
Native Food and Agriculture CRC

Participant Prospectus



Vision

By 2030, the Australian native food and agriculture industry sector is a sustainable, globally connected and acknowledged world leader delivering new products, diversified market opportunities, growing the commercial businesses of both Indigenous and non-Indigenous Australians and is contributing to the broader agriculture and food industry. It will be underpinned by a world-class access and benefit sharing framework and accreditation system that can be adopted by all participants in the ecosystem which will support broader industry development and deliver significant economic, social, cultural, environmental and health benefits to Indigenous Australians.

Acknowledgement Statement

We acknowledge the Traditional Owners of Country across Australia, and their Nations. As custodians of culture and knowledge we pay our respects to Elders past, present and emerging and acknowledge their deep and continuing cultural, social, environmental, spiritual and economic connections to their lands and waters.

Promising Australian native food and agriculture industries



Plant foods

Such as bush tomato, quandong, native citrus, wattle seed, riberry, muntries, Davidson plum, wild rice, Kakadu plum, warrigal greens, samphire, yams, murrnong, youlk, and kulyu.



Animal protein

Such as kangaroo, wallaby, fish, shellfish, crustaceans, molluscs, wildfowl, ants, and sea cucumbers.



Nutraceutical, botanical and ingredients

Such as Kakadu plum, Davidson plum, psyllium, myrtles, lemon aspen, mountain pepper, river mint, quandong, sea parsley, and salt bush.



Fibre and oils

Such as grasses and sandalwood.



“Right now my business growth is severely limited by reliable raw product supply... Demand is soaring, there's not yet enough investment into the agricultural side. There's just no doubt the way forward is to engage with Indigenous groups to get them planting and growing this for the future.”

Andrew Fielke, consulting chef, Tuckeroo (business solely based on Australian native food)

Native Food and Agriculture Cooperative Research Centre

Be part of a growing industry

State of the industry

Australia's farming industries focus almost exclusively on species introduced from overseas.

Compared to mainstream agriculture, the production of foods from native plants and animals – the native food industry – is small and underdeveloped. In 2010, the gross value of production at the ‘farm gate’ for native plant foods was between \$15 - 25 million. Industry employment was estimated at 500 to 1,000 people, and up to half were Indigenous people living in remote communities (RIRDC Publication No. 12/066). Both Indigenous and non-Indigenous people farm native foods and fibres.

There have been several attempts over the decades to develop the Australian native food industry. Perhaps the only global success story is the macadamia nut, but the selection and breeding of this nut was largely undertaken in Hawaii. Today we are in a situation where out of the world's top 150 crop plants, not one comes from Australia.

The opportunity

Of the 35,000 native plants in Australia, at least 1,500 are used by Indigenous communities as food. There is a magnificent opportunity for Australia to commercialise promising species, utilising large portions of the landscape to sustainably cultivate and harvest from the wild indigenous species of plants and animals.

We are inviting producers, processors, suppliers, communities and those involved in the broader food sector to join us in a bid to secure Australian Government co-funding for a new Cooperative Research Centre (CRC).

Demand for native products

There is massive potential to develop the Australian native food industry into a multi-billion dollar, world-leading industry

through Indigenous business development, new production methodologies, agronomy and market development.

Demand is higher than supply for many products, including crops such as bush tomatoes, wattle seed and Kakadu plum.

Indigenous businesses and communities

At least 50% of projects undertaken by the CRC will be led by Indigenous businesses. The CRC aims to at least double the proportion of native foods supply chain sourced from Indigenous led businesses by 2030.

All CRC activities will be underpinned by an access and benefit sharing framework to ensure prior informed consent, fair ownership and benefit sharing of intellectual property, and market opportunities for Indigenous communities. Involvement and consultation with a range of community and government organisations, such as the Indigenous Land and Sea Corporation, will be integral to this.

CRC Program

Cooperative Research Centres (CRC) Grants provide funding for medium to long-term, industry-led collaborative research, for up to 10 years.

The goal of the program is to solve industry identified problems to improve the competitiveness, productivity and sustainability of Australian industries.

The collaborations must include an industry-focused education and training program, increase R&D capacity in small-to-medium enterprises, and encourage industry uptake of research.

