

October 2025

At A Turning Point: Canada's Agricultural R&D

A Research Report prepared for CAPI by
Elisabeta Lika and Tyler McCann



Research
Report



The Canadian Agri-Food Policy Institute
960 Carling Avenue, CEF Building 60
Ottawa, ON K1A 0C6
capi-icpa.ca

The Canadian Agri-Food Policy Institute's mission is to lead policy development, collaborate with partners and advance policy solutions within agriculture and food



This report was funded in part by *Agriculture and Agri-Food Canada under the Sustainable Canadian Agricultural Partnership's AgriCompetitiveness Program.*

The findings, interpretations, and conclusions in this report are solely those of its authors.

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Canada's agricultural R&D:

Understanding challenges, framing the future

Why it matters



Canada's ag R&D system powered breakthroughs like the \$30 billion canola crop, steady dairy gains, and crop innovation for decades.

Today's global disruptions, climate, and new technologies mean yesterday's model isn't enough to meet tomorrow's needs.

Strengthening Canada's agricultural innovation system is vital for food security and global competitiveness.

What needs to happen first



Building a shared understanding of the challenges is essential. Quick fixes and siloed initiatives cannot solve deeply rooted problems. Honest, inclusive dialogue across the sector must come before solutions.

Path forward



See strengths as tools

Research base, reputation, and science to serve new goals



Prioritize long-term thinking

Plan beyond the next funding cycle



Turn obstacles into opportunities

Modernize, don't just patch



Learn from leading examples

e.g. Australia's national coordination



Utilize existing frameworks to unify action

Innovation Continuum

Evidence at a glance



Funding drop

21% decline since 1985



Aging infrastructure

95% reduction in capital funding



Fragmentation

Siloed efforts, national vision lacking



Private sector gap

<25% of R&D from private sources



Talent risk

30% of workforce retiring by 2030



Adoption lag

Only 54% of rural Canada with reliable broadband

Looking ahead



As part of a broader initiative, this report lays the groundwork. Stay tuned for further analysis and action-oriented policy work.

Note from CAPI

Canada's agricultural research and development (R&D) system has driven prosperity for decades. Today, however, the system faces significant challenges. Public funding is declining, research efforts are fragmented, and incentives do not align well with production and societal needs. External forces such as climate change, trade tensions, and rapid technological shifts are reshaping agricultural research demands beyond the system's current capacity.

This report seeks to build a shared understanding among stakeholders about these challenges. It raises key questions: Are the problems we face well understood? Is it time to reconsider the status quo? How should anticipated funding cuts and external disruptions inform future directions?

This report is part of a CAPI initiative exploring the future of Canada's agricultural R&D system, aiming to foster inclusive, evidence-informed dialogue about potential reforms. This and other reports, dialogues and communications, encourage reflection on the role the agriculture R&D system needs to play in helping Canadian agriculture and agri-food achieve its full potential.

The goal is not to develop solutions immediately but to create space for honest and productive dialogue about change. This starts with the need for a clearer picture of where things stand, what a 21st century ag innovation system looks like, and what it takes to transition from the status quo to the future.

Key Takeaways

- Canada's agricultural R&D system, once a driver of prosperity, now faces challenges such as fragmented coordination, outdated infrastructure, private sector underinvestment, and weak research-to-farm pathways.
- Engaging stakeholders in dialogue is the essential first step to understand the system's flaws. Without a common understanding of the challenges, proposed solutions risk being ineffective.
- Mapping the current state of R&D against a future vision provides a structured approach to guide meaningful system reform.
- Articulating a clear purpose for agricultural R&D determines the scale of transformation needed to meet 21st-century needs.
- Without changing current structures and incentives, the system's outcomes will remain the same despite pressing needs for improvement.

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Acknowledging challenges as a starting point

Canada's agricultural research and development (R&D) system has driven success for decades. Canola's climb to [\\$30 billion crop](#), steady dairy productivity, and many new crop varieties demonstrate this legacy. These gains grew from a system well funded and coordinated across governments, industry, and academia. But past success does not guarantee future success, and there is increasing awareness that today's R&D system is struggling to keep pace with change. Struggles go beyond funding cuts. Funders, researchers, and users of R&D often see different problems and measure success differently. Farmers, processors, and industry leaders look for practical solutions, while academic and funding bodies often focus on publications and budgets. This gap means research can remain theoretical, climate strategies may lack practical impact, and Canada's global competitiveness lags despite significant public investment.

Revisiting how the agricultural R&D system operates will help ensure it delivers a return on investment

and improvements to profitability, sustainability and resiliency not easily replicated elsewhere.

"If I had an hour to solve a problem, I'd spend 55 minutes thinking about the problem and 5 minutes thinking about solutions."

-Albert Einstein

The first step is not quick fixes but building shared clarity on what isn't working. Funders, researchers, and users must define together what "broken" means and what results matter most.

This report explores these challenges, covering funding, decision-making, and the gap between research and real-world use. It shows how current structures have failed to adapt to 21st-century demands like climate volatility and shifting global markets. While focusing on the early stages of R&D, it also recognizes that innovation is a continuum: flaws at the start slow commercialization and adoption later.



