

GREENER PASTURES 2

CRITICAL PATHWAYS TO CAPTURE
GLOBAL AGRICULTURAL OPPORTUNITIES

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FOREWORD

Greener Pastures 2 is part of a broader series of industry reports developed by ANZ and aims to support conversations around opportunities for Australian agriculture, to ensure ongoing growth and prosperity for the sector for decades to come.

In 2012, ANZ published “Greener Pastures: The Global Soft Commodity Opportunity for Australia and New Zealand” (GP1). This pivotal publication utilised extensive industry modelling and analysis to forecast a number of major drivers for Australia’s agricultural sectors for decades to come. In particular, GP1 modelled and forecast the different scenarios for the uptake in demand for agricultural products and the share of this which could potentially be filled by Australian exports.

The report identified the scale of capital required to achieve this potential, in terms of farm purchases, infrastructure development and supply chain enhancement. Policy recommendations were identified, aimed at enhancing the functionality of Australian agriculture.

A decade on from the release of GP1, this report, Greener Pastures 2 aims to serve two purposes:

- Provide a reflection on the predictions made in GP1 for Australian agriculture through the 2010s, highlighting the results compared to predictions, and the lessons from this period.
- Promote five key themes that are central to building on recent momentum – the impact of capital flows, green technology, sustainability practices, enhanced trade flows, and greater industry cohesion.

These five aspects of agribusiness are increasingly interlinked in what is an exciting yet complex outlook.

Greener Pastures 2 aims to generate vital questions and enhance industry discussions, in an effort to give Australian agriculture the best chance of reaching its full potential.



Shayne Elliott
Chief Executive Officer – ANZ



INTRODUCTION

Australian agriculture is arguably in the strongest globally competitive position it has ever been.

This position has come about through a combination of factors – in particular, a convergence of extended high prices for most agricultural commodities at a time when Australia had enjoyed a string of good production seasons, combined with the evolution of the overall sector to reach increasing levels of structural efficiency, resilience, and innovation.

The industry is fundamentally aware this period is likely to be a window of opportunity in a much longer cycle, given that Australia's agricultural trade competitors will inevitably see growth in their supply and exports before too long, while Australia's agricultural production volumes will also come off their current highs at some point in this cycle.

That said, it is the structural strength and fortitude of the Australian agricultural sector which will fundamentally underpin the long-term competitiveness of the industry.

The industry's fortitude has evolved due to a wide range of factors. The quality and safety of Australia's major agricultural products is unquestionably equal to the best in the world. The utilisation of technology to help create efficiency, productivity and sustainability gains has moved at a rapid pace.

This robust position of strength has been achieved by spending years building positive attributes and deepening understanding across many facets of Australia's agricultural landscape – moving the industry far beyond just being a producer of high quality traditional outputs of wool, sheep meat, beef and grain.

In an operating environment of highly deregulated industry structures, amidst the ever-present challenging natural landscape, and in the absence of subsidies for farmers, the industry continues to embrace innovation across all sectors and right through the supply chain.

Globally, through a period of volatility in global trade relationships, Australian agriculture has tirelessly pursued new market opportunities, seeking a balance between premium markets and an even spread of risk.

The ongoing growth of Australia's agricultural sector provides a significant return to the nation and is a vitally important component of the nation's economy.

Directly, employment generated by the sector stretches all the way from individual farms, every vineyard and every fishing boat to encompassing every processor, storage facility, retailer or port involved in the movement of Australia's agricultural goods.

Indirectly, secondary industries have an even wider reach, from farm services to input suppliers, to mechanics and building industries, to professional services, such as the growth in specialised agricultural legal and accounting providers.

Most importantly, in terms of continuing to fuel the growth of Australia as a nation, the agricultural sector can be relied on to provide the foundation for almost every rural and regional economy across the country.

While decentralisation from the capital cities enables many regional and rural centres to grow, much of the economic activity of these centres continues to rely on agriculture-related services. The increased population-flows from major cities to the country also brings new skilled workers closer to the opportunities in agriculture – giving rise to cross-benefits such as access to specialised labour, as well as enhancing the opportunities for new and innovative ideas to be utilised across the industry as a whole.

Agriculture is an industry that works in cycles – prices go up and down, rainfall patterns vary, and production volumes can change markedly each year. As a result, while the Australian agricultural sector may certainly enjoy the positive aspects of a series of good seasons, it is experienced enough not to get caught up in the moment. As such, while being open to the many new opportunities agriculture will provide, the industry must always be aware of all downside risks, and remain in the best possible position to work through them if necessary.

Australian agriculture can rightfully be proud of its achievements, and particularly in the share of world agricultural trade Australia enjoys despite the country's relatively small share of overall global production of most agricultural commodities. However, it is important for Australia to be aware of the developments and strategies of the major global trading competitors, as they vie ever more strongly for world markets.

LEARNING FROM THE PAST

The decade of the 2010s was the vital era in which the foundations for Australia's agricultural prosperity took shape.

Certainly, the decades prior each had their defining characteristics which permanently impacted the direction of Australian agriculture. The 1950s were the post-World War 2 recovery period, where the boom in demand for Australian agricultural exports led to strong capital flows into building both farm and supply chain infrastructure.

With the 'Green Revolution' changing agriculture globally in the 1960s, many Australian farms adopted an increasingly sophisticated usage of new fertilisers and seeds.

From the 1980s to the 2000s, the industry was increasingly impacted by the economic reforms, trade liberalisation and industry deregulation – highlighted by the abolition of both the Wool Reserve Price Scheme and the wheat single desk marketing monopoly.

In the 2010s, however, Australian agriculture underwent a new period of sophisticated development, capitalising on the building blocks leading up to that point. With global capital flows into agriculture production and supply chains increasing rapidly around the world, Australian agriculture moved quickly to position itself to be a key focus for new investment. As major global markets opened up, particularly in China and also across Asia and the Middle East, Australia utilised its relatively harmonious diplomatic relations and good agricultural trade reputation to gain a strong footing in many of these markets.

Domestically, during a period of challenging operating environments which included adjusting to deregulation, as well as managing a period of high interest rates, the Australian family farm gained in strength for a number of reasons, including advancements in agtech, more sophisticated farm operating structures, more employment opportunities in regional centres, and higher commodity prices.

This saw the family farm grow in importance as a source of progressively innovative production feeding into an increasingly demanding supply chain.

In 2012, ANZ published Greener Pastures: The Global Soft Commodity Opportunity for Australia and New Zealand (GP1). This pivotal publication utilised extensive industry modelling and analysis to forecast a number of major drivers for Australia's agricultural sectors for decades to come. GP1 modelled and forecast the different scenarios for the uptake in demand for agricultural products and the share of this which could potentially be filled by Australian exports.

The report identified the scale of capital required to achieve this potential, in terms of farm purchases, infrastructure development, and supply chain enhancement. Policy recommendations were identified, aimed at enhancing the functionality of Australian agriculture.

A decade on from the release of GP1, Greener Pastures 2 (GP2), aims to serve two important functions.

Firstly, to provide a reflection on the predictions made in GP1 for Australian agriculture through the 2010s, highlighting what actually happened and what can be learned from that period.

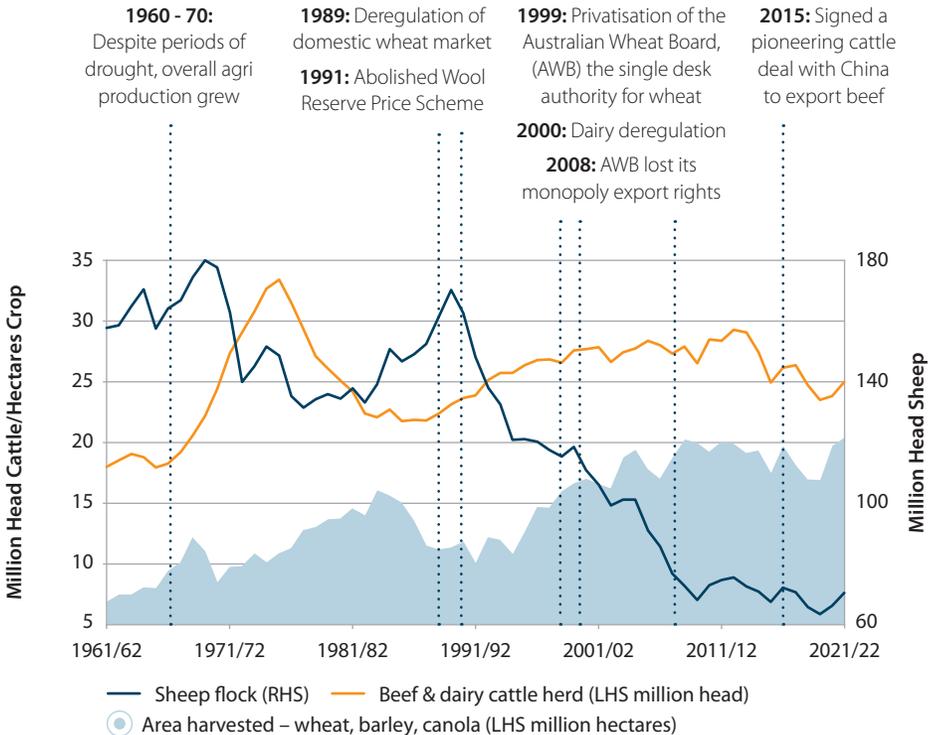
Secondly, to propose five major ways that stakeholders across the Australian agricultural landscape can work together – by understanding the impact of capital flows,

green technology, sustainability practices, enhanced trade flows, and greater industry cohesion – to ensure ongoing growth and prosperity for the sector in the decades to come.

These five aspects of agribusiness are increasingly interlinked, including the development of sustainability components into agricultural free trade agreements and the rapidly growing demand by investors for opportunities that combine both agricultural production and carbon credits.

GP2 aims to generate vital questions and enhance the discussions that all stakeholders across the industry should be having, in an effort to give Australian agriculture the best chance of reaching its full potential.

SIX DECADES OF AUSTRALIAN AGRICULTURE



Source: ABARES, ANZ



SECTION ONE

LESSONS LEARNED FROM
THE PAST DECADE





INSIGHT #1

AUSTRALIAN AGRICULTURE'S GROSS VALUE OF PRODUCTION GREW FASTER THAN EXPECTED

The Gross Value of Production (GVP) receives the most mainstream media coverage of all Australian agriculture economic data.

The GVP is the total price received by Australia's farmers for all agricultural products when ownership passes from the agricultural production sector, or farmgate, to the next stage, including processing and manufacturing. Examples of this include wool being sold to the processor or fruit being bought by a juice company.

While the GVP is not the only barometer of Australian agricultural growth, it is a very important one. It provides a strong indicator of the economic strength of the farming sector and its ability to innovate and grow. While it is impacted to a degree by changes in commodity prices – when production value and volume trends differ – it also highlights a growth rate for the industry to compare its trajectory against other major agricultural economies.

In 2010/11, Australian agriculture's GVP was \$49 billion. At that time, GP1 forecast that the sector would grow by a base case rate of 2 percent over the decade, rising to \$58 billion by 2019/20. This would have meant an overall cumulative gain of \$45.5 billion in extra production value over the decade.

In actuality, over that decade, GVP grew stronger than the base case. With an average growth rate of 3.2 percent, the Australian agriculture sector produced \$61 billion by 2019/20.

The surge in demand for meat highlighted a clear trend across the last decade as the percentage of Australian agriculture's GVP for meat overtook that of grain.

Export demand for beef drove up production – in 2019/20 beef production volume reached 2.4 million tonnes (mt) – up from 2.1mt in 2009/10 and doubled in value to \$14.6 billion during the same period. This generated higher than forecast prices, with the cumulative gain in GVP over the decade reaching \$85 billion – almost double the original forecast.

The strength of beef as Australia's highest value agricultural product emphasised the importance of developing and maintaining a rigorous biosecurity program. Global consumers increasingly sought beef that was not only of a high quality but also came with a strong food safety record. Australia's beef was essentially the only large volume product available.

A sustained period of restocking, like the one that followed the drought of 2018/19, is a challenge that may well have a major impact on GVP. Could high prices caused by tight supply compensate for lower volumes, particularly as the restocking program may well be a long one, as producers potentially seek to rebuild their herds well above pre-drought levels?

Unless the global beef industry experiences an unexpected shortage, Australia's restocking process should eventually bring about a period of notable reduction in supply tightness and an accompanying drop in GVP.