Applicants must at least match the amount of grant funding sought through cash and/or in-kind contributions.

www.business.gov.au/Grants-and-Programs/Cooperative-Research-Centres-CRC-Grants

Animal and marine protein industries

- **Seafood** – Australia's total fisheries and aquaculture gross value of production of \$3.1 billion in 2019-20
<https://www.agriculture.gov.au/abares/research-topics/fisheries/fisheries-economics>
- **Crocodile** – Overall value of Northern Territory's crocodile industry, including farm-related tourism and retail, egg collection in remote communities, and veterinary services was \$106.7 million in 2014-15
<https://business.nt.gov.au/publications/reports/economic-value-of-the-crocodile-farming-industry-to-the-northern-territory>
- **Kangaroo** - Combined value of production approximately \$88.8 (M) in 2011-12
<https://www.uts.edu.au/sites/default/files/CFCC-kanganomics-report.pdf>
- **Emu** – Australia's total emu export value of \$2.1 million in 2007, mainly through the export of emu oil, with oil exports increasing substantially in recent years amid interest in its health properties
<http://www.poultryhub.org/species/ratites/>
<https://www.agrifutures.com.au/wp-content/uploads/publications/06-117.pdf>

Key Challenges

- Supply not matching demand (under and over supply problems)
- Variable yields
- Agronomy unknown or essential elements missing
- Under capitalisation of the industry
- Lack of profit for growers, wild collectors, processors
- Food safety and quality standards not available or not always complied with
- Communication and cooperation missing across industry
- Need to better incorporate Indigenous interests – access and benefit sharing
- Increasing food industry homogenisation which closes doors to supply opportunity
- Ongoing product and market development needed
- Lacking market focus and access

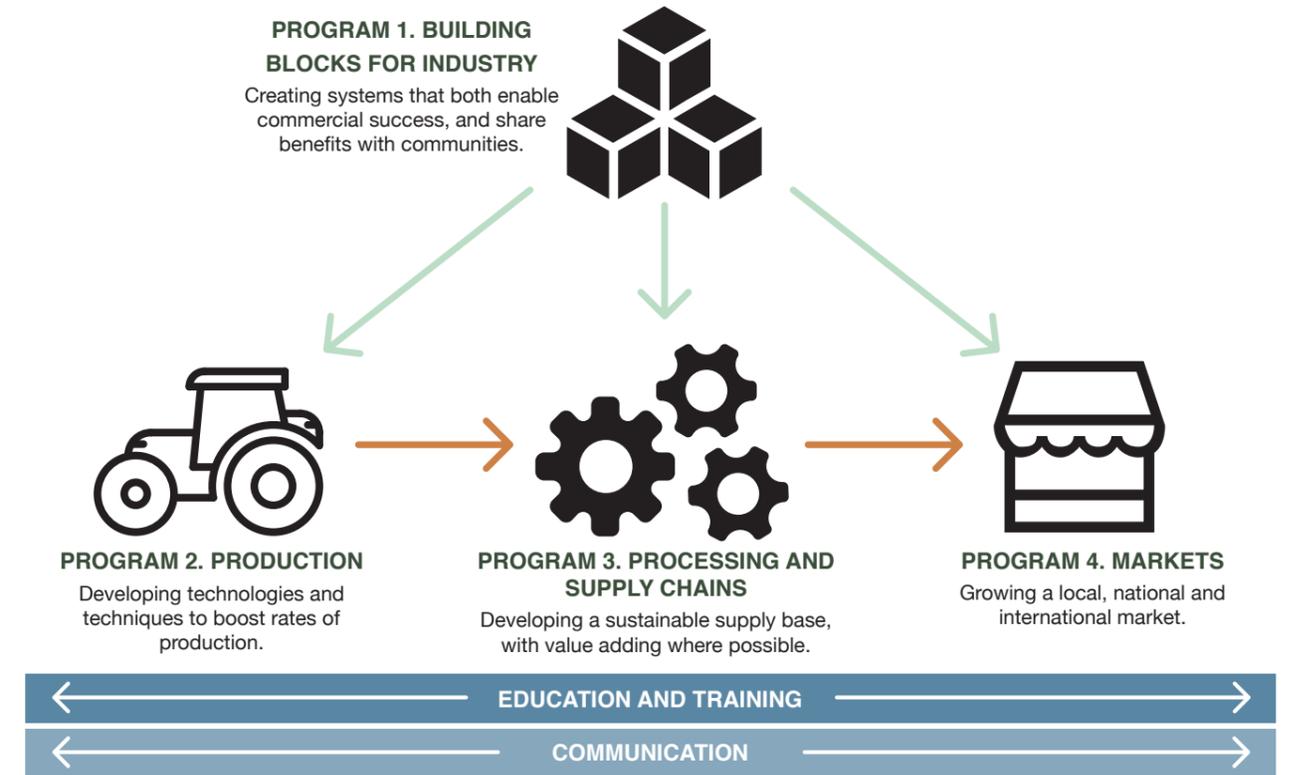
Enabling Australia's native food, botanical and fibre industries to establish and flourish.

