

**Submission
No 56**

FOOD PRODUCTION AND SUPPLY IN NSW

Organisation: Foodswell Limited

Date Received: 28 February 2022



Dear Mr Greenwich,

Submission to the Legislative Assembly Committee on Environment and Planning Inquiry into Food Production and Supply in NSW

Thank you for inviting submissions to the Inquiry into food production and supply in NSW, which represents an opportunity to contribute to policy and other discussions that may help to create a healthier and more resilient, equitable, and sustainable food system in NSW (and potentially beyond) given the social, public health, made and natural systems inter-connections and temporal and spatial impacts that our food ‘systems’ entail and co-generate.

I write on behalf of Foodswell Limited an organisation that undertakes research, communications and other projects that aim to promote and support the right of all Australians to food security, food sovereignty, healthy lands and waters. Our Board is comprised of professional people who possess diverse experience and expertise that relate to food systems and agriculture, Indigenous food and land management and natural resource life systems management. *See Appendix A.*

Foodswell programs include the Remote Indigenous Gardens Network (established 2009) and the Nourishing Matters to Chew On podcast that I host. Nourishing Matters takes its cue from healthy sustainable food system challenges and shares stories about change-making people, and issues they address, who work in our food system and across our agricultural landscapes, communities, and greater environment. Insights from Nourishing Matters expert guests are very salient to this Inquiry. We invite the Committee to listen in to episodes pertinent to the Inquiry Terms of Reference (TOR), a full list of Nourishing Matters guests and topics is provided at *Appendix C.*

Foodswell’s work is informed by the biopsychosocial model of health articulated in the first National Mental Health Report. We recognise that individual and collective health and wellbeing relies upon the human right to culturally appropriate, nutritious food and upon our individual and collective abilities to connect with and to care for the health and wellbeing of the lands, waters, cultures and communities that sustain us and that ‘may’ be able to sustain us in the necessary times of transition and climate change adaptation that we live in. It is well recognised that connection with the environment improves mental health and wellbeing.

Our approach to this submission

For over ten years, in parallel with community outreach and place-based activities, Foodswell has taken a high level or systems view of the global and domestic context of our food, social, cultural, geopolitical and environmental systems and the interplay of those. It is from this ‘overview’ position that we respond to the Inquiry’s Terms of Reference (TOR) at two levels:

1. A series of higher order ‘holistic’ recommendations that come from our overview position and informed by several years of wide-framed relational research and consultation with academics, policy makers, public health practitioners, change-makers, on-ground players, community groups and industry leaders. In these recommendations we address TOR 1-7, 9 and 11
2. Strengths based, immediate opportunities that stem from our own knowledge base, networks, activities and discussions. These recommendations address all TOR to varying degrees/detail

The disciplinary foundations and ethical positioning of our recommendations are:

- the discipline of robust and regenerative *circular economies* that are an essential and sustainable alternative framework to the linearly extractive and singular-benefit economies that have a global stranglehold on our food systems and,
- The consideration of *planetary boundaries* – that goes to the core of one of the more wicked food system problems – how do we sustain and grow *our* life on earth in a way that restores and enhances the living systems of the planet itself.

Our submission primarily addresses food production, supply and associated landscape, made and natural resource management issues within a food systems approach and we encourage the Committee to situate the Inquiry, and analysis of submissions made to it, within a broader ‘food system’ lens. See *Appendix B: What is a food system?*

Section one – Principles

Circular Economy principles can be applied to all made, material and natural life systems and resource flows and provide a clarifying lens through which to focus upon complex problems. They are highly applicable in a food systems context and align with the planetary boundaries framework. Circular economy principles are well understood and applied to waste to landfill as per the National Waste Policy Action Plan that includes action to address food waste, organic waste and food packaging waste. We note important circular economy work underway by CSIRO, AgriFutures and by the Food and Agribusiness Growth Centre (FIAL) to address food waste and/or close resource loops in production¹.

¹ See AgriFutures, Evoke(AG) Whole Green Foods current bridge funding for early-stage investors with an interest in foodtech, better nutrition, and eliminating waste in the food production value chain, to address that up to **25% of all vegetables produced never leave the farm** and 1,460 gegalitres of water is used annually to grow Australian produce that is thrown out. See the **Whole** start-up in WA who are commercialising a proprietary

It is timely to increase the ambition (and depth) with which we apply circular economy principles in approaches to improve the food system. A systems lens can help expand how we see resource waste, how we make waste and the wastemaking ‘we do’ to: human health and the health of our natural capital; nutrient waste in production and to the nutrients of whole foods - animal and plant based - produced but poorly used; food loss and the wasteful use of productive lands, floodplains, soils and fresh waters and biodiversity in our cities, peri-urban areas, towns and regions on which we rely as life systems.

The **planetary boundaries framework** defines a safe operating space for humanity based on the intrinsic biophysical processes that regulate the stability of the Earth system². The framework relates directly to agriculture and healthy food systems and since 2009 has helped inform strategic policies and social and economic innovations. Internationally and at home it is well recognised that substantial change in our food and agricultural systems is required to dramatically slow and transition processes of land degradation, biodiversity loss, disrupted nutrient flows, and to ambitiously adapt to climate change and reduce greenhouse gas emissions. Recent major reports and other developments that have drawn upon the framework and have intensified the spotlight on healthy and sustainable food systems include the LANCET Reports on The Global Syndemic of Obesity, Undernutrition and Climate Change, Food in the Anthropocene along with international processes that highlight the need for substantial action this decade to deliver upon the UN SDG’s, COP26’s calls to halt agriculture related and other deforestation and the UN Food Systems Summit of 2021.

We strongly **support the research and recommendations** to the Inquiry that may be made by important groups that include the **The Right to Food Coalition** – the human right to food - and the submission made by **Dr Belinda Reeve** from the University of Sydney. In her submission Dr Reeve notes that NSW does not have dedicated, comprehensive policies on topics such as food security and food system sustainability and **recommends** the creation of a state-wide, integrated **Food System and Food Security Plan to address sustainability, health, equity, and economic development in an integrated way**⁽³⁾. We support this recommendation and the view that Local Governments have a key role to play to work with their communities to develop and enact local food security and related economic and community development initiatives. Much more can be done by many Councils and State government policy and

technology that enables cost-effective and large-scale production of plant-based products using produce that would otherwise be wasted. This technology is 100% free of any chemical processing, produces no waste, and maintains all of the nutritional goodness of the original ingredients.

See work undertaken by The Food and Agribusiness Growth Centre (FIAL) in support of the National Food Waste Strategy, that includes *A Roadmap for reducing Australia’s foodwaste by half by 2030* (FIAL 2020) and *The National Food Waste Strategy Feasibility Study – Final Report* (FIAL, 2021). Since commissioning of this report, the Federal Government has appointed *Stop Food Waste Australia* as the governing entity to implement the food waste roadmap and the recommendations of this project.

² **Planetary boundaries** is a concept involving Earth system processes that contain environmental boundaries. It was proposed in 2009 by a group of Earth system and environmental scientists, led by Johan Rockström from the Stockholm Resilience Centre and Will Steffen from the Australian National University and has played a major role to inform and help drive international and local action on climate change, food systems and regenerative thinking generally.

