Department of **Industry, Tourism and Trade**

Agribusiness 2030

industry.nt.gov.au

AUSTRALIA'S NORTHERN TERRITORY | THE TERRITORY BOUNDLESS POSSIBLE

Acknowledgement

The Northern Territory Government respectfully acknowledges Aboriginal and Torres Strait Islander peoples as the First Nations people of this country. We acknowledge the continuing connection to lands, waters and communities, and the evolving cultures of all our First Nations peoples. We pay our respects to all Aboriginal and Torres Strait Islander cultures, and to their leaders - past, present and emerging.

NORTHERN TERRITORY GOVERNMENT | THE TERRITORY BOUNDLESS POSSIBLE

From the Chief Minister

When the Territory Economic Reconstruction Commission finalised its report in November 2020, they recognised that after a number of years of incremental growth, the Territory's agribusiness sector was primed to grow at scale. A key recommendation in that report was the development of this jointly designed and co-owned Agribusiness Strategy in order to collectively drive that growth.

This strategy has been steadily and thoughtfully developed over the last two years, with a focus on engagement of stakeholders and after receiving feedback from interested Territorians through a consultation process.

The agribusiness sector underpins our regional economies and employs a significant number of Territorians, both directly and indirectly. Agribusiness supply chains stretch across the Territory and whether you are a barista in Katherine or a hardware retailer in Alice Springs, the strength and economic well-being of this sector impacts us all.

This strategy has a shared vision and it is "a partnership to grow the size of the Agribusiness sector to $2 Billion by 2030 fostering vibrant, healthy and prosperous communities throughout the Northern Territory". The strategic priorities and actions contained in this strategy have been designed to get us there, together.

I'd like to thank all of those involved in the development of this strategy. It points the way forward for the Territory's agribusiness and aquaculture sectors and our government will put its shoulder to the wheel with all industry stakeholders to reach for the targets together.

Hon Natasha Fyles MLA

Chief Minister of the Northern Territory

From the Minister

This Agribusiness Strategy is the result of deep and robust conversations, thoughtful and strategic workshops and ambitious vision setting for one of the Territory's most important industry sectors.

As the Minister for Agribusiness and Fisheries, I am pleased to present this co-designed and co-owned strategy. Work on implementation has already commenced with a great number of projects, programs and activities very well developed and our collective efforts are progressing full steam ahead.

A joint Industry-Government Steering Committee will oversee implementation of the actions contained in the strategy and will report annually on how we are going. It will be important for us to harness our combined resources, experience, skills and knowledge to reach the target of $2 billion gross value of production by 2030.

There is tremendous potential for the Territory's primary industries to grow. The world needs our food and fibre and we have some of the best and most innovative farmers and graziers in the world in order to meet that demand. We also have a significant opportunity to value-add to our primary products, increasing profitability and further diversifying our economy.

This strategy identifies areas where we can collaborate to realise that potential, innovate and implement best practice and continue to earn the trust and support of our community.

This strategy is focused on economic development in a sustainable manner. It's about responsible farming and grazing practices, caring for our environment and prioritising biosecurity, to ensure a strong future for generations to come.

Hon Paul Kirby MLA

Minister for Agribusiness and Fisheries

About the Industry

The Northern Territory of Australia covers 1,349,129 km^2 and one sixth of the Australian continental landmass. With a population of approximately 250,000 people it accounts for about 1% of the Australian population, with the majority (60%) residing in the area around the capital Darwin, and the remainder dispersed over remote and very remote areas.

About 43% of the Territory's landmass is used for agricultural production with the majority of this area dedicated to extensive livestock grazing systems supplying a live-export trade and domestic markets. Fisheries extend from the Territory's 10 953km coastline out to Australia's Exclusive Economic Zone (EEZ) supporting traditional, commercial and recreational activity.

Agribusiness encompasses production, processing, marketing and distribution of agricultural food and fibre commodities into local, national and international markets.

For the purpose of this strategy, areas of focus include:

- Livestock production (predominantly cattle and buffalo)
- Horticulture
- Broadacre cropping
- Forestry
- Wild catch fisheries
- Aquaculture
- Crocodile production
- Native foods (wild harvest and production) and botanicals
- Buffalo wild harvest
- Investment facilitation, trade and market development
- Production and supply chain development, traceability and food safety (multiple commodities)
- Land sector diversification (including carbon and environmental products)
- Biosecurity systems
- Infrastructure, transport and logistics
- Commodity (food and fibre) processing and value-adding
- Training, education, research, business and workforce development
- Machinery, technology and communications
- Environmental and land management services
- Supply and services
- Legislation and regulation.

About the Strategy

Development of this Agribusiness Strategy has been facilitated by the Department of Industry Tourism and Trade (DITT) and a series of industry forums and engagements across the Territory in 2021 and 2022. The strategy provides a shared framework to deliver growth across multiple primary industry sectors and was a key recommendation of the Territory Economic Reconstruction Commission (TERC) report in 2020.

Northern Land Council

With most land claims now settled, the Northern Land Council is entering a new era where the focus is on activating those hard won rights in land, freshwater and sea country. Opportunities in agribusiness and aquaculture are ready made for Traditional Owners who want to be at the forefront of Aboriginal-owned enterprise, driving economic development, growth and innovation in the Northern Territory, creating jobs and wealth for their families, communities and all Territorians.

Joe Martin-Jard

CEO, Northern Land Council.

Through a range of industry and stakeholder workshops and one-on-one discussions, actions and priorities were established to achieve industry growth. The workshops covered livestock (cattle producers, livestock exporters and buffalo industry), fisheries, aquaculture and crocodile industry and plant industries (cropping, horticulture, and forestry). The aim of the workshops was to develop a comprehensive set of actions to drive the development of the Agribusiness Strategy and direct industry and government effort and resources into the future.

The overall vision in the draft strategy framework is to almost double the economic contribution of the agribusiness and aquaculture sectors by 2030. This aligns with the overall NT Government target of $40 billion by 2030 and proposes an increase in the gross value of production (GVP) of approximately $1.3 billion to $2 billion across the agribusiness sector.

Development, diversification and intensification of the pastoral and Aboriginal land estate remain key priorities to deliver increased value of production and attracting investment for innovation and technology remain central to building long-term productivity, profitability and resilience across primary industries.

In an increasingly complex and interdependent development space there are philosophical differences in approach to resource development and utilisation and emerging opportunities with policy, process and information gaps. The strategy acknowledges those tensions and attempts to find a balance which sees agribusiness grow in the Territory for the benefit of all Territorians.

Land and sea ownership delivers on the economic and social aspirations of Aboriginal Territorians. The *Aboriginal Land Rights (Northern Territory) Act 1976* (Land Rights Act) and the *Native Title Act 1993* provide the legislative foundations of Aboriginal land and sea ownership in the Northern Territory. Approximately 48% of the Northern Territory's land mass and 80% of its coastline is Aboriginal land, subject to the *Land Rights Act*. The majority of the remaining land and waters are, or are likely to be, subject to native title.

The Northern Territory Agribusiness Strategy acknowledges the aspirations of Aboriginal Territorians to develop Aboriginal-led agriculture and aquaculture enterprises and create jobs on-country. The strategy will seek to identify Aboriginal-led agriculture and aquaculture pathways and facilitate the development of innovative Aboriginal focused agribusiness initiatives throughout the Territory.

Sustainable agribusiness growth in the Northern Territory will be dependent on strong and mutually respectful relationships and agreements between land and water owners, native title holders, land councils, leaseholders, investors, developers, industry and peak bodies, governments, consultants and the community. Effective collaboration is crucial.

This is a shared strategy which relies on multiple stakeholders, including industry and government for implementation and success.

Agribusiness

– A co-designed plan for our growth

Our growth journey

The Territory is on a journey to achieve a sustainable and diverse $40 billion economy by 2030, leading to more jobs and higher living standards for all Territorians.

Achieving this ambitious target will only be possible with strong growth across all regions. The targeted growth will generate jobs, grow our population, boost economic prosperity and protect and enrich our lifestyle and our culture.

Agribusiness is a priority sector with a large regional footprint and strong potential to expand regional economic activity in the Territory. The sector is ready to develop at scale.

Although our sector has maintained consistent outputs, our economic contribution in comparison to other sectors has shrunk over the past decade with volatile commodity prices largely determining our value.

Global trade conditions are rapidly changing, and we must reconfigure the way we operate to overcome barriers to growth and to ensure we capitalise on every new opportunity.

As we embark on our growth journey that seeks to provide a better future for all Territorians, we must actively engage with the broader community to drive greater private investment and Aboriginal participation in our sector. We must do this while simultaneously working to protect our sector from existential threats by adapting and innovating the way we operate and de-risking investment.

Themes underpinning the strategy

- sustainability
- environment
- biosecurity
- regulation
- workforce
- Indigenous leadership
- improvement

Our vision

A partnership to grow the size of the agribusiness sector to $2 Billion by 2030 fostering vibrant, healthy and prosperous communities throughout the Northern Territory.

Supported • Secure • Stronger

A call to action

Territory Economic Reconstruction Commission recommendations

- Establish key sustainable development precincts
- Identify integrated commercialisation opportunities across the supply chain
- Support Aboriginal-led industry development opportunities
- Facilitate sustainable pastoral and Aboriginal land development.

A shared purpose

To sustainably grow agribusiness for the long-term benefit of Territorians and the economy.

Explaining the measures of industry value

Gross value of production (GVP) and gross value added (GVA) are two measures of industry activity or size. These measures are used across all industries.

- GVP is the market value of goods produced by an industry; and
- GVA is the 'value add' of an industry, and can be considered as the returns to capital (profits) plus returns to labour (wages and salaries).

For comparison, in 2020-21, the Territory's agribusiness sector was valued at $764 million in GVA terms and $1.261 billion in GVP terms.

This Strategy mostly uses GVP as this tends to be how growers and producers report activities. That said, a lot of economic analysis focuses on GVA, including a Northern Territory Government commissioned *Economic valuation of the maritime, agribusiness, minerals, oil and gas industries*, prepared by Deloitte Access Economics.

4 Strategic priority areas

To achieve our vision and purpose, we will focus our effort in the areas with the biggest impact as identified by agribusiness and aquaculture industry peak bodies, investors and key stakeholders.

Our 4 strategic priority areas guide our objectives and actions.

ENGAGE

We will Engage…

- with all our stakeholders openly and with integrity
- with all our stakeholders to collaboratively set directions and priorities to drive growth
- with our strong industry associations to be our voice
- regularly with the market, investors, regulators and industry advisors

to raise awareness and support for our industry.

We will Protect…

- our operations, produce and livelihoods from biosecurity threats
- the Territory's supply-chain reputation and credibility
- our natural resources and environment

to retain our competitive advantages.

PROTECT

ADAPT AND INNOVATE

We will Adapt and Innovate…

- in response to climate change threats
- to transition to renewable energy sources
- in partnership with Research, Development, Extension and Adoption groups and government

to overcome challenges and create opportunities.

We will Grow…

- a skilled workforce and new enterprises, with more Aboriginal participation
- more access to sustainable agriculture areas
- our intensity, diversity and value-adding processes

to provide a better future for all Territorians.

GROW

Targets

We have set aspirational but achievable targets for specific sub-sectors and for the industry as a whole.

