



Australian Government
Australian Trade and Investment Commission



**AUSTRALIAN CAPABILITY IN
BETTER-FOR-YOU
FOODS**



CONTENTS

Overview	03	Sports nutrition and weight loss products	12
Free-from and low-in foods	05	All-natural, health and superfoods	14
Organic food and beverages	07	Fortified and functional food and beverages	16
Baby food	09	Food research organisations	20
Food for the elderly	10	About Austrade	21

Disclaimer

This report has been prepared by the Commonwealth of Australia represented by the Australian Trade and Investment Commission (Austrade). The report is a general overview and is not intended to provide exhaustive coverage of the topic. The information is made available on the understanding that the Commonwealth of Australia is not providing professional advice.

While care has been taken to ensure the information in this report is accurate, the Commonwealth does not accept any liability for any loss arising from reliance on the information, or from any error or omission, in the report.

Any person relying on this information does so at their own risk. The Commonwealth recommends the person exercise their own skill and care, including obtaining professional advice, in relation to their use of the information for their purposes.

The Commonwealth does not endorse any company or activity referred to in the report, and does not accept responsibility for any losses suffered in connection with any company or its activities.

Copyright © Commonwealth of Australia 2018



The material in this document is licensed under a Creative Commons Attribution – 4.0 International licence, with the exception of:

- the Australian Trade and Investment Commission's logo
- any third party material
- any material protected by a trade mark
- any images and photographs.

More information on this CC BY licence is set out at the creative commons website: <https://creativecommons.org/licenses/by/4.0/legalcode>. Enquiries about this licence and any use of this document can be sent to marketing-comms-helpline@austrade.gov.au.

Attribution

Before reusing any part of this document, including reproduction, public display, public performance, distribution, dissemination, communication, or importation, you must comply with the Attribution requirements under the CC BY licence.

17-18-82. Publication date: October 2018.



OVERVIEW

As a world leader in researching, developing and manufacturing high-quality, safe and innovative processed foods, Australia has specialist expertise in products that can assist with overall health and wellness, known as better-for-you foods.

The raw ingredients for many of these foods come from Australia's highly regarded clean, green and safe produce, including some of the world's finest dairy, fruit, vegetables, grains, pulses, edible oils and honey. Australian farmers also grow many in-demand 'superfoods' such as nuts, avocados, berries and indigenous plants.

Australia's clean, green reputation is underpinned by the environmental stewardship of its farmers and land managers. Home to 60 per cent of the world's organic farmland, Australia is well positioned to meet the global demand for organic products. Its food safety and quality control systems provide assurance for consumers who want to know the origins of their food, where it was grown, how it was made, how safe and healthy it is, and impact of its production on the environment. The country's geographic isolation and stringent quarantine and monitoring regime also preserve its clean, green credentials.

Australia's size and geographic diversity mean manufacturers can source a variety of low-cost but high-quality ingredients from a large agricultural sector, transforming them into innovative better-for-you products for the retail, food service, sports, hospital and aged care markets.

To address the global increase in allergies and intolerances, Australian manufacturers have developed a broad range of food and beverages that are free from gluten, nuts, lactose and other ingredients considered to have an adverse impact on consumers' health. Many products aim to be all-natural, free of artificial colours, flavours and genetically modified organisms, and low in or free from fat, salt and sugar.

For many years, the Australian scientific and manufacturing sectors have been developing fortified and functional food and beverages that have added micronutrients to enhance health and wellbeing. These range from probiotic yoghurts and drinks to breakfast cereals fortified with omega-3, calcium or antioxidants, and spreadable oils fortified with plant sterols to reduce cholesterol.

Australia is also known for the quality of its infant formula and baby food, manufactured using the finest ingredients and informed by the latest scientific and nutritional research. Australian baby food is lower in salt and sugar than international competitors, and contains optimum levels of vitamins and minerals.

Like many countries worldwide, Australia has an ageing population. Food manufacturers have developed a wide range of products to assist the elderly to eat with ease and obtain the nutrients they need, as well as maintain their independence with meals that can be delivered to their home or to aged care facilities or hospitals.

Australia also has strong capability in sports nutrition and weight loss products. Manufacturers use premium raw ingredients and work with sports dieticians and food technologists to develop products that enhance the health and wellbeing of athletes and consumers.

Australia's industry-driven, government-supported research programs in food technology offer opportunities for international R&D and commercialisation collaborations. Australia's national science agency CSIRO ranks in the top 0.1 per cent of global institutions for citations in the areas of Plant and Animal Science, Agricultural Sciences, Environment/ Ecology and Geosciences.¹

The Australian food industry is also export-focused and has considerable experience tailoring products to meet customers' preferences. Global food companies can incorporate Australian food ingredients and food production technologies into their supply chains to improve efficiencies, reduce costs and foster the development of products with new differentiated attributes.

Transnational companies sourcing from Australia can take advantage of the country's counter-seasonal production to deliver produce to northern hemisphere markets. Australia is also close to and has well-established transportation links to Asia.

This industry capability statement provides an overview of Australian capability in better-for-you food production, including examples of Australian companies with specialist expertise.