³ Dr Belinda Reeve’s submission to the Committee is made on behalf of a group of researchers based at the University of Sydney, the University of Wollongong, and the William Angliss Institute (Melbourne) who have undertaken a three-year, Australian Research Council funded project on how Australian local governments and communities contribute to the creation of a healthy, sustainable, and equitable food system (*Strengthening local food systems governance*). Dr Reeve has generously facilitated information sharing to support the Inquiry submission process and we acknowledge and thank her for this.

other support to incentivise local food system and food security plans may be required. Local Governments are well positioned to work with community and business stakeholders to develop and deliver circular economy innovations on the ground and we welcome the opportunity to contribute to discussion and work to such ends. Great work is already underway to address household food, packaging and organic waste – much more can be done with regard to human and urban nutrient flows, urban agriculture, urban and landscape cooling, and more integrated, household and place based water management.

Section two – High order recommendations in response to the TOR

Recommendation 1: The Committee consider and make recommendations to invest in multi-stakeholder dialogue to further explore and embed circular-economy action across our food production and supply system at a place-based level and context, with a particular focus to identify and improve food production, supply and distribution systems of diverse types and scales, with shorter, less energy-intensive supply chains, in urban, peri-urban and rural and regional towns and catchments in NSW.

In making the above recommendation, we acknowledge the very important report *Improving the Prospects for Agriculture and Regional Australia in the NSW Planning System – A Report by the NSW Agriculture Commissioner*, released July 2021, that aims to address the growth in competing land use priorities and unresolved complexities in the planning systems and that states ‘the NSW Government will need to plan more assertively and explicitly for agriculture’. The above recommendation speaks to, and seeks to draw the Committee’s attention to, opportunities to ‘expand’ how ‘agriculture’ and ‘agricultural lands’ are defined and ‘where’ best use productive agricultural lands are identified and protected for food production with reference to the recommendations of the Agricultural Commissioner report and for more robust strategic planning for urban and peri-urban food production. New South Wales is highly urbanised, our urban footprints are very large per capita and housing developments often encroach upon vital lands and water catchments (and their potential) that could support more diverse forms of urban agriculture. Many rural towns and communities are fresh food ‘deserts’ and these include communities in ‘agriculturally’ productive regions that are fresh food poor.

We also draw the Committee’s attention to the *Sydney Peri-Urban Network of Councils (SPUN) ACTION PLAN 2020* that was published as the COVID-19 pandemic hit. SPUN is comprised of twelve councils on the Sydney surrounds many of whom are in areas deeply affected by the bushfires, floods and other extreme weather events. The Action Plan 2020 includes numerous action recommendations pertinent to this Inquiry that relate to ecological services and life systems (water, biodiversity, green lungs and cooling infrastructures) and to the significant and important role these Council areas and surrounds have to play to continue to provide primary food production. For important peri-urban and food futures research, data and modelling that provides evidence and projections pertinent to the Greater Sydney Basin and pressures upon the important role of this foodbowl, we encourage the Committee to review findings produced by *Sydney’s Food Futures (2015-2016)*, a collaborative research project that was undertaken by the [Institute for Sustainable Futures](#) at the University of Technology Sydney, in conjunction with a

number of government and industry partners. See <http://www.sydneyfoodfutures.net/> and related *Mapping of Sydney's foodsheds* work also undertaken by the Institute for Sustainable Futures <https://www.uts.edu.au/isf/explore-research/projects/mapping-sydneys-foodsheds>.

Recommendation 2: Recognise the urgent need for and support action for 'strong' climate adaptation measures to enable innovative made and natural infrastructures to be further explored and created to help cool and regenerate landscapes and catchments over time as foundational requirements for intergenerational and interspecies wellbeing, public health and safety during extreme heat and other disruptive events and to make possible the resilience of viable, humane local and regional food production in a changing climate. We need to mitigate floods and fires – not just reactively build further levees and cut down old trees near poorly located and designed new sub-divisions that, anthropocentrically focused, often require the removal of established trees and vegetation critical to urban and landscape cooling, flood management, biodiversity recovery and regeneration.

Recommendation 3: Pursue opportunities for more robust 'circular economy', long lens planning for more integrated and diverse scales of food production, natural life systems and land use planning for landscape wide climate adaptation in conjunction with emergency planning processes to enable the strategic protection and/or best use of productive soils, hydrological systems, trees and biodiversity in and across NSW's urban, peri-urban, towns and regions.

Recommendation 4: Explicitly link planning for bushfire mitigation and management, flood and drought resilience with agricultural and natural resource management planning recognising the foundational imperatives for human and ecological health to further green and cool our cities and to cool and reduce erosion and desertification across our regional landscapes and bio-regions by maintaining and increasing trees, native vegetation and ground cover.

Discussion, high order recommendations and opportunities in NSW

Australia is at the receiving end of climate change, is the driest continent on earth with the most variable water flows, and we are heating faster than elsewhere. Our agricultural and food systems are integral to the problems and to the solutions to help address and adapt to climate change. Our natural life systems, biodiversity, land use priorities, food systems and communities are under enormous pressures from increasingly frequent and extreme weather events, and from the social, economic and supply chain challenges that the COVID pandemic has both contributed to and highlighted. Strong measures to protect and rebuild soil health, to halt erosion and desertification, to maintain and enhance trees and native vegetation as part of Landcare, Natural Resource Management and other catchment wide measures within our urban, agricultural and greater landscape are critical to the future health and viability of food production, air quality, hydrological systems and biodiversity essential to human health and wellbeing.

The first two columns of Table 1, below, present the **earth system process** and **control variable** from the **planetary boundaries** framework described above. In the third column (far right) we suggest high order opportunities that relate to earth system processes that we believe are especially important to address in this ‘decade of consequence’ for NSW food production and supply and the health and viability of our earth systems and bioregions. The opportunities identified relate to all four Recommendations, above, and Inquiry TOR 1-7, 9 and 11.

