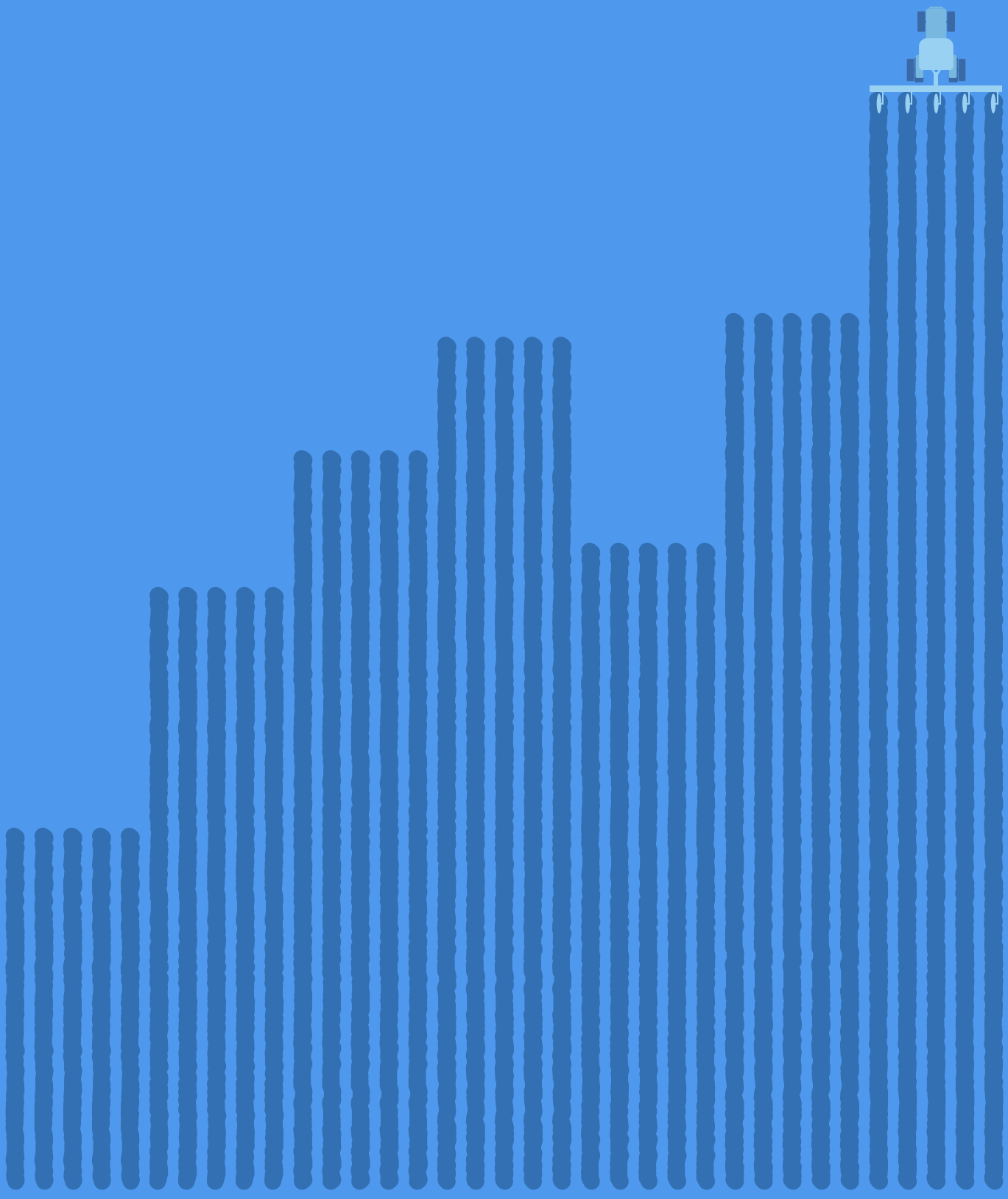
Blueprint Institute

Measuring up

Leveraging consumer demand to drive agricultural sustainability



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About the authors

Liana Downey

Liana's career has focused on improving citizen outcomes through the use of evidence-based policy in the areas of climate/energy, housing, and education. Downey has worked in the corporate, government and social sectors. Previous policy roles include Deputy Secretary, NSW Education, special advisor to the Department Prime Minister and Cabinet, leader of McKinsey sustainability and public sector practices, and lecturer in public policy at New York University's Wagner School of Public Policy. Liana, GAICD holds an MBA (Arjay Miller Scholar) with a focus on public policy from Stanford University, a Bachelor of Science (Maths), and a Bachelor of Asian Studies from the Australian National University.

Sophie Black

Sophie's research focuses on complex system change and evidence-based policy and development. Sophie holds a Masters (Hons) in International Relations from the University of St Andrews and a Graduate Diploma of Law from the University of Law in London.

Claire Poulton

Claire's research focuses on social polarisation and media, and her prior experience includes work in digital communications and marketing. Claire holds a Masters in International Relations from the University of Sydney, and a Bachelor of Communications and Media studies from the University of Wollongong.

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Executive summary

Agriculture is at the heart of Australia's identity, economy, and future. With farmers caring for over half the country's land and producing 90% of the food we eat, agriculture underpins our food security, sustains rural livelihoods, and helps feed a growing world.

Despite the ongoing work by farmers to innovate their practices to produce high quality food more sustainably, the environmental impacts of agriculture are hard to ignore. Agricultural activities are currently a leading cause of native animal habitat and biodiversity decline, accounting for 17.9% of Australia's net greenhouse gas emissions per the latest national inventory, and 74% of national water consumption.

Today, farmers are on the front line of changing weather patterns and increasingly extreme conditions. As a result, they are increasingly shouldering the responsibility of adapting their practices to ensure the resilience of our nation's agricultural sector for generations to come.

However, current incentive structures designed to support this work are too sparse and convoluted to be effective. If we're serious about securing the future of Australian agriculture, we need to do more than applaud farmers for their efforts—we need to back them with systems that drive real change.

That's why this paper proposes a bold but practical idea: a simple, consumer-facing agricultural sustainability star rating system, clearly displayed on product packaging.

The goal? To shift the balance of incentives so that doing the right thing for the environment also becomes the smart business choice. By giving consumers a simple way to recognise and reward sustainable farming, we can help tip the scales in favour of practices that protect the land, water, and ecosystems we all depend on.

To work, this approach must reflect a few key features. It needs to be independently credible and in line with consumer protection laws, ensuring trust from consumers and industry alike. It must be practical and not place an excessive burden on farmers, who are already doing more than their fair share. And it should be designed to evolve over time, with the flexibility to adapt as farmers continue to innovate and improve practices on the ground.

Above all, we need to move forward with urgency and purpose, without letting perfect be the enemy of good. The priority is to get started, refine through experience, and build momentum toward a more sustainable agricultural future. The catalyst for this will be clear government support from the outset, ideally through the establishment of an independent statutory body which ensures the rating framework keeps at pace with scientific advances at a pace acceptable to industry.

This proposal to implement a star rating system for agricultural sustainability builds on recommendations in our earlier report, *Cultivating Resilience*. These include standardising data metrics for measuring key environmental indicators, to build an informative and broadly applicable methodology for measuring agricultural sustainability, as well as supplementing investment into agricultural research and development and the expansion of information sharing networks between farmers, to ensure they are equipped with the knowledge of practices that improve both the health and productivity of their land.

Ultimately, this is about much more than a star on a package. It's about backing the people who feed the nation and ensuring that Australian agriculture remains productive, resilient, and sustainable for generations to come. Implementing a clear, change-driving mechanism like the star rating system is a crucial step toward reducing Australia's broader environmental footprint, while giving farmers the recognition, support, and market power they need to keep putting food on our tables well into the future.

The cost of feeding a nation

Farmers are no strangers to the tangible effects of a changing climate. They are on the frontline, bearing the brunt of extreme weather, shifting seasons, and prolonged droughts, and in many cases, doing the heavy lifting on inventing new approaches to care for the land under rapidly changing conditions.