- Lift the productivity of the NT cattle herd
- Double the area developed for horticulture working with existing and new farmers
- Achieve 100,000 hectares of broadacre cropping in the NT
- Double the number of aquaculture businesses from 5 to 10
- Increase fisheries and aquaculture Gross Value of Production by 50%
- Support existing producers to lift yields and expand production
- Increase strategic investments in infrastructure
- Delivery of agribusiness extension to support increased productivity and new land development
- Increased employment opportunities and upskilling across the agriculture and aquaculture sectors

We will continue to develop benchmarks to effectively measure our progress on our journey toward becoming a $2 billion contributor to the Territory economy by 2030.

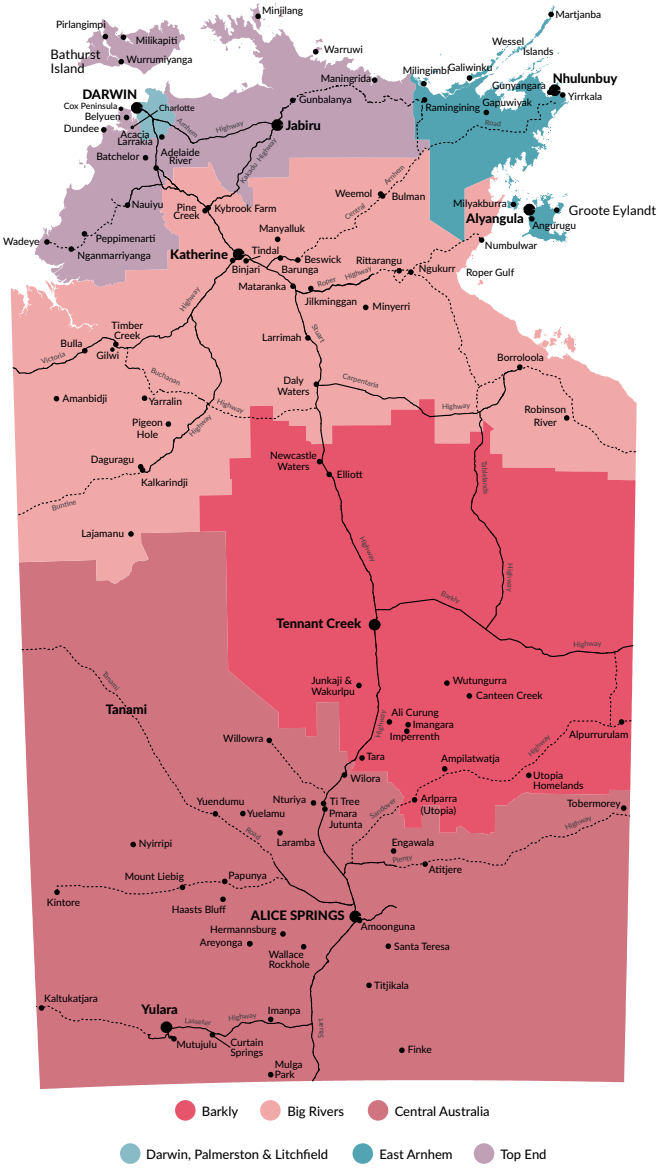
Our regions are the engine room for our growth. We are implementing local priorities and delivering increased investment, prioritisation and decision making in each region.

The Northern Territory is administered through six defined regional areas: Darwin; Palmerston and Litchfield; Top End; East Arnhem; Big Rivers; Barkly; and Central Australia.

Regional economic growth plans will be implemented for each of the six defined regions. The plans identify regionally-relevant activities and opportunities in the agribusiness sector, along with targets for development and diversification.

The Regional Development Framework guides the way regional development will be communicated, coordinated and delivered. The framework recognises regional communities have their own strengths, aspirations and ideas. It provides the model for regional governance and collaboration between governments, industry, business, land councils, regional development bodies and the non-government sector. The framework guides how regions will:

- support effective regional economic planning, implementation and project facilitation, including coordinating effort from all spheres of government and stakeholders with support to facilitate feasibility and business case development for investment attraction;
- establish effective governance and engagement arrangements across agencies, stakeholders, business leaders, traditional owners and communities that provide a clear regional voice to government;
- identify barriers and enablers to regional economic growth, including areas for structural reform and priority government investment;
- develop Regional Economic Growth Plans to inform priorities for government investment, attract private sector investment, increase Aboriginal economic development and support local industry growth and diversification; and access regionally-derived data, information and analysis to improve and inform decision making, regional investment and measurable outcomes.



Source: https://cmc.nt.gov.au/strengthening-regions

Agribusiness opportunities identified in the completed plans include:

- Top End: livestock (beef cattle, buffalo and crocodiles), horticulture (including bush food), fisheries and aquaculture (crabs, prawns, various fish) and forestry
- East Arnhem: forestry, commercial crustacean, mollusc and fishery projects (facilitated by investment at Gove Port), aquaculture on the Groote archipelago, small-scale but high-value bush foods and tropical fruit
- Big Rivers: logistics and distribution, value-add processing, irrigated horticulture and forestry.

Growing pains

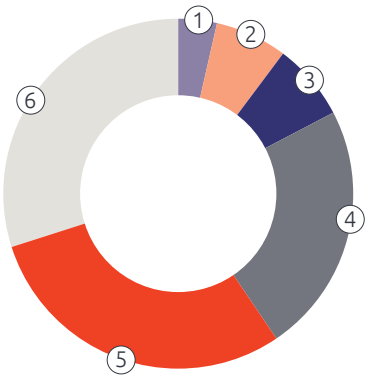
– Ups and downs

Our journey to now

Historical production-value and value-add economic indicators reveal that growth of the agribusiness industry has largely stagnated with product volume outputs and employment levels remaining constant or diminishing over the past 15 years.

Volatile commodity prices have been the dominant factor impacting the industry's economic contribution, punctuating an otherwise static value-add with semi-regular periods of extreme growth and decline. The industry's value has struggled to keep pace with inflation and its contribution to the Territory's economy and workforce, relative to other industries and has contracted over the years. However 2020-21 results have shown an increased contribution of 3.6% which is above the 10-year average of 2.7%.

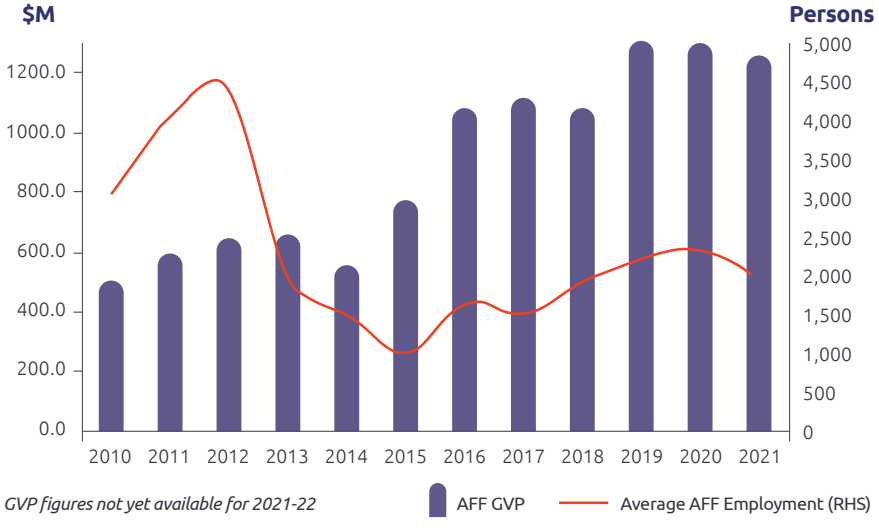
Contribution to NT Gross State Product (GSP) by major industry groups 2021-22



The NT GSP is dominated by the four big industry groups: Government, Mining, Services and Construction

1	Agriculture, forestry and fishing (AFF) **4%**
2	Construction **7%**
3	Retail & wholesale trade **7%**
4	Other services **23%**
5	Government & community services **29%**
6	Mining & manufacturing **30%**

AFF Employment and AFF GVP 2010 to 2021

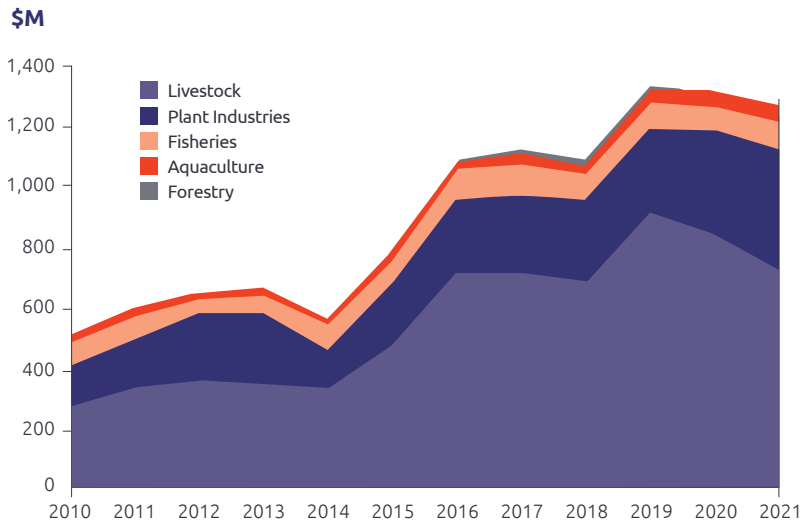


Long-term trends:

- The sector's value-add has stagnated in real terms while the rest of the economy has grown resulting in smaller % contribution to NT GSP.
- Growth profile is volatile and commodity-price driven.
- Employment data in the Territory is volatile, however AFF employment has trended up since 2015 averaging 1,600 persons to nearly 2,000 in 2021.
- Productivity-value improvements have partially compensated for a diminished workforce capacity.

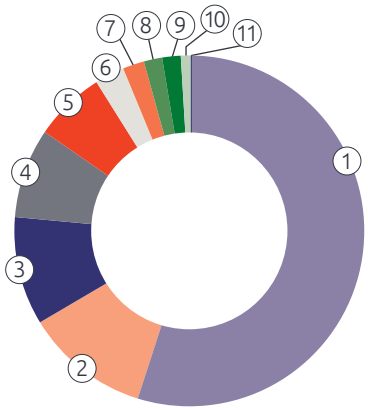
Key agricultural sectors GVP:

Contribution to NT AFF Gross Value of Production by Industry sub sectors 2010-2021



GVP figures not yet available for 2021-22

Contribution to NT AFF Gross Value of Production (GVP) by industry sub-sectors 2020-21



1	Cattle	**55%**
2	Fisheries	**12%**
3	Mangoes	**10%**
4	Other horticulture	**8%**
5	Melons	**7%**
6	Hay fodder	**3%**
7	Crocodiles	**2%**
8	Nursery, cut flowers and turf	**2%**
9	Cotton	**2%**
10	Buffalo	**1%**
11	Other livestock	**0.02%**
12	Forestry	**0%**

Cattle, fisheries and mangoes are the largest of the agriculture and fisheries sub-sectors by GVP

GVP figures not yet available for 2021-22

2021 Snapshot:

our sectors in a $25b economy

$1.3b
production-value

$764m
value-add or 3.1% of NT GSP and 1.6% of national agriculture and fisheries output

11th
largest industry by GSP contribution and 14th largest nationally

Comprises **935**
businesses but no large (>200 employee) enterprises, 68% are sole trader, 34% are in the pastoral sector

2400
employees or 1.8% of NT workforce

14th
largest industry by employment (same as national ranking)

Per capita worker productivity is
almost double
the national average.

