



FOOD FOR THOUGHT

WINTER 2024

A REGULAR LOOK ACROSS FOOD,
BEVERAGE AND AGRIBUSINESS SUPPLY CHAINS

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SOBER SIPS: THE RISE OF ZERO ALCOHOL DRINKS



It doesn't seem that long ago that ordering a non-alcoholic drink at a party or in a nightclub could bewilder other revellers, and potentially make a person into the punchline for the evening. These days, a spectacular change in social trends is seeing more and more people drink less alcohol and have an enjoyable but completely sober night.

While many people are embracing the move to going alcohol-free, they still enjoy the taste of a traditional alcoholic beverage at the same time. To fill this demand, recent years have seen a surge in the growth of non-alcoholic beverages – particularly non-alcoholic beer, wine, and spirits. What has become increasingly clear is that these new product offerings are not just passing fads but are becoming an increasing component of the beverage industry.

In contemplating the outlook for these products, it's important to look at the range of reasons behind the rapid growth in demand for these products, the scale and nature of competition in the market, and also some of the challenges facing the market.

Globally, the market for non-alcoholic beverages has expanded remarkably. In 2022, the global market was valued at around US\$22 billion, with growth forecast at almost 8 percent annually, to reach around US\$43 billion by 2027.

So what's driving the growth in non-alcoholic beverages? For many older Aussies, it wasn't that long ago that the idea of a non-alcoholic wine or beer was inconceivable. Arguably, a very early catalyst for the change was the introduction of drink driving laws and random breath tests. In particular, these led to both a decline in overall alcohol consumption, and a growth in low-alcohol beers.

The trend from low to zero alcohol beverages has been caused by another shift. In particular, it was driven by the gradual but major change by consumers towards healthier lifestyles, and by governments and other institutions – such as schools - seeking to promote this. Given that the past few decades have seen a concerted and largely successful efforts to reduce consumption of products

including cigarettes and fatty food, it is not surprising that alcohol consumption habits are now also evolving.

To a degree, the shift toward lower alcohol consumption has also coincided with the growing use of social media, to not only be able to get community health messages in front of more of the population than traditional mainstream advertising (i.e. television, radio, and print), but also to target the messages. As such, a range of campaigns, such as "Dry July" or "Sober Curious" have been able to reach different audiences in different ways, sending different marketing to younger audiences versus middle aged readers.

IMPORTANTLY, A MAJOR SHIFT IN DRINKING HABITS HAS BEEN IN THE YOUNGER GENERATIONS.

Whether it's the Gen-Zs or the Millennials, an increasing number of this market are preferring beverages which align with their health-conscious and performance-oriented lifestyles. To a degree, many in this demographic are less inclined toward heavy drinking, and more interested in beverages which can be part of their social and professional lives, without some of the potential drawbacks of alcohol.

Behavioural shifts in drinking were also impacted by Covid lockdowns around the world, which saw a rise in at-home occasions, as well a shift towards moderation.

The trend toward lower alcohol consumption has been seen in many countries. The CEO of Asahi, Japan's biggest brewer (and owner of CUB Beverages in Australia) recently forecast zero- and low-alcohol drinks would generate half of the company's beverage sales by as early as 2040. This is in line with a number of the world's biggest brewers,

including Heineken, AB-Inbev and Carlsberg continuing to lift their product offerings in that space.

NOTABLY, NON-ALCOHOLIC BEERS CAN NOT ONLY HAVE HIGHER MARGINS THAN SOFT DRINKS, AS CONSUMERS PAY A PREMIUM FOR PARTICULAR BEER BRANDS, BUT CAN ALSO BE MORE PROFITABLE THAN REGULAR BEERS, GIVEN THAT THEY DO NOT INCUR AN ALCOHOL TAX.

Even in the most famous of wine producing and drinking countries, France, alcohol consumption habits are down markedly. According to one study in 2022, around 10 percent of French people drank wine every day, down from 50 percent in 1980. Even more staggering, in 1960 the French drank an average of 116 litres of wine per person annually – by 2018, that had shrunk to 17 litres. Some surveys have shown that a quarter of French 18-34 year olds now say they never drink alcohol, while almost 40 percent say that they do not drink wine.

For many beverage companies, a reduction in alcohol consumption could well present a challenge – but, as the saying goes, every challenge is an opportunity for growth. The shift by many consumers to lower alcohol consumption has opened up a number of opportunities across a wide range of products. Certainly, this could include a growth in consumption of traditional bottled beverages – such as water or soft drinks. For the latter, the shift toward healthier lifestyles is likely to see ongoing growth in drinks offering aspects such as sugar-free or vitamin-enhanced. That said, to some degree, non-alcoholic beverages have also eaten into the markets for products such as water or soft drinks.

Notably, this behavioural change is likely to be a global one. While consumers in advanced markets will embrace these changes first, as middle income or “aspirational” markets catch-up, their consumers are also likely to pursue

these now lifestyles and products. At the same time, moves by government to reduce alcohol consumption in populations, for both health and social reasons, is no longer confined to developed countries.

Notably, the production processes for non-alcoholic wine, beer, and spirits differ significantly. Non-alcoholic wine and beer typically involve fermentation followed by alcohol removal, while non-alcoholic spirits often use botanicals and other natural ingredients to mimic the flavours of traditional spirits.

Non-alcoholic beer is the largest segment within the non-alcoholic beverage market. Popular brands such as Heineken 0.0, Carlton Zero, and Budweiser Zero have captured a significant market share. In 2023, non-alcoholic beer accounted for 45 percent of the total non-alcoholic beverage sales in Australia, as well as accounting for around 10 percent of all beer sales.