Although Aussie farmers have been responsible for a 15% reduction in the sector's greenhouse gas emissions since 1990, agriculture is still responsible for up to 18.2% of our nation's net emissions—making it the second highest-emitting industry after electricity and heat production. Livestock farming, particularly cattle and sheep, is a major source of methane—a greenhouse gas far more potent than carbon dioxide—while fertilisers and soil management practices contribute large volumes of nitrous oxide. Despite joining over 120 nations in signing the Global Methane Pledge in 2022, Australia has yet to implement binding methane reduction targets, and emissions continue to rise in tandem with the growing global demand for red meat.

In response to these challenges, the agricultural sector has been exploring practical and science-backed strategies to manage its methane emissions in agriculture, Current efforts include dietary modifications such as incorporating more forage legumes, using supplements like tannins that can reduce emissions by 13-16%, and applying biological controls to target methane-producing microbes—offering farmers tools to reduce emissions without compromising productivity.

The environmental footprint of agriculture extends well beyond emissions. The sector consumes a staggering 74% of Australia's water resources, placing enormous pressure on increasingly fragile water systems—most notably the Murray-Darling Basin, where over-extraction, mismanagement, and drought have compromised both ecological health and farming viability. At the same time, agricultural expansion is the leading cause of land clearing, threatening biodiversity and eroding the natural systems that support food production.

Across Australia, hundreds of thousands of hectares are cleared annually to make way for livestock and cropping, diminishing vital habitats and reducing the land's ability to store carbon. Striking a balance between agricultural productivity and environmental sustainability is no longer optional, but essential for the long-term resilience of both the sector and the ecosystems it depends on.

Yet amid these challenges, hope lies in the paddocks and pastures themselves. Farmers across Australia are already undertaking the hard work vital to repairing and stewarding our precious natural resources—regenerating soil, managing water use, rotating crops, and experimenting with low-emissions livestock practices. Many are adopting regenerative methods that prioritise soil health and biodiversity, and others are trialling technologies that reduce methane emissions or improve fertiliser efficiency.

These practices are not just beneficial for the environment. With careful management, they can also boost a farmers bottom line. As we heard from more than one farmer over the course of our research, things tend to work better if you work with nature, instead of against it.

This growing understanding of working alongside nature has had a tangible effect on the agricultural sector. In a 2023 survey, 87% of farmers felt Australian agriculture is likely to become sustainable in the next five years or more. The top reason given for that belief was that farmers are adopting new, environmentally responsible practices (see **Figure 1**).

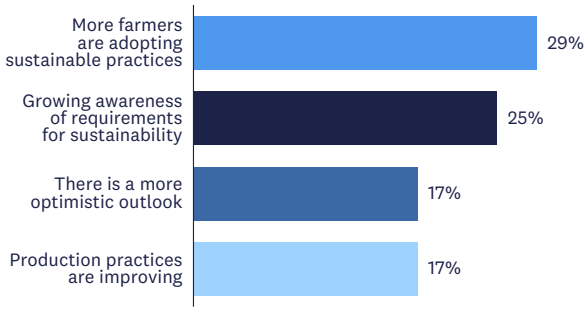


Figure 1 Reasons why surveyed farmers felt Australian agriculture was to be sustainable in the future, defined as 5 years or more (2021, n=532)

Source National Farmers' Federation

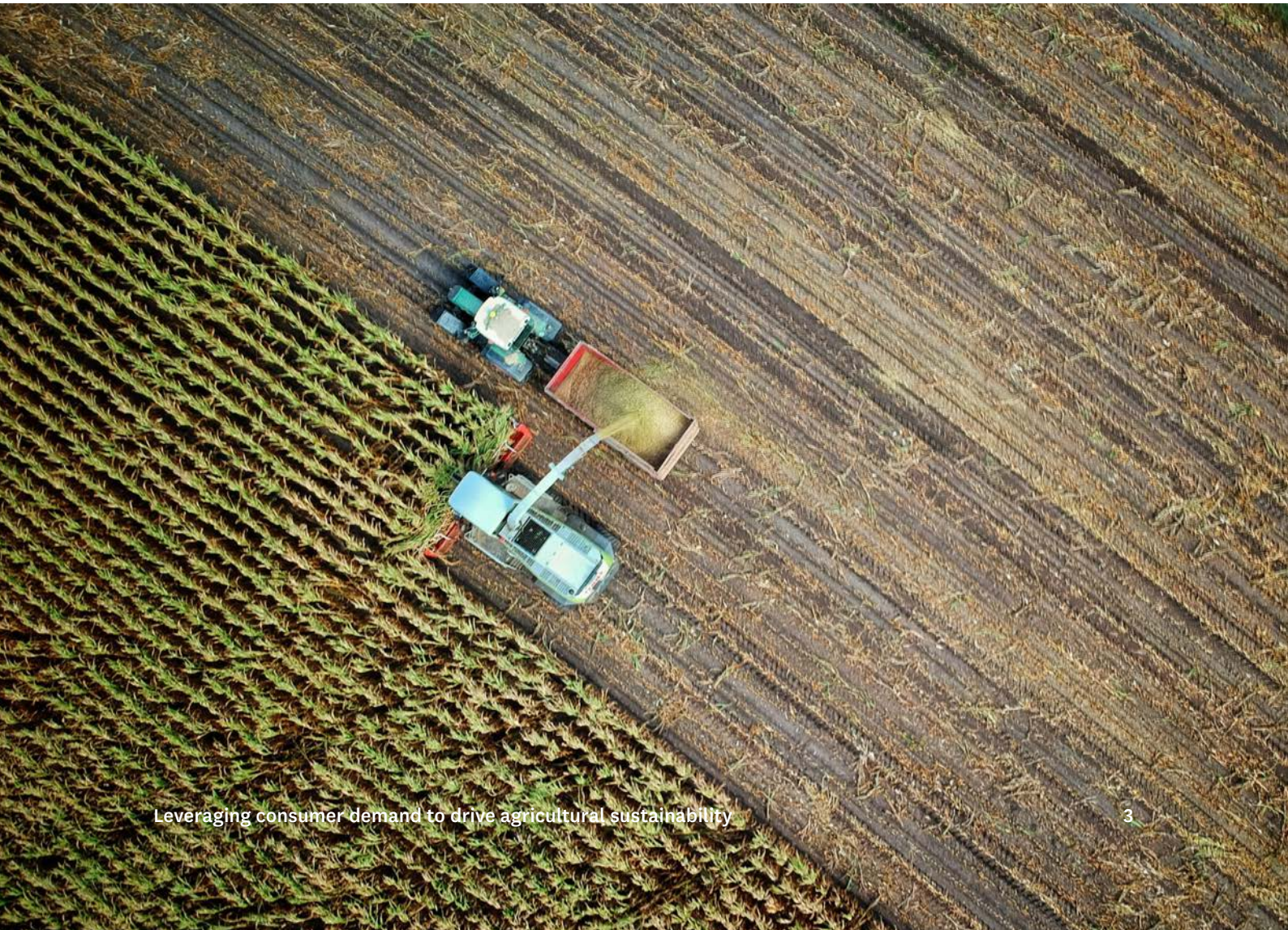
But right now, financial pressures and the incentive structures designed to better support sustainable agriculture don't make it easy to farm in ways that benefit the environment, nor do they adequately reward those who try.

The missing link is a clear market signal—something that allows farmers to be recognised and rewarded for sustainable practices by consumers and supply chain partners. While some niche labels and certifications exist, they are often fragmented, expensive, and confusing for consumers. What's needed is a unified, transparent, and scalable system that helps consumers understand how sustainably their food was produced, whilst also enabling farmers to get credit for their efforts.

We recommend the development and implementation of the Green Rating of Whole-Farm Sustainability (GROWS)—a consumer-facing star rating that communicates the sustainability credentials of agricultural products, right on the packaging. Drawing on proven models, GROWS would distil complex sustainability data into a format consumers can easily understand and use to direct their purchasing choices.

By giving farmers visibility in the marketplace for the work they do to reduce emissions, protect biodiversity, and steward water resources, GROWS would recalibrate the incentive structures that currently favour yield at all costs. It would level the playing field, encouraging lagging producers to adopt more sustainable practices in order to remain competitive, while offering a reward mechanism for those leading the charge.