Image adapted from [Innovation, Science and Economic Development \(ISED\)](#)

This isn't working at all... I should warn others not to put their cart before the horse.

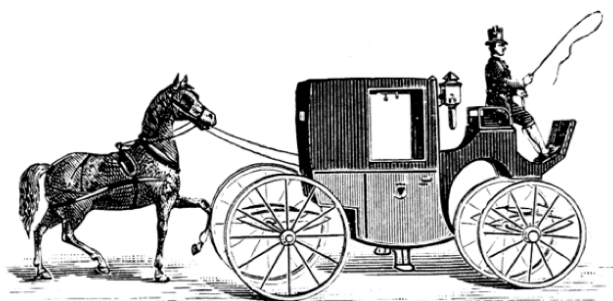


Image from [Lessons from the Goalpost](#)

By presenting this evidence, the report encourages stakeholders to engage in deeper discussions about the agricultural R&D system's state. Progress depends on building a shared understanding of challenges first.

Only then can stakeholders agree on the path forward: whether small adjustments, role redefinitions, or full restructuring. Despite current results, facing these problems head-on can unlock better outcomes for farmers, food processors, and consumers, raising farm profitability and food security.

Change is difficult. Getting agreement on what's failing won't be simple. But waiting for the system or sector to break down is riskier. The [2024 CAPI Agri-Food Risk Report Phase 1](#) emphasizes this. Farmers rank R&D high among priorities for both public and private sector, seeing it as a cornerstone tackling risks like markets and climate. With clear framing, a focused purpose, and solid data, it is feasible to bring stakeholders together quickly to start this important conversation.

Challenges in the agricultural R&D system

Getting on the same page about existing challenges in the Canadian agricultural R&D system is step one. The data lays out a clear picture: declining funds, disjointed efforts, and gaps in talent and infrastructure, to name a few, do exist. But not everyone feels it the same way. Some players thrive under the current setup, and that's great; others are losing ground, and that's hard to ignore. Discussion isn't just nice to have. It's how stakeholders involved



in the system sort out who's winning, who's struggling, and what it all means. Data alone won't call the shots or spark change, but it's a flashlight we can't afford to switch off. What follows is a rundown of these existing issues, backed by numbers and grounded in reality.

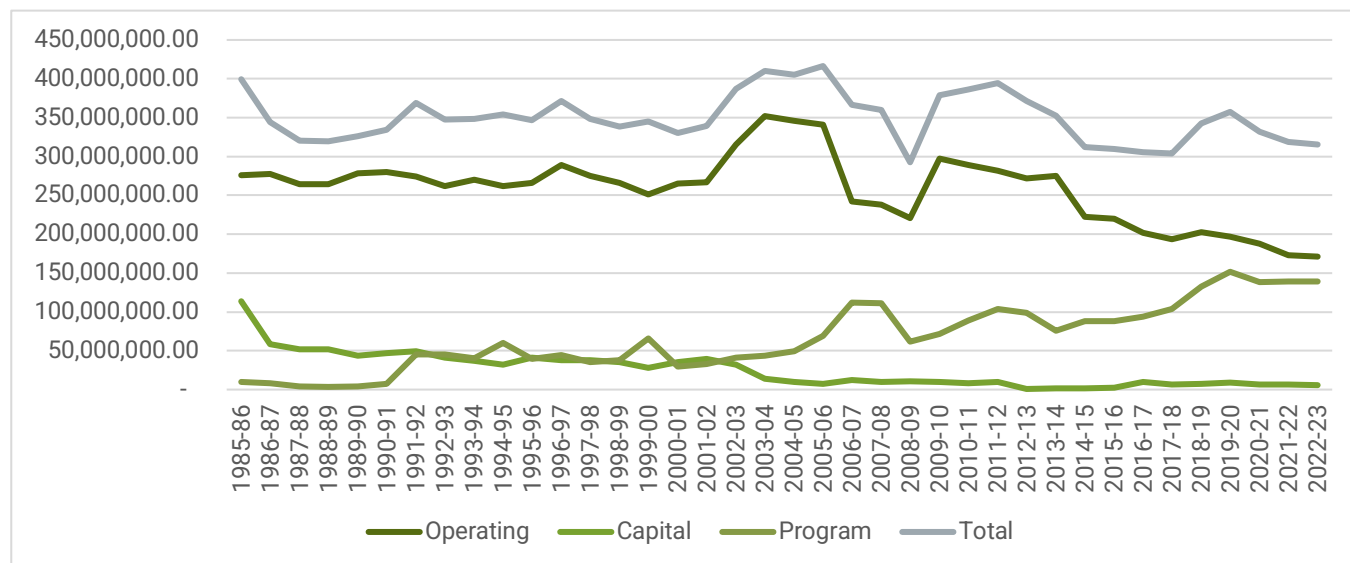
Decline in public funding

Canada's agricultural R&D system is under pressure, and funding trends are a significant part of the story, but not the whole story. Rather than focusing on a

single decline, it is important to recognize shifts that will shape the future, especially now. The economic landscape is [tightening](#), as the government has announced mandated spending reductions across departments, targeting up to [7.5% cuts](#) growing to 15% by 2028-29. Against this backdrop, Agriculture and Agri-Food Canada (AAFC) is expected to face further funding constraints. Here's what the data shows.