Research program

There are two fundamental questions that will guide the CRCs research and development activities:

- How to increase production and the value of native products already in demand?
- How to create demand for promising products that the market isn't yet familiar with?

After liaising with industry and community stakeholders, the following indicative research program has been devised. These programs will be further refined in response to ongoing industry consultation.



On the following pages, the four indicative programs are described in detail, including project research area ideas. We welcome and strongly encourage partners to add to these ideas.

Access and benefit-sharing

The Access and Benefit Sharing (ABS) arrangements which will be embedded within the projects and activities of the Native Food and Agriculture CRC will aim to provide fair and equitable sharing of benefits which arise from the use of knowledge and resources between the providers and users of those resources, as well as any subsequent application or commercialisation of those resources.

Once established, the CRC will work with Indigenous and local communities to ensure a benefit sharing legal framework is in place that respects the value of traditional knowledge, from connection of community both on and away from Country.

The CRC will work with relevant community and government authorities in determining the framework for access and benefit sharing including, Native Title Land Holders and Traditional

Owners, Prescribed Body Corporates, Land trusts, and members of the communities these bodies represent.

Any research and development which uses Indigenous traditional knowledge will be accessed with the prior informed consent of the Indigenous community providing the knowledge, and benefit-sharing will be based on mutually agreed terms.

The principles of the ABS Statement are underpinned by both the Nagoya Protocol to the Convention on Biological Diversity, in particular Articles 5,6,7, and 12, and also reflect the principles of the United Nations Declaration on the Rights of Indigenous Peoples, in particular Articles 4, 18, 31 and 32 (https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf)

Target

By 2030 the Native Food and Agriculture CRC will have contributed to the growth of plant and animal industry sectors that by then is contributing more than \$7B to the Australian economy, and making a significant contribution to achieving the \$100B Agriculture sector target.

Program 1. Building blocks for industry

At a grass roots level, there is an existing healthy industry in native foods across much of Australia, and a number of agencies, including Indigenous businesses/communities, Australian Native Foods and Botanicals (ANFAB) and research groups have started to develop some of the 1,500 or more estimated edible plants. But specific activities are required to support this development.

Developing industries quickly and on a large scale requires building blocks that will support the whole system, along the entire value chain. This Program will include mechanisms for:

- Governance of the industry and best practice models
- Benefit sharing framework for native foods for Australia, incorporating ongoing national protocols
- Collaboration between different parts of the value chain, and with Indigenous and non-Indigenous communities
- Building critical mass for the industry to operate at large scales (see box)
- Accreditation system
- International development framework that sets the context and development of native foods in a regional development framework, and looks at broader market opportunities
- Expand the knowledge base of native foods incorporating information on usage, nutrition and horticulture.

Goal

Develop agreed and universally implemented business systems in the Australian native food and agriculture ecosystem.

Potential research areas

1. What business models might work?
2. What should the benefit sharing framework be?
3. What are the business development opportunities that incorporate cultural values?
4. How to engage with Indigenous growers, communities and other businesses?