The lesson from implementing similar rating systems across a range of different industries is clear: the best time to begin is now. Delaying action in pursuit of perfection risks prolonging the very crises we seek to address. By starting today, we can begin to build trust, transparency, and a more resilient agricultural sector—one that honours the work of farmers, empowers consumers, and safeguards the land and water on which we all depend.



Sustainability without substance

The agricultural sector is broad, covering not just a range of products, but also a range of ecosystems. This diversity of agricultural practice across broadacre, horticulture, and livestock farms has resulted in a plethora of sustainability frameworks available to farmers each with their own targets and priorities.

To date, a range of commodity-specific agricultural sustainability-related frameworks have arisen in Australia. These include the Australian-grown Horticulture Sustainability Framework, Australian Beef Sustainability Framework, Australian Farm Biodiversity Certification Standard, Sustainable Winegrowing Australia, Grain Sustainability Framework, the SustainaWOOL Integrity Scheme, and the Australian Dairy Sustainability Framework.

Work has recently been undertaken by a consortium of organisations, led by the National Farmers' Federation and funded by the Australian Federal government, to develop the Australian Agricultural Sustainability Framework (AASF). This framework encompasses the entire agricultural sector, and articulates a range of categories to address in changing the way we farm (see **Figure 2**).

While there has been some discussion about the AASF evolving further, it has, to date, stopped short of identifying any specific measures or targets for the various dimensions described. While some of the elements already have legal reporting requirements, there is as yet, no agreed sector-level measures or objectives for those concerning climate, biodiversity, and water use.

As mentioned in our previous report, Cultivating Resilience, one of the major challenges to enforcing sustainability objectives is the lack of reliable, standardised measures and baselines for tracking key environmental metrics.

A clear example of this is biodiversity. Despite being one of the most urgent areas for action, the way we measure biodiversity is still in its early stages. Efforts to track species diversity and ecosystem health remain fragmented across a patchwork of tools, technologies, and volunteer-driven, 'citizen-scientist' initiatives. Even within the Kunming-Montreal Global Biodiversity Framework—agreed to by Australia alongside 195 other countries in late 2022—many of the targets set to "halt and reverse nature loss by 2030" do not yet have fully reliable or operationalised measurements.

Figure 2 The Australian Agricultural Sustainability Framework
Source AASF

Without a consistent, agreed framework for measurement, it is difficult to monitor change, compare across regions, or set meaningful targets, let alone evaluate the effectiveness of farm-level interventions.

Similarly, while a variety of greenhouse gas calculators are increasingly being used on farms, the standards that underpin them lack consistency, particularly when it comes to accounting for emissions from land clearing. Recognising this, the Federal Government has allocated $28.7 million to a dedicated working group to improve greenhouse gas accounting methods for agriculture. This is a welcome step, but one with a potentially limited impact due to the voluntary nature of any resulting recommendations.

Without consistent, credible measures, the task of setting meaningful targets, tracking progress, and assessing the impact of sustainable practices on the environment is next to impossible. It is therefore vital that the continued development and standardisation of key environmental metrics needs remain a priority.

Nature by numbers

Although the lack of clarity on how to measure biodiversity has long impeded its effective monitoring and management, scientists across Australia are pioneering new methods to quantify this crucial yet often overlooked indicator of environmental health. These include practical tools to help farmers understand which species are living on their land and how to better protect them.

As part of a global study involving eight other countries, researchers from the University of Sydney and CSIRO have been cataloguing the genomes of plant, animal, and fungal species. These genetic markers can be used to detect and monitor the presence of specific species in soil or water samples from a given area. Building on this work, researchers have created a publicly accessible database to house the genetic profiles of threatened species—97% of which previously lacked genomic resources to support conservation efforts. As such, this resource offers conservation practitioners a powerful tool to track population changes and inform land management strategies.

To help farmers demonstrate their biodiversity stewardship and gain access to the Nature Repair Market, the Department of Climate Change, Energy, the Environment and Water, in partnership with the Australian National University, launched phase one of the Australian Farm Biodiversity Certification in 2020. This voluntary program certifies farms at gold, green, or provisional levels based on their commitment to maintaining or improving biodiversity. Farms are assessed according to the condition of their native vegetation, which is compared against both the national minimum biodiversity standard—below which certification is not granted—and the average biodiversity condition for similar land types in the region. While this certification is still in its testing phase, feedback from farmers indicate their desire and willingness to participate in a scheme which provides clear market recognition and rewards for their environmental stewardship efforts.

Complementing these national efforts, targeted biodiversity monitoring programs tailored to specific ecosystems are also underway. In Australia's south-eastern sheep-wheat belt—an agricultural area formerly replete with woodland animal and plant life—researchers at Australia's National University's Sustainable Farms initiative have spent over two decades surveying farmers to understand the area's environmental health and to better understand challenges to its conservation and regeneration. This data has been used to develop BirdCast—a spatial modelling tool which enables farmers to estimate the number of bird species occupying their land and how many more they might attract by altering their land management practices, for instance by planting shelterbelts of trees.

Introducing GROWS: the Green Rating of Whole-Farm Sustainability

To accelerate the agricultural sector's efforts towards operating in harmony with the environment, we propose the implementation of Green Rating of Whole-Farm Sustainability (GROWS). This comprehensive rating framework assesses a farm's environmental performance across a range of key environmental indicators, including soil health, water quality, greenhouse gas emissions, and biodiversity.

To connect environmental performance at the farm level with consumer decision-making, GROWS will assign agricultural products a rating out of five stars. based on how sustainably they were produced. These ratings will be visible at the point of sale, helping consumers make informed choices aligned with their values.

Initially, we propose applying GROWS to whole foods such as fresh produce and cuts of meat, where supply chains are relatively straightforward to assess. Once the system has been accepted, adopted, and improved by industry participation, it can then be expanded to include amalgamated products, like mince meat or milk.

We anticipate that GROWS will be a powerful tool to boost awareness of the environmental impact of purchasing choices throughout the supply chain and to direct consumer demand towards farmers already implementing sustainable practices. By informing consumers about the environmental impact and practices of agricultural producers, a star rating system can unify existing, commodity-specific sustainability frameworks—such as those in wool, grains, or dairy—and drive meaningful change across the entire sector.

We've seen this approach work before. The success of the National Australian Built Environment Rating System (NABERS) showed that informed consumers make greener choices, lifting environmental performance standards across the sector.

We acknowledge that there are limitations in anyone's ability to forecast how such a system may play out. In particular it is always worth being alert to the difference between what people say they will do and what they actually do when it comes to pricing, particularly in a cost-of-living crisis. To date, most research, and particularly most domestic research, has focussed on people's reported preferences, rather than their actual behaviour.

For example, a 2024 survey conducted by Monash University found that about half of Australian consumers consider sustainability an important factor when making a retail purchase and say they are willing to pay more for products with sustainable credentials (see **Figure 3**). Notably, younger consumers were more likely to reflect these attitudes than those in older age groups, indicating a shifting societal importance placed on sustainability. But it's not enough for people to say they'll pay more, for farmers to earn those additional dollars.

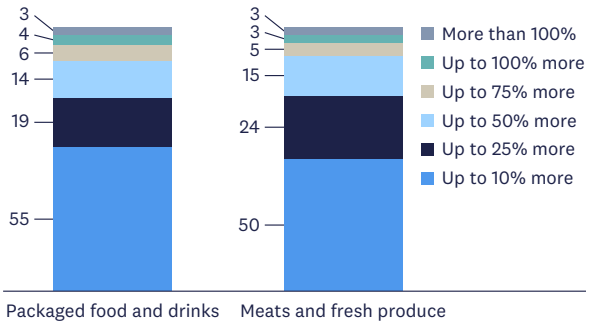


Figure 3 How much more Australian consumers are willing to pay for sustainable products (2023)

Source YouGov

Fortunately, there is also evidence that consumers are putting their money where their mouths are. A five-year survey of over actual sales data—from 44,000 brands across 600,000 individual products, across a range of food, beverage, personal-care and household items—demonstrated consistent sales growth in products that made positive environmental, social and governance claims, compared to those without.