This document focuses on seven better-for-you segments within Australia's processed food manufacturing industry:

1. Free-from and low-in foods
2. Organic food and beverages
3. Baby food
4. Food for the elderly
5. Sports nutrition and weight loss products
6. All-natural, health and superfoods
7. Fortified and functional food and beverages

Talk to your local Austrade representative for more tailored advice and information about connecting and partnering with the Australian better-for-you foods industry.

WHY CHOOSE AUSTRALIA



**CLEAN, GREEN
INGREDIENTS**



**ROBUST FOOD SAFETY AND
QUALITY CONTROL SYSTEMS**



**OPEN TO
COLLABORATION**



**INNOVATIVE
PRODUCTS**



**EXTENSIVE
FOOD AND NUTRITION R&D**



**LARGE, DIVERSE RANGE
OF PRODUCT SKUs**

FREE-FROM AND LOW-IN FOODS

Free-from foods are free from ingredients such as nuts, gluten, lactose or alcohol that can have an adverse impact on consumers' health due to allergies or intolerances. They can also be foods that are free of artificial colours, flavours and genetically modified organisms, or that are free from or low in fat, salt, sugar and meat-based ingredients.

It is estimated that over 250 million people globally may suffer from a food allergy.²

Australia has among the world's highest prevalence of allergic disorders, with an estimated four million people affected by an allergic disease.³

This has led to the creation of foods for people with coeliac disease, lactose intolerance and fructose malabsorption, as well as research into food allergens.

One in 70 Australians have coeliac disease, although as many as 80 per cent of sufferers may be undiagnosed.⁴ Australia has developed a variety of gluten-free foods for people with coeliac disease or gluten allergies, including flours, baking mixes, breakfast cereals, fresh bread and buns, ready-made cakes, muffins and pastries, biscuits, fresh and dry pasta, noodles, pizza bases, confectionery, sauces and oils, drinks, savoury snacks, snack bars and meat products. Products that are suitable for a gluten-free diet carry the Coeliac Australia Endorsement logo, which incorporates the internationally recognised crossed grain logo.



SILLY YAK FOODS

Rosemary Anger and Robert Hinterding founded Silly Yak Foods after Rosemary was diagnosed with coeliac disease. The couple opened Melbourne's first 100 per cent wheat- and gluten-free cafe to provide quality food products for people who can't eat wheat or gluten.

To cater for the growing domestic and international demand for gluten-free foods, they established a bakery (now owned by SACS Gluten Free) to manufacture and distribute a range of pies, pastries and other products that are free from wheat, gluten, dairy, yeast and nuts.

Silly Yak's products are suitable for consumers with coeliac disease, fructose malabsorption allergies and those who follow the low FODMAP diet.

sillyyaks.com.au

Lactose intolerance is growing in Australia and has led to the creation of foods suitable for people with this condition. True lactose-free foods in Australia include specially formulated liquid milk and infant milk powder. Other dairy-free products include yoghurt, custard, cream, cheese, cream cheese, chocolate, ice-cream, biscuits, snack foods and baking products. These items are ideal for consumers with a high lactose intolerance.

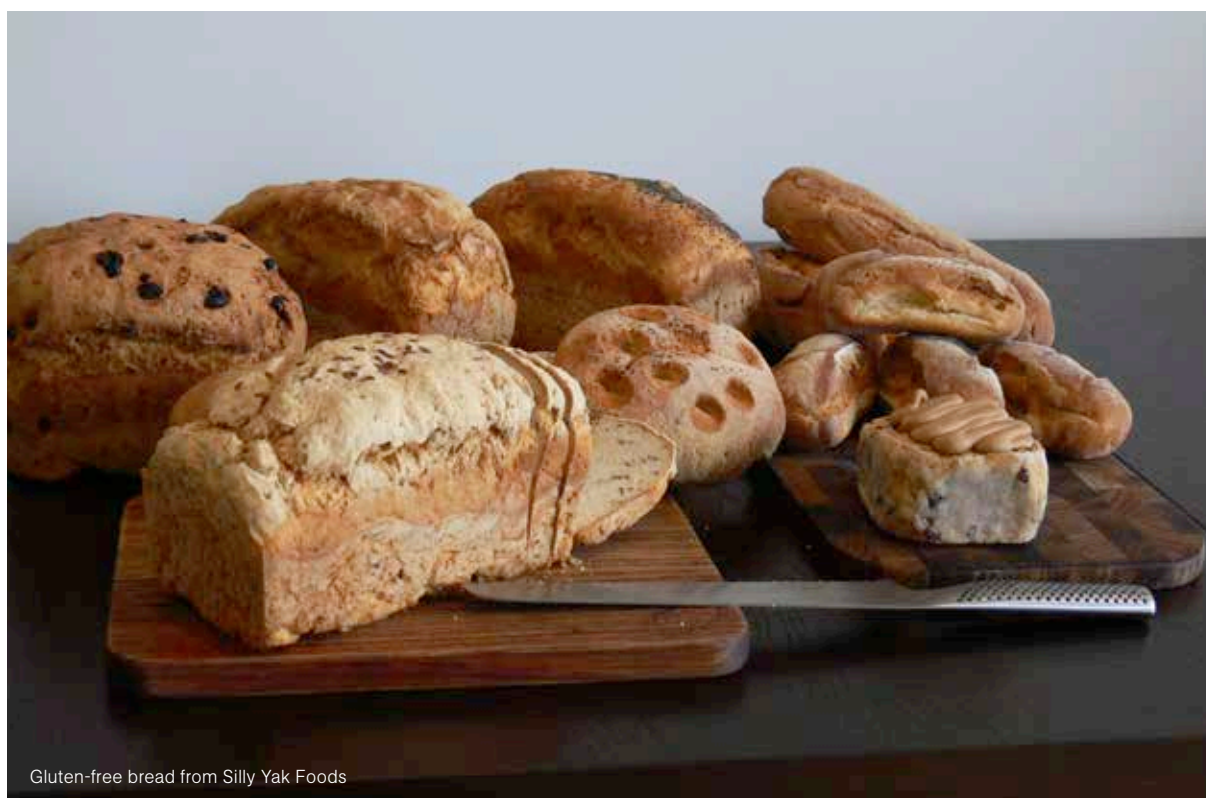
High sugar and fat diets are considered to contribute to obesity and heart disease, and many products are looking to reduce these ingredients. In addition to manufacturing foods free from or low in fat, salt and sugar, CSIRO and other universities are researching the impact of reducing these ingredients on flavour and texture, which will help manufacturers formulate foods that taste good and are good for you.⁵