According to major players such as Endeavour Group, one in ten customers has purchased a low or no alcohol product in the past twelve months. Asahi Beverages which accounts for nearly half of the Australian beer market, reported that non-alcoholic beer sales had tripled in the last three years, with low and zero alcohol drinks accounting for 30 percent of their total beer sales.

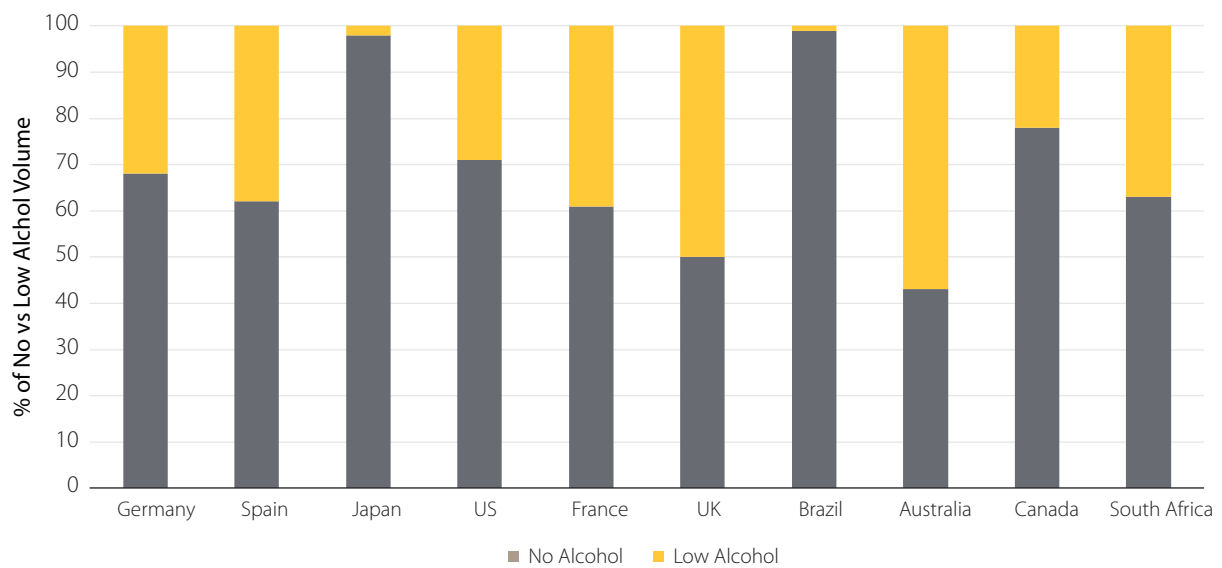
Non-alcoholic wine has seen a significant rise in popularity. Brands like McGuigan Zero and Edenvale have become household names in Australia. In 2023, non-alcoholic wine sales in Australia increased by 15 percent, according to Wine Australia. These wines offer a similar taste profile to their alcoholic counterparts, making them an attractive option for health-conscious consumers.

Zero alcohol spirits are arguably the smallest market of the three but are increasingly seeing new options particularly in products such as gin, or pre-mixes.

Taking a step back, this change does need to be kept in perspective. By far the majority of beer, wine and spirits drinkers will still opt for the full alcohol variety, seeking to drink and enjoy these products in moderation. But even if the number of consumers who will look for a non-alcoholic alternative is relatively small, it is still a large enough component of a huge market to offer a range of opportunities to both existing beverage companies, as well as start-ups.

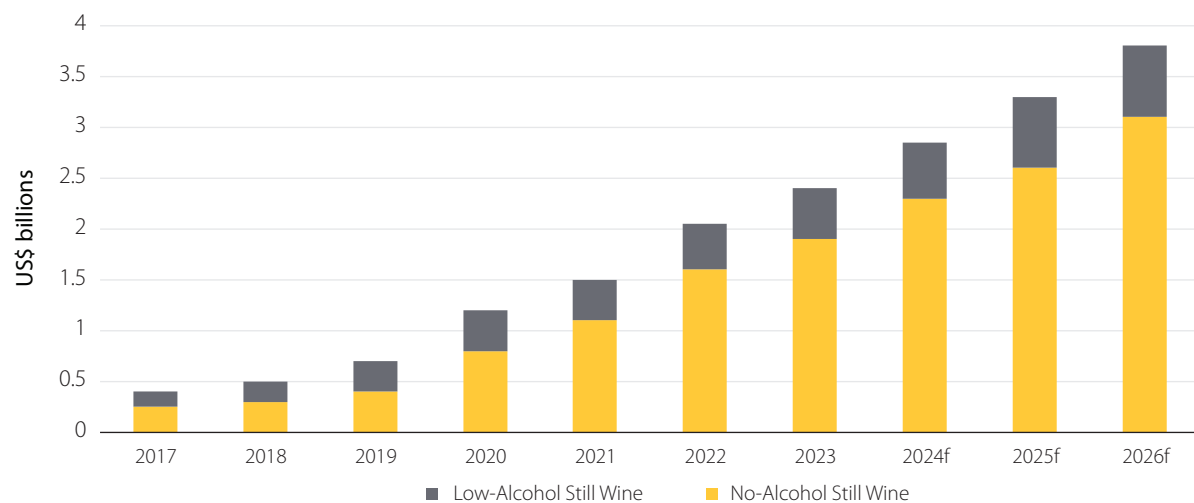


NO VS LOW ALCOHOL BEVERAGE VOLUME SHARE BY MARKET - 2022



Source: IWSR, ANZ

GLOBAL SALES OF NO-ALCOHOL AND LOW-ALCOHOL WINES



Source: Wine Australia, ANZ

It also needs to be noted that zero alcohol beverages can be expensive to produce compared to their alcoholic counterparts. The higher cost is often due to the additional processing required to remove alcohol, which can be a deterrent for price-sensitive consumers.

