QUEENSLAND FARMERS' FEDERATION

Ideas into Impact Accelerating Science and Innovation for a Better Future

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- Cotton Australia
- CANEGROWERS
- Greenlife Industry QLD
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- Queensland United Egg Producers
- Turf Queensland
- Pork Queensland
- Australian Chicken Meat Federation
- Bundaberg Regional Irrigators Group
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About the Queensland Farmers' Federation

The Queensland Farmers' Federation (QFF) is the united voice of agriculture in Queensland.

Our members are agricultural peak bodies who collectively represent more than 13,000 farmers who produce food, fibre and foliage across the state.

QFF's peak body members come together to develop policy and lead projects on the key issues that are important to their farmer members and the Queensland agriculture sector.

Together, we form a strong, unified voice leveraging our effectiveness by working together to drive policy and initiatives that support a strong future for Queensland agriculture.

Introduction

The Queensland Farmers' Federation (QFF) welcomes the Crisafulli Government's commitment to developing a long-term science and innovation strategy for Queensland. Queensland has a 15-year window to establish one of the world's few truly integrated sovereign food systems, with science and innovation not as supporting elements, but as the core infrastructure underpinning its success.

We are pleased to see agriculture has been identified as a priority industry within the Strategy. Nonetheless, innovation in the agricultural sector is ultimately realised not in the laboratory, but on-farm through adoption. Research only delivers value when it is integrated into farm businesses and translates into tangible productivity or resilience gains. Yet adoption is often constrained by a crowded and fragmented market of overlapping tools and solutions, where costs, subscription models, and switching barriers can deter smaller producers from engaging.

The capacity of farm businesses to adopt innovation depends on more than the quality of research alone. Access to capital, digital infrastructure, and trusted extension services are just as critical as the science itself. Equally important are the relational factors that enable uptake: growers adopt through trusted people and institutions, with decisions shaped by seasonal conditions, cashflow, and peer experience. These elements are interdependent and must be addressed in an integrated way.

Moreover, a persistent gap remains between discovery and impact, with too few research advances translating into market-ready solutions. This is driven by incentive structures that favour discovery over application, fragmented and discontinuous funding, limited coordination across institutions, insufficient co-design with growers, and a lack of support for early adopters who bear the risks of trialling new approaches. Closing this gap requires treating Agtech and agricultural innovation as a coordinated system, rather than a linear pipeline.

Queensland is well positioned to build on this foundation. The *Primary Industries Prosper 2050* blueprint and the *Queensland Agtech Roadmap 2023-28* set clear ambitions for productivity growth and innovation adoption. The new science and innovation strategy should align with and reinforce these frameworks, ensuring adoption is not treated as an afterthought but as the primary measure of success, supported by institutional architecture deliberately built at scale over the full 15-year horizon.

Summary of Recommendations

1. Position Agtech and agricultural science as core economic infrastructure. The Queensland Government should act as a strategic coordinator across a 15-year horizon, aligning investment, regulation and governance, reducing duplication, and intervening

where markets underdeliver, particularly in public-good areas like biosecurity and climate adaptation.

2. Deliver fit-for-purpose funding, commercialisation pathways and regulatory settings. Align co-investment, concessional finance, tax incentives and risk-sharing with agricultural timelines through to adoption. Fast-track approvals, enable regulatory sandboxes, and simplify IP to support system-wide deployment.
3. Embed grower co-design across the full research-to-adoption pipeline. Collaboration between developers and farmers should be a foundational design requirement in all funded programs, not a condition added at grant-end. Farm businesses that take on the risk of early adoption must be supported through that transition, not left exposed to productivity penalties.
4. Build workforce capacity, regional innovation infrastructure and inclusive participation pathways. Queensland should invest in vocational and tertiary Agtech pathways, innovation translation roles, and a distributed network of regionally embedded agri-innovation hubs built around on-farm trials and farmer-to-farmer learning.
5. Treat digital infrastructure and data systems as essential public infrastructure. Universal high-speed rural connectivity is a prerequisite for digital innovation adoption and must be funded accordingly, alongside interoperable data platforms and data sovereignty protections embedded in program design from the outset.
6. Leverage Queensland's advantages to attract international investment, grow export markets and maximise the 2032 Games opportunity. Position the state as a testbed for Agtech, secure early commercial rights, grow export markets through provenance and sustainability, and capitalise on the 2032 Games to showcase agrifood systems.
7. Implement staged accountability metrics tied to clear milestones. Outcomes should be tracked against 2030, 2035 and 2040 milestones across Agtech adoption rates, productivity growth, export performance and regional impact, with results used to drive continuous improvement in policy and investment settings across the strategy's full duration.

Response

Focus Area 1: Boosting Capability

1.1 What is the role of the Queensland Government in supporting people and organisations to create new knowledge and innovative solutions?

