

Newsletter

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About Rural Funds Management

Rural Funds Management Limited (RFM) is one of the oldest and most experienced agricultural fund managers in Australia. RFM has a 24-year history and operates from a head office in Canberra, and offices in Sydney and Queensland. The company employs more than 100 staff in fund and asset management activities.

Established in 1997, RFM manages approximately \$1.5b of agricultural assets. This includes three investment funds for which RFM is the responsible entity. Assets are located across New South Wales, Queensland, South Australia, Western Australia and Victoria.

The Rural Funds Group (RFF) is RFM's largest fund under management. RFF is an ASX-listed real estate investment trust and owns a \$1.2b portfolio of diversified agricultural assets including almond and macadamia orchards, premium vineyards, water entitlements and cattle and cropping assets.

RFM's company culture is informed by its long-standing motto of "Managing Good Assets with Good People". Scan the QR code to learn more.



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Image: Header harvesting barley at sunset, Lynora Downs, central Queensland, November 2021.

Cover image: Moving cattle on horseback during a snow flurry, Cobungra, Victorian high country, October 2021.



Understanding China's food systems

David Bryant, Managing Director

*"Fashion is in Europe, living is in America, but eating is in China."*¹

China is the world's largest food producer, food consumer and food importer. Understanding the food systems and trading opportunities in this country is sensible for investors in agricultural assets. A good place to begin this task, is to consider the nation's food culture.

Food culture

As one of the world's great civilisations, China has a long and well documented history – a history punctuated with periodic famine caused by floods, droughts, civil wars, foreign invasions and failed government policy. Millions have died from hunger in China within living memory. Food security, food safety and food quality remain to this day a

core priority of government, so that food consumption can continue to bind families and foster friendships.

Food eaten with others in China serves social purposes. Sharing a meal with another is used to establish or maintain relationships. A formal family dinner, which will include close friends, will include 4–6 cold dishes and 8–10 hot dishes. Rare and expensive foods can be served on occasions to project wealth and high social status. The industries that now mass produce these rare foods have become huge, such as global birds nest production, made from solidified swiftlet saliva estimated to be worth \$6.5 billion annually.

Cuisine and eating habits vary between regions, with rice a staple of the subtropical south and wheat

flour, used in steamed bread and noodles, the staple of the temperate north. These habits have travelled with those that made up the diaspora of Chinese in the nineteenth and twentieth centuries and, more recently, with the massive migration of people from rural areas to often distant Chinese cities.

Like most cultures, food is used in celebration of events, with mooncakes for the Mid-Autumn Festival, dumplings for the Spring Festival and birthdays celebrated with noodles and peaches. Specific foods take on symbolic characteristics, such as peanuts for longevity, oranges and chestnuts for good luck and glutinous rice balls meaning the family will stay together.

Food consumption is changing

One-third of Chinese consumers in a recent survey rate freshness as their top priority, with only 4% saying "cheapest option available" was most important.² In Australia, only 9% prioritised freshness, while 17% were focused on price. In China, 90% of consumers said they would pay a premium for healthier food, while in Australia just 51% think this way (see Figure 1).

Of particular interest to readers may be the changes in consumption habits for beef. Two major events affecting this category have been the outbreak of African Swine Fever (ASF) in China, causing a big reduction in pork supply, followed by the outbreak of COVID-19, which changed where people eat.

The shortage of pork from ASF caused pork prices in China to double in late 2019 (see Figure 2). Consequently, demand for beef increased, with corresponding price increases. By the beginning of 2021, pork production recovered and prices dropped to prior levels, but beef prices have remained high. According to a recent Rabobank report,³ this may be because retail demand has formed a solid base, making beef pricing less dependent upon pork, the traditional staple meat protein.

Prior to COVID-19, about 70% of beef was consumed outside homes, most commonly at hot pot restaurants, where diners cook sliced beef, beef balls and other meats in a hot pot of flavoured broth. With the onset of COVID-19 and lockdowns, sales in the food service industry dropped substantially, but hot pot revenue only declined 7.5%. This was a result of restaurants adopting home delivery and the supply of packaged instant products. Following the removal of lockdown restrictions, beef sales through supermarkets and e-commerce have remained robust, perhaps evidence of the consumers' newfound mastery of beef consumption at home.

Figure 1: Consumers likely to pay a premium for better quality healthier food in the next 12 months. PwC survey, 2020.²

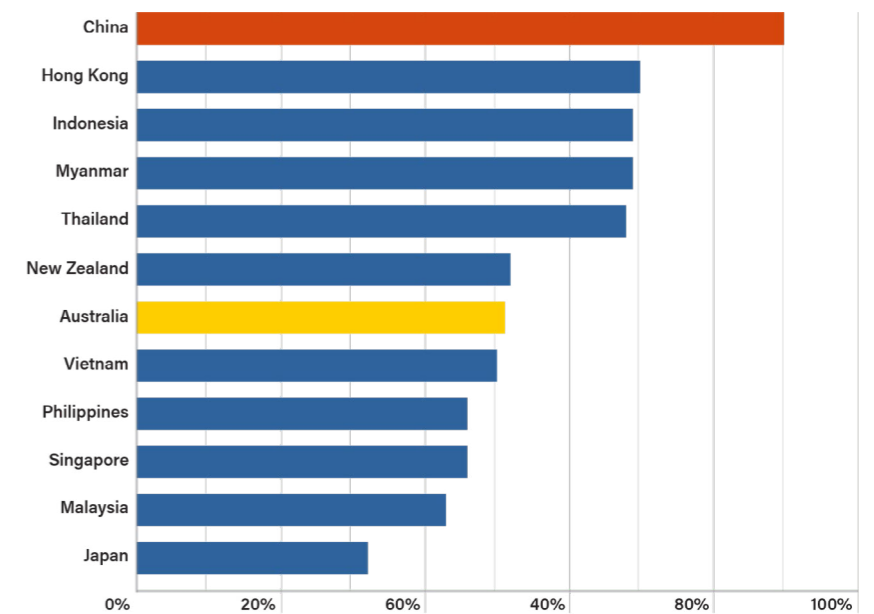
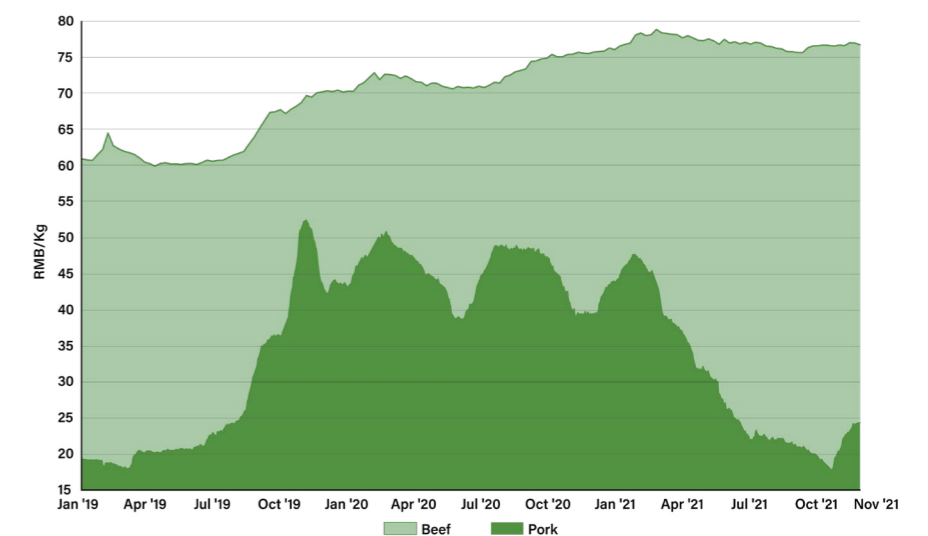


