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Resilient Roots

Policy recommendations for regenerative grain agriculture in Canada

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APRIL 2025

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LAND ACKNOWLEDGEMENT

We acknowledge that the lands on which agriculture in Canada operates are the traditional territories of Indigenous Peoples, who have cared for and cultivated these lands from time immemorial. Many principles of regenerative agriculture are rooted in diverse Indigenous knowledges, which emphasize balance, reciprocity and care for the land. The "Three Sisters" – corn, beans and squash – exemplify this wisdom, as they are traditionally grown together in a symbiotic relationship that nourishes the soil, supports biodiversity and sustains communities.

DISCLAIMER

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Executive Summary

Canada's agriculture sector, a cornerstone of our economy and the lifeblood of communities nationwide, stands at a pivotal moment.

The challenge is clear: extreme weather events, aging demographics, shrinking arable land and rising costs are pushing the sector to a breaking point. At the same time, the global demand for food is set to soar, with Canada expected to play a leading role in feeding a growing world population. The stakes couldn't be higher.

Ensuring a sustainable future for Canadian agriculture demands transformative action. Regenerative farming, with its potential to restore ecosystems, protect against climate change, and enhance farmer livelihoods, is not just an option – it's a necessity. The time to act is now.

Extreme weather events are already wreaking havoc on yields, budgets and farmer well-being. Without a decisive shift, agricultural greenhouse gas emissions, which have already grown by 39 percent between 1990 and 2021,[1] could surge another 47 percent by 2050,[2] jeopardizing Canada's climate targets. The potential upsides to regenerative practices are equally striking: they have proven to increase farm profitability, improve resilience and dramatically reduce emissions.

Our report reveals a path forward that is both ambitious and achievable. We offer eight bold recommendations to accelerate the adoption of regenerative practices and position Canada as a global leader in regenerative agriculture.

With bold leadership and swift action, Canada can turn this moment into a launchpad for innovation and leadership. Together, we can ensure a vibrant, sustainable future for Canadian agriculture – and for the future generations who depend on it.

Table 1: Recommendations Summary Table

BARRIERS TO REGENERATIVE AGRICULTURE	POLICY GOALS	POLICY RECOMMENDATIONS
Lack of awareness	Increase awareness and uptake of regenerative practices	Incorporate regenerative teachings in farm training programs
Lack of knowledge of how to apply practices	Develop regionally and locally relevant knowledge systems	Fund regional knowledge-sharing hubs
Skepticism of benefits	Provide practical and relevant evidence to support the adoption of regenerative practices	Further invest in regionally-relevant research that assesses the benefits of regenerative practices
Inability for farmers to differentiate regenerative products to consumers	Enable pathways for regenerative farmers to differentiate their products to generate consumer awareness and demand	Promote existing regenerative agriculture standards to farmers and consumers
Upfront investment and risk	Provide farmers with support to reduce the costs and risks involved in shifting practices	Scale financing programs that enable farmer adoption of regenerative technologies
Misaligned incentives in existing programs	Remove disincentives to adopting new farming practices from current programs	» Pilot alternative insurance programs » Adapt existing business risk management (BRM) programs to incentivize regenerative practices
Farmer mistrust in the design of specific programs	Build trust through consistent engagement with representative voices	Co-develop policies in partnership with farmers, Indigenous Peoples, and underrepresented communities

Introduction

Extensive fields of wheat and prairie vistas studded with grain elevators by railway sidings – these are iconic images familiar to Canadians.

Grain farming feeds our nation, sustains rural livelihoods and drives economic growth. In fact, wheat is a staple food for 35 percent of the world's population and is Canada's largest field crop.

Signs of stress, however, are growing, and the sector is facing a host of economic, social and environmental challenges, including extreme weather events, soil degradation, supply chain challenges and an upcoming labour transition.

Farmers need support to adapt to these challenges. If existing trends continue, not only will farmers' livelihoods be affected but so too will Canada's food supply. Waiting to act will only lock in these damages, making them more costly or impossible to reverse. We need immediate action to restore degraded land, help stabilize the climate and secure food systems for future generations.

What is Grain Farming?

For the purposes of this report, grain farming is an umbrella term to capture three types of crops: cereals, pulses and oilseeds.

Cereals include crops like wheat, barley, corn and oats. Canada is a leading exporter of cereals, planting nearly 14 million hectares yearly, equalling almost 46 million tonnes of food.