Building critical mass

We need to build the people capacity to support the ambitious target of a \$7 Billion contribution to the Australian agrifood economy. Attracting new entrants – both Indigenous and non- Indigenous – will require more than just education and training. We expect there will need to be the following steps to build the capability required to underpin vast growth in the sector, and so that the CRC's efforts in this area are designed on evidence-based findings:

1. Identify gaps in existing capability and the next generation across the value chain.
2. Build capability so that there is a fertile marketplace and industry setting for rolling out the outputs of the CRC, with individuals and organisations ready and able to commercialise the outputs.
3. Build capacity at four levels of the value chain:
 - Individuals: first build capability, then engage in outreach, education and training
 - Businesses, including start-ups and creating connections to large corporations: first build capability, then embark on education and training
 - Communities: communicate in relation to the unique opportunities of native food and agriculture, including sustainability and wellbeing
 - Industry at large: devise partnership strategies for the CRC to work intimately with structured partnerships and a clear flow of outputs from the CRC into this delivery stream.



“Just like the arts industry, we should have a trademark and certification system so purchasers can see the authenticity of the product, so there is a fair economic return.”

Roxanne Smith, Wiradjuri woman, CEO of Yadhaa Connect (ABC News, 2019)



Program 2. Production

Among the 1,500 native food plants, there are a range of tubers, grains, nuts and fruits, that could be developed as crops. In addition, due to the harsh growing conditions in many regions, Australian plants naturally contain a range of bioactive compounds. These compounds allow the plants to thrive in the extreme Australian environments, but can also confer health benefits to those consuming them. On the other hand, there are some crops, such as bush tomato, Kakadu plum and quandong, with great market demand but production volumes are too low to meet that demand.

Agronomy and aquaculture is another area that needs attention. While there is good agronomic research taking place for quandong, muntries, lemon myrtle and lemon aspen, there is a lack of information available for other species, which this CRC will develop. Aquaculture practises for a range of native seafood, shellfish and crustaceans are also required to grow the industry base.

Addressing production and wild harvest issues, including for seafood and animal protein products will be fundamental to the Native Food and Agriculture CRC, as a supply chain will not exist without the base product.

Other challenges include:

1. How to maintain the sustainability of wild harvest production?
2. Strategies for enrichment and land management to keep pace with future demand in a culturally sensitive way
3. Agronomic and horticulture practises to increase production through plantation
4. How can the industry be fast tracked using the latest Agtech, and can the development of purpose-built Agtech for native food production?
5. Genome resources for top native foods to assist next generation breeding and selection
6. Regulatory policy and protocols (inc organic)
7. New product register.

Goal

Identify and remove barriers to production, to ramp up production of crops and harvest.

Potential research areas

The consortium proposes the following key initiatives for transformational R&D:

- New agronomic, aquaculture, horticulture and tech methods - Agtech and Foodtech
- Land management strategies for enrichment planting and cobenefit farming (carbon, biodiversity, pollination etc), and to balance the sustainable harvest of plant, animal and seafood products.
- Orphan Crops project for Australia (in collaboration with UC Davis, Mars and the Rockefeller Foundation) to generate genetic resources for top native foods to assist next generation selection
- New breeds and varieties of native foods under royalty benefit sharing.

Program 3. Processing and supply chains

Achieving a sustainable and safe supply base of native foods to meet future demands will require systems for processing and trusted, secure supply chains. Market supply chains need to be better integrated, with clear pathways to market.

Integrated supply chains are needed for all native food and agriculture markets, including animal and marine protein, plant crops, bioactives and ingredients. The CRC aims to work with growers and distributors to achieve supply chain sophistication.

There are opportunities for value adding to the base resources to create higher value products, and if done right could increase the native food industry value by up to 500%.

Questions the CRC could address include:

1. Which products best lend themselves to value adding?
2. Can value adding activities be done at (close to) production sites?
3. Which value adding processes add to the stability and longevity of product?
4. Which new foodtech developments can be adopted by the industry to help it rapidly develop?
5. What is the right price to get into the market, or to meet market demand?
6. Which native foods can be rapidly converted to high output?

Goal

Establish processing and supply chain systems that balance consumer readiness with cultural integrity.