Increasing concerns about the health effects of eating too much meat and the environmental impact of cattle farming have driven demand for meat substitutes. Australian protein and meat alternatives source many of their ingredients such as potatoes, chickpeas and lentils from local growers and producers. Australia does not produce genetically modified soybeans, increasing the appeal of tofu and other soy-based products made from Australian-sourced soybeans.

Australia has one of the highest per capita incidences of anaphylactic reactions, particularly among children. Hospital admissions for anaphylaxis due to food allergy in children aged 0 to 4 years have increased five-fold over the last decade.⁶

The increased frequency of food allergy is driving research into areas such as prevention, treatment and why it has become more common. Current areas of research include allergen immunotherapy (also referred to as desensitisation) to switch off the allergy once it has developed. The Murdoch Children's Research Institute is conducting an Allergy in the Community research project to improve the management of food allergies in babies and children.

Coeliac Australia is also funding three research projects into coeliac disease. The Walter and Eliza Hall Institute of Medical Research is investigating the diets of people with coeliac disease, while James Cook University is researching how hookworms can contribute to a cure for coeliac disease. CSIRO developed Kebari®, a new barley grain that meets the World Health Organization's gluten-free classification. The grain is used in German brewery Radeberger's Pionier gluten-free beer. Monash University has undertaken research into irritable bowel syndrome for the past 10 years and was responsible for developing the Low FODMAP Diet.



Gluten-free bread from Silly Yak Foods

ORGANIC FOOD AND BEVERAGES

Organic food and beverages are grown and produced without the use of chemical fertilizers, pesticides or artificial chemicals. Organic food comprises fresh food such as grains and pulses, fruit, vegetables, nuts and meat, and processed products such as cooking oils, wine, biscuits, pasta and drinks.

The global market for organic food was worth US\$89.7 billion in 2016.⁷ The rising global demand for organic food is driven by consumers who value the health benefits of eating produce and products that are chemical-, additive-, hormone- and antibiotic-free, and contain no genetically modified organisms. In Australia, some of the most popular organic food categories include fruit and vegetables, dairy and home-cooking ingredients.⁸

Consumers are also placing greater scrutiny on where their food is sourced and how it is produced. They seek food that is cultivated using environmentally friendly farming practices, including limiting the use of chemicals they perceive as harmful to their health, and which is cruelty-free to animals.

Australia has 62 per cent of the world's organic farmland and over 35 million hectares of land under certified organic management, more than any other country in the world.⁹

Its size and geographic and climatic diversity mean it can offer a wide variety of organic food and beverages.

The country has a well-established tradition of producing some of the world's finest organic meat, dairy, grains and pulses, wine, edible oil, and honey. It is also known as a reliable supplier of top-quality fresh fruit, nuts and vegetables.



FLAVOUR MAKERS

Flavour Makers is a food development and manufacturing company. It combines strategic insight, culinary expertise and innovative manufacturing technologies to create healthy, great-tasting meals for supermarkets, food companies and other clients.

The company's white label organic food range is certified with one of the world's most rigorous and transparent organic standards – Australian Certified Organic. Ingredients such as vegetables, beans, quinoa, chia seeds, chicken and beef are sourced from Australian organic farmers. The products, including soups, stock, baby food and coconut water, are 100 per cent processed and manufactured in Australia.

flavourmakers.com.au

There are more than 4,000 certified organic processors, producers and handlers in Australia.¹⁰ While there is no mandatory requirement for certification of organic products sold in Australia, many businesses choose to be certified by an organic certification body to underpin truth in labelling requirements and promote consumer confidence.¹¹ Products that are exported from Australia face stricter regulations than those sold in the domestic market.

