An Age-Old Beginning

Understanding, sharing, and celebrating Australian Native Foods and their cultural significance and unique benefits

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In submitting this report, the Scholar has agreed to Nuffield Australia publishing this material in its edited form.

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Executive summary

This report aims to identify, emphasise and celebrate the cultural significance of Australian Native Foods (ANF) and explore their unique benefits. The ANF industry is still young, but it is growing rapidly. Research into ANF will highlight their nutritional value and distinctive benefits, which have driven increasing demand in a once-niche Australian market, now transitioning into a globally sought-after economy. Within this report, findings will illustrate the use of ANF and their relationship with First Nations communities and cultures across Australia. It will show how ANF is utilised in ceremonial and cultural practices and the role they play within First Nations knowledge systems and traditions.

Several case studies have been developed, focusing on products that range from those with established commercial markets and growing market presence, to non-mainstream, culturally vital foods for First Nations people, as well as internationally significant First Nations Foods:

- *Terminalia ferdinandiana* (Kakadu Plum)
- *Tetragonia tetragonioides* (Warrigal Green)
- Rock Fuchsia Bush (Bush Medicine)
- *Heteropogon triticeus* (Giant Spear Grass)
- Native North American Bannock

There are numerous challenges facing the ANF industry, with potential threats and risks related to the exploitation of cultural knowledge and provenance-driven information embedded within each ANF product. Best practice indicates that self-determination within First Nations communities and First Nations-led ANF businesses are essential for protecting Indigenous Cultural Intellectual Property (ICIP) and supporting First Nations knowledge systems to ensure the sustainable and ethical production and sale of ANF. Based on the findings of this report, I have collated a list of key challenges that face First Nations agriculturalists within the ANF industry, and barriers that inhibit the ethical practice of producing, harvesting, selling, and marketing ANFs.

After collating the benefits, risks, and market analysis of the ANF industry, I have designed several key recommendations that I believe will enhance the protection of culturally significant information that ANF holds, and highlight economic empowerment, opportunity, and celebration of ANF and First Nations knowledge systems. Those recommendations are:

- Strengthen IP and Traditional Knowledge protection
- Build consumer trust through authentic branding
- Greater investment in research and development
- Secure sustainable supply chains through capability and capacity building for First Nations agribusiness
- Increased capital investment in First Nations agriculture businesses
- Majority share of First Nations-owned bush food businesses
- Culturally safe Aboriginal and Torres Strait Islander governance structures for First Nations businesses in the Native Foods sector

Keywords; Native Australian Foods (ANF), Intellectual property (IP), Culture, Lore (Aboriginal Law), Aboriginal, Torres Strait Islander, First Nations, Business governance, Cultural significance, First Nations knowledge systems

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Foreword

To many Australians, Native Produce, more commonly known as “Bush Tucker”, is a growing concept within their homes. But for Aboriginal and Torres Strait Islander people, it’s a millennia-old tradition, holding some of the world’s oldest knowledge systems.

My name is Marlon Motlop, and I am a proud Larrakia/Gulumeorrgin, Kungarrakany Erub/Darnley man from Darwin in the Northern Territory, Australia. I am a First Nations grower and owner of Native Kitchen Australia, as well as a former Director of Native Co. Both Native Kitchen and Native Co. are Aboriginal and Torres Strait Islander-owned and operated companies specialising in Australian Native Produce, located in the Barossa region of Adelaide, South Australia. Native Co. is home to a variety of native herbs and succulents grown within a controlled environment of 6000 square metres (sqm) of plastic houses using both hydroponic and soil bed systems. The vision of Native Co. is to make Australian Native Produce accessible to everyday Australians, alleviating seasonal challenges through a consistent supply.

ANF products are often seen as exotic options for the everyday Australian household chef, and the cultural significance attached to each product frequently sparks unfamiliar conversations around many dinner tables. Celebrating, understanding, and sharing the importance of these knowledge systems, as well as how Australian society can use ANF as a vehicle for change, is a conversation starter for topics including colonisation, reconciliation, truth-telling and social cohesion. People’s appetite to learn about ANF often depends on the amount of highly essential vitamins and minerals available in them. Products like the Kakadu Plum attract attention on a global scale for their world-class levels of Vitamin C.

In my mind, just as important from a societal point of view, are the benefits of these products to foster conversation and connection. I must acknowledge the many Aboriginal and Torres Strait Islander communities and individuals who blessed my research journey. They provided the most sensitive information available, understanding of the enormity of the topic related to First Nations cultures and food, and the opportunity to bridge the gap in knowledge through endorsement of the findings within this report.

There are over 60,000 years of farming and agricultural occupation embedded within the DNA of this country. The role Native Produce plays from a cultural perspective is a pillar in the lore of our people. Native Food has provided case points and grounds for challenging western government policies and legislation through the Aboriginal Land Rights Act and Native Title. It serves as a bridge connecting cultures and people. Promoting ANF is about more than just tasting and enjoying them; it’s also about education and sparking conversation.

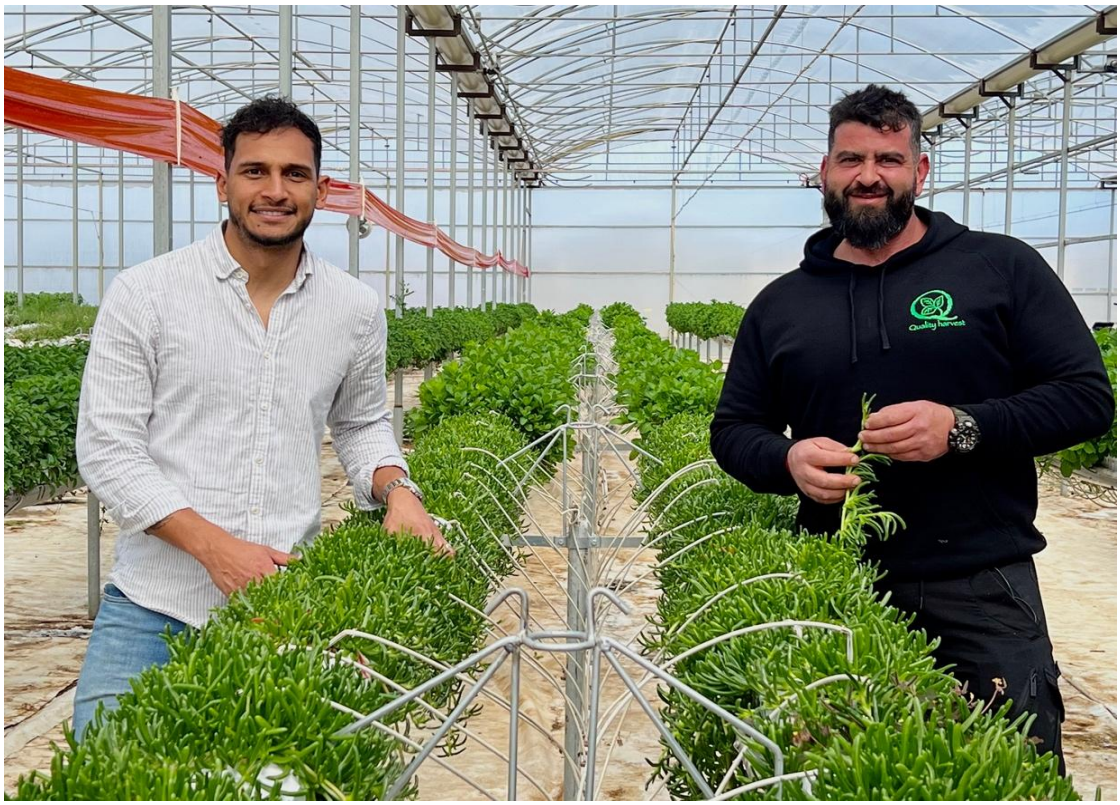

Figure 1: Marlon Motlop and Damien Manno (Directors), Native Kitchen Farm. (Source: Author)