An analysis of AAFC data reveals a decline in operating and capital expenditures and an increase in program dollars, but not enough of an increase to offset the losses. Operating expenditures (day-to-day costs, such as staff salaries and lab upkeep) have fallen 38% from 1985-86 to 2022-23. Capital expenditures, key for labs, experimental stations, and equipment, have dropped by 95% over the same stretch. Program spending on specific projects has climbed, but not enough to offset the reductions in operating and capital expenditures. Adjusted for inflation, total AAFC spending on agricultural R&D is down 21% since 1985.

Figure 1: Inflation adjusted AAFC spending on agricultural R&D



Note: Data provided by AAFC. Graph generated internally using AAFC-supplied data

This drop stands out against Canada's GDP, which increased from \$596 billion in 1990 to \$2.23 trillion in 2025 (US dollars). Agricultural R&D investment has not kept pace with economic growth, leading to

a shrinking share of GDP. R&D's share of GDP has dropped from approximately 0.12% in the mid-1980s to under 0.02% by 2022-23, falling over 80%.

Figure 2: Share of AAFC spending in agricultural R&D to GDP (current prices)



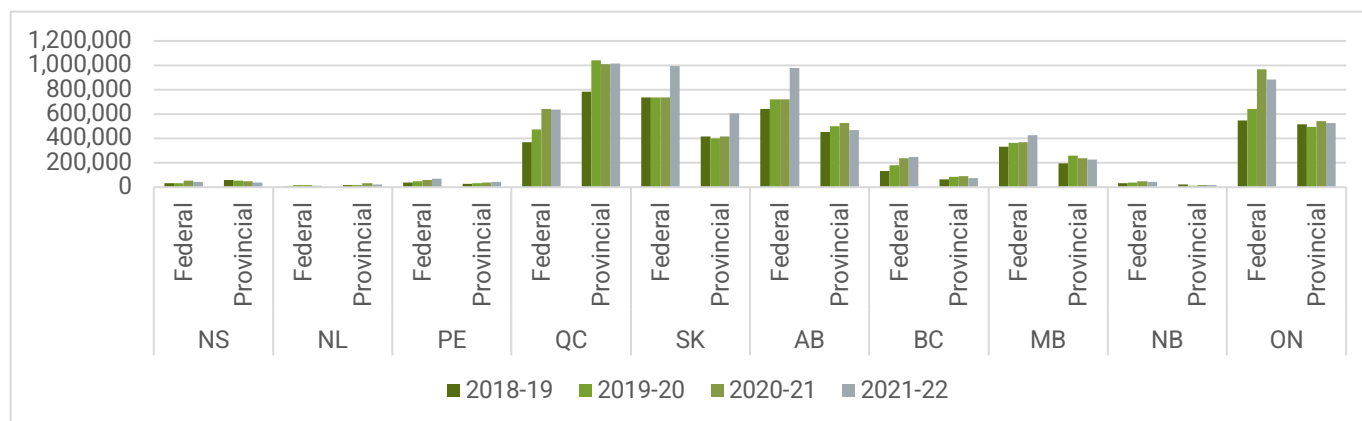
Note: Data provided by AAFC. Graph generated internally using AAFC-supplied data.

AAFC's funding is only one piece of the federal funding puzzle which also includes NSERC and other support. While this might increase the total federal envelope, Canada's agricultural system faces coordination gaps, aging infrastructure, and weak adoption on farms.

Research expenditure varies by province, reflecting local priorities and sector size.

Saskatchewan and Alberta lead in federal funds, while Quebec and Ontario invest the most provincially. The Maritime provinces receive the least federal support and do not consistently make up the difference with provincial funding. This uneven funding adds to a fragmented national research system, leaving some regions with limited capacity as federal support declines.

Figure 3: Agriculture research expenditure by province (2018 -2022)



Note: Amounts expressed in thousands of dollars. Data provided by AAFC. Graph generated internally using AAFC-supplied data.

Chronic private-sector underinvestment

A decline in public funding for agricultural R&D isn't unique to Canada. It is a global trend, but it stings more here because the private sector hasn't stepped up to fill the gap and rebalance the load.

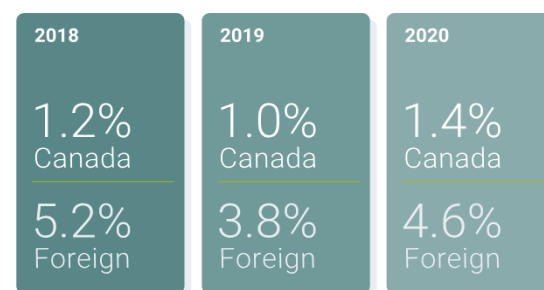
Private-sector contributions to agricultural R&D are disproportionately low compared to public funding. In 2020, private spending totaled \$108 million CAD, less than *one-fourth* of public funding (\$450 million CAD). By contrast, in the United States and Australia, private sector R&D spending outpaces the public sector. Public funding decline in Canada hasn't sparked a private-sector investment increase, leaving the system underpowered.