In addition, navigating regulatory requirements can be challenging for producers of non-alcoholic beverages. Labelling requirements, advertising restrictions, and differing regulations across regions can complicate market entry and expansion.

The growth of non-alcoholic products also presents new export opportunities. The attraction in these markets can include cultural ones – such as predominantly non-drinking Muslim markets – as well as ones with growing aspirational populations, who are seeking a boutique imported non-alcoholic product.

Another product category which is increasingly competing in this space, particularly for younger consumers, is known as “functional beverages” or “alcohol adjacents” - drinks with active ingredients such as cannabidiol (CBD), adaptogens or nootropics, which claim to offer health benefits, stress reduction, and mood alteration.

The non-alcoholic market is experiencing rapid growth driven by health and wellness, changing social attitudes, and regulatory influences. With continuous innovation and increasing customer acceptance, the future looks promising. However, challenges such as taste perception, price and regulatory hurdles need to remain a focus if this category is to continue to grow strongly. As consumers continue to seek these alternatives, the non-alcoholic market is poised to play a significant role in the global beverage industry.

RAISING THE STEAKS: A WRAP UP OF BEEF WEEK 2024



Beef Week Attendees from the ANZ Institutional Food, Beverage and Agribusiness Team

Beef Australia 2024, held in Rockhampton, Queensland from 5-11 May, was a resounding success, highlighting the vital importance of the cattle and beef industry to Australia. This triennial event brought together industry leaders, farmers, and enthusiasts from around the world, fostering discussions on the future of beef production and sustainability.

The cattle and beef industry is a cornerstone of the Australian economy. Australia boasts around 28 million head of cattle, managed by approximately 45,000 beef farmers. The industry employs over 200,000 people across various sectors, from farming and processing to distribution and export. Annually, Australia produces around 2.4 million tonnes of beef, making it one of the largest beef producers globally.

Exports play a critical role in the industry, with Australia exporting around 1.3 million tonnes of beef in 2023/24. The value of these exports exceeds A\$12 billion, marking beef as Australia's top individual agricultural export. Australian beef is renowned worldwide for its quality, and is exported to over 100 countries, particularly Japan, the United States, South Korea, and China.

Beef Australia - widely known as Beef Week - is held every three years, drawing attendees from over 30 countries. In 2024, the event attracted more than 100,000 visitors, making it one of the largest gatherings of its kind in the southern hemisphere. The event spans across Rockhampton, encompassing numerous exhibitions, seminars, and trade shows, offering a comprehensive platform for showcasing the latest in beef production and technology.

ANZ has been a long-standing supporter of Beef Week, recognising its importance to the agricultural sector. The ANZ team had a busy and rewarding week at Beef Australia 2024, engaging in discussions, hosting client events, and working closely with industry stakeholders. ANZ's commitment to supporting the cattle and beef industry is unwavering, and we are proud to play a significant role in its ongoing growth and development.

Several major themes emerged during Beef Week, reflecting the industry's current priorities and future directions:



Exports: Discussions focused on expanding market access and enhancing the competitiveness of Australian beef on the global stage. Emphasis was placed on maintaining high quality and sustainability standards to meet international demand, particularly with a likely herd rebuild in the United States generating additional exports.



Sustainability: Sustainability was a key topic, with conversations centred around reducing the environmental footprint of beef production. Innovative practices and technologies aimed at improving sustainability were showcased, highlighting the industry's commitment to a greener future. Farmer conversations centred around baselining emissions, while players further down the supply chain are seeking to reduce carbon footprints whilst not restricting production and profitability.