Pulses are the edible seeds of plants in the legume family, including beans, chickpeas, lentils and peas. Canada is one of the largest producers of pulses and 80 percent of Canada's pulses are shipped worldwide.

Oilseeds are grains that are also valuable for the oil content they produce, such as soybeans, sunflowers, canola and flax. In Canada, canola is one of the most widely grown crops, generating about one-quarter of all farm crop receipts.

Sustainability is at Risk

Drought, wildfires, flash floods, severe storms – extreme weather events are becoming more frequent and intense as the climate changes.

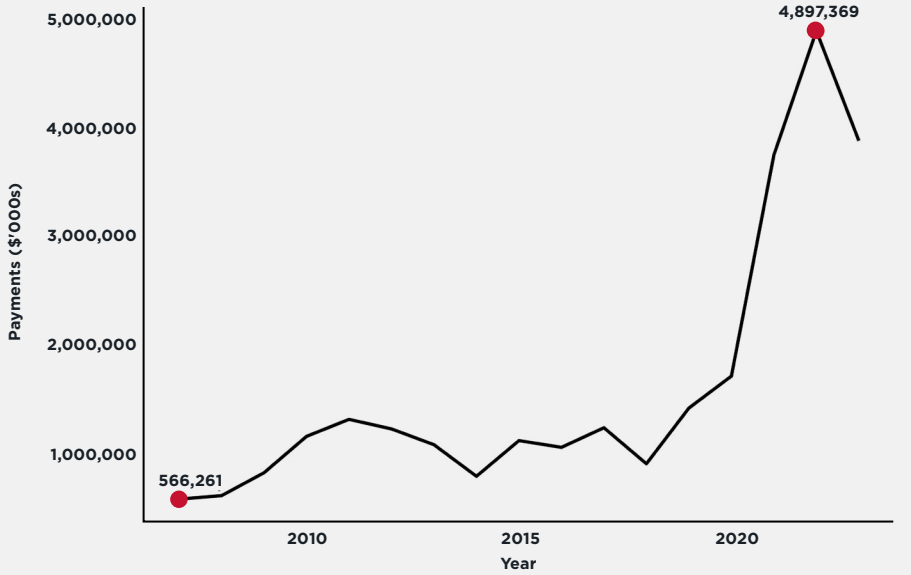
These events affect all Canadians but are particularly meaningful to our farmers, whose livelihoods are dependent on the weather. In the past few years alone, drought in the Prairies, extreme flooding in British Columbia, and violent hailstorms in Alberta have all reduced farmers' yields. In a 2024 survey, 76 percent of farmers and ranchers said they have been impacted by severe weather in the past five years.[3] Collectively, this presents a serious toll on farmers' yields, revenues, and even mental health, as they have to deal with an environment that is fundamentally more challenging and less predictable than in years past. Ultimately, susceptibility to extreme weather decreases market stability and increases food prices for consumers.

The impacts of extreme weather on agriculture can also be a huge drain on government budgets. The federal and provincial governments jointly provide a suite of business risk management programs that includes insurance payments to farmers in cases of rare and severe events, with the biggest being its AgriInsurance program to cover crop losses. Crop insurance payments increased dramatically from $566 million in 2007 to nearly $4.9 billion in 2022 (see Figure 1). According to an evaluation of AgriInsurance by Agriculture and Agri-Food Canada (AAFC), reserves built up through the AgriInsurance program over the past twenty years were almost depleted by the 2021 and 2022 claims alone.

Consider Saskatchewan, home to nearly 40 percent of Canada's total farm area. A drought in 2021 led to $2.4 billion in crop insurance claims, helping drive the

province to a historic $2.7 billion deficit. As more frequent and severe regional weather events are expected to occur, the long-term sustainability of such insurance programs and government backstops are put at risk.

