected with food security and economic growth.

- Canada's greenhouse sector has established itself as a leader in productivity and energy efficiency.
- As operating costs increased 44% over the past five years^{vii} – growers are highly motivated to reduce emissions and make sustainable investments to lower the carbon footprint of their energy-intense production system.
- On-farm investments such as combined-heat and power (CHP; a.k.a. co-generation system), whereby greenhouse growers generate electricity for their crop, together with supportive policies and energy regulators' contracts, can supply the grid during peak energy demand.

Economic growth – Greenhouse growers have a proven track record of steady growth with viable business models and leadership who are investing in their people and communities, capital-intense infrastructure, and cutting-edge technology for sustainable, circular systems.



- North American supply chains are increasingly sophisticated and complex. Predictable, free trade under CUSMA is essential for year-round food supply and Canadian food security.
- At \$1.7 billion, the value of greenhouse vegetable exports is the highest of all fresh produce (fruits, greenhouse vegetables, mushrooms, field vegetables, and potatoes) in Canada, accounting for 48% in terms of value of all fresh produce exports^{viii}.
- Continued export market growth is critical to ensuring a secure and resilient and sustainable domestic production and distribution base.

ⁱ Fruit and Vegetable Growers of Canada. *Extraordinary Measures for Unprecedented Times: Supporting Canadian Horticulture Now and in the Future*. Groupe AGECHO policy proposal paper. https://fvgc.ca/wp-content/uploads/2025/03/FVGC-BRM-Eng_-Final.pdf

ⁱⁱ Income Tax Folio S4-F11-C1, [Meaning of Farming and Farming Business](#).

ⁱⁱⁱ Fruit and Vegetable Growers of Canada. *Definition of a greenhouse*.

^{iv} Ashton, Lisa. *The Greenhouse Boom: How indoor farming can transform food production and exports*. June 12, 2024. RBC Thought Leadership. <https://thoughtleadership.rbc.com/the-greenhouse-boom-how-indoor-farming-can-transform-food-production-and-exports/>

^v CFIA. Pest risk analysis: How we evaluate fruits, vegetables, plants and wood products from new countries of origin. <https://inspection.canada.ca/en/plant-health/horticulture/how-we-evaluate>

^{vi} Council of Canadian Academies. The Expert Panel on Plant Health Risks in Canada: Cultivating Diversity. <https://cca-reports.ca/reports/plant-health-risks/>

^{vii} Statistics Canada. Table 32-10-0025-01 Specialized greenhouse producers' operating expenses

^{viii} <https://agriculture.canada.ca/en/sector/horticulture/reports/statistical-overview-canadian-greenhouse-vegetable-and-mushroom-industry-2023#ov>