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## **First Harvest: Short-term recommendations toward long-term resilience in Canadian Agriculture**

### **The context**

COVID-19 has been fundamentally destabilizing to much of Canadian life, and the agriculture sector is no exception<sup>1</sup>. With agriculture so critical to Canada's food security, environment, and economy, the government must continue to work with farmers and ranchers to lessen the immediate impacts of the pandemic, and ensure the recovery supports individuals and communities that have been disproportionately affected<sup>2</sup>.

Long before the pandemic, the agriculture sector has been resting on unstable foundations. Tens of thousands of farm labour jobs go unfilled every year; farm debt is at record high; business margins are narrowing; farmers are aging and retiring without farm succession plans; climate impacts are worsening; and sector emissions are on track to increase through 2030. While the measures required to address the short-term impacts of the pandemic are not the same as those required to address these longer term threats, a **lasting** recovery must consider these demographic, livelihood and climate concerns if Canada is to “build back better” through agriculture.

Canadian farmers and ranchers are resilient problem-solvers. But, they cannot alone carry the burden of building back better in agriculture, nor should they. Low-GHG, highly resilient agriculture that supports improved farmer livelihoods and diverse and thriving rural communities benefit all Canadians through the enhancement of clean air, water and biodiversity, food security, rural well-being and beautiful country landscapes. **A better future for Canada starts on our farms and ranches**, which is why, farmers and ranchers are seeking partnership with our governments to “build back better” - together.

### **The opportunity**

In its commitment to “build back better”, the government has promised to *“recognize... farmers, foresters, and ranchers as key partners in the fight against*

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<sup>1</sup> For example, processing plants were forced to shut down; there were significant labour shortages and impacts on temporary foreign workers; major supply chain challenges, particularly for producers selling to restaurants; and milk dumping, to list just a few .

<sup>2</sup> Women are 2x less likely to have gone back to work, racialized communities are 54% more likely to be unemployed, to cite just two examples .



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*climate change, supporting their efforts to reduce emissions and build resilience.” This is an unprecedented commitment to Canadian farmers and ranchers, and it is particularly important as increasingly severe climate events threaten farmer and rancher livelihoods, and rising on-farm and on-ranch emissions rub up against supply chains charting pathways to net-zero from farm-to-fork.*

For the government’s new commitment to propel us towards a more resilient, sustainable sector, it must prioritize:

- Policy solutions that are farmer- and rancher-led and backed by evidence
- Policy solutions that simultaneously enhance climate action, farmer and rancher livelihoods and a more inclusive and equitable sector

To this end, Farmers for Climate Solutions has recruited a farmer-led Task Force of experts to support the government in ensuring these priorities are top of mind.

**The Task Force will propose short-term actions that will deliver long-term lasting benefits, addressing the triple E of Emissions reduction, Economic well-being (improving farmer and rancher livelihoods) and Equity.** Collectively, the Task Force members have the diverse expertise and on-farm and on-ranch experience necessary to address all three.

### **The triple E of Emissions x Economics x Equity**

The sustainability of our sector depends on making improvements on all three Es, and this is not out of reach. Solutions that support farmers and ranchers to reduce emissions and build resilience will drive co-benefits. This starts with co-benefits for the farmers and ranchers themselves: many climate-friendly practices lead to long-term economic benefits and enhanced business risk management for farmers and ranchers. The co-benefits also extend to all Canadians: as stewards of the land, farmers and ranchers can improve the provision of public goods and services and protect and enhance food security. And finally, solutions that reduce barriers for BIPOC, youth, women, 2SLGBTQ+ farmers and ranchers are essential to the future of the sector and the vibrancy of rural communities and landscapes.

### **Defining our success**

The Task Force will advise Farmers for Climate Solutions in order to prioritize a short list of recommendations to be advanced for budget 2021, a national budget that will



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be heavily focussed on the economic recovery. These recommendations will therefore be associated with a specific budget request (dollar amount) to the federal government.

The recommendations will also serve to inform early-stage discussions on the Canadian Agricultural Partnership. These discussions are commencing in November 2020 at the Federal-Provincial-Territorial meeting, and our recommendations will highlight and substantiate the need and potential for climate action as a central priority.