Australia's six private certifiers base their certification standards on the National Standard for Organic and Biodynamic Produce, used by the Department of Agriculture and Water Resources for export certification.¹² These include AUS-QUAL (AUSQUAL), Australian Certified Organic (ACO), Bio-Dynamic Research Institute (BDRI), NASAA Certified Organic (NCO), Organic Food Chain (OFC), and Safe Food Production Queensland (SFQ).

Australia's strict organic regulations mean that farming land needs to be under organic management for approximately three years before the producer can obtain certification.¹³

Processed organic products have been popular among Australian consumers for many years now. There are around 1,998 certified organic producers (mainly beef producers and fruit and vegetable growers), and 1,432 processors in Australia manufacturing a full range of products, including bakery, dairy, baby food, confectionery, edible oils, snacks, shelf-stable meat, ready-to-eat meals, dressings and spreads.

Australia's location means it can supply counter-seasonal fruit and vegetables to northern hemisphere markets, while proximity to Asia shortens transport times and maximises produce freshness.



BABY FOOD

Food for infants and children is typically age-specific, that is, infant formula for babies up to six months, follow-on formulas and solid foods for toddlers aged six months to three years, and children's nutritional snacks.

Australia has a strong reputation for producing high-quality and convenient packaged food that is safe and nutritious for babies and children. The country has some of the most respected baby food manufacturers in the world, all of whom employ the strictest standards backed up by the latest scientific and nutritional research.

Australian baby foods have been shown to be healthier than those produced in Britain and Canada due to their lower levels of salt and sugar.¹⁴

There are strict regulations on the type of preservatives, artificial colours and flavours, and prescribed levels of vitamins and minerals that can be in baby food. Australian manufacturers can also adapt their products to meet regulations in other countries.

There is a full range of baby food made in Australia, including liquid food such as fruit and vegetable purees or custards in jars and sprout pouches, as well as dry food such as formula, cereals and snacks.

There are also many toddler food products available, including chew sticks, snack bars and biscuits to help with teething, and formula to supplement a solid diet and prolong the use of infant products into the later stages of growth.



WHOLE KIDS

Founded by James and Monica Meldrum, Whole Kids offers a wide range of junk-free, additive-free and allergen-friendly organic snacks for babies and children. Their products nourish children's physical and mental growth by providing the most nutritious, natural and healthiest food available.

Whole Kids is recognised as a leader in the organic food industry. It has received a number of industry awards for product innovation, quality and sustainable business practices. The company only uses 100 per cent certified organic ingredients, and works with organic growers and suppliers to ensure the highest quality for their products.

Whole Kids' product range includes biscuits, corn chips, dried fruit, fruit bars, fruit juice, popcorn, pouch foods and rice crackers. The products take into account children's allergies to ingredients such as dairy products, eggs, fish, crustaceans, tree nuts, peanuts, wheat and soy.

wholekids.com.au

FOOD FOR THE ELDERLY

Food for the elderly includes products that meet their specific health needs, such as food that is easy to eat and swallow or contains tailored nutritional content.

Due to declining fertility rates and an increase in life expectancy, the worldwide proportion of people aged 60 and over is expected to double between 2017 and 2050, reaching 2.1 billion by 2050.¹⁵

Australia has access to a wide range of quality food sources and a diverse offering of nutrient-rich fresh produce. Combined with the availability of scientific resources such as CSIRO and university-based innovation centres, Australia is well placed to develop appealing and functional food options that address the challenges of declining health.

For instance, Australian companies are developing foods that have a desirable taste and texture profile to counter the adverse effects of the ageing process on smell, taste, touch and sight, which can affect how individuals experience flavour, temperature, colour, appearance and texture.

Australian food manufacturers are also creating foods tailored to specific dietary considerations for hospitals and aged care homes. These include healthy heart, vegetarian, lactose-free and low potassium products. They are also producing items such as protein shakes and bars that can help with nutrition and digestion. These items are packaged in portion-controlled containers for convenience.

As people age, they experience a range of health issues which inhibit their mobility and ability to prepare food without assistance. Australian food companies offer ready-to-eat meals that can be home-delivered to those who become immobile.



PRECISE THICK-N INSTANT

Many older people are afflicted with dysphagia – a condition that makes it difficult or uncomfortable to swallow. Dysphagia can be caused by many conditions experienced by the elderly, including stroke, Parkinson's disease, dementia, and head and neck cancer.

Australian company Trisco's Precise range of products are suitable for people with dysphagia. Precise's Thick-N INSTANT liquid thickener thickens food and beverages to precise and predetermined viscosities. It can be used at home, hospitals and aged care facilities. Its Thick'N Ready range of hydrating, pre-thickened water, cordials and juices come in three viscosities – mildly, moderately and extremely thick – and are packaged in ergonomically designed cups that are easy to grip.

precisethickn.com.au

FLAVOUR CREATIONS

Flavour Creations is an Australian food and drink researcher and exporter of products that aim to improve the lives of consumers suffering from dysphagia. Flavour Creations' products are designed to deliver maximum hydration and nutrition, and contain innovative ingredients such as bowel motility agents and thickeners to alter viscosity for people with swallowing difficulties. Other products are fortified with fibre, protein or carbohydrates to meet specific nutritional deficiencies. The company's products are available in Australia, New Zealand, Europe and Asia.

flavourcreations.com.au



SPORTS NUTRITION AND WEIGHT LOSS PRODUCTS

Sports nutrition includes packaged food and beverage products that are specifically designed to assist athletes and consumers build muscle, lose weight, improve their nutrition and enhance their health.