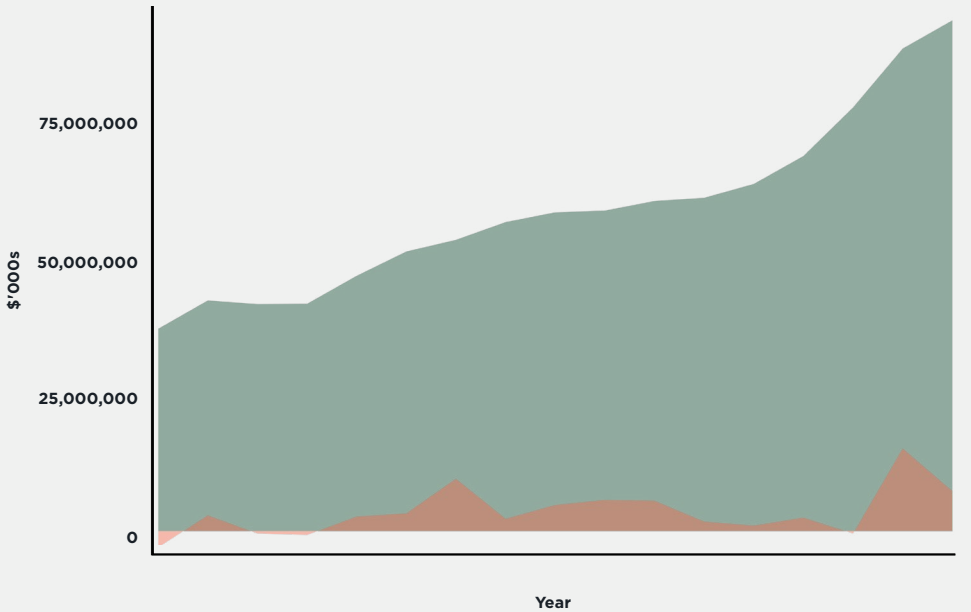
Figure 1: Crop insurance payments to agriculture producers, 2007–23



Source: Statistics Canada, "Direct Payments to Agriculture Producers."

These insurance programs can also mask the profitability of Canadian farms. While farm revenue has more than doubled since 2007, total net income to farmers, when adjusted for government subsidies, has remained relatively flat (See Figure 2). Traditional agricultural methods have encouraged a high-input, high-output model which generates yield, production, and revenue while the net income stays flat as farmers pay more for their inputs.

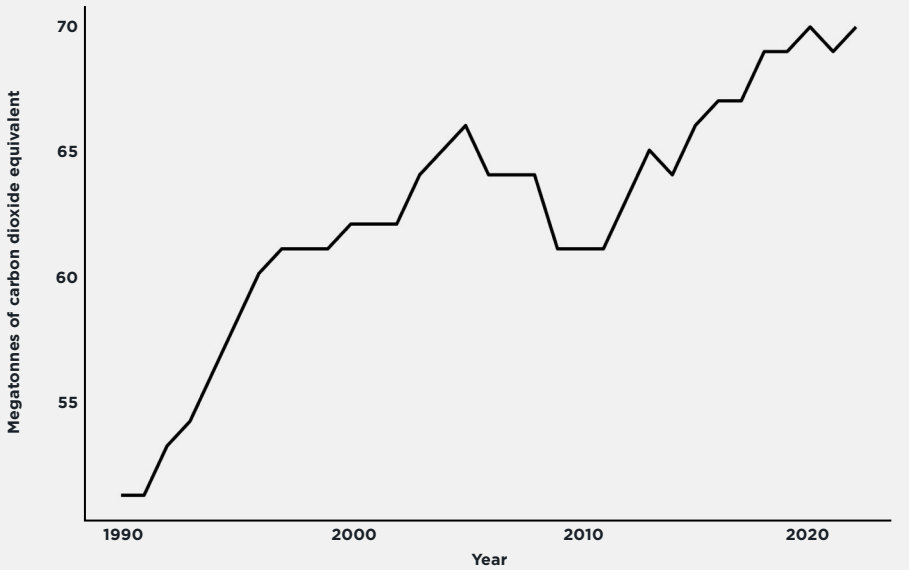
Figure 2: Gross farm revenue and realized net income, net of government subsidies, 2007–23



Source: Statistics Canada, "Farm Cash Receipts", "Net Farm Income", "Direct Payments to Agriculture Producers"

At the same time, the agriculture sector has an important role to play in helping Canada meet its targets to reduce greenhouse gas (GHG) emissions by 40–45 percent by 2030 and to make Canada net-zero by 2050. Canada's agriculture and food systems produce just over 10 percent of Canada's national GHG emissions annually. Between 1990 and 2021, emissions from the agriculture sector grew by 39 percent (see Figure 3), driven largely by increased fertilizer production and its use in crop production.[1] Without changes in current farming practices, emissions from agriculture are estimated to rise by an additional 47 percent by 2050.[2]

