



Future Scan Snapshot

A summary of the 2021 mega-trends that will shape Australian agribusiness for the next five years and beyond

This Future Scan Snapshot presents an overview of the mega-trends (i.e. the macro, uncontrollable external forces) that will fundamentally shape the operating environment for Australian agrifood industries over the next five years. The mega-trends reflect the fact that Australian agrifood industries are inextricably linked to a global food eco-system.

This scan has been compiled by drawing on McKINNA *et al*'s on-going project work with agribusinesses, industries and governments right across Australia.



Thoughts on future scanning . . .

Obviously, no one can accurately forecast the future, but an informed view of what *could* happen is vital for any organisation, be it a business, industry, region or government agency. Planning around various scenarios is simply part of good governance. For this reason, future scanning is the starting point of the McKINNA *et al* strategic planning process because no matter how effectively your organisation operates, it is the uncontrollable factors that will most critically define future success. Even a well-run ship can end up wrecked if the crew does not spot the dark clouds of stormy seas on the horizon.

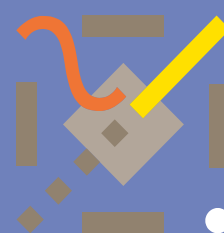
The uncertainty around the global economy, the changing geopolitical landscape, the impact of emerging technology, shifts in societal values and consumer behaviours, evolving climatic patterns are all the type of uncontrollable factors that will frame our future. The tectonic plates that shape the global agribusiness landscape were already unstable due to some of these factors when COVID 19 hit and unleashed a tsunami of disruption. Despite the fact that COVID 19 is more of an event than a mega-trend, it has resulted in structural shifts that will have a profound impact on global agrifood.

Because Australian agribusiness is heavily reliant on global supply chains for both exports and inputs, disruption to trade has added cost and complexity.

If you are tuned in, follow social media and read the newspapers, then there is nothing new in this future scan. Its power lies in the fact that it compiles all of the broad trends in one place for focused consideration. It is designed to be interpreted through the lens of your organisation and to paint a picture of how the agrifood world is likely to play out over the next five years.

I encourage you to take a quiet moment to think through the implications of these mega-trends on your team, organisation or industry. Do you need to reset your strategy?

Dr David McKinna
Principal, McKINNA *et al*



The 2021 mega-trends

The mega-trends that we have observed in 2021 are explained in more detail on the following pages.

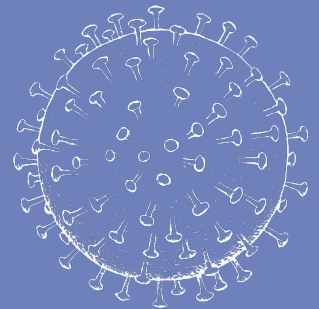
- Megatrend 1:** COVID 19 redefines the notion of 'normal'
- Megatrend 2:** The reality of climate change bites
- Megatrend 3:** Water becomes the new currency of agriculture
- Megatrend 4:** Globalisation pivots to nationalisation
- Megatrend 5:** Labour scarcity spoils the party
- Megatrend 6:** Digital stagnation is blocking transformation
- Megatrend 7:** Food shortages could be a taste of what's to come
- Megatrend 8:** Supply chain models are being reconfigured
- Megatrend 9:** Corporatisation creeps further into Australian agribusiness
- Megatrend 10:** Society is demanding 'farming without harming'



Megatrend 1:

COVID 19 redefines the notion of 'normal'

Although COVID 19 is an 'event' rather than a 'trend', it will set off a series of aftershocks that will profoundly impact the global economy, societal values and behaviours, global supply chains and labour availability for years to come.