Table 1: High order opportunities for NSW

Earth system process	Control variable	High order opportunities for action in NSW
Climate change	GHG emissions	<ul style="list-style-type: none"> • Fair transition to net zero – agriculture and all sectors • The NSW Government legislate on climate action in line with The Paris Agreement and ambitious climate action and make clear the link between climate action and sustainable food systems. • Radically support action to build and maintain healthy soils for carbon sequestration, to hydrate and cool landscapes, build drought resilience • Protect old growth forests, old catchment and paddock trees, enact moratoriums to protect trees and biodiverse areas in bushfire affected areas from urban expansion • Land use planning for best use of lands for carbon-farming and agriculture – strengthen land use planning regimes to manage potential land use conflict
Land-system change	Cropland use	<ul style="list-style-type: none"> • Comprehensively audit and transparently report on NSW land-clearing rates consequent to the on farm self-regulation of land clearing regime introduced in 2014 • Review and act upon CSIRO Atmospheric dust modelling and other Drought Resilience Mission research and tools to better identify and plan to address desertification and erosion hotspots in NSW • Review/amend frameworks that enable grazing lands to transition to cropping, particularly where this results in untenable demand for new dams, irrigation and land clearing • Support grain sector strategies (GRDC) to increase and diversify production of, and value adding to, crops that deliver both ecological services and high nutrient foods

		<ul style="list-style-type: none"> • Investigate and support small scale regional value adding activities – micro abattoirs, grain milling – to shorten and intensify supply chains and develop distributed / decentralised regional food hubs and distribution networks. • Consider scale and fitness for purpose and bioregion of proposed new large scale agri-ventures (eg. Almond plantations in the Murray Darling catchment) • Further review of NSW zoning frameworks in urban, peri-urban and regional areas to recognise and provide for urban agriculture and enable more equitable access to smaller pockets of land for stacked or artisanal primary production and to open new and alternative pathways for smaller scale investors and growers to enter farming.
Freshwater use	Water use	<ul style="list-style-type: none"> • Make the market fair – for public health, ecological flows, Indigenous cultural land and water rights, best productive land-use • Redress market flaws that favour large extractive users and threaten water catchments and the Great Artesian Basin • Strengthen holistic catchment management plans – water efficiency, re-use and recycling, all system levels • Act to respect rivers as ‘rivers’ and living ecosystems rather than as fast moving irrigation channels that threaten endemic species habitats and breeding places. • Develop long lens strategic catchment plans and prioritise and pursue best-use water use to ensure for human water security, equity and access. Eg. Consider aquifer water banking for water stressed towns in the Murray Darling catchment • Support closed-system food production techniques and industry that cycle and enable the re-use of water. Eg. Sustainable land-based aquaculture
Nitrogen cycling	N application	<ul style="list-style-type: none"> • Promote regenerative farming practices (at all scales of production) that use natural processes to create, fix and increase soil nitrogen • Intensify transitions to crops that deliver ecological services and high nutrient value foods – legumes, pulses, native grains • Support measures to increase on-shore value-adding of legumes and pulses, silviculture and bush foods so that these crops can generate

		higher returns to farmers and contribute to growing demand for plant based protein and increase agrobiodiversity in diets and landscapes
Phosphorus cycling	P application	<p>Phosphorus scarcity, locally and globally, remains a vital yet under-investigated factor in Australia’s food security and production. Phosphorus losses may be as high as 80% between extraction and the plate. The farming and food sectors have important roles to play</p> <ul style="list-style-type: none"> • Support investigation, trial and implementation measures to improve efficiency of phosphorus application on farm • Investigate, trial and implement measures to reduce food waste in supply chains and improve waste food recovery and reuse • Build upon the recently awarded Australian Research Council Hub for Nutrients in a Circular Economy (ARC NiCE Hub) - (UTS Sydney led initiative, five Australian universities, international researchers, 13 commercial/government partners) • Engage/involve the wastewater industry in food sector planning, commercialisation of urine processing technologies to demonstrate uses of the liquid fertiliser produced. • Investigate, trial and implement measures to recover and re-use nutrients from organic waste and sewage and wastewater in urban and peri-urban agriculture
Biodiversity loss	Extinction rate	<ul style="list-style-type: none"> • Protect biodiversity – for its innate value and ecosystems services critical to future health of the hydrological and terrestrial life systems we rely on • Support, regulate, incentivise private freehold landholders and prospective carbon farmers to protect biodiversity. Recent research highlights that almost half (48%) of threatened species’ distributions occur on private freehold land (The Conversation, February 11 2022) • Promote and support Landcare NSW and Natural Resource Management (NRM) groups to continue to protect local and regional biodiversity, corridors and connections. • Set and ensure vegetation thresholds are met. Vegetation extent is a critical NRM attribute. Vegetation thresholds of 10%-30% across (different) landscapes well recognised minimums for resilience. • Audit and act to ensure large broadacre agribusinesses and investors meet applicable biodiverse vegetation thresholds.

Section three – Strengths based, immediate opportunities

Discussion - Thriving, diverse food production systems and cultures

There are demonstrable drivers of and demand for change in our food system and many voices, politics and participants across the spectrum who can contribute to building a more diverse, resilient, healthy and fair food system if provided with planning support and market signals that prioritise health and sustainability objectives.

Regenerative agriculture is enjoying incredible growth of interest and practice. It travels with other practices (languages and movements) that have in large part developed in response to the environmental, health and social challenges created by twentieth century industrial scale, chemical and fossil fuel input intensive monocrop production. In NSW these concerns appear to be intensified by the impacts that particular food and fibre crops undertaken at massive scale have on the Murray Darling system, the equity of water markets and upon First People's cultural lands and waters, and upon the water security and rights of communities and smaller producers. Interest in and change toward more regenerative, resilient and sustainable practices is occurring at many scales of production, in diverse produce sectors and via a rich menu of enterprise styles and cultures: social, community, cooperative and corporate. After decades of concern about our aging agricultural sector, the face of farming and the demographics of farming are changing as a wave of new and younger generations and styles of producers and participants are attracted to and make change in the sector.