Potential research areas

- Value added products and new foods
- Food processing and technologies
- Food tech and safety, nutrition and bioactive profiling and provenancing, including traceability technologies
- Brand value and protection.
- Integrated supply chains, including mapping out pathways to market.



Program 4. Markets

The promotion of native products into national and international markets will be essential to growing the native food and agriculture industry. Australian native products will need to be able to compete in a global market against more established crops and sophisticated marketing campaigns. But with an increasingly adventurous and burgeoning global middle class - keen for the next quinoa - there are many opportunities.

This program will focus on the issue of encouraging markets to get to know, trust and appreciate native foods and flavours.

A discerning customer base, hungry for native flavours is still not developed in Australia. Cultivating a taste and demand for native foods is essential to reach national and global markets.

However we also need to recognise that we already eat a wide range of native fish and seafood (tuna, barramundi, lobsters and native oysters) and to a lesser extent game (kangaroo, emu and crocodile) and wildfowl (native duck, geese and pigeon).

The program will help markets understand where to get native foods. Many of the players currently in the market are Indigenous owned or operated, and many return significant benefit back to Indigenous communities involved in the business.

This Program is expected to include:

- An analysis of markets and customers (domestic and international), including a structure for the industry and a communications plan
- Protocols for quality assurance (QA) for plantations and wild harvest operations
- Protocols for export
- What commonly accepted non-native foods and ingredients could easily be swapped out with native products? Could this help encourage consumer acceptance?
- Policy recommendations to enable export activities (e.g. codes of conduct)
- Communication strategy to communicate externally to industry and to the public, with broad messages about the benefits to Australia, including sustainability.

Goal

Establish a 'share of mouth' for native food, ingredients and bioactives in local, national and global markets.

Potential research areas

- New markets for domestic and export, including how to increase access
- Global trends and insights
- Market drivers (such as premium branding, volume, functional uses, provenance, Indigenous authenticity)
- Consumer value proposition
- Marketing plan (potentially under Brand Australia).



Education and training

Education and training will be an integral part of the CRC, to support and encourage both Indigenous and non-Indigenous business owners and communities to participate in and lead the new wave of native food and agriculture.

Existing and new entrants will require mentoring and capacity building and skills transfer in a range of areas, such as suppliers, marketing, community engagement, science and policy. A minimum of 10% of CRC funds will be allocated to education and training initiatives, such as short courses. For each promising outcome from the CRC research programs, there will be specific case-based training.

Early intervention, with plenty of on-ground, on-country options will be critical.

The following key aspects could be covered:

- Analysis and research of the best ways to educate, train, empower start-ups and scale-ups (new tools, systems, etc.)
- Across value chain (Indigenous communities; growers; value-adders; agribusiness; banks; ingredient companies; food companies; nutraceutical companies; beauty industry)
- New business models
- Innovators and entrepreneurial new ventures
- Emerging leaders and young Indigenous talent
- Effective commercialisation.

Goal

Significant representation of next generation Indigenous talent represented at all levels within the native food and agriculture sector, including commercial value chains, policy and research.

PhD

The CRC will fund 30 PhD top-ups with operating budgets across the different programs and term of the program.

Aboriginal Art and Cultures Gallery

Leveraging the significant investment by both State and Federal governments in the establishment of a first of its kind Aboriginal Art and Cultures Gallery to be based at Lot Fourteen, exploring opportunities for exhibition development, cooking courses with chefs and public programs that can be toured nationally to raise greater awareness and interest in native foods.

STEM school program

Together with the South Australian Museum, we will work to develop STEM curriculum products for teaching to a range of Indigenous and non-Indigenous STEM programs, and to be incorporated as part of a structural component for the Australian Education system.



Incubator

Incubators go beyond education and training to provide tailored support and guidance to promising individuals and businesses. The overall goal will be to help partners commercialise CRC outcomes and outputs.

The CRC will run an Indigenous Leaders Program and Accelerator Program and industry training through the Native Ag+Food Incubator by Food Futures Company and Thinclab.

The opportunity will not just be for start-ups and new entrants, but also for new products and processes in existing companies/industries. The program will operate nationally and a minimum of 5% of CRC funds will be allocated to incubation activities.