Our 'new normal' is being defined by the following:

- A heightened sense of vulnerability and insecurity has changed societal and consumer values, behaviours and spending patterns.
- The global economy faces uncertainty.
- Permanent changes have been made to work patterns and workplaces.
- Reduced migration has dampened economic growth.
- Local and global supply chains have been disrupted.
- International travel and tourism are likely to be impacted for a number of years with flow-on effects on airfreight availability.
- Health systems have been challenged.
- Despite society reopening, business failures are still likely due to residual financial stress and other long term ramifications in certain sectors.
- Tree and sea change migration from Australian cities is driving growth of regional communities.



Megatrend 2:

The reality of climate change bites

Despite decades of predictions about the consequences of global warming, recent catastrophic, climate-related global disasters have raised consciousness of the issue. This has led to an abrupt change in the social discourse on climate variability, with growing public and industry action, which is rapidly changing the political landscape.



High profile media coverage and graphic images of extreme weather-related events around the world appear more regularly on Australian screens. The impact of global warming is becoming visible and manifesting in the following ways:

- *Deeper and longer droughts*
- *More extreme heatwaves and weather events*
- *Devastating bushfires*
- *Hail and floods (consequences of fires and loss of forest)*
- *Changed pest and disease behaviours*
- *Extreme winter cold events in northern hemisphere.*
- Large parcels of highly productive agricultural land will increasingly become marginal or unviable.
- Risk levels associated with agribusiness will rise and many enterprises will become uninsurable.
- Societal pressure, particularly from an articulate and more assertive younger generation, is prompting a sharp shift in the global action on climate change.
- Release of the 2021 IPCC Working Group report that provides updated measures of warming has shocked many.
- Media coverage of the Glasgow Climate Talks.
- Australia's trading partners and allies are committing to tighter targets on zero carbon and threatening trade sanctions for countries who do not comply.
- Increasingly, investors and financiers will favour carbon-friendly enterprises and finance will become difficult for environmentally damaging industries to secure. Proactively demonstrating sustainability credentials will become much more important than simply good governance.

Megatrend 3:

Water becomes the new currency of agriculture

The exponential growth in demand for water, in parallel with the diminishing and more volatile supply, is resulting in rises in average pricing over the long term. The increasing cost of water will fundamentally influence investment decisions and enterprise choice.



Factors influencing the water dynamic include:

- Reduced and variable run-off entering catchments due to the impact of climate change.
- A growing demand for water for urban and industrial use.
- Increasing pressure for greater environmental flows and reduced diversion limits for agricultural purposes.
- The exponential expansion in high value permanent horticulture.
- The Barmah choke limiting the availability of water down river in the Murray where demand is still yet to peak for permanent horticulture needs.
- Increasing corporate investment and investor speculation in the water market.
- Dysfunctionality in the management of the Murray Darling basin.
- The rising long term average prices of irrigation water will make crops with low value per megalitre of water unviable.



Megatrend 4:

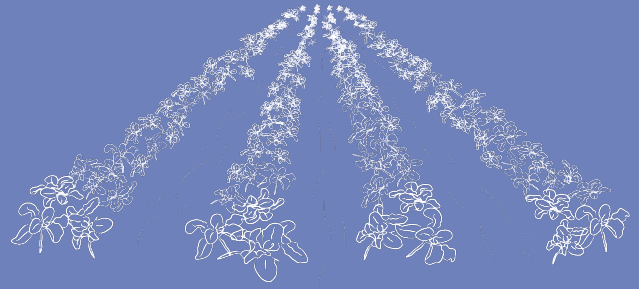
Globalisation pivots to nationalisation

There has been a notable swing away from globalisation with many countries becoming more introspective and protectionist due to growing social unrest, economic uncertainty and geo-political tensions.



The pivot to nationalisation is presenting in the following ways:

- Increasingly volatile geopolitics.
- A shifting of regional economic and security alliances.
- China is becoming more assertive, impacting regional stability and disrupting export trading patterns.
- Changes in relationships with leadership transition in Australia's trading partners and allies.
- Brexit and Britain's realignment of FTAs.
- High unemployment and declining living standards, even in wealthy countries such as USA and UK.
- Religious tensions and increasingly ethnically-motivated assertiveness and violence.
- The impact of COVID 19 resulting in less global travel and interaction.
- Disruption to global supply chains creating shortages and triggering particular concern about food security.