Turning effort into earnings

Australian producers we spoke to during our research reported mixed experiences in securing green premiums for sustainably produced goods. While some had successfully captured meaningful brand premiums for products with sustainable attributes, others noted only modest returns, or premiums that declined over time.

We hypothesise this variability in returns is due to the combination of two factors.

First, the Australian market lacks a mandatory, standardised framework that enables consumers to easily identify and compare the environmental credentials of products across different categories. Second, the uneven power dynamics of the agricultural supply chain means that grocery retailers hold substantial buyer power, enabling them to capture most of the additional revenue earned from the higher price point of sustainably produced goods.

Consumers are inundated with so called 'green claims' made on product labelling—not all of which are substantiated—leading to confusion on what each label means and whether it can be trusted enough to warrant additional spending. This isn't helped by the variety of certifications available to producers to advertise their environmental credentials, which increases the cost and complexity of reporting for no guaranteed recognition by consumers.

Industries typically don't experience consistent increases in returns for their product's environmental credentials until consumers are given a simple and reliable way to compare those products. For example, prior to the introduction of Energy Ratings on household appliances, there was no easy and accessible way for consumers to factor energy usage into their purchasing decisions.

By providing a unified, trustworthy label that encompasses a range of environmental performance metrics and can be applied across a wide range of product types, the GROWS rating system can offer consumers a consistent and reliable tool to guide their purchasing decisions, cutting through the noise of product- or industry-specific certification schemes.

The absence of a unified sustainability label across product types is further complicated by the uneven distribution of market power along the agricultural value chain. While most agricultural producers are small, family-run farms, the retail end is highly concentrated, with Woolworths, Coles, and Aldi together controlling around three-quarters of Australia's $135 billion supermarket sector.

This concentration of market power means that retailers hold significant 'buyer power', which often results in the additional profits from sustainable products being retained by the retailers, rather than being passed on to the farmers who are driving these sustainability efforts.

To address this, we propose mandating greater transparency in pricing and premium distribution within supply chains—in line with the current ACCC proposals for dairy products. This could include regulations requiring retailers to disclose how sustainability premiums are shared, or incentivising fair trade practices.

There are strong, practical options for measuring the sustainability of agricultural goods to convert into a GROWS rating. For example, the environmental stewardship priorities of the Australian Agricultural Sustainability Framework (AASF), or emerging research into biological indicators of regenerative agricultural practices, offer data-driven approaches towards quantifying sustainability on farms. What will be critical is ensuring the chosen methodology balances robustness with practicality, minimising data collection burdens on farmers using smart approaches like sampling, remote sensing, or selective auditing where possible.

For GROWS to succeed, it must be clear, credible, and committed to continuous improvement. Consumers need to know exactly what the rating measures, how it reflects real sustainability outcomes, and why those outcomes matter. It should offer farmers clear guidance on how to

continually improve performance across a range of environmental health indicators—enabling them to better understand what changes they can make to their practices that will protect their land and their farm's productivity in the long run.

Critically, the system must be designed to evolve, and able to incorporate new science, better data, and feedback from both farmers and shoppers. In light of the relative infancy of key environmental metrics such as for biodiversity, the methodology of GROWS should be iterated as this science develops and approaches are standardised. It will be essential that any updates to GROWS' methodology should be communicated to participants well in advance to ensure transparency and prevent unexpected disruptions as the rating framework improves.

Given their central role in establishing Australian Agricultural Sustainability Framework (AASF), the Department of Agriculture, Forestry and Fisheries and the National Farmers' Federation could play a key role in helping shape the methodology of GROWS, alongside independent scientific organisations such as the Australian Academy of Sciences.

The key is to get going. A data-driven prototype of GROWS should be rolled out as soon as possible, available for voluntary adoption by farmers to advertise the sustainability credentials of their products. It would be sensible to limit the initial rollout to a select number of food types and/or a select number of ecosystems, to enable iteration and tweaking of how GROWS measures and reports on sustainability.

It's been seen across other countries that early adopters play a critical role in shaping and improving a rating system like GROWS, but that they also stand a lot to gain, as early engagement with the system offers a head-start on improving their own practices to achieve a high rating.

While initially the scheme should be introduced on a voluntary basis, our research suggests that implementing GROWS as mandatory over time will be the key to ensuring improvements in farming practices over the long-term.

Keep it simple, make it stick

Catching the attention of consumers can be a tricky business. The average retail shelf is loaded with vibrant colours, distinctive typography, and alluring descriptions to entice shoppers towards buying a particular product, whether it be for its eye-catching design, purported health benefits, or environmental credentials.

To empower consumers to make more sustainable choices in the face of this information overload, we recommend that the GROWS ratings use a clear and intuitive star-based format (see **Figure 4**).

Figure 4 Prototype design for GROWS ratings
Source Blueprint Institute

Taking inspiration from the Health Star Ratings that consumers will already be familiar with, our suggested design for GROWS indicates a rating out of five, with more stars indicating that the product was more sustainably produced. By featuring a clear star rating prominently on packaging, shoppers can more easily compare products and make purchasing decisions that favor those with stronger environmental credentials.

Detailed data about how a product's GROWS rating was calculated—benchmarked against industry peers and international comparisons—should be made available to farmers to contextualise their performance and highlight areas for improvement, as well as the general public to ensure transparency and trust in GROWS ratings.

While transparency is essential, the amount of information presented to consumers should be carefully considered. Consumers are best served by a simplified, digestible format. Overly complex or technical information may overwhelm or confuse shoppers, potentially discouraging sustainable choices rather than promoting them. For this reason, we recommend that the GROWS label itself contain only a single rating out of five stars, with any additional information made available online.

Cutting complexity to minimise burden

To minimise the burden of data collection and monitoring on farmers, GROWS ratings should position practicality front and centre, gathering robust evidence on farm performance while avoiding unnecessary data collection. Wherever possible, the methodology should favour tools like sampling and independent audits, and make full use of existing data farmers already collect for other purposes.

This report doesn't attempt to define the technical details of the rating methodology—that work should be led by an independent scientific body to ensure the system is both accurate and fair, without overloading farmers with measurement demands.

Although further work is needed to fully develop standardised and reliable measures—particularly for complex areas like biodiversity and climate—it is important not to let these gaps delay progress. We recommend starting with the best available data and methods, with the understanding that GROWS will continue to evolve and improve in accuracy as science and data methodologies advance.

The rating methodology should prioritise the use of meta-indicators, meaning high-level metrics that act as proxies for multiple aspects of sustainability. This approach can deliver meaningful assessments without requiring farmers to submit excessive or repetitive data. For example, biodiversity is often closely linked with other key environmental indicators like soil health and water quality. This means that by measuring biodiversity alone, it may be possible to gain meaningful insights into all three areas of performance.

Emerging research linking biological indicators to sustainable farming practices also offers an exciting opportunity to simplify sustainability assessments into a meta-indicator. For instance, early trials have found higher levels of beneficial nutrients like Omega-3 and Omega-6 in beef and dairy produced on farms using regenerative practices. While promising, the science is still evolving, and relying on these indicators prematurely could misrepresent sustainability performance and unfairly disadvantage farmers.