Figure 3: Agriculture sector greenhouse gas emissions in Canada, 1990–2021, (megatonnes of carbon dioxide equivalent, rounded)



Source: National inventory report 1990–2001, greenhouse gas

Moreover, current intensive agricultural practices can threaten species at risk and biodiversity,[4] and undermine soil health, which in turn affects the soil's ability to sequester carbon and impacts water quality.[5] Scientists estimate that from 1971 to 2015, soil erosion caused $33.51 billion in yield losses, with oilseeds and small grains being the most impacted crops.[6]

With rising input costs for fertilizers and pesticides, declining soil health, and the increasing impacts of extreme weather, Canada's grain farmers need a new approach. We must enable a more climate-resilient agriculture and grain sector to address the growing challenges of extreme weather, which strain the economy and budgets. This is especially critical as Canada's food production may need to increase by 25 percent by 2050 to maintain our contribution to the global food supply.

The Benefits of Regenerative Agriculture

So what do we mean by regenerative agriculture?

While there is no singular definition, its goal is to restore and maintain the health of the land, soil, and surrounding ecosystem, often reversing the damage caused by intensive agricultural methods. These intensive methods maximize short-term yields and profits through practices such as heavy fertilizer use, monocropping over large areas and cultivating marginal land – areas with poor soil or other limitations that make them prone to degradation or require higher inputs.

Regenerative practices are more profitable for farmers in the long run. A Boston Consulting Group (BCG) study found that after the initial investment in transitioning to regenerative practices, profitability can increase up to 120 percent with a return on investment of 15–25 percent expected over 10 years.[7] Similarly, a US study on the Northern Plains found that regenerative corn fields had 78 percent higher profits over traditional corn production systems despite 29 percent lower production.[8] This profitability was attributed to the increased value of soil organic matter and fewer input costs. According to a McKinsey analysis on farms in the US Corn Belt, during years of drought when a conventional farm may achieve only one-third its typical yield, farms that practice no-till farming and plant cover crops could maintain more than 95 percent of their usual yield.[9]

There are five commonly accepted principles of regenerative agriculture (see Figure 4) and dozens of practices (refer to Appendix A) that are considered regenerative, including cover cropping, crop rotation, reduced tillage and holistic grazing. To take just one example, cover crops are grown during fallow periods to protect soil, improve water retention, boost organic matter and prevent nutrient leaching. Regenerative practices help to make soil and land more resilient to extreme weather events, stabilizing production in the severe growing seasons that are becoming all too common. Many of these methods are defined as beneficial management practices under federal and provincial government programs. Farmers who practice regenerative agriculture generally see themselves as cultivators of an entire ecosystem, not as producers of a single commodity.

Figure 4: Five Core Principles of Regenerative Agriculture

Minimize soil disturbance

Maximize crop diversity

Keep the soil covered

Maintain living root year-round

Integrate livestock

Regenerative agriculture is rooted in traditional Indigenous knowledge and practices that have existed for generations. In line with Indigenous worldviews, humans and nature are not separate forces but part of a whole that need each other to thrive. Regenerative methods enrich the land so it can continue to provide for present and future generations.

For a sector at risk, regenerative agriculture poses a solution that mitigates climate change, increases profit for farmers and provides greater climate resiliency. Some regenerative practices, particularly no-till or conservation tillage, are already generally practised. Most practices, however, need far more support to shift to a more sustainable future. For example, a study assessing the adoption of 24 different regenerative practices suggests widespread adoption can mitigate up to 78.2 million tonnes of carbon emissions annually in Canada by 2030.[10]

Regenerative agriculture builds resilience and adaptability, creating value beyond immediate outputs and securing future productivity.[11] Unlike intensive agriculture, which prioritizes short-term financial returns through high resource consumption and synthetic inputs that deplete soil and ecosystems, regenerative agriculture focuses on long-term sustainability. These practices balance ecological health, crop yields and profitability by regenerating soil health, biodiversity and community welfare while reducing waste and fostering resilience to climate extremes. Regenerative practices can be applied to large-scale farms, but they also promote viable livelihoods for small and medium-sized farmers, delivering lasting ecological, economic and social benefits without compromising long-term profitability.