Cattle	Horticulture	Fisheries	Mixed farming	Other livestock
$692.1M	$333.4M	$145.3M	$55.9M	$34.9M

Our sub-sector's status

Agribusiness sector in the Territory includes:

Cattle

(interstate movements and live export)

Other livestock

buffalo, crocodile, horse, camel donkey and goat

Horticulture

fruit (mango, melon, banana), vegetable (Asian), nursery, cut-flower & turf

Mixed farming

hay, grain, fodder, cotton and forestry

Fisheries

wild catch harvest (including Northern Prawn Fishery), aquaculture.

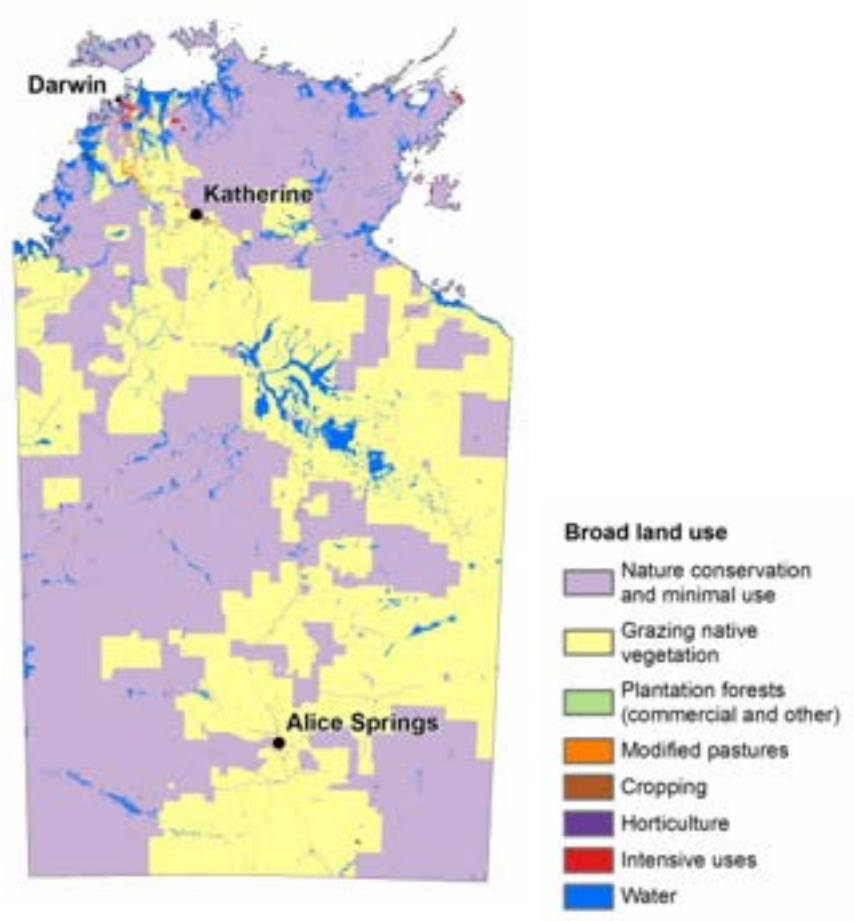
The cattle, horticultural and other livestock sectors support the most businesses and workers.

Livestock – Cattle

(43% NT land area)

- Live export market demand coupled with cross-sector innovations (breed type, herd management, transport, fodder supply, infrastructure improvements) has underpinned growth success to a steady 2.2 to 2.5 million head of cattle, and increased production-value.
- Key markets are interstate, for further growing or processing, and live export overseas, mainly to Indonesia.
- Market price volatility has resulted in sector value-add fluctuations of over 30%.

Catchment scale land use map (ABARES 2021)



Horticulture
(0.02% NT land area)

- Favourable dry-season growing conditions provides an early-season market advantage for melon, mango and a range of Asian fruit and vegetables which attracts a premium price.
- Supply is almost entirely into the high-value, short-shelf-life, domestic niche markets where demand continues to grow. Exporting to lucrative markets continues.
- Numerous lower-value commodities have been trialled but have failed the economic test-of-time although new innovative farming approaches may yet make them viable.

Mixed Farming
(54000 ha NT land area)

- Field crops are dominated by hay production supporting the livestock sector.
- Cotton cropping (8000 hectares in 2022) commenced in 2019 to underpin more integrated mixed-farming systems. Processing (ginning) will be available in the NT in 2023.
- Forestry plantations, which include Acacia mangium, African Mahogany and Indian Sandalwood, form the largest geographic footprint (49000 ha) of all plant agriculture in the Territory. The value of the industry is forecast to reach $300M as plantations become harvest ready in 5-10 yrs.

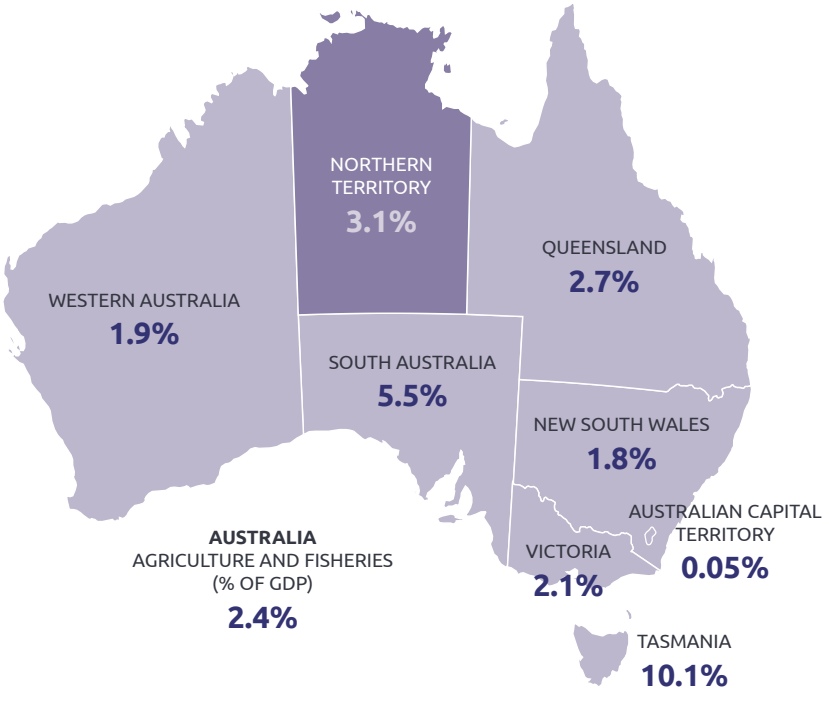
Fishing

- Over 5,500 tonnes of marine life are harvested annually from the 14 wild catch fisheries, comprising fish (barramundi, snapper, mackerel and shark) and crustaceans (mainly prawns and mud crabs).
- Wild catch production is controlled by sustainable fishery harvest caps. Aquaculture (currently pearls, barramundi and spirulina) is continuing to expand production including across the Aboriginal estates.

Livestock – Other

- Crocodile farming delivers over 70% of the production value of this sector with buffalo, predominantly for the live export market, contributing the remainder.

Agriculture and fisheries % contribution to each State or Territory's GSP



Our challenges are also our opportunities

– Challenges

The agribusiness sector identified a broad range of challenges that, when overcome, present real opportunities to stimulate accelerated growth. These opportunities span nine common themes relating to: infrastructure, resources, regulation, supply chains, markets, biosecurity, technology, reputation, and partnerships.

Infrastructure

- Adding value-chain facilities including abattoirs, fish factories, cold-stores, cotton gins, warehouses, dedicated port facilities and all-weather product transfer points.
- Lifting road standards and increasing the road networks into and throughout the regions.
- Maximising the opportunities presented by rail transport.
- Increasing the amount of community infrastructure, including accommodation, health and educational facilities.
- Improving mains electricity reticulation and digital services coverage, connectivity and reliability throughout regional and remote areas.

Regulation

- Changing the permitted use of existing pastoral land tenure to include cropping and horticultural activities.
- Aligning agricultural policies between Australian jurisdictions especially around market access and movement of product.
- Reducing timeframes for obtaining land clearing and water licencing approvals.
- Ensuring policy supports rigor and consistency toward certification and monitoring by Australia's Exporter Supply Chain Assurance System.
- Clarity and efficiency of environmental, emissions and cultural heritage regulation and processes.

Resources (inputs)

- Increasing the availability of locally-grown quality feed stock supplement for the pastoral sector and food for the aquaculture sector.
- Providing a secure water supply into the plant-based agricultural and horticultural precincts with resources allocated and utilised in a staged, equitable, sustainable, effective and efficient manner.
- Developing a skilled workforce capable of operating across all parts of the supply chain and enhancing local employment.

- Brokering agreements between farmers and native title parties for developing new agribusiness production areas.
- Achieving economies of scale needed to support supply chains and be competitive in the market by lifting productivity and reducing industry fragmentation.
- Securing critical inputs to production including fuel, fertiliser and technology in a challenged geostrategic and economic environment.

Supply chain

- Understanding and addressing the risks and value-add opportunities associated with each part of the supply chain.
- Reducing the costs associated with supplying critical inputs to sectors operating in remote areas.
- Improving the range, capacity and accessibility of cost-effective transport options for producers to be able to access existing and emerging markets.
- Addressing the skilled workforce shortage impacting all parts of the supply chain.

Markets

- Reducing the risk of adverse product pricing control of buyers by diversifying market options.
- Establishing domestic value-add capacity by investing in export-scale facilities and workforce up-skilling to produce a greater range of products for the market.
- Expanding capability and capacity to supply into new markets in response to the changing global geopolitical situation.

Biosecurity

- Maintaining vigilance and pro-active stance toward preventing foreign pest incursions at the border.
- Maintaining and enhancing local capacity to detect and respond quickly to any bio-security incursions.
- Managing seasonal risks around crop pests and diseases in tropical agro-ecological zones impacting on production capacity.
- Mitigating against the risks of adverse fire and weather events across the tropical savanna regions.

Technology

- Improving data and telecommunication connectivity into regional and remote areas.
- Promoting and supporting the uptake of contemporary business related digital technology.
- Adopting best-practice in data collection and analysis technologies to best support the industry.

Reputation

- Improving influence over or control of offshore processing facilities to ensure compliance with product and consumer standards.
- Ensuring product-handling best-practice is supported and embedded throughout the supply-chain with fit-for-purpose facilities, infrastructure and skills-training programs.
- Improving engagement and relationship with stakeholders in regional and remote communities to engender greater support for the industry.

Partnerships

- Developing strong and beneficial collaborations between Government, Traditional Owners, pastoralists and the resources sector.
- Engaging with Aboriginal Territorians seeking to establish agriculture enterprises.
- Growing trusted international relationships to underpin trade and people-to-people links.