Globally, Canada ranks 25th in private agricultural R&D investment, down from 18th in 2008. This imbalance is stark when compared to global competitors like the U.S., where private-sector investment significantly outpaces public funding. Canada's position in global rankings for private agricultural R&D investment has declined, falling from 18th place in 2008 to 25th in 2014.

The private sector's involvement in Canadian agricultural R&D is not only limited in scale but also narrowly focused. Over 95% of private crop breeding investments target high return crops like canola, corn, and soybeans. This narrow focus is largely due to the robust intellectual property protections these crops enjoy, which provide more certainty for private investors. However, this concentration leaves other important crops and agricultural sectors underserved in terms of private R&D investment.

Historically, foreign firms operating in Canada outspent domestic ones on R&D, a gap tied to big players like Huawei significantly funding ag-tech before retreating amid trade tensions. In 2020, domestic firms invested only 1.4% of their revenues in R&D, while foreign firms operating in Canada invested 4.6%. However, that's softened since, as foreign pullbacks have occurred and a slight domestic uptick has narrowed the gap.

Figure 4: Canadian agricultural firms trail global competitors in R&D spending (Expenditures as a percentage of revenues)



Fragmented coordination

While there are pockets of successful collaboration in the Canadian agricultural R&D landscape, the overall system faces significant challenges related to fragmented coordination across levels of government and between different stakeholders in the innovation ecosystem. This fragmentation is characterized by granting councils and other disconnected entities with similar but uncoordinated mandates operating at sub-scale levels. The

resulting lack of clarity regarding roles and responsibilities, non-complementary overlaps, and inconsistent support between stakeholders has led to [significant gaps in research support](#), particularly affecting intersectoral research, urgent societal need research, and ambitious international programming.

The absence of an independent, external advisory body to provide strategic advice and broad oversight further aggravates the impact of this fragmentation. Moreover, [the lack of a national strategy](#) or shared vision for the Canadian science, research, and innovation ecosystem hinders the alignment of various players towards common goals. Efforts to address these issues, such as the Canada Research Coordinating Committee (CRCC), have made some progress in understanding the needs and constraints of various actors but [have fallen short in resolving inefficiencies](#), inequalities, and barriers for researchers in Canada and their international partners.

An evaluation of [AAFC's Collaborative Framework](#) further underscores these coordination challenges. The framework, while addressing industry R&D needs and priorities, lacks strategic oversight. Its project review and approval process focuses on individual project approvals without considering the broader context of all projects within the Framework and AAFC's science portfolio, potentially leading to gaps in addressing priorities and risking duplication of project objectives.

The [AGriScience Program](#) cluster model was introduced to combine government and industry funding to address key agricultural research priorities. While valued by industry, especially farmers, for matching their contributions with public funds, clusters face challenges that limit their effectiveness. Funded on five-year cycles without guaranteed renewal, clusters operate under uncertainty and shifting political priorities. This structure often pressures partners to align with AAFC's agenda rather than set truly collaborative priorities. Evaluations further highlight that [clusters tend to focus on individual activities](#) instead of harnessing their collective potential, which weakens their overall impact.

Adding to these challenges, the program's current setup measures success by tracking outputs from individual projects rather than the cluster's overall effect. This narrow focus makes it difficult to understand the broader economic, environmental, or social benefits. It also hinders knowledge sharing and slows adoption, since findings remain siloed

instead of contributing to a unified strategy. Public-private partnerships (P3s) and public-private-

producer partnerships (P4s) have emerged as important vehicles for collaboration, leveraging funds and resources from various stakeholders. However, these [partnerships face challenges](#) in aligning goals, managing intellectual property, and navigating complex reporting requirements from public funders.

The result? A system where stakeholders "collaborate" in name only, prioritizing narrow interests over collective progress.