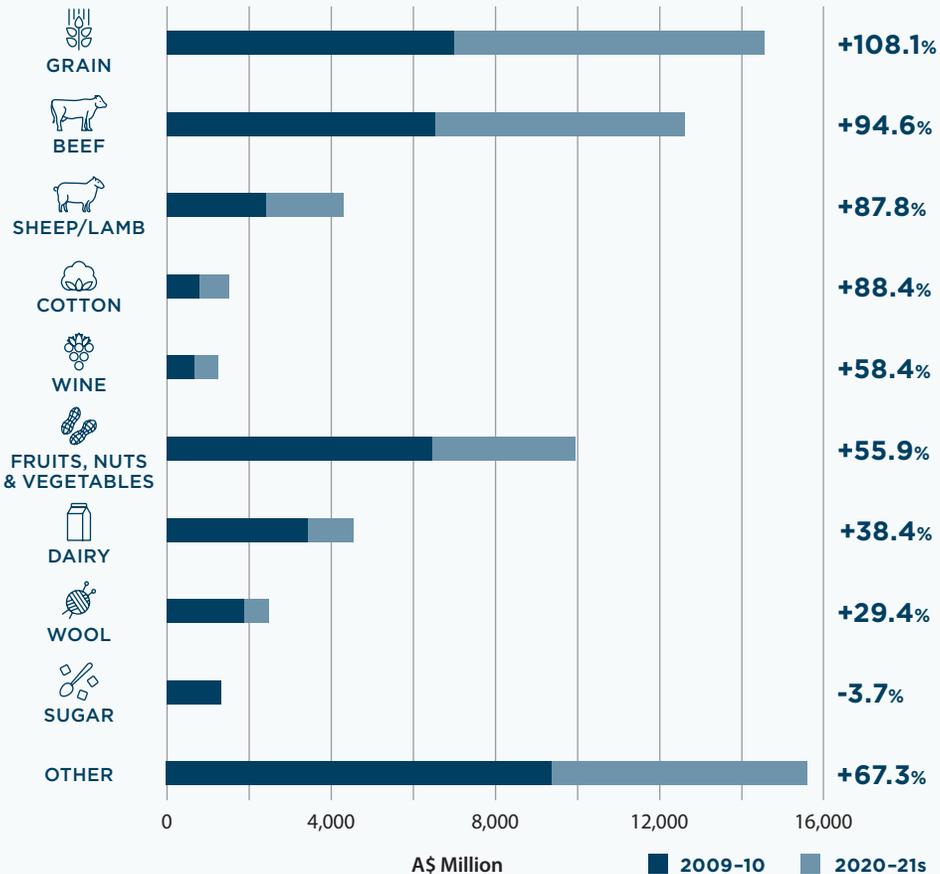
Any ongoing growth in GVP also requires Australian agricultural exports to maintain their reputation for being not just the safest, but of the highest quality. This is reflected in exports including horticulture and lobsters, where Australian products command a premium due to their quality standing.

It is also vital for Australian agricultural producers to continue to develop and refine their product offerings, to ensure that they continue to stand out from major global competitors.

For example, while competitors increasingly improve the quality of their crops, Australian grains are still preferred by many importers due to the innovative focus on grains being grown to suit the specific noodle or bread demands of major markets.

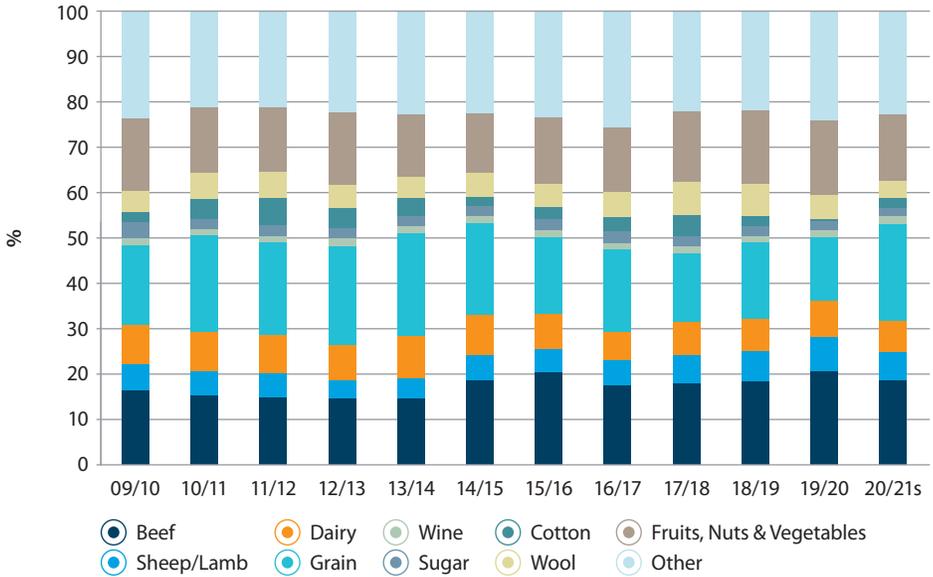
Future GVP calculations may also be impacted if revenues from carbon capture are included in the calculations.

AUSTRALIAN AGRICULTURE GROSS VALUE OF PRODUCTION



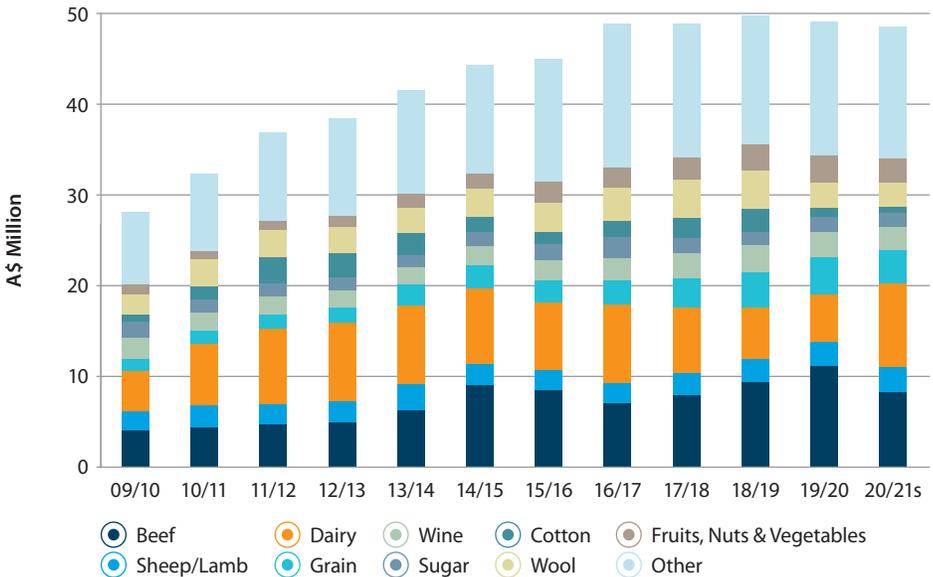
Source: ABARES, ANZ

AGRICULTURAL GROSS VALUE OF PRODUCTION - SHARE BY SUBSECTOR



Source: ABARES, ANZ

GROSS VALUE OF AUSTRALIAN AGRICULTURAL EXPORTS



Source: ABARES, ANZ



INSIGHT #2

AUSTRALIA'S AGRICULTURAL EXPORTS SURGED BEYOND EXPECTATIONS

Whilst the value of Australian agricultural production rose strongly in the 2010s, the growth of the sector was largely driven by the unexpectedly strong increase in exports.

When GP1 was published the forecasts for a looming surge in agricultural exports were widely predicted within the industry. The continuing growth of the middle classes – mostly in Asian markets – as well as an accompanying change in diets toward increased consumption of meat and dairy, were highlighted by many as an argument for investing in the sector. This investment was made to both direct production as well as further down the supply chain, particularly in infrastructure.

In modelling for the decade 2010–2020, GP1 forecast that Australian agricultural exports would grow strongly above the trend leading into that decade. This ranged from a base case of an extra \$33 billion to a high case of an extra \$80 billion in exports. GP1 forecast that beef, dairy and wheat were likely to be the commodities in highest demand.

Ultimately, the gains of the decade exceeded even the most optimistic forecast, with Australia recording an additional \$111.5 billion of agricultural exports over that period. This growth was principally driven by China's rapid upsurge in importing Australian beef in the middle of the decade.

The forecast that meat exports would increase was largely based on growth trending upwards, rather than the surge which eventuated.

The forecasts were also based on China's imports coming from a range of markets, including the US and the EU – as it eventuated, Australia accounted for around 33 percent of China's beef imports in 2015.

Following the initial surge in Australian beef exports to China, Australia's share of the Chinese beef import market subsequently declined over the remainder of the decade, as China gradually opened up access to other exporters, particularly from South America.

Initially, Australia's dominant position existed particularly due to favourable perceptions of food safety. When China opened its market to large volume beef imports, most other major beef exporting countries had experienced outbreaks of either Bovine Spongiform Encephalopathy (BSE, or 'Mad Cow Disease') or Foot and Mouth Disease (FMD) in previous years. As a result, they were officially banned from a number of major markets. This included both North and South American exporters, as well as a number of countries in the EU. China, similar to a number of other major Asian markets, was initially hesitant to import beef from markets with any history of outbreaks of this kind. This was particularly pertinent for China, given their major internal food safety crisis around milk and infant formula contaminated with melamine in 2008.

Looking ahead to 2030, ANZ's modelling suggests that the potential outlook for Australia's agricultural exports is highly variable. It is a reflection of the previous decade, where unexpected global factors impacted the initial forecasts.

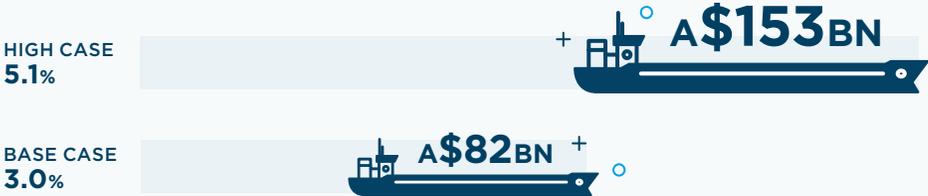
At base trends, with exports rising by three percent per annum, Australian agricultural exports are forecast to gain an extra \$82 billion over the next decade, above current figures.

This outlook will change markedly however, if the forecast is based on the high case – particularly if Australia aims to hit \$100 billion in agricultural production by 2030. Under this scenario, Australia would gain an extra \$153 billion in exports by 2030. This would require a highly ambitious growth rate of just over five percent, but as the events of the previous decade have shown, it has been done before.

Achieving this goal would require strong commodity prices to stay at relatively high levels, though with tightening global food supplies, this assumption seems reasonably likely. In addition, it would also require Australia to not only maintain a major share of its biggest export markets, but also grow its share in other markets. Australia would need to be a leading exporter in a larger number of agricultural commodities, aside from its traditional leaders of wool, beef, and grains. These sectors could include dairy and wine.

To maintain a position as the agricultural exporter of choice to major importers, and continue to demand the price premium which boosts export revenue, Australian agriculture must strive to continue to innovate in commodities. This could include more grains being developed with traits to appeal to particular export markets, or animal proteins produced with lower carbon footprints.

AUSTRALIAN AGRICULTURE EXPORTS OUTLOOK (2030)



BASE CASE

Maintaining current trend.



HIGH CASE

An ambitious estimate based on previous decade's growth rates.

Source: ABARES, ANZ

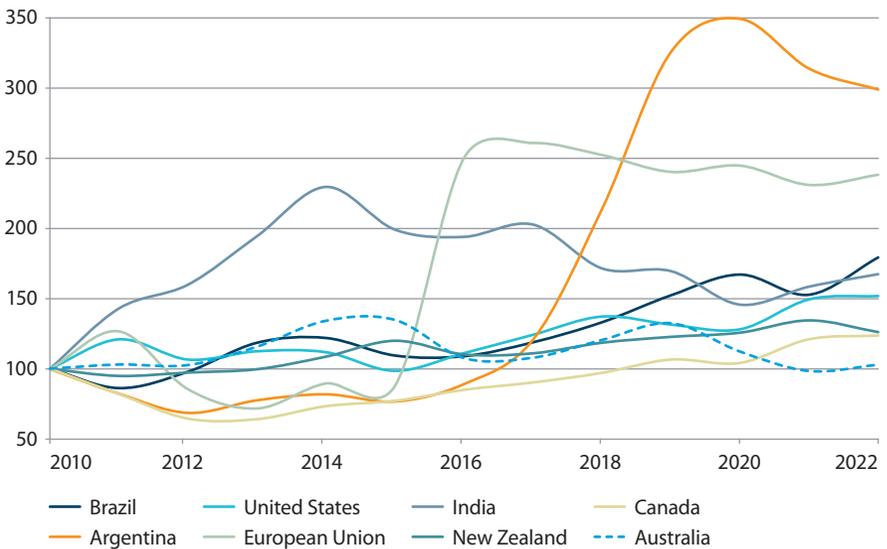
Note: These two cases are based on forecast cumulative gain on top of 2020 exports of A\$49 billion.