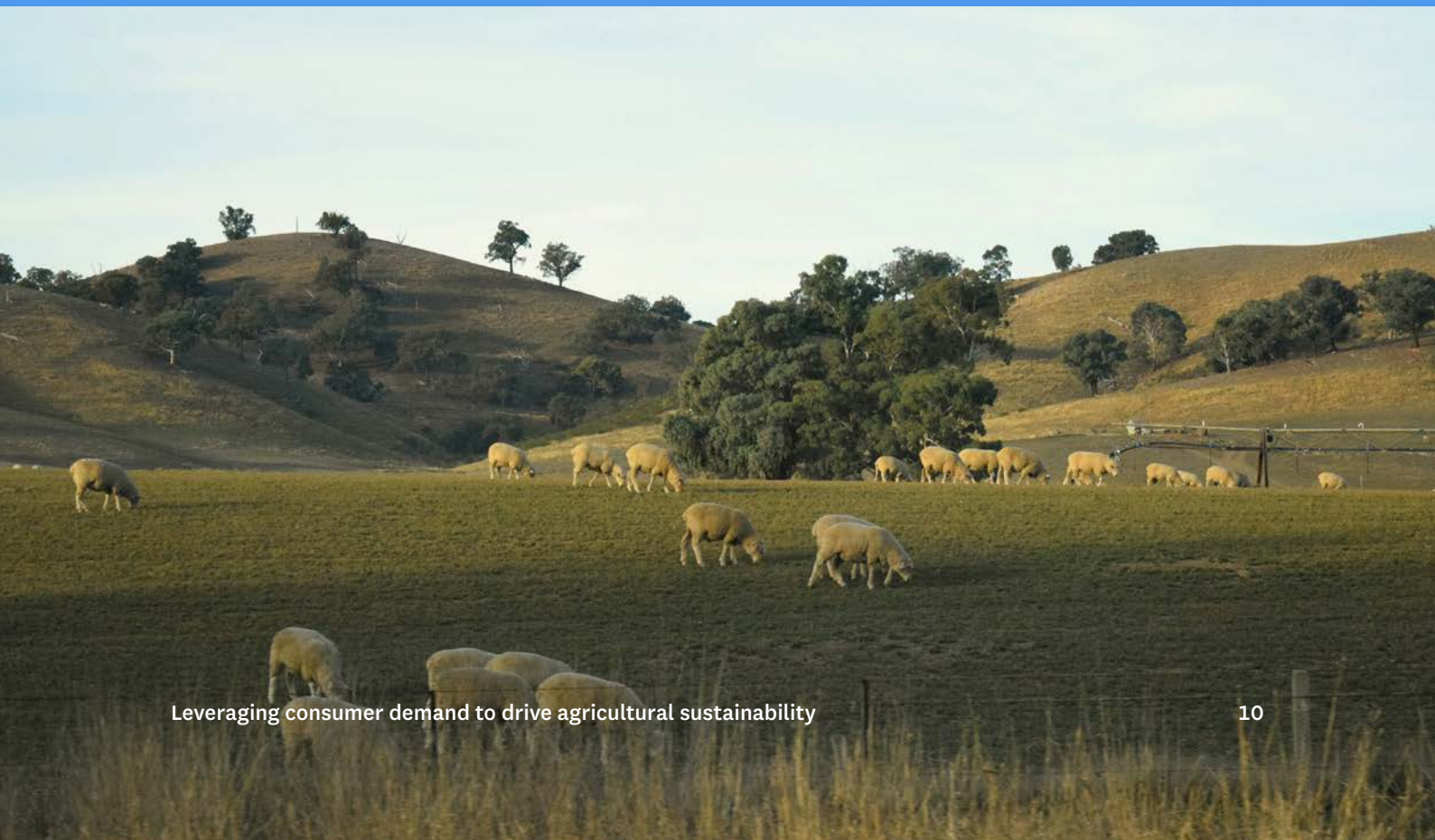
Reducing regulatory cost and burden

One of the biggest concerns expressed by farmers about the introduction of a sustainability rating system is the fear that it will create more paperwork, higher costs, and little practical benefit. That concern is entirely reasonable—governments have historically struggled to design systems that minimise administrative and compliance burdens, especially in agriculture. But it doesn't have to be that way.

To avoid this outcome, the government agency responsible for developing the rating system must do more than just talk the talk. It must actively measure and manage regulatory burden from the outset. This means tracking how much time and cost is involved for farmers to comply, and ensuring the system remains lean, useful, and farmer-focused.

This approach has worked before. In 2018, the NSW Department of Education, responding to mounting frustration from frontline staff, implemented a program to reduce the administrative load on school principals. Through baseline assessments of the time costs associated with administrative responsibilities of principles, assessing the impact this compliance burden had on educational outcomes, and tracking all new and existing administrative requirements across the school system saved over a million cumulative hours in completing unnecessary paperwork. Key steps to achieving this result included piloting all new programs, introducing review processes, and incorporating incentives for reducing administrative burden—all while providing ongoing training to Department staff in human-centred design.

These lessons can be applied to minimise the regulatory burden of GROWS reporting on farmers. For starters, the current demands of sustainability reporting work need to be understood, including the length of time and how much it costs producers to track and report on their farm's environmental performance. Farmers must be actively involved in designing and testing the system to ensure it meets their needs and fits into the realities of their operations. New approaches for measuring and tracking environmental indicators should be piloted in diverse contexts, with implementation times closely tracked to ensure they do not overload farmers, whose main responsibility is to cultivate their land, and not fill out paperwork.



The merits of quantitative rating schemes

Although many product labelling initiatives we reviewed, such as Fairtrade, Red Tractor, IP-Suisse, and Rainforest Alliance, utilise certification schemes to guide consumer decisions, the design choice to adopt a quantitative rating system offers several advantages.

Firstly, it enables farmers to more accurately report their credentials across various dimensions of sustainability. It also enables growth, recognising that the transition to sustainable practices is a journey, and one that we are arguably just starting as a country.

Secondly, a quantitative system offers farmers clear, targeted feedback on areas they may be falling short, for example, in water usage, soil health, or emissions. This detailed feedback can help farmers target specific areas for improvement, informing on the holistic health of their farm and justifying the adoption of more sustainable practices.

Making the gradual move to mandatory reporting

We recommend that the GROWS system be introduced initially as a voluntary scheme. This approach allows for a smoother adoption process, enabling early participants to engage with the system without regulatory pressure and to offer valuable insights into its effectiveness and usability. Launching GROWS voluntarily encourages a collaborative, incentive-driven atmosphere where producers can take pride in showcasing their sustainability efforts and be compensated for doing so.

Once a critical mass of participation has been achieved and the system is well-established, we recommend transitioning GROWS into a mandatory framework. This phased strategy ensures that those who have embraced sustainable practices from the outset are rewarded with recognition and market advantage, while also creating a mechanism to hold lagging producers accountable.

This carrot-and-stick approach balances encouragement and enforcement, where early participants are acknowledged and celebrated, while those resistant to change are ultimately required to meet the same sustainability standards as their peers. This ensures fairness across the industry and drives widespread improvement in environmental performance.

Voluntary schemes have benefits—a lower compliance burden and lower costs. They encourage early adopters to reap new market benefits, and generally allow for some flexibility in approach, which can enable some firms to progress at a more rapid rate than the standard might imply. But there are also downsides to this approach—the lack of standardisation can hamper the effectiveness of the scheme itself and can act as a handbrake on adoption and consistency. Voluntary schemes can also fail to provide adequate market certainty to signal investment toward sustainability initiatives. Similarly, they limit the ability of the sector to learn from others' experience

While voluntary schemes facilitate smoother implementation for early adopters due to generally malleable standards, the lack of enforcement can also lead to insufficient sector-wide adoption to deliver outcomes at scale. Eventually, mandatory disclosure frameworks are typically most effective at moving the needle, meaning that if GROWS is going to work, it will likely work best once participation is transitioned to being on a mandatory basis.

Star power in practice

Australian consumers are no strangers to a star rating system. If you're in the business of buying or leasing buildings, you have likely encountered a NABERS rating. In your kitchen cupboards and your fridge, more than a few products will have Health Star Ratings displayed on their packages.

Few rating systems have been perfect from their inception, and many still have a way to go. However, they offer some useful lessons to ensure the design of the GROWS system resonates with consumers enough to factor into their purchasing decisions.

The National Australian Built Environment Rating System

Perhaps one of Australia's greatest successes in developing a consumer-facing star rating system is exemplified by the National Australian Built Environment Rating System (NABERS), which has served as the basis for similar rating systems in New Zealand and the United Kingdom. NABERS demonstrates how rating systems, with successive iteration based on evolving understandings, can be effective in leveraging informed consumer demand to influence supplier behaviour and to drive tangible outcomes.

NABERS ratings are designed to indicate the environmental performance of buildings, with the goal of driving improved sustainability in the built environment via informed consumer demand. Ratings are represented on a scale from one to six stars, with six stars representing market-leading performance (see **Figure 5**). Ratings are valid for a 12-month period, ensuring that a building's current building performance is accurately represented.

According to NABERS, the impact has been significant, with over 90% market penetration in the Australian real estate sector, they have driven an average emission reduction of 30-40% of their customers over a decade. Over the past 20 years, this has accumulated to a whopping 11.57 million tonnes reduction in CO2 emissions.