Megatrend 5: Labour scarcity spoils the party

The prospect of a generational boom in Australian agrifood is being tempered by seasonal labour shortages, despite high unemployment. Labour shortages are damaging productivity and constraining growth in regions. The crisis that existed well before COVID 19, has intensified with the loss of backpackers and newly-arrived migrants.

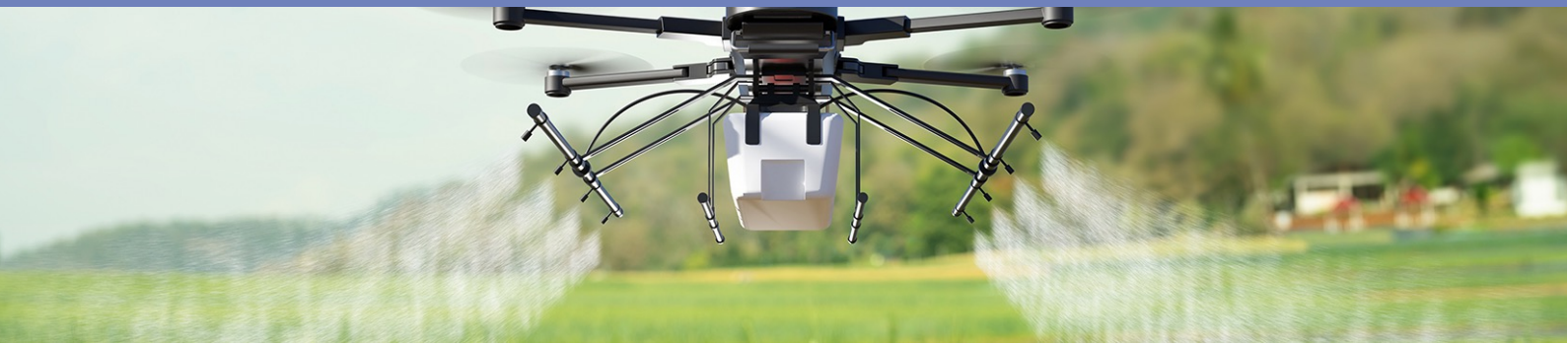


- Federal border restrictions and visa policies are all reducing the availability of seasonal labour as well as movement of equipment.
- The aging agricultural workforce is resulting in a loss of skill and a need for improved succession planning.
- Australia's high cost of labour generally has always hampered global competitiveness and the added costs of needing to create COVID-safe workplaces has added a further necessary burden.
- Regions have long had difficulty in attracting and retaining young, talented labour.
- There is a disconnect between education and training providers and industry skill requirements.
- The shortage of suitably skilled labour is constraining the adoption of new technology which requires specialist training and capability.
- Variable regional liveability and accommodation shortages and affordability are a fundamental contributor to the labour issues.
- In the medium term, there will be inevitable shortages and rising prices of some food categories.



Megatrend 6: Digital stagnation is blocking transformation

Despite the critical importance of the adoption of digital and mechanical technology to improve Australia's global competitiveness, the Australian agriculture sector is trailing behind many countries in its adoption. The potential of technology to transform industries is evident in the large-scale sectors leading the charge.



Rapidly evolving technologies include:

- Drones/robotics/automation
- Artificial intelligence/virtual reality
- Internet of things and cloud computing
- 5G functionality
- Satellite enabled technologies
- Blockchain enabled product authenticity, tracking, supply chain management and transactional platforms
- Big data
- Smart manufacturing/ packaging.

Blockers to AgTech adoption include:

- Cost and affordability
- Access to reliable phone and high speed Internet connectivity
- Conservatism and risk aversity
- The offer from technology providers does not always meet the needs of agri-businesses
- Access to technical support services in regional areas
- IP protection around service and maintenance.
- Shortage of suitably skilled labour and support services.