Case Study
Axten Farms' Journey to Regenerative Agriculture

IMAGE CREDIT: AXTEN FARMS

Axten Farms in Minton, Saskatchewan, has seen the benefits of regenerative farming firsthand. This multigenerational farm is over 100 years old, spanning 6,000 acres, and is dedicated to growing healthy grains. Axten has transformed its practices to focus on soil health and long-term resilience. "Everything we do revolves around the soil" is Tannis Axten's mantra. The farm began its regenerative journey in 2006, driven by the realization that their soil health was poor. Big rainfall events highlighted the issue: water was running off instead of being absorbed.

Through education, experimentation and investment in new technology, Axten Farms adopted regenerative practices. These practices improved soil biology, reduced erosion, moderated soil temperatures, and increased water retention. "Since keeping the soil covered, we've had way fewer washouts."

Regenerative practices have brought measurable benefits. Yields on their home farm, where these practices have been in place for almost a decade, are now nearly double those of a newly acquired conventional farm despite similar conditions and inputs. Input costs, particularly for fertilizers, have dropped significantly. "It's less inputs, less risk – but it's a big leap of faith," Tannis explains.

Regenerative practices have also impacted the community and beyond. With the farm's success, it has employed more people and enabled employees to purchase homes in the local town of Minton, Saskatchewan. The farm's focus on soil health has extended to human health: "We want to grow things that make people feel more healthy," says Tannis.

The Axtens see the journey as ongoing. They embrace regenerative certification programs like Regenified, which emphasize continuous improvement and connect them with buyers seeking regeneratively farmed grains. Educating consumers to build a market for their produce also remains a cornerstone of their mission. "Education is the key – to bridge the gap between farmers and consumers," Tannis emphasizes.

Axten Farms proves that regenerative agriculture isn't just about farming – it's about creating a sustainable future for the soil, the farm and the community.

Barriers to Adopting Regenerative Practices

Consultation with farmers and other key stakeholders (see Appendix B), as well as a literature review, revealed several barriers to adopting regenerative practices, as outlined below (Table 2).

Table 2: Key Barriers to Adopting Regenerative Practices

CATEGORY	BARRIER	DESCRIPTION
Awareness and knowledge barriers	Lack of awareness	Producers may not be aware of specific regenerative practices that are applicable to their situation.
	Lack of knowledge of how to apply practices	Limited access to unbiased agronomic advisors or peers who can provide advice on how to apply specific methods to their own farms.
	Skepticism of the benefits	Difficult to shift the mindset from traditional practices and a limited amount of regionally relevant evidence on the benefits of regenerative agriculture.

CATEGORY	BARRIER	DESCRIPTION
Economic barriers	Inability for farmers to differentiate regenerative products to consumers	End consumers who may be interested in regenerative practices are rarely able to identify these products, limiting the revenue-based incentive for farmers to adopt regenerative practices.
	Upfront investment and risk	Changing practices requires upfront costs for equipment and labour which poses a risk given it takes time (an estimated four years) before farmers see a return on investment. With over 40 percent of farmland rented, long-term sustainability is not always a priority for tenant farmers.
Policy and program barriers	Misaligned incentives in existing programs and policies	Certain existing policies or programs may actively encourage producers to adopt practices that are not regenerative.
	Farmer mistrust in the design of specific programs	Farmers feel that policy design and implementation have not been adequately informed by the experience of farmers. This causes mistrust, which hurts the acceptance and adoption of intended programs.

The Need to Expand Existing Government Efforts

Various federal and provincial government initiatives exist to help enable a more sustainable agriculture industry. While these are a step in the right direction, gaps remain.

For example, while the AAFC Living Labs program is making progress in testing innovative technologies and on-farm practices to adapt to climate change, there remains a need to support the adoption and implementation of these practices.

At the same time, the Agriculture Clean Technology Program and On Farm Climate Action Fund programs that provide financial incentives to adopt clean technology and regenerative practices are oversubscribed, suggesting there is high demand for government support. In consultations with regenerative farmers and farmer unions, it was reported that the subsidies were helpful but not the deciding factor. Instead, these farmers were primarily motivated by the need to increase resilience against extreme weather events. In fact, some early adopters of regenerative practices were denied assistance as subsidies are not available to those who have already

started implementing change. Program conditions, such as income thresholds for eligibility, were also reported as barriers for Indigenous farmers.