Short-term focus in research priorities

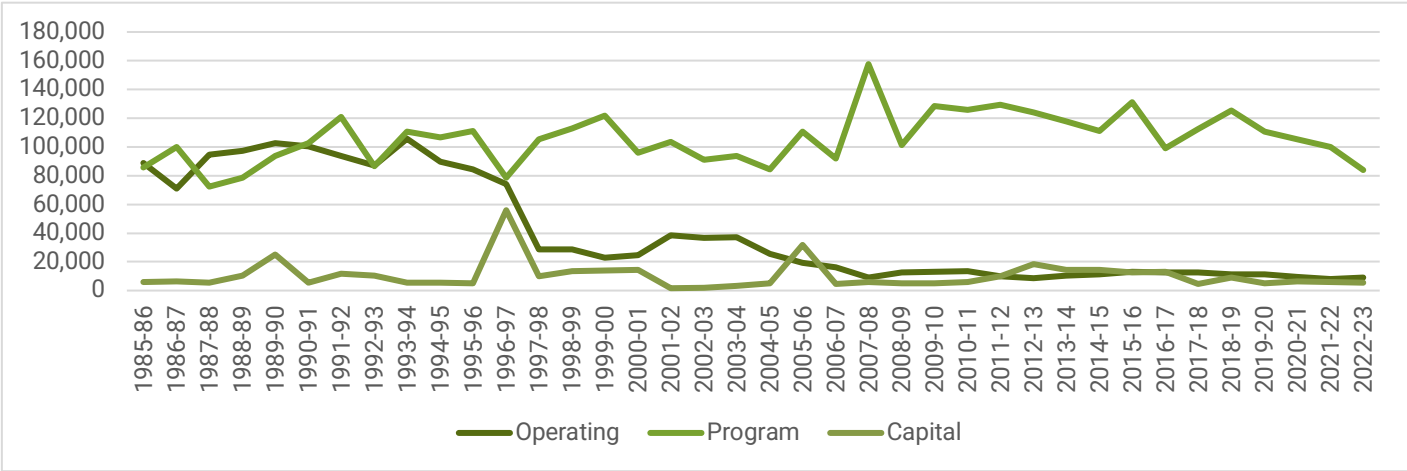
The Canadian agricultural R&D system faces a significant challenge [in its tendency to prioritize short-term, applied research projects over long-term, foundational research](#). This push for quick results and immediate returns on investment has tilted the system off balance, letting operational fixes overshadow the deeper innovation needed to tackle complex challenges or maintain Canada's edge globally.

The [steady decline](#) in public funding for agricultural R&D in Canada over the past three decades has put pressure on researchers and institutions to deliver quick, tangible results to keep the money flowing. As a result, many research projects now squeeze into [short funding cycles](#) of three to five years, a timeframe that naturally leans toward applied research with instant payoffs rather than foundational efforts that might take decades to bear fruit. [The 2017 Fundamental Science Review](#) warns that skimping on basic research, where breakthroughs like drought-resistant crops or soil regeneration start, threatens the wellspring of future innovation, often delayed by long lags no one can predict. If this shift worries experts in the U.S., it should be seen as a red flag for Canada, where basic research has taken a back seat for over a decade.

Provincial spending data from 1985 to 2022 lays bare the trend. Operating expenditures, which keep research ticking day-to-day, peaked in the early 1990s, then slid hard, leveling off at lower amounts by the 2000s with only slight bumps since. Capital expenditures, vital for long-term infrastructure like labs or field stations, have stayed the smallest slice, flatlining despite brief spikes in 1996-97 and 2005-06. Program expenditures, tied to specific projects, have climbed overall but swing wildly, hitting highs in 2007-08 and the mid-2010s, then dipping after 2017.

This rollercoaster makes long-term planning a gamble, and the focus stays on short-term applied wins over the slow burn of foundational discovery.

Figure 5: Comparison of provincial expenditure on agricultural research by category (inflation-adjusted), 1985-2022

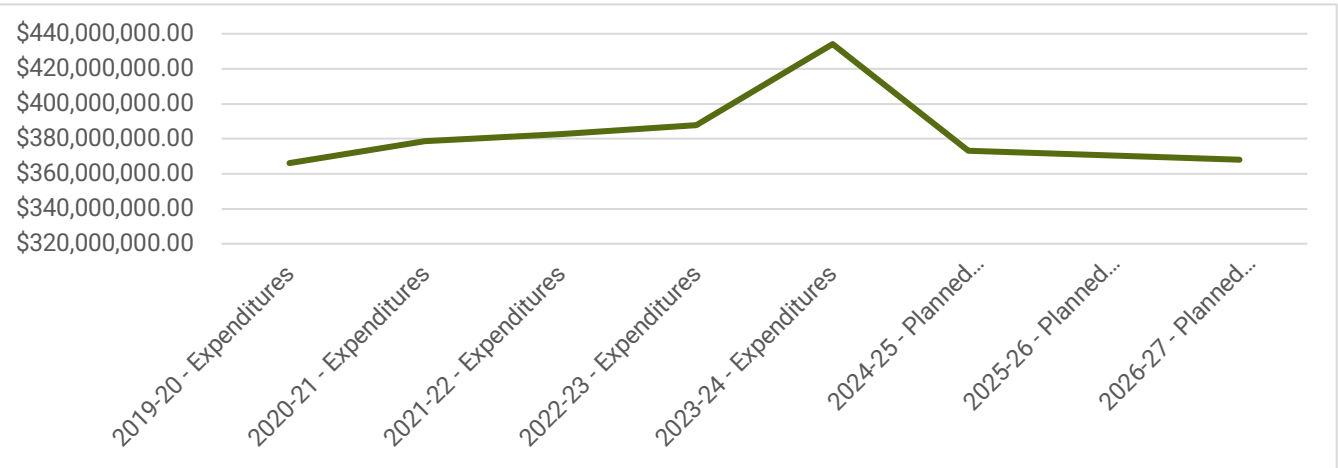


Note: Dollar amounts are expressed in x1000. Data provided by AAFC. Graph generated internally using AAFC-supplied data.