- Act as a strategic coordinator of the Agtech ecosystem, aligning investment, regulation, infrastructure and governance across research, extension, markets and education.
- Intervene where market forces fall short, particularly in public-good science such as biosecurity and climate resilience.
- Build de-risking mechanisms into funding design, including concessional finance, public-private risk pooling, parametric insurance, co-investment R&D funds and tax incentives, as capital retreat from climate-exposed agriculture is already eroding SME farms' capacity to invest in innovation.
- Maintain integrated knowledge loops between research, education and extension, supported by digital adoption advisors and regionally embedded agricultural science roles, so publicly funded research translates into practice.

1.2 What skills or training opportunities are most needed to prepare Queenslanders for future jobs in the science and innovation sectors?

- For agriculture, the challenge is as much attraction and retention as supply, especially for roles at the intersection of workforce, innovation and data sovereignty.
- Elevate Certificate III and IV programs in precision agriculture, farm business management and Agtech, alongside updated university pathways covering digital tools, IoT, data analytics and automation.
- Invest in innovation translation roles that bridge research institutions and farm enterprises, manage IP arrangements and build cross-sector relationships.
- Embed entrepreneurship and digital innovation across education pathways, while improving regional connectivity, liveability and career infrastructure so talent can stay in regional Queensland.

1.3 How can we ensure that all Queenslanders, including from underrepresented communities, have equal access to education and career pathways in STEM and innovation?

- Design programs that address intersecting disadvantages, including capability, capital access, networks and confidence.
- Develop a scaled innovation program for women in agriculture, building on initiatives such as the *Backing Female Founders Program* and *GrowHer*.
- Invest in regional universities, blended learning, high-speed connectivity and community liveability to reduce structural barriers for regional and remote Queenslanders.
- Integrate First Nations knowledge systems as a substantive competitive advantage, positioning Aboriginal and Torres Strait Islander communities as co-designers of research priorities.

1.4 How can we encourage more collaboration between entrepreneurs, researchers, government, and investors to drive innovation? What Queensland resources could be leveraged further for science and innovation?

- Embed collaboration in program design from the outset, not as a condition added at grant end.
- Account for seasonal timing, cashflow pressures and informal trust networks in farming communities, where adoption depends on relationships as much as formal structures.
- Establish incubators, accelerators and co-located innovation hubs where startups can access real farm data, test prototypes and build trust with growers.
- Reform incentive structures that reward academic publication over translation and leave farm businesses exposed to adoption risk without sufficient support.

Focus Area 2: Enhancing Connections

2.1 What is the role of the Queensland Government in strengthening collaboration across the science and innovation system? How can we better connect Queensland businesses, researchers, and communities?

- Focus on the full paddock-to-plate chain, not just the innovation pipeline, with collaboration infrastructure spanning producers, processors, logistics providers and input suppliers.

- Coordinate across universities, agencies, industry bodies and Commonwealth programs to eliminate duplication, close gaps and strengthen pathways from research to adoption.
- Redesign collaboration frameworks to include small and medium farm enterprises, reduce administrative barriers and embed formal industry input from priority-setting through to evaluation.
- Use procurement policy as a market-maker for early-stage Agtech adoption, including the 2032 Olympic and Paralympic Games as a first-customer opportunity.

2.2 How can we better connect Queensland's innovation precincts and hubs to create a more cohesive and impactful network? How can we ensure they are accessible and beneficial to local communities?

- Extend connections beyond metropolitan precincts into regional communities by establishing a distributed network of agri-innovation hubs, supported by extension professionals, local governance, and shared testing infrastructure.
- Design hubs to enable farmer-to-farmer learning, on-farm trials, and co-development with Agtech startups, ensuring practical, locally relevant innovation.
- Treat universal high-speed rural internet access as a critical prerequisite for adoption of digital tools and innovations.

2.3 How can science and innovation best leverage the unique geography of Queensland, including through support of regional economies?

- Position Queensland as a preferred real-world testing environment for precision agriculture, sensing, automation and digital management technologies, using its diverse production systems as a validation advantage.
- Use this position to attract international Agtech investment and strengthen food processing, packaging, cold chain logistics and export infrastructure.
- Support local ecosystems through Smart Farms, agribusiness precincts and digital infrastructure, underpinned by coordinated extension, vocational training and First Nations engagement.
- Align land-use planning, water management, biosecurity and data governance, and use funding programs and procurement incentives to de-risk adoption.

2.4 How can we encourage more startups and businesses to collaborate with research institutions?

- Require demonstrated industry and farmer participation in developing research questions, methods and outputs as a design principle throughout funded programs, not a condition added at grant-end.
- Implement practical structural mechanisms including on-farm trial requirements, technology voucher programs and SME co-location through innovation hubs.

Focus Area 3: Supporting Commercialisation

3.1 What is the most valuable role the Queensland Government can play to help innovators commercialise their ideas? What can governments at all levels do to support increased commercialisation outcomes?