AUSTRALIAN AGRICULTURE EXPORTS OVER GP1 PERIOD - FORECASTS VS ACTUAL



Source: ABARES, ANZ

COMPARATIVE EXPORT GROWTH OF MAJOR BEEF EXPORTERS - 2010-2022 (2010 = 100)



Source: USDA PSD, ANZ



INSIGHT #3

AUSTRALIAN AGRICULTURE'S CAPITAL REQUIREMENTS EVENTUATED

In the space of a decade, the discussion around investment in Australian agriculture has experienced a fundamental shift. Ten years ago, the debate largely revolved around two major points – whether the level of investment required by the industry could be raised, and what the balance should be between domestic and foreign investment.

Looking ahead to 2030, the agricultural investment discussion has changed focus to two quite separate questions – on which agricultural sectors should investment be focused, and how efficiently can the current investment inflows be deployed.

When looking into the issue of investment in agriculture, it is important to remember that this topic stretches broadly across a range of definitions. The most widely discussed focus is on foreign direct investment (FDI), under which capital from outside Australia is invested in the domestic agricultural sector. It is also important to remember that a large component of agricultural investment comes through reinvestment by those already in the system. This includes retained earnings through profitability, as well as debt through earnings and balance sheet strength, particularly through land values.

At the time, GP1 discussed the potential for debt capping, raising the likelihood that investment would need to come from outside the farming operations themselves.

Ultimately, over the period of 2010–2020, debt played a larger role than had been anticipated. As the decade played out and despite the droughts experienced through that time, farm profitability and balance sheet strength also improved beyond initial forecasts.

A decade on, while these questions remain important ones to ask, it is the responses to them that have changed. This change shows how far Australian agriculture has come over the past 10 years, and also signals the challenges for the future.

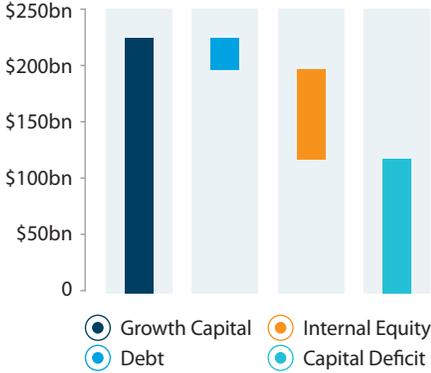
GP1 based its forecasts for capital requirements on the volume of agricultural production which Australia would require to fulfill forecast export needs. These export requirements were based on the forecast demand growth of Australia's export markets.

The modelling separated the capital requirements into two parts:

1. Capital required to increase production and efficiency on farms, supply chains and infrastructure.
2. Capital required to buy out farms, largely as a result of generational change.

The increased production forecasts were based on a continuation of the growth trends of Australia's agricultural output, feeding into both the domestic and export markets, while farm turnover forecasts were based on recorded farm transactions leading up to that period.

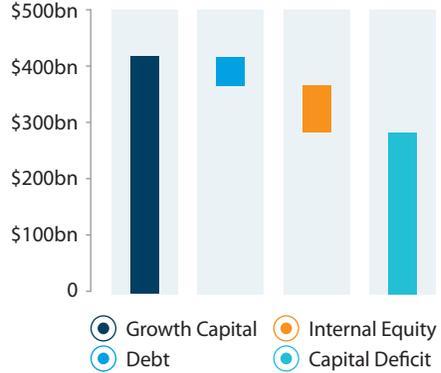
FUNDING GAP (2021-30) BASE CASE 3.0%



Source: ABARES, ANZ

Note: Investment in agricultural productivity and farm turnover, based on 3% growth in GDP.

FUNDING GAP (2021-30) HIGH CASE 5.1%



Source: ABARES, ANZ

Note: Investment in agricultural productivity and farm turnover, based on 5.1% growth in GDP.

GP1 forecast that for agriculture to grow at the base case (as distinct from the low and high case scenarios) between 2010 and 2050, the industry would require an additional \$600 billion in investment for capital improvement and \$400 billion for farm turnover.

For the decade of the 2010s, this translated as Australia requiring \$83 billion to continue to grow production, as well as \$68 billion for farm turnover.

As it eventuated, Australian agriculture ultimately saw an investment of \$212 billion in agricultural production over the decade, well above the original forecast. This figure reflected the eventual major inflow of both domestic and global investment into the sector. Despite concerns at the start of the 2010s that attracting investment to Australian agriculture may be challenging, clearly this shows that the momentum of global food demand over the decade, combined with the positive attributes of Australian agriculture, meant that it was ultimately quite achievable.

The coming decade will continue to see structural change in Australian farm ownership as the outlook has shifted substantially from where it may have been five to 10 years ago.

When GP1 was published, it highlighted the average age of Australian farmers as being in their mid-60s. Given the tough conditions for farming at that time, and the potential reluctance of many in the next generation to stay in agriculture, the general outlook was that a large proportion of farmland would likely be purchased by investors and farm management companies would take on the responsibility, and cost, of improving general farming infrastructure and conditions.

The many positive changes across the agricultural landscape have resulted in this outlook changing considerably. As detailed elsewhere in this publication, the revival of the family farm, with at least two generations working together on one operation, has grown dramatically. Driven by varying factors including sustained high commodity prices and the development of regional centres, farms are now more attractive to family members (and their partners) coming back from capital cities.

The challenge to maintain this momentum now shifts to the future. The decade to 2030 will see an increasing number of variables impacting investment flows into agriculture.



**AUSTRALIAN AGRICULTURE HAS PROVEN TO BE A
COMPELLING INVESTMENT CASE FOR BOTH EXISTING
PARTICIPANTS AND EXTERNAL INVESTORS.**

These will include changes in global agricultural trade, ongoing consolidation of Australian farms, the increasing impact of agtech implementation, sustainability regulations and climate.

Under the base case forecasts of ANZ modelling over the current decade 2021-2030, Australia will require a further \$122 billion in investment to continue to grow agricultural productivity, as well as an additional \$118 billion to fund the turnover of farms. These figures are based on Australian agriculture's GVP climbing from \$61 billion in 2020 to \$83 billion in 2030.

Given the strong investment growth over the previous decade, this would seem an achievable goal. The challenge will increase if Australia looks to accelerate its rate of productivity.

A number of industry stakeholders have called for Australian agriculture to aim for a GVP of \$100 billion by 2030. To attain this, production value growth would need to see an annual increase of just over five percent this decade, up from the three percent in the base case. To reach the target of \$100 billion GVP by 2030 would require an additional \$284 billion in investment for growth, and \$133 billion for farm turnover – an increase of 73 percent on the base case requirements, and almost double the level of investment that Australia saw in the 2010s.

THE FUTURE OF AUSTRALIAN FARM OWNERSHIP

Given the variables impacting Australian farms, this report considers that by 2030 Australian farm ownership will be split across the following categories:



40%

REMAIN IN THE SAME OWNERSHIP

Whether as single generation operations, or family run entities. For many of these, this decade will see them grow in both size and sophistication.



30%

PURCHASED BY EITHER A NEIGHBOUR, OR A LOCAL FARMER/FARMING FAMILY

The recent sustained run in high commodity prices combined with the positive long-term outlook for the sector indicates strong farmer confidence.



15%

STAY IN THE SAME FAMILY, BUT PASSED ON TO THE NEXT GENERATION

Generational transition may be assisted this decade by factors including high commodity prices allowing older generations easier access to a new home off the farm, and the growth in regional centres making a move 'into town' more attractive.



15%

PURCHASED AND OPERATED BY OUTSIDE INVESTORS/FARM MANAGEMENT COMPANIES

While the number of new investors will continue to grow in this type of ownership structure, the growing strength in family farming heightens competition for farm assets.

WHERE – INVESTMENT ORIGIN

A change in approach towards the origin of investment into agriculture has been a major shift over the past decade.

Ten years ago, GP1 highlighted concerns among a number of people in the agricultural and wider communities about both the level and impact of offshore investment into the sector. Offshore investment into Australian agriculture had been a reality for many years – flowing initially from the UK, with more recent examples including the involvement of American investors into the burgeoning Australian cotton sector from the 1960s.

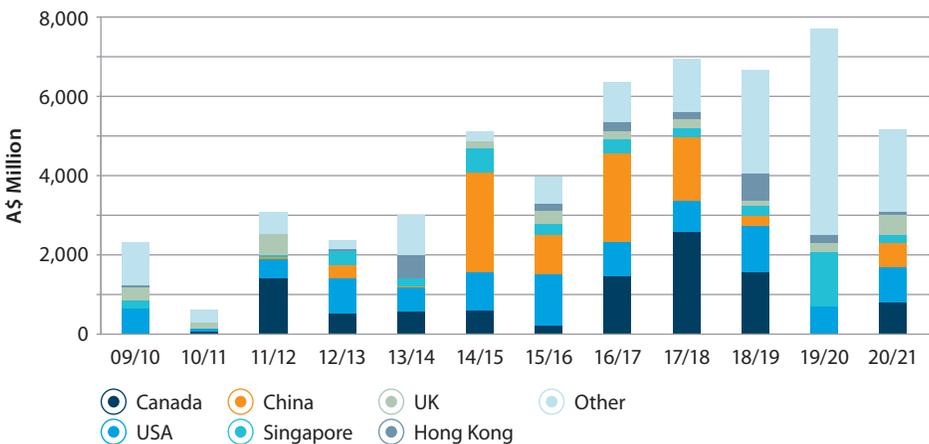
The combination of the growth in global investment capital and the surge in demand for global food imports in the 21st century increased the attention on agricultural production and supply chains as an asset class, with Australia becoming a central focus for investors. In addition to investors from the US, the attention came from Canada, Europe and Asia – particularly China.

The early concerns over the origin of investments were driven by several factors.

It was felt by some that foreign ownership of large Australian agricultural production assets may see an increased amount of farm produce diverted to exports, reducing availability or increasing prices for domestic consumers. Another concern was that global agribusinesses could potentially utilise investments in Australian agricultural assets to reduce competition for their operations in other parts of the world, again impacting prices overall.

Domestically, it was argued that Australian investors – and in particular super funds – were being too slow in matching the pace of their global counterparts investing in agriculture. In their defence, the differing approaches and needs of their clients compared to those of their global competitors, made agriculture a sector they needed to approach carefully with a high level of planning and research.

FOREIGN INVESTMENT REVIEW BOARD APPROVALS BY COUNTRY IN AUSTRALIAN AGRICULTURE, FORESTRY AND FISHING



Source: FIRB Annual reports, ANZ

FAMILY FARMS

A further change over the past decade, which cannot be underestimated, is the evolution of the capacity by Australian farmers to reinvest in their own sector.

When GP1 was published, one of the main drivers behind the push for new investment into the sector was that Australian producers – the family farmers themselves – would inevitably decline in terms of their role in the wider production landscape, with this space likely to be filled by the growth in corporate farming operations.

Fast forward to the present time where many family farms have emerged stronger than ever and find themselves in a robust position both financially and agronomically.

This has enabled them to make long term strategic decisions with far more complexity than would have been the case 10 years ago.

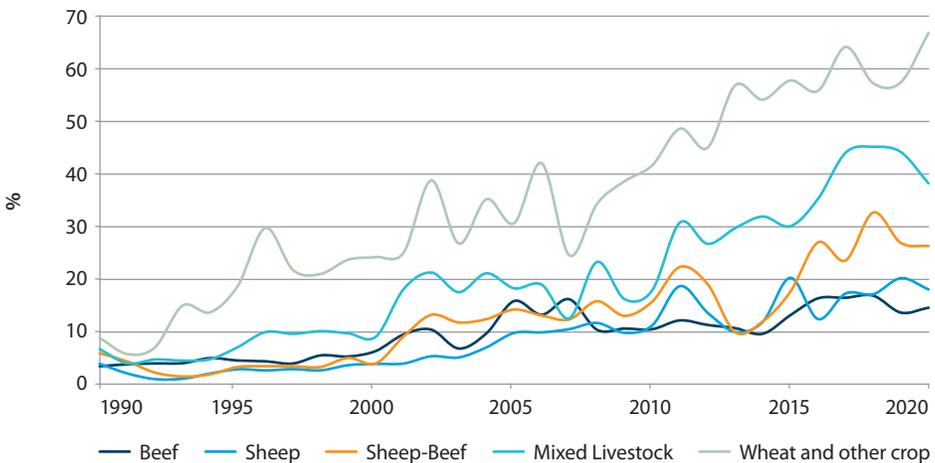
Whilst it is difficult to quantify, it is clear across many parts of rural Australia that the approach to scale, succession and generational change has evolved in a positive way.