Training will include product and market development, business and entrepreneurship, access and benefit sharing, native title and other governance frameworks, new ways of communication and engagement.

Relationships with other initiatives

The CRC will leverage and complement other activities in this space, harnessing a long term vision and commitment to market development and capacity building. These include:

- CRC for Developing Northern Australia
- ARC Training Centre for Uniquely Australian Foods
- ARC discovery project 'Indigenous Knowledge Futures – protecting and promoting indigenous knowledge'
- We will build on the work of previous projects, including NintiOne, Desert Knowledge CRC, CSIRO bush foods research group
- We will explore additional partnership opportunities with the Fight Food Waste CRC, Food Agility CRC, Future Farm Systems CRC.

Value proposition

Businesses and organisations participating in the Native Food and Agriculture CRC will have the opportunity to:

- Select the projects they wish to support
- Be integrated into the CRC offerings and supported to deliver outputs on the ground, in proportion to their contribution
- Help direct the development of a benefit sharing framework and other structural industry mechanisms, such as a model for long-term industry levies
- Help deliver the mission of organisations like Australian Native Food and Botanicals (ANFAB) and the Indigenous Working Group of the National Indigenous Bushfood Symposium.



“We know... that dispossession of culture is having a detrimental effect on... young people. [We need] to provide Aboriginal people with an opportunity to reconnect to traditional culture by working with and gaining skills, knowledge and experience from positive Aboriginal role models and skilled Aboriginal community elders.”

*First Hand Solutions Aboriginal Corporation,
Mission Statement, 2020*

Partnership opportunities

TIER	INVESTMENT	BENEFITS
Major Partner	Significant contribution over the 10 year timeframe – at least \$1 million over 10 years.	<ul style="list-style-type: none"> • Right to commercialise • Nominate priorities of the program/s for consideration by the Steering Committee and approval by the Board
Partner	Leading commitment to a particular program or project and are investing for a specific outcome. Total contribution of \$250,000 over 10 years.	<ul style="list-style-type: none"> • Project outcomes • Right to commercialise
Project partner	Partnering with the CRC on a project basis. Flexible investment available depending on the project and contracted deliverables.	<ul style="list-style-type: none"> • Right to commercialise

Bid development costs

Partners signing up to the Native Food and Agriculture CRC are asked to contribute towards the costs of preparing the initial bid.

If the CRC bid successfully passes through the Stage 1 process and a Stage 2 bid is prepared, future participants in the CRC will be requested to contribute additional funding, of similar value, for the costs of the Stage 2 bid. These funds would be sought around August-September 2020.

R&D Tax Incentive

Where sponsorship of the CRC is from an Australian entity it may qualify for a tax offset under the Australian Government's R&D tax incentive. The incentive provides up to 43.5% refundable tax offsets for eligible entities to encourage and support industry to conduct research and development.

IP & Commercialisation

IP arrangements will be structured to maximise the financial benefit to the Native Food and Agriculture CRC partners and will be pro-rata according to contributions. IP will be managed at a project or program level, to allow different partners to engage in different projects. These will be negotiated at the start of each project to provide complementary benefits to different partners, including royalties, preferential access and/or segmented market rights.

We anticipate that any new IP will be owned by the partners supporting the project and will be commercialised by a key industry lead.

We anticipate that the management of IP at the project or Program level will be most attractive for most companies, allowing them to participate in those activities best suited to their capability and to achieve a commercial advantage.

The Native Food and Agriculture CRC will seek to maximise benefit to its partners and participate in the benefit sharing framework to be developed in Theme 1.

A consultative workshop with partners will be used to develop a heads of agreement prior to the bid submission. This will form the basis of the IP agreement to be negotiated pending the award of the grant.