Our short list of recommendations will be selected based on:

- GHG reduction potential, which will consider regionality, scales of farms, types of production and potential adoption rates
- Cost - benefit analysis of implementation for farmers and ranchers
- Co-benefits, particularly as they relate to climate adaptation (water impacts, particularly)
- Implementability, prioritizing practices and policies that are immediately implementable and approachable to farmers, ranchers and decision-makers
- Cost for government (must be within scope of federal budget)
- At minimum, does not exacerbate barriers to BIPOC, women, 2SLGBTQ+ farmers and ranchers and at best, removes barriers and supports enhanced participation and leadership

Our final list will present a suite of practices and policies that meet the needs of diverse scales, types and regions of production. Together, they will lead to a set target of absolute reduction in emissions by a certain date, to be defined by the Task Force at an interim stage.



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## **Task Force Composition**

### **1. Leadership, Farmer Co-Chairs - Ian McCreary and Arzeena Hamir**

**Ian McCreary, SK grain and livestock farmer**

*With my wife and two sons we own and operate a mixed farm in central Saskatchewan. We have 2,000 acres of annual cropland, approximately 600 acres of hayland, and protect around 300 acres of wetlands. The livestock includes beef cattle and a small flock of goats. We are involved in a community pasture where 34 patrons collectively graze 2,000 cow calf pairs on 40,000 acres of fragile lands. We have a partnership with a conservation organization in that pasture who provide a biologist to assist us with improving our grazing rotation to improve range health and habitat for endangered species. On our farm we have a 16.9 kw solar array for the production of the power for our farm. In the past year we have begun mapping all of our soils by zone to improve nitrogen use efficiency and reduce nitrous oxide emissions while hoping to sustain or improve output. We have some experience with cover cropping. We spend a portion of our winter management trying to better understand how we can reduce our environmental footprint.*

**Arzeena Hamir, BC vegetable farmer**

*Arzeena earned her Bachelor's degree in Crop Science from the University of Guelph and a Master's in Sustainable Agriculture from the University of London, England. She worked as a CUSO volunteer in Thailand and as a researcher in Jamaica, India, and Bangladesh. She was the staff Agrologist for West Coast Seeds from 1997-1999 and served as the Coordinator of the Richmond Food Security Society from 2008-2012, and in 2010 helped launch the Richmond Farm School. She and her husband moved their family to the Comox Valley in 2012 and run Amara Farm, a 25-acre certified organic farm in Courtenay, BC. In 2018, Arzeena was elected to the Board of the Comox Valley Regional District where she serves as both Vice Chair and Director.*

### **2. Emissions Team - Dr. David Burton, Dr. Brian McConkey, Cedric MacLoed, Dan Woynillowicz**

**Dr. David Burton, Soil Scientist, Professor, Department of Plant, Food and Environmental Sciences, Faculty of Agriculture, Dalhousie University**

*Dr. Burton's research examines the role of the soil environment in influencing the nature and extent of microbial metabolism in soil. His focus has been on processes in the cycling of nitrogen in soils and their implications for soil fertility and environmental impact. His current research programs involve an examination of the production and consumption of greenhouse gases in natural and agricultural landscapes, the development of tools for the measurement of soil nitrogen supply to plants, influence of climate on soil biological processes, and the assessment of the quality of the soil biological environment and its influence on soil health. Over the past decade his work has focused on potato production in Atlantic Canada. It is the aim of this work to better understand the factors that control soil microbial processes and to use this information to develop sustainable land management systems in a changing climate. He was awarded a Dalhousie University Research Professorship in recognition of his research accomplishments. Dr. Burton teaches courses in Introductory Soil Science, Soil Fertility and Nutrient Management, Soil Microbiology and Air, Climate, and Climate Change. He has been working on the development of blended learning and on-line learning approaches. In terms of service, Dr. Burton, is a Past President of the Canadian Society of Soil Science, serves as an Associate Editor of Canadian Journal of Soil Science, and is part of Fertilizer Canada's 4R advisory panel. He has served as*



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*chair of a number of national advisory panels with respect to nutrient management and agricultural responses to climate change. He is currently a member of Équiterre's advisory committee on Improving Climate Resilience and Climate Mitigation in Agriculture.*