Not that long ago, many families viewed succession as the departure of the parents and the arrival of the children onto the property. These situations were often quite fraught, tackling issues such as management responsibility handover, as well as the financial restructuring required for parents to move on from the farm.

With the ongoing process of farm consolidation enhancing the scale of many operations, the opportunity increasingly exists for two generations to work together on a farm constructively. The younger generation may return from a tertiary education not only having been trained in agricultural practices, but also possessing new skills, networks, and knowledge of agtech and finance, which positively benefit any farming operation.

The move to more innovative and efficient farming operations ultimately adds to the strength of the overall sector.

SHARE OF MEDIUM AND LARGE FARMS BY SECTOR



Source: AgSurf, ANZ
Medium Farm: Rev A\$0.5-1.0m; Large Farm: Rev >A\$1.0m

That said, multi-generational farming operations can still experience succession issues requiring early attention, including the balancing of relationships between family members of different generations, while ensuring a successful retirement plan for the older generations.

In terms of investment, the reinvigoration of the family farm has allowed this segment of agricultural production to play an increasingly important role.

The ongoing climb in Australian farmland prices is being driven primarily by the stronger family farm sector using their strength to 'buy the neighbours' and continue to grow their operations. Not only are they genuinely competing with institutional investors, they are also outbidding them. A family farming operation is more likely to have a multi-generational strategy – rather than a shorter-term return base strategy.

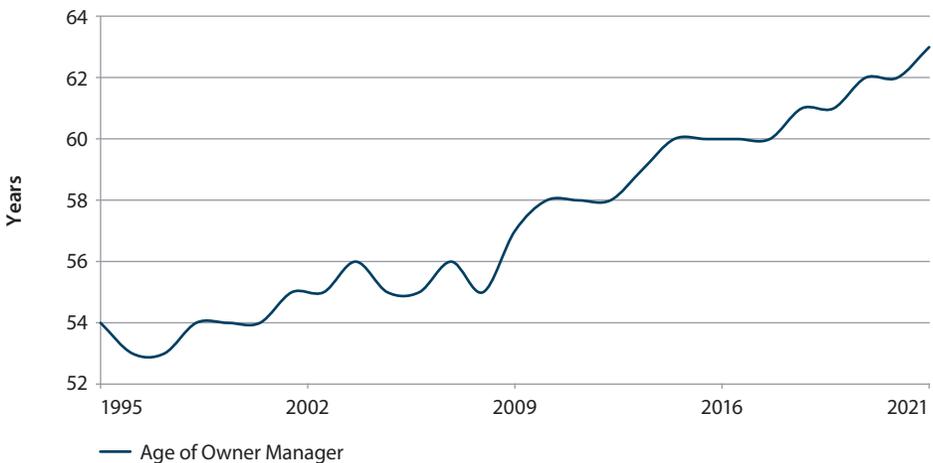
A stronger family farm segment also provides a new investment pathway into agriculture for outside investors.

THE AUSTRALIAN FAMILY FARM HAS EMERGED STRONGER THAN EVER, BOTH FINANCIALLY AND AGRONOMICALLY.

While still being considered an emerging option, it offers investors who may not have the scale to purchase a major agricultural asset and run a skilled management team an option of partnering with an innovative family operation to jointly build the business.

Importantly, the growth of the family farm brings with it a fundamental, and perhaps unappreciated, boost to the growth and adoption of sustainable farming practices across the Australian agricultural landscape.

OWNER/MANAGER OF AUSTRALIAN FARMS



Source: AgSurf (Broadacre), ANZ
Owner Manager: Primary decision maker in the farm business



AUSTRALIAN AGRICULTURAL LAND & FOREIGN OWNERSHIP



14.1%

In 2021, **14.1 percent** of Australian agricultural land had a level of foreign ownership.

Source: FIRB, ANZ

Family farming operations are driven by the vision to remain productive for the long term, so that they can be passed on not just to the next generation, but many more to follow. For that reason, family farming operations fundamentally realise the need for climate and production diversity in order to be sustainable well into the future.

THE CHANGING NATURE OF AGRICULTURAL INVESTORS

Another major change between the 2010s and the 2020s has been in the structure of most large investments into agricultural production. At the start of the last decade, non-farmer investments into large agricultural production assets were predominantly made by corporations or high net worth families or individuals.

Gradually over the last decade, as the profile of Australian agricultural opportunities continued to grow globally, the flow of investments into Australian agriculture grew strongly. These offshore funds included pension funds, endowment funds and family offices and have now reached a point where they are

the dominant vehicle for the purchase and management of major agricultural assets.

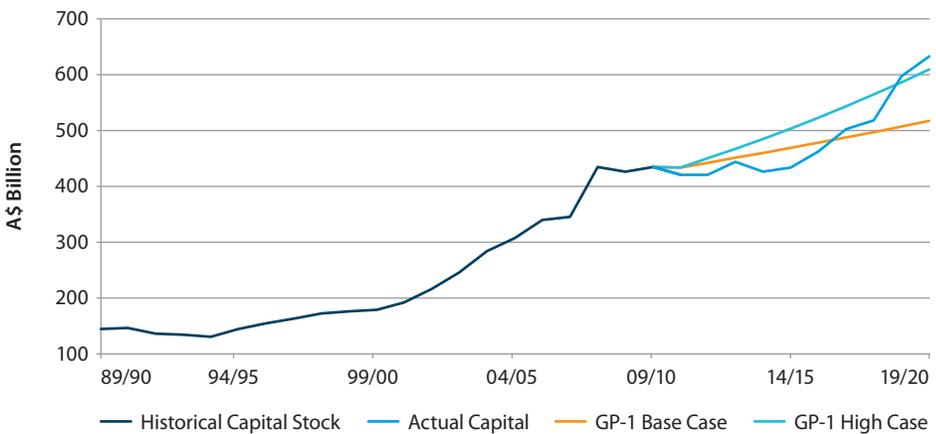
While this trend looks set to continue, several other factors are likely to strengthen as Australia looks towards 2030.

Forecasts of consolidation across a number of Australia’s superannuation funds will see the emergence of some much larger domestic funds. Given their scale, they will be in a stronger position to invest in larger agricultural production assets.

This is likely to be accompanied by a growth in private investment in agriculture by high-net-worth Australian individuals and families. As the scale of wealth at this end of the spectrum continues to grow dramatically, an increasing number are looking to capitalise on the return potential from agriculture.

The largest family farmers in Australia – keen to capitalise on their successful operations, industry knowledge, and their multi-generational agricultural strategies – are also likely to continue to play a greater role in investing in the sector, contributing to overall industry productivity.

AUSTRALIAN AGRICULTURE CAPITAL STOCK GROWTH COMPARISON



Source: ABARES, ANZ

Note: Capital Stock is defined as the assets that underpin output, including land values, machinery, buildings and raw materials.



INSIGHT #4

EFFICIENCY GAINS REDUCED LABOUR CONCERNS

At the start of the last decade, GP1 forecast that human capital issues would be a major hurdle to the progress of Australian agriculture. In particular, the issues of labour and skill shortages, as well as ageing farmer populations.

According to one estimate at that time, Australia already faced a shortage of around 100,000 farmworkers. Based on this deficit, the report forecast that the flow of workers into agriculture could not keep pace with the sector's expected strong growth.

Of particular concern was that a number of specific industries would be most impacted and would be unable to achieve their full production potential. The major sector highlighted was horticulture, where the ongoing challenge to attract enough casual labour led to short-term impacts like the inability to pick all fruit and vegetables, to the longer-term impact of deterring future investment in the sector.

Similarly, the dairy industry was also challenged in its ability to attract labour to roles that usually involve early and disjointed hours, often in colder conditions.

Clearly these challenges remain, with the labour shortages as a result of COVID-19 disruptions quite apparent. However, the developments over the past decade have somewhat mitigated this concern.

Importantly, developments in agtech have increased the level of work that can be automated, whether in horticulture, dairy, or other industries.

While these technological developments have great potential, there is still much room for improvement, as well as on-farm implementation of agtech until labour requirements are significantly reduced.

The consolidation of farms and the growth in efficiency measurements has seen an ongoing reduction in the labour requirements of the major agricultural sectors. ANZ modelling has shown that for both the broadacre and dairy sectors, total labour time for each sector overall has fallen over the past 30 years. This is largely due to rapid advances in agricultural technology.

A further change to the ability to attract labour to the sector has come about through an ongoing shift in the approach to agricultural employment. The growth in corporate farming structures during the last decade continues to modernise the labour structure of agricultural operations today.

Many larger family farms and corporate farms offer employees better terms and conditions, the opportunity for career development and greater job security.

Ongoing developments in technology and farm management are leading to greater efficiency, reducing the number of workers needed per unit of output.

IT IS LIKELY THAT THE CONTINUING RISE IN INVESTMENT INTO AGRICULTURE WILL PLAY A MAJOR ROLE IN THE INCREASE OF AUTOMATION IN DIFFERENT SUBSECTORS.

The growth in value and outlook for the sector have encouraged a new generation of employees to enter the industry.

The onset of COVID-19 in 2020 provided a strong reminder to the industry as to why the process of automation must be sped up. The COVID-19 disruptions exacerbated labour shortages, highlighting the high reliance by some parts of the agricultural sector on itinerant or cross-border labour.

Losing foreign labour, including backpackers and other short term visa holders, had a significant impact on horticulture as one example, while difficulties experienced by shearers in getting across state borders also created concerns for the sector.

Looking toward 2030, it is likely that the continuing rise in investment into agriculture will play a major role in the increase of automation in different subsectors. The increasing emphasis on achieving new sustainability metrics, such as reduced water and fossil fuel usage will further speed up this change.

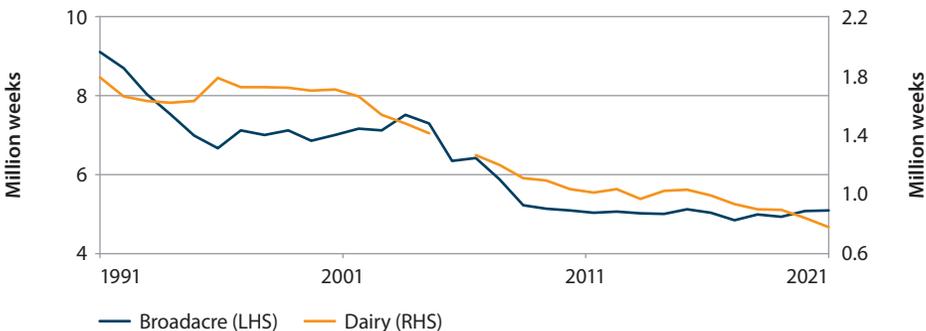
FAMILY LABOUR

The age demographics of Australian farmers was considered another challenge. When GP1 was published the median age of farmers was in the mid-50s and only a minority had family working in their business, yet many farms did not have succession plans in place.

The subsequent decade proved that not only were many of these concerns unfounded, but that the situation changed markedly.

As discussed in the previous section, the changing structure of the Australian family farm, with growth in multi-generational operations and larger farms leading to increases in both efficiency and family labour, has also reduced labour shortage concerns for Australian agricultural operations, as family members increasingly pro-actively fill many of the essential roles.

TOTAL FARM LABOUR USED



Source: AgSurf, ANZ

INSIGHT #5

DEREGULATION AND SECTORAL RESTRUCTURING GAVE RISE TO INNOVATION

GP1 discussed the fact that Australian agriculture was still adjusting to the post-deregulation era. For decades, almost all major Australian agricultural commodities had been subject to some form of regulation.

Regulation included single desk selling to export markets, subsidised minimum-price purchasing of commodities by governments and regional restrictions within Australia as to where products could be sold.

Common globally, these structures were aimed at maximising the effectiveness of marketing Australia's exports, as well as maintaining the viability of domestic farmers.

In the decades leading up to GP1 being published, Australian governments took the controversial decision to gradually dismantle each of these structures. This was primarily for economic reasons, as the cost of government intervention in the market was deemed unsustainable. This decision was also in line with a wide range of changes being made across many Australian industries at the time. Governments of all persuasions were seeking to allow industries, including agriculture, to become more efficient. In addition, as global trade agreements and rules became more prominent, deregulation increasingly became a necessary change to grant access to certain markets.