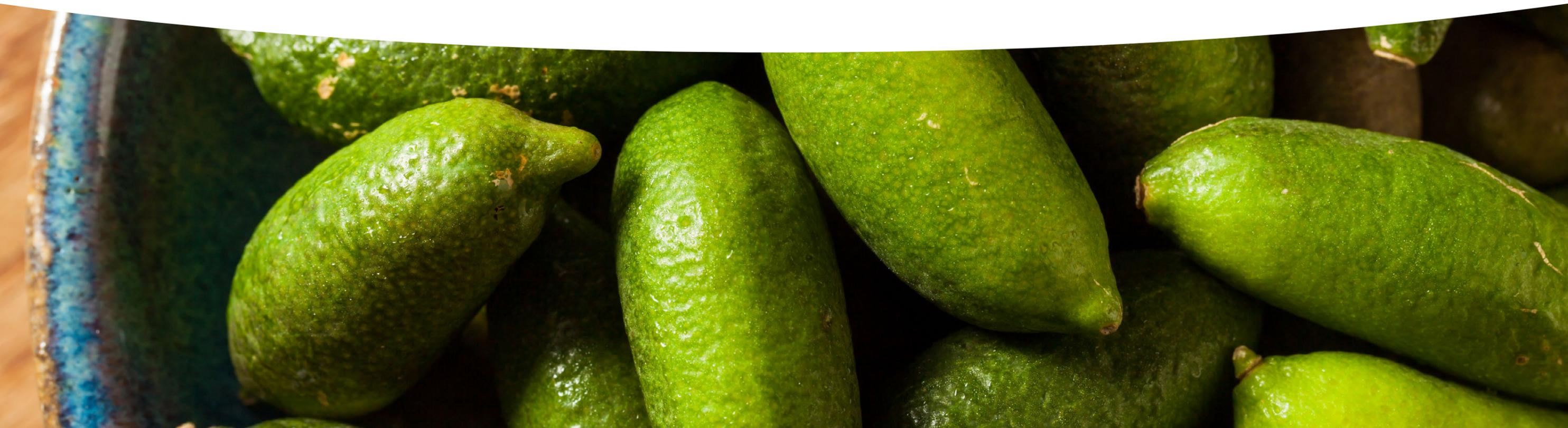
Terms

- Ten years maximum duration.
- Three phases, with three year contracts and major review between the each phase.
- Projects may run for three, six or nine years.
- Participation Agreements will be for ten years, with one year's notice of withdrawal.

Project approval process

The anticipated approval process for projects is:

1. Industry partner puts forward a project idea or proposal
2. The Native Food and Agriculture CRC matches the partner with appropriate researchers and other organisations
3. Partners can nominate SMEs and/or product and service providers to join their project (for approval by the Native Food and Agriculture CRC Board)
4. Project-level agreements negotiated and signed.



Governance

The following roles and groups will be established in the coming months:

- Indigenous Governance Committee
- Chairperson
- Independent Board
- Science Steering Committee
- Program and project leaders

Contributions

Our total funding goal is \$30 million in cash (\$3 million per year), comprising:

- \$15 million from the CRC Grants program
- \$15 million from industry partners via the sponsorship program.

A further \$30 million is being sought as in-kind contributions from industry, research and other partners.

Financial model

Of the total cash funding for the CRC, we anticipate the following approximate breakdown of expenditure:

- 60% for R&D projects
- 10% for Administration and hosting of the CRC headquarters and head office
- 10% for Education and training programs
- 10% for special acceleration projects
- 5% for IP and commercialisation support, including incubation programs
- 5% Contingency.

Indigenous Governance Committee

The Indigenous Governance Committee will guide the bid development team in proposal preparation and delivery of the projects, to ensure that best practice Indigenous research is conducted and Indigenous Intellectual Property rights, prior informed consent, access and benefit sharing are promoted and maintained.

The committee will oversee and make recommendations regarding all projects and activities of the CRC with intent to support growth of the Australian Indigenous food and agriculture sector. It will also provide cultural guidance to the CRC to ensure ethical engagement with Indigenous communities and Indigenous-led businesses to ensure that Indigenous Australians are a primary beneficiary of the CRC.

The committee will consider, but not be limited to:

- The vision and objectives of the CRC proposal
- The core programs and projects
- The relationship between the CRC and the broader Australian native food and agriculture industry sector
- Engagement with Indigenous communities and businesses
- Guidance on issues, as they arise, pertaining to Indigenous communities and Indigenous-led business
- Referral of matters from the CRC Board for scrutiny and approval as necessary.

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