As a renowned sporting nation, Australian athletes and consumers drive the demand for sports nutrition products, in particular protein-based supplements due to an increasing awareness of its role in muscle repair and recovery.

Sports nutrition products are readily available through sports and health food stores, chemists, supermarkets, convenient stores and cafes.

With access to high-quality raw ingredients such as in-demand milk and whey proteins, Australian businesses work with leading sports dietitians and food technologists to develop packaged sports supplements that have a high degree of transparency of ingredients and efficacy, improved taste profile and benefits backed by scientific evidence.

Australian companies are developing protein shakes, bars and snacks that can be consumed after workouts and during meals to increase muscle mass. Plant-based protein powders have increased in popularity, with health-conscious consumers starting to favour natural ingredients in the sports nutrition products they consume. Manufacturers have launched plant, pea, rice and soy proteins, products featuring natural ingredients enhanced with vitamins, and vegan, vegetarian or gluten-free products.¹⁶

Sports nutrition and packaged food manufacturers are also offering protein cookies, protein balls and high-protein chia puddings. Sports nutrition manufacturers are increasingly targeting females, with women's products typically featuring natural ingredients, marketed to slim, define or sculpt.¹⁷



GEN-TEC NUTRITION

Gen-Tec Nutrition was founded by Nick Jones, a sports nutritionist and award-winning bodybuilder with more than two decades of experience. Gen-Tec nutraceutical and nutrition products include protein powders and other supplements to help improve quality of life and enhance athletic performance.

gen-tec.com.au

Australia is also a leader in sports nutrition research. The Australian Institute of Sport (AIS), a division of the Australian Sports Commission, researches nutritional strategies to enhance performance, or the special nutritional requirements and concerns of athletes. Many of its projects are undertaken in partnership with other disciplines and partners such as the Australian Catholic University. The AIS has worked with Australian company the Complete Dairy to develop milk that contains 70 per cent more protein than regular full cream milk, and with the Gatorade Sports Science Institute on hydration research.

Like other areas of the world, obesity is an issue in Australia. In 2014–15, 63 per cent of Australian adults and 26 per cent of Australian children and adolescents were classified as overweight or obese.¹⁸

The prevalence of obesity in Australia has led to the development of weight-loss products designed not only to help consumers lose weight, but to also feel healthier and more energetic, and avoid weight-related diseases.

Examples of weight-loss products include meal-replacement shakes, calorie-counted meals, and low GI, fat and sugar, and portion-controlled foods.



RAPID NUTRITION

Rapid Nutrition (RAP) is a natural healthcare company focused on researching, developing and manufacturing a range of healthcare supplements designed to address obesity. The company's core business is the creation of organic and natural scientific-based health food supplements.

RAP exports a range of healthcare products including Leisa's Secret®, which comprises meal replacement shakes, high-potency energy-boosting tablets, weight loss tablets and an appetite suppressant powder. RAP's SystemLS™ brand includes a variety of high-protein shakes, high-fibre bars, organic multivitamins, fat-burning shots and supergrain granola cereal.

rnplc.com



ALL-NATURAL, HEALTH AND SUPERFOODS

As a reliable grower of some of the world's best fresh horticultural produce, Australia can supply the raw ingredients, including superfoods, used in all-natural and health foods.


Superfoods are natural foods that are considered to be exceptionally good for one's health, boosting the immune system due to naturally high levels of vitamins, minerals, fibre, antioxidants or omega-3 fatty acids.¹⁹ Examples of superfoods grown in Australia include avocados, chia seeds, quinoa, blueberries, raspberries, blackberries, strawberries and nuts such as almonds, macadamias, pecans, pistachios and walnuts.

Australia is also attracting attention for its native foods and botanicals, known for their unique flavours and high nutritional value.

For example, the Kakadu plum has the highest recorded level of natural vitamin C of any plant in the world – more than 100 times that of oranges. Its antioxidant capability is five times higher than blueberries, and it also contains vitamin E, lutein, folate, magnesium and calcium. Due to its health properties, the fruit has been dried and ground into a powder for use in dietary supplements and health foods.²⁰

There are over 6,500 types of native foods in Australia, with 13 certified by Food Standards Australia New Zealand (anise myrtle, bush tomato, Davidson plum, desert lime, finger lime, Kakadu plum, lemon aspen, lemon myrtle, mountain pepper, muntries, quandong, riberry and wattleseed).²¹ There is significant potential to develop and commercialise Australia's native foods.