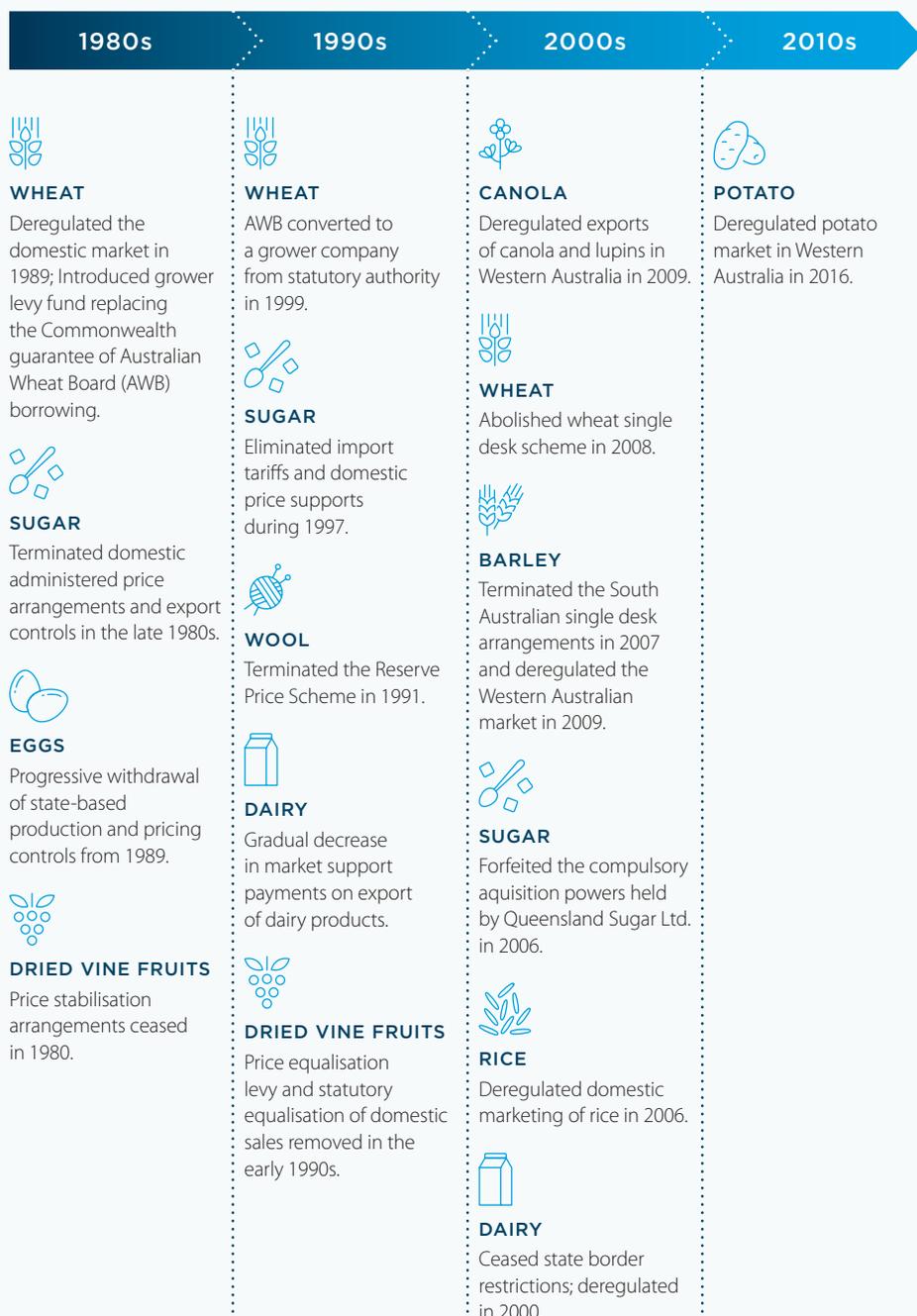
Different commodity regulations changed at varying speed. While the Wool Reserve Price Scheme finished in 1991, the last of the wool stockpile wasn't sold until 2001.

Australia's dairy industry, which had previously observed state border restrictions, was deregulated in 2000, while the wheat single desk scheme was finally abolished in 2008. Subsequently, sectors including barley and sugar have also emerged from single desk structures. The most recent deregulation was the potato market in Western Australia in 2016.

Looking toward 2030, the need for some forms of industry regulation remains the subject of debate in a number of agriculture sectors. Supporters of this argument highlight issues such as declining producer and production volumes in some industries – dairy being a major example – as well as the ongoing subsidy programs enjoyed by most of Australia's major agriculture export competitors. The debate around the need for greater water regulation has also remained consistently strong.

While the global discussion centres around agricultural subsidies – and whether some of Australia's major competitors should look to reduce them – the situation remains that for domestic political reasons in many countries, little is likely to change. This is a reality with which Australian agriculture must come to terms.

CHANGED REGULATORY/SINGLE DESK STRUCTURES



Source: OECD, ANZ

THE FREEDOM TO CHOOSE MARKETING OUTLETS FOR THEIR COMMODITIES AS WELL AS PURSUE INDIVIDUAL TRADE RELATIONSHIPS HAS ENABLED MODERN PRODUCERS TO EXPLORE INNOVATIVE DEVELOPMENTS TAILORED TO THEIR BUYERS' NEEDS.

This development has ultimately created an environment where innovative players down the supply chain have the potential to flourish unimpeded.

The freedom to choose marketing outlets for their commodities as well as pursue individual trade relationships has enabled modern producers to explore innovative developments tailored to their buyers' needs. An impressive example of this can be seen in the innovations made by some of Australia's largest grain producers, to tailor their products specifically to the needs of their export partners.

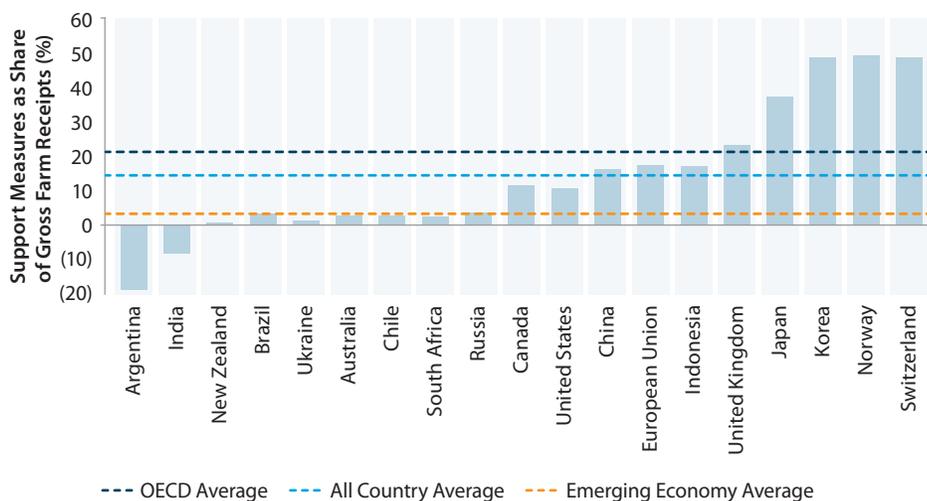
The ability for producers to select between exporters has further provided them with the opportunity to enhance their returns

and build their business, benefitting the overall strength of the sector.

Further along the supply chain, the rise of new marketing bodies has not only facilitated entry into fresh markets for Australian agricultural products but also led to improved efficiency across logistics and distribution networks.

As the process of farm consolidation evolves, and as both corporate and family farms continue to grow in both their sophistication and their global outlook, the benefits of deregulation will continue to provide further benefits to the industry in the years to come.

COMPARATIVE AGRICULTURAL PRICE SUPPORT LEVELS BY COUNTRY



Source: OECD – 2020, ANZ



INSIGHT #6

GREATER CONTROL OF PRODUCTION COSTS BOOSTED AUSTRALIA'S INTERNATIONAL COMPETITIVENESS

GP1 highlighted the fact that as costs rose across supply chains, Australian agriculture was losing its international competitiveness.

At that time, costs were high all along supply chains – not just on farms – and this included processing, distribution and exports.

Costs of production are driven by a range of factors, including farm inputs, fuel, plant and equipment, stock feed and labour.

High production costs are a major issue in an unsubsidised agricultural market like Australia, where farmers are unable to fall back on government support schemes if low commodity prices squeeze their operating margins.

Farmers cannot sell their product above a certain price without it being uncompetitive in a global market. High costs of production erode into their margins, reducing the potential for their businesses to grow. This not only impacts their overall production and productivity levels, but acts as a deterrent to investment.

At the same time, when costs are higher further down the supply chain relative to global competitors, it places upward pressure on prices.

As GP1 noted, by the mid-2000s, the average production cost of Australian beef was already double that of Argentina and Uruguay, and about 20 percent more than Brazil.

Meanwhile, the production cost of Australian wheat was almost double that of Argentina, and countries in the Black Sea region.

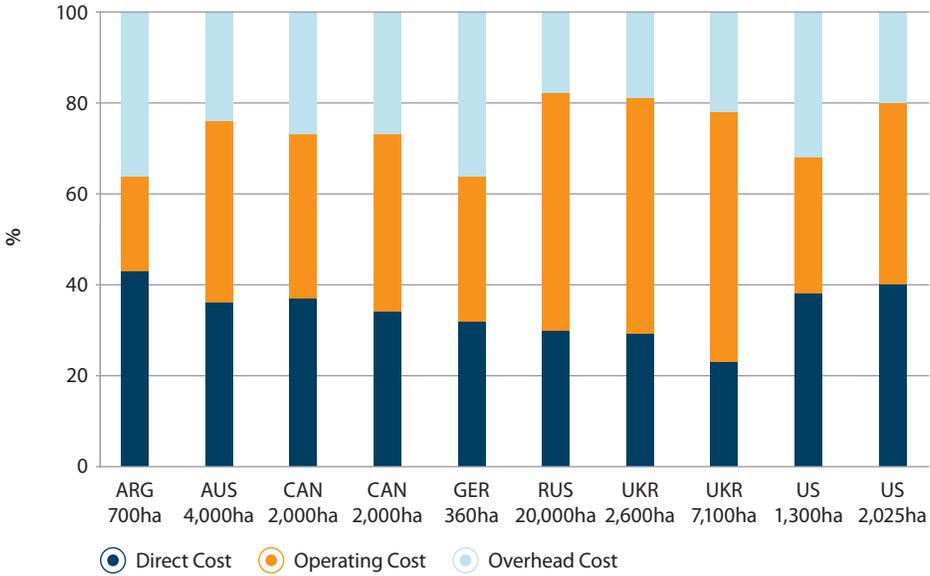
By 2020 however, Australia's cost of production for most major agricultural products sat comfortably among the best in the developed world. While a factor in the previous decade had often been labour costs, the growth in technology for many agricultural production and processing areas has reduced this as a variable today.

For beef cattle, Australia's cost structures are now similar to those of North and South America.

Despite this, Australia remains a relatively high-cost producer of wheat. That Australian wheat margins are well above the global average highlights the premium product the industry continues to produce, and arguably justifies the high production costs.

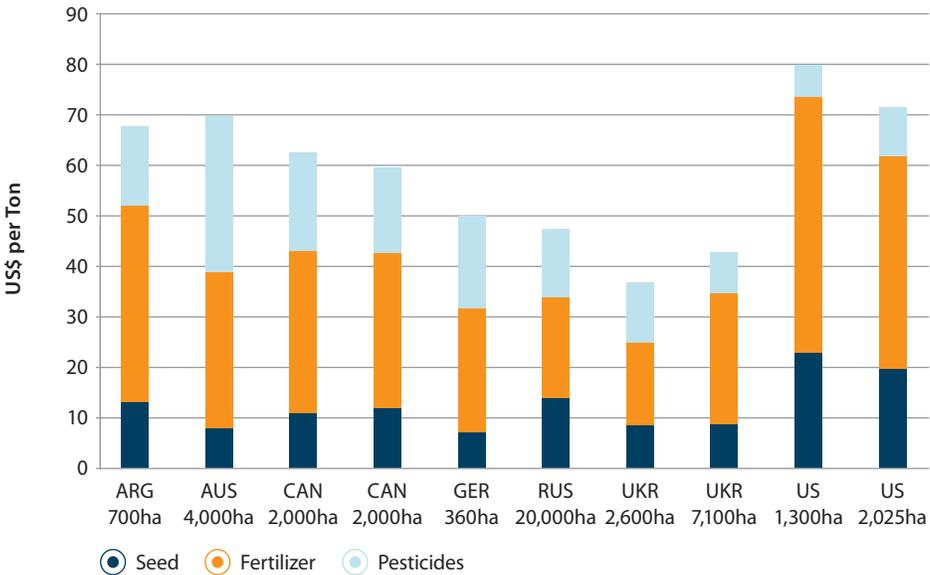
One important indicator of the outlook for Australian agriculture's future growth and international competitiveness is its Total Factor Productivity (TFP). TFP is measured by taking into account all of the factors involved including land, labour, capital and material resources utilised in farm production, then comparing them with the total amount of crop and livestock output.