Table 1. Travel itinerary including Contemporary Scholars Conference (CSC) and Global Focus Program (GFP)

Travel date	Location	Visits/contacts
28 July 2022	Australia: North East Arnhem Land,	Gumatj Aboriginal Land Corporation
October 2022	Australia: Darwin, Northern Territory	Northern Land Council (NLC)
6 – 20 March 2023	Canada: Richmond, British Columbia	Nuffield Pre CSC Tour Nuffield CSC
21st March– 2nd April 2023	New Zealand: Wellington, Christchurch	Nuffield Triennial Pre-Tour Nuffield Triennial Tour
3 - 11th April 2023	Brazil	GFP in Brazil
12th-17th April	United States of America: Austin, Texas	GFP in United States of America
17th-20th April	England: London	GFP in England
20th -22nd April	Belgium: Brussels	GFP in Belgium
8 – 14 July 2023	Singapore	Hawker Street markets, Maxwell Food Centre

4 – 12 September 2023	Australia: Sydney	Economic Participation of Indigenous Communities Cooperative Research Centre (EPIC CRC)
12 – 18 October 2023	Australia: Darwin, NT	Northern Land Council (NLC) Larrakia Development Corporation (LDC)

Acknowledgments

I acknowledge the Traditional Custodians of the Aboriginal and Torres Strait Islander lands and waters across Australia and pay my most profound respects to Elders past, present, and emerging. I recognise their enduring connection to Country, culture, and knowledge, which continues to guide and enrich the Australian Native Food industry today. In particular, I would like to highlight the peoples and lands of:

- Kaurna
- Larrakia
- Yolngu
- Kungarrakany
- Yuin
- Pitjantjarra
- Tjarutja.

I would like to thank the First Nations communities, knowledge holders, and industry partners who generously shared their time, insights, and perspectives in shaping this report. Their contributions have been invaluable in ensuring this work reflects both cultural integrity and culturally safe methods of engagement.

I also acknowledge the support of my scholarship sponsors Woolworths, Nuffield Australia, and Nuffield International. Their support made this report possible. I would like to extend my appreciation and deep thanks to former Nuffield Australia CEO Jodie Redcliffe for her support, guidance, and understanding throughout my Nuffield journey.

Several industry representatives, businesses and organisations provided their time to contribute to the findings of this report, such as:

- Andrew Lowe
- Bush to Bowl
- Damien Manno
- Daniel Motlop
- EPIC CRC
- First Nations Fresh Produce Pty Ltd
- Katie Kiosses
- Mo Motlop
- Native Co.
- Native Kitchen Australia
- Northern Land Council
- Nuffield Australia
- Nuffield International
- Phil Duncan
- Quality Harvest Pty Ltd
- Something Wild Australia
- University of Adelaide
- Woolworths

Abbreviations

ANF	Australian Native Foods
ATSI	Aboriginal and Torres Strait Islander
AUS	Australia
CAN	Canada
EPIC CRC	Economic Participation of Indigenous Communities Cooperative Research Centre
ICIP	Indigenous Cultural Intellectual Property
IP	Intellectual Property
NLC	Northern Land Council
NT	Northern Territory
SA	South Australia
TCE	Traditional Cultural Expressions
TK	Traditional Knowledge
USA	United States of America

Objectives

- Highlight the cultural importance of Australian Native Foods (ANF) and their role in First Nations culture.
- Emphasise the unique benefits of Australian Native Produce.
- Investigate and outline the significant barriers facing First Nations business startups and their entry into the agriculture and farming sectors.
- Explore and underline the importance of Indigenous Cultural Intellectual Property (ICIP).
- Showcase the significance of First Nations Foods from around the world and the similarities in their cultural importance.
- Highlight the necessity of First Nations knowledge systems in Australian agriculture.

Introduction

The latest Indigenous Business Snapshot from Melbourne Business School indicates these businesses contribute more than $16 billion to the Australian economy, employ 116,795 people, and pay $4.2 billion in wages (MBS, Retrieved from: https://mbs.edu).

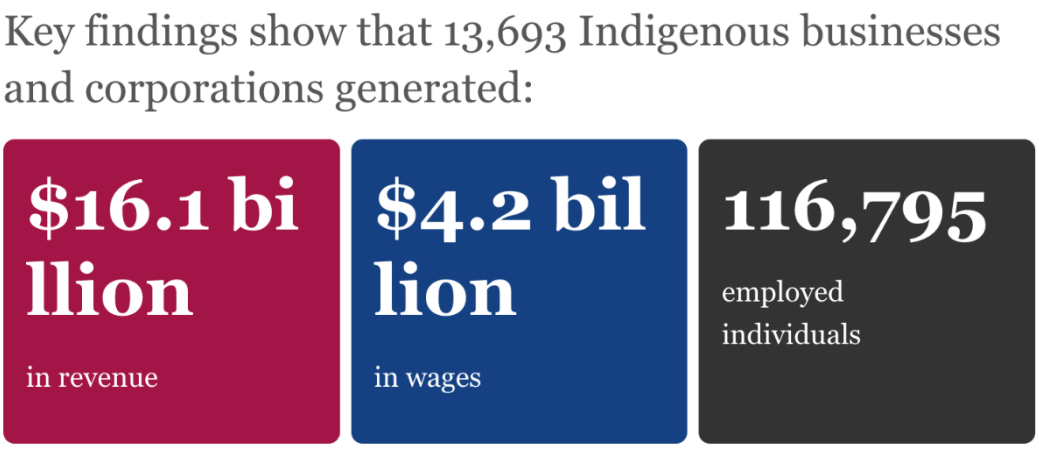

Figure 2: Key findings from Melbourne Business School.

The First Nations Native Food industry was worth $81.5 million in the 2019–2020 financial year, with the potential to double by 2025 (McCubbing, 2022). Underpinning many of the Aboriginal-owned organisations working within agriculture and food is a rich history and interconnected relationship with land, plants, animals, and people encompassed through Aboriginal and Torres Strait Islander 'Lore' and customs. This is also known as 'cultural significance'. Native Produce holds vital information and plays a pivotal role within Aboriginal culture. This includes detailing what specific foods are utilised for, when and what can be harvested, which community members hold knowledge, and importantly, what can be eaten. This information is part of what is in today's world is better known as 'Indigenous Cultural Intellectual Property' (ICIP). ICIP refers to the rights that Aboriginal and Torres Strait Islander peoples hold in relation to protecting and controlling their cultural heritage, traditional knowledge, and cultural expressions. This includes languages, stories, art, music, dances, ceremonies, symbols, ancestral remains, sacred sites, and knowledge of Native Foods and plants.