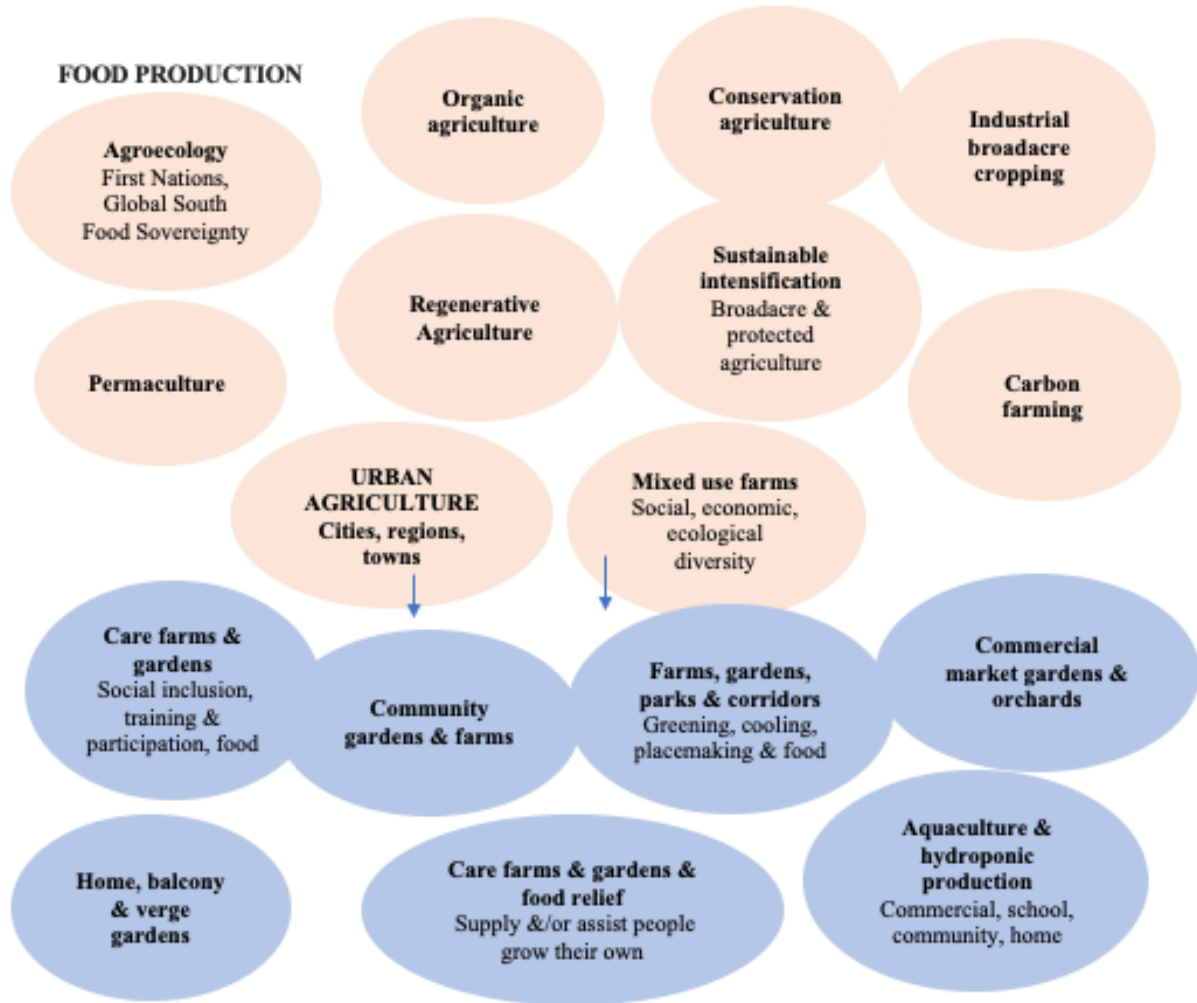
Large scale agri-food and agri-business, the corporate 'environment or regime' of food production, processing and industrially produced inputs is highly consolidated both in Australia and internationally and exerts great power and influence over our food system, water markets and supply chains as COVID disruptions have highlighted particularly in large-scale meat processing. Industrial broadacre producers are the inheritors of the Green Revolution and its reliance upon intensive industrial agricultural inputs and fossil fuels, and are oft characterised as productivist, profit and efficiency driven and some would argue can be quite 'landscape indifferent' and/or regard territory as commodity to be extracted and sold. However many large scale broadacre producers have long practiced sustainable farming practices (such as conservation agriculture – low and no till, that still require chemical inputs) and may already adopt (and co-opt) a mix of regenerative farming practices pertinent to their production and the places where they farm.

It is not possible to map out and discuss the various politics, values, interests and players in any detail here nor is it our intention to. However we do seek to draw the Committee's attention to the diversity, potential conflict of interests *and* complimentary overlaps that exist within our food production community in order to highlight challenges and potential opportunities about where, with whom and how it may be **most** constructive to engage different players to better incorporate 'circular economy' principles into their operations and collaborations with others.

On the following page is a **mudmap (fluid and incomplete!) of ‘clusters’ that represent different food production systems, practices and cultures.** Each circle has a different story/s to tell about what it values and why, and about how it goes about growing food and associated things to care for landscapes, soil, water, nutrient flows, the nutrient density and diversity of food, biodiversity and for people and farmed and wild animals.

So often the ‘health’ and ‘sustainability’ credentials of ‘food’ may not be about ‘a’ problematic food or ingredient – but rather, may pertain to issues around questions of the scale and nature of the production of that food, its nutrient value, how ultra-processed it is, and of the fitness for purpose of the place where production of that ‘food’ occurs, who benefits, who loses, the production system that is involved and about the overall ethics of care that the system embodies.

A Mudmap of ‘clusters’ that represent different food production systems, practices and cultures



FOOD SYSTEM INNOVATIONS - to enable more diverse, shorter, supply & vertical value chains



Responding to the ToR: Strengths based, immediate opportunities for food production and supply, life systems

Further to Recommendations and high order opportunities for action in NSW made in this submission that directly and indirectly address most of the Terms of Reference, we offer the following further comments and suggestions that address each of the TOR.

ToR 1: Improving food security and equitable access to food.

We advocate strengths based, community driven solutions to food and water insecurity and approaches that address the broader social determinants of health, in line with First Nations and less advantaged Culturally and Linguistically Diverse (CALD) community needs. Holistic approaches to health that go beyond physical well-being to encompass social, emotional and cultural well-being. See:

- Work by the George Institute and UNSW with the Walgett community and elsewhere in western NSW to address and improve water and food security
- Recommendations to the Inquiry, the George Institute and other public health/research organisations
- World leading, healthy stores research, policies, tools and resources that Dr Julie Brimblecombe has developed and delivered in partnership with food stores and communities in the Northern Territory and Queensland, highly applicable in NSW. See <https://www.monash.edu/medicine/healthy-stores-2020> and see online webinar series, 2021, community lead food solutions, facilitated by Ms Nicole Turner, a Kamilaroi woman, nutritionist and chair of Indigenous Allied Health Australia and NSW Rural Doctors Network at <https://www.monash.edu/medicine/healthy-stores-2020/online-series>
- Recommendations to the Inquiry, valuable research and community work of The Right to Food Coalition – see <https://righttofood.org.au/>, and of community based coalitions including Food Fairness Illawarra – see <https://foodfairnessillawarra.org.au/>
- We reiterate support for Dr Reeve’s recommendation for the creation of a state-wide, integrated Food System and Food Security Plan to address sustainability, health, equity, and economic development in an integrated way

ToR 2: Reducing food waste and destruction.

See Recommendations 1 and 3, pp 4-5 herein, and reiterating opportunities to capture and cycle food, nutrient and wastewater streams for solid and liquid waste fertiliser. See the Australian Research Council Hub for Nutrients in a Circular Economy (ARC NiCE Hub) led by the University of Technology, Sydney.

ToR 3. Developing technologies to bring food production into cities.

Multiple opportunities to grow vertical and other urban agriculture systems including circular economy hydroponics and aquaponic systems exist and can be readily built upon. For example, see:

- Sydney based Food Ladder, that operates internationally and across remote and rural Australia to support hydroponics food production systems for food security, see <https://www.foodladder.org/about/>

- National Vegetable Protected Cropping Centre, Western Sydney University, Hawkesbury campus at <https://www.westernsydney.edu.au/nvpcc>
- Innovative closed system, NSW land based aquaculture, including AQUANA Sustainable Murray Cod <https://aquana.com/about/>

We encourage the Committee to recognise and include ‘technologies’ that incorporate human systems, along with education, open source and community networks that enable people to build social capital, social enterprise, producer cooperatives, farmers markets, school and community gardens, and other enterprising food production, distribution, profit for purpose and other businesses that can help to grow and support robust local and regional food systems and supply chains. For example:

- See Mudmap of food production systems, practices and cultures, above. Multiple NSW examples abound
- See Open Food Network – world leading, Australian innovation, <https://openfoodnetwork.org.au/>
- See Farmer Meets Foodie, regional virtual farmers market, north Queensland, model applicable to regional NSW, <https://www.farmermeetsfoodie.com.au/>
- See outstanding work done by the Royal Botanic Gardens, Sydney, Community Greening and Youth Community Greening teams across NSW, <https://www.rbg Syd.nsw.gov.au/learn/community-greening>
- Community Supported Agriculture, local and regional food solutions. See <https://foodconnect.com.au/>

ToR 4. Preserving productive land and water resources.