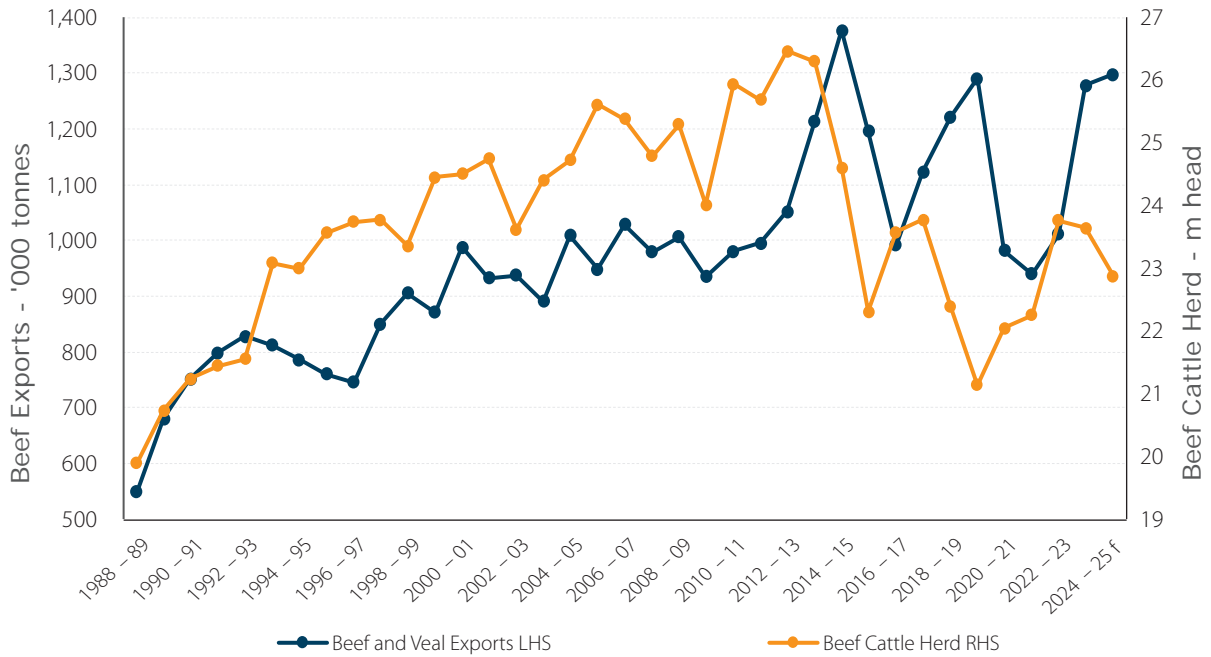


Changing Landscape: The evolving landscape of beef production, driven by advancements in technology and changing consumer preferences, was a significant focus. Sessions covered the adoption of smart farming practices and the integration of data analytics to optimise production.



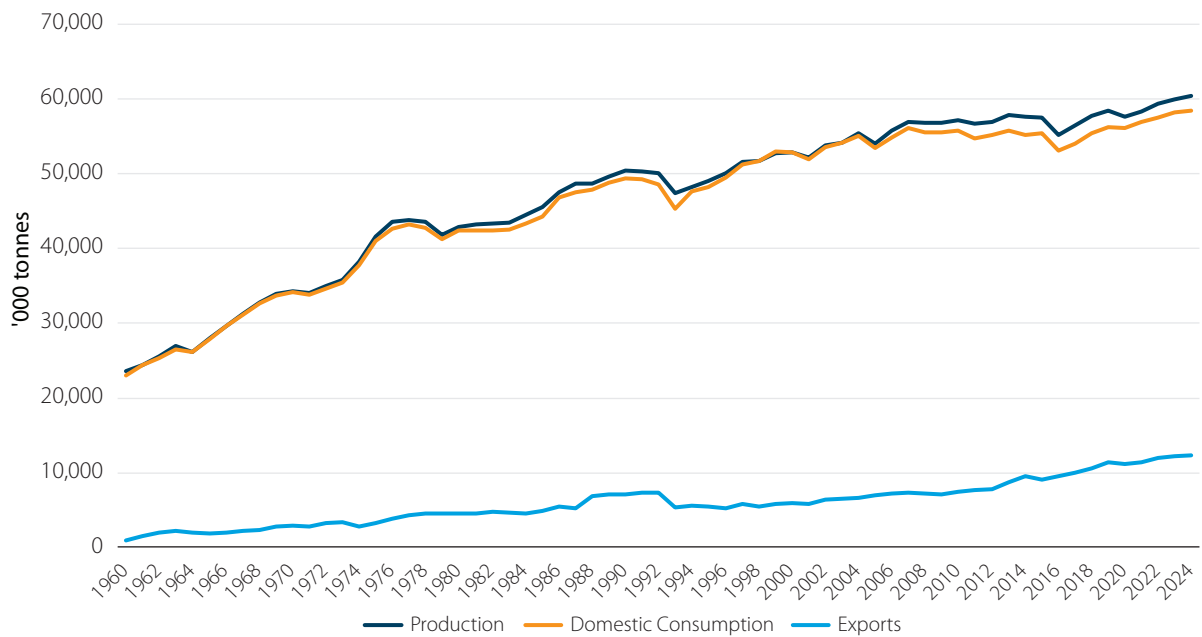
Global Competition: Competing globally remains a challenge, with Australian producers striving to maintain their edge in quality and sustainability. Strategies for enhancing competitiveness, including investment in infrastructure and research, were extensively discussed.

AUSTRALIAN BEEF CATTLE HERD VS BEEF EXPORT VOLUME 1988/89 - 2024/25F



Source: ABARES, ANZ

GLOBAL BEEF PRODUCTION, CONSUMPTION AND EXPORTS 1960 - 2024



Source: USDA, ANZ

The overall sentiment from Beef Australia 2024 was overwhelmingly positive, with all participants emerging from the event with a sense of excitement and optimism about the future of the cattle and beef industry. The collaborative spirit and the innovative ideas shared during the week have set a strong direction for the industry's growth and sustainability.

Looking to the future, many are already planning for the next event in 2027, eager to build on the successes of this year. The enthusiasm and commitment demonstrated at Beef Australia 2024 underscores the dynamic and resilient nature of the industry, promising exciting times ahead. With stakeholders across the industry continuing to work together, and a shared vision for sustainable growth, the future of Australian beef looks brighter than ever.

WASTE NOT, WANT NOT - TACKLING FOOD WASTE



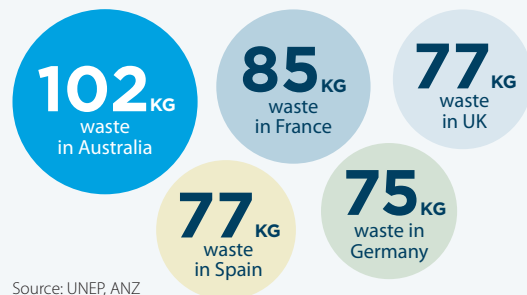
To consider the issue of food waste, have a think about your own home. Envisage how many apples go off in your fruit bowl, how many crusts never get eaten, how much yoghurt just past its use-by date you put in the bin, or how many frightening green beings from a horror movie you find at the bottom of your fridge vegetable drawer.