Throughout my experiences in the Native Food industry, I've observed that Australian consumers are increasingly understanding the importance of story within food and are seeking unique experiences within every meal. The demand for education around Aboriginal Australia has placed cultural and intellectual property in a position of increased importance, creating an undercurrent of pressure for ICIP for Australian Native Foods.

My journey into researching the cultural significance of ANF for Aboriginal communities began here in Australia with First Nations businesses, Aboriginal communities and Traditional Owners. Through the opportunity of my Nuffield Scholarship, I have travelled abroad to seek perspective and information on alternative ways of placing

high importance on the cultural significance of First Nations communities abroad, and the unique benefits of their traditional foods. Examples from First Nations peoples in Vancouver, Canada, demonstrate the universal utilisation of Native Foods and cultural protocols related to food.

In my view, aside from the intentions and purpose stated above, being part of this program for me was an opportunity to open doors for other First Nations farmers and show those who follow that we belong in this space, and that farming and agriculture are deeply connected to our people and our story. Yet, many barriers inhibit entry into the sector. Access to capital, market access and supply chain, and ICIP demands are just some of those barriers that First Nations communities face today.

Case studies

Kakadu Plum (*Terminalia ferdinandiana*)

Outback superfood

Several ANFs are in high demand in today's growing Native Food industry. One of the leading players in the high-demand ANF market, for instance, is the *Terminalia ferdinandiana* from the northern regions of Australia, more commonly known as the "Kakadu Plum," or in the local Darwin Aboriginal language, Gulumeorrgin "Dhamiyumba." The Kakadu Plum is now a highly sought-after product due to its nutritional value. The Kakadu Plum is an oval-shaped fruit that is 1.5–2 centimetres (cm) in size with a scent of a mixture of baked apple and pear. Each fruit or plum weighs between 2–5 grams (Food Reviews International, 2024).

This ancient immunity booster is wild harvested for its high vitamin C content, giving the Kakadu Plum the iconic tag of "superfood". Emphasising its benefits has placed them in high demand from pharmaceutical and nutraceutical companies.

> *Extracts from the peel, pulp, and seeds of native plums can participate in cell signalling pathways…while inhibiting pathogenic microorganisms, including bacteria, fungi, and viruses. (Food Reviews International, 2022)*

Figure 3: Kakadu Plum tree & fruit (Source: Author)

Kakadu Plum is an endemic plant species that grows throughout northern Australia, including the Northern Territory, Western Australia's Kimberley region, and parts of Queensland. This fruit is high in vitamin C, it is quite a potent antioxidant that protects your body from damage caused by reactive molecules known as free radicals. In addition to its importance as a food and medicine(7 Health Benefits of Kakadu Plum, (Healthline, 7 benefits of Kakadu Plum Retrieved From: https://www.healthline.com) Kakadu Plum harvesting is shaped by cultural traditions. Throughout northern

Australia, specific First Nations cultural protocols specify that only women within communities are permitted to harvest the Kakadu Plum, and men are not allowed to participate in the harvest (Thamarrurr Ranger, pers. comm., 2021; SBS News, 2019).

Products

This superfood contains the following dietary information: Protein: 0.8 grams, Carbs: 17.2 grams, Dietary fiber: 7.1 grams, Fat: 0.5 grams, Sodium: 13 mg, Vitamin C: 3,230% of the Daily Value (DV), Copper: 100% of the DV, Iron: 13.3% of the DV. (Healthline, 7 benefits of Kakadu Plum Retrieved From: https://www.healthline.com) Once a tropical Australian bushfood, it has become a nutrient- and antioxidant-rich supplement. Now, it floods the Australian health food market with its versatility, appearing in products from supplement powders to immune-boosting viral tablets.

Figure 4: Bushtucker Blends, Australian Superfoods Co., Kakadu Plum Co Retail Supplements.

The superfood status of the Kakadu Plum has naturally attracted the attention of global companies attempting to secure the market share of the Australian bushfood. In the early 2000s, American cosmetics company Mary Kay applied for a patent for Kakadu Plum extracts, which was rejected as a result of challenges from Gundjeihmi Aboriginal Corporation (Wood, 2022).

Figure 5: Kakadu plum harvesting (Source: Wood A. 2022)

Warrigal Greens (*Tetragonia tetragonoides*)

An Australian story

Tetragonia tetragonoides, also known as Warrigal Greens, belongs to the Fig-Marigold (Aizoaceae) family. Also called Native Spinach, Warrigal Greens inhabit the southeastern coastlines of Australia. Like many other Australian native plants, Warrigal Greens are a nutrient-rich edible plant high in Vitamins A, B1, B2, C, and K, making it another top choice for traditional prevention and treatment of stomach-related ailments (Lee et al., 2008).

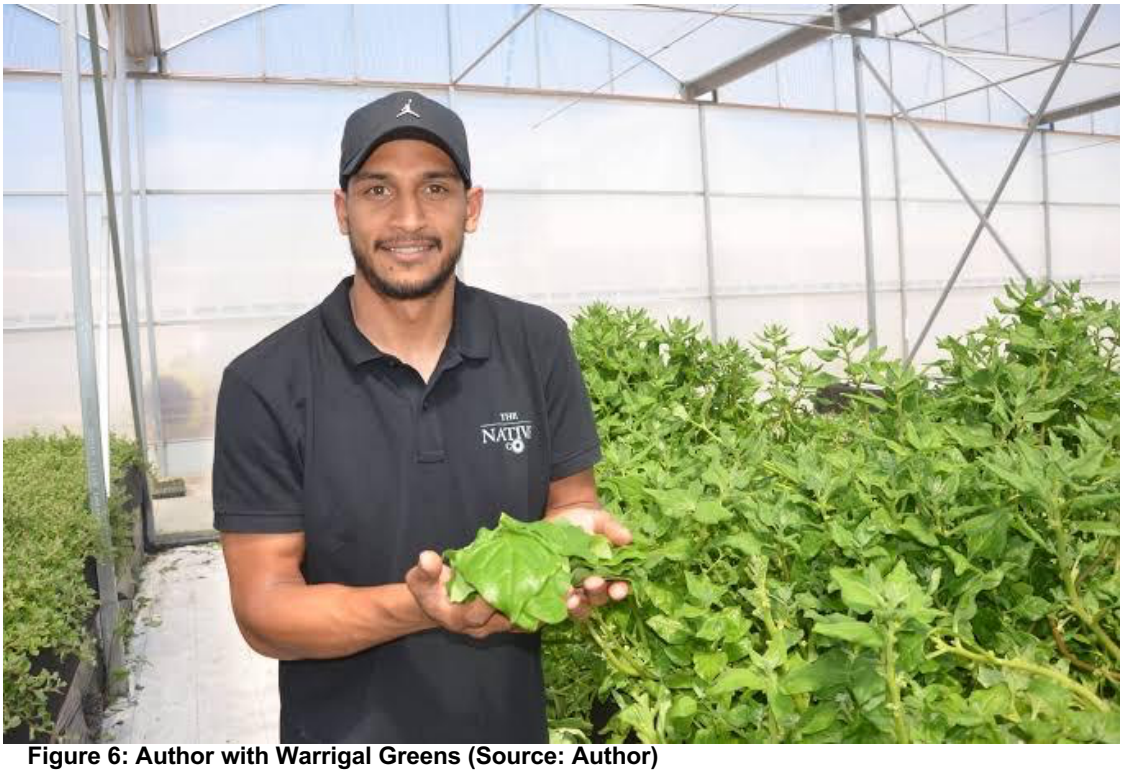

Figure 6: Author with Warrigal Greens (Source: Author)