See high order Recommendations and opportunities for NSW identified in prior sections of this submission.

- We further recommend the Committee consider and liaise with CSIRO’s Drought Resilience Mission to discuss and undertake feasibility work to investigate aquifer water banking for regional and remote communities in the upper Murray Darling who were acutely afflicted by water shortages during the last drought – including, Walgett, Wee Waa, Wilcannia.
- We encourage the Committee to liaise and consult with First People’s organisations, researchers and community leaders in the water space, including Mr Phil Duncan, Chair, Murray-Darling Basin Authority, Basin Community Committee
- We encourage and support further funding to grow Landcare NSW’s Australian ‘first’ Working Together Aboriginal engagement program

ToR 5. Managing the impact of climate change.

See high order Recommendations and opportunities for NSW identified in prior sections of this submission, with especial note of the importance of:

- Halting agriculture related land clearing and deforestation
- Maintaining and expanding tree and native vegetation thresholds across the sector
- Expanding groundcover and the role that soils as sinks have to play to cool landscapes now, especially in broadacre agricultural contexts, in the ‘decade of consequence’

- Farmers for Climate Action – an incredible, expanding network of farmers advocating for and enacting on-farm climate action

ToR 6. Limiting the impact food production has on the environment, including overfishing.

See high order Recommendations and opportunities for NSW identified in prior sections of this submission.

- We particularly note and commend to the committee further consideration of and support for the important work of Oceanwatch Australia, Australia’s only National Marine NRM, whose head office is located in Sydney.

ToR 7. Addressing complex challenges to food production including declining pollinating species and productive fertilisers.

See high order Recommendations and the table of opportunities for NSW identified in prior sections of this submission, and:

- We encourage the Committee to consider, provide further funding, research and extension services support to pollinator research programs that include the ‘Future-Proofing the NSW Apiary Industry and Keeping Beekeepers in Jobs’ supported by NSW for Bushfire Recovery and by Agrifutures Honey Bee and Pollination programs
- Recognise and support the important work of the When Bee Foundation generally, and with specific regard to their programs that address bee-friendly farming and gardening practices
- See (2) above, Australian Research Council Hub for Nutrients in a Circular Economy (ARC NiCE Hub) new liquid and other fertilisers
- Consult with First People’s land managers and rangers, re cool fire burning and related initiatives to rebuild and support native bee populations

ToR 8. Consideration of workforce challenges and skills development.

See discussion and **mudmap of different food production systems, practices and cultures** above. There are many ways to define ‘workforces’, challenges and skills required and to identify new and emerging growth areas and opportunities within our urban, peri-urban, mixed and broadacre food production and supply.

There is a growing, new face of farming and many new generations and styles of farmers – work with and support this space across all scales of production! Noting traditionally defined workforce opportunities as well as social enterprise and care farming and gardening avenues that create and build social inclusion, participation and training that lead to employment opportunities. For example, see/consider:

- Urban and community gardening networks and new enterprise forms with high potential for food production and land sharing enterprises in urban, peri-urban areas and towns – eg. See the Farm It Forward social enterprise - <https://www.farmitforward.com.au> and Grow It Local’s platform and programs that connect people with neighbours, skills and capacity <https://www.growitlocal.com/>
- RBG Community Greening Master Gardeners Program

- Innovative Indigenous native green spaces enterprise – see Indigenous led, not for profit social enterprise Wildflower - <https://www.wildflower.org.au/>
- The Landcare NSW Working Together Aboriginal engagement program manager reports that there is strong farmer interest to employ First People’s to undertake cool cultural burning on their farms. They also report that notwithstanding many NRM and other ‘grant guidelines’ to consider cultural burning practices, a major impediment to small Indigenous businesses delivering cool, cultural burning services is the lack of adequate insurance policies and providers to enable them to deliver such services. We strongly recommend the committee consider and redress this market flaw.
- Carbon farming and biodiversity credit knowledge and capacity building and extension services
- State action to consider, link and integrate Inquiry recommendations with Commonwealth Future Drought Fund programs and Drought Resilience Hubs within rural and regional towns, local and regional food systems and urban and peri-urban agriculture initiatives within them -ie. Future food production in rural and regional areas includes, but needs to think and act beyond traditionally defined and understood broadacre and mixed use large agriculture

ToR 9. Development and growth of the food industry (raw or processed) as an export.

See high order Recommendations and opportunities for NSW identified in prior sections of this submission. We reiterate opportunities to increase and diversify the nature and scale of livestock production and processing facilities (more local and regional mini-small abattoirs to enable more fit for place species and size animals, and more humane transport distances, production and processing, value capture and adding to offal) and to increase and diversify grain and pulse production to support ecological services in crop production and to enable high nutrient plant based foods and on-shore value adding to be realised (milling, processing of milled product to high value, plant based food products).

- The food sovereignty of people as producers and eaters does not equal consumer choice in the way what is currently served up by neoliberal consolidated big business.
- Product choice – of what is offered to you is one thing – as is the power to take control and to enact your own active informed choices about what to choose to eat, and about how to produce, process and sell food within a food sovereignty lens and frame.
- We commend to the Committee consideration the work, advocacy and recommendations of the Australian Food Sovereignty Alliance – see <https://afsa.org.au>

ToR 10. Implications for quality control and labelling of processed/manufactured food.

Pursue, develop and enact fair, clear and transparent labelling across the food production and supply sectors, particularly as new and novel products emerge (such as novel and plant based new proteins) and with especial regard to public health recommendations pertaining to labelling to address diet related Non-Communicable Diseases and the hazards presented by low nutrient value, ultra-processed foods. We note for the Committee’s consideration:

- The work and recommendations of Australian leaders in international research and advocacy to promote healthy sustainable food systems – that include Professors David Raubenheimer and Stephen Simpson and their interdisciplinary teams at the Charles Perkins Centre, University of Sydney, and DEAKIN Universities Professor Mark Lawrence and Dr Phillip Baker
- New and emerging agricultural biodiversity and carbon accreditation systems that are being developed in response to EU, COP26 and other pressures. These call for robust and transparent data, transparency of interests and clear communication of what the accreditation details ‘mean’ about production methods and the products (food) delivered to consumers, producers and investors, so that these accreditation systems are meaningful, accessible and can be appropriately leveraged and communicated to promote best use stewardship of productive lands, biodiversity and waters and so that best practice producers are recognised and rewarded in the marketplace by consumers
- Value and apply greater attention to the nutrition value, density and stewardship of nutrients across the life cycle of production and use of animals and crops in food production systems, products and exports:-
 - to increase value adding opportunities (and financial rewards to) on-shore production and processing of crops that deliver both ecological services and high nutrient value foods
 - to support and enable more humane production of a greater diversity of types of livestock (and species) that are more fit for landscapes and extreme heat conditions, that can be humanely processed in abattoir facilities ‘closer’ to their place of production and that can be fully valued and consumed ‘nose-to-tail’
 - Value adding to and sale of offal products for human consumption – to value and make the most of natural capital expended to produce each animal, potentially reduce livestock numbers and linear extraction upon natural capital for their production.

