



Canadian Farmer Resilience: A Sector Under Siege





Canadian row crop producers are facing the most severe financial pressures in decades

Canadian row crop farmers are facing unprecedented financial and operational pressures. Debt is mounting, land prices are soaring, and global instability is creating an unpredictable future. Farmers are producing more than ever—but rising costs and volatile markets are squeezing profitability.

Farming is getting more expensive

Interest expenses surged 38.9%, farm debt hit \$138 billion, and land prices jumped 52% in three years—making expansion unaffordable.

Global instability is raising risks

The Russia-Ukraine war, U.S. trade uncertainty, and extreme weather are disrupting supply chains and shaking market stability.

Resilience through adaptation

Farmers are tightening financial discipline, embracing sustainability, and leveraging technology to cut costs, optimize inputs, and improve efficiency.

This paper explores the challenges farmers face, the strategies they're using to stay competitive, and how technology is shaping the future of Canadian agriculture.



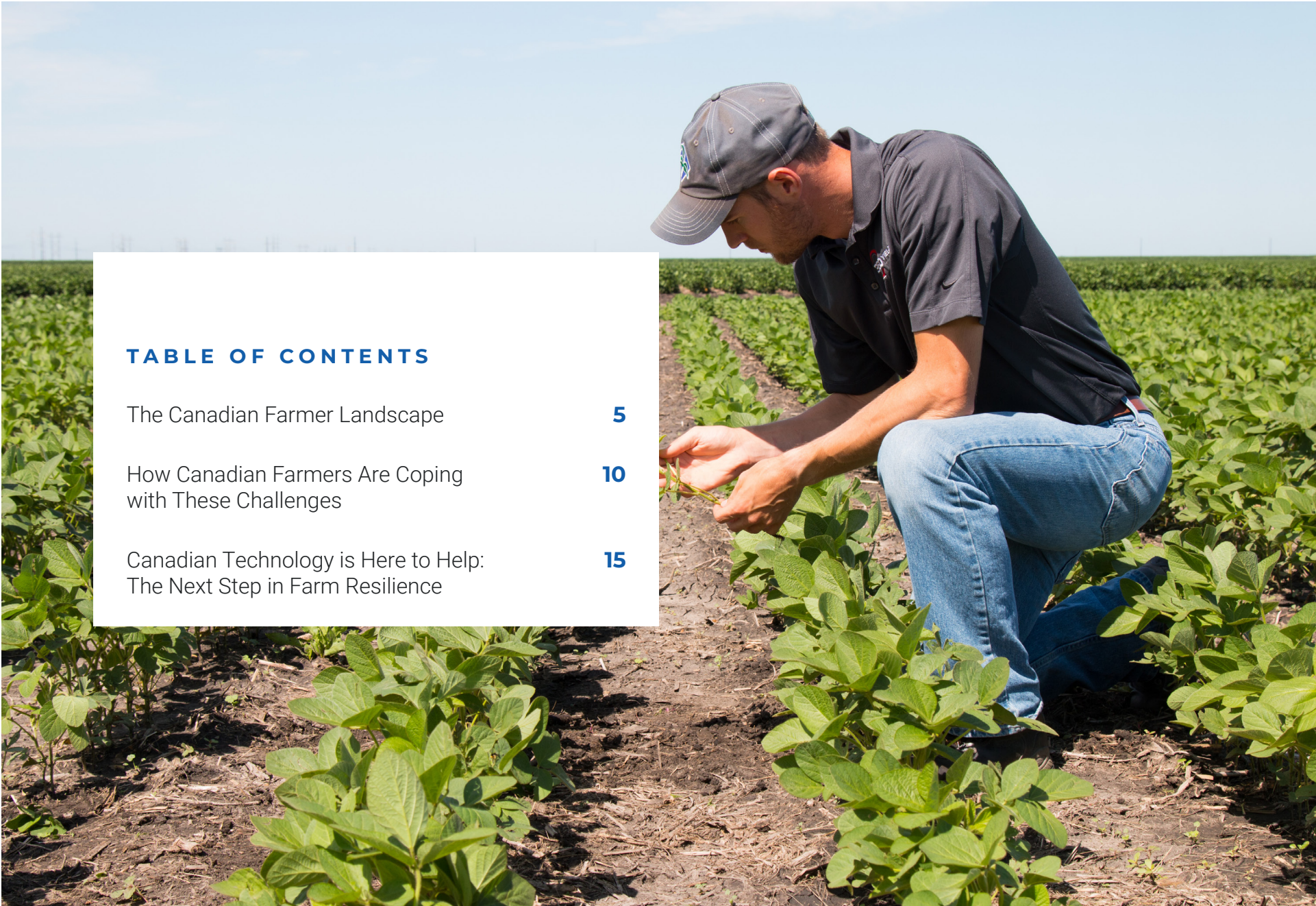


TABLE OF CONTENTS

The Canadian Farmer Landscape **5**

How Canadian Farmers Are Coping with These Challenges **10**

Canadian Technology is Here to Help: The Next Step in Farm Resilience **15**

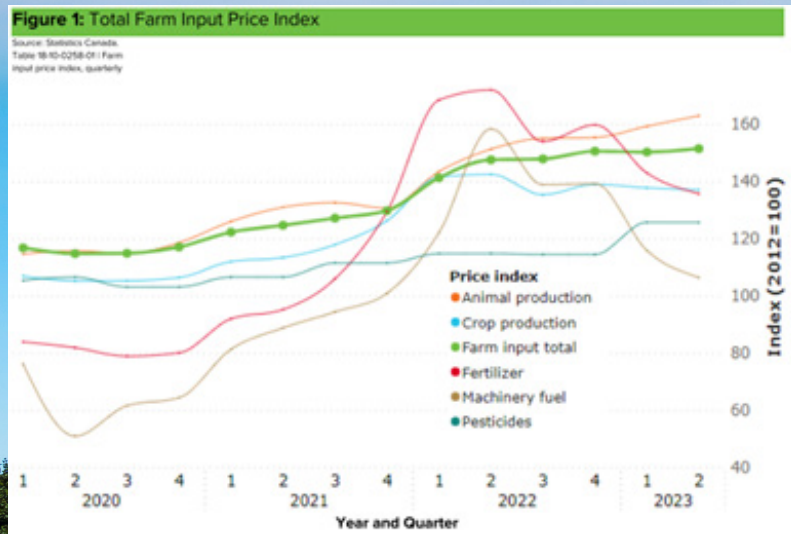


PART 1

The Canadian Farmer Landscape

The Cost of Farming is Outpacing Revenue Growth