This perennial superfood has a close connection to Australian history, with stories from local Aboriginal communities about using it as a supplement to fight scurvy, a disease conquered by settlers and explorers. The term “Warrigal” derives from the Aboriginal Dharug language, meaning “Wild.” The seed of Warrigal Greens is described by the local Dharug people as resembling the head of a wild dog puppy, which is how the name ‘Warrigal’ was created (Community Elder, pers. comm, 2023).

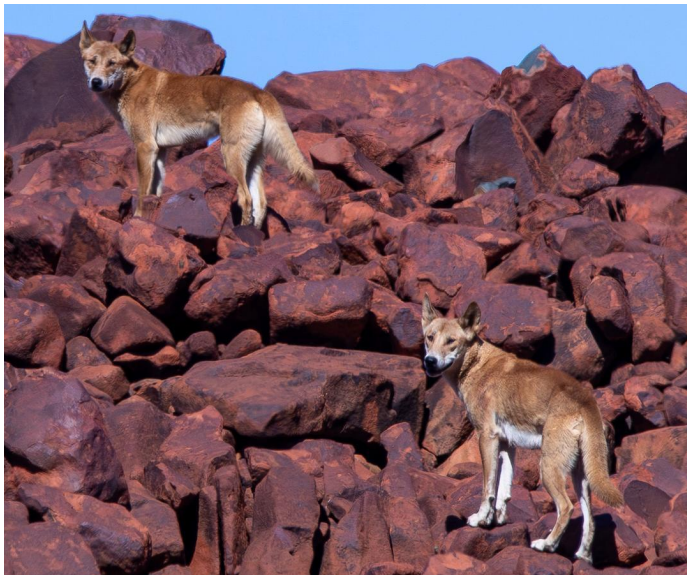

Figure 7 & 8: Dingoes & Warrigal Greens seed (Source: Author)

The role this species played highlights a clear connection to the foundations of the Australian story. Local Aboriginal Wiradjuri members at the time of settlement shared the cultural knowledge of Warrigal Greens with struggling settlers, as the plant was traditionally used to combat illnesses and was gifted upon settlers' arrival to help fight diseases such as scurvy and the common cold (Community Elder, pers. comm, 2023).

Similar to many profiles of other ANF, research has shown that Warrigal Greens are high in fibre, vitamin C, and antioxidants. However, they also have high concentrations of oxalates, which can accumulate and lead to kidney stones (King, 2019). Studies and trials have demonstrated that the nitrogen ratio and duration significantly affect oxalate concentrations with the lowest concentrations found in older plants (Ahmed & Johnson 2000).

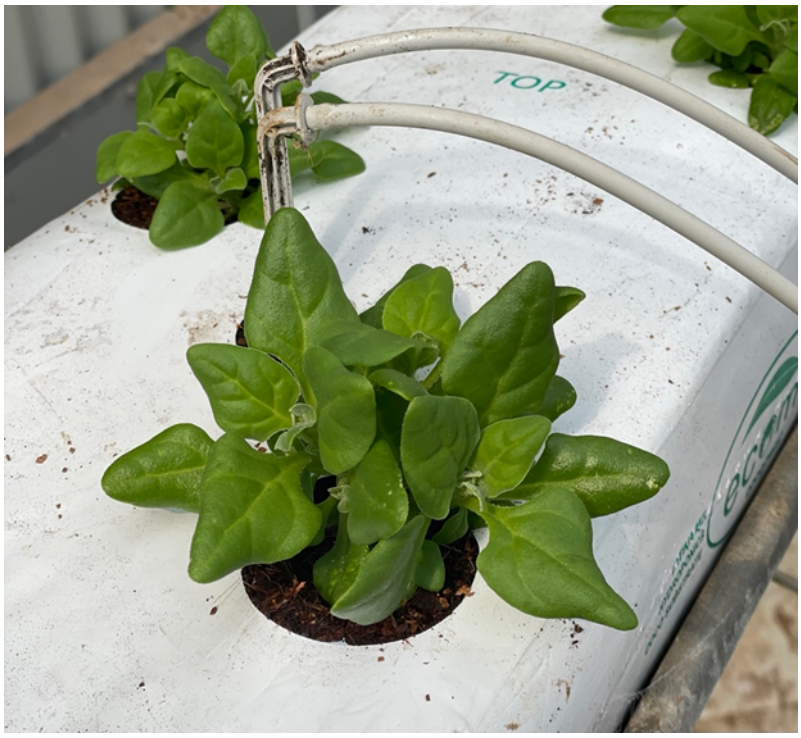

Figure 9: Warrigal Greens in Coco peat (Source: Author)

Cultivating techniques

From a cultivation perspective, Warrigal Greens are a hardy and versatile species, performing well across various environments during multiple trial phases, but exhibiting adverse reactions to excessive water levels. Between May and June 2022, Warrigal Greens were trialled at the Native Co. facility using an outdoor hydronic salad table system. This method increased weight per leaf, although by the 42-day mark, the plant showed signs of stabilising, then holding, before declining due to too much water.

The second trial saw Warrigal Greens grown in Coco peat with a timed irrigation system over 42 days. Coco peat is coconut husk fibre, used as a sustainable alternative to soil. It holds water well, provides good aeration, and creates a clean, disease-free environment for plant roots, making it popular in hydroponics and greenhouse farming. The results from this trial saw a longer growing phase with higher yield but less weight per leaf at the 42-day mark.

Rock Fuchsia (*Eremophila freelingii*)

Bush medicine

There have been many instances of using ANF to demonstrate ongoing cultural connections to Aboriginal and Torres Strait Islander peoples. For example, in mainland Australia, throughout the central desert regions, local Aboriginal people harvest leaves from various plants such as the Rock Fuchsia Bush.

Figure 10: Rock Fuchsia (Source: Author)

The Rock Fuchsia Bush (*Eremophila freelingii*) and Sandalwood (*Santalum spicatum*) is ground into a paste to extract the oils, which are believed to have significant healing properties. These oils are then mixed with oils and fats from emu as a remedy for a range of physical issues, including muscle aches, sores, skin rashes, dry skin, and cold and flu symptoms. The Rock Bush Fuchsia is a valuable plant for Aboriginal people, with the leaves being used in various ways to treat complaints such as headache, chest pain and colds. The flowers could also be used for decorative purposes during ceremonies (Latz, 2004).