Federal BRM programs may also limit innovation and adoption. An evaluation conducted by the Office of Audit and Evaluation at AAFC found that AgriInsurance "may have an unintended consequence of reducing an operation's long-term financial health and resilience by its very construct." Program conditions, such as minimum acreage requirements, discourage smaller producers from diversifying and innovating to ensure the operation's future viability. Anecdotal evidence suggests that provincial crop insurance may also provide an incentive to farm marginal land that would otherwise be uneconomical.

The Office of the Auditor General of Canada's 2024 report also highlights gaps in federal policy and notes the lack of a comprehensive strategy to guide AAFC's climate adaptation and mitigation activities.[12] In response, AAFC agreed to finalize a Sustainable Agricultural Strategy to provide overarching guidance for collective action to improve environmental performance and coordinate action in the sector. This strategy offers the opportunity to make meaningful progress and ensure that the voices of all farmers, not only the usual stakeholders and businesses, are heard. Consultations were concluded in 2024, but the strategy has yet to be released.

Additional financial incentives are provided at the provincial level through programs such as Saskatchewan's Resilient Agriculture Program and British Columbia's regenerative agriculture funding stream, drawing on the federal, provincial and territorial cost-sharing agreements under the Sustainable Canadian Agricultural Partnership. Recognizing the unique regional differences, these provincial initiatives are critical to complement federal support for regenerative agriculture. However, not all jurisdictions prioritize regenerative agriculture, leading to gaps in programming nationwide.

Recommendations

The recommendations in this report aim to address the barriers to adopting regenerative agriculture identified earlier, based on extensive research and consultations. They are meant to complement and support AAFC's Sustainable Agriculture Strategy. Our intent is not to encourage any specific practice but to support a sector-wide transition toward more regenerative practices generally.

Recommendation #1

Incorporate Education about Regenerative Practices in Farm Training Programs

With approximately 40 percent of Canadian farm operators expected to retire by 2033,[13] increasing the number of new farmers equipped with skills to implement regenerative practices will be critical. Traditional agricultural training has long been centred around intensive farming practices. To address this gap, governments should enable agricultural colleges, technical institutes and vocational training programs to update their curricula to include regenerative practices.

This could happen through targeted funding for institutions to provide training in regenerative agriculture. Community-oriented hands-on learning modules, field trips to regenerative farms, and certification of competency could promote uptake. Similarly, agronomist training programs should emphasize advising farmers on regenerative methods, ensuring that these professionals can support sustainable transitions effectively. A partnership with educators from regenerative-based farming organizations

would ensure that the training materials are up-to-date and evidence-based.

Further, regenerative agriculture scholarships could be implemented provincially and cost-shared with the federal government. The Agriculture Student Scholarship in Saskatchewan could serve as a model for these scholarships.

Equipping both farmers and agronomists with a robust knowledge base enables Canada to shape the next generation of producers to embed soil health, biodiversity and climate resilience into their farming systems.

Recommendation #2

Fund Regional Knowledge-Sharing Hubs

Public policy should support the development of regional hubs where farmers can access locally relevant guidance, expert advice and peer learning opportunities. These hubs would serve as an agricultural extension service that offers field workshops, multilingual tools and training specific to each region and climate.

The farmers' experience can be further developed through farm mentorship programs where seasoned farmers provide one-on-one assistance to new entrants, as in the UBC Farm Practicum.

One option would be for provinces to establish dedicated funds for training in regenerative agriculture, using resources from their Workforce Development Agreements with the federal government, designed to support training and skills development programs. These funds would support continuous education and skill development, ensuring that current farmers can transition to and maintain regenerative practices effectively.

Grants or tax credits could also be offered to promote experienced farmers as mentors, creating a "train-the-trainer" type of incentive for implementing more systematic approaches. Drawing from programs such as the recently launched Canadian Prairies Trusted Advisors Partnership, this combination of collective learning and personal mentorship would strengthen the support network for farmers transitioning to regenerative practices.

Recommendation #3

Further Invest in Regional Research Assessing the Benefits of Regenerative Practices

To convince farmers to adopt regenerative practices, the sector needs to provide evidence that these practices are better for society and the farmers themselves.

Case Study: Trusted Advisor Partnership (TAP) in the Canadian Prairies

The TAP program, recently launched in the Canadian Prairies, exemplifies the power of local knowledge systems and mentoring networks in promoting sustainable agriculture. Supported by leading food and beverage companies, NGOs, and scientific partners, TAP aims to fill the gap in technical assistance for soil health management. By equipping agronomists with next-generation skills and professional networks, TAP is poised to significantly enhance farm resilience across Manitoba and Saskatchewan.