Figure 2: China weekly pork and beef price, in renminbi (RMB) since January 2019 to November 2021.³

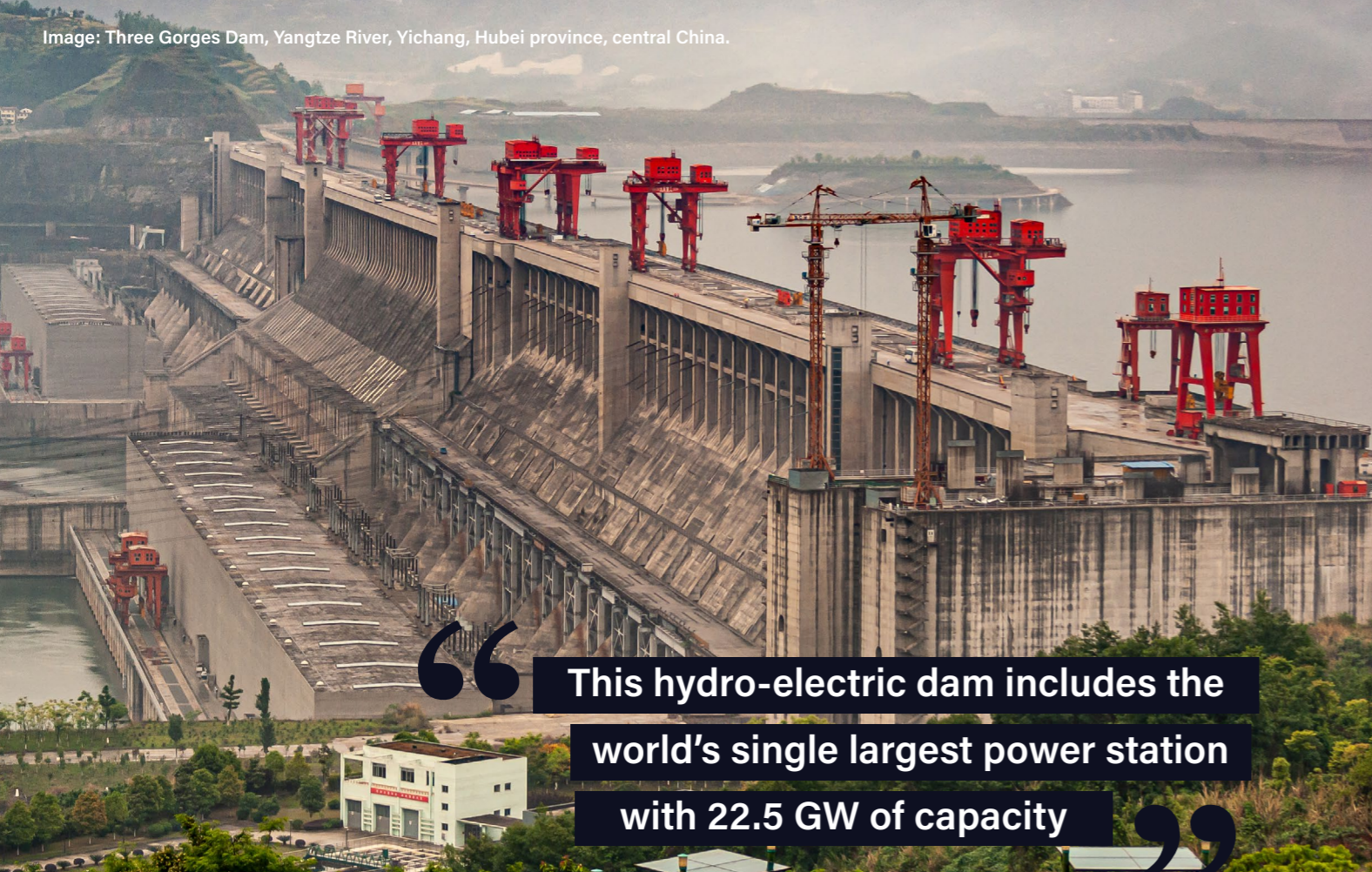


Beef sales, made direct to the consumer through online shopping, have been a feature of the development of Chinese e-commerce. A decade ago, beef was not consistently available in traditional marketplaces, which provided an avenue for developers of online markets to differentiate, through its offering. With the enthusiastic adoption of online shopping in China, it is thought that e-commerce is now more important than supermarket sales for the distribution of beef. And the future of this industry is bright, with the recent

IPO prospectus for Dingdong Maicai, an aptly named fresh food delivery business, stating e-commerce will continue compound growth at 30% per annum through to 2025.