The Rock Fuchsia Bush has experienced a remarkable shift from being a little-known traditional remedy to an emerging marketable product. For generations, Aboriginal communities have utilised this plant for its pain-relieving properties, safeguarding knowledge of its preparation and application as part of cultural healing practices. Once largely unfamiliar outside these communities, increasing recognition of its medicinal worth has attracted interest from researchers and industry, leading to trials, validation, and the development of safe commercial formulations.

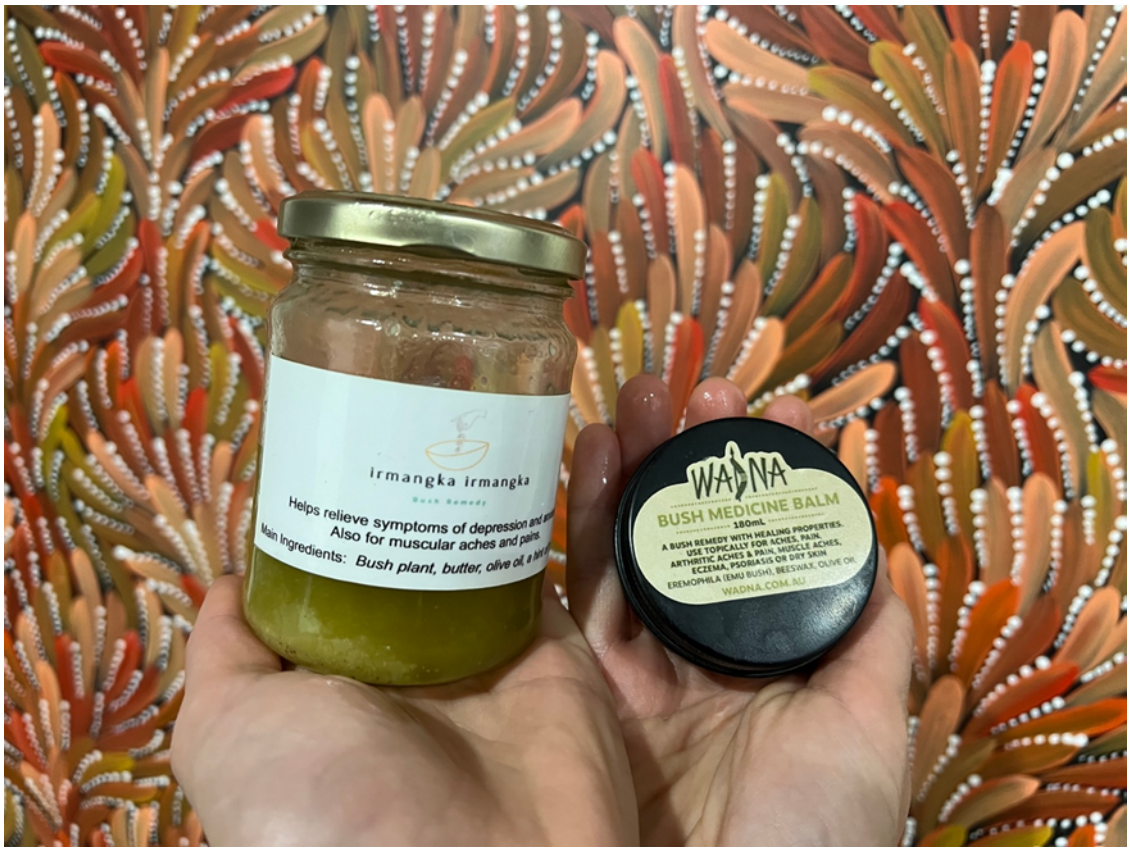

Figure 11: Commercialised Bush Medicine products with Bush Medicine painting. (Source: Author)

Today, the Rock Fuchsia Bush is moving from secret knowledge to shelves as a store product, reflecting both the growing demand for natural remedies and the importance of honouring and protecting the First Nations knowledge systems that first identified its benefits.

Mayilema Giant Spear Grass (*Heteropogon triticeus*)

Tied to the seasons

There are over 100 languages and dialects spoken in the Northern Territory of Australia. The traditional owners of Darwin, Northern Territory, are known as the Larrakia/Gulumeorrgen people. Although Darwin is a highly developed major city, the Larrakia people of the area have managed to keep their cultural ties and knowledge alive since colonisation.

In the Larrakia and Gulumeorrgin languages, Spear Grass is called ‘Mayilema’. An essential sign for local Larrakia is the flowering of the Mayilema, which signals the collection of Goose Eggs, a necessary food for local Aboriginal people. Additionally, the flattening of the Giant Spear Grass from rain indicates the end of the monsoonal rain season. (Sourced from pers. comms. & Larrakia & limilngan Elders 1989-1994, Woodward and Cooper, 2012).

The term ‘Mayilema’ represents not only the Native Food and plant name of the Giant Spear Grass, but also one of the seven seasonal periods throughout the year of the Larrakia people of Northern Australia. Aboriginal seasons are based on profound observation of Country spanning over more than 60,000 years, tracking changes in plants, animals, weather patterns, and ecological cycles, rather than the fixed four-season model of Western calendars.

Many Aboriginal groups recognise six or more distinct seasons, each indicated by signs such as flowering plants, animal breeding, or changes in wind and rainfall. For example, the blossoming of certain flowers might signal the start of fishing season, while the arrival of specific winds could indicate it's time for burning practices. Unlike the Western way of dividing the year into spring, summer, autumn, and winter, Aboriginal seasonal knowledge is more adaptable, responsive, and tailored to local environments. This system reflects a deep connection to the land and offers a sustainable way to live in harmony with nature.

Musqueam Bannock (Flatbread)

First Nations enterprise

Bannock flatbread holds a special place in North American First Nations Musqueam culture, symbolising both resilience and adaptation. Originally introduced through contact with European settlers, Bannock was made from traded ingredients such as flour, sugar, lard, and baking powder, which became staples during a time when traditional food sources were disrupted.

Over time, Musqueam people transformed Bannock into a cultural food of their own, preparing it for family gatherings, ceremonies, and community events with the use of native seed. Today, Bannock flatbread is more than a meal; it is a reminder of survival, connection, and cultural identity, representing how the community has carried tradition forward while adapting to historical change.

The progression from enduring the effects and disruption of colonisation to the advancement of First Nations business and enterprise, championing First Nations foods of North America, is a topic worth celebrating. In Vancouver, Canada, the Salmon n' Bannock restaurant is a symbol of strength and First Nations economic progress, promoting First Nations Native Food Products within a restaurant setting. Employing First Nations staff, it showcases Native traditions, customs, and histories expressed through the food and cuisine of the North American Musqueam people.