It is currently mandatory to display a building's NABERS rating when selling or leasing any building over 1,000 square meters in Australia. This was not always the case, however, as its initial implementation amongst commercial real estate businesses was entirely voluntary until 2010, when the Building Energy Disclosure Act mandated its inclusion in the sale or lease of buildings over 2,000 square meters.

A key lesson from the development of NABERS has been in the importance of iterative design, meaning the continual adjustment and improvement of its design to resonate with consumers and actively drive environmental goals.

When NABERS' predecessor, the Australian Building Greenhouse Rating, was introduced in 1999, its methodology was criticised for being unable to provide a holistic view of a building's environmental performance due to its predominant focus on energy usage. When NABERS was introduced six years later, its methodology was expanded to include other factors like water usage, waste management, indoor environment quality, and greenhouse gas emissions, providing what consumers deemed a more accurate assessment of a building's environmental merits.

The Health Star Rating System

The evolution of the Health Star Rating System from the Healthy Heart Tick highlights the advantages of using a graded evaluation system over a binary certification scheme, as well as the importance of refining the rating methodology to maintain credibility with consumers.

Figure 5 NABERS rating design
Source NABERS

Initially introduced by the Heart Foundation in 1989, the Healthy Heart Tick was developed to guide consumers towards making healthier food choices and to motivate producers to improve the nutritional quality of their products. It achieved early success, with measurable impacts such as the removal of trans fats from margarine and significant reductions in salt across products like breakfast cereals.

However, the Tick's binary format—where products were either approved or not—proved to be a fundamental design limitation. While simple and easy to understand, this approach lacked the nuance needed to effectively guide consumer behaviour. The system often ended up signalling the "best of a bad bunch," awarding the Tick to relatively healthier options within unhealthy categories, such as meat pies or fast food items. This created confusion, misrepresented the overall healthiness of products, and led to negative publicity, especially when companies like McDonald's displayed the Tick on certain items. The lack of a graded, comprehensive assessment ultimately undermined consumer trust and limited the system's credibility and impact.

In response, the Health Star Rating System was launched in 2014 as a more sophisticated, consumer-focused alternative. By assigning products a star rating from 0.5 to 5 based on their overall nutritional profile, the system offers a clear, at-a-glance comparison across categories. This shift from a binary certification to a graded scale better supports informed decision-making and provides stronger incentives for manufacturers to reformulate products.

While the system is currently voluntary, early evidence suggests its graded approach resonates with consumers, with 77% of Australian shoppers surveyed in a 2019 review indicating that it enabled easy comparison between products.

However, the methodology of the Health Star Rating System has been criticised for suggesting a "health halo" around highly processed foods, thanks to its focus on a limited range of nutritional indicators. As a result, Health Star Ratings are less effective at pursuing their intended purpose, which is to improve the nutritional quality of food products available to Australians.

There are two lessons to be had here. The first is that it is critical to clearly define the intended outcomes of introducing such a system. In the case of GROWS, it's to make it easy and financially viable for farmers to farm in a sustainable manner.

The second lesson is the importance of iterative design, as demonstrated in the evolution from the Healthy Heart Tick to the Health Star Rating System. For those designing consumer-facing systems to drive behavioural outcomes, the transition from the Healthy Heart Tick to the Health Star Rating System demonstrates the power of being able to meaningfully differentiate between options. While binary schemes can provide clarity, they may not offer enough depth to guide nuanced decision-making or motivate meaningful change. In contrast, graded systems—when designed to be intuitive, transparent, and grounded in robust data—are better equipped to influence behaviour at both the consumer and producer level.

Ready, set, implement

Transforming an entire system is never easy—especially so when it comes to a value chain as intricate and interconnected as agriculture. For GROWS to meaningfully support farmers in their transition to sustainable practices, it must be implemented thoughtfully and fairly.

First, participating farmers should be rewarded by the uptake in the scheme, beyond the potential of green premiums to be earned. Data collected from a period self-reporting survey will also provide participating farmers access to key insights on what practices are working for others.

To ensure fairness, transparency, and accountability across the supply chain, policymakers should consider setting minimum sustainability standards for imported products to maintain a level playing field. For amalgamated products, like mince meat and milk, GROWS ratings should take into account all the farms that product was sourced from, with ratings capped to the lowest-performing contributor. With the right guardrails in place, GROWS will be able to move the dial on sustainable agriculture in Australia, without compromising the livelihoods of those it aims to support.

There are several possible models for the governance of GROWS in both the private and the public sector, but a show of faith from the Federal Government via the establishment of an independent statutory body would give GROWS the credibility it needs for broad industry uptake. Finally, there is a role for the ACCC to play in regulating GROWS claims, to maintain consumer trust in its ratings.

Optimising the benefits to farmers

While green premiums offer a valuable incentive, the GROWS system has the potential to deliver even greater benefits to farmers. By building a shared evidence base of practices shown to improve sustainability performance, GROWS will offer farmers the tools and insights they need to make confident, informed decisions that work in real-world conditions.

We recommend introducing a simple, periodic self-reporting survey for farmers participating in GROWS to capture data on practices in use on-farm and to help identify which approaches are driving improvements. Given the potential for misreporting, this survey data should not be used as a basis for GROWS ratings. However, it could be used as a valuable supplementary data set to be overlaid with sustainability performance data to identify what practices are working and where for use by other farmers looking to improve their performance.

Comparative analysis on sustainability performance and self-reported agricultural practices will enhance the benefit of GROWS to farmers so that it is more than an incentive mechanism. Farmers can only embrace practices that they are aware of, which is why it is crucial to build a robust evidence base for proven approaches to sustainable farm management and ensure farmers have access to that information.

Insights gathered from this comparative analysis could form the basis of education outreach programs, forming an evidence base of proven practices which could be relayed in training videos, case studies, or best-practice guides, such as those produced by Soils for Life and Farmers for Climate Action.

This benefit may also extend to government support, as GROWS ratings can provide clearer visibility into where gaps exist between current on-farm practices and more sustainable approaches—particularly across regions, industries, and production systems. These insights can inform the targeted delivery of training, funding, and extension services, helping to ensure that farmers are equipped with the knowledge and tools they need to adopt better land management practices and improve long-term sustainability outcomes.

Tracking sustainability from farm to fork

A noteworthy consideration in the implementation of a consumer-facing rating system for agricultural sustainability is the complexity of the agricultural value chain. Thanks to modern food production systems, agricultural products undergo transportation, packaging, and display at a retailer before ending up as food on the table (see **Figure 6**).

Take, for instance, a carton of milk. Dairy farmers must either buy or breed their own cows, which need feed, medicines, and other inputs to produce milk. Producers milk the cows, and that milk gets sent off to processors for pasteurisation and packaging. A distributor picks up the milk from the processor, and delivers that milk to a retailer like a grocery store, where that milk is now ready to be bought by consumers.

Figure 6 A simplified agricultural product value chain
Source Blueprint Institute

This long value chain from input to consumer creates difficulties in assessing how a product is created from start to finish. This was a lesson learned in modern slavery reporting—where the importing and exporting of materials and products within a given value chain muddied the waters in tracing labour practices involved in making a product at each stage of its lifecycle. For that reason, rating systems like NABERS—which assesses the ongoing sustainability of a particular building—evaluates the performance of a product, rather than the materials that went into that product.

For boutique, farm-gate products, where farmers sell directly to consumers and the supply chain is streamlined, fewer variables will affect the product's sustainability rating. In these cases, the rating should focus primarily on the sustainability of the farmer's practices, including any inputs used (such as fertiliser and seed).

But for products like mince meat—which combines beef sourced from several farms—the star rating should reflect the overall sustainability of the ingredients going into that product. We recommend that the star rating for amalgamated agricultural products be capped at the rating of the least sustainable farm from which any of the product's ingredients are sourced.

By taking a weakest link approach to rating amalgamated agricultural products, processors will be incentivised to source their ingredients from more sustainable producers to profit from their products having improved star ratings. The agricultural processing industry is becoming increasingly more concentrated, especially when compared to producers, with tens of thousands of small family run farms. This concentration of power among processors limits farmers' bargaining power when selling their products, creating a top-down pressure that can drive the adoption of more sustainable agricultural practices.