Benefits afforded by investment in advanced technology include:

- Improved productivity, quality and consistency
- Cost-savings in labour intensive, value-adding categories
- Improved sustainability and ability to farm marginal areas
- Replacement of seasonal and unskilled labour
- Potential to reduce chemical use
- Improved water efficiency
- Improved food safety, verification and traceability
- Improved workplace safety.

Megatrend 7:

Food shortages could be a taste of what's to come



Predictions of global food shortages are now starting to transpire. It is true that there is frequent short-term oversupply of some commodities, but at a macro level, the world demand for food is growing faster than the capacity to produce it, driving up the price of proteins especially. Global food systems will need to adapt to feed the forecast world population of close to 10 billion by 2050.

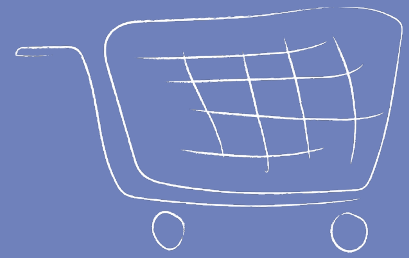


- The highly influential EAT Lancet report on global food policy proposes five core strategies that are critical to feed a global population of 10 billion:
 1. Doubling current consumption of plant-based foods
 2. Agricultural practice that enhances biodiversity
 3. Sustainable intensification of food production
 4. Better governance of earth's resources
 5. Halve food losses and waste.
- The global capacity to produce food is being limited by:
 - Diminishing arable land due to urban encroachment and land degradation
 - Depletion of marine fisheries in some countries
 - Less water for agriculture
 - Impact of climate change
 - Higher risk factors due to large areas of monoculture and geographically concentrated production.
- Increased frequency of weather-related events is causing volatility in supply, creating periodic shortages and sending prices to all time highs, but there are also periods of oversupply and depressed prices which discourage production in future years.
- Because many global production systems are now monocultures, an abnormal monsoon in India, drought in California or disease outbreak in China, can cause world-wide shortages of a massive scale relative to Australian production volumes.
- Rising wealth in Asia is driving demand for higher value protein, better quality, safer and healthier foods, which in turn, is increasing prices in the domestic market.
- Disrupted global supply chains are resulting in extended shortages of food and ingredients.
- Sovereign wealth funds in countries such as Singapore, Qatar and UAE are investing in agrifood assets and infrastructure to ensure food security for their populations.

Megatrend 8:

Supply chains are being reconfigured

COVID 19 has accelerated the reconfiguration of supply chains, characterised by reduced reliance on overseas sourcing and shifts in the mix between various market channels in the Australian domestic market.



Supply chain shifts include:

- Shortening of supply chains and more closed-loop alliances between producer and retailer.
- Global supply chain disruption due to:
 - Air and sea freight availability and cost
 - Increasing market access blockers (both tariff and non-tariff)
 - Oversupply on domestic markets resulting in price dilution.
- Air and sea freight costs are likely to remain high for two or three years making some export categories unviable and the cost of imported foods, ingredients, plant and equipment more costly and less reliable.
- Supply constraints and delays continue, which is driving a shift to local sourcing. The 'just in time' inventory model has been stress tested and many are moving to secure storage or holding capacity.

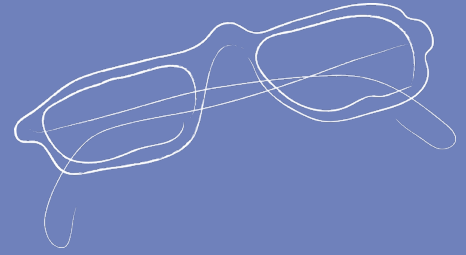
Shifts in the channel mix in domestic markets are occurring:

Retail

- Rise of local independent retail
- Increases in on-line sales and 'click and collect'.
- More 'grab and go' and home-delivered meal solutions.