It can be stunning to think about just how much of the food that is produced in the world never actually gets consumed. According to some studies, as much as a third of the food actually produced in the world is lost or wasted – from grain to meat to horticulture, and in almost every category. While this is concerning on its own, given the levels of food insecurity in many countries – often the ones with some of the least efficient food supply chains - the issue becomes even more critical.

IN AUSTRALIA,
20% ≈ **ONE MILLION TONNES ANNUALLY**
of all vegetables produced never leave the farm

Food waste is a critical issue that affects every stage of the food, beverage, and agricultural supply chain, from production and processing to retail and export. In the agricultural production stage, food waste often results from factors such as overproduction, pests, disease, and adverse weather conditions. In Australia, it is estimated that up to 20 percent of all food produced never leaves the farm, including crops that are not harvested due to quality standards, market fluctuations, or logistical challenges. According to one study, around 20 percent of vegetables growing in Australia never leave the farm, equivalent to around one million tonnes annually.

In particular, it has been estimated that Australians waste around five million bananas, which if laid end to end, would stretch approximately 1,000 kilometres, or roughly from Sydney to Melbourne. (It would also be interesting to know how many of these are put into home freezers, with plans to be made into banana bread...which never happens.)



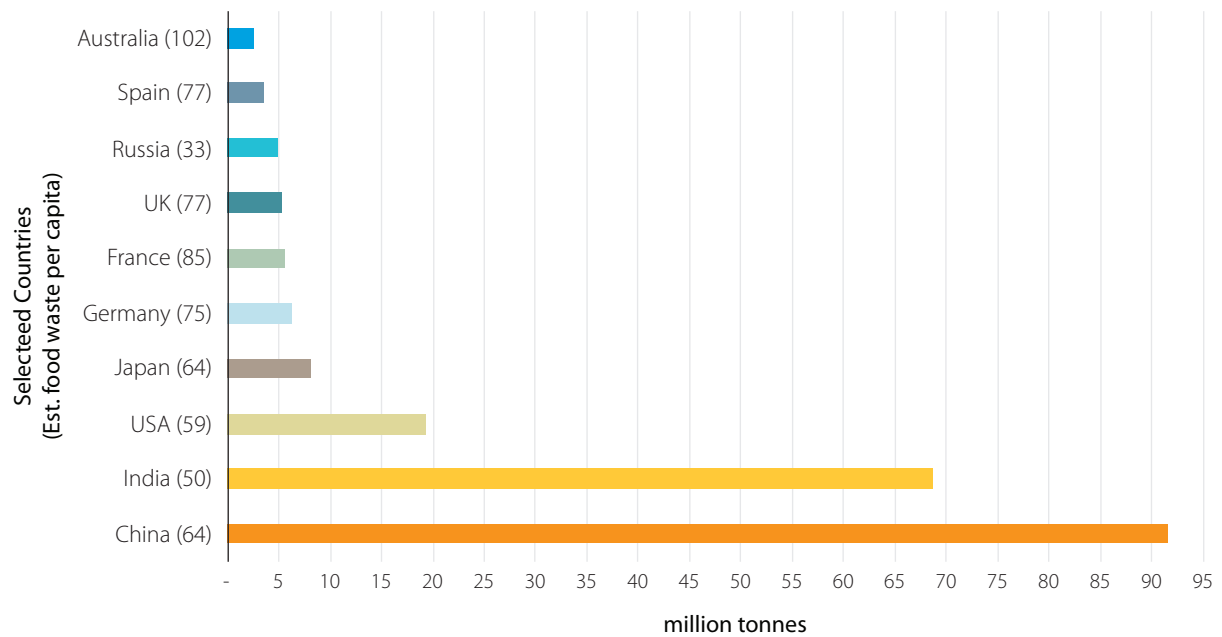
Source: UNEP, ANZ

In the UN Food Waste Index Report 2021, figures showed that Australian consumers waste around 102 kg of food each year. This relatively high figure could be due to factors such as both the relatively high availability of food in Australia, compared to many countries, as well as relatively high consumer incomes. In addition, in developed markets like Australia, consumers are far more likely to dispose of food after the "best-before" date, when it is still safe to eat. In addition, in a market like Australia, it is more likely that consumers will feel more relaxed about discarding food, whether at home, or when eating out.

During processing, food waste can occur due to spoilage, inefficiencies, and quality control issues, with losses occurring during cleaning, peeling, slicing, and packaging. According to Food Innovation Australia Limited (FIAL), the food manufacturing industry wastes approximately 1.2 million tonnes of food annually.

In the retail sector, food waste is driven by factors such as overstocking, improper storage, and stringent aesthetic standards. Supermarkets often discard food that is close to its expiration date or does not meet visual standards, even if it is still safe to consume. The National Food Waste Baseline report indicates that Australian supermarkets waste around 310,000 tonnes of food annually.

TOTAL ANNUAL HOUSEHOLD FOOD WASTE PRODUCED (SELECTED COUNTRIES)



Source: UNEP, ANZ

Consumer behaviour plays a significant role in food waste at the household and hospitality levels. In Australia, households discard around 3.1 million tonnes of edible food each year, equivalent to approximately A\$8 billion. This waste often results from over-purchasing, improper storage, and misunderstanding of expiration labels.