**Dr. Brian McConkey, Chief Scientist, Viresco Solutions Inc.**

*Dr. Brian McConkey is Chief Scientist for Viresco Solutions Inc, an environmental consulting firm that helps clients strategically navigate the complex and evolving world of sustainability with a focus on agriculture, greenhouse gases and sustainable supply chains. Prior joining Viresco Solutions, Brian had 33 years of diverse experience in agri-environmental research, technology application, and science policy, with Agriculture and Agri-Food Canada within the Canadian Government. Internationally, he was lead author for three IPCC methodological reports and co-chair of the Integrative Research Group of the Global Research Alliance on Agriculture Greenhouse Gases. He is author or coauthor of over 200 scientific papers and book chapters covering soil and plant processes, soil health, water-agriculture inter-relationships, impacts of climate change on agriculture, quantifying carbon sequestration and greenhouse gas emissions at field to national scales, and the assessment of the sustainability of agricultural production.*

**Cedric MacLeod, Principal at MacLeod Agronomics and Executive Director, Canadian Forage and Grasslands Association**

*Cedric grew up in Carleton County, New Brunswick. He graduated in 1999 with a Bachelor of Science Degree from the Nova Scotia Agricultural College, Soil Science major, Plant Science minor. In 2004 he received a Masters Degree from the University of Manitoba, Department of Soil Science. As Executive Director at CFGA, he works to uphold the Canadian forage industry and realize the potential of the domestic and export forage market. He spent 4-years with the Canadian Pork Council as the National Environmental Programs Coordinator, established MacLeod Agronomics Ltd, in April 2007 as an advisory firm to support innovation and production advances for Canadian farmers, including environmental, agronomic, energy and business management. Cedric manages 260-acres of pasture, forage and cash crops using intensive rotational grazing, extended grazing season and no-till cropping system concepts. He has been producing grass-finished beef for direct market to local customers for 7-years.*

**Dan Woynillowicz, Principal at Polaris Strategy + Insight**

*With nearly two decades of experience working at the interface between energy, climate change, policy and politics, Dan offers a unique blend of skill and experience. Before starting Polaris Strategy + Insight he was the Deputy Director at Clean Energy Canada, a think tank at Simon Fraser University. His responsibilities included managing a team of analysts, advisors and communicators, while overseeing research and analysis that informed strategic policy and communications advice to federal and provincial governments. Keeping his finger on the pulse of the energy transition, he curated the selection of stories, commentary and analysis for the weekly [Clean Energy Review](#). Throughout his career he has researched and written numerous reports on the environmental, climate change, economic and political dimensions of the energy transition in Canada. He is frequently called to testify before regulatory and legislative bodies, quoted in media, and regularly publishes commentary in Canada's leading publications. In 2019 he received a Clean50 award for advocacy, recognizing his leadership in clean energy solutions.*

**3. Economics Team - Mike Moffatt, Scott McFatridge, Dr. Alfons Weersink and Dr. Aaron Delaporte**

**Mike Moffatt, Senior Director of Policy and Innovation**

*Mike Moffatt is the Senior Director of policy and innovation at the Smart Prosperity Institute and*



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*an Assistant Professor in the Business, Economics and Public Policy group at Ivey Business School, Western University. In 2017, Mike was the Chief Innovation Fellow for the Government of Canada, advising Deputy Ministers on innovation policy and emerging trends. He has also previously held the titles of Director (Interim) of the Lawrence National Centre for Policy and Management and Chief Economist for the Mowat Centre at the University of Toronto. Mike has worked with politicians and policy makers of all political stripes in several countries to craft more effective public policy. From 2013-2015 Mike served as an economic advisor to Liberal leader Justin Trudeau. Mike holds a Ph.D. in Management Science from Ivey Business School and an M.A. in Economics from the University of Rochester.*

#### **Scott McFatridge, senior research associate**

*Scott McFatridge is a senior research associate at the Smart Prosperity Institute. His research focuses on policies to enhance sustainability in working landscapes - including carbon and biodiversity offsets, payments for ecological services, and voluntary ecological certification schemes. He is currently the program manager and research lead on SPI's Clean Growth in Agriculture program line. Prior to joining Smart Prosperity Institute, Scott worked as a research associate for the International Institute for Sustainable Development and the World Agroforestry Centre in Nairobi, Kenya. He has a Master's degree in Public Administration from the School of Policy Studies at Queen's University.*