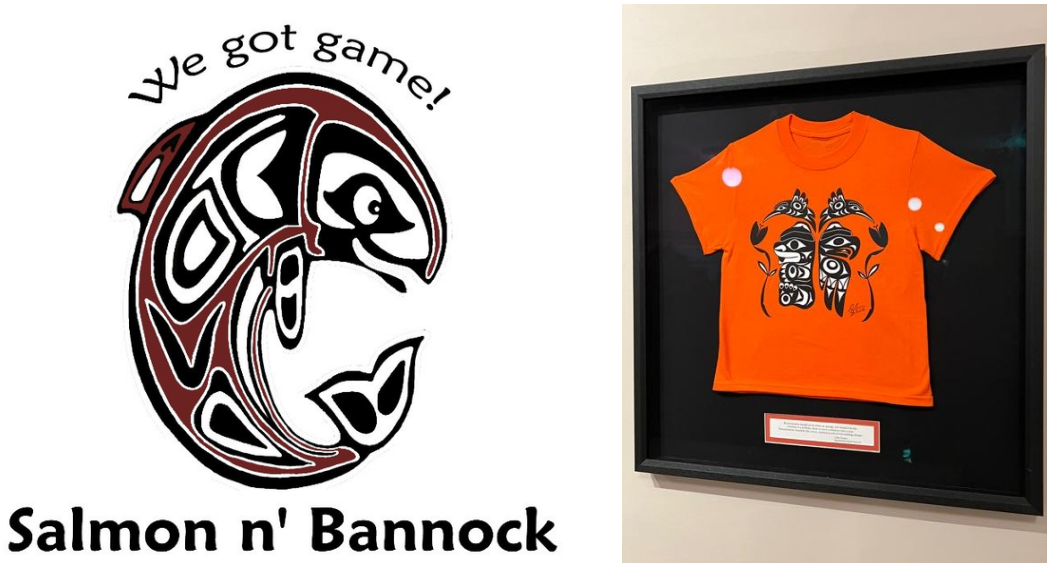

Figure 12: Salman n' Bannock logo (Source: Salman n' Bannock)

Indigenous Cultural Intellectual Property (ICIP)

Indigenous Cultural and Intellectual Property (ICIP) refers to Indigenous or First Nations (in Australia includes Aboriginal and/or Torres Strait Islander) peoples' rights to their cultural heritage based on the fundamental right to self-determination (Janke and Co., 2025). Cultural heritage includes all aspects of artistic practices, traditional knowledge, resources and knowledge systems developed by Indigenous people as part of their Indigenous identity. (Janke and Co., 2025)

For Aboriginal and Torres Strait Islander people, ICIP can be attributed to stories, artwork, cultural expression, song and dance, which are passed down orally from generation to generation in a specific method depending on what Aboriginal or Torres Strait Islander country you are from. The transfer of knowledge is a cultural obligation and responsibility to First Nations peoples, and in its most valid form, holds a high level of accountability. The heightened sense of accountability and commitment is a safeguarding mechanism to ensure the risks of misappropriation are regulated through strong cultural governance and strict oversight from cultural elders and leaders. Upholding ICIP is a pillar to artistic integrity, supporting self-determination. Ensuring the sustainable use and longevity of intellectual property and knowledge systems are central to those who use it.

More commonly known is Intellectual Property (IP) which refers to legally protected rights such as copyright, trademarks, patents, and designs, all governed by specific legislation including the *Copyright Act 1968*, *Trade Marks Act 1995*, *Patents Act 1990*, and *Designs Act 2003*. These laws protect the creations of identifiable individuals or organisations for a set period of time. In comparison, Indigenous Cultural Intellectual Property (ICIP) encompasses the cultural heritage, knowledge, stories, languages, art, and cultural expressions that belong to Aboriginal and Torres Strait Islander peoples. ICIP at the current point in time, is not yet protected under current Australian IP law, as these laws do not recognise communal ownership, ongoing cultural responsibility or rights that extend beyond the life span of an author. As a result, the only practical way to uphold ICIP, is through ethical frameworks, cultural protocols, and agreements rather than dedicated legislation.

Cultural heritage is a holistic concept, which encompasses all facets of Aboriginal practice, knowledge systems and kinship (family) structures, making up a person’s cultural identity. According to Janke (2024) this includes:

- Artistic, literary and performance works (copyright)
- Indigenous languages
- Different types of knowledge (e.g. plant and spiritual knowledge)
- Tangible and intangible cultural property
- Indigenous ancestral remains and genetic materials
- Cultural and environmental resources
- Sites of Indigenous significance
- Documentation of Indigenous heritage and histories (Janke, T. 2024)

The need for protection

For centuries, First Nations peoples and communities have faced the exploitation of their knowledge and cultural expressions. Examples include applications for patenting ANF for pharmaceutical, financial, and commercial benefits without the consent of First Nations peoples, and the misappropriation of Aboriginal artwork for commercial and financial gain without free, prior and informed consent.

These instances are often called cultural appropriation. The misappropriation of cultural language, images, art, and expression has significant effects on First Nations communities, affecting their ongoing spiritual, emotional, and physical connection to culture.

International recognition and frameworks

There are several international declarations and agreements that empower then need to protect ICIP, such as:

- **The United Nations Declaration on the Rights of Indigenous Peoples** affirms Indigenous peoples' right to maintain, control, protect, and develop their cultural heritage, traditional knowledge, and traditional cultural expressions.
- **The Convention on Biological Diversity:** Recognising the value of Indigenous knowledge in biodiversity conservation and the need to protect it from exploitation.
- **The World Intellectual Property Organisation:** This has an Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, which is working toward developing international legal instruments to protect Traditional Cultural Expressions and Traditional Knowledge.

Challenges to implementation

One of the main challenges in protecting ICIP is the difference in worldview between Western legal frameworks and indigenous knowledge systems. Conventional intellectual property laws are typically:

- **Time-bound:** Copyrights and patents expire after a set number of years, while cultural knowledge is often considered eternal.
- **Individual-centric:** IP rights are usually granted to individual creators or inventors, but indigenous knowledge is held collectively by communities.
- **Fixated on originality:** IP law requires new, original expression. Traditional culture is often seen as "passed down" rather than newly created, and thus ineligible for protection.

Moreover, documentation poses a paradox. To be protected under most IP regimes, cultural expressions need to be recorded or fixed in some tangible form. However, many Indigenous traditions are oral, performative, or spiritually sacred and intentionally not written down. The act of documentation itself can sometimes violate cultural norms or beliefs.

Barriers for First Nations agribusiness

While the trajectory of First Nations business is a key topic to celebrate, there are many significant barriers and challenges they face in attempting to enter the business sector. These barriers include:

- Limited access to capital and finance
- Land use agreements and legal barriers
- Market Access and supply chain challenges
- Infrastructure and capability gaps
- Cultural misappropriation and cultural safety

Yet, while these obstacles are real, they also highlight the resilience, creativity, and determination of First Nations entrepreneurs who continue to push forward despite them. By breaking down these barriers through more substantial investment, recognition of ICIP, improved infrastructure, and pathways into mainstream markets, there is an opportunity to unlock enormous potential.

Supporting First Nations businesses is not just about the conversation of reconciliation and acknowledgement. The real change and investment lie within empowering the self-determination of Aboriginal and Torres Strait Islander communities, safeguarding cultural knowledge, and fostering innovation that directly benefits First Nations communities. In facing these challenges, First Nations business leaders are not only building enterprises, they are also shaping a more inclusive and sustainable economy for the future.

For the Agriculture sector and governing regulatory bodies, aligning with the Australian Federal Government's Closing the Gap reform and outcomes agreement, would prove a significant advancement in the alignment of equitable solutions to empower First Nations communities and their rights to self-determination.