CHALLENGES CREATED BY FOOD WASTE

The issue of food waste presents a number of challenges. Wasting food represents a significant economic loss right through the supply chain, including for farmers, processors, retailers, and consumers. Environmentally, decomposing food waste in landfills generates methane, a potent greenhouse gas. Additionally, wasted food means wasted resources such as water, energy, and labour. Perhaps most importantly, while large quantities of food are wasted, millions of people globally suffer from hunger and food insecurity.

OPPORTUNITIES TO ADDRESS FOOD WASTE

Despite the huge issues it creates, the challenge of addressing food waste can create several opportunities. Reducing food waste can save money for businesses and households, and create new economic and commercial opportunities in food recovery and redistribution, while businesses can capitalise on surplus food by donating to food banks or selling imperfect produce at a discount. One example is OzHarvest, a leading food rescue organisation in Australia, which claims to save over 10,000 tonnes of food from going to waste each year. They collect surplus food from supermarkets, restaurants, and food manufacturers and distribute it to over 1,300 charities across the country, providing meals to those in need. Their efforts not only reduce food waste but also support food security for vulnerable communities.

Environmentally, converting food waste into bioenergy is a growing industry with significant potential, while commercial composting operations can turn food waste into valuable compost for agriculture. Richgro, a Western Australia-based company, has invested in an anaerobic digestion plant that converts food waste into renewable energy. The facility processes up to 35,000 tonnes of food waste annually, generating enough electricity to power around 3,000 homes. This not only diverts food waste from landfills but also provides a sustainable energy source, showcasing the potential for commercial bioenergy production from food waste.

FOOD WASTE IS A PERVASIVE ISSUE THAT IMPACTS EVERY STAGE OF THE FOOD, BEVERAGE, AND AGRICULTURAL SUPPLY CHAIN.

By understanding the extent of the problem and recognising the opportunities to address it, stakeholders can take meaningful steps to reduce waste. This not only helps save money and resources but also contributes to a more sustainable and equitable food system. As we move forward, it is essential to continue innovating and implementing best practices to minimise food waste and maximise the efficiency of our supply chains. And finally, next time you think about leaving those crusts, remember that Australians throw away nearly 1.3 billion slices of bread each year, which if stacked up, would create a tower over 1,000 kilometres high (or the makings of a really impressive sandwich).

NOURISHING NATIONS: THE IMPORTANCE OF FERTILISER IN FOOD SUPPLY CHAINS



Though many food consumers around the world may have little idea about it, fertiliser is a cornerstone of modern agriculture, fundamentally essential to the global food supply chain. According to some researchers, around two-fifths of humanity, or more than three billion people, are alive because of the major impact of fertiliser on the agricultural sector, particularly from the Green Revolution in the 1960s. With fertilisers leading to a tripling of world grain production, this led to the biggest growth in human population the world has ever seen.

TODAY, FERTILISERS ARE JUST AS IMPORTANT, IN CONTINUING TO GROW FOOD SUSTAINABLY ACROSS THE GLOBE, TO FEED GROWING POPULATIONS - PARTICULARLY IN AFRICA - AND TO HELP MEET THE NEEDS OF CHANGING DIETS ACROSS MANY MODERNISING COUNTRIES.

In Australia, as well as globally, fertilisers play a pivotal role in enhancing yields for crops and horticulture, improving soil fertility to grow pasture for livestock and animal feed, and ensuring food security for an ever-growing population. In the current Australian cropping season, fertiliser demand has surged recently in regions where the delayed arrival of the autumn/winter has seen some farmers make late decisions to plant a new crop.

The global fertiliser landscape has been exceptionally eventful over the past few years. Major developments such as the COVID-19 pandemic, which disrupted supply chains, and the Russia-Ukraine conflict, which affected major fertiliser exports, have significantly impacted

fertiliser availability and prices. Energy price volatility, particularly driven by geopolitical tensions and weather events, has further influenced fertiliser production costs. In response, innovations in sustainable fertiliser practices and advancements in precision agriculture are emerging as critical strategies to navigate these challenges. Looking ahead, the fertiliser industry must continue to adapt to these dynamic conditions to sustain global food production and security.

In thinking about the domestic and global fertiliser landscape, it helps to have a basic understanding of the different major types of fertilisers. Fertilisers can be broadly categorised into three main types: nitrogen (N), phosphorus (P), and potassium (K), often referred to as NPK fertilisers. Each type plays a unique role in plant growth.

NITROGEN

Nitrogen fertilisers are crucial for plant growth, particularly for leafy vegetables and cereals, as they are essential for photosynthesis, and result in higher yields. Nitrogen fertilisers are made by capturing nitrogen from the air and combining it with hydrogen from natural gas to create ammonia, which is then processed into various fertilisers like urea and ammonium nitrate. Common nitrogen fertilisers include urea, ammonium nitrate, and anhydrous ammonia.

The largest producers of nitrogen fertilisers include China, India, and the United States, while the largest exporters are Russia, Qatar, and Saudi Arabia. The Russia-Ukraine conflict significantly impacted the availability and price of nitrogen fertilisers, not only because Russia is a major exporter, but because resultant high natural gas prices led to increased production costs and higher prices.

Australia uses around 1.8 million tonnes of nitrogen fertilisers annually, valued at around A\$2 billion. These fertilisers are

predominantly used for cereal crops like wheat and barley, which require high nitrogen levels for optimal growth.