Biosecurity Matters

– Biosecurity risks are increasing

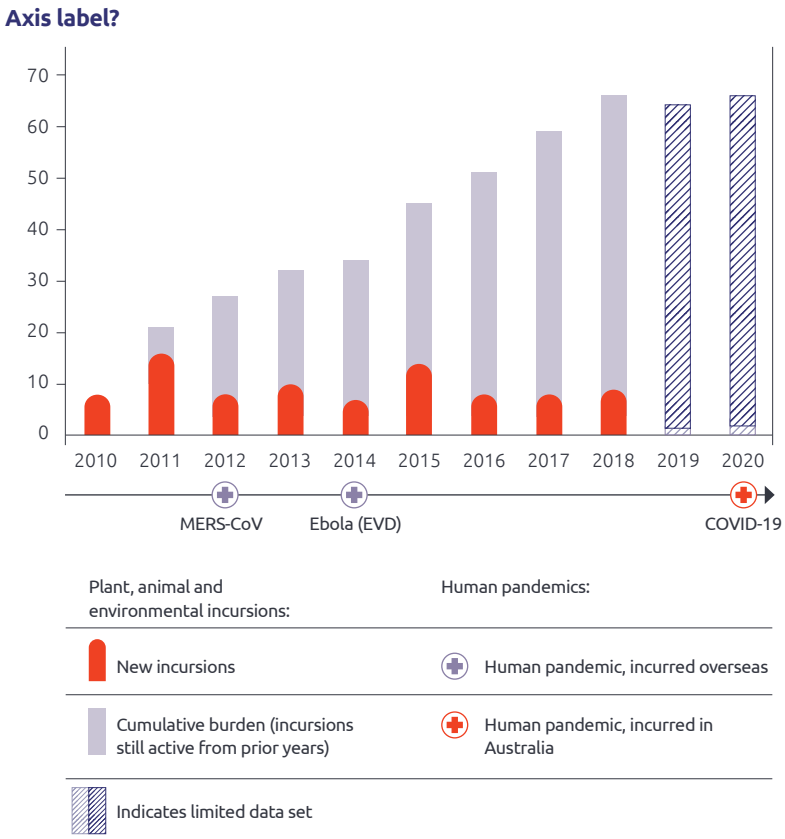
Changing climate and changing global trade and investment patterns have shifted the threat level dial upwards.

We can no longer rely on our isolation and island status as our protective shield.

What happens in biosecurity in our geographic region has a direct and serious impact on our risk levels.

The presence of new diseases in our region is a call to action for all of us. This means increased surveillance, refreshing our biosecurity plans, getting our teams ready.

Indicative biosecurity incursions and cumulative burden in Australia



Biosecurity is a shared responsibility

We are all part of the national biosecurity system, whether we are involved in surveillance, diagnostics, responses, eradication activity or in managing new diseases and pests that we can't eradicate.

The cumulative burden on producers is growing. Every new pest or disease that we can't eradicate means that it has to be managed. That has a direct financial impact and reduces profitability.

Berrimah Farm Science Precinct: a world-class biosecurity diagnostic and response facility.

Together we must focus on preparedness

Investment in biosecurity preparedness and prevention is the best kind of investment with the greatest returns to producers and the economy.

Having biosecurity plans and business continuity plans in place puts us in a better position to tackle the challenges.

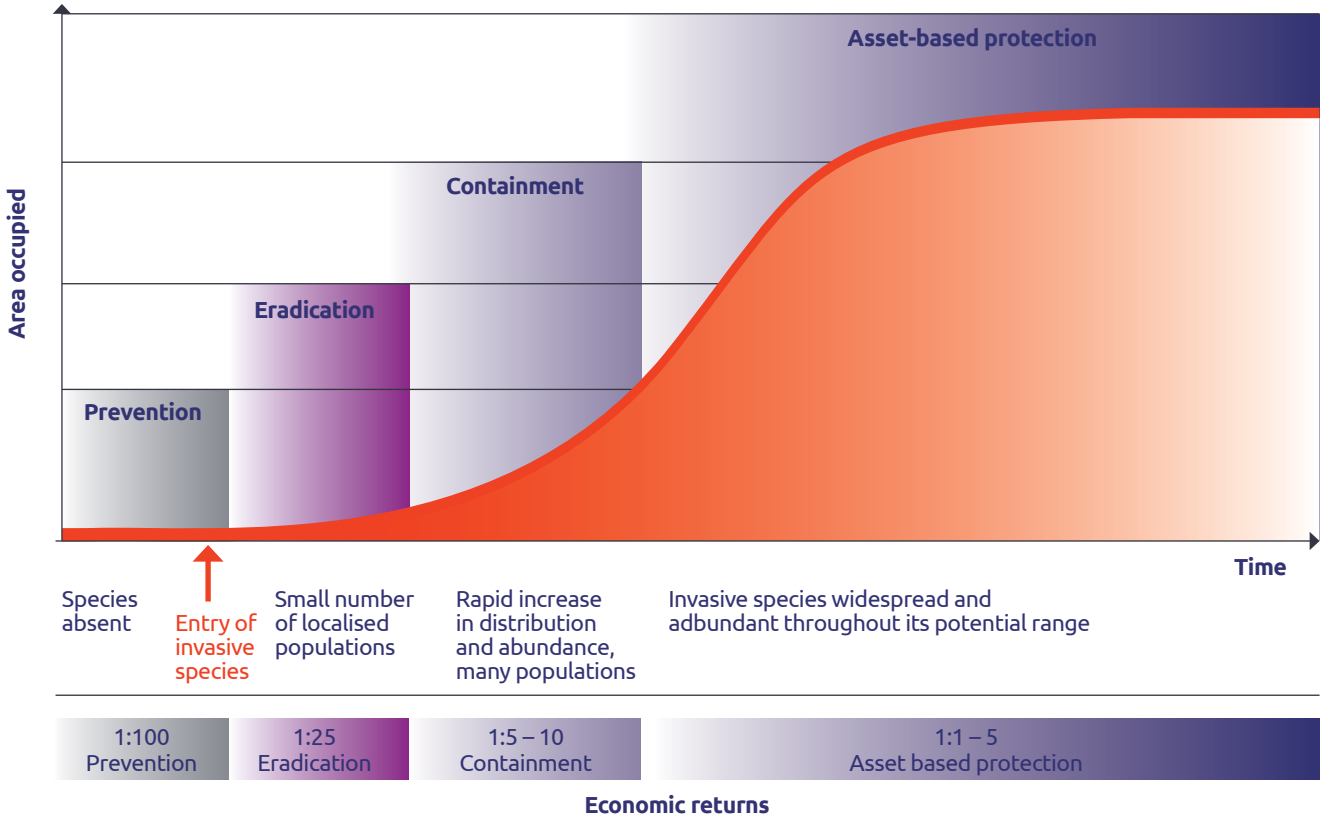
There will be times when despite our best efforts, pests and diseases will get through our defences via uncontrolled pathways. We know that monsoonal winds bring some pests and together we must be ready to detect and eradicate, if we can. Investing in biosecurity diagnostic and response capacity will be key to our ability to eradicate these threats.

The Territory is also a part of the national biosecurity system and with industry we are signatories to the emergency response deeds which provide us with financial and operational support from other jurisdictions and the Commonwealth Government if we have an incursion of national significance.

These deeds are national assets and we highly value them.

Investment in new laboratories at the Berrimah Farm Science Precinct is a strategic and welcome investment. With one more laboratory building to go to bring this $44 million Northern Territory Government investment to completion, the Territory will have world-class laboratories, including a biosecurity containment level three laboratory, to face the incoming threats.

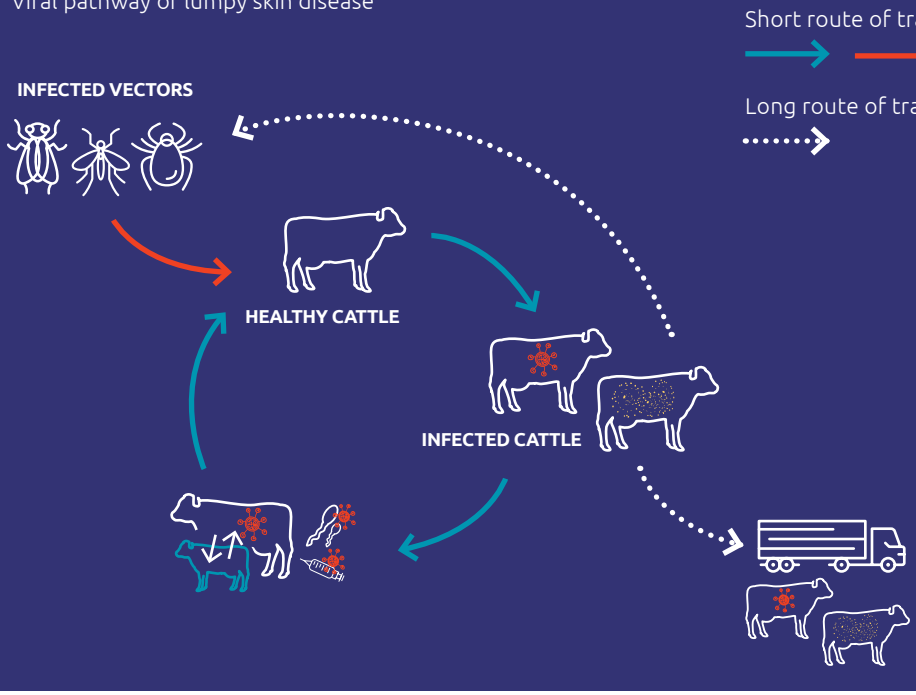
Generalised invasion curve showing actions appropriate to each stage



Biosecurity Case Studies

Lumpy Skin Disease

Viral pathway of lumpy skin disease



On 3 March 2022 Indonesia advised the World Organisation for Animal Health of the first occurrence of lumpy skin disease (LSD) in Sumatra.

LSD is caused by a poxvirus, closely related to sheeppox and goatpox and infects cattle and water buffalo only.

LSD is transferred by biting insects, mosquitoes, culicoides, ticks and by saliva, nasal discharge and semen.

This virus is established in Africa, the Middle East, and Asia and reported in China, India, Hong Kong and Myanmar.

An incursion has the potential to bring the NT's $1B live cattle export trade to a standstill overnight.

The disease would have significant and far-reaching impacts should there be an incursion in Australia with considerable economic losses and restrictions placed on both domestic and international markets.

With LSD in our region, there is an increasing likelihood of an incursion in Australia.

Northern Australia is high-risk, with this disease challenging to detect and control.

Increased surveillance and preparatory work with the northern cattle industry and other key stakeholders is being prioritised – industry and government are working together.

Early detection of the disease is critical to buy time to create an Australian standard vaccine.

Northern Territory Lumpy Skin Action Plan

1 International Engagement and Support	1.1 Indonesia-NT Biosecurity Program 1.2 Timor-Leste-NT Biosecurity Program 1.3 Northern Neighbors Laboratory Exchange Program
2 Biosecurity and Trade	2.1 Enhanced Bali Safeguards 2.2 Trade Impacts Review 2.3 Trade-proof Territory Markets 2.4 Industry Economic Impact Analysis
3 Diagnostics	3.1 Berrimah Veterinary Laboratory LSD Diagnostic Testing Capability
4 Surveillance	4.1 Emergency Animal Disease (EAD) Early Detection Surveillance Plan 4.2 Contactless Surveillance Innovation
5 Preparedness and Response	5.1 LSD Risk Prevention Plan 5.2 NT EAD Hazard Management Plan 5.3 EAD Response Exercise 5.4 Northern Australian Biosecurity Strategy Vet Network Planning Series 5.5 EAD Preparedness - Returning livestock vessel strategy 5.6 Industry Training Package
6 Awareness and Communications	6.1 Establish Northern Coordination Network 6.2 EAD Communications Plan 6.3 Stakeholder Awareness Campaign 6.4 Future-focused Aboriginal Landholder Sustainability Development
7 Research and Innovation	7.1 Investigate new technologies in LSD surveillance 7.3 Develop modelling tools to support EAD preparedness and response 7.3 Investigate Arthropod Vector Control options
8 Recovery	8.1 Develop Recovery Package options for an EAD strategy

Biosecurity Case Studies

American Serpentine Leafminer

American Serpentine Leafminer (Liriomyza trifolii) is a tiny fly whose larvae damages plants by tunnelling (mining) through leaf tissue.