According to the Australian Government Department of the Prime Minister and Cabinet (accessed 2025) the outcomes are:

- **Shared decision-making:** Aboriginal and Torres Strait Islander people are empowered to share decision-making authority with governments to accelerate policy and place-based progress on Closing the Gap through formal partnership arrangements.
- **Building the community-controlled sector:** There is a strong and sustainable Aboriginal and Torres Strait Islander community-controlled sector delivering high-quality services to meet the needs of Aboriginal and Torres Strait Islander people across the country.
- **Improving mainstream institutions:** Governments, their organisations and their institutions are accountable for Closing the Gap and are culturally safe and responsive to the needs of Aboriginal and Torres Strait Islander people, including through the services they fund.
- **Aboriginal and Torres Strait Islander-led data:** Aboriginal and Torres Strait Islander people have access to, and the capability to use, locally-relevant data and information to set and monitor the implementation of efforts to close the gap, their priorities and drive their own development.
- **The socio-economic outcomes:** For example health, education, life expectancy and mortality rates,

Applying these where relevant and possible ensures a genuine, concerted effort towards the advancement and inclusion of First Nations people within agriculture. More than half (55%) of Australian land use is accounted for by agriculture, encompassing 426 million hectares, excluding timber production, as of December 2023 (Snapshot of Australian Agriculture, 2025). This represents a land mass that was once entirely owned and managed by First Nations communities, presenting a significant opportunity.

First Nations knowledge systems in agriculture

The earliest dated existence of Aboriginal and Torres Strait islander people, evidenced in occupation in Australia, has been dated back to more than 40,000 years through Rock Art carbon dating and artifactual luminescent rock face dating. In the Burrup Peninsula of the Western Australian Pilbara region, the Ngarluma, Mardudhunera, Yaburara, Yindjibarndi, and Wong-Goo-Tt-Oo peoples of the Murujuga Aboriginal Corporation are custodians of over 2 million traditional rock art sites, which hold cultural significance and are known as “songlines”. Testing conducted through the University of Western Australia (UWA) under luminescence has provided results dating back more than 40,000 years. Along with the long, rich history of existence. Documented in the award-winning author Bruce Pascoe’s Dark Emu and Salt are evidence recordings and learning of Aboriginal peoples and the evidence of agricultural occupation throughout their respective traditional homelands. Taken from the book ‘Salt’, an excerpt of diarised farming Aboriginal farming systems:

> *‘My hat was full of seed, too, and I looked around at the uniform height of the grass heads. Growing through the heath and banksia was a monoculture of kangaroo grass, all the same height and nearly all maturing seed at the same time...That’s too much seed to eat all at once, but if you milled the grain and stored the flour, you could eat it all later…Gregory had seen fields being sown and irrigated, and Sturt had witnessed the grinding process. (Pascoe, 2019)*

There is considerable evidence-based documentation of First Nations farming systems that have endured the tests of colonisation and settler invasion throughout the Australian landscape. The suppression of multiple historical timelines is one of the clear barriers that have inhibited the amalgamation of Traditional Aboriginal knowledge systems and Western agricultural farming methods. The advancement of First Nations farming within Australia through self-determined and designed Aboriginal Corporations and land management organisations is an example of the defiance of systematic oppression. Innovation has been shown to embed ancient farming systems into the modern world of agriculture, which was initially designed to exclude traditional practices.

Two-way learning

The knowledge base and traditional constructs of First Nations ways of being, knowing and doing can, in most cases, differ from the knowledge base and practices of Western society. From a traditional sense, Aboriginal knowledge bases are transferred orally,

through song, dance and story, placing enormous responsibility on individuals, in comparison to Western knowledge transfer, which is documented, written and shared.

The evolution and advancement of First Nations communities have shown the ability to shift into a place of knowledge sharing and collaboration with Western science, commerce and governance.

Many examples demonstrate the ability of the two worlds of knowledge systems to amalgamate and advance modern science. The CSIRO has worked collaboratively to co-design a seasonal calendar that reflects the ecological seasons of Aboriginal nations. These calendars illustrate Aboriginal knowledge systems that document seasonal changes based on plant observations, weather patterns, and cycles of country, representing six or more seasonal changes, which differ from the Western four-season pattern.

Other examples of two-way learning between Western academia and Aboriginal knowledge holders are Healthy Country Plans (HCP), Indigenous Protection Act (IPA), and Land Management Plans.

An HCP is a strategic framework developed by Aboriginal Corporations that guides the care, protection and management of traditional lands and waterways. The HCP builds on the foundations of cultural and intellectual knowledge, community priorities, with the intention to sustain the country and keep it thriving for the community, its people, animals, and future. HCP can hold the ability to safeguard knowledge sharing, advise on sacred site management, invasive pest management, preserve and grow cultural identity and create opportunities for economic development and growth on traditional lands.

Conclusions

This report has highlighted the profound cultural significance of ANF and the unique benefits of their nutritional profiles. Documented in this report is a researched insight into the educational and socioeconomic benefits that ANF provide through championing and celebrating the history and origins of these foods. While this is an industry that deserves celebrating and sharing, this report has demonstrated the significant barriers that First Nations communities have had to, and continue to overcome to take part in an ever-evolving industry of ANF. These barriers include access to capital, Aboriginal and Torres Strait Islander governance and knowledge safeguarding, and ICIP.

By recognising and continuing to develop advanced frameworks to protect Indigenous Intellectual property, we can continue to strive towards a universal purpose to safeguard traditional knowledge and provide ethical and fair benefit sharing for First Nations peoples within the food, farming and agricultural sectors.

The integration of First Nations knowledge systems into modern agriculture continues to evidence the positive impacts that sustain the viable use of land, waterways and the environment. The challenge is to ensure that these knowledge systems, traditional practices and economic aspirations are supported, empowered, and consistently centred in the heart of Australian Agriculture and Farming.

Although in today's progressive world, how passive is too passive? And when does too progressive become aggression? Or, in the conversation of sustainable and ethical practice, does it ever? With increased pressure of climate volatility, the time has never been more critical for government, industry leaders, researchers, and communities to work together to champion First Nations Foods and stories. What an opportunity Australia holds, to create a sustainable, innovative model of practice grounded in respect, equity and cultural integrity and inclusivity, founded on the DNA and knowledge of the most sustainable culture in the world.

Recommendations

1. **Strengthen IP and Traditional Knowledge protection:** Safeguard cultural heritage-related information and ensure that First Nations communities retain ownership over their knowledge, with fair recognition and benefit sharing. Prevent exploitation of Indigenous Cultural and Intellectual Property (ICIP) through a national framework specific to the ANF industry.

2. **Build consumer trust through authentic branding:** Ensure transparency in provenance disclosure and traceability. Authenticity, cultural integrity and recognition to protect against cultural misappropriation, misrepresentation and exploitation of First Nations peoples and culture.

3. **Greater investment in research and development:** Empower innovation by unlocking new product design opportunities, enhancing consumer nutritional understanding, and driving market-based growth through science-backed research and food safety-approved regulations for ANF, as well as advanced research and development into cultural significance and uses of ANF for education purposes and Traditional Owner benefits.