#### **Dr. Alfons Weersink, Professor, Food, Agricultural and Resource Economics Department, University of Guelph**

*Alfons Weersink grew up on a farm in St. Marys, Ontario, where he developed an interest in the economics and structure of agriculture. His academic career began at the University of Guelph, where he received a Bachelor of Science in Agriculture. During the period between his master's and Ph.D., he worked in the farm lending industry, and returned to the University of Guelph as a faculty member after completing his Ph.D. at Cornell University. In addition to being a faculty member, Alfons is also an assistant coach for the Gryphons women's varsity soccer team.*

#### **Dr. Aaron DeLaporte, Senior Research Association, Food, Agricultural and Resource Economics Department, University of Guelph**

*Aaron's research program examines the environmental and economic tradeoffs of innovative agricultural BMP adoption using spatial bioeconomic and transportation modelling. He has examined wetland management throughout Canada and biomass-based bioenergy in Ontario and North Dakota. His current research focuses on 4R nitrogen management, precision agriculture, cover crops and genomic technologies.*

#### **4. Equity Team - Melana Roberts**

##### **Melana Roberts, Principal at Diversity Matters**

*Melana Roberts is a municipal and federal food policy strategist and Chair of Food Secure Canada. Based in Toronto, Melana uses a food justice and equity lens to inform her food systems work advancing diverse projects focused on food security, local procurement, supply chain issues, climate adaptation and local community and economic development initiatives in Ontario. Her work to date has focused on building diverse food system leadership and democratizing food policy governance and engagement as a member of the Toronto Food Policy Council, and as the former Chair of the Toronto Youth Food Policy Council. Melana is currently the Lead Consultant for the City of Toronto's first Black Food Sovereignty Plan supporting Black farmers and communities to develop a comprehensive approach to food issues. With experience working on a variety of farmer-led initiatives aimed at advancing the capacity and leadership of*



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*Black, Indigenous and racialized farmers, she welcomes the opportunity to bring those learnings to the Farmers for Climate Solutions Task Force. Melana holds a variety of leadership positions that help to inform her work, including Advisor to Global the Agriculture Exchange, Meal Exchange, FoodShare Toronto, The People's Food Institute, Black Creek Community Farm and Carrot Cache. Melana is currently conducting policy research on the future of work in agriculture using an equity and sustainability lens, as a 2020-2021 Action Canada Fellow, and is keen to bring her findings to this work.*

## **5. International Analysis - International Institute for Sustainable Development (Jane McDonald and Vanessa Corkal)**

### **Jane McDonald, Executive Vice President**

*In this role, provides leadership to IISD's global team, whose work impacts economies, ecosystems, and lives in nearly 100 countries. Jane has over 15 years of Canadian and international experience working with governments, corporate executives, and major think tanks to advance sustainability. She worked in the financial sector building new environmental markets at investment bank Cantor Fitzgerald, and she led efforts to build a cross-border coalition that succeeded in securing the inclusion of Canadian renewable electricity in the US Clean Power Plan while at Manitoba Hydro. More recently, Jane served as policy director for the Canadian Minister of Environment and Climate Change, where she supported the Canadian government's role in the Paris Agreement, as well as negotiations with provinces on the pan-Canadian Framework on Clean Growth and Climate Change and the 2016 North American Climate, Clean Energy, and Environment Partnership.*

### **Vanessa Corkal, Policy Analyst**

*Vanessa Corkal combines her expertise in climate change adaptation and food security with over nine years of documentary, journalism and non-profit experience. In her work, she focuses on capacity building for community, civil society and government partners to develop and implement effective climate change and livelihood strategies. Vanessa crafts compelling research, content and communications while managing complex project logistics. Her interests lie in community-based adaptation and mitigation, Indigenous knowledge, agro-biodiversity and biocultural diversity. Previous work experiences include climate change research, communications and project management for the Prairie Climate Centre (University of Winnipeg) and the First Nation Adapt program (Crown-Indigenous Relations & Northern Affairs, Government of Canada). She holds a Master of Climate Change from the University of Waterloo.*