At first glance, Canadian farm cash receipts seem strong, rising 4.6% to \$99.4 billion in 2023. However, this increase masks an alarming trend: expenses are rising at an even faster pace, rapidly eroding profitability.



- ↑ Interest expenses surged by 38.9%, marking the highest increase since 1981. Rising debt costs are cutting deep into margins.
- ↑ Farm operating expenses rose 3.4% to \$75.4 billion in 2023, following a staggering 19.9% increase in 2022, the largest jump in over 40 years.
- ↓ Net farm income plunged by \$8.5 billion, despite rising gross revenues.

For row crop farmers, these numbers paint a bleak picture: profitability is being squeezed tighter than ever. Despite strong demand, the rising cost of financing, production, and land is outpacing any gains in revenue.

The Rising Cost of Production is Gutting Profit Margins

The cost of essential inputs for Canadian grain and oilseed farmers has skyrocketed over the past three years, making it harder to break even.

- ↑ Fertilizer prices increased 54.4% in 2022 and remain well above pre-pandemic levels, despite a 13.9% drop in 2023.
- ↓ Fuel costs, though down 13.3% in 2023, remain volatile, influenced by geopolitical instability and carbon pricing.
- ↑ Labor costs rose 15% since 2020, with average farm wages increasing from \$20.29/hour in 2019 to \$23.42/hour in 2023, further straining operational budgets.
- ↑ Machinery costs have soared 25% since 2019, making new equipment increasingly unaffordable for farmers.