Feeding causes loss of healthy leaf tissue, so the plant can't capture enough sunlight and often becomes infected with disease. Plants often fail to grow or produce crops.

This makes it a serious threat to horticulture, nursery production and agriculture plant industries of Australia if it spreads throughout the country.

American Serpentine Leafminer (ASL) targets many economically important vegetables and legume crops such as beans, celery, chrysanthemum, cucumber, gerbera, gypsophila, lettuce, onion, potato, tomato, peanuts, soybeans, lentils, lupins, faba beans and chickpeas and ornamental plants.

American Serpentine Leafminer was detected in Kununurra, the Torres Strait, Katherine and Darwin in July and August 2021.

Nationally, it has been determined that ASL is not eradicable.

Biosecurity NT partnered with NT Farmers Association to commence research into the most efficient and effective ways of managing this pest in the Northern Territory context.

A range of integrated pest management regimes and chemical treatment regimes have been developed including natural parasitoids and predators to reduce the impact of this pest on plant production.

This work has been a successful collaboration with the results directly benefiting growers as they seek to manage this damaging pest which is now endemic.

Agriculture Case Studies

Dryland cotton industry development

Dryland cotton crop research in the Northern Territory (NT) started in the late 1800s at the Botanical Gardens in Darwin while its production started in the 1900s at the Douglas Daly Research Farm.

The Territory Government invested in cotton research in the Katherine and Douglas regions from 1994 – 2012, indicating its growing potential. Cotton interest re-emerged in 2016, and in 2018 – 2019, when the Department of Industry, Tourism and Trade supported the research needs of cotton growers. A sowing date trial at Katherine Research Station (KRS) in February 2019 showed better yields and quality cotton.

The work at KRS formed the foundation for a Corporate Research Centre for Developing Northern Australia's (CRCNA) 'Potential for broadacre cropping in the NT' project in 2020. On its conclusion, another follow-up project has been funded by CRCNA on "Addressing the fundamentals of cropping-systems that deliver sustainable growth of the agriculture sector in the NT".

Growing dryland cotton has been identified as a high-value broadacre cropping option for expanding agriculture in the NT with the first commercial crop of around 200 ha grown during the 2018 – 19 season.

Subsequently, in the 2019 – 20 season, 800 ha including 160 ha of irrigated area was grown.

In 2020 – 21 around 4029 ha grown was dryland and about 185 ha was irrigated, with a yield potential for dryland cotton being 3.75 – 4 bales per ha.

The area under dryland cotton production doubled in 2021 – 22 season to 7930 ha and 155 ha irrigated.

Territorian growers are committed to expanding dryland cotton in the Daly and Katherine regions. Completion of the cotton gin near Katherine is considered a driver for increased cotton production in the Territory.

The Department will continue to support Territorian cotton growers towards finding solutions for crop establishment and production challenges.

Developing the jackfruit industry

The Australian jackfruit industry is considered to be an "emerging" industry with just over 9,000 plants in the ground, worth $2.09 million annually. The industry is based primarily in the Northern Territory and Queensland.

The Department of Industry, Tourism and Trade has partnered with the Corporate Research Centre for Developing Northern Australia, the Queensland and Western Australian state departments, NT Farmers, GrowCom and growers to investigate options to improve the orchard systems used for growing jackfruit.

One of the key features of established plant crops is the development of recognisable varieties which provide a uniform end product. This allows a grower to synchronise their on-farm logistics (such as harvest labour and transportation). It also ensures that the markets can expect to sell a consistent product, which growers will be able to identify with. The Australian jackfruit industry is currently based on non-clonal plants which lack this consistency of product and timing.

As a tropical fruit tree, these plantings tend to be located in cyclone prone areas, and are vulnerable to extreme weather in their early years.

The current orchard densities allow for large, un-wieldy trees with a large percentage of fruit waste and lost profits.

This project will address these issues, identify growing systems to improve the yield, resilience and productivity of jackfruit orchards in northern Australia. Grower partners are trialling these systems on-farm and will be able to judge the differences themselves, championing the outcomes to other growers. The material produced from these trials will provide new and potential growers with contemporary information that will inform their future investment decisions and de-risk the establishment of further plantings across northern Australia.

Once production is established and sustained, the potential for value-added products, including the potential for processed and partially processed fruit, can be realised. These new industries can benefit from northern Australia's location and access to quality aviation and export facilities to gain access to international markets.

The impacts of a more reliable and profitable tropical fruit production will be increased GVP in northern Australia and the consequent impact on rural communities through increased employment in production and farm service industries. The expansion of the tropical fruit production capacity will not only grow the domestic market but will lead to improved export opportunities.

If the tropical fruit sector can better withstand cyclones, there is no limit on the production potential of northern Australian horticulture. Particularly when you consider the current value of Australian horticulture and that Australia only produces a small number of horticultural tree crops and that there are over 60 different exotic tropical fruits which are unique to the growing environments of northern Australia.

Agriculture Case Studies

Native and bush foods

The Department of Industry, Tourism and Trade, in consultation with a range of Northern Territory Aboriginal development corporations and remote Indigenous communities, has identified native and bush food commercialisation opportunities associated with native rice and Kakadu plum.

With the free, prior and informed consent of participating Indigenous communities, partnerships have been established with universities and research delivery partners for strategic research and investigations into the sustainable development of native rice and Kakadu plum industries in the Northern Territory.

Native rice species grow on the monsoonal floodplains, complete their annual life cycle during the wet season, and produce seeds into the late wet and early dry season. The field conditions vary significantly between years and make access to the floodplains difficult. Preliminary research found that wild harvest is unlikely to support adequate supply for commercialisation and thus cultivation of native rice is being investigated.

A current project is developing agronomic protocols to support cultivation of native rice in a field setting by 2024.

A follow-on project over the subsequent three years will broaden engagement with Traditional Owners on the Adelaide River, South Alligator River, and Mary River catchments, and in the Thamarrurr Region. The project outputs will include new knowledge about the grain qualities and population genomics (including knowledge of the diversity of genes significant to agronomy and grain quality) of Australian native rice species on the Indigenous estate across the regions. The project's outcomes will shape future establishment of a sustainable commercial Australian native rice industry in the Northern Territory.

Kakadu plum *(Terminalia ferdinandiana)* is endemic to northern Australia with exceptional phytochemical properties and industrial applications. The plant has commercially important antioxidants and the highest level of ascorbic acid of any fruit in the world. The demand for the products derived from Kakadu plum is steadily increasing. The wild harvest of Kakadu plum for commercial purposes is an established method of supply for numerous First Nations enterprises. In the Northern Territory, an interest

in augmenting wild harvest with cultivation is growing. At least one group has undertaken site and infrastructure assessments with the support of the Northern Territory Government, and more may follow. It is anticipated that growing market demand will attract investors to establish large-scale plantings of Kakadu plum.

The diversity of Kakadu plum currently produced by different Indigenous community groups provides an opportunity for the development of unique cultivars to meet a range of markets. Research undertaken to grow the Indigenous-led Kakadu plum industry includes work on floral biology and fruiting; diversity and variability of its leaves and fruit across sites and populations. More work is underway to gain a better understanding of aspirations of Aboriginal suppliers for participation in the supply chain and specific supply chain models that may suit the different groups of suppliers to service a range of potential national and international markets.

The Northern Territory Government in collaboration with Indigenous communities and research delivery partners, is establishing horticultural techniques (such as identifying suitable root stock and grafting techniques) that will enable the development of cultivars (with desirable characters for markets and for production) by utilising the genetic diversity present in each location. The knowledge generated will be valuable for developing Indigenous-led Kakadu plum businesses.

Fisheries Case Studies

Blacklip Rock Oyster

The Blacklip Rock Oyster is a native intertidal oyster species, found across North Australia and the Asia-Pacific region. The species is a prime candidate for a new aquaculture industry with the Darwin Aquaculture Centre leading research to inform the development across northern Australia.

There has been significant government, Aboriginal organisation and private investment in the development and delivery of collaborative research with strong engagement with Traditional Owners.

Recent breakthroughs in hatchery production techniques reiterated the potential of the species to generate economic opportunities within remote Aboriginal communities, utilising a locally-adapted species which has traditionally been harvested for millennia. Securing consistent spat supply is crucial to the long-term success of the industry.

Research at the Darwin Aquaculture Centre has made significant progress, culminating in the publication of the world's first hatchery manual for the Blacklip Rock Oyster (Saccostrea echinata). Over the past 3 years, hatchery production of Blacklip Rock Oysters at the Darwin Aquaculture Centre has increased exponentially, from 10,000s to 100,000s spat per run. This increase in production is a direct result of improved hatchery techniques, which have been enhanced through broodstock conditioning, settlement and nursery trials.

Northern Australia presents challenges not experienced in temperate oyster-growing regions and new grow-out techniques need to be adapted for the region. Grow-out trials have been completed at an existing farm at South Goulburn Island and another farm trial is underway at Groote Eylandt.

This next project phase will see an ongoing support and extension services for these existing pilot farms as well as supporting the participation of more communities in a Blacklip Rock Oyster industry.

A changing world is presenting growth opportunites

Megatrends

Multiple changes occurring at a global, national, and local scale will continue to create opportunities and risks for agribusiness over the coming decade and longer. These megatrends – a combination of geopolitical, economic, environmental, social and technological trends – will affect rural lifestyles, agricultural landscapes and the Territory's economy and society.

A hungrier, wealthier and fussier world will drive significant changes in global demand and consumption behaviour while product supply will become more reliant on innovative approaches to overcome the challenges of climate-change and geopolitical power shifts.

At a national scale, changing socio-economic, land-availability and climate conditions are presenting a unique opportunity for northern Australia to sustainably develop its extensive un-tapped natural land and water resources and become an agricultural powerhouse of the region.

Aboriginal-led developments in the agribusiness sector will reset the development paradigm. Development projects that partner with Aboriginal leaders will align with the economic and social aspirations of Aboriginal Territorians.