Finally, there is the question of whether products made from a mix of agricultural ingredients—such as prepackaged salads and ready meals—should be included in the GROWS system, and if so, how. While there is clear potential to expand GROWS to cover these types of foods in the future, attempting to do so from the outset risks making an otherwise strong concept unwieldy. We therefore recommend that the initial rollout focus exclusively on whole foods and amalgamated products to keep the implementation pragmatic, manageable, and effective.

Trade without trade-offs

Policymakers should also consider the nuances of imports and exports in the agricultural value chain to avoid unintended trade consequences when implementing minimum standards related to GROWS.

For instance, if sustainability requirements (such as displaying a star rating on packaging) are only imposed on products sold domestically, Australian farmers may choose to export their products instead because it would be cheaper and less burdensome than selling them in Australia. A more effective solution would be to levy the same minimum sustainability requirements on both domestic and exported products. European and some Asian markets are increasingly demanding high levels of transparency when it comes to farming practices. There is an opportunity to get ahead of the curve here, with estimates from the CSIRO suggesting the potential for an estimated $10 billion in additional export earnings via marketing the products' enhanced environmental credentials.

A consistent approach to implementing sustainability star ratings will not only drive change at the consumer end of the value chain—by increasing consumer awareness of the environmental impact of their food choices and empowering them to make more informed purchases—but will also foster change at the producer level. To capture consumer demand for greener goods, processors will be incentivised to source raw materials from sustainably operating producers, who, in turn, will seek to buy inputs from environmentally responsible sources. The star rating system should critically provide strong information transparency to enable farmers to better understand the practices that are resulting in better ratings, and their impact on productivity and nutritional value. This creates a cascading effect throughout the supply chain, promoting sustainability at every stage.

Leading with integrity

It is possible, of course, that the implementation of GROWS could be driven by the private sector, for instance by retail or benchmarking corporations. However, this responsibility should ideally fall to an independent, statutory government organisation—one grounded in the real-world experience of Australian producers and backed by sharp minds in science, measurement, and analysis. The organisation must be able to strike the right balance between keeping sustainability assessments simple but robust.

NABERS offers an attractive governance model for GROWS—one that could strike the right balance between navigating the complexity of measuring across Australia's diverse farming landscapes whilst maintaining integrity and scientific rigor. It includes representatives from the Federal Government as well as all states and territories who have holding voting power on the Steering Committee. As such NABERS is able to respond to the needs and concerns of a diverse set of communities across Australia. At the same time, representatives from scientific and industry peak bodies—who serve as non-voting stakeholder members of the Steering Committee—help ensure that the NABERS framework evolves at a pace aligned with industry needs, whilst maintaining its credibility through ongoing scientific input.

In the context of Australian agriculture, a well-rounded Steering Committee for GROWS would include representatives from bodies such as (but not limited to) the Department of Agriculture, Forestry and Fisheries, CSIRO, the National Farmers' Federation, Rural Research and Development Corporations, the Australian Centre for International Agricultural Research, Soil Science Australia, the Department of Climate Change, Energy, the Environment and Water, the Australian Academy of Sciences, and the Australian Seed Federation.

There will also be an important role for the Australian Competition and Consumer Commission (ACCC) to have in regulating advertising claims related to GROWS ratings to ensure consumers are not misled about a product's sustainability credentials. Just as the ACCC currently enforces the accuracy of claims associated with certification trademarks, we anticipate that the ACCC will assist in maintaining the credibility and consumer trust in GROWS as a tool to guide sustainable purchasing decisions.

Shared knowledge, smarter farming

By harnessing growing consumer demand for sustainably produced goods, the GROWS rating system has the potential to become a powerful catalyst for the widespread adoption of sustainable practices across the Australian agricultural sector. However, for GROWS to deliver on this promise, it must be supported by a comprehensive framework of enabling measures.

As we outlined in *Cultivating Resilience*, this policy package should include sustained investment in research, development, and knowledge-sharing. If we are to fairly expect farmers to respond to market incentives and adopt more sustainable practices, we must ensure they have access to the evidence-based guidance, practical tools, and peer networks they need to do so confidently and successfully. This reflects the comments made by a recent survey of Australian agricultural workers, which indicated financial constraints and a lack of trusted knowledge as key barriers to emissions reductions in agriculture (see **Figure 7**).

Australia historically underinvests in research and development, to the detriment of our industries. This underinvestment poses a serious challenge to the feasibility of transforming our agricultural systems in line with environmental and economic needs. Building a strong evidence base of proven sustainable practices is essential if we are to support farmers through this transition.

Without it, we risk asking them to shoulder the burden of experimentation and uncertainty on their own.

As technology improves and the evidence base for sustainable methods becomes more robust, the cost of adopting farming techniques will fall—making it easier for farmers to implement environmentally responsible practices without compromising their financial security. In this way, innovation can help to de-risk the transition to sustainability by offering practical, affordable, and data-backed solutions.

But research and development alone are not enough. To ensure that these solutions reach those who need them most, we must also invest in stronger information-sharing networks within the agricultural sector. These networks will serve as an impactful platform to share information gleaned from the uptake of GROWS, for instance which agricultural practices have worked in which regions to produce particular outcomes.

A well-connected agricultural community is key to spreading knowledge of sustainable approaches that also improve farm productivity. Farmers are more likely to adopt new practices when they can see their success in action—when knowledge is shared peer-to-peer, tailored to local contexts, and backed by lived experience. And that's not to mention the wellbeing benefits for farmers to engage in peer support networks

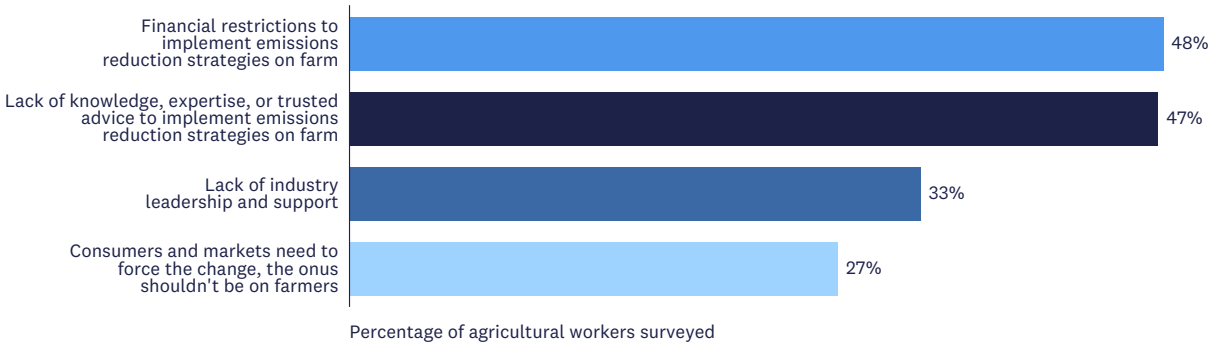


Figure 7 What agricultural workers think will be the biggest challenge facing the transition to net zero emissions in agriculture (2023, n=708)

Source Farmers for Climate Action

when undertaking land restoration projects—decreasing the chance they will seek to exit the industry, despite environmental challenges.

In addition to the need to build and support information sharing networks for farmers, further work needs to be undertaken to improve how we measure key environmental indicators Biodiversity, soil and water quality, and greenhouse gas emissions are all important gauges for ecosystem health, yet we lack standardised, consistent methods for tracking progress in these areas. This measurement gap hinders our ability to evaluate the impact of sustainable practices and to manage our natural resources effectively.

Expanding and standardising key environmental metrics must therefore be a priority. What gets measured gets managed, and high-quality data will be indispensable to any informed approach to measuring agricultural sustainability.

Your questions, answered

Introducing any new system, particularly in a sector as complex and constrained as agriculture, is bound to raise questions. To support confident engagement with a sustainability rating system like GROWS, we've identified and addressed key concerns that emerged during our research and consultation with the agricultural sector.

What makes GROWS different from other sustainability frameworks in the market?