Land and water

Probably the most significant factor that drove China's exceptionally large population was access to arable land and water supplies that were harnessed for irrigated food production. The consequent reliable and ample food supply enabled population growth, which



“ This hydro-electric dam includes the world’s single largest power station with 22.5 GW of capacity ”

paradoxically caused China’s land and water supply *per capita* to shrink.

Producing food for so many people is a challenge because arable land, the stuff on which food can be cultivated, is only 0.8 ha per capita or one-quarter of the global average. To make matters more challenging, two-thirds of China’s arable area is low-yielding fields on hills and mountains.

Freshwater resources per capita are currently 1.9 megalitres (million litres or ML) compared to a global average three times higher, and an Australian resource ten times higher. In the more arid north, water scarcity is acute, with residents of Beijing, for example, restricted to just 0.18 ML per capita in 2020.

Infrastructure projects designed to address water scarcity have been constructed over the past two millennia, with the Three Gorges Dam on the Yangtze River, completed in 2012, being a recent example. This hydro-electric dam includes the world’s single largest power station with 22.5 GW of capacity, six times

larger than the whole of the Snowy Mountains Scheme in Australia. The dam can store up to 40,000 gigalitres (billion litres or GL) of water, about five times more than the Snowy Scheme.

As a consequence of being built on a geological fault and the massive weight of impounded water, the dam has caused thousands of earthquakes of low magnitude, with the largest being 5.1 on the Richter scale. These earthquakes were anticipated in constructing the dam, with an expectation of a maximum magnitude of 6.⁴ Perhaps relocating 1.24 million residents to construct a dam that holds back a 110 metre wall of water, with tens of millions of people downstream, is evidence of the nation’s determination and ability to command its water supply, despite the associated tremors.

Another large water project is the South to North Water Diversion Project (SNWD), a multidecade project that aims to ultimately divert 45,000 GL annually – about twice the average discharge of the Murray Darling Basin if no water was

extracted. The project consists of three routes using canals, pipes and pump stations, to enable the transfer of water from the reliable Yangtze River in the south to drier northern regions.

The eastern route, begun in 2002, incorporates the Grand Canal, a network of interconnected canals completed in AD 609. By 2013, the eastern route was delivering water with additional construction due to take water delivery further north. At completion this route will be 1,150 km long, with 23 pumping stations to keep the water moving along the coastal plain.

The central route began providing water to Beijing from 2014, with further expansion under way. At 1,264 km in length, the completed canal can deliver around 12,000 GL annually, an amount equal to the entire annual extractions from the Murray Darling Basin in Australia. The canal utilises gravity to transport water along its route, which includes two massive tunnels that cross 70 metres beneath the Yellow River.

Small farms and Hukou

While China’s ability to build infrastructure is beyond doubt, its agricultural sector is challenged by two additional and connected characteristics. China’s farms are among the world’s smallest and are possibly getting smaller as a side effect of the nation’s unique household registration system, called Hukou.

It is estimated that there are 200 million farms in China (see Figure 3), with an average size of just 0.43 ha (see Figure 4) and with 92.5% being less than 2 ha.⁵ Most of the people who operate or depend on these enterprises for their livelihood are poor and uneducated. Yet this is the group of people tasked with providing a nation of 1.4 billion people with sufficient fresh and safe food to eat.

The combination of the requirement for increasing farm productivity and a poorly educated workforce means that China’s agricultural sector is an exceptionally high user of agricultural chemicals. Despite farming just 9% of global cropland,⁶ Chinese farmers are consuming around 30% of the world’s synthetic fertiliser and 43% of global pesticides.⁷ It is estimated that over 60% of these agrochemical inputs are wasted,⁸ causing economic inefficiencies and environmental problems.

Studies have found that increasing farm size would provide a reduction in agrochemical use, while increasing farm productivity.⁹ However, the Hukou household registration system is impeding progress in this regard. While decades of rural migration to the cities has reduced China’s rural population to 40%, 64% of the national population remains registered as rural.

Hukou is a citizen registration and identification system operated like an internal passport system. It is used to control the rate of internal migration of rural residents to cities by requiring permits for registered

rural residents who wish to stay and work in cities. The system denies immigrants access to government services in the cities, such as education, health care and social security. Because rural immigrants residing in cities lack certainty or permanent residency, they have an incentive to retain the family farm, in the event they are forced to return.

An additional feature of China’s agriculture is that land cannot be owned by farmers; instead it is leased for periods of around 30 years. Given this finite tenure and the fact that land is frequently resumed

for urbanisation, farmers lack both access to finance and long-term incentive to invest in development of what are very small farms anyway.

Reforms to the country’s Hukou system and rural land tenure have occurred from time to time over the past decades, and further reform is required if the country is to achieve greater efficiencies in food production. These requirements are however being balanced by a determination to control migration to a rate that matches urban services and job creation.

Figure 3: Top five countries by number of agricultural holdings and agricultural area.⁵