Australia has a small but growing hemp foods industry. High in protein and essential vitamins and minerals, hemp foods were made legal for human consumption in Australia in November 2017. Australian hemp food



ROBIN'S FOODS

Ian and Juleigh Robins founded **Robin's Foods** with a vision to bring Indigenous foods to the mainstream food market. The ingredients for the company's Outback Spirit products are sourced from Indigenous bush food producers from around Alice Springs, Broome and across the Top End of the Northern Territory and harvested according to traditional Indigenous methods. Outback Spirit products include kakadu plum and sweet chilli sauce; lemon myrtle, coconut and chilli sauce; outback tomato chutney; wild lime pickle; Tasmanian pepper salt; and wattleseed dukka. Robin's Foods donates a portion of its sales to a fund that assists Aboriginal and Torres Strait Islander peoples who are developing their own enterprises based on native foods.

outbackspirit.com.au



MORLIFE

Morlife manufactures a range of functional superfoods. Founded by Dr Warren Stewart, a nutrition researcher with nearly 30 years of experience, the company's product range includes boosting powders, functional cereals, teas, quinoa risottos, chia puddings and food bars.

All of Morlife's products are backed by research and developed by a team of in-house nutritionists. Rich in nutrients, each product is designed to deliver a specific functional benefit. The company's multi-award-winning products are available internationally in major supermarket chains and health food stores.

morlife.com

or industrial hemp is produced from cannabis plants with less than 1 per cent of the psychoactive ingredient tetrahydrocannabinol in the leaves, flowers and stems. Australia manufactures hemp seeds, oil, protein, flour, chocolate and beer.

Wholefoods are foods that are eaten as near as possible to their natural state, with minimal processing. They include oats that contain soluble fibre which can lower high levels of cholesterol and has anticoagulant properties; linseeds that contain the heart-friendly nutrients omega-3 polyunsaturated fats, phytoestrogen lignans and soluble fibre; soy protein, believed to lower blood cholesterol; and chia seeds that are rich in fibre, omega-3 fats, protein, vitamins and minerals. Australia has a ready supply of these and other wholefoods.

All-natural products are free from artificial colours, preservatives, flavours or other additives. Naturally healthy packaged foods are minimally processed foods that contain vital nutrients to sustain good health. Australia offers a wide range of naturally healthy packaged foods including high-in-fibre bread, cereal, noodles, pasta, cereal bars, margarine and spreads, soy drinks, sour milk products, fruit and nut bars, honey, olive oil, nuts, seeds and trail mixes, and rice.



TUCKER'S NATURAL

Tucker's Natural has been part of the Australian premium food industry for over 30 years and is known for using high-quality natural ingredients sourced from Australian producers.

Tucker's Natural products are free from artificial and genetically modified ingredients and do not contain yeast, soy, MSG and preservatives. Available in retail and food service formats, the company's product range includes Gourmet Crackers, Dessert Biscuits, Fibre Packed Snacks, Gourmet Bites, Gluten Free Bites, Vita Packed Snack Crackers, Snack Plus Crackers, Fruit Pastes and Fruit Packed Bite.

Tucker's Natural range of crackers, biscuits and snacks have been recognised by Australia's most prestigious national food awards as the best-quality products in their class.

tuckersnatural.com.au

FORTIFIED AND FUNCTIONAL FOOD AND BEVERAGES

Fortified and functional foods have added ingredients that improve their overall nutritional value. Worldwide, there is growing demand for fortified and functional foods as consumers seek greater nutritional value from the products they eat and drink to address or prevent health issues.

The Australian fortified/functional packaged food market was worth A\$3.16 billion in 2016.²²

Baby food, in particular baby formula, is the leading category in the fortified food market in Australia, driven by demand from Chinese parents looking for quality and reliable products for their infants.

Australia manufactures a broad range of fortified and functional products, including fortified milk formula for babies; bread and breakfast cereals fortified with omega-3, calcium or antioxidants; flavoured milk drinks positioned as 'liquid breakfasts'; probiotic yoghurts and prebiotic foods for digestive health; and milk and spreadable oils and fats fortified with plant sterols to reduce cholesterol.

In certain sectors, Australian food companies must add micronutrients to their products. Micronutrients are only needed in minuscule amounts but enable the body to produce enzymes, hormones and other substances essential for proper growth and development. For example, it is mandatory for Australian millers to add folic acid and iodine to bread-making flour, to help prevent birth defects and address the re-emergence of iodine deficiency in the Australian population.²³ Given soft white bread is popular with children, companies have begun to add more fibre, vitamins and minerals to this product.

Considered to be good for the digestive system, probiotics can be found in Australian yoghurt and yoghurt drinks and are increasingly being added

to other products made in Australia such as juice, water, snacks and flour. Prebiotics can also assist with gut health and occur naturally in bananas, honey, asparagus, leeks, onions, garlic, chicory and wholegrains like wheat, rye, barley and oats. Prebiotics are being added to foods such as bread and infant formulas in Australia.