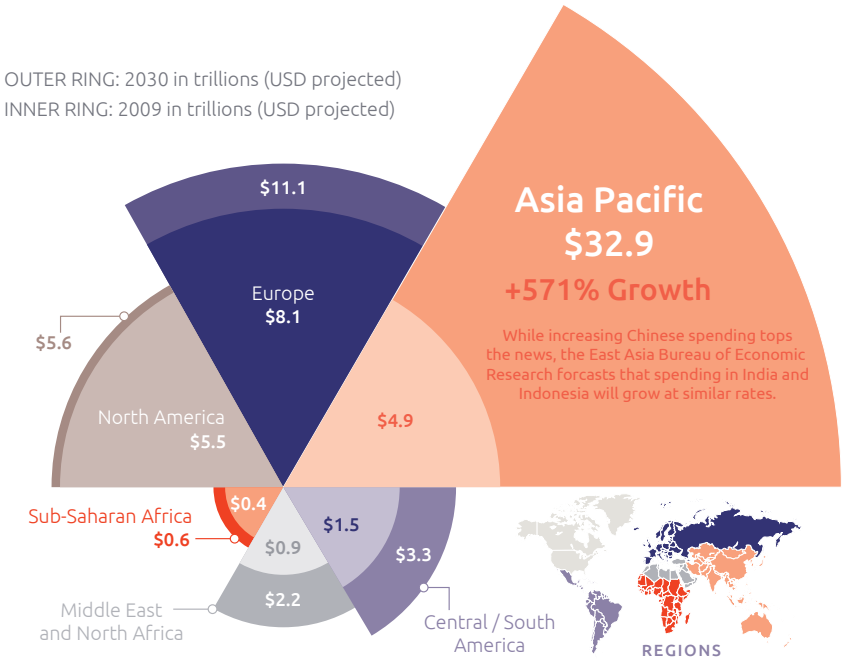
Changing market demand

Population growth and rapidly increasing incomes, particularly in emerging Asian economies, is driving a burgeoning middle-class and increasing demand for higher volumes and quality of food and fibre.

Diets are shifting from grains, rice and other starchy staples towards protein-rich animal products (red meat & dairy), plant-based sources of oils and protein, and fruits,nuts and vegetables.

Health, provenance, sustainability and ethical considerations will increasingly sway consumer's purchasing decisions.

Middle class consumer spending



Opportunities

- Increased export market demand for our existing produce
- Capitalise on our existing geographic, provenance and industry advantages
- Act as a buffer to supply shocks in the global food market
- Diversify our product base to meet customer needs
- Establish supply-chains into new high-value markets
- Increase employment opportunities across the value chain
- Proximity to Asia
- Ability to supply specific market windows.

Risks

- Low-quality operators damaging reputation of Aussie producers and harming export markets
- Increased risk of biosecurity incursions due to higher trade and international travellers
- Policies and regulations that restrict agricultural development opportunities, noting that the NT landscape is significantly under developed in comparison to other states and territories.

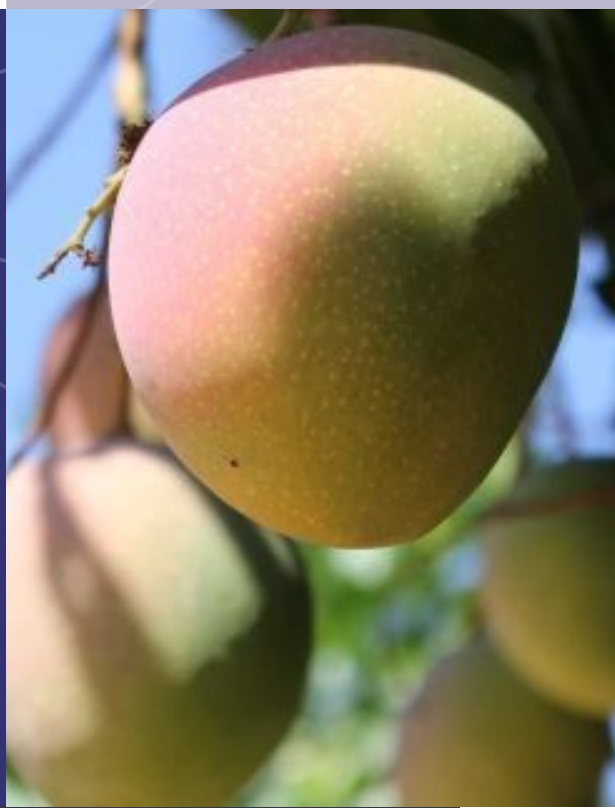
Northern Territory Farmers Association

NT Farmers Association is pleased to work with the Department of Industry, Tourism and Trade to develop this agribusiness strategy.

The strategy will play an important role in supporting growers and assisting the plant industry to achieve $1 billion in farm gate revenue by 2030. NT Farmers Association and the Department of Industry, Tourism and Trade are shaping the future of the industry through our Research, Development and Extension Committee. The Committee identifies and addresses the critical research needs of industry in the NT.

Simon Smith

President, NT Farmers Association.

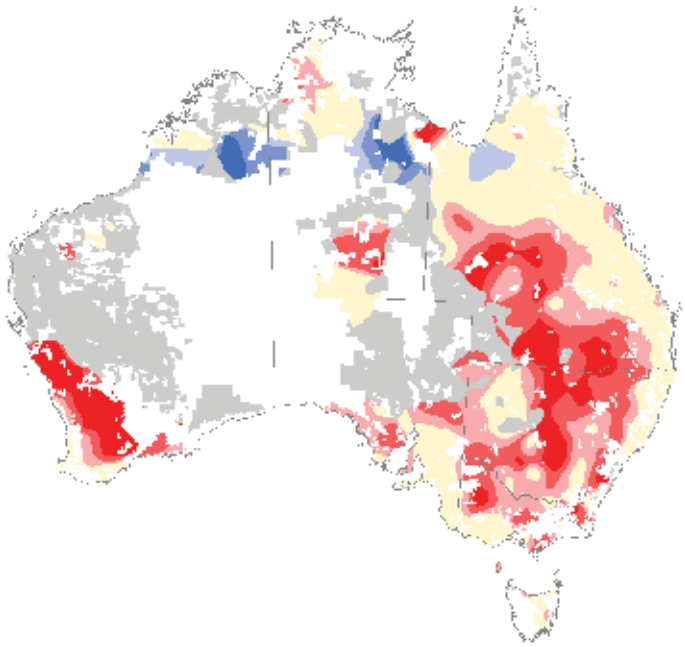


Climate and geopolitical changes

As global greenhouse gas emissions continue to rise, Australia will become hotter with drier conditions in the south and wetter more variable conditions in the north changing the productivity-distribution dynamics of the agricultural sector.

Geopolitical power shifts will shape the future of demand and supply in commodities and tensions could fracture existing trade frameworks along strategic lines, making cooperation more difficult in an environment of distrust.

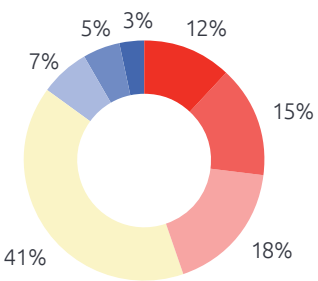
Effect of 2000 to 2019 climate conditions on average farm business profit



Farm business profit percentile ranges

90–100	Near highest
80–90	Very much above average
70–80	Above average
30–70	Average
20–30	Below average
10–20	Very much below average
0–10	Near lowest
	Insufficient sample
	Non-agricultural land

Percentage of agricultural land by percentile range



Opportunities

- Pastoral and cropping areas of the Territory will be less impacted and may in fact improve
- Increased demand for carbon credit schemes (forestry), emission reduction innovations and ecosystem services
- Lower volatility for export-oriented sectors
- Reputation for supplying healthy, high-quality, ethical and sustainable products is likely to become more important.

Risks

- Increased consumer emphasis on environmental impacts and animal welfare shaping market demand (e.g. carbon and biodiversity offsets)
- More volatile commodity prices and market access
- Higher likelihood of extreme weather events and consequential bushfires and floods
- Production no longer viable in some locations
- Protectionist policies limiting export markets
- Increased complexity and ambiguity in trade assurances
- Negative cross-sector impacts of foreign consumer sentiment on market access.

Innovations & technology

Relentless innovation will continue to drive productivity gains globally, compelling us to invest in innovation of practices, systems and technologies of our own in order to remain competitive.

Exponential advances in digital technology, automation, genetics, and synthetics will disrupt and change how food and fibre products are made, marketed, and delivered.

Opportunities

- Leveraging investment in farm management practices, technology and regional infrastructure to improve productivity
- Apply whole-of-supply-chain management practice through integrated and inter-connected digital systems to deliver on customer expectations and increase access to high-value markets and investment capital
- Establishing clear customer value-propositions to drive benefits back to the producer
- Adoption of sophisticated computer and data-based analysis and decision support systems to augment producer knowledge and practice
- Establishing a multi-industry shared-data ecosystem to realise the benefits offered by collaboration.

Risks

- Declining support to deliver effective research, development, extension and adoption programs
- Failure to continually commit the necessary resources and coordination required to develop and maintain whole-of-system innovations
- Highly tech-skilled workers not able to be retained in agriculture industry due to a highly competitive labour market
- Policy and regulatory reform at multiple-levels needed to support innovation, change and growth
- Insecure access to land and water required for agricultural investors.

Opportunities in the Territory

– Where are the growth opportunities?

Agriculture sector

Beef Cattle

In the Northern Territory the beef cattle sector has long been the most significant economic contributor from an agriculture perspective. The pastoral sector has a footprint spanning almost half of the Territory's land mass and is a significant contributor to sustaining regional economies across the NT.

Cattle operations are generally large scale and sophisticated, with herd sizes averaging more than 8,000 head grazing mainly large tracts of native rangeland pastures. Total cattle numbers tend to range between 1.8 and 2.4 million head, depending on environmental conditions, with turnoff exceeding 600,000 head annually.

While beef cattle production in the NT is well established and sophisticated due to a range of land and infrastructure improvements, improved genetics and productivity increases, there is significant scope to increase turnoff through further productivity gains. Those gains can be achieved by further application of phosphorous supplementation, sustainable grazing practices, herd selection, further genetic improvements and strategic property infrastructure developments.

The availability of cost effective protein and energy sources as a direct input or by-product of other value-add exercises such as cotton seed will provide opportunity for further productivity gains across the sector. Further utilisation of big data as a decision making tool will also assist.

Infrastructure improvements and installations enabling greater connectivity (communications and data) and road upgrades will provide substantial benefits to regional communities and enable substantial productivity gains for the Territory's beef sector.

Northern Territory Livestock Exporters Association

The demand for quality fresh, healthy beef continues to rise and the Northern Territory is set to remain a trusted and sought after provider of affordable, accessible protein for a significant number of consumers across South East Asia.

Wherever we find ourselves in the market cycle, the enduring imperatives of the NT's livestock export industry remain compelling.

We're very proud of the way our industry promotes good biosecurity, best-practice animal welfare and regional food security, all while supporting livelihoods and sustainable land management here in the Territory.

David Warriner

Chairman, NT Livestock Exporters Association.

Horticulture and broad acre farming

Major infrastructure establishment such as cotton gins, and forestry value-add facilities coupled with the availability of suitable land and access to water, and research and development support from the Northern Territory Government and Australian Governments, Research and Development Corporations, and the private sector are leading to a growing broadacre cropping industry in the Territory.

The establishment of diversified mixed farming systems focusing on dryland and irrigated cotton and emerging crops such as industrial hemp, sesame and peanuts are creating significant diversification options for Territory landowners.

Value-add opportunities are being established for Territory grown fresh produce.

Examples of the fresh produce industries with huge potential for value-added products include jackfruit, mango and ginger. In cropping, the value-add opportunities include cotton seed and a range of products including industrial hemp, sesame, other grains and peanuts.