4. **Secure sustainable supply chains through capability and capacity building for First Nations agribusiness:** Ensure First Nations businesses have access to industry expertise for enhancing business knowledge, commercial viability and economic growth within the agriculture and food sector. Ensure agribusiness and commerce-based institution have capability building for First Nations businesses to advance the pathways for them in the agribusiness, food and farming sectors.

5. **Increased capital investment in First Nations agriculture businesses:** Enable First Nations-led enterprises to scale, innovate, and take a central role in shaping the future of the Native Food industry through greater access to finance and resources.

6. **Majority share on First Nations-owned bush food businesses:** 51% or more shareholding and ownership of all Native Australian Bush Food businesses. Creating First Nations-led and governed businesses promotes and ensures that the knowledge, lived experience, and cultural perspective are at the forefront of business operations and strategy to protect the knowledge systems represented by Native Australian Bush Food.

7. **Culturally safe Aboriginal and Torres Strait Islander governance structures for First Nations businesses in the Native Foods sector:** Aboriginal governance structures and systems create culturally safe and

appropriate methods for decision-making that affect First Nations communities and peoples. Examples of culturally appropriate governance structures are:

- First Nations Advisory Committee
- Elders Circle for Cultural approval methods
- First Nations Leadership
- First Nations Ownership

8. **Align the strategy of agricultural outcomes with the National Closing the Gap reform targets:** Aligning with the Closing the Gap reform ensures First Nations people benefit from fairer opportunities, stronger cultural recognition, and improved access to resources.

References

Ahmed, A.K. & Johnson, K.A., 2000. Growing Australian native edible plants using hydroponic techniques. *Acta Horticulturae*, 511, pp.225–232. doi:10.17660/ActaHortic.2000.511.25.

Akhter, K., Rasheed, A., Shafique, U. & Habib, T., 2022. Indigenous vegetables of the family Cucurbitaceae of Azad Kashmir: A key emphasis on their pharmacological potential. *PLoS ONE*, 17(6), e0269444.

Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES), Snapshot of Australian Agriculture 2025, retrieved from: https://www.agriculture.gov.au/abares/products/insights/snapshot-of-australian-agriculture [Accessed: 16 July 2025]

Australian Government Department of the Prime Minister and Cabinet, n.d. Copyright. Closing the Gap., retrieved from: https://www.closingthegap.gov.au [Accessed: 16 September 2025]

Bobasa, E.M., Akter, S., Phan, A.D.T., Netzel, M.E., Cozzolino, D., Osborne, S. & Sultanbawa, Y., 2022. Impact of growing location on Kakadu plum fruit composition and in vitro bioactivity as determinants of its nutraceutical potential. *Nutraceuticals*, 3(1), pp.13–25.

Food Reviews International (Li, J., Liu, H., Mazhar, M.S., Quddus, S., Agar, O.T. & Suleria, H.A.R.), 2024. Australian native plum: A review of the phytochemical and health effects. *Food Reviews International*, 40(1), pp.504–532. Available at: https://www.tandfonline.com/doi/full/10.1080/87559129.2023.2172428 [Accessed 16 Sept. 2025].

Food Reviews International (Williams, D.J., Edwards, D., Pun, S., Chaliha, M., Burren, B., Tinggi, U. & Sultanbawa, Y.), 2016. Organic acids in Kakadu plum (Terminalia ferdinandiana): The good (ellagic), the bad (oxalic) and the uncertain (ascorbic). *Food Research International*, 89, pp.237–244. doi:10.1016/j.foodres.2016.08.004.

Harris, C., 2021. Marlon Motlop turns from footy to native food production. *Good Fruit and Vegetables*. Available at: https://www.goodfruitandvegetables.com.au/story/7510335/native-food-stories-spur-on-producer/ [Accessed 16 Sept. 2025].

Haskin, E., 2019. Bush medicine heals ailments but also keeps Indigenous women's culture alive and well. *ABC News*. Available at: https://www.abc.net.au/news/2019-09-28/bush-medicine-keeping-womens-culture-alive-and-well/11545810 [Accessed 16 Sept. 2025].

Joo, W-H., Lee, M.A., Choi, H.J., Kang, J.S. & Choi, Y.W., 2008. Antioxidant activities of the solvent extracts from Tetragonia tetragonioides. *Journal of Life Science*, 18(2), pp.220–227.

Latz, P., 2004. *Bushfires and bushtucker*. Alice Springs: IAD Press.

McCubbing, G., 2022. Bush foods industry worth $80m but could double by 2025. *Financial Review*. Available at: https://www.afr.com/companies/agriculture/bush-food-industry-worth-80m-but-could-double-by-2025-study-20221104-p5bvn3 [Accessed 16 Sept. 2025].

Moore, P., 2005. *A guide to plants of inland Australia*. Sydney: Reed New Holland. Available at: https://alicespringsdesertpark.com.au/connect-with-nature/plants/plants/rock-fuchsia-bush [Accessed 16 Sept. 2025].

Healthline, 2019 7 Health Benefits of Kakadu Plum https://www.healthline.com/nutrition/kakadu-plum-benefits [Accessed 16 September 2025]

Healthline, 2019 7 Health Benefits of Kakadu Plum https://www.healthline.com/nutrition/kakadu-plum-benefits [Accessed 16 September 2025]

Salmon n' Bannock, 2025. *Salmon n' Bannock*. [online] Available at: https://www.salmonandbannock.net/ [Accessed 16 September 2025].

SBS News, 2019. Kakadu plum harvest brings women together. *SBS NITV*. Available at: https://www.sbs.com.au/nitv/article/kakadu-plum-harvest-brings-women-together/nnw5306py [Accessed 16 Sept. 2025].

Science backs traditional knowledge of Kakadu plum health benefits, 2024. *The Conversation*. Available at: https://pmc.ncbi.nlm.nih.gov/articles/PMC10056586/ [Accessed 16 Sept. 2025].

Southern Cross University, 2019. Warrigal greens are tasty, salty, and covered in tiny balloon-like hairs. *SCU News*. Available at:

https://www.scu.edu.au/news/2019/warrigal-greens-are-tasty-salty-and-covered-in-tiny-balloon-like-hairs.php [Accessed 16 Sept. 2025].

Terry Janke & Company, 2025. *Indigenous cultural and intellectual property (ICIP)*. Available at: https://www.terrijanke.com.au/icip [Accessed 16 Sept. 2025].

United Nations, 2007. *United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)*. Resolution adopted by the General Assembly, 13 September 2007. Available at: https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf [Accessed 16 Sept. 2025].

Wood, A., 2022. How the Kakadu plum industry is being shaped by Indigenous-led businesses. *Gourmet Traveller*. Available at: https://www.gourmettraveller.com.au/dining-out/food-news/kakadu-plum-19149/ [Accessed 16 Sept. 2025].

Zhou, Y., Phan, A.D.T., Akter, S., Bobasa, E.M., Seididamyeh, M., Sivakumar, D. & Sultanbawa, Y., 2023. Bioactive properties of Kakadu plum-blended products. *Molecules*, 28(6), p.2828. Available at: https://pmc.ncbi.nlm.nih.gov/articles/PMC10056586/ [Accessed 16 Sept. 2025].