In addition to these rising expenses, carbon pricing continues to add a financial burden to row crop producers. Farmers are facing higher costs for fuel, heating, and other essential operations, with no viable lower-emission alternatives.

Land Costs and Debt Loads Are Becoming Unmanageable

For many farmers, land is both their greatest asset and their biggest financial burden. The cost of farmland in Canada has surged at an average rate of 10% per year over the last decade, making expansion or even maintaining operations increasingly difficult.



- ↑ Ontario farmland prices skyrocketed from \$11,786 per acre in 2019 to \$17,962 per acre in 2022, a 52% increase in just three years.
- ↑ Farm debt reached a record \$138 billion in 2022, with Ontario, Alberta, and Quebec carrying the highest levels.
- ↑ Average annual mortgage payments have increased by 9.7% per year over the last decade, with a massive 41% jump in 2022 alone due to rising interest rates.

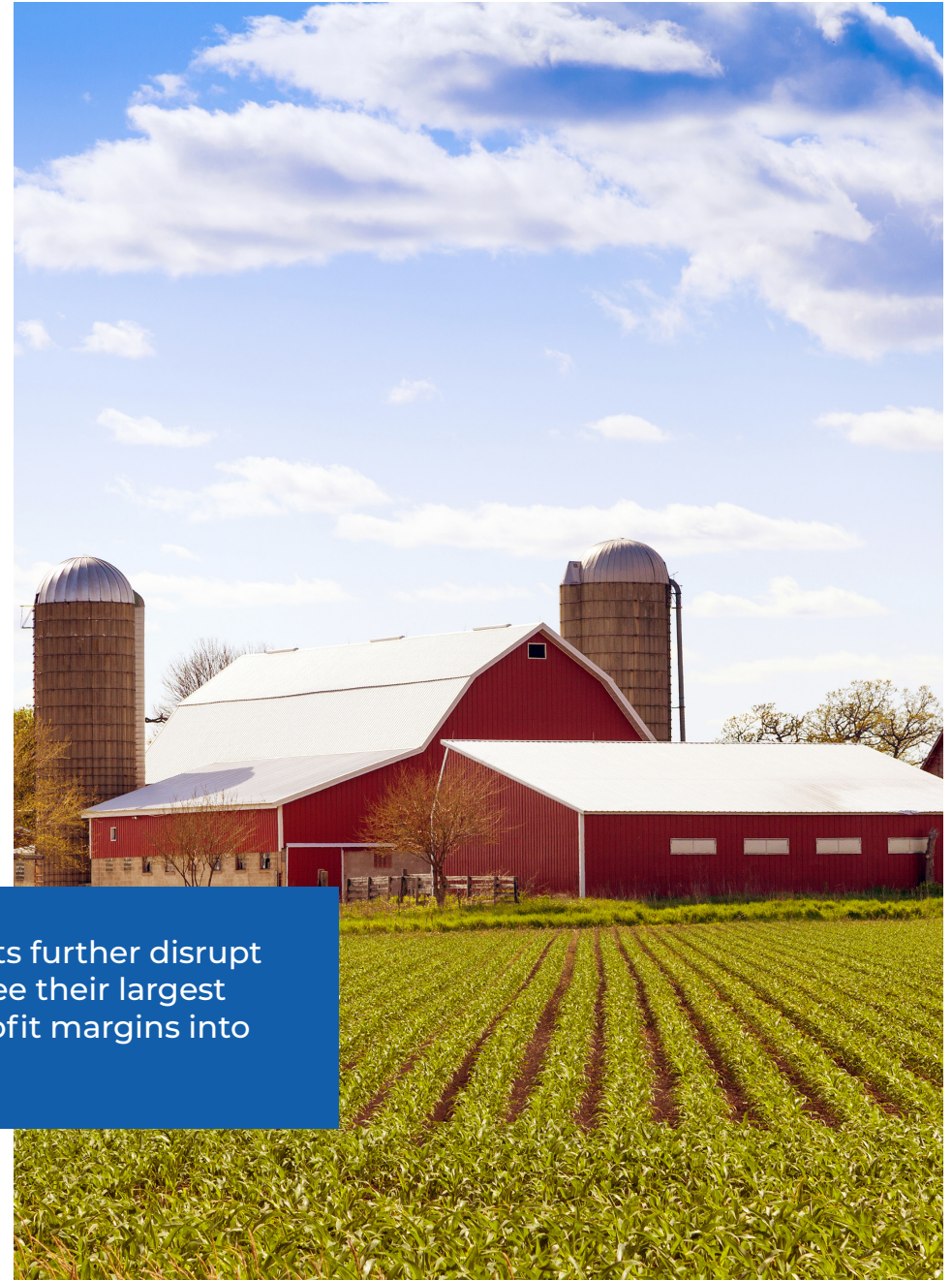
For row crop producers who rely on land-intensive operations, these rising costs mean that buying, leasing, or refinancing farmland is becoming financially untenable. As interest rates remain high, many farmers are being forced to reassess their operations, with some even choosing to sell portions of their land to stay afloat.