COMPARATIVE GLOBAL AVERAGE COST SHARES FOR WHEAT, 2020



Source: Purdue University, ANZ
Data represents average input cost shares for each farm

AVERAGE CROP ESTABLISHMENT COSTS FOR WHEAT, 2019



Source: Purdue University, ANZ
Data represents average input cost shares for each farm

Ideally, the output will grow faster than the inputs – leading to positive growth.

Compared to a number of other major agricultural producers, Australia's rate of TFP has enjoyed strong growth over the past 50 years. Combined with the forecast increased utilisation of agtech, as well as improving levels of efficiency, this growth trend could, and should, continue to rise.

One other factor which stands out from this comparison is the level of volatility in Australian TFP, which is far greater than for any other competitor. This is likely to have been driven predominantly by drought, as well as the absence of smoothing impacts through high government subsidies. In order to reduce the future impact of droughts on TFP, it will be essential for the wider industry to continue to look at measures and strategies for preparing for these inevitable events.

AGRICULTURAL TOTAL FACTOR PRODUCTIVITY INDEX



Since 1960, the growth in TFP in agriculture between different countries has varied widely.



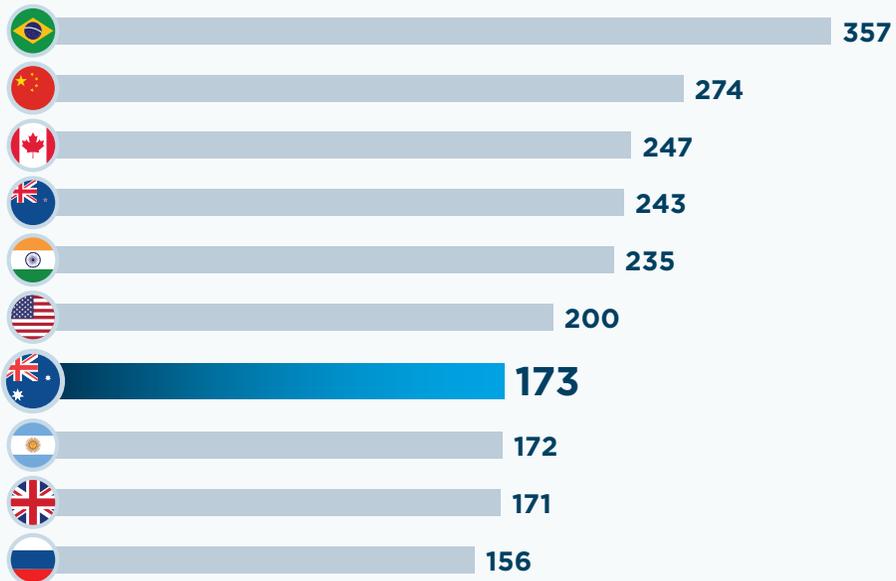
Countries which have harnessed research, investment, and structural reform have seen especially strong growth.



Australian agriculture's TFP growth reflects its start from a higher base, but is also relatively volatile.



Importantly, there is both the potential and the need for TFP to improve.



Source: USDA ERS (International Agricultural Productivity), ANZ





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SECTION TWO

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FIVE PATHS TO ENHANCING
AGRICULTURAL GROWTH

PATH #1

IMPROVE THE PROCESS OF CAPITAL FLOWS INTO AGRICULTURE

GP1 highlighted the fact that as costs rose across supply chains, Australian agriculture was losing its international competitiveness.

Foreign Direct Investment (FDI) has long been a vital component of the sector and rapid growth in exports combined with expectations for increases in long term demand saw even stronger investment growth.

Whilst the topic has been a controversial one, an ongoing rise in investment is vital for the industry to lift production levels and meet the demand required by major trading partners – all the while doing this in an increasingly efficient way. If new sustainability practices are to be achieved in ways that both benefit the country ecologically and continue to allow the agriculture sector to prosper, the requirement for ongoing investment flows to facilitate the change in farming practices will be more important than ever.

While the high quality of Australian agriculture production assets and the food demand outlook are two major drivers of increased investment into the sector, it is the structure of the investment landscape itself which plays an equally major role.

The past two decades have seen the rapid growth in the scale of some of the world's largest investment funds – particularly those from North America and Europe. These funds include endowment, pension and sovereign wealth funds.

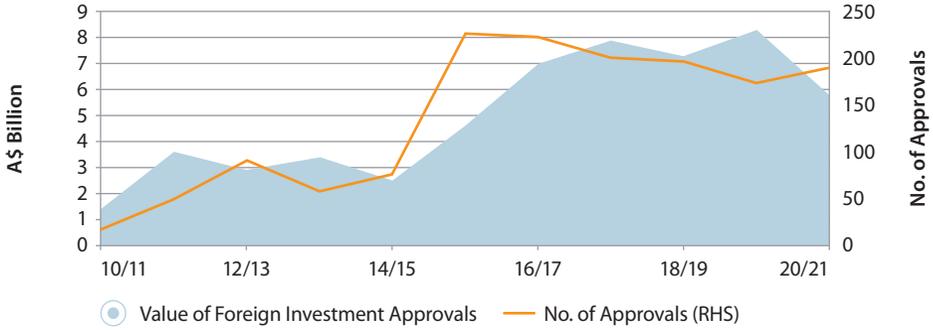
Growth is driven by factors including consolidation of funds, regulatory changes lifting the levels of income allocated to pension funds to reduce long term government liabilities, and through long term investment strategies.

Over the past decade, an increasing number of international investment funds have begun to invest in agriculture, either on their own, through a 'fund of funds', or a funds management structure.

As these offshore investors increased their presence in Australia, the impetus was created for Australian investment funds to follow suit. While the relative lack of investment in agriculture by domestic funds has created debate, most Australian funds have not had the scale necessary to allocate a large enough percentage of their investments to production agriculture. In comparison to more traditional asset classes, it is difficult to ensure that the size of their investment would not overexpose them to the comparatively high risk of agricultural investments.

The focus of investment will continue to grow across the entire food supply chain. This will be as a result of the economic growth forecast until at least 2025 – albeit with some turbulence, particularly due to the geopolitical landscape, as well the ongoing domestic and export demand stories.

TOTAL NUMBER AND VALUE OF FOREIGN INVESTMENT APPROVALS IN AGRICULTURE



Source: FIRB, ANZ

While the investment landscape for production agriculture has been enhanced over the past decade, there are a number of steps that could improve the process, for the benefit of all stakeholders.

One area requiring ongoing consideration is the outlook for long-term liquidity in the market. This issue will become increasingly relevant as a number of agriculture funds approach the end of their investment horizon over the current decade. There will be great interest in determining whether new funds or investors will be readily available to take the place of those exiting. Over the past decade, despite the impact of droughts on the commodity returns of some of the major Australian agriculture fund investments, investors have been comforted by strong levels of capital appreciation.

If farm capital appreciation declines, or if global market returns were to consistently be above farm capital appreciation and yields, then corporate investment in farming could again come under scrutiny. However, the combination of global factors pushing the long-term demand behind food production, combined with the shift of agricultural investment from an alternative asset class to an established one, is unlikely to see any major drop in corporate investment focus.

THE STRONG GROWTH IN FOREIGN DIRECT INVESTMENT HAS COINCIDED WITH RAPID GROWTH IN EXPORTS.

CAPITALISE ON THE GROWTH OF DOMESTIC SUPER FUNDS

Over the coming decade, it is inevitable that a number of Australian super funds are likely to merge. This will allow them to take advantage of administrative efficiencies of scale, in what is a fragmented and competitive market. As more Australian super funds grow in scale far larger than their current size, they will have the ability to not only pursue investments in agriculture more aggressively, but also to acquire far larger assets.

It is important for the industry to best position itself to take advantage of a likely pending growth in domestic appetite.

ENHANCE FARMER EDUCATION TO BE 'INVESTMENT READY'

Many farmers – particularly the larger scale and recognised innovators – are enthusiastic at the prospect of exploring new funding opportunities from both global and domestic funds. Many want to make the necessary connections and build networks but don't always know where to start. They are keen to learn how best to market the investment opportunities in their operations, including their operational data, long term strategic plans, and sustainability practices.

While all good farmers will have these materials and abilities to a certain level, these skills need to be formalised to a greater degree across the wider farming population. A major part of this will be educating farmers on the metrics required by investors, as well as any new sustainability characteristics an operation should adopt to become an attractive investment proposition.

ENHANCE THE MARKETING OF AUSTRALIAN AGRICULTURE INVESTMENT OPPORTUNITIES GLOBALLY

While investment in Australian agriculture has grown strongly over the past decade, the strength and sophistication of global competitors continues to raise the bar. Australia has an excellent setup of international offices and representatives promoting agriculture as an investment, particularly Austrade.

Global investors will increasingly require a highly sophisticated and specific campaign to guarantee that Australian agriculture stays at the forefront of attention for the global investment dollar. It will be important for government, agriculture industry bodies and the private sector to work together more closely to enhance the investment campaign globally. One option could include appointing experienced agriculture investment specialists to promote opportunities globally.

FARMERS WILL REQUIRE EDUCATION ON THE METRICS USUALLY REQUIRED BY INVESTORS, AS WELL AS ANY NEW SUSTAINABILITY CHARACTERISTICS AN OPERATION SHOULD ADOPT TO BECOME AN ATTRACTIVE INVESTMENT PROPOSITION.

BUILD AGRICULTURAL INVESTMENT EDUCATION ACROSS AUSTRALIAN SERVICES

Large scale investments in prime Australian agricultural assets are currently supported by a small number of real estate and legal firms. While it is important that the highest level of expertise is provided to facilitate these transactions, many medium-to-smaller sized firms with agriculture expertise – particularly in regional Australia – could build out their networks and skill sets to better tap into these opportunities.

A campaign to provide regional real estate agents, legal firms and accountants with learning in how to identify and access greater levels of investment could provide them with the opportunity to participate more fully in any investment flow, with ongoing benefits for regional communities.

Critical to fund investment is operational expertise – whether taking on direct management, or leasing. In all areas, this market has to keep pace, or the investment will slow.

PATH #2

EMBRACE AGRICULTURAL TECHNOLOGY

After years of research, investment, innumerable discussions and reasonable utilisation, the decade leading to 2030 will be a critical period for agtech to move into widespread implementation in Australian agriculture.

Over every decade, technology continues to play a major role in the development of Australian agriculture. From the efficiency and productivity improvements of early developments like the Sunshine harvester, technological advancements are a mainstay of the Australian agricultural supply chain.

At every step, these advancements bring multiple benefits, from increasing the production levels of farmers, to enhancing both the availability and quality of food accessible to consumers.

In the past, advancements in technology have been so widespread across Australian agriculture that many of them are now taken for granted and accepted as part of everyday working life. They range from pregnancy testing in livestock to Global Positioning Systems in farm cropping machinery and everywhere in between.

Whilst the term has become somewhat cliché, 'agtech' is just over a decade old. Its era began with the transition of main agricultural production drivers moving from mechanical to digital. Most of these major agtech developments have occurred in the past 10 years. This period can certainly be viewed as one of both technological advancements as well as one of major investment.

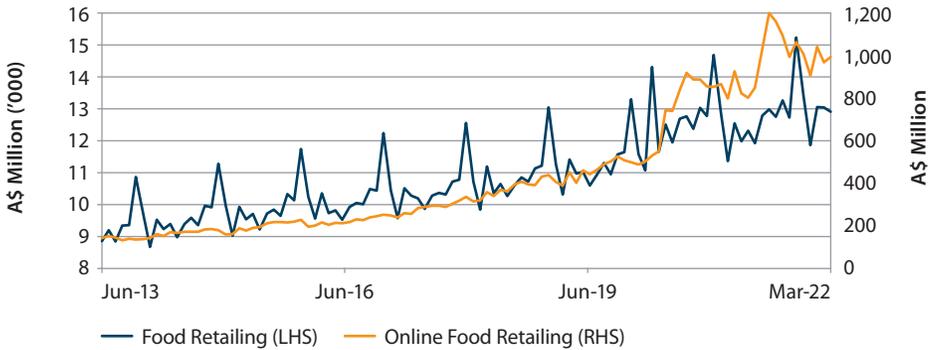
Despite the growth in development and investment, the rate of implementation of agtech to the wider agricultural production landscape has been relatively slow over the past decade, particularly by small to medium farming businesses.