While Australia does have some domestic production of nitrogen fertilisers, primarily urea, produced by companies like Incitec Pivot, a significant portion is imported, particularly from countries with abundant natural gas supplies, such as Qatar and Saudi Arabia.

Nitrogen is arguably the most controversial of the major fertilisers. In a number of countries, including Australia and New Zealand, nitrogen runoff from farms into waterways has been blamed for a build-up of algae and the poisoning of fish and other life forms. In New Zealand, limits have been placed on the amount of nitrogen which can be applied to each farm, while dairy farmers must report their annual nitrogen use.

Looking ahead, advances in precision agriculture, which can apply nitrogen exactly and only where it is required, could well reduce both waste as well as the environmental impact. For farmers, this could also ultimately result in a reduction of their overall input costs.

PHOSPHORUS

Phosphorus fertilisers are essential for root development, flowering, and seed production. They are particularly important for leguminous crops, such as lentils, chickpeas and beans, as well as grain crops. Phosphorus fertilisers are made by mining phosphate rock and treating it with acid to make it usable for plants.

The largest producers of phosphate include China, Morocco, and the United States. Morocco is also the largest exporter of phosphorus fertilisers, followed by Russia and the United States. Supply chain disruptions due to COVID-19 and geopolitical tensions, particularly involving Russia, have affected the global supply of phosphorus fertilisers. Additionally, export quotas and lengthy inspection requirements on the fertiliser ingredients by China to lower domestic prices have also impacted global supply.

Australia uses around 0.4 million tonnes of phosphate annually, with a value of around A\$800 million. While Australia does produce some phosphorus fertilisers from locally mined phosphate rock, mainly in Queensland, a significant quantity of phosphorus fertilisers is still imported from countries like Morocco and the United States.

One major challenge with phosphate is that the global supply of phosphorus is finite, which has led to an acceleration in research around how to make phosphorus mining and processing more efficient. Similarly, like nitrogen, overuse of phosphorus has been blamed for water contamination, with a result that in places like Western Europe, its use is either highly regulated or in decline.

POTASSIUM FERTILISER (OR POTASH)

Potassium fertilisers improve plant health by enhancing disease resistance, water retention, and overall hardiness. They are vital for a wide range of crops, including fruits, vegetables, and grains. Potassium fertilisers are made by mining potash ore and refining it to create potassium chloride or potassium sulphate.

Canada, Russia, and Belarus are the largest producers of potash, while Canada is also the leading exporter,

followed by Russia and Belarus. Sanctions on Belarus, a major potash exporter, and trade disruptions involving Russia have significantly impacted the global supply of potash. Additionally, logistical challenges and increased transportation costs have contributed to higher prices.

In Australia, around 0.5 million tonnes are used each year, valued at around A\$500 million, mostly on fruit, vegetable, and grain crops. Australia has no domestic production of phosphate and relies entirely on imports, largely from Canada and Russia.

Given Australia's complete reliance on imports, potash supply is vulnerable to global geopolitical tensions and trade disruptions. As a result, decades of industry development and start-up funding has gone into projects seeking to create domestically produced potash. In particular, these projects have largely looked at creating sulphate of potash (SOP), a variant which makes up around ten percent of Australia's potash use, through an environmentally friendly, low-cost salt lake brine process. SOP is used predominantly by the horticultural industry, and to some degree by the grains industry. Despite the ongoing work, the projects are yet to create commercial quantities of SOP.

SUSTAINABILITY IMPACT

Sustainability standards and regulations are increasingly impacting the fertiliser industry, influencing both production and usage practices. Two prominent examples of these regulations are Scope-3 and the Corporate Sustainability Due Diligence Directive (CSDDD), which are set to drive significant changes in how fertilisers are produced and applied.

The increased focus on Scope-3 regulations, which account for all indirect emissions that occur in a company's value chain, including those from raw materials and product use, is poised to significantly impact fertiliser usage in agriculture. One example in response to this is the aim by Norwegian fertiliser company Yara International to cut CO2 emissions by 30 percent by 2030 using renewable energy. German fertiliser and chemical company Bayer has developed Climate FieldView, a platform which will help farmers apply fertiliser more precisely, reducing wastage and emissions. According to a 2022 report by the International Fertilizer Association (IFA), fertiliser production and usage contribute approximately 2.5 percent of global greenhouse gas emissions. As they are increasingly implemented through the food supply chain, Scope-3 regulations may increasingly see farmers needing to explore new ways of reducing fertiliser usage accelerating their focus on reducing fertiliser, including through precision agriculture, as well as exploring sustainable fertiliser alternatives, such as bio-fertilisers and slow-release fertilisers.

The European Union's supply chain regulations, particularly the CSDDD, are set to reshape the fertiliser industry. These regulations require companies to identify, prevent, and mitigate adverse impacts on human rights and the environment throughout their supply chains. For example, the EU's Green Deal aims to reduce chemical pesticide use by 50% and fertilisers by 20% by 2030, pushing companies like BASF to innovate with sustainable alternatives. Fertilizers Europe has developed a Product Environmental

Footprint (PEF) tool to improve environmental performance. With the agricultural sector responsible for around 10 percent of the EU's greenhouse gas emissions, this shift will increase operational costs but enhance the industry's sustainability and ethical footprint.