The North Dakota TAP, which served as a model for the Canadian initiative, has already demonstrated impressive results. Since its inception in 2022, over 30 independent Certified Crop Advisors have graduated from the program, leading to the sustainable management of hundreds of thousands of acres. In the next five years, the Canadian Prairies TAP aims to train more than 225 agronomists, potentially bringing cutting-edge conservation agriculture to over 500 farmers by 2029.

While a myriad of research has been conducted globally, farmers want to know that these results can apply to their land. There is, therefore, an opportunity for more research and evidence, building on initiatives such as Living Labs, to demonstrate the impact that regenerative practices have had on Canadian grain farmers and to give producers the confidence to select and adopt the practices best suited for their operations. Some suggestions include:

» Collaborating with universities and researchers to develop regenerative agriculture research programs using regionally specific knowledge, tools, and technologies; and

» Integrating monitoring and evaluation of agri-environmental indicators and return-on-investments into cost-share programs and reporting research findings as a standard practice.

Recommendation #4

Promote Existing Standards to Farmers and Consumers

Certifications like Regenified and Regenerative Organic Certified cater to a growing demand for regeneratively produced goods. These programs enable regenerative farmers to attract value-aligned customers. Adoption in Canada, however, remains limited.

By increasing awareness of and promoting existing regenerative agriculture certification standards, there is an untapped opportunity to connect farmers with an expanding market. Aligning on a standard would also help define clear practices, ensure adherence, educate consumers and address market misuse of the term "regenerative."

The success of the organic movement highlights how consumer recognition through labelling and certification can drive widespread adoption.

To maximize credibility, implementation should prioritize independent verification and avoid for-profit models. This should be paired with increased consumer education on the benefits of regenerative grains. Further, certifications should recognize that regenerative agriculture is a long-term journey and enable farmers at different parts of the journey to be recognized for their progress.

Recommendation #5

Scale Financing Programs that De-Risk Farmer Adoption of Regenerative Technologies

Reducing the risks and costs associated with adopting new technology that supports regenerative farming is crucial. While innovative technologies, such as precision fertilizer application and low-emission fertilizers, are available and have the potential to make a big difference, high upfront investments remain a barrier.

We therefore recommend federal and provincial governments work together to scale up programs like the Agricultural Clean Technology Program, which provides financial assistance to farmers to adopt clean technologies like farm management software.

Additionally, programs that protect farmers against financial losses from adopting new practices (e.g., the Great Lakes Protection Fund's Best Management Practice Challenge) should be introduced and supported to encourage farmers who are on the fence to test new practices.

Recommendation #6

Pilot Alternative Insurance Programs

Traditional insurance may leave some farmers uninsured or underinsured because it doesn't support switching from traditional to regenerative practices. There's an opportunity to pilot and scale alternative insurance policies with better-aligned incentives to regenerative practices.

For example, the Multi-Peril Crop Averaging program in Saskatchewan allows farmers

Case Study: Best Management Practices Challenge

In 2002, the Great Lakes Protection Fund introduced a program to protect farmers against financial losses that might result from adopting new beneficial management practices to provide a risk-free opportunity for producers to see proof on their own farms that new practices could be profitable.

Farmers with over 15,000 acres of corn participated in the program across the US, and through the program, nitrogen usage dropped by an average of 41 pounds per acre per year.

Most importantly, after participating in the program, 60 percent of farmers who participated extended the practices to additional acres, even without any additional incentive.

to basket crops, rewarding farmers who grow more than one type of crop by decreasing the cost of crop insurance. Similar programs could be introduced in other provinces.

There is also an opportunity to provide incentives through insurance, such as reducing premiums for farms with regenerative certifications.

The federal government should co-develop climate-smart insurance solutions to ensure programs reflect on-the-ground realities. By modernizing insurance, Canada can protect farmers, strengthen food security and lead in climate-smart agriculture.

Recommendation #7

Adapt Existing Business Risk Management (BRM) Programs to Incentivize Regenerative Practices

Canada's existing BRM programs are designed to help farmers manage risk and stabilize farm incomes when their yield may decrease. While they are not designed to encourage regenerative practices, they can be a valuable tool to drive behavioural change, especially as over 75 percent of grain farmers are already familiar with and subscribe to the program.