Comparisons between the Green Revolution of the 1960s and the 'Agtech Revolution' of recent times are worth examining to highlight the importance of action. The Green Revolution was effective because the products that had been developed were adopted widely and quickly. Farmers, globally and particularly in the developed world, began utilising new fertilisers, pesticides and seeds to produce hardier, more plentiful and better-quality crops.

The years to 2030 must become a period when agtech development moves into the mainstream with widespread adoption. Making this happen will rely on people who have the ability to accelerate implementation, analyse their progress and create pathways for others in the sector.

One great benefit arising from an increase in agtech implementation will be the concurrent growth in sustainability measures. Reduced water usage for horticulture, or lower fertiliser and pesticide application on crops and pastures will yield returns with many ecological benefits.

AUSTRALIA FOOD RETAIL VS ONLINE FOOD RETAIL TURNOVER



Source: ABS, ANZ

Without them, the barriers to increased investment in agriculture will be raised higher.

Further along the supply chain, the utilisation of agtech and the subsequent efficiency gains are also likely to contribute to a marked reduction in fossil fuel usage.

Impetus for further accelerated agtech uptake has been highlighted by the impact of COVID-19 on the domestic food, beverage and agribusiness supply chain, right from the moment the pandemic began in 2020. While much of the agriculture supply chain continued to function well through the various COVID-19 disruptions, the most fragile components of the supply chain were those that were highly reliant on human labour. These included activities such as meat processing and fruit picking. Other labour-reliant agricultural activities such as sheep shearing and grain harvesting also faced strong concerns about their ability to operate.

The impact of COVID-19 has been most apparent in online food retailing. While the usage of online retailing had been rising gradually over the past decade, it almost doubled over the course of the first few months of COVID-19. As the market share of online retailers grows, this change will accelerate the development of online platforms by many retailers, especially supermarkets. The impact of this will continue to flow back through supply chains as a result.

The hypothetical impact of these industries not functioning due to labour shortages would have been one of the most serious of the pandemic – a curbing of the ability for food to reach both major population centres as well as export points.

The fields of robotics and automation across a number of agricultural sectors have experienced some of the biggest agtech developments. Despite this, COVID-19-related disruptions highlighted the concerning evidence that relatively few of Australia's agricultural supply chains currently utilise these technologies.

While COVID-19 saw the uptake of these technologies accelerated at the distribution and retail end of the supply chain, far more activity needs to ramp up around production and processing. Incorporating new levels of automation and robotics as either upgrades or new developments though Australia's agriculture supply chains is essential.

In the coming decade, likely increases in regulatory requirements around sustainability will create further impetus for widespread uptake of agtech. A greater compulsion to show a range of sustainability metrics – such as reducing water usage or carbon capture – will push many agricultural producers to utilise relevant agtech mechanisms to boost their ability to achieve and record future sustainability metrics.

PATH #3

UTILISE SUSTAINABILITY FOR ECONOMIC ADVANCEMENT

It is fair to say that the concept of sustainability has been viewed by some in the agricultural community with a sense of hesitation and caution. The image it presents can often be one of producers being restricted from carrying out the normal operations of their farms, or as an overall threat to their business.

Australian agriculture has a long history of not only adopting sustainability practices, but also enhancing them – for the benefit of the industry and the wider environment. The Landcare movement of the 1980s saw many farmers adopt new practices in fencing off eroded areas on their properties and planting trees in salinity impacted areas. Not only did salinity levels fall and soil quality improve, but most farms saw productivity improvements in livestock and cropping.

Similarly, the utilisation of no-till cropping, where crops or pasture are grown without disturbing the soil through tillage, has grown strongly over the past 20 years. In 2000/01, the percentage of agricultural land farmed using no-till methods was 26 percent. By 2017, 79 percent of crop land and 70 percent of pastureland was not cultivated.

From the perspective of ensuring the health of the environment in which they operate – soil, water, biosystems – sustainability concepts will remain as important as ever to most Australian farmers.

Looking ahead to 2030, the issue of sustainability is set to take on greater degrees of importance and complexity for Australian agricultural producers.

From a regulatory perspective, various governments have been discussing new measures for a number of years. Water usage, land clearing and the adoption of farm plans are important topics. Discussions also continue around the possibility of production agriculture requiring carbon impact statements and metrics. Carbon regulations could potentially be driven not only by Australian governments, but also by trade agreements with carbon emission related tariffs.

It is increasingly likely that major international investors, both Australian and global, as well as Australian agriculture's global customer base, will require far more extensive sustainability and carbon metrics.

This changing landscape may drive producers to adapt their farming practices and operations to include new aspects of sustainability. In some cases, it may be necessary to change farming systems to remain a supplier into certain global markets.

Above all, the farming community and its stakeholders will need to continually educate themselves on this rapidly evolving subject. Agriculture has a huge role to play in the pursuit of a net-zero economy, and there are potentially many direct economic opportunities for the industry from new sustainability structures.

MORE EXTENSIVE SUSTAINABILITY AND CARBON METRICS WILL BE REQUIRED BY MAJOR INTERNATIONAL INVESTORS AS WELL THE GLOBAL AGRICULTURAL SUPPLY CHAIN.

For some producers, the standout opportunity will come in the form of carbon farming and sequestration.

These new methodologies have the potential to give many producers the ability to capture carbon within the confines of their farms through a range of methods. They include increasing the number of trees grown on their property, reducing farm fire usage, or capturing carbon in soils through crop or pasture management.

In turn, the volume of carbon captured through these practices, measured in carbon credits, could potentially be traded for financial return with an entity which may emit carbon emissions, thus allowing them to reduce their net overall emissions.

Given the scale of this carbon capture process, combined with the dearth of similar carbon capture opportunities, it could be argued that Australian agriculture provides a vital key for many companies of the high emissions corporate sector, not only in Australia, but globally. However, given the evolving process around this whole field, it will be important for Australia's farmers to remain mindful that the credits generated by their own operations may potentially be required at some point to offset their own individual emissions profile.

A question which will increasingly arise will be around what is more valuable to a farmer – the carbon credit cashflow or the license to operate. In addition, a further question will be whether the industry will be able to reach a position of being a net positive carbon sink, which would allow it both to sell credits, while remaining carbon neutral. While this matter does create a range of business decisions which most farmers have never had to face, the renowned ability of Australian producers to overcome challenges and embrace new opportunities provides confidence that the industry will work productively on the issue over the course of this decade.

It is essential that the industry does not lose sight of the global imperative – safe, reliable, affordable food supply, reducing the rate of global warming and recognising the importance of biodiversity. The answer cannot be one at the expense of the other.

The Federal versus State government structure may make this difficult, but tough decisions need to be made. The ongoing uncertainty makes it difficult for farmers to plan, deters investors, and even leads to uncertainty for sought-after major environmental projects.

All of these need to be solved in the current decade.

SUSTAINABILITY BEST PRACTISE

To ensure the future of Australian agriculture, the industry needs to work toward the following steps:

BE PROACTIVE IN THE CLIMATE DEBATE



The wider sector must ensure that it is proactive in the climate debate. To do this, it must highlight opportunities for it to play a positive role.

HIGHLIGHT POTENTIAL IMPACT



The industry has an obligation to highlight the potential impact on its long-term future of any misguided actions.

DEVELOP SUSTAINABLE PRACTICES



The agricultural sector must continue to play a leading role in the development of sustainability practices, regulations, and metrics.

PROVIDE OPPORTUNITY TO LEARN



The sector must ensure that producers have the best opportunity to learn the essentials of the science and agronomy and to be aware of the opportunities.

EDUCATE OUTSIDE THE INDUSTRY



The sector must continue to educate those outside the industry on the sustainability practices in the production of food and fibre.

A NATIONAL AGREEMENT ON WATER



The industry must move closer to arriving at a national agreement on water structures, including usage levels, cost, and allocation.

PATH #4

IMPROVE THE TRADE LANDSCAPE

The Australian agricultural sector has been reliant on trade and exports for its prosperity for most of its modern history.

The combination of Australia’s extensive agricultural production area, high quality soils, relatively strong water availability and world leading agricultural production capability, together with a relatively small domestic population and food demand base, are almost unique in global agricultural production – in many ways New Zealand is perhaps the only comparison.

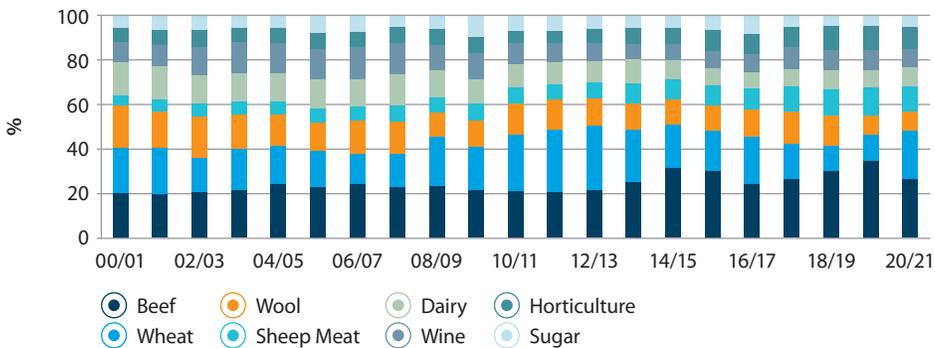
To highlight this, in 2020, Australia’s agricultural exports were valued at \$49 billion, out of total agricultural production value of \$61 billion.

For the first time in many years, during 2019/20 and 2020/21, agricultural export value declined while agricultural production value increased.

This decline was almost entirely based on a tightness of supply of Australian agricultural products available for export – particularly beef and sheep meat. This was a direct result of farmers restocking after the drought – rather than any reduction in global demand for Australian agricultural products.

The export strength of Australian agriculture has travelled a long path. The established pattern of working with major export partners began with the United Kingdom as Australia’s major trading partner, and over time extended to include other major partners such as Japan, the US, South Korea and a number of Southeast Asian nations.

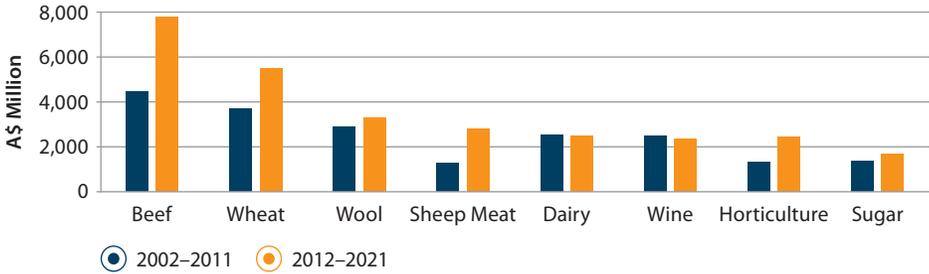
KEY AUSTRALIAN AGRICULTURAL EXPORTS - RELATIVE % SHARE



Source: ABARES, ANZ

Note: These exports represent the major agri exports of Australia. They accounted for an average of 63 percent of all agri exports for the period 2000/01 - 2020/21

10 YEAR AVERAGE EXPORT VALUE OF MAJOR AUSTRALIAN AGRICULTURAL COMMODITIES



Source: ABARES, ANZ

The decade leading up to the 2020s was arguably unique. The rise of China as a strong export partner had continued to be discussed but had taken some time to eventuate. In the 2010s, China's rapid emergence as an importer of Australian agricultural goods – and of those globally – fundamentally changed the export playing field.

As an agricultural trade partner, China's features are unique. It has a huge population, a middle class with incomes and tastes that continually demand a range of sophisticated foodstuffs, and the capacity to be able to purchase Australia's premium product offering. Combine these facts with the reality that China – like many other countries – is unable to domestically produce the volume of agriculture to completely feed its own population.

As China's agricultural import demands escalated over the past decade, Australia emerged as a major trading partner. Australia ticked almost every box required in the relationship – reliability of supply, high product volume, proximity, food safety and quality.

Even while China grew as a trade partner, Australia maintained strong relationships with its existing partners, avoiding a scenario of displacing one market for another. Some Australian agriculture sectors reacted by lifting their production volumes to meet the demand, a trend which both spurred, and was spurred by, a strong growth in new investment. Two strong examples of this were in dairy and horticulture.

At the start of the 2020s, Australia's agricultural trade landscape with China undeniably experienced some challenges. These situations can be part of almost every major trade relationship, and the resultant challenges allow both partners to develop trade strategies which best position themselves for long term scenario planning and resilience. For both countries it will be important to maintain constructive dialogue around their agricultural trade relationships, and to consider the most positive long-term outlooks for their populations.