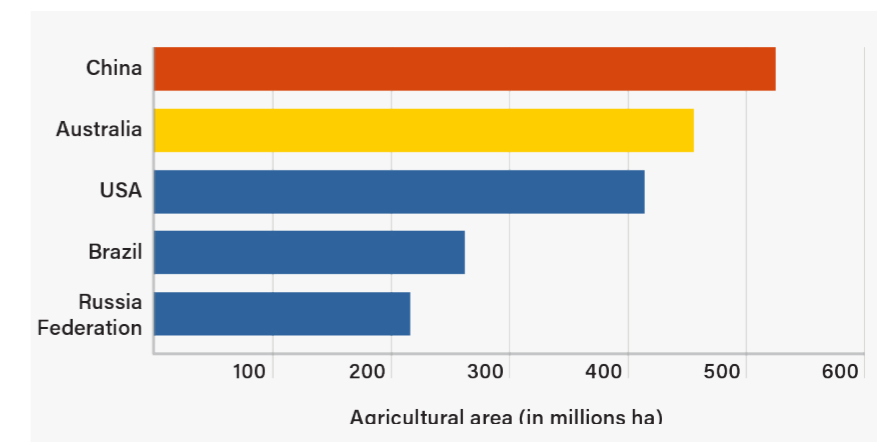
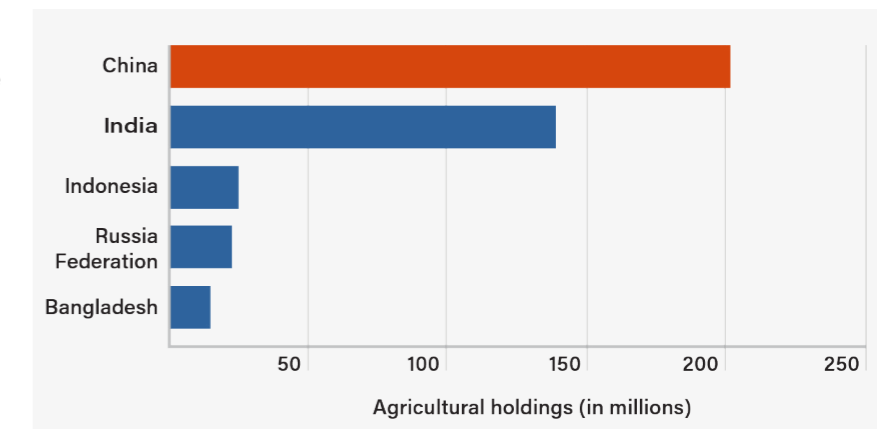
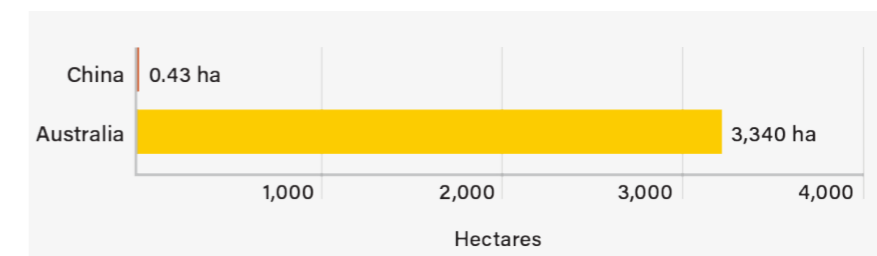


Figure 4: Average farm size in China and Australia, 2000.⁶



Trade

'I set no value on objects strange or ingenious, and have no use for your country's manufactures.'

Emperor Qianlong's response to British demands for greater trade, 1793.¹⁰

In the same year that the 80-year-old Emperor Qianlong rebuffed British trade demands, the British Parliament formalised a monopoly for the East India Company over the opium trade between India and China. This Act accelerated the shipment of opium to China, which began a chain of events and wars that caused more than a century-long national addiction to opium, two opium wars that forced the drug into the country and the denial of tariff autonomy because of the creation of treaty ports. So began China's Century of Humiliation. Having experienced trade with western characteristics, it is little wonder that China seeks autonomy today in its trade in food. Following accession to the World Trade Organization in 2001, China's imports of agricultural commodities have grown and changed. During

the first decade following this key event, imports of land-intensive bulk commodities such as soybeans, corn and cotton grew ten-fold to around \$90 billion per annum but have since flattened. Meanwhile, imports of consumer-oriented foods such as dairy, beef and tree nuts have risen twenty-fold to \$80 billion in the past 20 years, with many categories still increasing at rates of around 20% per annum.

Despite impressive growth in imports, sudden changes in trade policy have adversely effected shipments of food to China for a range of reasons. The recent restrictions on several Australian food exports are an example of seemingly arbitrary change, while changes in the structure of the infant milk formula (IMF) market is an example of a nation determined to create a level of self-sufficiency in its own food systems.

Manufacturers of IMF have until recently been one of the fastest growing groups of ASX stocks that could be considered agricultural.

However, in recent times sales to China have slumped as a consequence of a 2019 Chinese government plan to increase domestically produced IMF to a 60% market share. In addition, China's births have declined from 17.5 million in 2015 to a forecast of 10 million in 2021.¹¹ While some trade restrictions may appear arbitrary, in hindsight the growth and subsequent slowdown in the IMF market was probably predictable.

Conclusion

As a country with enormous resources, not the least being its people, China is rightly determined to choose whose 'manufactures' it has use for. It is a country with many poor people, whose economic development is a genuine concern of capable technocrats and party leadership. Reform of its agricultural sector will take a long time and regardless of the success or extent of these reforms, demand from an increasingly prosperous urban population will continue to grow.



Image: An aerial view showing a patchwork of small fields in rural China.



Image: Longsheng Rice Terraces, Longji Rice Terrace (Dragons Backbone) in Longsheng County - Guangxi Province, China.

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Image credits

Rice fields among karst formations in the Guangxi region of China. Creativefamily/Adobe Stock #190089034. Three Gorges Dam, Yangtze River, Yichang, Hubei province, central China. Klodien/Adobe Stock #426438718. Longsheng Rice Terraces, Longji Rice Terrace (Dragons Backbone) in Longsheng County - Guangxi Province, China. Cedar/Adobe Stock #2556242758. An aerial view showing a patchwork of small fields in rural China. Greg Brave/Adobe Stock #280511305.

Rural Funds Group update: acquisitions and developments in northern Australia

James Powell, General Manager – Investor Relations and Marketing

Over the past six years, Rural Funds Group (RFF) has made Queensland a strategic focal point for the expansion and development of its portfolio of agricultural assets, acquiring over 700,000 hectares (ha) of properties and over 100,000 megalitres (ML) of water entitlements worth a combined \$543.6 million. This figure includes the recent \$126.4 million acquisition of cattle, macadamia and cropping properties in the state's central and south east, announced in November 2021.¹

Queensland-based assets now represent 46% of the RFF portfolio, a number that is expected to grow as assets are developed to improve their productivity, or converted to higher and better use.¹

This article revisits the strategy for investing in Queensland and provides an update on recent acquisitions and activities in this part of the portfolio.



Image: Forage oats, Rewan, central Queensland, December 2020.

In June 2016, RFM published a discussion paper which outlined RFM's considered approach to diversify assets into new climatic zones.