The forestry sector offers the opportunity for development of silvopastoral farming systems, sandalwood oil production, greenhouse gas abatement, and processing of hardwood logs into high-value products for domestic and export markets.

Among the horticultural crops, the mango industry is large and sophisticated. While contributing more than 50% of the Australian national mango production, the industry has significant scope for further expansion. With the development of new varieties of mangoes, the industry will maintain a strong growth trajectory for the foreseeable future. Moreover, the expansion of mangoes into drier and cooler climatic zones in the Northern Territory will improve product quality and expand the production window to produce mangoes in the NT from September through to March. Increased mango production in the Territory, supported by the major export hub and Vapour Heat Treatment facility in Darwin will facilitate mango exports into Asia and the rest of the world from Darwin. All in all, the mango supply chain will continue to grow its associated economic activity.

New crops like agave, rambutan and jack fruit, provide significant diversification and high value niche crop opportunities.

Fisheries and Aquaculture sector

Fisheries

The NT seafood industries operate across the vast and pristine waters off the NT coastline. While the volumes of production are low by global and national terms, the fisheries are highly sustainable with a focus on high-quality produce. There is significant potential for development and there is increasing interest from existing Australian fishing enterprises and Aboriginal interests to develop new, and expand existing, fishing businesses.

Increasing demands for seafood and the national reliance on imported finfish has seen a growing interest in developing niche markets for existing species, and new markets for underutilised species, commonly undervalued in Australia as a seafood commodity.

The NT in particular has a range of tropical species, both targeted and by-product, that are underutilised; such as blacktip sharks, mackerels, tropical snappers, small pelagics and trevallies. There is an opportunity to increase the value and sustainable harvest of these species within existing management frameworks.

NT fisheries are well managed and have robust frameworks in place, featuring scientific assessments of stocks, ecological risk assessments, fishery harvest strategies and fishery quota entitlement systems to provide certainty and security around investment and development.

The majority of NT wild caught product is currently sent interstate as whole fish. There is considerable potential for value adding through processing, product development and full utilisation of products.

Government and industry are working together to explore matters such as:

- investment in a seafood processing facility and investigating product development and waste utilisation (i.e. skin for products, branding, ready to eat, extended shelf life, pet food, fertilisers)
- developing and accessing new markets, and new ways to sell fish to maximise value for the Territory
- increasing consumer interest and profile of undervalued/ underutilised species
- increased Aboriginal involvement and partnerships in wild capture fisheries.

While the NT has the largest barramundi farm in Australia, aquaculture has significant opportunities for expansion. The NT has the ideal climate and environment for the production of many tropical species including: Barramundi, prawns, trepang, Blacklip Rock Oysters, corals and Pearl Oysters.

The Department of Industry, Tourism and Trade works closely with industry to identify potential new species and utilises established research, development and extension collaborations between government, industry, Aboriginal communities, research institutes and universities to support innovation and adoption of leading technologies and practices.

Humpty Doo Barramundi

As a multi-generational Territory family business Humpty Doo Barramundi understands the importance of growing our business in line with our environment and community.

We prioritise investing in local Territorians through both direct employment and training and indirectly through contracting the services of other Territory businesses. Our aim is to ensure sustainable practices go beyond environmental compliance and take into account community expectations.

Dan, Bob and Tarun Richards,

Humpty Doo Barramundi.

Aquaculture

The Darwin Aquaculture Centre (DAC) is a world standard government research and development facility. It was instrumental in the development of intensive Barramundi aquaculture production and is undertaking research to commercialise two native species; the Blacklip Rock Oyster and Black Jewfish.

The DAC assists industry to address technical barriers to expansion and increase profitability through collaborative research partnerships. The Centre also leases areas to commercial operators to support private sector research and hatchery production. The Government is investing in the DAC to operate as a Centre of Excellence in tropical aquaculture and increase its capacity to support aquaculture development and increase the scientific and technical workforce capacity in the NT.

Opportunities within the NT aquaculture sector include:

- Increasing the production volume of NT aquaculture through enabling the expansion of existing farms and attracting investment in new aquaculture businesses
- Utilising brownfield sites and former aquaculture farms to fast-track investment and increased production
- Significant opportunity for Aboriginal involvement in the aquaculture industry, through different business models e.g. owner operator, joint venture partner or landowner
- Investigation of the benefits of implementing circular economy principles for aquaculture and maximising on farm efficiencies, including the utilisation of waste products and multi-trophic farming systems
- Exploring opportunities in seaweeds and other tropical species e.g. Tropical Rock Lobsters, prawns and corals.

Value-add opportunities

To support the doubling of the economic contribution of the agribusiness and aquaculture sectors by 2030, the Department of Industry, Tourism and Trade has commenced a consultancy to implement the TERC report key action to 'undertake a comprehensive feasibility assessment of value-add opportunities across the Northern Territory agribusiness sector, including industry capabilities, options to incentivise Agribusiness processing, manufacturing and innovative technologies and alignment with national strategies'.

This feasibility assessment report will examine the value-add opportunities across the value chains of the NT agribusiness sector by industry. Value-add opportunities may include options for productivity improvements, adoption of new technology or a change in logistics. There may be market-driven opportunities for niche processing such as wild game, community timber, juicing or fish sauce production. There are also opportunities for the development of new export markets for existing produce.

Changing tack will put us on a growth pathway

– We know what we must do to realise our vision and purpose

ENGAGE

We must meaningfully engage with our broad community of stakeholders to maintain their respect and support.

- Continue to strengthen partnerships between government, industry and Aboriginal people.
- Have strong industry representative organisations.
- Communicate with honesty and integrity in an open, transparent and timely manner.
- Present information in formats that enable adoption.
- Clearly translate scientific findings and actively promote information to enhance understanding of the benefits of development and to prepare for new biosecurity threats.
- Attract and facilitate new investors.
- Support the right environment to retain current investors and provide surety to enable further development.
- Continually update consumer market preferences and intelligence and maintain strong in-market relationships.
- Re-engage with key international markets to strengthen and grow agribusiness trade, locally, nationally and internationally.
- Continue to work with Infrastructure NT on agribusiness priorities to promote infrastructure projects with Infrastructure Australia and the Commonwealth.
- Engage Regional Reconstruction Committees and other key regional forums in agribusiness development.

PROTECT

We must strive to protect what we have worked hard for: our reputation as a supplier of choice for high-quality produce.

- Strengthen our overall biosecurity performance across the environment, plants, and animal and fish sectors.
- Deploy new technology to increase our ability to detect pests early, where they have minimal economic impact.
- Develop stronger shared biosecurity responsibility models to prepare, survey, respond and build resilience to increasing threats.
- Create programs and systems that support producers to quickly re-enter markets following an incursion.
- Invest in sentinel crops and livestock in key areas as a better early detection safeguard.
- Partner with Aboriginal Ranger programs to strengthen biosecurity performance.
- Build greater cross-government collaboration, including with the Commonwealth.
- Protect the Territory's reputation as a disease free, safe, ethical and sustainable producer with internationally recognised supply chain traceability systems.
- Enhance credibility in our markets through strong animal welfare performance and chemical regulation.
- Support land managers to continue prioritising environmental values.
- Implement and review legislation and regulatory processes that prioritise effective environmental and natural resource management.

Growth drivers

Aboriginal leadership

Aboriginal groups increasingly aspire to lead the development of business ventures, including those that are culture-based, on land and sea, to create new sustainable industries and jobs on country.

Securing critical resources

Additional resources, capacity and capability to meet increased biosecurity and climate threats, statutory responsibilities, national agreements, work health and safety and staff wellbeing, and operational workforce demands.

De-risking industry investment

Technical data and analytics to inform regulatory development and compliance, enable efficient development processes and deliver clarity, certainty and confidence for investors.

Expanding threat protections

Expanded biosecurity surveillance and response capability in the face of increasing multi-domain threats, to protect economic and natural resources and ensure the integrity of existing and new supply chains to the domestic and international consumer.

Optimising government processes

Contemporary policy, legislation and regulations, coupled with an efficient approvals process and compliance enforcement program, to encourage investment, streamline development and enhance protections.

ADAPT AND INNOVATE

We must continually adapt and innovate to capitalise on opportunities and to respond to biosecurity and climate change threats.

- Prepare Territory agribusinesses and aquaculture for climate change, including increased biosecurity threats.
- Build an "offsets" sector to quickly capitalise on opportunities presented by net zero emissions targets.
- Work with industries to develop decarbonisation capabilities.
- Transition agriculture and fisheries to renewable energy sources.
- Support new agriculture and aquaculture industries.
- Partner with research and extension hubs and universities to support industry innovation.
- Pursue value-add and manufacturing opportunities.
- Develop supply chains to new markets and improve existing supply chains.
- Partner with the Australian Government to fund new agribusiness and aquaculture service roads.
- Drive productivity gains and profitability.
- Build capacity in agriculture technology solutions (AgTech).
- Attract funding and invest in coordinated research, development and extension to support the growth of the industry.

GROW

We must focus our efforts on actions that activate the key drivers of growth if we are to succeed in realising our vision.

- Sustainably develop the Territory's natural resources – land and in water.
- Acknowledge the aspirations of Aboriginal people and prioritise support for Aboriginal-led agribusiness and aquaculture development.
- Build our human capital and capacity.
- Provide clarity and certainty with regard to land tenure and access to fish resources.
- Rapidly release sustainable agribusiness precincts and land.
- Intensive assessment of sustainability parameters for agribusinesses to establish scalable horticulture and agriculture precincts.
- Develop bio regional land clearing models that define allowable levels of land clearing by regions in the NT.
- Intensify and diversify the Pastoral estate and aquaculture industry.
- Identify opportunities to enhance the value of our existing produce.
- Capitalise on the distinct advantage for NT commodities and products.
- Increase trade, investment and secure market access.
- Improve physical and digital connectivity to regional and remote areas of the NT.
- Achieve equity (for NT) for eligibility rules governing carbon economy initiatives.

Growth drivers

Leveraging innovation investment

Capitalising and leveraging external investment in innovation (research, development, extension and adoption) to drive industry and supply chain efficiency and profitability.

Establishing marketable advantages

Controllable aspects of the industry value-chain, including new product development and active promotion, working to add to the appeal-of-provenance and consumer sentiment.

Maximising estate-use compatibility

Accessing technical and business services to realise the economic potential and increase the productivity and sustainable development of the pastoral and Aboriginal land and sea estates.

Intensifying and diversifying activities

New agribusiness on greenfield sites plus intensification of land use, coupled with value-add processing opportunities, to deliver increased regional economic development, investment and jobs through the development and production phases.

Building enabling infrastructure

Putting in place the critical infrastructure and utilities required to increase efficiencies, open-up new areas and support product development options.

Accessing more of the value-chain

A whole-of-sector approach to value-add, utilising operational synergies, new areas of processing and manufacturing and prioritisation of biosecurity to underpin sustainable industry growth.

Prioritising our actions will accelerate growth

– We will take action to achieve our strategic objectives

68 strategic actions have been developed across the 4 priority areas to address the strategic objectives with a focus on activating the drivers of growth.