Australia will always be a major player in global agricultural trade. Barring a calamitous event – such as a major biosecurity challenge (which in all likelihood would only impact a particular portion of exports) – Australia will always offer a unique and leading combination of volume, quality and reliability for world agriculture, food and fibre markets.

It is vital for Australia to continue to work hard to enhance its overall trading position and capabilities. Specifically, this will allow the sector to:

- become a more resilient global exporter
- grow the returns of producers and other supply chain stakeholders
- enhance supply chain capabilities
- incentivise producers and supply chain stakeholders to adapt

Concentration on several main areas will help Australia solidify its global export strength, namely:

1. STREAMLINING TRADE FLOWS

The industry must re-examine its practices at each point, and work to enhance them. This will enable Australia to not only grow its reputation as an exporter of choice by product volume and quality, but also improve the ease of doing business.

This will be achieved by maintaining an ongoing focus on areas including trade bureaucracy, quarantine, infrastructure, technology, and payments. Australia must continue to have clear and reliable regulatory settings. This is especially important in promoting investor certainty.

It is vital to enhance all aspects of the quarantine process for exports. All exports of grain, meat, horticulture, and other products need to be free from any phytosanitary issues which may disrupt trade, as well as from any potential concerns in those areas which may be raised.

The ongoing collaboration between industry and government on traceability technologies through the supply chain will further confirm the true legitimacy of many Australian agricultural export products. This will occur against the backdrop of a period where the growing sophistication of counterfeits or substitutes may raise concerns with major importers.

2. ENHANCE ESTABLISHED TRADING RELATIONSHIPS

The Australian agriculture export sector has worked hard to build its major trading relationships, and these will always be fundamental to the focus of the sector. Part of this success has been due to the specific concentration and attention on particular trading partners. One example is the long-established presence of offices of Meat and Livestock Australia (MLA) in a number of major markets, continuing to build the relationship of their sector, and complementing the work of Austrade, Australia’s agricultural attaches and others.

This model is reflected in the approach by other global agricultural export competitors of pursuing a detailed export market strategy. The United States Soybean Export Council (USSEC), for example, has a major presence in its markets globally, not just to maintain relationships, but to seek to enhance the product utilisation of its exports.

In addition to continuing to pursue free trade agreements, Australia needs to focus on the evolving changes and needs of its major trade partners, including their consumer needs and import infrastructure. Part of this will involve constantly examining changes in market competition, and how Australia can continue to enhance export product differentiation.

AGRICULTURE TRADE FLOWS

Australia is a world leader in the efficiency of agricultural trade flows, along all points of the supply chain.



3. SEEKING NEW MARKETS

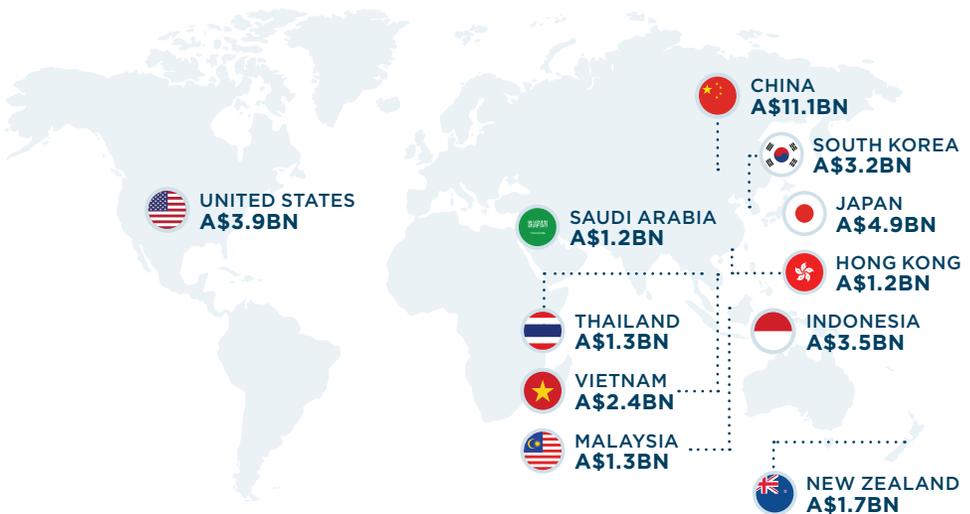
The quest for new markets will always be top of mind for every major agricultural exporter. Australia needs to work with its existing smaller and emerging trading partners to identify their changing needs, as well as partnering to improve their import supply chain capabilities – particularly in the areas of infrastructure and trade technology.

The potential for increased exports to India will grow strongly. India brings its own unique characteristics in terms of specific consumer product demands, as well as the trade-off with its own domestic agricultural production. It is a market which will move quickly, as its middle class grows in similar ways to that of China.

At the same time, Middle Eastern markets are also likely to continue to grow rapidly, particularly in their needs for products like sheep meat, grains and oilseeds. Combined with their relative limitations on domestic agricultural production, these trading partners will not only seek greater imports, but increasingly look to invest right through the supply chain.

In a world of growing and developing global markets that don't have the capacity for self-sufficiency, Australia's produce will increasingly be in demand.

TOP AUSTRALIAN EXPORT MARKETS FOR AGRICULTURE, FORESTRY & FISHERIES (2020-2021)



Source: DFAT, ANZ

4. NICHE PRODUCT OFFERINGS

Looking ahead to 2030, the global agriculture trading landscape will increasingly be dominated by volume producing countries. The countries of South America, particularly Brazil, will continue to grow their production of beef.

TO REMAIN A STRONG COMPETITOR, AUSTRALIA MUST STAND OUT IN TERMS OF PRODUCT QUALITY AND SAFETY, AND IN BALANCING PRODUCT DIFFERENTIATION WITH VOLUME.

A number of countries and regions, including the EU, Canada and the US will become increasingly larger producers of wheat, other grains and oilseeds.

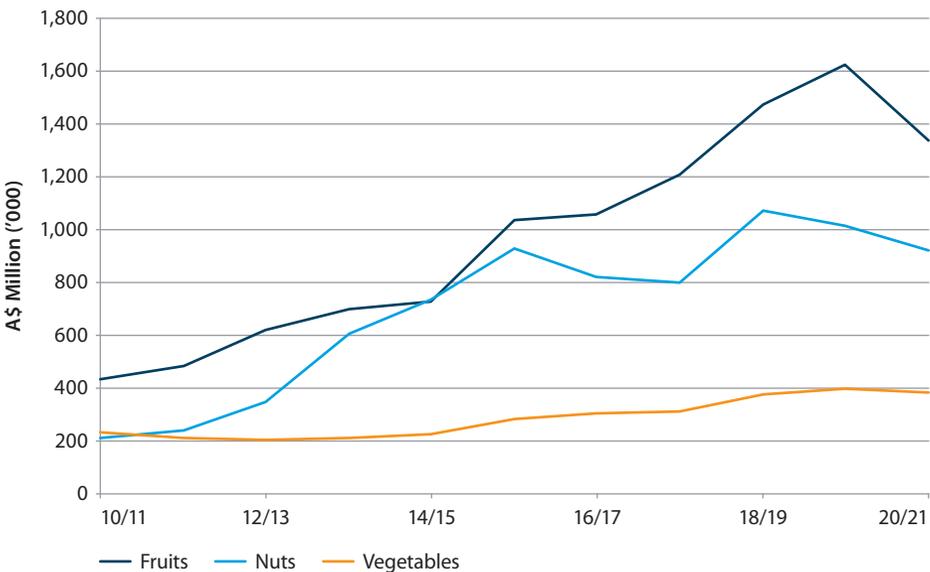
To remain a strong competitor, Australia must stand out not just in terms of product quality and safety, but in terms of balancing product differentiation with volume.

For example, Australia must continue to refine grain production for evolving customer demands for specific noodle, bread or even animal feed requirements.

In growing horticultural markets, where consumers have specific tastes in everything from citrus fruits to apples and cherries and seek greater volumes of quality fruit and vegetables for a healthy lifestyle, trading partners will look to Australia to be able to meet these requirements.

While volatile climatic conditions will inevitably impact crops, Australia's combination of relatively fertile expanses of cropping country, high levels of infrastructure, as well as world-leading grain production management will continue to be a comparative advantage.

EXPORT GROWTH IN AUSTRALIAN HORTICULTURE



Source: ABARES, ANZ

PATH #5

ADVOCACY AND INDUSTRY COHESION

Like all major industries in Australia, the agriculture sector looks to its peak bodies for a range of advocacy functions.

The peak bodies for Australian agriculture arguably take on a greater importance than for those of other industries. Agricultural peak bodies must seek to represent and lobby for the interests of an industry which is fundamental for the success of many aspects of Australia as a nation – economically, environmentally and socially, among others. Agriculture is also an industry where many people, whether senior decision makers or the wider population, have fixed opinions about it. These range from foreign ownership and environmental aspects right through to water issues – despite very few having any direct experience in the sector, or ever having set foot on a farm.

For Australian agriculture to make sure it has a voice in matters of policy which impact it, it is vital that it has strong representation in relevant policy discussions, both at a State and Federal level.

The role of peak agricultural bodies will continue to be encapsulating and promoting issues which are important for the broader agricultural sector, including the enhancement of regional telecommunications or promoting upskilling on agricultural sustainability programs. They should play a lead role in promoting positive messages by the industry out to the wider community. Most importantly, they need to play a strong and expert role in all aspects of policy and regulatory development, in any way which may impact agriculture.

Australia's agricultural advocacy groups are currently made up of a range of State, Federal and industry-based groups. Each State has at

least farmer representation – some more than one – while at a national level, the National Farmers Federation brings these together. Each of these bodies also contains a number of specific agriculture sector sub-groups.

Farmer representative groups will increasingly face challenges as Australian farm numbers consolidate – with farm sizes growing at the same time that the number of farmers decline, it will prove increasingly hard to attract members, and also membership revenue.

US agriculture peak bodies by comparison, are often funded with a mixture of government funding, investments, and contributions from larger agribusinesses.

In Australia, peak bodies for other industries, such as the Minerals Council or the Pharmaceutical Guild, benefit from the funding of much larger, well-resourced members.

Australia's agriculture sector groups do a very good job of advocacy, and often attract a profile well beyond that which could be expected for similar groups of their structure.

Peak bodies will need to plan for a future. The whole agricultural landscape is evolving rapidly, the farmer base continues to decline, and sustainability initiatives will come to the fore. They will need to explore the option of including more commercial partners while at the same time, not compromising the interests of primary producers. Consolidation among groups will be unavoidable and never easy in an industry of very big personalities.

CONCLUSION

When GP1 was published the Australian agricultural sector was looking ahead to a future facing a multitude of challenges and concerns over how it would tackle them.

As GP1 highlighted, new investment in the sector was urgently needed to increase both production and productivity. This was accompanied by concerns about whether it could be adequately sourced and from where it would originate.

While the average age of Australian farmers was reported as mid-60s, concern was expressed as to who would take over their farms and what this would mean for overall industry efficiency.

Globally, Australia was falling behind its export competitors, particularly in terms of costs and innovation.

Australia's agricultural landscape has changed fundamentally in the past decade, in a way that few could have predicted. In the space of 10 years, a set of rapidly changing global circumstances, combined with stringent and positive action by many people across the sector has shifted the entire outlook to one of positivity, and immense possibilities.

Drawn by the Australian agricultural industry's world-leading capabilities, the influx of global and domestic capital into the sector will only continue to grow. For the most part, opposition to new investment has been replaced by enthusiasm.

A large number of family farms have evolved into multi-generational businesses, adopting new strategies and planning for the long term.

Embracing new developments in agtech, financing and other opportunities operationally has positioned the industry to be substantially more competitive globally - right through the supply chain.

The focus on new investment in Australian agriculture will be strong. It is imperative that all stakeholders not only improve their processes, but also ensure investment is deployed to its best use.

**NOW IS THE PERFECT TIME
TO HARNESS MOMENTUM,
CAPTURE OPPORTUNITIES
AND TAKE THE INDUSTRY
TO THE NEXT LEVEL.**

Australia will be required to both solidify and diversify its export relationships in a global trading environment increasingly impacted by volatile geopolitical factors and food insecurity concerns.

Big developments in agtech have led to great potential for the sector. It is vital that the current decade is the one where widespread implementation and utilisation filters through all the way from the farm to the consumer.

It is a great time to be part of Australian agriculture. Tackling the challenges and the hard work required to reap great rewards is something the industry knows how to do well.

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