The GROWS system delivers a comprehensive, scalable approach to measuring and reporting on agricultural sustainability, cutting through the clutter of existing frameworks available to farmers. More than just an educational tool, GROWS is designed to accelerate the adoption of sustainable practices by tapping into growing consumer demand for environmentally responsible products. By making sustainability visible and marketable, it enables farmers to turn their efforts into real financial returns.

Sustainability initiatives across Australia's agricultural sector are highly fragmented, with separate frameworks developed for almost every commodity type. These include the Australian-grown Horticulture Sustainability Framework, the Australian Beef Sustainability Framework, the Australian Farm Biodiversity Certification Standard, the Sustainable Winegrowing Australia, Grain Sustainability Framework, the SustainaWOOL Integrity Scheme, and the Australian Dairy Sustainability Framework.

While this variety demonstrates the sector's increasing commitment to environmentally responsible practices, the absence of a coordinated approach to setting standards and rewarding good performance limits the overall impact of these schemes.

By contrast, GROWS offers a unified sustainability framework relevant to the entire agricultural sector, applicable to horticulture, livestock, grain, and industrial-use farming, reducing administrative complexity for participants and providing greater potential for widespread adoption.

GROWS also actively incentivises farmers to adopt sustainable practices by linking performance to tangible financial rewards. Its clear and straightforward 5-star rating system empowers consumers to easily distinguish sustainable products, driving market demand—and premium returns—towards farmers who demonstrate genuine environmental stewardship.

Will GROWS become outdated as new technologies and understandings of sustainability emerge?

The GROWS framework should be treated as a dynamic system that evolves alongside growing understandings of environmental sustainability. As climate impacts worsen and technologies advance, it is likely that approaches to evaluating on-farm health will change significantly.

However, this does not mean we should wait for perfect data or complete scientific understanding before implementing a sustainability rating system like GROWS.

Waiting for perfection often delays meaningful progress. Releasing a workable version allows for real-world testing, feedback and improvement, which are essential for building a credible system. In a complex and evolving field like sustainability, practical iteration is more valuable than prolonged theoretical planning.

An initial version of the GROWS ratings should be rolled out as soon as is practically possible, made available for voluntary adoption by farmers who want to promote the sustainability credentials of their products. It may make sense to begin with a few key food types and ecosystems, allowing room for adjustment and improvement over time.

To ensure that GROWS is adequately resourced for its implementation and ongoing development, we recommend the Federal Government demonstrate strong, early support by establishing an independent statutory body responsible for overseeing GROWS ratings. This body would be tasked with ensuring the continual alignment of the ratings with the latest advances in agricultural sustainability science, whilst managing methodology updates at a steady pace acceptable to participants.

Will this scheme place unnecessary financial and administrative burdens on farmers?

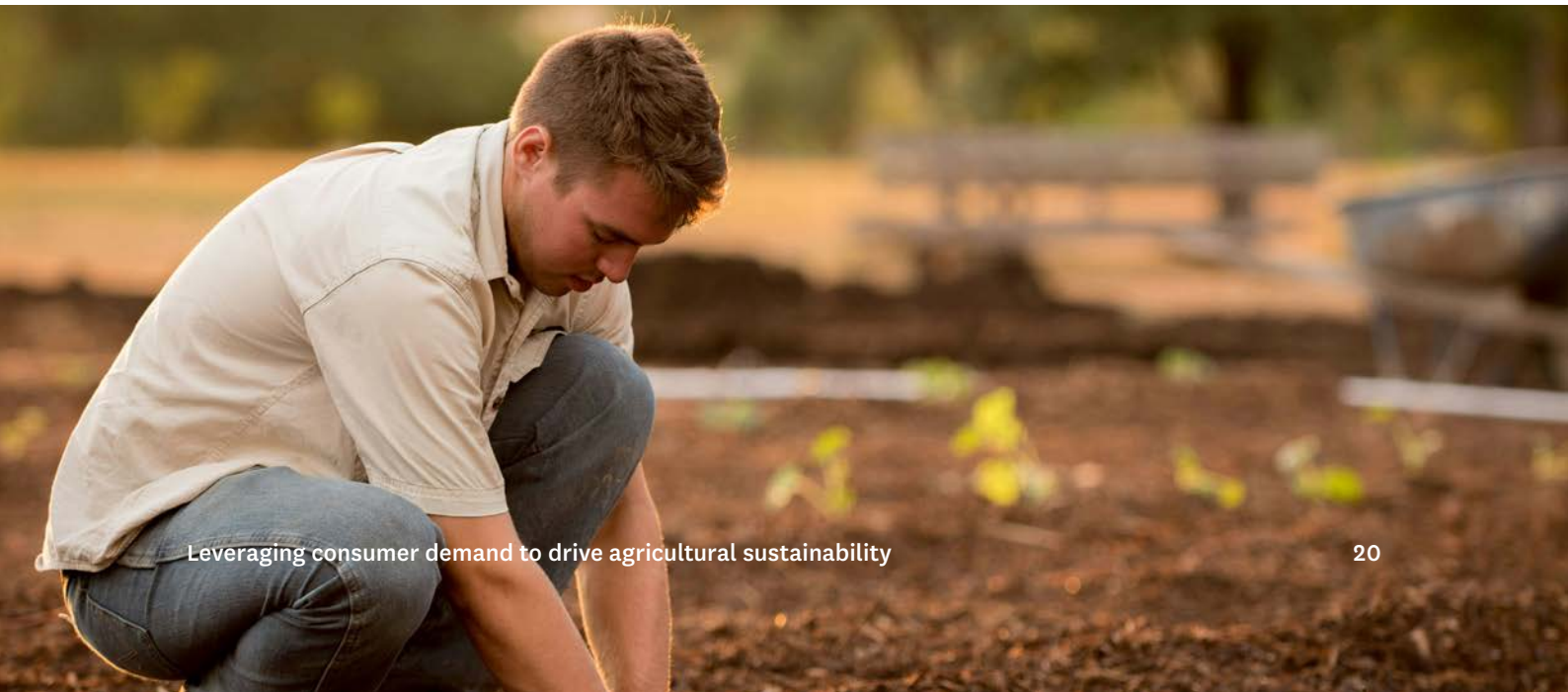
As highlighted in our report, *Cultivating Resilience*, farmers are already constrained in their ability to transition to more environmentally responsible practices. We recognise these real, financial pressures farmers face in challenging and often uncertain market conditions, and that systems like GROWS don't get implemented without the consent and approval of their users.

To ensure the system delivers a strong cost-benefit return for farmers, the GROWS framework and its supporting policy package prioritises the practicality and clear value for those working on the ground.

Farmers already collect lots of information on how their farm is performing, for example via soil sampling or recording animal health and input use. Wherever possible, these sources should be capitalised on to calculate on-farm sustainability levels. Alternatively, meta-indicators—such as the biological indicators of regenerative practices—could be used to limit the financial and administrative burden that data collection for GROWS ratings could otherwise impose on farmers.

Any additional financial or administrative burden GROWS places on farmers should be compensated for by the benefits this policy package offers to farmers. For example, the centralised data pool created from a periodic, self-reporting survey should better enable farmers to learn about and adopt sustainable agricultural practices that have worked for others in similar circumstances, reducing the need for costly experimentation.

Combined with the other measures outlined in *Cultivating Resilience*, such as tax incentives linked to regenerative practices and increased public investment in agricultural research and development, and the potential for higher price premiums on products with strong GROWS ratings, farmers should feel fairly rewarded for their participation in the scheme.



Driving change at the checkout

With a consumer-driven system like GROWS in place, Australia has the chance to position itself as a global leader in agricultural sustainability. Our farmers are already putting in the hard yards to adapt their practices, often in the face of mounting climate pressures and limited support. It's time we met their efforts by building systems that recognise, reward, and accelerate sustainable change.

A star rating system for agricultural sustainability won't solve every challenge overnight, but it's a practical, powerful step toward reshaping how we produce and consume food. Consumers will be empowered to make informed choices that reflect their environmental values, and farmers will be equipped with the knowledge and support they need to embrace sustainable practices, without going out of business.

It's a win for consumers. It's a win for farmers. And it's a win for the planet.

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