The paper included a study of rainfall data from across Australia. The study demonstrated low to negative correlation in rainfall variability between the northern, western and south-eastern parts of the country.

The resultant RFF climatic diversification strategy aimed to reduce the likelihood of lessees experiencing adverse climatic conditions at the same time, by acquiring assets in climatically diverse locations.

To underline the climatic diversification strategy, RFF continues to present the location of its assets on a map sourced from the Bureau of Meteorology (see

Figure 1). The map shows different rainfall zones, for example; summer predominant in the north and winter predominant in the south, rather than the usual state and territory boundaries.

The strategy also achieves additional layers of diversification within the portfolio, such as by agricultural sector. This is because certain commodities are only suitable for growing in specific climatic zones.

For example, while almonds and macadamias are both tree nuts, they require distinctly different growing conditions. In fact, after owning almond orchards for several years, one of the first investments RFF made in northern Australia was three macadamia orchards in Bundaberg, Queensland.

In recent years RFF has acquired additional land and water to expand its exposure to the macadamia sector in Queensland.

Macadamias are a versatile food, sought after by consumers, from an industry that is still developing production gains and capacity.

Macadamias account for only one per cent of the world trade in tree nuts, which is growing at a rate of seven per cent a year. Healthy eating trends and educated consumers looking for healthier options have contributed to the surge of macadamia popularity and production. Production increases by companies such as RFM in Australia, and worldwide, will propel what was once a boutique industry into a commodity that can be relied upon by an increasing number of markets.³

RFM believes the long-term prospects for this industry are compelling, as noted in David Bryant's December 2020 Newsletter article 'A world going nuts', which can be accessed from RFM's website.

Update on macadamia orchard developments

RFM is planning to develop 5,000 ha of macadamia orchards in three locations: Rockhampton, Bundaberg and Maryborough. The locations of the development assets, and the original orchards purchased in 2016, are presented in Figure 2.

RFM expects to have 1,000 ha of the orchard development complete by the end of the current financial year. The initial 500 ha is being spread across Rockhampton (50 ha), Bundaberg (100 ha) and Maryborough (350 ha).

Figure 1: Climatic diversification, assets and sectors map²

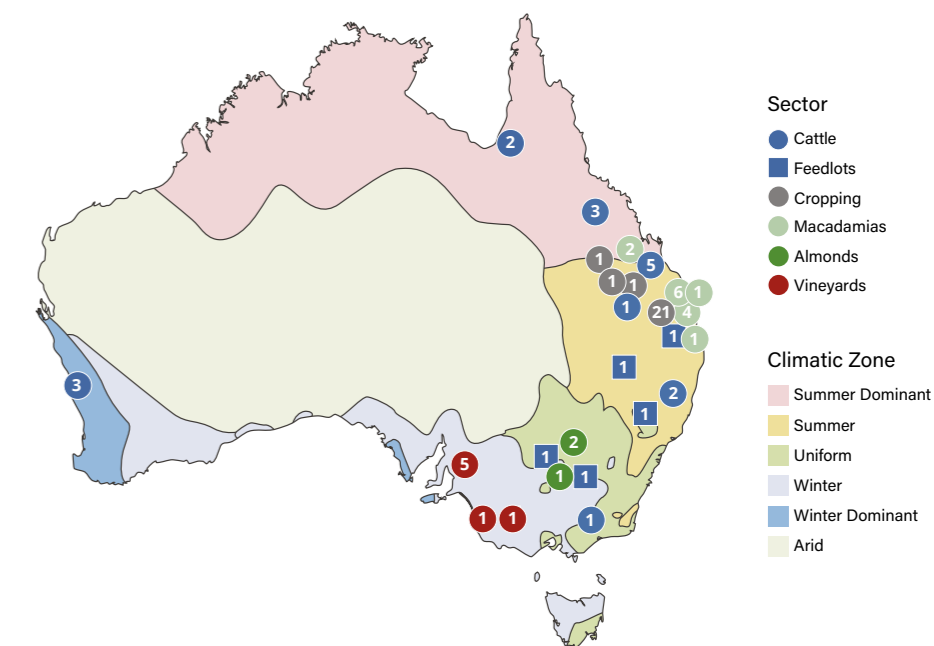


Figure 2: Macadamia development locations



In the Rockhampton region, ground preparation is being completed on the property 'Riverton'.

Along with the ground preparation work, RFM is preserving previously cleared creeks and waterways on the property, enabling re-growth of their natural habitat, which slows water run-off and reduces the risk of soil erosion (see Figure 3).

Installation of the irrigation system on the property began in September, and tree planting commenced in December 2021.

Riverton has access to water entitlements which will support the early stages of the development and is adjacent to the 'Rookwood Weir' site. To support the future orchard plantings RFF acquired 21,600 ML

of water entitlements that will be sourced from the Rookwood Weir upon its completion.⁴

The Rookwood Weir will capture water in the lower Fitzroy River for use across the region. Construction of the weir and its infrastructure will provide water security to multiple industries, including agriculture. The project will boost the regional economy by creating jobs and increasing growth and diversity across industries, as evidenced by the macadamia developments being undertaken by RFF. Figure 4 shows the significant progress in the Rookwood Weir development which is expected to be complete in 2023.

The water secured via the Rookwood Weir, in addition to water already owned, will be used to support up to 2,500 ha of macadamia orchards and

irrigation for cropping and cattle production on other RFF properties located on the Fitzroy River (see Figure 7). Future plantings of macadamia orchards will also occur on 'Rookwood Farms'; an aggregation of properties assembled by RFF, which has access to the Fitzroy River (see Figure 2 and 7).

The other major development region for the macadamia orchards is Maryborough, located approximately 330 kilometres south of Rockhampton.

At Maryborough, the process of converting sugar cane farms to macadamia orchards commenced at the 'Glendorf' farm earlier in the year.

The first phase of planting at Glendorf began in May 2021 and covered an area of 51 ha, with more

than 16,000 trees planted. The second phase of plantings targeting 196 ha started in October 2021. Figure 5 shows a picture of a crew planting trees using a 'tree auger' that applies a measured amount of water, after the hole is drilled at precise intervals. Applying water into the ground allows the tree to absorb water immediately, reducing stress and transplant shock.