ToR 11. Consideration of Indigenous food and land management practices.

We acknowledge Australia’s First People’s, across country, and that sovereignty was never ceded and that our food systems and rural and urban lives occur and impact upon the lands and waters First People’s steward. We support the spirit and recommendations of the Uluru Statement from the Heart. We encourage the Committee to consider and include in the recommendations they make to this Inquiry the following specific suggestions:-

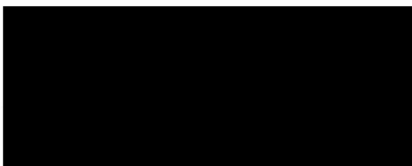
- To recognise, develop and support programs and strategies to further support Indigenous led land and water management, co-management and outreach with the broader NSW community congruent with the spirit and objectives of the UN Decade of Indigenous Languages, that commenced in 2022, and promotes and supports the rights of Indigenous people to steward, preserve and protect their cultures, languages, lands, waters and foodways.
- To support, expand and further fund Indigenous Ranger and fire management programs, along with practical action to enable and support cultural burning practices on farms, Indigenous Protected Areas,

parks and public lands, and other lands, waters and corridors that include Local Land Services managed stock routes in NSW

- To recognise, further fund and support the ground-breaking *Native Grains from Paddock to Plate* research led by Dr Angela Pattison and colleagues from the University of Sydney, in partnership with First People from northern NSW, so that they can build upon research findings from the first *Native Grains from Paddock to Plate* research project into native grain production options, technologies and nutrient profiles of native grains. Support to extend and grow this research and extension work offers many linked-up potential benefits to improve health, diets and wellbeing, connection to country and culture, and to grow new, long lens food production industries and landscape/NRM management options on farms and public lands led and or co-managed by Indigenous Australians.
- That NSW review and update statutory provisions, as/if required, to ensure that relevant NSW legislation is commensurate with Queensland legislation and ensures protections for accessing and using First Nations peoples' traditional knowledge in biodiscovery with the inclusion of the traditional knowledge obligations. Such reforms to reflect international developments since the *Biodiscovery Act 2004* was first passed, particularly the Nagoya Protocol to the Convention on Biological Diversity
- For further information, we refer the Committee to Indigenous Biocultural Knowledge expert Gerry Turpin an Australian (and international) leader in this field, who is the Senior Ethnobotanist at the Australian Tropical Herbarium, Tropical Indigenous Ethnobotany Centre at James Cook University, Queensland.
- Recognise, support Indigenous community led initiatives to grow food and to heal country and people, that include outstanding social enterprise initiatives such as Wildflower, an indigenous-led-not for profit-social enterprise who create and nurture native green spaces, working with communities to build a sustainable connection to country, providing safe, meaningful work for people facing barriers to employment. See: <https://www.wildflower.org.au/>

We see the TOR that we have addressed as being within the domain of our knowledge and experience and have limited our comments to those domains. We are available to further discuss or comment on the above submission, and to assist with applying a regenerative systems lens to policy development to improve the sustainability of NSW food production and supply.

Sincerely



Anthea Fawcett
Director
Foodswell Limited (ACN 163 396 736)
W: foodswell.org.au

FOODSWELL SUBMISSION - APPENDICES

Appendix A: Foodswell Board (see www.foodswell.org.au)

Director and Chairperson

Ms Gemma Purcell is a partner in Meier Farms, a mixed grazing and drylands cropping enterprise in South Western NSW and a full-time parent and part-time freelance writer and consultant, community creative and placemaker with extensive experience in Business Development, Issues Management and Communications. She is actively involved in developing social enterprises and community capital. Community Renewables. Local food networks. Environmental projects. The Grong Grong Earth Park. Gemma's current roles include, Chair of Murrumbidgee Landcare Inc.

Director

Dr Cynthia Mitchell is Professor Emerita at the University of Technology, Sydney, 2021, and was Distinguished Professor of Sustainability at the Institute for Sustainable Futures (ISF), UTS, 2018-2020, where she was Research Director from 2001. She has pioneered trans-disciplinary research in water, sanitation, learning and community development and led numerous collaborative projects with on-ground impacts in urban and rural communities in Australia and the region.

Director and Deputy Chairperson, Convenor Indigenous

Mr Christopher Thiesfield is a Gooreng Gooreng man, Traditional Owner and recognised Elder, deeply respected for his skills and deep experience in community leadership and development and for the design and delivery of cultural awareness, vocational and other training in mental health, Conservation and Land Management, rural industries, cleaning operations, hospitality and the security sectors in and across remote Australia. He owns and operates a recognised Registered Training Organisation, is a qualified horticulturist and is a former member of the national AgriFood Skills Rural and Related Standing Committee.

Director

Dr Catherine Chicken is an equine veterinarian in the Upper Hunter Valley of NSW, where she has lived and worked for the past 29 years. She has a PhD in veterinary epidemiology and holds membership of the Australian New Zealand College of Veterinary Scientists and plays an active role in her professional peak body, the Australian Veterinary Association (AVA). She is Deputy Chair of the Thoroughbred Horses Advisory Panel of Agrifutures Australia and is the current (2021-22) Agrifutures candidate on the Australian Rural Leadership Program.

Managing Director, Public Officer

Ms Anthea Fawcett is the Founder of the Remote Indigenous Gardens Network (2009) and of Foodswell (2013). Her training is in the humanities. She is an Industry Associate of the Institute for Sustainable Futures, UTS, and has

worked in sustainable design, policy and development and corporate affairs roles in cross-cultural settings in Australia and overseas for over twenty-five years, most recently with Vast Solar Pty Ltd, an Australian renewable energy technology development company.