Funding mechanisms double down on this short-term bias. Meanwhile, AAFC's budget for foundational science is set to shrink, dropping from

2023-24 levels to \$373 million in 2024-25 and \$368 million by 2026-27, a signal that long-term bets are losing ground.

Figure 6: AAFC expenditures on foundational science and research



Note: Data provided by AAFC. Graph generated internally using AAFC-supplied data.

This shift comes with real trade-offs. Applied research matters, but it's not where government should lead. Foundational research, the kind that takes years and risks dead ends, is where public funding belongs because it builds the basis for breakthroughs that can transform agriculture over

time. But, that requires steady funding, patient timelines, and a public commitment out. [Canada's Ebola vaccine](#), built on 15 years of lab curiosity, shows what's possible when government backs ambitious, long-term science.

Aging and underfunded research infrastructure

The Canadian agricultural R&D sector faces significant challenges due to aging and underfunded infrastructure, limiting the sector's ability to innovate and compete globally.

This underinvestment extends to both physical and digital infrastructure. Many facilities, like experimental farms and research stations, have not kept pace with modern technological requirements, limiting their ability to conduct advanced research in areas such as precision agriculture, robotics, and climate-resilient crop varieties.

Federal capital expenditures for agricultural research have seen a dramatic decline over the past decades. In 2022-23, federal investment in research capital expenditures was only \$8.9 million, representing an 88% decrease from \$74.6 million in 1985-86. This reduction suggests long-term underinvestment in research infrastructure, potentially leading to outdated facilities and equipment. Provincial capital expenditures for research have shown minimal growth. In 2022-23, provinces collectively invested \$8.4 million, only marginally higher than the \$3.9 million invested in 1985-86. When accounting for inflation, this represents a decrease in real terms over less than four decades.

Beyond physical infrastructure, the sector faces significant challenges in soft infrastructure, including data management, digital equipment, and virtual platforms. Evaluations of agricultural R&D programs have identified [limitations in data storage and computation capacity](#), particularly affecting areas of research related to genetics which produce large and complex datasets. The [lack of a common analytics platform](#) and rural broadband often prevents farmers and researchers from realizing the full potential of large-scale research such as precision agriculture. Issues of [data interoperability](#) and standardization further complicate the adoption of data-driven agricultural technologies.

The urgency of addressing this issue has been recognized by recent initiatives. In June 2004, the

government [announced](#) an investment of over \$18 million through the Canada Foundation for Innovation to support 23 research infrastructure projects at 21 colleges and polytechnics across the country. The Agricultural Research Institute of Ontario (ARIO) has [emphasized](#) the need to "continue to pursue the revitalization of the province's agri-food research infrastructure necessary to support innovative research and the long-term sustainability and growth of the agri-food sector".

Weak research-to-farm pathways

Canada's agricultural R&D system churns out plenty of science, ranking [8th globally](#)¹ in agricultural research output, but struggles to get those findings into farmers' hands. The number of agricultural patents [has slipped over](#) the past decade, hinting at a slowdown in turning research into tangible tools, though we acknowledge that patents alone don't tell the full story. Not all innovations, like better agronomy practices, can be patented, and even patented tech doesn't guarantee adoption. The real difficulty lies in barriers that keep research from hitting the field.

Farmers face practical hurdles to using new tools. Only [54% of rural Canadians](#) had reliable high-speed internet by 2022, a gaping hole when data-driven gear like precision agriculture needs solid connectivity to work. Without it, even the best research stays theoretical for half the rural communities. Meanwhile, the erosion of public extension services, once the glue between labs and fields, makes matters worse. Provincial cuts have shrunk these programs since the 1990s, leaving farmers leaning on [private advisors](#) or commodity groups. Yet, their efforts often [lack](#) the consistency or scale needed to drive widespread adoption. For example, climate-smart agricultural practices validated through research frequently remain [underutilized](#) due to fragmented knowledge transfer. Saskatchewan's Strategic Research Initiative (SRI), for instance, funds large-scale projects but findings often sit in reports instead of reaching growers.

¹ The ranking of 8th globally in agricultural research output refers to 2014, so it is somewhat outdated. Evidence indicates that Canada's ranking has likely declined further since then. Still, the 2014 figure is sufficient to illustrate the broader point about Canada's challenges in agricultural R&D output.

Human capital erosion

Canadian agricultural R&D is facing growing pressure to attract and retain the next generation of talent. By 2030, nearly 85,000 people or 30% of today's agricultural workforce, are expected to retire. This trend is mirrored on the farm, where the average operator is now 56, and over 60% are aged 55 and older.

At the same time, many Canadian-trained researchers are choosing to work abroad. A 2022

study found that over 80% of those who left moved to the U.S., where salaries in STEM fields are often 20-30% higher.