Following the completion of plantings at Glendorf, ground preparation and the installation of irrigation equipment at another Maryborough property 'Charleville' started and is now nearing completion. Following this, ground preparations have begun on a third farm, 'Dowlings'.

Adjacent to orchard development sites in Maryborough, active preservation and improvement of waterways to protect flora and promote biodiversity is also being planned (for further information on environmental sustainability initiatives being undertaken by RFF on macadamia development sites and other assets, see the following article in this Newsletter).

Located north of Maryborough at Bundaberg is a macadamia tree nursery owned by RFF. The tree nursery was a strategic acquisition, to provide sufficient quantity and quality of macadamia trees to support the developments. RFF has expanded the capacity of the nursery by approximately four-fold so that it can supply the majority of the planting material for RFF's developments. Figure 6 shows a newly constructed shaded tree growing area that provides protection for young growing trees until they are required for planting.

Now that the expansion of the nursery is materially complete, it has been leased to an external operator under an arrangement that ensures the supply of trees to RFF, while outsourcing the management of the operations.

In addition to the development of new orchards, in November 2021 RFF announced the acquisition of 475 ha

Figure 3: Land preparation for macadamia orchards at Riverton



Image: Riverton, central Queensland, September 2021.

Figure 4: Rookwood Weir construction site



Image: Rookwood Weir construction site, Fitzroy River, central Queensland, September 2021.

Figure 5: Macadamia tree planting at Glendorf



Image: Glendorf orchard, Maryborough, Queensland, October 2021.

Figure 6: Macadamia tree nursery expansion.



Image: Nursery Farm, Bundaberg, Queensland, March 2021.

of mature orchards in two locations south of Maryborough.

The immediate income able to be generated from the mature orchards complements the orchard developments and enhances their marketability to prospective lessees. RFF will operate the assets on behalf of RFF until leased.

Update on recent acquisitions: cattle and cropping developments

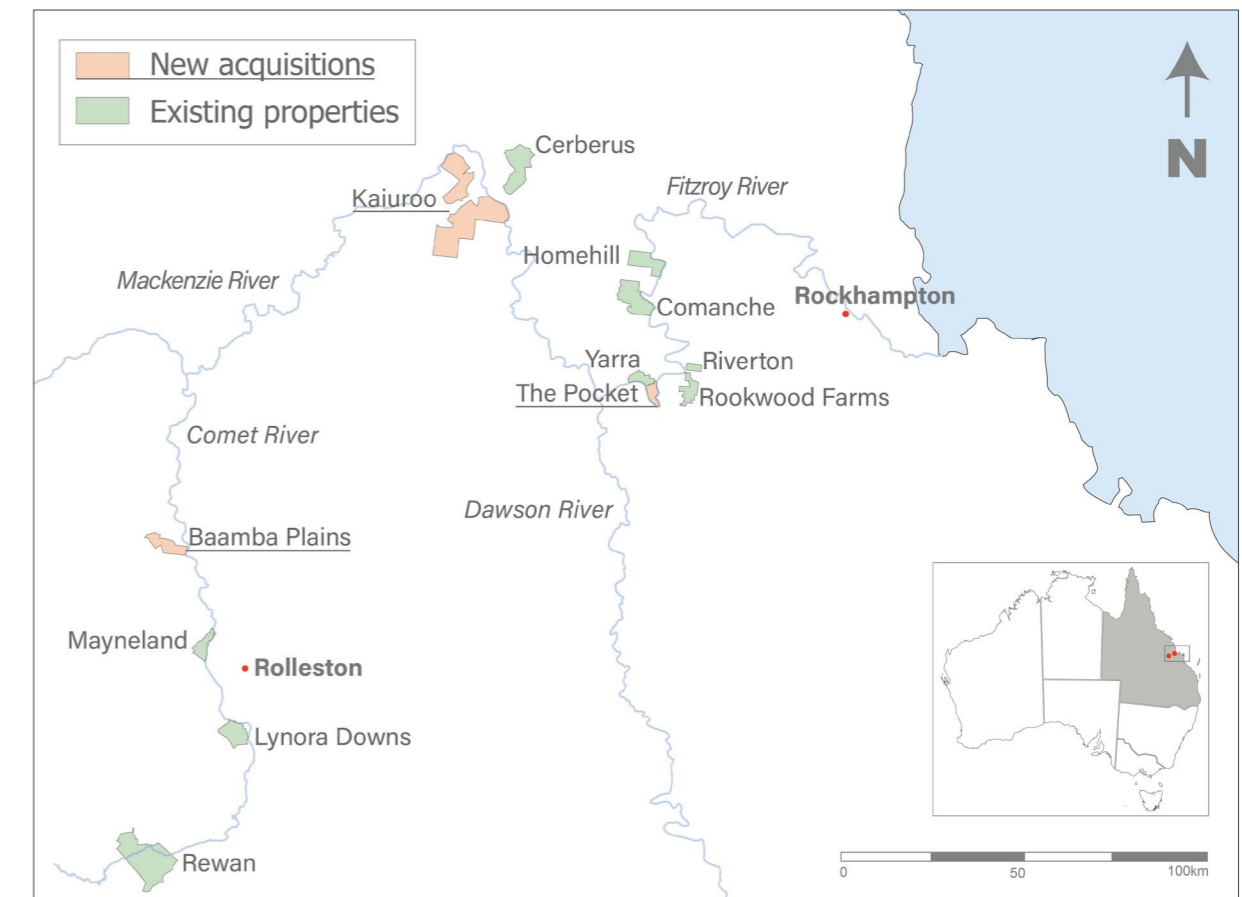
In addition to the mature macadamia orchards, in November 2021 six cattle and cropping properties in central Queensland were acquired.

This includes an aggregation of four cattle and cropping properties,

referred to as 'Kaiuroo', a cropping property called 'Baamba Plains', and a cattle and cropping property called 'The Pocket'.⁵ These properties total 33,926 ha and include 33,181 ML of water entitlements. The locations of the new properties are highlighted on Figure 7.