Changes can be made to these programs to reward farmers for adopting regenerative practices. These changes could include:

» Lowering premiums for producers that meet specific requirements that demonstrate commitment to regenerative practices (e.g., governments are currently piloting an AgriInsurance premium rebate);

» Reducing coverage for programs that may not be environmentally beneficial (e.g., disallowing coverage for multi-year, single crop rotations or limiting coverage for newly converted permanent grassland, trees or wetlands for a period of time); and

» Removing requirements for practices that increase GHG emissions (e.g., eliminating requirements for prior tilling and mowing to receive payment under the Unseeded Acreage Benefit).

These types of changes will further provide the nudge needed for farmers to adopt regenerative practices and, just as importantly, reduce existing disincentives.

Recommendation #8

Co-Develop Policies in Partnership with Farmers, Indigenous Peoples, and Underrepresented Communities

Farmers, Indigenous Peoples, and underrepresented communities hold invaluable knowledge of sustainable land stewardship, but their exclusion from decision-making has led to ineffective policies, mistrust and missed opportunities.

Successful regenerative agriculture in Canada depends on local expertise and traditional knowledge. By working collaboratively, the federal government can embed these insights into policy, fostering sustainable solutions and rebuilding trust.

To achieve this, the federal government must engage these groups as equal partners, respect Indigenous land stewardship, and address barriers like limited funding and resource access. Transparent, inclusive decision-making will empower communities, accelerate adoption and ensure regenerative agriculture benefits both people and the planet.

Conclusion

The past few years of extreme weather have shown the vulnerability of Canada's grain sector.

If we want Canadian agriculture to continue feeding society at large, we must fully embrace the movement toward regenerative agriculture. This policy paper provides a visionary yet practical outline for achieving this transformation.

By uniting the grain farming sector around common objectives and undertaking an inclusive decision-making process, Canada can ensure that farmers lead the way toward sustainability. Revitalizing and retooling knowledge-sharing networks will provide farmers with the resources, support, mentorship and localized context needed to implement regenerative practices. Changes to current government policies and programs can further incentivize adoption and address farmers' risk-benefit calculation. Finally, incentives to encourage the adoption of technology will help Canadian grain farmers continue on the path toward climate adaptation and mitigation while ensuring their livelihoods.

There may be obstacles to achieving a regenerative future. Still, if action is taken with patience, creative collaboration and science, then policymakers, farmers and agronomists could create an agricultural landscape globally recognized as a model for sustainability and innovation.
The time to act is now.

Endnotes

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Appendix A
Examples of Regenerative Agriculture Practices

Protecting Soil Surface with Cover Crops	An additional crop grown when no crop would normally be grown to protect the soil from erosion, increase water retention and improve soil health. Advantages include increasing soil carbon storage by providing organic matter, nitrogen scavenging and mitigating leaching into groundwater.
Integrating Livestock through Rotational Grazing	Grazing livestock provide manure that helps to regenerate soil health, boosts grass production and enhances carbon storage. Rotating animals across specific plots of land allows grass to grow and form longer roots, increasing carbon storage in the soil.
Minimal Soil Disturbance with No or Low Till	This is a practice that promotes soil health and improves water retention by minimizing soil disturbance to only during planting periods. This reduces farmers' labour, equipment rental and fuel costs.
Diversity through Intercropping / Companion Cropping	Companion cropping involves planting and growing two or more crops together, reducing disease and pest risks. This practice also helps control weeds and improve soil structure. Tree-based intercropping is a variation where crops and trees grow together.
Maintaining Living Roots with Carbon Capture	This is a method to capture the excess atmospheric carbon and store it in the soil, benefitting both plant life and livestock.

Appendix B
Expert Interviews

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ACKNOWLEDGEMENT

We would like to thank the Public Policy Forum (PPF) and Action Canada's executive team, staff and advisers for their support and guidance throughout the Fellowship, including but not limited to Sara-Christine Gemson, Anne Matio, Emilie Davy, Kris Frederickson, Scott Taymun, Mark Stevenson, Suzanne Nault and the Advisory Council. We welcome this unique opportunity to grow as Canadians and as leaders. A special thank you to our mentor, Rachel Wernick, who generously shared her advice and knowledge while guiding us through this journey. Finally, we would like to thank all the experts and community leaders who shared their insights with us.

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