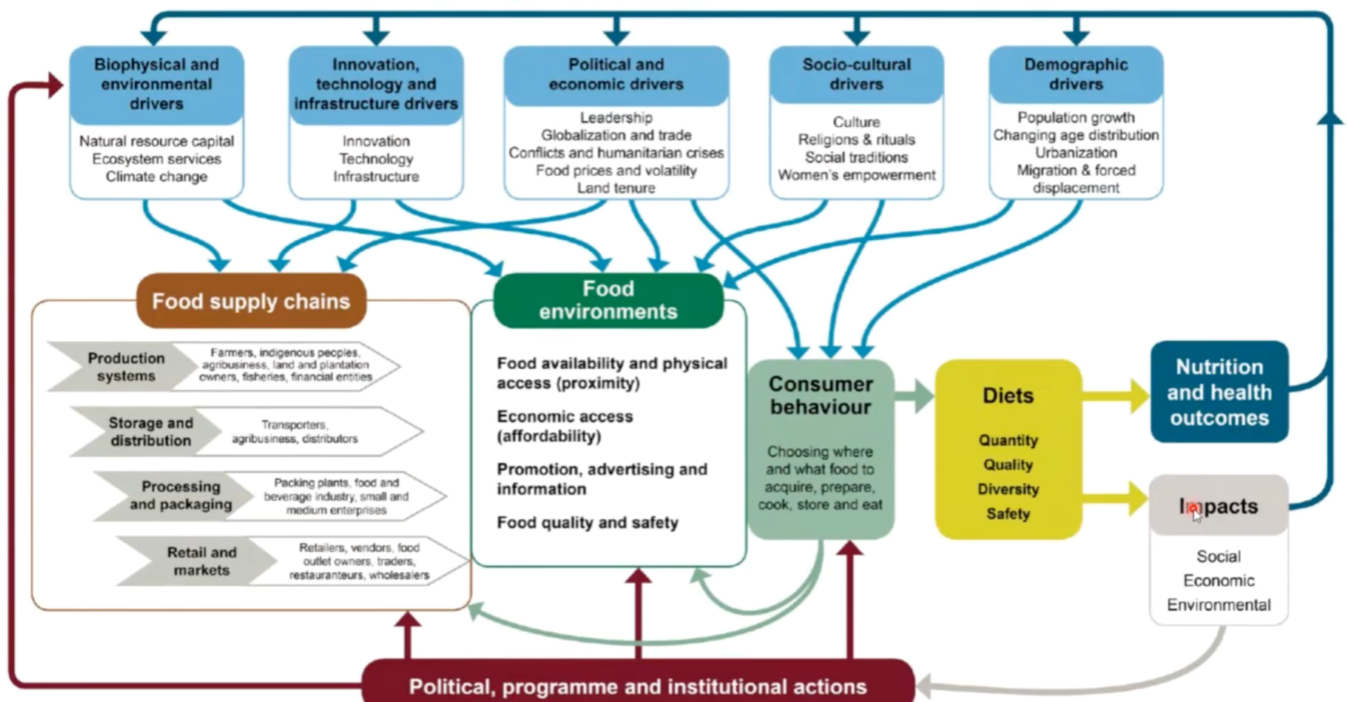
Company Secretary

Ms Luci Rafferty is a lawyer with over twenty years of corporate and legal experience and is the manager of her family’s pastoral business in the Northern Tablelands, NSW. From 2003 to 2012, she was General Counsel and Company Secretary of Alesco Corporation Limited, an industrial company listed on the Australian Stock Exchange until 2012. Prior to this she was General Counsel at Namoi Cotton Co-operative Limited from 1999 to 2003, based in rural New South Wales. She has also worked for Sydney based law firms Anderson Legal and Gadens.

Appendix B

The Big Picture – What is a food system?

What is a food system?



Acknowledgement: From a webinar presentation by Dr Jessica Bogard, CSIRO.

Appendix C

Nourishing Matters to Chew On podcast, guests and topics – Season 1 and 2 (December 2020 - 2021)



NOURISHING MATTERS PODCAST

An invitation to listen in and join us for nourishing conversations

@ foodswell.org.au/nourishing, omny.fm/shows/nourishing

or wherever you get your podcasts

Join host Anthea Fawcett in conversation with inspiring people who are enabling change toward healthy, sustainable and more diverse food systems that can better care for people and the places, animals and environments who nourish us all. Presented by Foodswell, Nourishing Matters shares stories from across our food and agricultural landscapes, communities, and greater environment. Conversations with amazing people that share their stories and celebrate them and the change-making things they do - large and small – that we can all help grow.

NOURISHING MATTERS TO CHEW ON PODCAST – SEASON 2 EPISODES

Season 2 launched with a forward looking, upbeat story about holistic honey, healing and ‘bees’ research for biodiversity, bushfire recovery and human health. Listen in to hear from diverse, great guests who share their stories that track across climate, resilience, First Nation’s and Landcare, urban agriculture, peri-urban innovation, our grains sector and future protein, farming futures, growing your own, Australian food history and more.

S2/16: 22/12/21: A great chat and 2021 wrap with Paul West about his latest book *HOMEGROWN – A year of growing, cooking and eating* – be inspired, give it a go and grow it local

<https://omny.fm/shows/nourishing/paul-west-homegrown>

S2/15: 17/12/21: With Anika Molesworth, on her new book *Our Sunburnt Country*, & cultivating climate courage & action <https://omny.fm/shows/nourishing/dr-anika-molesworth-our-sunburnt-country-climate-c>

S2/14: 10/12/21: With Richard Heath, Executive Director, the Australian Farm Institute, on Grains, Pulses, Future Protein – Challenges & Opportunities <https://omny.fm/shows/nourishing/richard-heath-on-grains-pulses-future-protein>

S2/13: 03/12/21: In discussion with Paul van Reyk about his new book *True to the Land – A History of Food in Australia* an overview of Australian food history and foodways spanning 65 000 years...

<https://omny.fm/shows/nourishing/paul-van-reyk-true-to-the-land>

S2/12: 25/11/21: With Dr Roger Attwater, eco-innovation at the peri-urban edge, Western Sydney & Hawkesbury-Nepean <https://omny.fm/shows/nourishing/eco-innovation-at-the-peri-urban-edge-dr-roger-att>

S2/11: 17/11/21: The fabulous Farm It Forward folk & model – Growing food and community in the Blue Mountains <https://omny.fm/shows/nourishing/the-fabulous-farm-it-forward-the-people-the-model>

S2/10: 10/11/21: CSIRO's Drought Resilience Mission: Aquifer Water Banking, Atmospheric Dust Modelling & more on 'why' & how the time to plan for the next drought is 'now' <https://omny.fm/shows/nourishing/csiro-s-mission-for-drought-resilience>

S2/09: 03/11/21: In discussion with eminent climate scientist Prof. Roger Stone, on ENSO, Climate & Agriculture – risk & seasonal forecasting for extreme events, drought resilience and more <https://omny.fm/shows/nourishing/prof-roger-stone-on-climate-agriculture-risk-seaso>

S2/08: 21/10/21: With Dr Julie Brimblecombe, on Remote Food Security & Community Lead Solutions - Healthy Stores 2020, HEALTHY STORIES = GOOD FOOD...and a whole lot more <https://omny.fm/shows/nourishing/dr-julie-brimblecombe-remote-food-security-communi>

S2/07: 14/10/21: With Gabi Chan we talk about her new book *Why You Should Give A F*ck About Farming* <https://omny.fm/shows/nourishing/why-you-should-give-a-f-about-farming-with-gabi-ch>

S2/06: 07/10/21: Part 2 – Craig Aspinall, Working Together, Landcare NSW's Aboriginal engagement program <https://omny.fm/shows/nourishing/part-2-working-together-landcare-nsw-aboriginal-en>

S2/05: 30/09/21: Learn about Australian CliMate – a handy app for agriculture & for people 'everywhere'. Climate data, trends, producer analytics & more. With Dr Ann Starasts, Southern QLD & Northern NSW Drought resilience Hub. <https://omny.fm/shows/nourishing/australian-climate-a-very-handy-app>