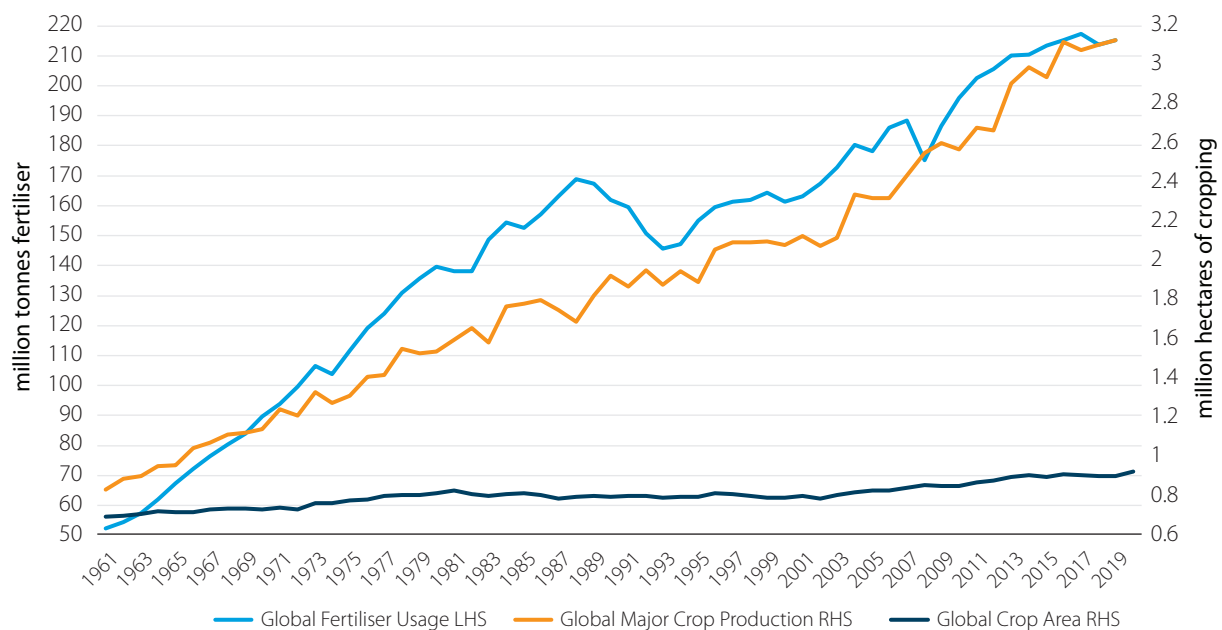
CONCLUSION

Fertilisers are indispensable to the long-term sustainability and productivity of Australia's agricultural sector and the global food supply chain. They play a crucial role in ensuring that crop yields are sufficient to meet the growing demand

for food, fibre and biofuels. Looking ahead, the importance of fertilisers will only increase, given the challenges posed by climate change, soil degradation, and the need to enhance food security for a burgeoning global population.

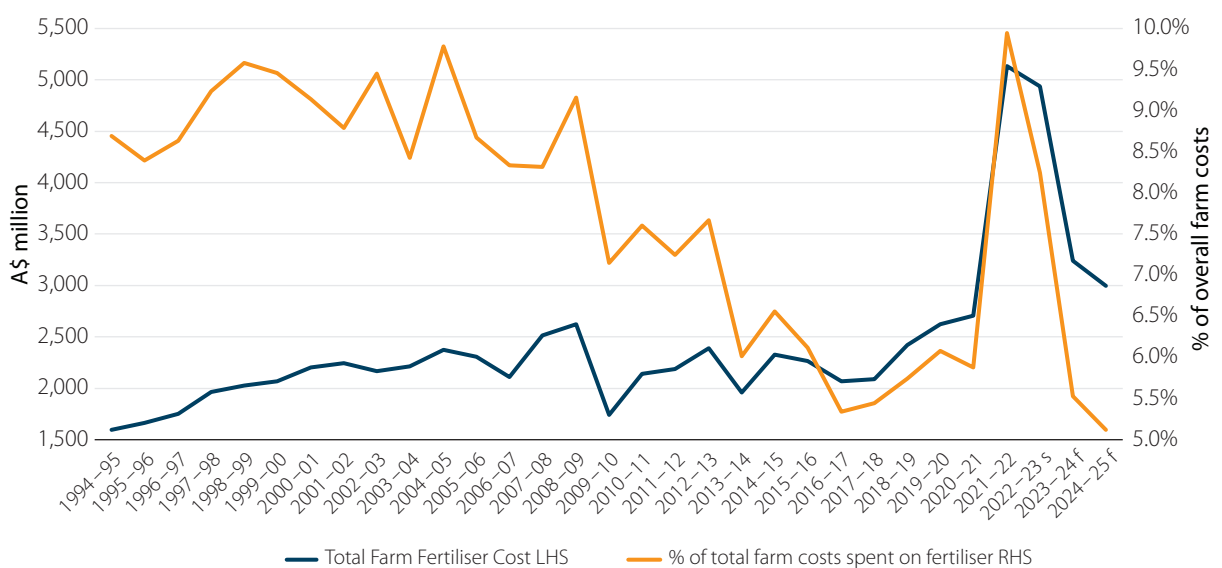
It is vital for stakeholders in the agricultural sector to focus on sustainable fertiliser practices, invest in research and development, and improve global cooperation to ensure a stable and resilient fertiliser supply. By doing so, this will secure the future of food production, support the livelihoods of farmers, and contribute to the well-being of populations worldwide.

GLOBAL FERTILISER USAGE VS CROP PRODUCTION VS CROP AREA



Source: USDA, ANZ

TOTAL AUSTRALIAN FARM FERTILISER COST VS % OF OVERALL FARM COSTS



Source: ABARES, ANZ

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