- Shorten the path from research to on-farm adoption by removing barriers across regulation, capital, infrastructure and market development.
- Establish fast-track approvals and technology sandboxes for on-farm validation, and create co-investment funds and tax incentives aligned to agricultural development timelines.
- Fund integrated, system-wide transitions rather than individual technologies in isolation, so adopters are not exposed to productivity penalties.
- Treat rural broadband, shared testing facilities, demonstration farm networks and regional innovation hubs as foundational infrastructure.
- Sustain funding and industry partnership through multi-year adoption pathways, leveraging extension and advisory networks to translate research into practical outcomes.

3.2 How can we leverage international partnerships to bring more opportunities and investment to Queensland's science and innovation sectors?

- Demonstrate the uniqueness of Queensland conditions (climate variability, biosecurity settings, production systems) and the need for local adaptation rather than assumed transferability.
- Position Queensland within international Agtech networks, offering its diverse production systems as preferred real-world testing environments in exchange for early commercial rights and access to global knowledge.
- Prioritise Asia-Pacific market development through direct producer-to-buyer engagement, converting Queensland's production and research strengths into premium export positioning around provenance, sustainability, and food safety, and clearly articulating that investment tailored to Queensland conditions can deliver stronger and more scalable returns than importing offshore solutions unchanged.

3.3 What barriers need to be addressed to enable more commercialisation opportunities for researchers and innovative businesses?

- Regulatory complexity, slow approvals, limited access to patient capital, unclear IP frameworks, and infrastructure gaps, including rural broadband and shared testing facilities, hinder agricultural innovation and development.
- Low digital literacy, limited pilot data and regional skills shortages in Agtech and data science, combined with the proliferation of overlapping digital solutions with varied subscription models, which can fragment adoption and discourage smaller producers from engagement.
- Cultural and relational barriers, including growers' reliance on trusted sources and reluctance to share operational data, as well as risk aversion driven by uncertainty of outcomes and the difficulty of switching between providers if a tool does not meet farm needs.
- Structural gaps in the research funding ecosystem, including the retreat of government-funded foundational research and the risk of proprietary outcomes from industry-funded research.

3.4 What role does science and innovation play in growing Queensland's future industries and contributing to the Queensland economy?

- Recognise Agtech and agricultural science as strategic national assets essential to productivity, diversification, resilience, and competitiveness, while creating export opportunities in premium food products, sustainable inputs, and technology services.
- Leverage robotics, automation, and enabling infrastructure, such as processing, logistics, and energy systems, to address workforce shortages and ensure innovations translate into scalable, investable industries.
- Outcomes should be measured beyond productivity alone, including Agtech adoption, export growth, climate adaptation, biosecurity preparedness, supply chain robustness, data sovereignty and public access to publicly funded research, while recognising that adoption is complicated by a crowded and fragmented market of digital tools, which can limit uptake unless affordability, integration, and usability are prioritised.
- Greater emphasis is needed on enabling infrastructure and delivery systems (e.g. processing, logistics, and energy systems), not just inputs or feedstock supply, to ensure innovations translate into scalable, investable industries.

3.5 How can the Queensland Government help to fast-track opportunities for the 2032 Olympic and Paralympic Games? Think: sports science, sports technology, and more.

- Use the Games to demonstrate investment across production, processing, packaging, traceability, and provenance, embedding Queensland's food, fibre, and nursery sectors within a dedicated agrifood and green infrastructure innovation stream to deliver lasting commercial and export outcomes.
- Prioritise locally grown native plants and produce through government procurement across venues, precincts, and legacy infrastructure, while enabling large-scale demonstration of native species, urban greening solutions, and Agtech to a global audience.
- Begin early inter-agency collaboration to capture long-term benefits and opportunities across the Asia-Pacific region.

Conclusion

Queensland has the agricultural diversity, geographic advantage, and industry capability to build one of the world's most effective integrated sovereign food systems. What has been missing is coherence across institutions, policy settings, funding streams, and governance arrangements, and a clear commitment to treating Agtech and agricultural science as core economic infrastructure rather than as a secondary consideration.

The 15-year horizon this strategy provides is the right frame for that commitment. It is long enough to build institutional architecture that outlasts electoral cycles, and long enough to close the gap between research and adoption at scale. It is being designed into a global environment, shaped by geopolitical instability, supply chain fragility and intensifying competition for food resources, making sovereign food system capability not just an aspiration but a strategic necessity.

The strategy provides an opportunity to establish that commitment definitively. It should be guided by a recognition that Agtech adoption is a systems challenge requiring coordinated action across research, extension, digital infrastructure, capital markets, regulation, and education. It depends on farmers, Agtech developers, and regional communities actively participating as co-designers, not passive recipients. And it requires investing in the

institutional architecture that allows research to become practice at scale – something Queensland has yet to consistently deliver.

QFF encourages the Queensland Government to use this Strategy to build that architecture: regionally accessible, institutionally coherent, stably resourced, and equal to the next 15 years. QFF approaches this process as a long-term strategic partner, having engaged in serious foresight work with industry leaders on the future of Queensland agriculture, and we are ready to bring that work to bear as this strategy is developed and implemented.

Yours sincerely

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