Global Uncertainty is Shaking Market Stability

The global agricultural landscape is more volatile than ever, and Canadian row crop farmers are caught in the middle of economic and geopolitical uncertainty.

- ↗ The ongoing Russia-Ukraine war continues to disrupt global grain markets, increasing price volatility and supply chain risks for Canadian producers.
- ↗ U.S. trade policy remains unpredictable, with the constant threat of new tariffs on Canadian grain exports adding uncertainty to an already volatile market.

If new tariffs are introduced or geopolitical conflicts further disrupt supply chains, Canadian row crop farmers could see their largest market shrink overnight, sending already tight profit margins into the red.





PART 2

How Canadian Farmers Are Coping with These Challenges

Despite mounting pressures, Canadian row crop farmers are adapting and evolving. From tightening financial discipline to embracing sustainability and leveraging peer networks, they're finding ways to navigate rising costs and volatile markets—and stay competitive.


A green combine harvester is shown in a wide, golden field during sunset. The harvester is moving from left to right, leaving a trail of harvested grain behind it. The sky is filled with soft, warm light from the setting sun, creating a hazy atmosphere. The field is vast and flat, extending to the horizon.

Financial Planning and Cost Control Are Critical for Survival

With rising input costs, escalating debt, and high interest rates, financial management has become the foundation of resilience for Canadian row crop farmers.

Working capital management is a top priority, as farms with low liquidity risk insolvency when market conditions shift. Farmers are increasingly monitoring their working capital ratios, which should ideally remain above 2:1 to maintain financial stability.

Short-term financing remains a risky but necessary tool, as many farmers are relying on advance payments programs to smooth out cash flow issues.

A person is shown from the side, holding a stalk of grain up to the light. The background is a field of grain at sunset, with a warm, golden glow. The person is wearing a dark jacket and a hat. The overall mood is contemplative and focused on agriculture.

With farm debt reaching a record \$138 billion and machinery costs surging 25% since 2019, financial survival depends on strategic cost control and smarter capital investments. Farmers who actively manage working capital and reassess equipment purchases are positioning themselves to weather economic uncertainty.

Even with these strategies, financial stress is evident across the industry. A national sentiment index of farmers showed a rating of just 84 out of 200, reflecting deep pessimism about their current financial state. Some hope exists for future improvement, most row crop producers remain focused on cutting costs and preserving liquidity in the short term.



94%

of Canadian farmers view soil health as a top priority, recognizing its role in yield stability and long-term farm resilience

Farmers Are Turning to Sustainable Practices for Profitability

Economic pressures are accelerating the shift toward low-cost, high-efficiency farming methods, particularly soil health improvements, regenerative agriculture, and input optimization.

Cover cropping, no-till, and reduced tillage are expanding, as they lower fuel and machinery costs while improving soil moisture retention. These practices also reduce input needs, cutting fertilizer use without sacrificing yield.

Precision agriculture is gaining adoption, with more farmers using GPS-guided equipment, drone technology, and real-time soil sensors to optimize fertilizer and water application. This reduces waste and improves margins.

Farmers are also shifting to renewable energy to lower operational costs. Solar panels and biogas systems are helping reduce on-farm electricity expenses, while variable rate irrigation systems are cutting water use without sacrificing production.