PERKii

Developed by the University of Queensland, PERKii is a juice drink with 1 billion microencapsulated probiotics and only 26 calories. PERKii products include probiotics which can assist with weight control, improve gut health and boost immunity. The fermentation technology used in PERKii results in a better-tasting drink that avoids the high sugar and bitterness found in competing products.

perkii.com.au



TRU BLU BEVERAGES

Tru Blu Beverages manufactures a range of 'better-for-you' products as well as some of Australia's most loved and iconic brands. Tru Blu recognises the effect that today's food and beverages can have on health and wellbeing. Wherever possible, the company uses natural colours and flavours to enhance products, and actively strives to reduce the amount of sugar and preservatives in its drinks.

Tru Blu makes alcoholic and non-alcoholic beverages, and non-dairy drinks. The company's product range includes energy drinks, still and sparkling mineral water, low-joule carbonated drinks (which have no added sugar or artificial flavours and 95 per cent fewer calories than regular soft drinks), diet cordials, and fruit juices and drinks.

In addition to developing its own products, Tru Blu offers contract packaging and new product development services. The company employs 400-plus people and has manufacturing plants in three states.

trublubeverages.com.au

Australian companies have capitalised on the growing trend in Australia and globally for high-protein, low-carb diets, by developing a range of foods for consumers looking for more convenient, high-quality sources of protein such as energy bars and protein balls, bars and drinks. The market for protein is largely dairy-based, but soy-based protein is gaining popularity, and vegetarian options include protein rice and vegan protein powders to add to meals.

Awareness of omega-3 and its benefits to brain and heart health is high in Australia. Fatty acids can be found in Australian-made bread, margarine, oils, infant formula, beverages and cereals. Cholesterol-lowering margarines are also available.

Carotenoids are a class of over 600 fat-soluble substances naturally found in plants, phytoplankton, bacteria and moulds. With natural carotenoids finding scientific validation in reducing cancer-causing cells, there has been a growing focus on developing this arm of the functional food and beverage sector. Carotenoids can be found in some Australian-made fruit and vegetable juice.²⁴



Photo courtesy of The Healthy Grain

BARLEYmax™

CSIRO has recognised barley's human health benefits and application for fortified food products. Its research found one particular barley grain had higher fibre content and enhanced nutritional benefits compared with regular barley. A program of conventional plant breeding led to the development of BARLEYmax™, a high-fibre wholegrain with high levels of resistant starch.

In a joint venture with Australian Capital Ventures, CSIRO bred the new BARLEYmax™ grain, then worked with food manufacturers to create products containing the grain, including breakfast cereals, food wraps, rice mixes and bread. Australian and international consumers including those in Japan have enjoyed the benefits of foods containing BARLEYmax™ since August 2009.

csiro.au/en/Research/AF/Areas/Plant-Science/Wheat-barley/BARLEYmax

Although Australia accounts for less than 2 per cent of the world's estimated milk production, it is a significant exporter of dairy products. Australia currently ranks fourth in terms of world dairy trade – with a 6 per cent share – behind New Zealand, the European Union and the US.²⁵ Australia uses its high-quality milk to manufacture high-protein, calcium-fortified dairy products.

Australia also has access to a range of natural plants, proteins and minerals that provide high volume/low-cost access for processors to deliver fortified and functional foods across a broad range of product formats.

Fortified and functional food and beverage manufacturers can source expertise, technologies and infrastructure from CSIRO, and undertake food manufacturing research and development at its pilot plants in Werribee, Melbourne and Coopers Plain, Brisbane.

The Werribee pilot plant includes:

- › A\$50 million state-of-the-art food manufacturing research facilities
- › six self-contained 500-square-metre registered food factory modules, with freezers, cool rooms, temperature-controlled rooms, office space and laboratories
- › two non-food-grade modules
- › a range of conventional and innovative processing technologies and equipment
- › Dairy Food Safety Victoria and local council registration
- › secure and confidential operation.

CSIRO also has food product development kitchens and laboratories for chemical, biochemical, physical and sensory analyses.

See page 20 for more information on Australia's food research organisations.





FOOD RESEARCH ORGANISATIONS

Australian Research Council

Australian Research Council (ARC) identifies emerging research areas and opportunities for further development. One of its priority research areas is food, including increasing the ability of producers to adopt new technologies and practices; facilitating technology transfer to local business through international R&D collaboration; and encouraging cross-disciplinary research to drive high-technology food manufacturing and agriculture. Its ARC Industrial Transformation Training Centre for Functional Grains is researching cereals and pulses to measure the health properties of grains and develop high-value products from Australian-grown grain.

csu.edu.au/research/fgc/home

CSIRO's food innovation centre

CSIRO's food innovation centre offers world-class laboratories and expertise at pilot plants in Melbourne, Brisbane and Adelaide. Industry and researchers can develop novel products, access innovative technologies and testing facilities, and utilise expertise in processing equipment, sensory analyses, food technology, food safety, chemical analysis and food storage.

csiro.au/en/Do-business/Partner-with-our-Business-Units/Do-business-Agriculture-Food/Food-innovation-centre

Food Agility CRC

The Food Agility CRC is a consortium of food and technology industry partners focused on driving the use of digital technologies in the food industry.

foodagility.com

Monash Food Innovation Centre

Monash Food Innovation Centre offers a range of support to businesses in the food industry, including front-end consumer services, design and visualisation of ideas, innovation programs and technical expertise in areas such as food chemistry, packaging design and food ethics. The centre includes a A\$3 million incubation facility, with American yoghurt maker Chobani using the new facility to run a bespoke incubator program for early-stage companies.