Foodservice

- Greater share of consumption in food prepared away from home
- Rapid growth of home delivered groceries and meals.



Megatrend 9:

Corporatisation creeps further into Australian agribusiness

Australian agribusiness is becoming more corporatised due in part, to the need for external investment to achieve growth. The lack of viability in the traditional family farm model is resulting in the adoption of entirely new business models.



Incidents of increased corporatisation include:

- Corporate investment by:
 - Foreign investors/sovereign funds and superannuation funds
 - More ASX agrifood listings
 - High net worth individuals entering the sector.
- Transition of larger family businesses into 'family corporate' models with independent directors.
- Aggregation of land assets to achieve scale.
- Investment in large scale technology and intensive farming/aquaculture systems to drive efficiency and product differentiation.
- Corporate ownership of water entitlements.
- Vertical integration and on-farm value-adding.
- Closed-loop supply chains are becoming more common.
- A greater interest in collaborative farming, processing and exporting models.
- The traditional family farm is stuck in the middle - too small to scale up and too big to be artisan.
- Small-scale farming business are reinventing to supply local and farmers markets.

Megatrend 10:

Society is demanding 'farming without harming'

Social licence has shifted from a marketing claim to a condition of doing business. This has been driven by changed community values, amplified by social media. Social licence is critical to brand power and the credibility of businesses, industries and governments. Social licence is now also impacting access to capital as the ethical investor segment expands and banks more closely scrutinise ESG (environmental, social & governance) factors.



Societal and consumer pressure will force agribusinesses and industries to behave more responsibly and transparently on issues such as:

1. *Animal welfare*
 2. *Sustainability*
 3. *Ethical employment practices*
 4. *Fair trade*
 5. *Corporate citizenship*
 6. *Food miles*
 7. *Truth in labelling*
 8. *Protection of heritage and culture*
 9. *Best practice governance.*
- To a large degree, the push to more socially acceptable practices is being driven by supermarkets and foodservice corporates who are highly sensitised to damage to their brands.
 - Tangible evidence of social and corporate responsibility and accountability will increasingly become a central platform of an organisation's brand and ultimately its survival.
 - Environmental, Social and Governance (ESG) factors are already impacting the ability to raise capital or secure finance.

The future as we see it is blue skies ahead

Despite the many obvious challenges highlighted in this future scan, the reality is that the outlook for Australian agrifood is optimistic. At a macro level, agrifood industries are well positioned to capitalise on the seemingly insatiable demand for premium quality, safe and trusted foods from consumers in Asian and Middle Eastern markets, where Australia has a significant location advantage. However, success will require governments, regions and businesses to reset strategies and policies to manage the changing risk profile. Availability of labour (both seasonal and skilled) and water will become the two greatest growth limiters in the short term with climate change presenting a range of pernicious challenges including increased crop risk. Investment in sustainable farming and aquaculture systems, intensive or protected cropping and more water efficient production will be critical, as will as adoption of new business models for family farms.

What does this mean for stakeholders?

Governments at all tiers will need to provide agile, sensible policy settings around carbon, water, infrastructure, technology adoption, digital connectivity, labour and immigration, land-use planning and foreign investment.

Agribusinesses will need to pivot in response to the fact that the strategies that were successful in the past may no longer be effective. Supply chain and channel strategies will need to be reset to reflect the changing purchase behaviours and the disruption to international supply chains. New business models will be needed for the traditional family farm to survive.

Exporters will need to price goods to reflect an increased risk profile and greater volatility with strong risk mitigation and market diversification strategies. Industries with a high exposure to single markets would be well advised to proactively diversify their mix, even if it means compromising short term profitability. The resetting of geopolitical alliances will open new export opportunities and there will also be strong import replacement opportunities for many food and ingredient categories.

With the right strategy, the future looks bright blue to us.