Despite these efforts, there is still hesitation. Profitability remains the primary driver of adoption, and while many farmers see the long-term benefits of sustainable practices, they require financial incentives and price premiums to fully commit.

Farmers Are Leaning on Peer Networks and Industry Collaboration

With uncertainty at an all-time high, knowledge sharing and industry support are becoming essential survival tools.

Collaboration between farmers, agronomists, and research institutions is increasing, with more producers attending workshops, industry events, and online forums to exchange best practices and efficiency strategies.

Supply chain partnerships are evolving, as farmers work directly with grain buyers, input suppliers, and financial institutions to secure better contract terms and risk-sharing agreements.

This peer-driven model is especially important for adopting new technologies and sustainability practices. Farmers are far more likely to try new methods if they have seen success from their peers, reinforcing the importance of trusted industry networks.



86%

of farmers say they learn best from other producers, making peer-driven education one of the most trusted sources of technical support.



PART 3

Canadian Technology is Here to Help: The Next Step in Farm Resilience

Rising costs, volatile markets, and climate uncertainty are squeezing Canadian row crop farmers. Technology is the difference-maker—precision ag, AI-driven insights, and digital platforms are cutting costs, boosting yields, and driving sustainability. The farms that adopt these tools won't just survive—they'll thrive.



Precision Agriculture is Cutting Costs and Improving Efficiency

With input prices rising and margins tightening, farmers are turning to precision agriculture to maximize resource efficiency.



75% of Canadian farms are expected to adopt at least one precision agriculture technology by 2024, demonstrating its growing role in farm management.



Variable-rate technology (VRT) for fertilizer application is already used by 40% of farmers, reducing waste and ensuring nutrients are applied only where needed.

Farmers Edge precision agriculture solutions, including FarmCommand[®], integrate real-time data from weather, soil, and equipment to help farmers make smarter, more efficient input decisions.

AI and Data-Driven Decision Making are Increasing Productivity

Artificial Intelligence (AI) is rapidly reshaping farm management by providing predictive insights, optimizing operations, and reducing inefficiencies.



AI-powered crop monitoring systems use predictive analytics to determine optimal planting and harvesting times, increasing efficiency and maximizing yield potential.



AI-driven scouting tools detect diseases, pests, and nutrient deficiencies earlier than traditional methods, preventing losses before they become severe.

By leveraging AI-powered insights, farmers are reducing guesswork, optimizing resource allocation, and improving farm profitability in an increasingly volatile market.



Farmers Edge AI-powered yield prediction models and in-field decision support tools provide farmers with actionable insights to improve planning and maximize productivity.



Digital Platforms are Unlocking New Revenue Streams and Market Access

Beyond operational efficiency, digital agriculture is creating new financial opportunities by enhancing traceability, sustainability, and marketability..



Carbon intensity scoring tools are allowing farmers to participate in carbon markets, providing financial incentives for sustainable farming practices.



Cloud-based farm management platforms provide real-time financial tracking, helping farmers make data-driven marketing and investment decisions.

With digital tools, farmers are not only optimizing their operations but also gaining new revenue opportunities through sustainability and enhanced market access.

Farmers Edge sustainability dashboards and traceability tools help farmers track and monetize their sustainability efforts, from carbon credits to compliance with emerging market regulations.

Conclusion: A Resilient Future for Canadian Agriculture

Technology is no longer optional—it's essential. 75% of farms are adopting precision ag, AI is optimizing decisions, and digital platforms are cutting costs. Farmers who embrace tech will outcompete and outlast.

Profitability meets sustainability. 94% of farmers prioritize soil health, and precision input management is lowering costs while boosting yields. Carbon markets and traceability create new revenue streams.

Collaboration is driving the future. 86% of farmers rely on peer networks. Industry partnerships, data-driven insights, and real-time market access accelerate adoption and success.

The future belongs to those who adapt and innovate. With the right innovations and support, Canadian agriculture is poised for a more efficient, sustainable, and profitable future.





Partners@FarmersEdge.ca
FarmersEdge.ca