foodinnovationcentre.com.au

RMIT Food Research and Innovation Centre

RMIT Food Research and Innovation Centre helps businesses develop and market innovative, high-value products for the global marketplace. It has a broad industry network and links with leading research organisations around the world.

rmit.edu.au/about/our-locations-and-facilities/facilities/research-facilities/food-research-and-innovation-centre

University of Queensland Centre for Nutrition and Food Sciences

The University of Queensland (UQ)'s Centre for Nutrition and Food Sciences is part of the Queensland Alliance for Agriculture and Food Innovation, a partnership between UQ and the Queensland Government. It uses a range of cross-disciplinary approaches, modern analytical techniques and understanding developed by studying model systems, to identify the fundamental mechanisms responsible for important food and nutrition properties.

qaafi.uq.edu.au/centre-for-nutrition-and-food-sciences

ABOUT AUSTRADE

The Australian Trade and Investment Commission – Austrade – contributes to Australia’s economic prosperity by helping Australian businesses, education institutions, tourism operators, governments and citizens as they:

- › develop international markets
- › win productive foreign direct investment
- › promote international education
- › strengthen Australia’s tourism industry
- › seek consular and passport services.

Austrade helps companies around the world to identify and take up investment opportunities in Australia as well as to source Australian goods and services. Our assistance includes:

- › providing insight on Australian capabilities
- › identifying potential investment projects and strategic alliance partners
- › helping you identify and contact Australian suppliers.

W austrade.gov.au

E info@austrade.gov.au

REFERENCES

1. CSIRO, Annual Report 2016–17, pg. 33
2. World Allergy Organization, worldallergy.org/UserFiles/file/WorldAllergyWeek2013final.pdf, accessed 26 March 2018; foodmag.com.au/new-partnership-develop-treatment-peanut-allergies/#_ftn1
3. Australasian Society of Clinical Immunology and Allergy (ASCI), National Allergy Strategy, nationalallergystrategy.org.au/about-us, accessed 9 April 2018
4. Coeliac Australia, coeliac.org.au/coeliac-disease, accessed 9 April 2018
5. CSIRO Food Sensory Science, csiro.au/en/Do-business/Partner-with-our-Business-Units/Do-business-Agriculture-Food/Food-innovation-centre/Our-expertise/Sensory, accessed 30 April 2018
6. Australasian Society of Clinical Immunology and Allergy, Food allergy, allergy.org.au/patients/food-allergy/food-allergy, accessed 17 April 2018
7. Research Institute of Organic Agriculture (FiBL), The World of Organic Agriculture 2018, organic-world.net/yearbook/yearbook-2018/key-data.html, accessed 23 March 2018
8. Australian Organic, Australian Organic Market Report 2018, May 2018, austorganic.com/ao-market-report
9. As above
10. As Above
11. Department of Agriculture and Water Resources, agriculture.gov.au/ag-farm-food/food/organic-biodynamic, accessed 23 March 2018
12. Department of Agriculture and Water Resources, agriculture.gov.au/export/controlled-goods/organic-bio-dynamic/national-standard, accessed 23 March 2018
13. Australian Certified Organic, aco.net.au/organiccertification/farming, accessed 23 March 2018
14. Maternal and Child Health Journal, December 2015, Volume 19, Issue 12, pp 2598–2604, The nutritional profiles of baby and toddler food products sold in Australian supermarkets, link.springer.com/article/10.1007/s10995-015-1778-y, accessed 23 March 2018
15. United Nations, World Population Ageing 2017, un.org/en/development/desa/population/publications/pdf/ageing/WPA2017_Highlights.pdf
16. Euromonitor, Sports Nutrition in Australia, October 2017
17. As above.
18. Australian Institute of Health and Welfare, An interactive insight into overweight and obesity in Australia, November 2017, aihw.gov.au/reports/overweight-obesity/interactive-insight-into-overweight-and-obesity/contents/how-many-people-are-overweight-or-obese
19. Australian Natural Care, Top 15 superfoods, ausnaturalcare.com.au/health/life-style/nutrition/top-15-superfoods
20. AgriFutures Australia, Focus on Kakadu plum, agrifutures.infoservices.com.au/items/14-115
21. AgriFutures Australia, Emerging business models for the Kakadu plum industry, February 2018, agrifutures.com.au/wp-content/uploads/publications/18-003.pdf
22. Euromonitor, Fortified/Functional Packaged Food in Australia, May 2017
23. Food Standards Australia New Zealand, Mandatory Fortification, foodstandards.gov.au/consumer/nutrition/folicmandatory/documents/Mandatory%20Fortification%20Brochure%20for%20Health%20Professionals.pdf, accessed 26 March 2018
24. Frost & Sullivan, Functional and Luxury Foods Market Analysis, November 2015
25. Dairy Australia, dairyaustralia.com.au/industry/exports-and-trade/international-market-overview, last accessed 12 April 2018

austrade.gov.au



Australian Government
Australian Trade and Investment Commission