While agricultural program enrolment has grown at an annual average growth rate of 1.7% over the last two decades, it hasn't kept pace with retirements or rising demand. Without stable funding and clearer career pathways, retaining talent remains an uphill climb.

Misaligned incentives

While Canada's agricultural R&D challenges aren't by design, they're a side effect of incentives that haven't kept up with the sector's needs. Like anything in life, what drives progress today might not hold up a decade later. Academic rewards, industry motivations, and regulatory landscape once made sense in their time, but they're pulling researchers, companies, and government in directions that don't fully match today's realities. Revisiting these incentives could close the gaps, turning a system that's drifting into one that's in sync.

Academic incentives; Academic incentives: "The publish or perish" cycle

The Canadian agricultural R&D system is influenced by academic incentives that favor academic publication and theoretical discoveries over practical impact. This "publish or perish" cycle is ingrained in the academic culture, where researchers are primarily rewarded for securing grants, publishing papers, and training graduate students. Federal grants from agencies like NSERC (Natural Sciences and Engineering Research Council of Canada) and SSHRC (Social Sciences and Humanities Research Council) typically tie funding to peer-reviewed journals as key outputs, putting citations ahead of whether a farmer ever uses the work. University promotion ladders double down, tying tenure to academic wins, not field-level change.

That focus pulls research away from the farm gate. Programs like AgriScience acknowledged limitations in tracking commercialization rates, a sign the system's not built to bridge lab to land. Today's fast-moving world demands a web of feedback between basic science, applied work, and growers' needs, but incentives don't push

universities that way. Without the right incentives, good ideas too often stall at the journal stage.

Weak IP protections and misaligned incentives

Private-sector engagement lags because the incentives don't spark bigger moves. Canada's intellectual property (IP) protections for plant breeding lag behind the U.S. and EU not just in strength, but in enforcement. Under the Plant Breeders' Rights Act, breeders get exclusive rights to new varieties, but the government takes a hands-off approach, leaving enforcement entirely to rights holders. Unlike the U.S., where agencies like the USDA share data on infringements, Canada offers no such support, refusing to disclose information it holds, per industry critiques. This gap leaves companies exposed, dampening their appetite for long-term R&D when they can't reliably defend their work.

Canada's intellectual property protections for plant breeding innovations are weaker compared to the U.S. or EU, creating a disincentive for long-term investments, as companies cannot ensure exclusive rights to their innovations. This leads to a "free-rider" economy where firms wait for public-funded innovations to enter the market rather than investing in their own research.

The PBR Act's *Farmer's Privilege* clause adds another hurdle. Farmers can save and replant protected seed without limits, no payment required, no cap on use, unlike tighter rules in the EU or U.S. (e.g., U.S. utility patents mandate royalties). This promotes exploitation of IP and discourages investment. Add in Canada's patent landscape, lacking utility patents for plants, unlike the U.S., and leaning on less

tangible “cell patents” that are harder to justify and enforce, and firms often opt to wait out publicly funded innovations rather than fund their own. It’s a “free-rider” setup not by intent, but by design flaws that haven’t evolved.

Tax incentives, such as the SR&ED program skew things further, favoring [big firms](#) with the resources to navigate its claims process. This creates an imbalance where smaller enterprises have limited access to these incentives, discouraging them from engaging in R&D. As a result, private investments are narrowly focused on [low-risk crops](#) like canola, corn, and soybeans, with canola receiving 52% of investment. That’s a safe bet where IP holds tighter, but it starves other crops of R&D focus.

Regulatory barriers

Canada’s regulatory framework for agricultural innovation is designed with safety in mind, but its

layered processes can slow the path from discovery to adoption.

For new crop traits developed through genetic engineering or advanced breeding, developers must navigate a series of approvals: environmental assessment under the Plant with Novel Traits (PNT) rules, plus separate food and feed safety reviews. The PNT process alone can take three to five years and [cost millions](#); with food and feed assessments, the full approval timeline often exceeds seven years.

On top of this, Variety Registration for crops like wheat and barley adds extra requirements and waits, sometimes running in parallel. These cumulative delays can [discourage investment](#) in Canada, especially when timelines do not align with major markets like the U.S. or EU. A closer look at how efficiency and safety can be balanced could help support both public trust and timely innovation.

A clear purpose is the starting point for change

Determining the changes needed to address the challenges in Canada’s agricultural R&D system cannot be done without more clearly articulating the purpose of the system. It also requires agreement on what success looks like and how it is measured. Should the system prioritize near-term productivity gains? Or should it focus on embedding sustainability into economic viability while preparing for climate and market disruptions? Is the end goal farmer adoption? Determining the strategic direction is not about funding levels or governance but about defining the system’s purpose.

Once these goals are established, stakeholders can work backward to identify the changes and interventions needed to achieve them. This approach forces stakeholders to confront misalignments between intent and structure. For instance, if global leadership is the aim, Canada’s R&D ecosystem cannot settle for incremental improvements. It requires cohesive translation of research into outcomes, such as modernized infrastructure, transformative technologies like AI-driven precision agriculture, and incentives that prioritize farm-level adoption over academic publication metrics.