S2/04: 23/09/21: Part 1 – With Craig Aspinall we talk Working Together, Landcare NSW's Aboriginal engagement program <https://omny.fm/shows/nourishing/working-together-landcare-nsw-aboriginal-engagemen>

S2/03: 15/09/21: With Kate, Cherie and Sarah the creators of Healthy Food Systems Australia (HFSa) – PhD students and systems thinkers all who are advocates for better policy for healthier food futures <https://omny.fm/shows/nourishing/meet-hfsa-health-sustainability-equity-systems-thi>

S2/02: 07/09/21: With Sadie Chrestman and Matthew Evans, digging into Matthew's wonderful new book *Soils – The incredible story of what keeps the earth, and us, healthy* <https://omny.fm/shows/nourishing/matthew-evans-amp-sadie-chrestman-on-soil-the-incr>

S2/01: 01/09/21: With Professor Liz Harry & Dr Nural Cokcetin on honey and healing – the magic and science of honey research for people, apiarists, biodiversity and bushfire recovery <https://omny.fm/shows/nourishing/in-conversation-with-professor-liz-harry-dr-nural>

NOURISHING MATTERS TO CHEW ON PODCAST – SEASON 1 EPISODES

Ep 21: 16/06/21: A quick 'wrap and reflect' on Season 1's inspiring conversations and great guests who joined us <https://omny.fm/shows/nourishing/nourishing-season-1-wrap>

Ep 20: 27/05/21: With Phil Pettit, Manager RBG, Community Greening Program – Urban Agriculture, care farming & gardening in Sydney: People, Place & Plants – Growing food & community <https://omny.fm/shows/nourishing/phil-pettit-and-community-greening-people-plants-p>

Ep 19: 20/05/21: Part 2 - With Kate Wingett and Grant Hilliard, On Offal (Part 2) The Joys & Benefits of Eating Nose to Tail, A Sliver of Liver! <https://omny.fm/shows/nourishing/on-offal-part-2-the-joys-and-benefits-of-eating-no>

Ep 18: 13/05/21: Part 1 - With Kate Wingett & Grant Hilliard, On Offal (Part 1) The Joys & Benefits of Eating Nose to Tail <https://omny.fm/shows/nourishing/on-offal-part-1-the-joys-and-benefits-of-eating-no>

Ep 17: 6/05/21: Nourishing Books & Bites – with Mark Spencer on Podcasters Declare and the Climactic Network

<https://omny.fm/shows/nourishing/nourishing-books-bites-mark-spencer-on-podcasters>

Ep 16: 29/04/21: With Nicole Abadee on her podcast "Books, Books, Books", books responding to precarious times
<https://omny.fm/shows/nourishing/nourishing-books-bites-nicole-abadee-on-books-book>

Ep 15: 22/04/21: Erica Hughes, "Farmer Meets Foodie – Innovative virtual farmers market & connections, far N QLD"
<https://omny.fm/shows/nourishing/erica-hughes-farmer-meets-foodie-innovative-virtua>

Ep 14: 7/04/21: With Scott McDonald, "More fresh food! Food Ladder's 'protected agriculture' – Practical technology fit for purpose, people & place <https://omny.fm/shows/nourishing/more-fresh-food-food-ladder-s-protected-agricultur>

Ep 13: 1/04/21: "Australian Farmer-Led, Science-Based Pathways to Net Zero Emissions by 2050" – With Dr Colin Chartres, The Crawford Fund & Dr Daniel Walker, ACIAR
<https://omny.fm/shows/nourishing/australian-farmer-led-science-based-pathways-to-ne>

Ep 12: 25/03/21: "Care Farming & Gardening in the Climate Emergency - Urban Agriculture Month & Forum", Dr Nick Rose, Executive Director, SUSTAIN, Councillor Jess Miller & Naomi Lacey, President, Community Gardens Australia
<https://omny.fm/shows/nourishing/care-farming-gardening-in-the-climate-emergency-ur>

Ep 11: 18/03/21: With Gemma Meier on "Catchment Keepers, Murrumbidgee Landcare & More"
<https://omny.fm/shows/nourishing/nourishing-books-bites-gemma-meier-on-catchment-ke>

Ep 10: 11/03/21: NOURISHING BOOKS & BITES – With Jade Miles on Futuresteading – living like tomorrow matters
<https://omny.fm/shows/nourishing/nourishing-books-bites-futuresteading-living-like>

Ep 9: 4/03/21: With Richard Bootle, of Bogan Farms, Nyngan "After the drought? Planning for resilience and profitability - Farming in western NSW" <https://omny.fm/shows/nourishing/after-the-drought-farming-in-western-nsw>

Ep 8: 25/02/21: "Food Biodiversity, Food Plant Solutions" Growing community based solutions for agrobiodiversity, Bruce French, Karalyn Hingston & Dr John McPhee, Food Plants International and Food Plant Solutions, Tasmania
<https://omny.fm/shows/nourishing/dr-john-mcphee-and-oa-karalyn-hingston-food-plant>

Ep 7: 18/02/21: With Professor Robyn Alders & Matthew Evans, "On Eating Meat Part II "Ethical Eating, Nose to Tail and More" <https://omny.fm/shows/nourishing/on-eating-meat-eating-nose-to-tail-and-more>

Ep 6: 11/02/21: With Professor Robyn Alders & Matthew Evans, On Eating Meat Part 1 "It's Not the Cow, It's the How"
<https://omny.fm/shows/nourishing/on-eating-meat-part-1-its-not-the-cow-its-the-how>

Ep 5: 4/02/21: Dr Angela Pattison, University of Sydney, "Native Grains from Paddock to Plate"
<https://omny.fm/shows/nourishing/dr-angela-patterson-native-grains-from-paddock-to>

Three scene setting episodes - soft launch, December 2020

Ep 4: 10/12/20: In conversation with Dr Jessica Bogard & Dr Mario Herrero, CSIRO, "The Great Food Transformation"
<https://omny.fm/shows/nourishing/dr-jessica-bogard-and-dr-mario-herrero-the-great-f>

Ep 3: 10/12/20: With Dr Phillip Baker, DEAKIN University, "Unprocess Your Diet" – we talk about the environmental and health damage junk foods do... <https://omny.fm/shows/nourishing/dr-phillip-baker-unprocess-your-diet>

Ep 2 – FIRST EPISODE! – 10/12/20: Dr Arnagretta Hunter, Commission for The Human Future, "The Need for Strategic Food Policy in Australia" <https://omny.fm/shows/nourishing/dr-arnagretta-hunter-the-need-for-strategic-food-p>

Ep 1: 10/12/20: Introducing NOURISHING MATTERS TO CHEW ON
<https://omny.fm/shows/nourishing/introducing-nourishing-matters-to-chew-on>

To listen in to Nourishing Matters head to wherever you get your podcasts or at foodswell.org.au/nourishing or [omny fm/shows/nourishing](https://omny.fm/shows/nourishing)

If you have a story you'd like to share, we'd love to hear from you. Email [REDACTED]

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