Figure 7 also includes seven other cattle and cropping properties accumulated over the past five years:

Figure 7: Central Queensland properties



“ the transaction provided validation of RFM’s strategy of identifying natural resource assets with development potential ”

Rewan, Lynora Downs, Mayneland, Cerberus, Homehill (an aggregation with Glenroy), Comanche and Yarra. These properties total some 48,362 ha and have 34,139 ML of water entitlements.

Cattle property developments

Before providing an update on the current cattle property developments it is useful to revisit some of the earlier acquisitions.

One of the first cattle acquisitions was ‘Rewan’, a 17,479 ha cattle property, bought for \$30.1m in August 2016; the same year RFF announced its climate diversification strategy.

Initially RFM leased Rewan and commenced the implementation of three main productivity developments:

- pasture improvement – such as planting legumes;
- cultivation area –planted forage

- crops; and
- water points – which promotes better pasture utilisation.

The goal of these developments was to enable Rewan to increase cattle carrying capacity and daily weight gain. By developing assets to improve profitability for lessees, the value and possible rental returns are improved.

Through a combination of productivity improvements and the broader appreciation of agricultural land, the most recent independent valuation of Rewan was \$50.4m, an increase of \$20.3m (including capex).

Once the initial productivity developments were in place, RFM on-leased Rewan to the Australian Agricultural Company (ASX: AAC). The rent was increased to reflect the improved productivity and value of the property. Leasing Rewan to AAC also established the

relationship with a high-quality, corporate lessee.

Furthermore, the transaction provided validation of RFM’s strategy of identifying natural resource assets with development potential. This approach of developing assets prior to on-leasing has continued on other cattle properties such as ‘Homehill’ and ‘Comanche’ (see Figure 7). Following their initial development, RFM is now in discussions with corporate lessees for these properties. Another central Queensland cattle property which is being further developed is Cerberus. RFM is currently generating agistment income for RFF while this occurs.

A separate strategy RFM has used to increase the appeal of properties to lessees is to provide scale by aggregating. For example RFM aggregated Homehill with a property called Glenroy, and, more recently, The Pocket was purchased adjacent to Yarra (see Figure 7). These aggregations now represent 4,925 ha and 4,090 ha respectively – close to doubling their size through the process.

RFM is now undertaking initial productivity developments on Yarra and The Pocket prior to seeking lessees.

Cropping property developments

RFM’s strategy to improve the productivity of cropping properties in northern Australia includes developing water infrastructure to support additional irrigated cropping area. These properties will typically grow a number of crop types throughout the year but are focused on higher value cotton production. Figure 8 shows an example of irrigated cotton developments on ‘Lynora Downs’, which was acquired in December 2016.

In November 2021 two similar acquisitions were made: ‘Kaiuroo’, a 27,879 hectare aggregation and ‘Baamba Plains’, a 4,130 hectare

property. Included in the acquisitions are 26,468 ML of water entitlements, which will be utilised as part of the productivity developments. An extended settlement date of up to two years has been negotiated for Kaiuroo. This allows RFM to begin productivity developments and seek a lessee prior to settlement. RFM may settle the property earlier, which would result in a reduction in the purchase price.

Baamba Plains, which will be operated by RFM on behalf of RFF while developments commence, is located 30 kilometres to the north of another cropping property, ‘Mayneland’. Over the past two years, RFM has entered into a short term lease arrangements while Mayneland is developed. Development of irrigation infrastructure and total irrigable area is expected to be complete in the next year. In time, Baamba Plains and Mayneland may be jointly marketed to lessees to provide operational scale.

Therefore the cropping properties present similar potential benefits as RFF’s cattle properties, that is, providing development opportunities to attract quality lessees and to generate higher income.

Conclusion

RFM first started acquiring cattle and cropping properties and macadamia orchards in Queensland in 2016. This was prompted by a desire to achieve climatic diversification, but with the knowledge that commodity and counterpart diversification would be co-benefits of this strategy.

Acquisitions in Queensland have also broadly provided two opportunities to generate additional value for RFF unitholders; either productivity improvements (such as on cattle or cropping properties) or conversion to higher and better use (such as macadamia developments).

RFM has been able to use its operating experience to improve the productivity and functionality of RFF assets prior to on-leasing them to external parties. Examples include Rewan and the macadamia nursery. RFM is currently in discussions with corporate lessees for other properties.

There is also reason to be optimistic about potential future income and capital growth from the portfolio, given the number and quality of assets RFM is developing prior to leasing.

Importantly, the developments have occurred whilst maintaining distributions to RFF unitholders: FY22 forecast distributions total 11.73 cents per unit, an increase of 4% on the prior year, funded from forecast adjusted funds from operations of 11.8 cents per unit.

Figure 8: Cropping property development

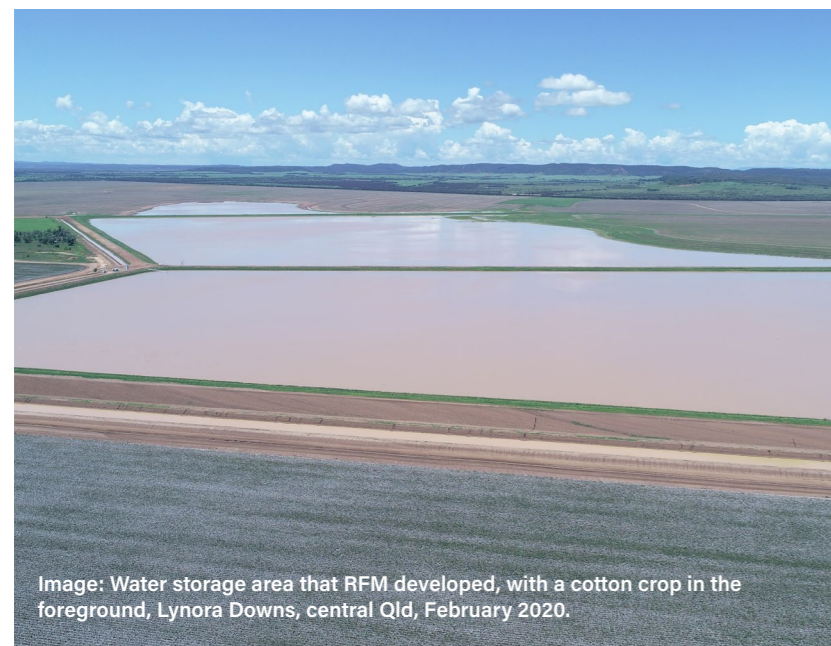
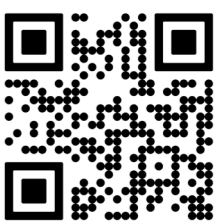


Image: Water storage area that RFM developed, with a cotton crop in the foreground, Lynora Downs, central Qld, February 2020.