Conversely, if the goal is solving specific challenges like soil health degradation, interventions must bridge fragmented efforts, such as aligning federal carbon sequestration projects with provincial sustainability initiatives. Current structures, such as commodity-specific funding silos, often isolate research on pulses, livestock, or cereals, stifling cross-sector collaboration essential for systemic resilience.

Ultimately, determining the change needed comes down to understanding what is needed to better align the system’s governance, structure and funding with its purpose. If Canada’s agricultural R&D system is meant to solve fundamental challenges and position the country as a global leader, then it will require bold, systemic changes, potentially even a complete overhaul of how funding decisions are made, how research priorities are set, and how knowledge is transferred to end users. If stakeholders instead opt for a narrower focus such as incremental productivity gains, then smaller adjustments might suffice. But either way, stakeholders must first acknowledge that the system has issues and agree on what success looks like before deciding how to get there.

Framing the path forward

Once stakeholders come to a clear understanding of the system's current challenges and agree on what agricultural R&D should aim to achieve, a natural next step is asking: How can the system change to deliver on that purpose?

This report offers a few starting points to help shape the conversations ahead. These recommendations reflect key themes that appear across emerging dialogues in the sector and broader efforts already underway aiming to reform Canada's agri-food innovation system, such as [AgRISE](#) (Agri-food Research, Innovation, Skills & Education) partnership.

1. Reconsider what strengths are for

Canada has many assets starting from a world-class research base, global trust in its agri-food experts, and a strong public commitment to science. But strengths only carry impact if they are aligned with a common purpose. As future challenges shift, it may be useful to reflect on how to activate these strengths in service of priorities like climate adaptation, market resilience, or sustainability and not just preserve them.

2. Take a longer view of opportunity

Opportunities aren't just about new technology or global trends. They are about how well the system is positioned to respond. That sometimes means rethinking coordination, investing in long-neglected infrastructure, or building space for foundational science alongside applied innovation. Focusing on the long arc, five, ten, or twenty years out, can help guide short-term decisions toward larger goals.

3. Ask whether today's pressures could become tomorrow's leverage points

Many of the system's pressures, aging infrastructure, policy lag, demographic shifts, are real and urgent. But where they signal risk, they may also present opportunities to reconfigure, modernize, or retool. Viewing challenges not just as constraints but as entry points for change may widen the path forward.

4. Learn from other models around the world

Other countries have tackled similar challenges in agricultural R&D. In Australia for example, a clear national [strategy](#), targeted public investment, and shared goals helped guide structural reform and greater private-sector engagement. While Canada's path will be its own, comparative models offer useful perspectives, especially when trying to bridge vision and implementation.

5. Use shared tools to spark shared thinking

Frameworks like the Canada's [Innovation Continuum](#) developed by ISED, which links talent, research, commercialization, and system-wide coordination, can help structure the next phase of dialogue. This framework helps identify gaps, clarify ambitions, and organize priorities over time, supporting the shift from fragmented activities to a more integrated, forward-looking system.

The empty table below, generated internally and adapted from the Innovation Continuum, is intentional. It represents a conversation still to come, which this report aims to help make possible.

The Innovation Continuum	People & Skills	Fundamental Research	Applied R&D	Commercialization	Scale-Up	Adoption	Policy & Regulatory
What is the role of this space on the continuum?							
What is its state of play? What are the problems and opportunities?							
What can be learnt from other countries?							
Where does it need to be in 10/20 years?							
How do we get there from here?							

Conclusion

Canada's agricultural R&D system is facing a set of challenges that are deeply interconnected. While declining public funding has drawn much of the attention, the roots of the problem run deeper. Misaligned incentives, fragmented decision-making, aging infrastructure, uneven knowledge transfer, and a lack of shared direction all contribute to a system that is not delivering what agriculture in Canada needs to navigate an uncertain, volatile future, but one that is full of opportunity for the sector.

Still, there is a path forward. It begins with a clearer understanding of where the system stands and what outcomes it should be working toward. This report offers a starting point for a broader conversation. It invites all stakeholders to come together, reflect honestly on what is working and what needs to change, and shaping a collective sense of purpose.

From that shared purpose, more concrete steps can follow. Priorities such as competitiveness, profitability, growth, resilience, and sustainability can only be addressed through greater coordination and

longer-term thinking. That includes looking more closely at how funding flows, how research is evaluated and applied, and how policies and programs affect those doing the work on the ground.

Agriculture sits at the centre of many complex challenges, from climate and food security to rural economic development and technological transformation. Meeting these challenges will depend on a more connected and responsive R&D system. One that reflects the diversity of actors in the sector and brings research, policy, and practice into closer alignment.

This report is a contribution to that process. It aims to support a wider shift that is already gaining momentum across the sector toward a more deliberate and better-coordinated approach to agriculture R&D system. Change will take time, and the work will not be easy, but there are already many valuable pieces in place. Stakeholders don't need to start from a blank slate, and change doesn't have to feel like a mountain.