ENGAGE Actions		GROWTH DRIVERS										
		A	B	C	D	E	F	G	H	I	J	K
1.	Appropriately support industry associations to coordinate members and represent industry.	✓						✓				
2.	Support industry associations to develop decarbonisation and biodiversity capacity.			✓			✓	✓				
3.	Proactively promote agribusiness and aquaculture investment opportunities nationally and internationally, leveraging "development of northern Australia" synergies, forums and conferences.			✓								
4.	Proactively engage with important Territory agribusiness and aquaculture markets to strengthen national and international trade.			✓				✓				✓
5.	Work with industry to develop a shared understanding and ownership of increasing biosecurity threats and to strengthen surveillance networks to mitigate risks.		✓	✓	✓							
6.	Engage effectively across and with governments to advocate agribusiness and aquaculture growth opportunities.			✓		✓						
7.	Contribute agribusiness and aquaculture industry knowledge and objectives and participate in various joint forums to enable coordinated infrastructure development through engagement with national funding bodies and investors.			✓		✓					✓	
8.	Engage effectively with Territorians where English is a second language to build partnerships for agribusiness and aquaculture in the NT.	✓	✓	✓								
9.	Provide information to the community with regard to agribusiness and aquaculture policy and processes to raise community confidence.			✓		✓						
10.	Include agribusiness and aquaculture in the Regional Economic Growth Plans.					✓						
11.	Collect, incorporate and share agribusiness and aquaculture sector data in the regional data portals to support investment.	✓		✓			✓					
12.	Develop positive social media and other communication tools to promote community stakeholder's engagement with and support for Territory agribusiness and aquaculture.	✓	✓	✓				✓				
13.	Support agribusiness and aquaculture project proponents to engage with Territorians regarding project benefits and impacts.	✓	✓	✓				✓				

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PROTECT Actions		GROWTH DRIVERS										
		A	B	C	D	E	F	G	H	I	J	K
1.	Continue to review and modernise legislation and regulations to protect industry reputation and supply chain integrity.			✓	✓	✓		✓				
2.	Review regulatory settings to identify barriers to carbon offset industry growth, including the facilitation of private investment into delivery of projects across different tenure types.			✓	✓	✓	✓		✓	✓		
3.	Complete Berrimah Farm Science Precinct upgrades to strengthen biosecurity laboratory diagnostic capability and attract high quality scientists and experts Territory-wide.	✓			✓						✓	
4.	Increase Biosecurity resourcing, capacity building and networking through partnerships and engagement with industry and community.	✓	✓		✓							
5.	Fast track the development of emergency response capability in industry and government to better prepare for future incursions.	✓		✓	✓			✓				
6.	Conduct biosecurity training and exercises to strengthen capability to respond to threats and incursions.	✓	✓		✓							
7.	Work with the Commonwealth to strengthen and expand the biosecurity capacity of the Aboriginal Ranger network and support development of commercial activities linked to natural resource and sustainable resource management.	✓	✓	✓	✓	✓		✓	✓	✓		✓
8.	Consider the use of sentinel crops in key locations that are monitored by ranger groups.		✓		✓		✓			✓		
9.	Trial, test and implement new technologies to support improved biosecurity outcomes across the NT.			✓	✓		✓	✓				
10.	Incorporate biosecurity risk management within business plans to address current and future biosecurity risks and enhance resilience.	✓		✓	✓							
11.	With NAQS, WA and QLD governments, prioritise activities to strengthen biosecurity surveillance across the north to protect industry, the environment and the community.		✓		✓			✓				
12.	Include biosecurity preparedness in all financial planning workshops.				✓							
13.	Continue to maintain strong animal welfare protection and chemical regulations to underpin market values for Territory produce.			✓	✓	✓		✓				
14.	Explore the introduction of school-based apprenticeships for rangers.	✓	✓		✓							
15.	Continue to review and modernise legislation and regulations to protect industry reputation and supply chain integrity.			✓	✓	✓		✓				

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ADAPT AND INNOVATE Actions		GROWTH DRIVERS									
		A	B	C	D	E	F	G	H	I	J	K
1.	Leverage new investment in regional hubs to deliver agriculture innovation.			✓			✓		✓		✓	✓
2.	Support the development of integrated sustainable cropping systems and high value mosaic cropping, including a modern cotton industry.			✓					✓	✓		
3.	Support development of new industries through agriculture innovation prioritisation, research partnerships and extension activities including market development and participation on industry RD&E committees.	✓					✓	✓		✓		
4.	Support farmers to become more efficient water users through effective research and extension and assist growers with water regulatory compliance, rights and obligations.			✓		✓	✓	✓	✓			
5.	Intensify development on cleared land through deployment of new technologies and methods.						✓		✓	✓		
6.	Maintain support for abattoirs including licencing for small remote abattoirs.			✓		✓						✓
7.	Proactively engage with the telecommunications sector and government to deliver improved data and telecommunications capability.						✓				✓	
8.	Apply innovative technology to develop fast, new and efficient supply chains to new and existing markets including traceability systems.				✓		✓	✓				✓
9.	Proactively assess economically viable value-adding and manufacturing opportunities and build capability for the service and technical support sector.	✓								✓	✓	✓
10.	Continue to bituminise important Territory beef, buffalo, forestry and other agribusiness and aquaculture roads to increase transport efficiencies and to ensure mobilisation of remote workforces.		✓	✓					✓		✓	
11.	Continue to work with partners across the north to identify new technologies that will improve our surveillance and diagnostics of high-priority pests and diseases.				✓		✓					
12.	Assess the viability of developing a new community at Fleming to service the Douglas Daly agriculture and tourism region including infrastructure and investment attraction plan.		✓	✓							✓	
13.	Establish agreed framework and resources for economic and productivity measurement, evaluation and analysis.	✓		✓								
14.	Establish a Land Based Abatement Program to support primary producers and other land managers to commercialise low emissions technologies and land management practices to improve productivity and reduce emissions.			✓		✓	✓		✓	✓		
15.	Undertake a carbon offset industry feasibility study to inform Land-Based Abatement Program design.			✓			✓			✓		
16.	Support development of consolidated, evidence-based supply-chain infrastructure investment and operations (eg: the Katherine Agribusiness Logistics Hub) by providing agribusiness and aquaculture industry knowledge and expertise.	✓		✓			✓				✓	✓
17.	Undertake research to quantify the carbon storage opportunities for agriculture in the Territory and promote climate adaptation planning to underpin sustainability and industry development.			✓			✓					
18.	Develop market opportunities for agriculture waste products to improve carbon footprint and profitability.			✓						✓		✓

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GROW Actions		GROWTH DRIVERS										
		A	B	C	D	E	F	G	H	I	J	K
1.	Government to improve the regulatory efficiencies in land clearing, water allocation, environmental and other approval processes whilst maintaining a robust regulatory system.					✓						
2.	Prioritise strong and meaningful partnerships with Aboriginal people and Land Councils, Centrefarm and Aboriginal Land Economic Development Agency, the Aboriginal Sea Company and NT Aboriginal Investment Corporation to develop agribusiness and aquaculture projects on Aboriginal land and overlying waters.		✓						✓			
3.	Support Aboriginal-led agribusiness activities including increased investment in the Indigenous Pastoral Program, horticulture, forestry, native foods, Aboriginal fisheries mentoring and Aboriginal agribusiness focused field days.	✓	✓						✓			
4.	Connecting investors to Aboriginal-led projects and upskilling landowners on emerging markets and business opportunities, new/innovative agribusiness and aquaculture developments led by other Aboriginal peoples.	✓	✓	✓						✓		
5.	Enable pastoral leaseholders to develop leases in accordance with the Pastoral Land Act 1992 through mapped pathways for tenure and permitting with clear governance arrangements, decision-making processes, costs, and timeframes, including information on native title.					✓			✓			
6.	Improve baseline mapping at a scale of 1:100 000 in water, vegetation, soils, biodiversity, and carbon in the landscape.						✓		✓	✓		
7.	Continue to inform and promote investment in agriculture through the provision of Aboriginal Sacred Sites mapping.		✓	✓		✓						
8.	Establish Sustainable Agribusiness Development Precincts by identifying and releasing new land for development (e.g. Keep Plains, Larrimah, and Wildman River) to private developers.						✓		✓	✓	✓	
9.	Assist pastoral leaseholders with subleases under the Pastoral Land Act 1992 where a Non-Pastoral Use Permit has been granted to provide improved financial security for the lessee and/or attracting prospective external investors to a diversified pastoral estate.			✓		✓			✓	✓		
10.	Provide contemporary fisheries management that provides certainty and security to underpin industry development.		✓			✓						
11.	Facilitate full use of established commercial harvests of wild fish species.									✓		✓
12.	Implement harvest strategies for commercial fisheries to improve economic performance.					✓			✓			
13.	Diversify the commercial aquaculture species cultured in the NT (currently barramundi, pearl, oysters, and spirulina).						✓			✓		✓
14.	Explore potential new fish species opportunities through marine bioprospecting.						✓			✓		
15.	Support career pathways in agribusiness and aquaculture with delivery of targeted short courses, qualifications, and apprenticeships.	✓	✓	✓								
16.	Prepare an agribusiness and aquaculture workforce for the future by upskilling, promoting placements for university graduates and encouraging adoption of new technologies.	✓	✓	✓								
17.	Attract a more diverse workforce to agribusiness and aquaculture through targeted programs.	✓	✓									
18.	Provide a safe work environment for agribusiness and aquaculture workers in the Territory.	✓		✓	✓			✓				
19.	Increase farm business capability through targeted business planning and support programs.	✓	✓						✓			
20.	Pursue taxation relief options to grow, diversify and strengthen agribusiness and aquaculture enterprises, to incentivise a regional workforce and incentivise investment in Aboriginal-led agribusiness and aquaculture.	✓	✓	✓								
21.	Undertake relevant and targeted research, extension and adoption programs that improve productivity and are conducive to expansion whilst supporting traditional and emerging industry sectors.						✓		✓	✓		
22.	Participate in strategic partnerships with industry, Aboriginal peak bodies, universities, research and development corporations, cooperative research centres, State and Territory governments to deliver programs and activities that are transformational and regionally specific for agribusiness and aquaculture growth.		✓				✓		✓			✓

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Coordinating our approach

– Will keep us on track

Collaborative action plan

The actions outlined in this co-designed strategy will drive agribusiness development in the Territory.

To implement these actions a coordinated and collaborative approach will be necessary.

Only when all stakeholders work together will the benefits be realised.

To achieve the required level of collaboration, a Steering Committee will be put in place by the Minister for Agriculture and Fisheries.

The Steering Committee will be a mix of government, industry and key stakeholders to ensure that these actions are implemented in a way that achieves the economic outcomes the Territory needs and best serves all Territorians.

It is this fine balancing act that will deliver success.

Prioritising actions

There are a significant number of actions listed under each of the Strategic Priority areas: Engage, Protect, Adapt and Innovate and Grow.

The role of the Steering Committee will be to prioritise and oversee the implementation of these actions to deliver economic growth.

Celebrating wins along the way

– Will keep us motivated

Reporting back

We understand that Territorians will be interested to keep track of our progress.

Annual reporting against the targets contained in this strategy will let everyone know how we are tracking.

We may need to adjust our targets and actions as time goes on. We expect that we will be reporting on the actions that we have implemented and adding some new ones as the development landscape changes.

This strategy will be a living breathing document and will evolve.

**Department of Industry,
Tourism and Trade**

t. +61 08 8999 2006
w. industry.nt.gov.au

NORTHERN TERRITORY GOVERNMENT | THE TERRITORY BOUNDLESS POSSIBLE