RFM regularly publishes video updates on assets and developments. To see the videos please scan the QR code.



Notes and reference

1. Figure quoted include properties in Queensland acquired between January 2016 to November 2021. Includes assets contracted but not settled. Only the deposit amount (\$17.2m) included for the Kaiuroo acquisition, settlement expected in 2023. Adjusted property assets values (at 30 June 2021) and purchase prices (assets acquired since 30 June 2021) used.
2. Numbers in the circles/boxes on map show number of assets. Blue square boxes denote cattle feedlots. Includes assets contracted but not settled.
3. Kim I, ‘What makes macadamia nuts the most expensive nuts in the world, at \$25 per pound’, Business Insider Australia website, 2019.
4. As announced on the ASX on 17 December 2020. Contracts were exchanged with Sunwater Limited for the purchase of 21,600 ML Medium Priority Lower Fitzroy water, sourced from the Rookwood Weir.
5. Baamba settled 30 November 2021, The Pocket settled 8 December 2021 and in November 2021, Kaiuroo was contracted to exchange with an extended settlement of up to 24 months.

Environmental sustainability initiatives being conducted by RFM

Rural Funds Group (RFF) owns a portfolio of Australian agricultural assets and the stewardship of these assets is of critical importance to the performance and growth of the fund. As part of RFM's ongoing strategy to mitigate and improve climate related risks, RFM will continue to monitor emissions and seek to implement infrastructure and practice changes.

The main activities in agriculture that produce greenhouse gasses (GHG) are fuel consumption (producing carbon dioxide, or CO₂), growing cattle (which produce methane, or CH₄) and the application of fertiliser (which produces nitrous oxide N₂O). The following case studies provide examples of initiatives RFM has undertaken in FY21 and those which are planned for FY22.

To read more about RFM's incorporation of Environmental, Social and Governance (ESG) considerations in the management of RFF, scan the QR code to see the most recent Annual Report.



Environmental impact assessment as part of macadamia developments

RFM has commenced an assessment of emissions study on a mature macadamia orchard. This will incorporate farm emissions from fuel, fertiliser use, and transportation of harvested macadamias to the processing facility.

Also during the planning stages of RFF's macadamia orchard developments, critical design principles that seek to minimise negative environmental impacts and optimise productivity are being considered. Examples include:

- detailed soil surveys and assessment of topography data. This allows water drainage plans to be designed to increase the likelihood that water flows from rain events are manageable in terms of volumes and velocities of water, to minimise soil erosion;
- optimal layout of irrigation design, providing operational efficiencies and reduced inputs, such as diesel consumption;
- precision tree planting and geo-referenced records, enabling the adoption of emerging low energy technologies including automation;
- high-specification dual irrigation systems, that provides targeted tree irrigation to maximise water use efficiency and minimise nutrient loss or leaching; and
- grassed interrows, which assists with the prevention of solids being removed with water run-off.

GHG reduction research and initiatives on cattle properties

During FY21 RFM commenced research on multiple projects which seek to quantify, reduce or offset GHG emissions on cattle properties.

The research has focused primarily on methods which have been outlined by the Australian Government Clean Energy Regulator and generally fall into two approaches; either reducing emissions that would normally be produced, or actively storing carbon in vegetation or soil.

The methods of which RFM commenced research are detailed below:

Beef herd management

During FY20 RFM in conjunction with Meat and Livestock Australia (MLA) undertook an assessment of the GHG emissions intensity of Mutton Hole, Rewan, Comanche and grazing land in NSW. Emissions intensity, rather than total emissions, is a metric used for assessing farming enterprises as it compares the GHG emissions generated per unit of farm product, such as kilograms of beef. Improved emissions intensity may be a result of higher farm production and a significant level of avoided emissions that would have otherwise been produced for the same level of output.

The report calculated that from 2016-17 to 2018-19 GHG emissions intensity declined by 17% on the New South Wales properties and 43% on the Queensland properties. The report identifies that improved feed quality and animal management are contributing factors to these results. A copy of the report is available on the MLA website.

During FY21 RFM engaged with a research scientist to continue this project to provide recommendations on activities which further reduce GHG emissions.

Soil carbon sequestration

Soil carbon is a part of the organic matter in soil. Improving soil carbon sequestration involves managing agricultural land to encourage increases in soil carbon, such as through changes to farm management practices and converting land usage. The efficacy of these changes is determined through soil sampling which establishes existing soil carbon levels and changes over time.

During FY22 RFM plans to engage an external consultant to assess baseline soil carbon levels on suitable properties and identify ways these may be increased.

Reforestation

During FY21 RFM has commenced assessment of reforestation projects. Reforestation involves planting trees to reduce the amount of GHG entering the atmosphere, as carbon remains stored in the trees while they grow.

During FY22 RFM plans to engage an external consultant to assess the application of tree planting on suitable properties.

Solar energy

Solar-powered water pumps utilise power from solar panels, pumping water from nearby water sources such as a dam or bore. These systems have replaced existing diesel-powered pumps, as well as being utilised in new installations.

The pumps provide a direct reduction in emissions, not only through reduced diesel usage, but also in the reduction of travel requirements for farm staff as regular refuelling of the pumps is no longer necessary.

During FY21 RFF funded the installation of 26 solar-powered water pumps on its north Queensland cattle properties Mutton Hole, Oakland Park and the Natal Aggregation.

Image: Cattle grazing in the paddock, Cobungra, central Victoria, September 2021.

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A photograph of a rural landscape featuring a green field with several cows. In the background, there are trees with yellow-green foliage and a hazy, overcast sky. The cows are of various colors, including brown and white, and black. The scene is captured from a slightly elevated perspective, showing a dirt path or rut in the grass.

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